

香港專營巴士服務  
獨立檢討委員會

香港金鐘道66號  
金鐘道政府合署21樓

本函檔號 Our Ref.: CSO/IRC-BUS/CR/7-50/2  
來函檔號 Your Ref.:



Independent Review Committee on  
Hong Kong's Franchised Bus Service

21/F, Queensway Government Offices,  
66 Queensway, Hong Kong

電話號碼 Tel No.: 2867 5324  
傳真號碼 Fax No.: 3104 0254

香港中區立法會道1號  
立法會綜合大樓  
立法會秘書處  
秘書長陳維安先生

陳先生：

香港專營巴士服務獨立檢討委員會報告

香港專營巴士服務獨立檢討委員會於2018年12月31日已向行政長官呈交報告，並知悉政府於今日公布了《香港專營巴士服務獨立檢討委員會報告》，而《報告》中致謝章節的一句句子的一部分在經諮詢法律意見後被遮蓋，以確保對正在進行的刑事訴訟進行公平審判。

現隨函附上80本《報告》，謹請秘書處把該份《報告》轉交各議員參閱。

( 陳炳輝  )

香港專營巴士服務獨立檢討委員會秘書

2019年1月8日

連附件

香港專營巴士服務  
獨立檢討委員會

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21/F, Queensway Government Offices,  
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8 January 2019

Mr Kenneth CHEN  
Secretary General  
Legislative Council Secretariat  
Legislative Council Complex  
1 Legislative Council Road  
Central, Hong Kong

Dear Mr CHEN,

**Report of the Independent Review Committee on  
Hong Kong's Franchised Bus Service**

The Independent Review Committee on Hong Kong's Franchised Bus Service submitted its Report to the Chief Executive on 31 December 2018, and notes that the Government released today the Report of the Independent Review Committee on Hong Kong's Franchised Bus Service, with part of a sentence in the Acknowledgements chapter of the Report redacted to ensure a fair trial of the ongoing criminal proceedings.

I enclose 80 copies of the Report for your distribution to Members of the Legislative Council for their information and retention.

Yours sincerely,

(CHAN Ping-fai, Peter)  
Secretary, Independent Review Committee on  
Hong Kong's Franchised Bus Service

Encl

# 香港專營巴士服務 獨立檢討委員會報告

倫明高法官，GBS  
歐陽伯權先生，JP  
羅康錦教授，JP

二零一八年十二月





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# 香港專營巴士服務 獨立檢討委員會報告

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倫明高法官，GBS

歐陽伯權先生，JP

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二零一八年十二月

[www.irc-bus.gov.hk](http://www.irc-bus.gov.hk)



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## 簡稱表

九巴	九龍巴士(一九三三)有限公司
大聯盟	兼職車長苦主大聯盟
小巴	公共小巴
工作小組	加強專營巴士安全工作小組
交諮會	交通諮詢委員會
委員會	香港專營巴士服務獨立檢討委員會
冠忠	冠忠遊覽車有限公司
城巴	城巴有限公司
指引	《巴士車長工作、休息及用膳時間指引》
條例	《公共巴士服務條例》(第 230 章)
規例	《公共巴士服務規例》(第 230A 章)
黑盒	電子數據記錄儀／車載智能通訊系統 ／行車記錄儀
新巴	新世界第一巴士服務有限公司
署長	運輸署署長
運房局	運輸及房屋局
實務守則	專營巴士車長訓練綱領實務守則
管理局	新加坡陸路交通管理局
龍運	龍運巴士有限公司
嶼巴	新大嶼山巴士(一九七三)有限公司
聯盟	巴士業職工會聯盟
競委會	競爭事務委員會



# 報告

**備註：**

原著以英文撰寫，本報告譯自原文。

委員會接受口頭陳述的程序以英語進行。在聽證會舉行期間，委員會為所作的提問及有關代表／人士作出的口頭陳述提供英語或中文即時傳譯，並製備聽證會紀錄本，供各方參考。

中文紀錄本按聽證會即時傳譯製備的，如與有關代表／人士在聽證會上所作的口頭陳述有遺留或相悖的地方，本報告中文版在引用相關口頭陳述時，會作出增補，並以「<>」作標示，以作參考。



# 香港專營巴士服務獨立檢討委員會報告

## 第 1 章 — 職能範圍

1. 行政長官在 2018 年 3 月 13 日宣布，成立香港專營巴士服務獨立檢討委員會(「委員會」)，並委任倫明高法官為委員會的主席、歐陽伯權先生及羅康錦教授<sup>1</sup>為委員。

### 職能範圍

2. 委員會的職能範圍為：

從安全角度而言，鑑於香港專營巴士涉及 2018 年 2 月 10 日發生的致命意外以及那段期間發生的嚴重事故：

- (a) 審視巴士專營權在現行法律、專營權及其他合約規定下的運作及管理模式；
- (b) 審視現行對專營巴士的監管及監察制度；以及
- (c) 就上述事宜向行政長官提出與安全相關的建議，以維持香港的專營巴士服務安全可靠。

3. 委員會可邀請相關團體／人士及公眾就上述事宜提交意見書，並盡其所能在 9 個月內提交報告。關於 2018 年 2 月 10 日發生的致命意外的成因及所涉人士的法律責任等事宜會由警方進行調查，該等事宜不屬委員會的職權範圍。

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<sup>1</sup> 利益申報見附錄 I

## 檢控涉及 2018 年 2 月 10 日致命意外的專營巴士司機

4. 警務處處長代表在 2018 年 10 月 25 日致函通知委員會，涉及 2018 年 2 月 10 日大埔公路近大埔尾村的致命意外的專營巴士司機，被控 19 項違反普通法的嚴重疏忽引致誤殺罪，以及被控 18 項違反《道路交通條例》(第 374 章)第 36A 條的危險駕駛引致他人身體受嚴重傷害罪。各名死傷者都是該巴士上的乘客。

5. 各項誤殺控罪的罪行詳情，都指稱巴士司機違反他對巴士上各名身亡乘客應負上的照顧責任，他沒有採取合理的謹慎措施以確保巴士上乘客的安全，有關行為如下：

- (a) 駕車沿大埔公路往大埔方向的下坡行車道及在大埔大埔尾村巴士站前面右彎的開端以逐漸增加並過高的速度行駛；
- (b) 當把該巴士拐該右彎時沒有減慢車速；
- (c) 當趨近並把車拐該右彎時沒有充分或完全使用腳掣或制動器剎車；

控罪書指違反責任等同嚴重疏忽，結果令該巴士翻側之後撞毀，同時亦是引致各名乘客死亡的實質原因。

6. 委員會獲告知，有關的訴訟程序將會由裁判法院轉交高等法院審理。當然，有關審訊將會由法官會同陪審團主持。在這些程序進行時，委員會一直留意必須確保不讓任何可能妨礙日後公平審訊的材料公開。正如前述，委員會的職能範圍訂明有關致命意外的「成因及所涉人士的法律責任」並不屬委員會的職權範圍。

## 第 2 章 — 委員會的工作進程

7. 2018 年 3 月 28 日，委員會在其網頁發出通告，述明委員會正邀請「獲識別的相關團體／人士」於 2018 年 4 月 17 日前，就專營巴士在現行法律框架、專營權和其他相關合約規定下當前的運作及管理模式提供書面意見。委員會另邀請 2018 年 2 月 10 日大埔公路交通意外的乘客和死傷者家屬，以及其他公眾人士於 2018 年 4 月 30 日前提供書面意見。

8. 2018 年 4 月 12 日，委員會發出通告，宣布委任鄧樂勤資深大律師、黃佩琪女士和陳政龍先生為委員會的代表大律師，以及委任高露雲律師行為代表律師，負責協助委員會的工作。

9. 委員會後來收到極大部分應邀提供協助的相關團體／人士、公眾人士及相關協會／組織和一個法定機構提供的書面意見。雖然委員會收到一些匿名的意見書，但在商議時並不考慮這些意見。同樣地，即使某些人士在意見書表明身份，但由於拒絕應邀提供口述證供以證明其在意見書中所作聲稱屬實，他們的書面意見亦不獲考慮。

10. 2018 年 5 月 3 日，委員會發出通告，述明正邀請獲識別的相關團體／人士委派代表向委員會提供口述證供，以及首節聽證會定於 2018 年 5 月 7 日舉行。同日，委員會在其網頁發布了有關接受相關證供的程序規則。雖然委員會表示會考慮相關團體／人士提出由法律代表協助引領其提供主問證據的申請，但並沒有收到這樣的申請。因此，由 2018 年 5 月 7 日至 10 月 16 日舉行合共 21 天的聽證會，都是由協助委員會的大律師引領證人作供。部分證人選擇作開場發言。正如通告所述，委員會把收到的所有口述證供以中英文謄寫紀錄，並把謄本上載至委員會網頁。此外，委員會把曾參考的意見書及其附件上載至委員會網頁並收錄為聽證會文件。

11. 委員會分別在 2018 年 6 月 25 日及 7 月 13 日委任 John Stanley 教授和 Mike Weston 先生兩位專家，請他們以書面報告及口述證供提供專家意見以協助委員會。John Stanley 教授為悉尼大學商學院運輸及物流研究學

院 (Institute of Transport and Logistics Studies, University of Sydney Business School) 的客席教授，Mike Weston 先生為獨立的客運交通顧問，並曾出任倫敦運輸局 (Transport for London) 的巴士服務總監 (Director of Buses)。兩位專家後來為委員會撰寫了報告及提供了口述證供。

12. 當委員會預計在 2018 年 10 月 16 日完成收集口述證供的工作，便在 2018 年 10 月 12 日發出通告，公布正邀請獲識別的相關團體／人士及公眾於 2018 年 11 月 7 日或之前提交最後一輪書面意見，就委員會向行政長官提出「與安全有關的建議以確保香港專營巴士服務安全可靠」時，應該或不應該作出的建議提供意見。

13. 其後，委員會收到最後一輪書面意見，當中包括競爭事務委員會提交的書面意見。

14. 2018 年 11 月 29 日，委員會收到協助委員會的大律師所提交的總結書面意見。



### 第 3 章 — 公共巴士服務專營權的批予、規管、監察及續批

#### 法律框架

##### 《道路交通條例》

15. 《道路交通條例》(第 374 章)及其附屬法例旨在就道路交通的規管、車輛與道路的使用而訂定條文。此等條文中提述的「公共巴士」或「巴士」，均適用於專營巴士公司所營運的巴士。

##### 《公共巴士服務條例》

16. 《公共巴士服務條例》(第 230 章) (「條例」)第 5(1)條訂明，行政長官會同行政會議可向已根據《公司條例》(第 622 章)註冊的公司批予權利，以在行政長官會同行政會議藉命令指明的路線經營公共巴士服務。

17. 條例第 5(3)條訂明：

「專營權 —

(a) 可在公開投標後批予，或以行政長官會同行政會議認為適合的其他方式批予；

(b) ……

(c) 須受行政長官會同行政會議指明的條件規限；」

18. 根據條例第 6(1)條，專營權可獲批予不超逾 10 年的期間。條例第 6(2)條訂明，如專營公司藉書面通知要求延展，行政長官會同行政會議可將專營權延展一段不超逾 5 年的期間。根據條例第 12(1)條，專營公司必須「……維持達致署長<sup>2</sup>滿意的程度的適當而有效率的公共巴士服務」，

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<sup>2</sup> 第 2 條的「署長」乃指「運輸署署長」。

而條例第 12(2)條則訂明，「……專營公司除非按照其專營權、本條例、任何根據其專營權或根據本條例作出的指示、要求或規定，以及任何計劃或任何根據第 16A 條作出的批准而維持和經營服務」，否則專營公司並不符合有關規定。

19. 條例第 9 條訂明，行政長官可委任不多於 2 人為專營公司的額外董事。運輸及房屋局（「運房局」）在其書面陳述中指出已行使權力，在各間獲批予巴士專營權的公司委任 2 名董事。運房局常任秘書長(運輸)黎以德先生在作供時表示，署長和負責巴士服務的副秘書長已獲委任為有關董事。

20. 條例第 22(1)和(2)條訂明，「如某專營公司沒有遵從其專營權或本條例，或沒有遵從根據其專營權或本條例作出的指示或規定，或沒有遵從任何計劃或任何根據第 16A 條給予的批准」，行政長官會同行政會議可規定繳付經濟罰則。條例第 22(3)條訂明，如屬首次施加的經濟罰則，不得超逾 10,000 元，如屬第二次施加罰則，則不得超逾 20,000 元，如屬第二次以後施加的罰則，則不得超逾 50,000 元。

21. 運房局常任秘書長(運輸)黎以德先生代表運房局作供時指出，以他記憶所及，經濟罰則的條文從未就安全事宜而援引。黎先生作供時說他不察覺「近期」有施加該罰則。

22. 條例第 24 條訂明，行政長官會同行政會議若信納專營公司未能「維持適當而有效率的公共巴士服務」及其他原因，而專營公司並無提出因由，解釋為何不應撤銷該項權利，則可以撤銷該項專營權。

### 《公共巴士服務規例》

23. 條例第 35(1)條訂明：

「(1) 運輸及房屋局局長可就以下所有或任何事宜訂立規例：

.....

- (d) 一般地關於某專營公司所使用的巴士上的乘客或擬成為乘客的人的行為；

.....

- (j) 就駕駛某專營公司所使用的巴士的司機而言，規管在本規例所指明的任何期間-

(i) 該司機可准許駕駛該類巴士的最多時數；及

(ii) 該專營公司給予該等司機休息和用茶點的相隔時間；」

條例第 35(2)條訂明，行政長官會同行政會議可藉規例訂定，違反任何規例乃屬犯罪，並訂定不超逾 5,000 元罰款及不超逾 6 個月監禁的罰則。

24. 《公共巴士服務規例》(第 230A 章)(「規例」)第 9 至 12 條對巴士司機的行為及其他事宜作出規定，而規例第 13A 條則對乘客的行為作出規定。規例第 11(d)條訂明，任何巴士司機「須採取一切合理預防措施，確保乘客在該巴士內或該巴士上，或在登上或離開該巴士時的安全」。規例第 13A(1)(a)條訂明任何乘客或擬成為乘客的人均不得「故意阻礙或妨礙巴士司機……或故意分散他們的注意力」。規例第 25(3)條訂明，任何人無合理辯解而違反有關條文，包括第 11(d)及 13A(1)條的條文，即屬犯罪，可處罰款 3,000 元及監禁 6 個月。

25. 運房局常任秘書長(運輸)黎以德先生在作供時表示，基於認為相關條文已經足夠，他們並沒有就規例進行檢討。不過，在大埔公路的意外發生後，並且收到多次有關發生「車長同埋乘客之間嘅緊張嘅氣氛係增加嘅」情況的報告，當局已指派運輸署制訂「教育計劃」，提醒乘客要表現有序守規，並且告知他們提出投訴的途徑。他表示當進行有關工作時，預期運輸署將考慮有關規例是否足夠。[第 1 日聽證會紀錄本：2018 年 5 月 7 日，英文本第 40 至 41 頁，中文本第 14 至 15 頁]

## 附例

26. 條例第 36 條訂明，制訂附例須經立法會批准：

「(1) 任何專營公司在符合本條例及其專營權的規定下，可就以下所有或任何事宜訂立附例-

.....

(c) 該專營公司的公共巴士服務的安全和有效率運作；

.....

(e) 一般地關於正使用該專營公司巴士的乘客的行為……」

條例第 36(3)條訂明，違反任何該等附例，即屬犯罪，可處罰款不超過 2,000 元。

27. 這類附例從未制訂。新巴／城巴董事總經理鄭偉波先生作供時表示，他不知道有該條文，公司亦沒有考慮制訂附例。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 62 至 63 頁，中文本第 30 頁]九巴的蘇偉基先生表示該公司從未亦沒有考慮通過附例，因為若九巴這樣做，便有責任執行附例，同時，他們亦關注到是否有足夠人手即時處理有關問題。相反，他指出警方有資源和專業能力處理與乘客發生衝突而引起的問題。[第 13 日聽證會紀錄本：2018 年 8 月 10 日，英文本第 83 頁，中文本第 37 頁]

### *工作、休息及用膳時間指引*

28. 正如前述，雖然條例已有明文規定須訂立規例，以規管車長的最高駕駛時數，以及休息和用茶點時間，但有關規例仍未訂立。然而，運輸署在 1983 年首次公布《巴士車長工作、休息及用膳時間指引》（「《指

引/」)，並不時予以修訂。2010 年 10 月的《指引》<sup>3</sup>和 2018 年 2 月的《指引》中內容涵蓋以下有關工作日的事項：

- (i) 最長工作時數；
- (ii) 最長駕駛時數；
- (iii) 休息時間的長短和編排；
- (iv) 連續工作天之間的休息時間長短；以及
- (v) 用膳時間的安排。

29. 至於 2018 年 2 月的《指引》，須留意運輸署於 2018 年 4 月 25 日提交的意見書所載該署與專營巴士公司達成協議，說明《指引》[聽證會文件 TD-1：英文原文第 65 頁第 7 段]：

「……將自 2018 年第 2 季開始分階段實施，之後須視乎是否能聘請足夠車長，以填補因縮短現職車長的當值和駕駛時間所引致的額外人手需求，以期新修訂於 2019 年第 2 季獲全面遵守。」

30. 運輸署於 2018 年 4 月 25 日提交的意見書中指出，該署要求專營巴士公司提交季度報告以監察其遵守《指引》的情況，而在 2018 年 1 月後，專營巴士公司便須每月提交報告。此外，運輸署亦委聘獨立承辦商「每年進行實地調查，以評估專營巴士公司遵守《指引》的實際情況。」運輸署指出「過去 3 年遵守《指引》的比率逾 96%。」[聽證會文件 TD-1：英文原文第 66 頁第 8 段]

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<sup>3</sup> 附錄 III

## 專營權協議

31. 行政長官會同行政會議已將現時公共巴士服務的經營權批予以下公司，准其在根據條例第 5(1)條不時就有效而適當的路綫表令及條例第 14 和 15 條所發出的通知書所指明的路綫，於指定期間在訂明的一般地理範圍經營：

- (i) 龍運巴士有限公司(「龍運」) — 2013 年 5 月 1 日至 2023 年 5 月 1 日行走北大嶼山和機場；
- (ii) 城巴有限公司(「城巴」) — 2013 年 5 月 1 日至 2023 年 5 月 1 日行走北大嶼山和機場；
- (iii) 新世界第一巴士服務有限公司(「新巴」) — 2013 年 7 月 1 日至 2023 年 7 月 1 日行走港島、過海路綫、九龍和將軍澳；
- (iv) 城巴 — 2016 年 6 月 1 日至 2026 年 6 月 1 日行走港島和過海路綫；
- (v) 新大嶼山巴士(一九七三)有限公司(「嶼巴」) — 2017 年 3 月 1 日至 2027 年 3 月 1 日行走大嶼山和一條新界路綫；以及
- (vi) 九龍巴士(一九三三)有限公司(「九巴」) — 2017 年 7 月 1 日至 2027 年 7 月 1 日行走九龍、過海路綫和新界。

32. 6 間專營巴士公司的專營權文件第 1(3)條規定：「除非另有明文規定，否則專營公司須遵循署長就此項專營權而發出的任何指示及要求，而政府不必為此動用公帑。」[聽證會文件 TD-2：英文原文第 323 頁]6 間專營巴士公司的專營權文件第 7(1)條規定[聽證會文件 TD-2：英文原文第 325 頁]：

「專營公司須盡可能在切實可行的情況下，按照署長與其進行磋商後所合理地可能提出的要求，為其巴士取得、提供、採用、維修或修改安全或提升服務的設施、裝設、固定附着物、裝置、器材或設備，並令署長滿意。」

33. 條例第 18(1)訂明，專營公司須就指明事宜備存妥當紀錄，並在署長提出要求時提交該些紀錄的副本。

34. 各獲批專營權的巴士公司的專營權文件均訂明，該專營公司必須按照署長的規定，以書面向署長提交他們所備存的紀錄的副本，連同有關巴士服務的資料，包括但不限於批予專營權所訂明的事宜。

35. 於 2016 年 6 月 1 日之前批予的專營權訂明相同的紀錄和資料，即 (a)至(m)<sup>4</sup>項；而在 2016 年 6 月 1 日或之後批予的專營權則各自訂明相同的紀錄和資料，即附表II的(a)至(q)<sup>5</sup>項。

### *遠期計劃*

36. 條例第 12A 條訂明，專營公司須於每年不遲於 6 月 30 日，「就附表指明的事宜擬備專營公司其後 5 年的經營計劃」，而專營公司及署長須採取一切合理步驟，以在不遲於該年的 9 月 30 日，就該計劃達成協議；否則，根據條例第 12A(4)條，運房局局長須「就該(有歧見的)事項作出決定」。運房局常任秘書長(運輸)黎以德先生在作供時確認運房局局長從未要求作出有關決定。[第 1 日聽證會紀錄本：2018 年 5 月 7 日，英文本第 46 頁，中文本第 17 頁]

37. 條例第 12A 條附表第(a)至(g)段訂明計劃須包括的指定事宜，但(h)段亦訂明計劃須涵蓋「署長藉給予專營公司書面通知而規定的其他事宜，不論該等事宜是否(a)至(g)段所指明者。」

38. 城巴的意見書夾附運輸署於 2017 年 5 月 17 日向其發出的信件[聽證會文件 CTB-2：英文原文第 3 至 19 頁]，說明運輸署通知專營公司每年向署方提交的 5 年遠期計劃所須涵蓋事宜的程序。信中述明城巴獲提供「一

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<sup>4</sup> 附錄 IV

<sup>5</sup> 附錄 V

套內容關乎下列範疇的指引和規定，以便貴公司遵行有關擬備 2018-2022 年 5 年遠期計劃的規定」。該信在「巴士安全」的標題下指出：

「貴公司的遠期計劃應包含『巴士安全』的獨立章節以涵蓋下列資料：

- (a) 過去 2 個曆年發生的意外的類別／成因分析，以及意外率與下列各項因素的關係：
  - (i) 車長年齡；
  - (ii) 車長的服務年資；
  - (iii) 車長在意外前已駕駛的時數；
  - (iv) 車長駕駛有關路線的經驗；
  - (v) 車長操作該型號巴士的經驗；
  - (vi) 車長每更駕駛的路線數目；以及
  - (vii) 車長每更駕駛的巴士數目。
- (b) 未來 5 年每年減低意外比率(以每百萬公里計)的目標。
- (c) 未來 2 年減少常見類別／成因的意外的計劃項目。
- (d) 未來 2 年提升長者和殘疾人士在巴士上的安全的項目／計劃。
- (e) 利用黑盒或類似儀器收集數據，進行自動化監察車長駕駛行為的計劃。
- (f) 未來 2 年提升乘客安全的宣傳項目／計劃。
- (g) 未來 2 年加強車長培訓的項目／計劃。
- (h) 在直梯式雙層巴士的樓梯兩旁加設扶手的項目。



- (i) 請提供在全部新巴士上的(a)所有座椅和(b)所有上層座椅安裝安全帶的可行性研究報告。」[斜體為本文所加]

### *2018-2022 年專營巴士營辦商 5 年遠期計劃*

39. 雖然運輸署基於商業機密的理由，拒絕在其書面意見中向委員會提供專營公司每年向署方呈交的 5 年遠期計劃。然而，經協助委員會的大律師在署長陳美寶女士提供口述證供時向其作出要求，並得到所有相關專營公司的同意，委員會最終取得 2017 年呈交予運輸署的各份遠期計劃中有關巴士安全的章節。其後，九巴／龍運應委員會的要求，提供其各自就 2019-2023 年整段期間按年呈交的遠期計劃中有關巴士安全章節的副本。

40. 2018-2022 年九巴遠期計劃報告的巴士安全章節，載述在 2015 至 2016 年這兩年期間所發生意外的按性質分類分析。須留意的是，報告指出在該段期間，51.5%的意外涉及「乘客失去平衡」。該兩年中，每年發生大約 450 宗同類意外，當中「逾半是由於行車期間剎車所致」。報告中「按責任分類意外」的分析指出，25%的意外涉及車長「疏忽」，至於在其餘 75%的意外中，車長則「沒有犯錯」。[聽證會文件 TD-1：英文原文第 183 至 184 頁]

41. 代表香港警務處作供的總警司白令嘉先生在證供中表示，警方會自行整理意外的統計數字，即採用與運輸署共用的「案件管理資訊系統」。調查個別意外的警務人員會按既定範本把數據輸入系統，該範本就意外成因列出 60 項特定的「司機相關因素」，並設有意外可能屬「其他司機因素」和「不關乎司機的因素」的選項。他稱對專營巴士公司的遠期計劃所包含的資料並不知情，但認同如可取用該等詳盡資料，對警方是有用的。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 13 至 14 頁、第 19 頁、第 28 至 30 頁，中文本第 5 至 8 頁及 11 至 12 頁]。數據聚焦於意外的成因而非後果，而範本內並無「沒有佩戴安全帶」的選項。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 33 頁，中文本第 13 頁]

## 黑盒

42. 運輸署分別要求各專營公司提供有關利用電子數據記錄儀(「黑盒」)或類似儀器收集數據，以進行自動化監察車長駕駛行為的計劃的詳情，而專營公司的回應顯示運輸署只是要求在巴士上安裝具備基本功能的行車記錄儀。這項規定始於運輸署在 2003 年 10 月 17 日致函專營巴士公司時訂明的，適用於 2004 年 7 月 1 日後首次登記的巴士。有關文件鄭重說明訂立規定的目的[聽證會文件 CTB-2(A)：英文原文第 206 頁]：

### 「電子數據記錄儀的最低基本要求

1. 電子數據記錄儀旨在提供工具，以便巴士公司監察及管理旗下巴士在路面行走時有關車速和安全的表現，並間接鼓勵良好的駕駛態度。」[斜體為本文所加]

43. 對於儀器的要求，文件指出：

「2. 記錄儀應每隔 1 秒採集下列數據，並每 30 秒儲存數據 1 次，為時 2 周：

#### (a) 操作時間(實時)

- 發車時間
- 行駛時間
- 停車時間
- 結束時間

#### (b) 車速

3. 分析車上或所下載的數據的軟件須作出以下報告：

- (a) 意外報告—在偵測到 0.2G 的減速前的 3 分鐘時間內，每隔 1 秒記錄的車速資料

(b) 超速報告一車速超過每小時 70 公里的頻率、所達到的最高車速和超速時間的長短。」

44. 必須注意，儘管專營巴士在香港道路上行駛的最高速度為每小時 70 公里，但它們途經的大部分路段，最高車速限制僅為每小時 50 公里。

45. 隨後，運輸署於 2018 年 10 月 3 日告知委員會，已於 2018 年 8 月修訂「電子數據記錄儀的最低基本要求」。其中一項改變是偵測減速的臨界值由 0.2G 增加至 0.4G。[聽證會文件 TD-5：英文原文第 1773 頁，第 2.22 章及第 1807 頁]

46. 若干專營巴士營辦商自 2004 年起展開在專營巴士上加裝行車記錄儀的計劃，經年來逐漸取得進展。於 2009 年 11 月和 2012 年 11 月 26 日向立法會交通事務委員會提交的簡介文件亦指出，在 2009 年 9 月和 2012 年 1 月，分別約有 70%和 85%的專營巴士已安裝了黑盒。[聽證會文件 SEC-1：英文原文第 350 頁第 7 段及第 409 頁第 16 段]

47. 其後直至 2018 年 8 月為止，運輸署並未有因應科技進步，而向專營公司特別就該儀器的應用作出新規定。然而，在運輸署分別與城巴和嶼巴為各別的專營權續期進行洽商期間，該 2 家營辦商於 2015 年 8 月承諾提供改善服務措施，包括[聽證會文件 CTB-3：英文原文第 582 頁；以及聽證會文件 NLB-2：英文原文第 34 頁]：

「(a) 新專營權第 14 項條款

(1) 提供實時巴士資訊系統，以便通過流動通訊裝置(包括但不限於智能電話、平版電腦和電腦)，輔以安裝在……巴士總站的顯示屏，根據實時數據，發布貴公司營辦的所有巴士路線在各巴士總站和中途站(如適用)開出或抵站的預計時間……」

48. 嶼巴董事總經理黃焯安先生作供稱[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 133 頁，中文本第 61 頁]：

「嚟 2003 年之後，……嗰陣時要求我哋去裝黑盒，我哋以前係有……一直用一個舊式嘅黑盒，其實係連一啲資料我哋想去上傳番返去我哋個server<sup>6</sup>度，都做唔到。亦都係嚟 2016 年我哋開始去傾個新專營權嘅時候，因為係去做個ETA<sup>7</sup>，而我哋就換咗一個新款嘅黑盒。」

49. 九巴和龍運在 2017 年遞交各自的 2018-2022 年 5 年遠期計劃中表明 [聽證會文件 TD-1：英文原文第 187 至 188 頁及第 218 頁，第 8.3.2 段]：

#### 九巴

「巴士已經安裝或現正安裝監察和限制車速的儀器。

- 現正利用電子行車記錄儀監察車長表現，特別是超速行為。該儀器是新巴士必備的標準器材。截至 2017 年 4 月底，共有 3 922 部九巴巴士(即 100%已登記的領牌車隊)已安裝了電子行車記錄儀；以及
- 所有巴士已安裝實時駕駛提示器，以助車長應用在環保安全駕駛培訓課程中所學的駕駛技術。」

#### 龍運

「巴士已經安裝或現正安裝監察和限制車速的儀器。

- 現正利用電子行車記錄儀監察車長表現，特別是超速行為。該儀器是新巴士必備的標準器材。截至 2017 年 5 月底，共有 24 部龍運巴士(即 100%已登記的領牌車隊)已安裝電子行車記錄儀；以及
- 自 2013 年年中起，已陸續在巴士安裝實時駕駛提示器，以助車長應用在環保安全駕駛培訓課程中所學的駕駛技術。」

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<sup>6</sup> 「server」即「伺服器」。

<sup>7</sup> 「ETA」即「預計到站時間」。

50. 相比之下，嶼巴則在標題「*利用黑盒或類似儀器收集數據，以進行自動化監察車長駕駛行為的計劃*」下表示[聽證會文件 TD-1：英文原文第 236 至 237 頁，第(C)(e)段]：

「發生交通意外後，一般會翻查黑盒的數據，對這些電子數據進行特別分析。

分析結果會作防範意外研究之用，以避免同類意外再次發生。

翻查、分析數據及提供建議的工作需由專家支援。」

51. 委員會曾向嶼巴查詢如何利用旗下巴士所安裝黑盒的收集數據功能。嶼巴在其書面意見中作出回應[聽證會文件 NLB-1：英文原文第 33 頁]：

「為記錄及使用所有這些大量數據，必須在數據傳輸、數據儲存系統和精密軟件方面投入巨額資金。目前，專營巴士營辦商利用黑盒系統實時監察車長的表現，是否(原文如此)並非強制規定；而能否運用科技實時監察車長的表現，亦須視乎各營辦商的運作需要和財政能力。」

52. 然而，嶼巴董事黃焯添先生作供時表示，雖然嶼巴目前未能提交巴士超速異常報告，但預期公司的系統在 2018 年第四季便可製備這類報告。製作報告的各項準則仍未敲定。日後，嶼巴「希望可以做到從黑盒每秒上傳資料」。與現時每隔 30 秒傳送數據一次相比，新安排涉及的額外數據傳輸費用約為每部巴士每月 100 元。另一方面，黃先生表示嶼巴仍在考慮是否向車長發出實時超速警報，並需就此與工會商討。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 125 至 128 頁，中文本第 57 至 58 頁]

53. 2016 年 3 月，九巴和龍運的控股公司載通國際控股有限公司發表 2015 年年報，內容提及[聽證會文件 KMB-5：英文原文第 1526 頁]：

「巴士到站時間預報系統

於 2015 年底，集團內部研發的巴士到站時間預報服務已全面覆蓋九巴及龍運單獨經營的所有路線，使九巴和龍運成為香港首兩間全線提供此項服務的巴士公司。乘客可透過巴士總站及巴士站的顯示屏，以及九巴／龍運的智能手機應用程式及九巴和龍運網頁，獲取巴士到站資訊。」

54. 運房局在一份 2017 年 3 月 28 日的立法會參考資料摘要告知立法會 [聽證會文件 TD-3：英文原文第 496 至 569 頁]，九巴的專營權會在 2017 年 7 月 1 日續期，九巴在續期前已保證會兌現推行改善服務和提升安全措施的承諾，包括 [聽證會文件 TD-3：英文原文第 543 頁]：

「乘客資訊

(ii) 以網頁及智能手機應用程式提供實時巴士到站資訊，並分階段在合適的巴士站增設顯示屏以提供該等資訊。」

55. 運輸署在 2018 年 7 月 13 日的書面意見中，表示曾於 2005 年、2009 年和 2016 年與九巴和城巴開會，會上建議他們多加利用巴士黑盒所記錄的數據，「以監察車長的駕駛態度和行為」。不過，運輸署看來是直至 2018 年 1 月，即「2017 年 9 月的深水埗巴士車禍後」，才首次要求巴士公司就取自黑盒的資料提交特定報告；由此看來，此前一直由專營巴士營辦商自行決定如何利用行車記錄儀／黑盒達到上述監察目的。[聽證會文件 TD-1：英文原文第 50 頁及第 394 至 395 頁]

56. 運輸署在 2018 年 4 月 25 日的書面意見中表示 [聽證會文件 TD-1：英文原文第 50 頁，第 40 段]：

「由 2018 年 1 月起，所有專營巴士營辦商均須向運輸署提交以下的每月報告：

(i) 隨機抽查有關黑盒記錄的運作數據的結果及相應跟進工作的資料；」

57. 2018 年 1 月的每月巴士安全監察措施報告顯示，運輸署的範本要求的資料包括「檢查監察車長駕駛行為的黑盒數據」，有關資料根據「黑盒數據例行檢查(截至月底為止)」及「因投訴等事項而進行的黑盒數據特別

檢查(截至月底為止)」兩類檢查而製備，每類檢查涉及「- 加速 - 突然剎車 - 其他(請註明)」的行為及「已作出的跟進行動」。在 8 552 宗例行類別的檢查中，有 271 宗據報為超速，管方為此發出共 271 項口頭、書面及最後警告。至於 400 宗特別檢查，當中 5 宗據報為超速，8 宗為突然剎車，管方為此發出 13 項口頭警告。

58. 根據 2018 年 5 月 4 日運輸署的意見書中的聲明，運輸署「檢視專營巴士營辦商提交的每月報告，以確定專營巴士營辦商一直監察旗下司機的駕駛行為，以及採取／將會採取跟進行動」[聽證會文件 TD-1：英文原文第 163 頁]。就此，主席詢問「檢視」一詞是否僅表示運輸署閱讀該文件，署長沒有直接回答，而是表示[第 2 日聽證會紀錄本：2018 年 5 月 8 日，英文本第 44 頁，中文本第 16 頁]：

「呢個係以月報嘅形式提供嘅，……一啲基本資料，睇下巴士公司係以乜嘢方式去檢查，譬如話係<暗中巡查及>查嗰個黑盒嘅數據，<以及跟進行動，>……呢個係等我哋每年評估巴士公司表現嘅時候嘅一個理據，再加埋我哋有個獨立嘅分析。我哋分析番巴士營運商嘅意外嘅數字，同埋有冇乜嘢嘅成因，<譬如話睇下係咪關乎>巴士車長個行為嘅問題。」

### 訓練

59. 關於「未來兩年加強車長訓練」的項目／計劃，城巴(涉及專營權 1 及 2)和新巴表示[聽證會文件 TD-1：英文原文第 200 及 232 頁第 5.11(ii)段；第 208 頁第 5.3(ii)段]：

「向每名車長提供複修駕駛課程。課程內容會定期檢討，必須包括防衛性駕駛概念、防止意外小知識及交通意外黑點。」

60. 九巴和龍運提及本身的項目／計劃時表示[聽證會文件 TD-1：英文原文第 187 及 218 頁，第 8.3.1 段]：

「駕駛導師會按步驟進行檢查，監察駕駛表現，如有需要，以紀律行動作出跟進。此外，實時駕駛提示器亦有助識別在指定路線上『急速剎車』率高於正常

的車長。這項資料可用以確保向車長主動提供適當的意見，以促進改善駕駛行為，從而達致防止／減少乘客『失去平衡』的情況(以及一般意外)。」

61. 嶼巴則表示[聽證會文件 TD-1：英文原文第 237 頁，第 C(g)段]：

「未來兩年加強車長訓練的項目／計劃

為此，嶼巴會設法與其他專營巴士營辦商合作，倘雙方同意及合作，會派遣車長參加其他營辦商提供的訓練課程。

與外間專業機構合作，為在職及新聘司機提供加強駕駛技巧訓練。」

62. 署長在口述證供中解釋[第 1 日聽證會紀錄本：2018 年 5 月 7 日，英文本第 89 頁，中文本第 32 頁]：

「講到巴士車長嗰方面，其實係專營權公司亦都自願咁樣樣係作出一啲服務嘅承諾，亦都為所有新入職嘅車長就去提供呢個培訓，亦都每三年一次為現役嘅車長提供一個<在職>培訓嘅。佢哋亦都提供咗培訓方面嘅資訊，係每年咁樣向署方係提交呢啲係資料，讓我哋進行呢個監察嘅。」

63. 鄧樂勤資深大律師詢問運輸署是否依賴專營巴士營辦商提供的資料，抑或署方會獨立檢視車長的訓練，署長回答時表示[第 1 日聽證會紀錄本：2018 年 5 月 7 日，英文本第 107 頁，中文本第 38 至 39 頁]：

「巴士公司提供咗一啲資料畀我哋嘅，喺呢一方面，喺佢哋每年嗰個計劃嗰度都有話畀我哋聽係點樣樣去落實佢哋自願作出嘅呢一個服務承諾，我哋會睇佢哋呢啲資料，而且亦都每年去檢視佢哋嘅表現嘅。」

我要係強調一點，運輸署並唔會係再自己獨立咁進行去查核嘅，因為呢啲培訓嘅工作唔係源自嗰個係專營權或者係嗰個條例嘅，其實就係巴士公司係自願咁樣樣係提出呢一個就跟進我哋同佢哋講係如何去加強巴士安全。其實喺法例上面就係有咁嘅要求，專營權嗰度亦都有咁嘅要求嘅，所以到目前為止，我哋運輸署就係有……突擊檢查或者係自己獨立咁去調查佢哋嗰個車長方面嘅培訓。」[斜體為本文所加]



64. 署長確認，運輸署沒有「特別係指明對培訓或者係某啲措施嘅……要求」，也沒有向專營巴士營辦商發出關於訓練的「任何指引」。對於「所以呢啲就係由巴士公司決定嘅？」的問題，署長作出肯定的答覆[第 1 日聽證會紀錄本：2018 年 5 月 7 日，英文本第 132 至 133 頁，中文本第 48 頁]。

65. 另一方面，運輸署在 2018 年 4 月 25 日的書面意見中表示[聽證會文件 TD-1：英文原文第 50 至 51 頁，第 40 段]：

「就新聘司機的訓練及在職司機的訓練(即每三年一次)，專營巴士營辦商須向運輸署提交每季報告。」

### *車輛維修*

66. 運輸署在 2018 年 4 月 25 日的書面意見中表示，在確保專營巴士車輛安全方面，不只依靠年度檢驗，還需要由專營巴士營辦商對現役專營巴士進行每月檢查。為此，營辦商須提供「《公共巴士服務條例》第 18(2) 條所規定的每月車輛維修報表」，當中包括專營巴士路上故障的資料以述明具體毛病。另外，運輸署「每日突擊檢查 14 輛專營巴士」，抽驗車輛[聽證會文件 TD-1：英文原文第 90 至 92 頁，第 9 段；聽證會文件 TD-4：第 1390 至 1391 頁]。據悉[聽證會文件 TD-1：英文原文第 92 頁，第 11 段]：

「…在 2012 至 2016 年間，運輸署檢驗有關巴士營辦商的專營巴士，發現與安全有關的毛病按每部經檢驗的巴士計只介乎 0 至 0.08 之間。」

### *運輸署對專營巴士運作表現的評估*

67. 運輸署在書面意見中表示，運輸署每年評估「專營巴士運作表現」時，會考慮專營巴士營辦商提供的資料和運輸署獨立取得的資料。陳美寶女士在口述證供中表示，評估結果會提交交通諮詢委員會(「交諮會」)，以便該會向行政長官會同行政會議提供意見[第 2 日聽證會紀錄本：2018

年 5 月 8 日，英文本第 3 頁，中文本第 2 頁]。評估會考慮 9 項主要指標，當中 2 項明確與安全有關，即「每次檢驗發現與安全相關的毛病」及巴士「每百萬行車公里的涉及意外率」。[聽證會文件 TD-2：英文原文第 316 頁]

68. 日期為 2017 年 9 月的 2016 年評估已提交委員會，用以說明評估過程。評估文件附件 B 關乎「加強巴士運作安全措施」。在「加強安全設施及車上設計特點」標題下，該文件表示[聽證會文件 TD-2：英文原文第 317 頁，第(b)段]：

「整隊專營巴士車隊均設有車速限制器，將巴士時速限制於 70 公里。所有巴士均已加裝黑盒。」

69. 在「車長培訓」標題下，該文件指出[聽證會文件 TD-2：英文原文第 317 頁]：

「專營巴士營辦商繼續採取措施，改善車長的駕駛技巧、駕駛態度，以及安全意識。除培訓新聘車長外，所有巴士營辦商亦為現職車長提供加強、複修及矯正的安全駕駛訓練課程。另外設有獎勵計劃，向車長發放安全獎金及安全駕駛獎項。」[斜體為本文所加]

70. 在「改善車長休息時間」標題下，鑑於有關《指引》已於 2010 年 10 月修訂，該文件指出[聽證會文件 TD-2：英文原文第 318 頁，第(d)段]：

「《指引》自 2012 年第 4 季起全面實施，自此所有巴士營辦商均把用膳時間增至不少於一小時。所有巴士營辦商須就遵行《指引》的情況向運輸署提交定期報告。該署亦定期調查，評估《指引》的遵行情況，認為結果令人滿意。」

### 續批專營權

71. 正如前述，專營權可經公開投標批予，或「以行政長官會同行政會議認為合適的其他方式批予」。當局在 1998 年決定不向中華汽車有限公

司續批專營權，並招標承投各條路線的 5 年專營權，此後便沒有再公開招標承投巴士專營權。而現時的專營權是政府經評估專營公司是否提供「適當而有效率的公共巴士服務」後續批的。[聽證會文件 TD-1：英文原文第 74 頁]

72. 2013 年新巴、龍運及城巴獲續批專營權，可說明該程序。立法會交通事務委員會從一份日期為 2011 年 7 月的討論文件得悉，當局計劃把專營權繼續批予這些公司。就此，運房局表示[聽證會文件 SEC-1：英文原文第 378 頁，第 6 段]：

「根據既定的做法，巴士公司如證明能夠提供適當而有效率的服務，並願意繼續投資經營專營巴士服務，可獲批予為期 10 年的新專營權。」

73. 關於決定專營公司是否提供適當而有效率服務的程序，該文件述明[聽證會文件 SEC-1：英文原文第 378 頁，第 7 段]：

「……運輸署一向通過乘客滿意程度調查、實地調查、車輛檢驗、以及審閱巴士公司定期提交的資料和公眾意見，來定期檢視該些公司的服務表現。」

74. 該文件接着作出「評估」，在「服務表現和營運效率」、「加強安全和服務的措施」及「市民對巴士服務的意見」等標題下進行分析，然後指出署長認為專營公司「……一直提供適當而有效率的巴士服務，而且展示出願意繼續投資以進一步改善服務。」該文件在總結指出「……當局計劃與 3 家專營巴士公司分別就為期 10 年的新專營權進行商議，在 2013 年他們的現有專營權屆滿時隨即生效。」[聽證會文件 SEC-1：英文原文第 379 至 383 頁]

75. 交諮會在 2011 年 7 月 26 日及 2012 年 3 月 27 日舉行會議後，在 2012 年 4 月 10 日致函運房局局長，表示支持「當局在 3 間巴士公司現有專營權屆滿後批出 10 年新專營權的建議……」[聽證會文件 TD-4：英文原文第 1372 頁]。其後，運房局在一份日期為 2012 年 4 月的立法會參考資料摘要中告知立法會，在行政會議 2012 年 4 月 24 日的會議上，行政會議建

議而行政長官亦已指令新的 10 年專營權批予 3 間專營公司，並在 2013 年的不同日期生效；作出此決定時已參考了政府所徵詢「市民與各區議會轄下交通及運輸委員會」的意見，以及諮詢立法會交通事務委員會及交諮會。[聽證會文件 TD-4：英文原文第 1275 頁]

76. 署長作供時表示，最近有關競投新專營巴士線的例子包括高鐵西九龍站及港珠澳大橋的巴士線。不過，她澄清這些投標只限現有專營巴士營辦商參加，並非公開投標。運輸署首席運輸主任謝善怡女士表示，上次公開投標在 1998 年舉行，當時招標承投先前由中華汽車有限公司營辦的路線。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 16 至 26 頁，中文本第 11 頁]

#### 第 4 章 — 對於公眾廣泛關注專營巴士安全的回應

##### A. 深水埗致命意外 — 2017 年 9 月 22 日

77. 2017 年 9 月 22 日，一輛專營巴士撞向在交通燈前停下的一輛的士的尾部，再駛前撞向站在行人路上等候過馬路的行人，在撞到懸掛式簷篷後停下，導致 3 人死亡，包括巴士上層 1 名乘客及行人路上 2 名行人。

78. 2017 年年底起，運輸署與各個有關工會及專營巴士營辦商的代表舉行多次會議，考慮應否修訂《指引》。運輸署於 2018 年 2 月頒布了經修訂的《指引》，當中訂明的事宜包括調低車長每天容許駕駛巴士的最高時數。

##### B. 大埔公路致命意外 — 2018 年 2 月 10 日

79. 2018 年 2 月 10 日，大埔公路發生涉及一輛專營巴士的致命意外，導致 19 人死亡及多人受傷，當局在意外後即時及持續進行善後工作，舉行多次會議，並展開多項措施。

##### (i) 2018 年 2 月 12 日 — 大埔區議會特別會議

80. 在大埔區議會於 2018 年 2 月 12 日舉行的特別會議上，署長為回應 2018 年 2 月 10 日大埔公路意外所引起的廣泛關注，向與會者表示九巴已承諾在一個月內向運輸署提交意外報告，並告知區議員行政長官已決定成立獨立委員會調查。[聽證會文件 DC-2：英文本第 786 頁，中文本第 769 頁]

##### (ii) 2018 年 2 月 15 日—立法會交通事務委員會會議

81. 立法會交通事務委員會在 2018 年 2 月 15 日的會議上，運房局局長告知「當局在 2 月 10 日的意外發生後採取的跟進行動」。結果，3 項議案獲得通過。其中一項議案促請運輸署探討為所有座椅加裝安全帶的可行

性。另一項議案促請當局不單探討可行性，亦須「分階段強制乘客佩戴安全帶」。該項議案亦促請當局改裝限速裝置及安裝自動緊急剎車系統。最後，委員會促請專營巴士公司檢討車長的工時、薪酬及訓練。[聽證會文件 SEC-3：英文原文第 1345 至 1346 頁，第 1360 至 1362 頁]

*(iii) 2018 年 3 月 12 日 — 九巴意外報告*

82. 2018 年 3 月 12 日，九巴向署長提交該公司就 2018 年 2 月 10 日的意外進行調查而撰寫的意外報告。[聽證會文件 KMB-1(A)：英文原文第 98 至 116 頁]

*(iv) 2018 年 3 月中 — 加強專營巴士安全工作小組*

83. 運輸署在 2018 年 4 月 25 日提交的書面意見中告知委員會，該署已於 2018 年 3 月中成立了加強專營巴士安全工作小組(「工作小組」)，由 5 個專營巴士營辦商、3 個巴士製造商的代表及運輸署代表組成。[聽證會文件 TD-1：英文原文第 95 頁；聽證會文件 TD-5：英文原文第 1761 至 1763 頁]須注意，工作小組首個會議於 2018 年 3 月 13 日舉行，即署長收到大埔公路意外九巴特別委員會的報告之後一日。

*(v) 2018 年 4 月 10 日 — 九巴行動計劃*

84. 九巴於 2018 年 4 月 10 日去信運輸署呈交行動計劃，闡述如何實施 2018 年 3 月 12 日的意外報告中所載的主要建議。[聽證會文件 KMB-1(A)：英文原文第 145 至 151 頁]

*(vi) 2018 年 5 月初 — 城巴的安全委員會*

85. 2018 年 5 月初，城巴成立了安全委員會，由董事總經理鄭偉波先生擔任主席。[聽證會文件 CTB-1：英文原文第 54 頁；第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 2 頁及第 24 至 27 頁，中文本第 2 頁及 12 頁]

## 第 5 章 — 《巴士車長工作、休息及用膳時間指引》

86. 正如前述，現時生效的巴士車長工作、休息及用膳時間《指引》為運輸署於 2010 年 10 月所提供的經修訂《指引》，沿用至 2018 年第二季才開始實施 2018 年 2 月再修訂的《指引》。當局建議視乎車長的招聘情況，在 2019 年第二季全面實施該再修訂的《指引》。

### 2018 年 2 月 23 日發布的《指引》

87. 雖然《指引》(1)(a)訂明最長的更次時間，即每一個更次由開始至完結的時間(包括所有休息時間)不得超逾 12 小時，亦即一更次內執行駕駛職務及小休的時間。然而《指引》(1)(b)訂明，「因應上下午繁忙時間的服務需要而安排」的特別更次時間可超逾 12 小時，惟最長的更次時間限於 14 小時，而當中最長的駕駛時間則仍然是 10 小時，在特別更次內應有一段不少於連續 3 小時的休息時間。

88. 《指引》(2)訂明[聽證會文件 TD-4：英文原文第 1086 頁]：

「兩個相連更次之間的休班時間不應少於 10 小時。另外，除特別更次外，三個相連更次內的總休班時間不應少於 22 小時。」[斜體為本文所加]

### 運輸署的立場

89. 運輸署在其書面意見中表示[聽證會文件 TD-1：英文原文第 64 頁，第 6 段，註 3]：

「超過一半的專營巴士路線在早上及晚上的繁忙時段班次較為頻密得多。在非繁忙時段，這些路線的需求不大，因此所需的司機也較少。現時，專營巴士營辦商合共有約 1 500 個特別更次。如取消所有特別更次，便需要額外逾 1 000 名巴士司機，而額外聘請這麼多巴士司機並不可行，遑論當中所涉的財政開支。此外，現時駕駛特別更次的巴士司機的實收薪金會因而減少。」[斜體為本文所加]

90. 對於《指引》(2)有關 3 個相連更次內最少休班時間的規定不適用於特別更次，運輸署解釋[聽證會文件 TD-1：英文原文第 65 頁，第 6 段，註 4]：

「3 個相連更次內的總休班時間不應少於 22 小時的規定並不適用，因為現時最長更次時間 14 小時，以及兩個相連更次之間休班時間最少 10 小時的規定是為特別更次而維持，以應付運作需要。」

### 工會的立場

91. 正如前述，在 2017 年 9 月 22 日於深水埗發生致命巴士意外後，運輸署在 2017 年 10 月初與各個工會代表舉行會議，徵詢他們對現行的工作、用膳及休息時間《指引》及其他事宜的意見。

### 汽車交通運輸業總工會

92. 汽車交通運輸業總工會林天賦先生在作供時確認，其工會的立場如 2017 年 10 月 17 日刊登的通告所述[聽證會文件 TU-1(D)：英文本第 289-274 頁，中文本第 289-120 頁]：

「不能在短期內一刀切地下調工作指引中的工時上限，而應制定過渡或階段性措施來處理這個問題。」

93. 林先生表示[第 9 日聽證會紀錄本：2018 年 7 月 30 日，英文本第 63 至 64 頁，中文本第 29 至 30 頁]：

「……我哋喺見運輸及房屋局局長陳帆嗰陣時都講得比較清楚……呢個十四小時係工作嘅時間上限，唔代表所有嘅司機都係要做十二<十四>小時工作……

第二點，就喺呢個十四小時，因為如果減到十二小時嘅話，對員工個收入會有比較大嘅影響……每日減兩小時嘅話，佢哋嘅收入每個月會減 5,000 蚊<蚊>……如果要十四小時減到十二小時，即係巴士公司需要將呢啲時間畀咗其他人，其他本來工時相對短嘅員工去做呢個負擔，負起呢個駕駛任務……九巴



有二千個員工嘅話，佢即係每日要有四千個小時嘅工作時間，起碼要請四百人以上……唔係短時間可以得到嘅。

所以呢個見到就話如果呢啲工作時間喺短期入面有可能達成嘅話，呢個變咗--工作時間應該係變咗而家啲工時比較短嘅人要變咗兼負咗。

呢個所以我哋講嘅……反而係休息時間更加重要，休息嘅設施更加重要，比巴士司機，巴士車長有好嘅工作條件，好嘅工作環境。

咁呢個就係唔可以單純去睇，將呢個十四小時將佢醜化佢，因為巴士公司又好，巴士車長又好，佢需要彈性……其實巴士嗰個車長要開特別更嘅，佢哋要申請嘅，唔係話巴士公司安排嘅。」

94. 在其證供部分，張子琦先生確認其他工會曾建議更次時間上限應調低至 12 小時。

95. 關於需要為車長提供足夠的休息設施，黎兆聰先生表示[第 9 日聽證會紀錄本：2018 年 7 月 30 日，英文本第 56 至 57 頁，中文本第 26 頁]：

「例如有啲九龍灣廠，佢住屯門……佢可能唯有喺休息室搵地方休息，或者搵個架車休息，或者返廠休息，咁呢個可能佢要自己去選擇一個休息地方。個設置夠唔夠呢？可能七成夠……但係你話有休息室配唔配置到，迎唔迎合到佢呢？咁我相信有啲未必迎合到佢嘅，可能有時啲休息室……會嘈呀，咁可能會選擇一啲連鎖店或者麥當勞……去休息。」

### *巴士業職工會聯盟*

96. 巴士業職工會聯盟(「聯盟」)林錦標先生在作供時確認，聯盟提倡將車長最長的工作時間由 14 小時減至 12 小時。劉啟謙先生在其證供指，聯盟的意見書內有一個附件，當中引述了歐盟、美國、新加坡及南韓的工時做法，以支持其立場。[第 9 日聽證會紀錄本：2018 年 7 月 30 日，英文本第 119 至 120 頁，中文本第 52 頁；聽證會文件 TU-1(B)：英文原文第 260-351 頁至 260-388 頁]須注意，附件內實無提供有關美國或南韓的書面資料。

97. 關於聯盟反對 2018 年《指引》中列明的特別更次安排，鍾松輝先生投訴，運輸署未有訂明連續 3 小時休息「究竟有冇薪酬」，並強調[第 9 日聽證會紀錄本：2018 年 7 月 30 日，英文本第 121 至 122 頁，中文本第 52 至 53 頁]：

「冇地方畀我哋休息。即係好似過街老鼠咁，你叫啲車長何來會可以喺個所謂休息時間可以補充到體力呢？」

98. 聯盟在 2018 年 4 月 24 日提交的書面意見中表示「運輸署在修定<訂>車長工作指引的同時，亦承諾了改善車長休息的設施。」就此，聯盟強調[聽證會文件 TU-1(A)：英文本第 226-25 頁，中文本第 171 頁]：

「……設立休息設施如休息室亦涉及多個政府部門，如運輸署、地政總署、食物及環境衛生署、房屋署及警方等，而且尚要經民政事務總署及一連串的諮詢程序方有望成功設立休息設施。以港島區鰂魚涌(祐民街)總站為例，便經過接近長達十年的爭取，直到今天，一個細小的休息空間也未能落地，而樂華邨總站休息室的設置更變成小規模的抗爭行動。」

99. 聯盟在 2018 年 7 月 16 日提交的書面意見，附有運房局於 2018 年 4 月 18 日發給聯盟的信件，信中指出「同時，專營巴士公司也承諾考慮為車長在休息時間提供適當的薪酬待遇，以及進一步改善車長休息設施的環境和設備。[聽證會文件 TU-1(B)：英文本第 260-341-4 頁，中文本第 260-340 頁]

### *九巴僱員工會*

100. 九巴僱員工會在其書面意見中表示「合理工作時數每天最高 12 小時」。[聽證會文件 TU-1(A)：英文本第 90-7 頁，中文本第 88 頁]

101. 黃健威先生在作供時表示，他在九巴擔任車長，駕駛特別更次。他輪值工作 5 天或 6 天後休班 1 天，每天工作時段相同。為說明他日常的工作模式，他敘述 2018 年 6 月 26 日的工作，當時是他作供前約一個月。他於 06:30 時離開葵盛西邨的住所，先乘搭巴士到美孚，繼而乘搭九巴的旅

遊巴到昂船洲巴士廠，在大約 07:20 時「打卡」上班，再登上一輛巴士，駕駛該輛巴士到葵盛東邨巴士總站，然後於 08:00 時開始駕駛其路線。他於 12:45 時回到該巴士總站，乘搭巴士到葵盛西邨巴士總站，於 14:08 時開始在該處的職員設施休息。葵盛東邨巴士總站並無休息設施。他於 15:55 時再次駕駛。他原定於 20:43 時在昂船洲下班。然而，他下班前遇到交通意外，自此一直放病假。[第 10 日聽證會紀錄本：2018 年 7 月 31 日，英文本第 40 至 48 頁，中文本第 18 至 24 頁]

102. 九巴僱員工會在最後一輪書面意見中表示[聽證會文件 TU-1(A)：英文本第 112-127 頁，中文本第 112-121 頁]：

「每天 14 小時工作安排，無論用甚麼美化籍<藉>口都是罔顧安全的決策，每天 12 小時工作，其中駕駛時間為 10 小時是人體極限，因是連續多天先休息一天，會有累積疲勞情況(不計每月只休二或三天的車長)。」[斜體為本文所加]

### 月薪車長大聯盟

103. 甄建明先生是一名九巴車長，亦是新成立的月薪車長大聯盟的成員。他引述前一日的行程，作供以說明作為一名特別更的車長的日常工作。他大約 06:00 時離開位於旺角的住所，前往青衣車廠，於 07:00 時「打卡」上班，然後登上當天他負責駕駛的巴士，開往長亨巴士總站，再於 07:45 時駛往油塘巴士總站，接着駛往荃灣愉景新城，在該處開始駕駛 42M 線巴士來往荃灣和長宏巴士總站。大約 12:30 時，他把巴士停泊在青衣機場站，並到長安巴士總站的員工設施內休息至 15:20 時。由 15:35 時開始，他駕駛來往長安巴士總站和尖沙咀東的 41A 線巴士，之後把巴士駛回青衣車廠，為巴士入油後於 21:00 時「打卡」下班，然後於當晚 21:40 時回家。[第 10 日聽證會紀錄本：2018 年 7 月 31 日，英文本第 120 至 126 頁，中文本第 59 至 62 頁]

九巴

104. 九巴彭樹雄先生在作供時表示「我哋每日約有二十三個百分比嘅車長就係返緊一個叫做特別更」。意即「工時係唔會超過十四個鐘嘅」。彭先生認同，新舊《指引》的重要差別，在於駕駛時間限於 10 小時，並且規定「車長佢一定要有一段唔少過連續三個鐘頭嘅休息時間」。他補充說「我哋公司係絕對唔會強逼啲同事係去返啲乜嘢嘅特別更分，split shift<sup>8</sup>，所有返呢啲所謂特別更嘅車長係全部都係自願咁去返嘅」。[第 14 日聽證會紀錄本：2018 年 8 月 11 日，英文本第 65 至 67 頁，中文本第 31 頁]九巴主席梁乃鵬博士作供時指出「雖然運輸署係容許可以每日有十四個工時，但係如果我哋嘅目標係想由每日嘅工時由十四降至到十三，我哋都會考慮」。[第 14 日聽證會紀錄本：2018 年 8 月 11 日，英文本第 69 頁，中文本第 32 頁]

105. 關於當特別更的九巴車長可使用的休息設施，彭樹雄先生表示[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 81 頁，中文本第 33 頁]：

「九個 per cent<sup>9</sup>嘅特別更嘅車長，即是一百三十四位嘅特別更車長，佢係會喺嗰四個廠裏面休息嘅，即係換句話，正話李生<sup>10</sup>講嗰啲，我哋會有一啲 horizontal<sup>11</sup>嘅床等等，呢一百三十四位同事就會喺廠休息嘅。」

另外喺各個站頭休息嘅，就佔咗十七個 per cent，就係二百六十二位。而返屋企呢三個鐘頭或者以上嘅休息，其實佔嘅總數係所有特別更嘅車長係七十四個 per cent，係一千一百一十七位同事，七十四個 per cent 嘅同事係佢哋可以返到屋企休息嘅。」

106. 委員會曾於 2018 年 8 月 11 日要求取得特別更車長的日程資料，以上扼要的統計數據摘要係九巴應委員會要求而提供的。龍運的資料則顯

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<sup>8</sup> 「split shift」即「特別更」。

<sup>9</sup> 「per cent」即「百分比」。

<sup>10</sup> 「李生」是九巴董事總經理李澤昌先生。

<sup>11</sup> 「horizontal」解作「水平的」。

示，其特別更車長有 8%是在車廠休息，其餘的 31%及 61%則分別在總站或家裏休息。[聽證會文件 KMB-12(A)：英文原文第 5010 頁]

107. 九巴董事總經理李澤昌先生早前證實，4 個車廠分別位於荔枝角、九龍灣、屯門及沙田，這些車廠的設施與屯門車廠的一樣，而主席及秘書處已實地視察有關設施，特別是睡眠設施。[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 55 至 58 頁，中文本第 22 頁]

108. 關於九巴使用的 217 個總站，李先生表示[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 61 頁，中文本第 25 頁]：

「我哋叫做即係 purpose-built<sup>12</sup>有一個 toilet<sup>13</sup>喺度，係五十個；而佢有化廁嘅地方，係有六十六個；咁跟住有一百個左右，係倚賴周邊嘅設施畀個車長，例如係一啲即係 shopping mall<sup>14</sup>，或者啲商場嗰啲咁嘅地方，咁今日仲有一個係有洗手間嘅設施。」

109. 在其證供部分，彭樹雄先生表示[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 65 頁，中文本第 26 頁]：

「我覺得都頗為詫異就係，佢完全冇 factor in<sup>15</sup>到一啲 permanent<sup>16</sup>嘅洗手間喺裏面。我舉幾個例，例如西九龍高鐵巴士總站，一個係好有規模嘅巴士總站，但係完全係冇洗手間嘅安排；紅磡嘅紅鸞道，啱啱使用，佢係要嚟取代嗰個紅磡碼頭，亦都係一個好大嘅 PTI，我哋所謂 public transport interchange<sup>17</sup>，亦都係有一個洗手間嘅設備，冇站長室，冇休息室；港珠澳大橋，我哋初步睇，亦都係有一個洗手間嘅設備。」

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<sup>12</sup> 「purpose-built」解作「特別建造」。

<sup>13</sup> 「toilet」即「洗手間」。

<sup>14</sup> 「shopping mall」即「購物中心」。

<sup>15</sup> 「factor in」解作「考慮」。

<sup>16</sup> 「permanent」解作「永久」。

<sup>17</sup> 「public transport interchange (PTI)」即「公共交通交匯處」。

## 專營巴士公司的立場

### 城巴／新巴

110. 城巴的鍾澤文先生在作供時表示，城巴迄今沒有調派車長當特別更。他又表示，雖然 2018 年 2 月的《指引》准許聘請車長負責最長值班 14 小時的特別更，但城巴／新巴有意在 2018 年第三季實施特別更時，把值班時間的上限定於 13 小時。他表示，作出這個決定是基於公眾對安全的關注。延遲實行《指引》，是因為需增聘 121 名車長以配合新《指引》，以及為車長提供額外的休息設施。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 75 頁，中文本第 36 頁]鍾先生表示，公司建議，獲聘的特別更車長的工資，其中 8 個小時會按基本工資計算，另外 5 個小時則按超時工資計算。

111. 鍾澤文先生表示，城巴與新巴對特別更的處理方法有所不同。城巴車長須按指定的更表執行駕駛職務，當中有部分可能包括特別更。車長可按本身意願與同事調更。至於新巴，其車長可選擇當特別更與否。如選擇當特別更，則會獲指派該更次的職務。

112. 鄭偉波先生代表城巴／新巴在最後一輪書面意見中表示[聽證會文件 CTB-1：英文本第 107 頁，第 6 段]：

「就運輸署於 2018 年 2 月發出修訂的《巴士車長工作、休息及用膳時間指引》引入特別更一事，我們留意到某些工會代表提出反對。專營巴士公司因應上下午繁忙時間的服務需要須安排特別更。雖然特別更最長的值班時間是 14 小時，但當中須有一段不少於連續 3 小時的休息時間，故此特別更內最高 10 小時駕駛時數，與一般更次的最高駕駛時數相同。」

### 嶼巴

113. 嶼巴在 2018 年 6 月 27 日提交的書面意見中表示，該公司經營 24 條路線，其中 9 條「需要特別更安排」。不過，嶼巴續表明[聽證會文件 NLB-1：英文原文第 51 頁]：

「由於我們的車長大部分住在上下班的簽到處附近，所以車長如須執行特別更任務，他們大多會回家休息，並無困難。我們沒提供特別的設施，供特別更車長休息之用，但在主要的巴士總站均設有基本設施，例如微波爐、雪櫃、蒸餾水、枱、長椅及空調室，供員工用膳時使用。」

## 運輸署

114. 運輸署在 2018 年 7 月 20 日提交的書面意見中表示[聽證會文件 TD-1：英文原文第 438 頁]：

「我們沒有就提供洗手間及休息設施，向專營巴士營辦商發出特定的指引，因為洗手間及休息設施通常是在設計新巴士總站時會考慮的基本設施的一部分。專營巴士營辦商對洗手間及休息設施的要求和意見，會適當納入巴士站的設計中。」

115. 關於協助專營巴士營辦商設置這些設施，運輸署表示[聽證會文件 TD-1：英文原文第 438 頁]：

「當相關部門／機關考慮及審核設置這些員工設施的申請時，運輸署已作出適當協調，以便及早裝設這些設施。」

## 第 6 章 — 九巴的意外報告及行動計劃

### 意外報告

116. 九巴在 2018 年 4 月 24 日提交予委員會的書面意見中，向委員會提供了一份該公司於 2018 年 3 月 12 日提交予署長有關 2018 年 2 月 10 日大埔公路《巴士意外研究調查》的文本，報告內容是有遮蓋的。該報告是由九巴主席梁乃鵬博士、副主席陳祖澤博士及曾偉雄先生所組成的特別委員會撰寫。[聽證會文件 KMB-1(A)：英文原文第 98 至 116 頁]報告是應署長在 2018 年 2 月 12 日去信九巴，要求九巴「進行調查以研究該宗意外，以及通盤檢視所有與巴士運作安全相關的問題」，包括下述指定事宜[聽證會文件 KMB-1(A)：英文原文第 117 至 118 頁]：

- 「(a) 車長的入職資格及招聘要求，以及為車長(全職及兼職)提供的一般及特定路線訓練；
- (b) 九巴的兼職車長政策及兼職車長的詳細資料，包括兼職車長的數目、調派及工時等；
- (c) 全職及兼職車長表現的監察機制、加強現行監察制度的措施以確保及提升巴士駕駛安全，以及令車長加深了解監察機制下的紀律處分及其他罰則的措施；以及
- (d) 九巴對車長(全職及兼職)在加入九巴前及加入後涉及交通意外及／或交通相關罪行紀錄所訂的政策，以及確保此等車長適合駕駛的任何措施。」

117. 該報告第 4 章按以下各標題提出建議：

- A. 招聘；
- B. 培訓；
- C. 工作表現；



D. 工作環境；以及

E. 心理支援。

118. 第 5 章就改善巴士安全的其他措施作回應：

- 安全帶；
- 電子穩定控制系統；
- 地理圍欄系統；
- 傾側警報器；
- 車速警報器；
- 車速限制系統；
- 擋風玻璃防霧系統；以及
- 車長睡意監察器。

119. 九巴特別委員會在「改善巴士安全的其他措施」這標題下所考慮的事項範疇，以及報告內該章序言所述，反映了立法會議員所提及的事項。有關內容顯然與立法會交通事務委員會委員在 2018 年 2 月 15 日的特別會議上所提事項有關，部分更是該委員會一致通過的 3 項議案的主題，而梁乃鵬博士、李澤昌先生及其他九巴高層人員亦有出席該次會議。[聽證會文件 SEC-3：英文本第 1360 至 1362 頁]

*建議：安全帶及安全裝置*

120. 特別委員會在其報告中就各種安全裝置提出一系列「建議」，並指出九巴管理層「會予實行或作進一步研究」。[聽證會文件 KMB-1(A)：英文原文第 114 頁第 39 段]

121. 關於安全帶，該報告指出[英文原文第 40 段]：

「九巴已要求其供應商為 2018 年 3 月 5 日後訂購的新巴士的所有座位裝上安全帶，將此設定為一項標準裝置。至於現役巴士，如個別路線有此需要，九巴亦會分階段在其巴士上層安裝安全帶。」

122. 關於在巴士上安裝電子穩定控制系統及車長睡意監察裝置，報告指正就前者進行測試，另外亦將會就後者進行測試。如果測試結果令人滿意，將會在九巴巴士上安裝這些裝置[英文原文第 41 及 47 段]。關於地理圍欄系統，報告指會在 10 部巴士上作測試，如果測試結果令人滿意，亦會考慮把該項技術應用於整個車隊；若落實執行，將優先應用於有陡坡或急彎的路線[英文原文第 42 段]。關於自動車速限制系統，涉及利用變速器制動或減速，報告指經一段時間測試後可以安裝在新巴士上[英文原文第 45 段]。報告指，司機擋風玻璃的霧氣問題可藉安裝熱風除霧器或發熱擋風玻璃解決[英文原文第 46 段]，而「整個車隊的每部巴士均會安裝」傾側警報器[英文原文第 43 段]。最後，據悉啟動車長座位車速警報器的聲效和燈號警報的臨界車速，已由之前的時速 75 公里調低至 70 公里。

### *行動計劃*

123. 運輸署在 2018 年 3 月 19 日的信件中，要求九巴就特別委員會報告第 39 至 47 段有關應用安全裝置提升巴士安全的措施所作建議，提供實行或完成研究工作的「預算時間表」及其他事宜[聽證會文件 KMB-1(A)：英文原文第 134 至 137 頁]。九巴在 2018 年 4 月 10 日的覆函中，向運輸署提供了一份「行動計劃」，交代各項測試的進度和結果，以及這些安全裝置的進度(就適用者而言) [聽證會文件 KMB-1(A)：英文原文第 138 至 151 頁]。

124. 九巴 2018 年 4 月 10 日的行動計劃指出，巴士下層安裝安全帶是不可行的，但九巴會繼續探討在巴士上層安裝安全帶是否可行。至於電子穩定控制系統，則會安裝在新的歐盟六期巴士，而九巴會繼續探討在現役巴士加裝電子穩定控制系統是否可行。另外，九巴正進行關於以下各項的可

行性研究，包括地理圍欄系統、傾側警報器的警報臨界設定，以及在新巴士上安裝包含制動及變速功能的自動車速限制系統。至於車長睡意監察器，則自 2018 年 4 月底起在 4 部巴士上作測試。事實上，有關測試於 2018 年 6 月進行。[聽證會文件 TD-5：英文原文第 1803 頁；KMB-1(A)：英文原文第 232 頁]在現役巴士上加裝熱風除霧器或發熱擋風玻璃的工作，將於隨後的 12 個月進行。[聽證會文件 KMB-1(A)：英文原文第 150 至 151 頁，第 14 至 21 段]

## 第 7 章 — 大埔公路安全措施的檢討

125. 署長列席了大埔區議會 2018 年 2 月 12 日的會議，會上多位區議員要求運輸署檢討 2018 年 2 月 10 日發生車禍的大埔公路路段的車速限制[聽證會文件 DC-2(B)：英文本第 783 至 800 頁，中文本第 772 至 777 頁，第 17、21 及 24 段]。署長在其證供表示，「署方會考慮該路段以往發生的意外次數及性質、道路設計、現場環境、對駕駛者的影響等因素，研究適當的改善措施」。[聽證會文件 DC-2(B)：英文本第 798 頁，中文本第 779 頁，第 34(ii)段]

### 降低車速限制

126. 運輸署在一份日期為 2018 年 4 月 9 日給大埔區議會傳閱的文件中指出，署方已檢討大埔公路介乎沙田駿景路至雍宜路一段的車速限制，有關檢討是根據「恆常機制檢討道路速度限制，以確保所訂立的速度限制能保障道路安全及可維持交通暢順」，以及考慮以下因素而作出[聽證會文件 TD-5：英文本第 1617-1 至 1617-4 頁，中文本第 1611 至 1615 頁]：

「(a) 路段發生意外的紀錄；

(b) 車輛的常用車速；及

(c) 道路環境和特徵(路段斜度、視線、路口、行人情況等)。」

127. 警司李大偉作供指他兩三年前曾出席車速限制檢討工作小組的會議。該工作小組於 2000 年在運輸署總部首次召開會議，成員包括運輸署、警方、香港汽車會及香港汽車高級駕駛協會的代表，由運輸署提供秘書處服務和擬定議程。[聽證會文件 TD-1：英文原文第 121 頁；第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 107 至 110 頁，中文本第 42 至 43 頁]

128. 在該相關檢討工作中，關於大埔公路介乎赤泥坪至雍宜一段，運輸署指出[聽證會文件 TD-5：英文本第 1617-2 頁，第 4(c)段，中文本第 1612 至 1613 頁，第(三)段]：

「有關路段的交通意外率有上升趨勢，而其過去一年的意外率亦高於全港平均意外率，加上近月偵測到的常用車速較以往慢及普遍低於現時速度限制的每小時 70 公里。此外，白石角有多個大型發展項目近年相繼落成或在建造中，車輛經過博研路天橋、優景里、瞭望里來往此路段比往年有顯著增加，重型車輛比例也有所增加。」

129. 結果，鑑於車速限制檢討工作小組同意有關建議，而且路政署正安排豎立適當的交通標誌，運輸署總結如下[聽證會文件 TD-5：英文本第 1617-2 至 1617-3 頁，第 4(c)段，中文本第 1612 至 1613 頁，第 4(三)段]：

「因應以上新的情況，有關路段的速度限制有下調空間，建議由每小時 70 公里降低至 50 公里，以進一步提升道路安全。」

130. 最後，運輸署決定新的車速限制由 2018 年 4 月 27 日起生效，並指出[聽證會文件 TD-5：英文本第 1617-3 頁，中文本第 1613 頁，第 6 段]：

「署方正爭取資源，期望在本年年底前能落實在大埔道近赤泥坪……裝置固定偵測車速攝影機。」

#### *裝置固定偵測車速攝影機計劃*

131. 在運房局、保安局及香港警務處一份題為《打擊違例行車事項的執法工作》的文件中指出，只有「24 部偵察車速攝影機在全港 130 個攝影機箱地點運作」[聽證會文件 SEC-3：英文本第 1420 頁，第 7 段]。總警司邱倩雯作供時解釋，「不定期咁樣就將呢啲嘅偵速機就擺喺唔同嘅地點嘅度」。她進一步指當運房局向立法會取得撥款時，運房局「有一個比例喺度嘅」。然而，她說「而家最新嘅商談，咁樣係希望就將每一個地點，……都可以擺一個攝錄機喺度，呢個亦都係而家主要商討嘅重點」。關於這方面，她解釋運輸署在一份日期為 2018 年 4 月 9 日給大埔區議會

傳閱的討論文件中，建議在大埔公路安裝固定的偵察車速攝影機，但因撥款問題而延遲安裝，不過她得悉運輸署現已獲得撥款。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 141 至 143 頁，中文本第 56 至 57 頁]

*就增加大埔公路安全措施早前曾提出的要求*

132. 大埔區議員陳笑權先生在 2017 年 6 月 5 日去信位於小瀝源的香港警務處交通總部，指他接獲「大埔公路一帶的居民」投訴，「茲因大埔公路經常有司機超速駕駛及非法賽車」，故此他要求「盡快於大埔公路近鹿茵山莊至大埔尾村之間加設“快相機”」。[聽證會文件 DC-2(B)：英文本第 840-74 頁，中文本第 840-70 頁]

133. 警務人員林知行於 2017 年 6 月 16 日覆信，並將副本分送有關的高級警務人員，覆信內容指[聽證會文件 DC-2(B)：英文本第 840-73 頁，中文本第 840-71 頁]：

「安裝固定偵察車速攝影機的地點選址，主要是由運輸署決定，安裝後交由警方進行執法。而本部據悉運輸署現時並未有計畫<劃>於上述路段裝設固定偵察車速攝影機。」

134. 警司李大偉作供時表示，討論的問題是偵察車速攝影機而不是車速限制，而相關事宜是根本不會轉交給車速限制檢討工作小組考慮。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 119 頁，中文本第 48 頁]

135. 大埔區議會轄下交通及運輸委員會在 2015 年 3 月 13 日的會議上，處理日本人國際學校的 Juliet Ashton 女士於 2015 年 2 月 10 日致函該委員會的要求。信中指出，鑑於該校外的路段曾發生導致行人死亡的意外，故要求把該校附近的大埔公路鹿茵山莊一段的車速限制，由時速 70 公里降至 50 公里。列席該會議的運輸署代表說，「署方會研究該路段現時的車速限制是否適合」。[聽證會文件 DC-2(B)：英文本第 840-84 頁及第 840-91 至 840-93 頁，中文本第 840-81 至 840-85 頁]

136. 警司李大偉在其證供部分表示，由於在會議上已由運輸署代表處理有關事宜，警方不會將此事轉交車速限制檢討工作小組。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 124 頁，中文本第 49 至 50 頁]

137. 大埔區議員陳笑權先生於 2015 年 7 月 24 日致函運輸署王國良先生，他在信中要求跟進在大埔公路翡翠花園彎位附近「盡快於上述位置加設時速『50 公里』的速度限制標誌」。[聽證會文件 DC-2(B)：英文本第 840-75 頁，中文本第 840-78 頁]陳先生作供時，確定在信中要求將車速限制由時速 70 公里減至 50 公里。[第 6 日聽證會紀錄本：2018 年 7 月 14 日，英文本第 9 頁，中文本第 4 頁]陳先生表示，「運輸署就有好正面，不過我都有電話同佢傾嘅。」他稱曾與王先生通電話，並獲告知須先進行研究和諮詢，才可更改車速限制。[第 6 日聽證會紀錄本：2018 年 7 月 14 日，英文本第 9 至 11 頁，中文本第 4 至 5 頁]

138. 運輸署在 2018 年 7 月 13 日的書面意見中表示，「根據紀錄，運輸署沒有接獲區議員陳笑權先生於 2015 年 7 月 24 日的來信」。[聽證會文件 TD-1：英文原文第 396 頁，第 11 段]

139. 警司李大偉作供時表示，這封信的副本沒有送交警方，因此警方沒有此事的紀錄。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 130 頁，中文本第 52 頁]

## 第 8 章 — 加強專營巴士安全工作小組

### 成員及職能範圍

140. 就工作小組的成立及其目的，委員會從運輸署 2018 年 4 月 24 日的書面意見得悉[聽證會文件 TD-1：英文原文第 95 頁，第 4 段]：

「……運輸署於 2018 年 3 月中成立工作小組，以檢討在專營巴士安裝一些新的安全裝置或把新科技應用於安全裝置，以加強對巴士乘客的保障，是否技術上可行和推行上可取。工作小組成員包括所有專營巴士公司和巴士製造商的代表。」

141. 運輸署在意見書續稱，工作小組亦有考慮巴士車長的訓練事宜，並表示工作小組會[聽證會文件 TD-1：英文原文第 131 頁，第 15 段]：

「……檢討多項事宜，其中包括巴士車長(全職和兼職)的訓練安排。就曾干犯嚴重交通罪行或有交通意外紀錄的司機，工作小組會集中檢視是否需要劃一他們再培訓的要求。

……

儘管檢討工作仍在進行，我們已提議頒布一套**指引**，列明巴士車長入職訓練和輔助訓練的主要原則和規範(涵蓋訓練課程的架構、各訓練單元所佔比重、修業期等)，以及專營巴士營辦商的內部監察和審核機制。專營巴士營辦商的代表對上述建議反應大致正面。所有專營巴士營辦商均同意為巴士車長訂定一個共通的入職訓練或輔助訓練架構，但認為須容許各專營巴士營辦商在某程度上可彈性地制訂切合所需的訓練課程(例如課程的修業期、次數等方面)，以配合個別專營巴士公司不同的營運規模和營運環境……」[斜體為本文所加]

142. 運輸署在 2018 年 5 月 7 日致函委員會，提交標題如下的文件[聽證會文件 TD-1：英文原文第 351 頁]：

「加強專營巴士安全工作小組

工作範疇」



文件開列工作小組的三項工作範圍。第一項與巴士車長的訓練有關，第三項關於「在巴士安裝車內安全裝置的技術可行性、成本效益、適用性及其他相關事宜」，包括 7 個指明分項。第二項則提到：

「研究在沒有遮擋的座椅以外的所有座椅安裝安全帶的技術可行性、成本效益、適用性及其他相關事宜；」

有關車長訓練方面，文件指出：

「(1)檢討和改善各類巴士車長(例如新聘車長、在職車長、曾干犯交通罪行或曾牽涉交通意外的在職車長等)的訓練安排；」

## 安全裝置

### (i) 安全帶

143. 因應「……三個雙層巴士製造商(即亞歷山大丹尼士有限公司、富豪及猛獅)」均確認技術上可在所有乘客座椅安裝安全帶，運輸署在意見書表示，「所有專營巴士營辦商均同意，在購置新巴士時，加入這項要求」。[聽證會文件 TD-1：英文原文第 96 頁，第 7 段]

144. 意見書指出，有關各方正探討為現有巴士加裝安全帶是否可行和所涉成本，但指出「加裝工作將涉及大規模改動」。[聽證會文件 TD- 1：英文原文第 97 頁，第 8 段]

### (ii) 電子穩定控制系統及翻側穩定控制功能

145. 因應全港 170 輛專營巴士已安裝電子穩定控制系統，運輸署在意見書表示，「所有專營巴士營辦商均同意，在購置新巴士時，加入安裝電子穩定控制系統(此系統已包含翻側穩定控制功能)的要求」。[聽證會文件 TD-1：英文原文第 100 頁，第 15 段]

(iii) 車速限制器

146. 因應「……現時所有專營巴士均裝有車速限制器，將巴士最高車速限定為每小時 70 公里」(以切斷引擎燃料供應的方式限制車速)，運輸署在意見書表示，「當車輛滑動時，車速並非由引擎轉動或波檔所決定」。儘管如此，3 個巴士製造商表示，在技術上可通過「安裝減速器」使巴士下坡時減速。因此，運輸署在意見書表示，「所有專營巴士營辦商均同意，在購置新巴士時，加入這項要求」。**[聽證會文件 TD-1：英文原文第 101 頁，第 16 至 18 段]**

(iv) 地理圍欄系統

147. 運輸署的意見書載述，地理圍欄系統利用全球定位系統訊號與數碼地圖的互動以確定車輛位置，並利用車速感應器預設的範圍內提供「可變車速限制功能」，以控制車速。意見書又指出，「……藉着短時間暫緩引擎點火、或切斷燃料供應，甚至啟動制動系統的機制」，減慢車速。意見書載述，儘管 3 個巴士製造商均認為地理圍欄系統「理論上可行」，但對於全球定位系統訊號在高樓大廈影響下能否準確定位，他們有所保留。此外，委員會留意到，專營巴士營辦商擔心這樣會鼓勵車長依賴地理圍欄系統的自動功能，而不是按當前情況駕駛巴士。**[聽證會文件 TD-1：英文原文第 101 至 102 頁，第 19 至 20 段]**

(v) 車速顯示器

148. 運輸署在意見書表示，車速感應器記錄所得的專營巴士車速，可於車廂內的螢幕顯示，讓乘客看見。這與公共小巴(「小巴」)的規定相同。不過，考慮到專營巴士營辦商擔心顯示這些資料「會令車長與乘客發生磨擦和爭拗」，意見書作出以下結論：「專營巴士營辦商認為，車速顯示器對加強巴士安全並無幫助」。**[聽證會文件 TD-1：英文原文第 103 頁，第 22 段]**

*(vi) 防撞及保持行車線裝置*

149. 運輸署在意見書表示，防撞系統依賴雷達、激光光束或攝影機，偵測已安裝該系統的車輛與前車的距離，並視乎距離發出警報。車長若對警報無反應，制動系統便會自行啟動。保持行車線系統利用前置攝影機，偵測路上的行車線標記，提醒車長修正轉向或剎車，或向車長發出警報。

150. 鑑於車輛在香港需要頻密地轉換行車線，3 個巴士製造商對使用保持行車線系統有所保留，而且部分曾測試該系統的專營巴士營辦商認為測試結果未如理想，因此運輸署的意見書作出以下結論：「專營巴士營辦商不認為安裝防撞及保持行車線裝置，能有效提高專營巴士服務的運作安全」。[聽證會文件 TD-1：英文原文第 105 頁，第 26 段]

*(vii) 監察司機裝置*

151. 運輸署在意見書表示，監察司機駕駛時是否有睡意／專注力不足的系統，是利用攝影機監察司機的情況，並向司機發出視覺／聲效警報。意見書載述，2 個專營巴士營辦商建議由 2018 年 5 月起，在 4 輛巴士上試用該系統，為期 3 個月。[聽證會文件 TD-1：英文原文第 106 頁，第 28 段]

*城巴／新巴的安全委員會及參與工作小組*

152. 正如前述，城巴／新巴董事總經理鄭偉波先生於 2018 年 5 月 29 日作供稱，城巴／新巴約於 3 個星期前成立了安全委員會，由他擔任主席，成員包括營運總監鍾澤文先生、工程總監李廣威先生、人力資源及行政總監吳智光先生，以及高級營運經理和高級工程支援經理。他承認，該安全委員會是因應運輸署設立工作小組而成立；此前，部分相關責任由負責服務質素和調查車長駕駛行為及意外的營運總監承擔。該公司主要依賴巴士供應商告知有關發展成熟的技術。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 24 至 26 頁，中文本第 11 至 12 頁]然而，以色列供應商

綠元素科技 (Neshtech) 於 2014 年接觸城巴／新巴，其後自發進行了一次「神眼」(Mobileye) 防撞系統的測試，惟測試最終未能成功。

#### *自動車速限制系統及電子穩定控制系統*

153. 鄭偉波先生及李廣威先生確認，運輸署把自動車速限制系統及電子穩定控制系統的建議列為工作小組議程後，該公司才決定購置安裝了有關系統的新巴士。該公司已要求巴士供應商確認，加裝該等裝置是否可行，並提供撥備開支預算。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 38 至 43 頁及第 47 至 48 頁，中文本第 18 至 21 頁及第 23 頁]

#### *地理圍欄系統*

154. 關於地理圍欄系統，鍾澤文先生表示，儘管本港的全球定位系統訊號是否準確備受關注，該公司仍擬購置有關裝置，以測試在地理圍欄系統使用有關裝置所得的資料是否準確。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 46 頁，中文本第 22 頁]

#### *防撞*

155. 鍾澤文先生稱，該公司於 2014 年曾測試名為「神眼」的防撞系統，但由於該系統頻頻發出錯誤警報，該公司決定不安裝防撞系統或轉換行車線警報系統。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 49 至 50 頁，中文本第 24 至 25 頁]

#### *司機有睡意／警覺性不足*

156. 關於司機警覺性監察系統，李廣威先生表示，該公司已向 3 個供應商查詢，現正測試該系統的效能和等待供應商提交報價。該公司知悉，其中一個供應商 Guardian，正是為新加坡陸路交通管理局供應當地專營巴士強制使用的司機警覺性監察系統的供應商。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 53 至 54 及 57 至 58 頁，中文本第 25 至 27 頁]

## 安全帶

157. 關於該公司在旗下專營巴士安裝安全帶，李廣威先生表示，該公司已同意，由 2019 年 6 月起付運的新巴士，所有座椅均會安裝三點式安全帶。不過，該公司在書面意見表示，根據觀察所得，即使沒有遮擋的座椅已安裝安全帶，但甚少乘客佩戴。鄭偉波先生的口述證供也確認了這點。鄭先生表示[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 59 至 61 頁，中文本第 28 至 29 頁]：

「如果法例有規定嘅話就有得執法喇，因為現時就有規定坐巴士要繫安全帶嘅，就算法例有規定，如果到時有執法嘅話，咁呢個都係浪費資源嘅。」

158. 鍾澤文先生表示，該公司曾向運輸署反映，因專營巴士上乘客甚少佩戴的安全帶，而對建議有所保留。運輸署回應說，如座椅已安裝安全帶，至少乘客可選擇是否佩戴。對於考慮在現有專營巴士加裝安全帶，李廣威先生說，亞歷山大丹尼士有限公司表示，可為其 2013 年後製造的巴士上層座椅加裝安全帶，初步估計所需費用為每輛巴士 15,000 至 20,000 英鎊。鑑於該公司有 1 100 輛該類巴士，加裝安全帶的費用達 1.8 億至 2.4 億元。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 61 及 67 頁，中文本第 29 及 32 頁]

159. 總警司白令嘉先生作供稱，對運輸署有關給予乘客選擇的意見，表示贊同：「我覺得乘客應該係要有選擇，當然呢個選擇都係要確保乘客係盡量安全。如果有加裝安全帶，當然就連選擇都有」。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 48 頁，中文本第 18 頁]不過，他繼而承認[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 48 至 49 頁，中文本第 18 頁]：

「……個人經驗嚟睇，大部分人都唔會戴安全帶，即係佢哋坐小巴嘅時候。可以預計專營巴士情況都會係一樣，……原因一樣，因為唔方便，同埋車程比較短。」

所以執法係一個問題，<即使已經有法例，>我認為警方係好難定期……咁執到法。」

### 嶼巴參與工作小組

160. 嶼巴董事總經理黃焯安先生作供時確認，截至當天為止，嶼巴代表曾 3 次出席運輸署召開的工作小組會議，有關會議分別在 2018 年 3 月 27 日、5 月 30 日和 6 月 12 日舉行，席上討論在專營巴士安裝和使用安全裝置的事宜。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 119 頁，中文本第 53 頁]

### 地理圍欄系統

161. 對於利用地理圍欄系統監察或限制車速，嶼巴董事黃焯添先生表示，嶼巴是「open-minded」<sup>18</sup>的。他認為大嶼山的道路干擾較少，因此「我哋……容易啲將……準確啲……GPS<sup>19</sup>……數據……上傳到我哋server<sup>20</sup>」。他進一步指出，「但係最主要一樣嘢就係將呢一個GPS嘅數據實時去同我哋本身架車嘅電腦去做到個配合，呢個係需要時間去研究」。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 119 頁，中文本第 55 頁]

### 車速顯示器

162. 對於使用車速顯示器，黃焯安先生關注到乘客如果知道車長超速可能作出的反應，並說「……但係我相信最大嘅機會都係直接去confront<sup>21</sup>嗰個車長嘅」。對此，他說：「我哋最唔想係見到呢個情況嘅」。相反，他認為「如果……技術係可以做到真係有個方法去令到架車係唔超速，我覺

<sup>18</sup> 「open-minded」解作「持開放態度」。

<sup>19</sup> 「GPS」即「全球衛星定位系統」。

<sup>20</sup> 「server」即「伺服器」。

<sup>21</sup> 「confront」解作「質問」。

得個效果係會好過……」。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 137 至 138 頁，中文本第 62 至 63 頁]

### *電子穩定控制系統*

163. 對於使用電子穩定控制系統，嶼巴的楊家寶先生說[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 81 至 82 頁，中文本第 37 頁]：

「而呢個系統就有兩個功能嘅，一個功能係防止架車過度轉向同埋改善轉向，另外一個功能就係防滾嘅，即係防反車嘅，喺嗰個臨界點之前，嗰架車有自動一個反應就係將個車速減慢，而令佢保持喺一個穩定嘅狀態。」

164. 楊先生說，與其在巴士安裝另一套警報系統而可能打擾車長，「……倒不如將佢控制喺穩定嘅情況之下」。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 82 頁，中文本第 37 頁]

### *工作小組持續進行的工作*

165. 署長在 2018 年 5 月 8 日作供時，確認備存工作小組的會議紀錄。當被問及可否將該紀錄提交給委員會時，她表示[第 2 日聽證會紀錄本：2018 年 5 月 8 日，英文本第 6 頁，中文本第 3 頁]：

「講到會議紀錄，因為一般嚟講，裏面係涉及一啲內部嘅討論，我哋一般嘅原則就係唔會將佢披露，因為呢啲係內部嘅討論，亦都有涉及一啲係未成熟嘅<分析同>研究，亦都如果係將佢披露，可能就會妨礙大家好開放、好坦白咁樣係交談。」

166. 儘管署方初時對於向委員會提交工作小組的會議紀錄有所顧慮，委員會隨後獲得工作小組及轄下小組(即巴士車長訓練安排技術會議及專營巴士車上安全裝置工作分組)經遮蓋部分內容的「會議紀錄」和「會議紀錄擬稿」。最後，在工作小組全體成員同意下，委員會在 2018 年 9 月 14 日收到該等文件未經遮蓋的版本。

## 安全帶

2018 年 3 月 13 日

167. 工作小組在 2018 年 3 月 13 日舉行首次會議，所有專營巴士營辦商均有派員出席。根據會議紀錄，就專營巴士安裝安全帶一事，運輸署助理署長關翠蘭女士表示[聽證會文件 KMB-12(A)：英文原文第 4869-6 頁，第 13 段]：

「考慮到技術可行性，運輸署建議在新巴士所有座椅安裝安全帶，並在現有巴士所有座椅加裝安全帶。」

168. 九巴／龍運及城巴／新巴的代表全都認同只要在採購時提出要求，巴士都可以安裝安全帶，但困難之處隨後會陸續浮現。在巴士下層安裝安全帶會增加巴士的結構載荷。此外，下層的地台大多為玻璃纖維，令加裝工作增添困難。

169. 會議紀錄載述城巴／新巴代表的意見如下[聽證會文件 KMB-12(A)：英文原文第 4869-6 頁，第 16 段]：

「……質疑在所有座椅安裝安全帶以加強乘客安全這做法是否可行，因為巴士車長難以確保所有乘客均佩戴安全帶。此外，巴士根本沒有為站立的乘客提供安全帶，城巴／新巴關注到站立的乘客是否需要佩戴安全帶。」

170. 會議紀錄載述運輸署的回應如下[聽證會文件 KMB-12(A)：英文原文第 4869-6 頁，第 16 段]：

「運輸署表示在多宗交通意外發生後，有要求指須全面檢討在巴士安裝安全帶一事。上次就巴士安裝安全帶一事的檢討，距今已經超過 10 年。現時討論的



目標應集中在沒有遮擋座椅外的所有座椅安裝安全帶的技術可行性、成本效益、應用性及其他相關事宜。」<sup>22</sup> [斜體為本文所加]

2018 年 4 月 23 日

171. 工作小組 2018 年 4 月 23 日第二次會議的紀錄提到[聽證會文件 KMB-12(A)：英文原文第 4887-5 頁，第 16 段]：

<sup>22</sup> 2007 年

2007 年 1 月，運輸署擬備並向立法會交通事務委員會提交題為《加強專營巴士營運安全措施的進度》的文件，探討在專營巴士加裝安全帶，並特別提及就海外司法管轄區的相關做法進行的檢討[聽證會文件 SEC-1：英文原文第 274 至 283 頁內第 275 至 276 頁，第 3 至 4 段]。

文件指出，相關資料搜集自 6 個國家和維多利亞省。在向立法會交通事務委員會 2018 年 7 月 25 日會議提交的文件中，也同樣引述這些司法管轄區的相關情況。2007 年 1 月的文件提到[第 4 段]：

「至今仍未發現有國家立法規定行走市區且准許乘客站立的巴士必須為乘客座椅裝設安全帶。這些國家的運輸當局表示，施加巴士安裝安全帶規定的好處尚未確定。」

2007 年 7 月，運輸署擬備並向立法會交通事務委員會提交題為《加強專營巴士營運安全措施的進度》的文件，探討在專營巴士加裝安全帶，以及如座椅安裝有安全帶乘客便須佩戴等事宜[聽證會文件 SEC-1：英文原文第 291 至 299 頁]。就上述第二項事宜而言，該文件提到[聽證會文件 SEC-1：英文原文第 295 頁，第 8 段]：

「要對行走在市區或准許乘客站立的巴士施加上述規定，實行起來會有困難。專營巴士即使正在行駛，乘客都可以在車上站立或走動，因此警方在專營巴士上執行相關規定，會較在公共小型巴士上執法困難得多。」

2004 年

2004 年 5 月，運輸署擬備並向立法會交通事務委員會提交題為《專營巴士公司就加強專營巴士營運安全的安排的檢討報告》的文件，探討在專營巴士加裝安全帶。文件提到，相關資料搜集自「6 個海外國家和歐盟」，並有以下觀察[聽證會文件 SEC-1：英文原文第 183 至 199 頁內第 188 至 189 頁，第 23 段]：

「在這些國家中，大部分規定車長座椅必須安裝安全帶，但沒有規定巴士上其他座椅必須安裝。於實行安全帶規定的國家中，市區巴士路線可獲豁免。澳洲和加拿大曾進行研究，結果顯示為巴士全車座椅安裝安全帶所帶來的額外安全效益，未必能及預期般大。」

「九巴／龍運補充說，在所有乘客座椅安裝安全帶，會令每輛雙層巴士的成本增加約 5,000 英鎊。所有巴士營辦商均同意，日後購置新單層巴士和雙層巴士時，會加入這項要求。」

172. 紀錄續提到[聽證會文件 KMB-12(A)：英文原文第 4887-6 頁，第 18 段]：

「現有巴士方面，城巴／新巴及九巴／龍運表示，仍未確定在巴士上層所有乘客座椅安裝安全帶在技術上是否可行。即使證實技術上可行，考慮到大規模改裝巴士需要一定時間，對財政和巴士營運(例如巴士可供使用的情況)均會造成影響，有關事宜仍須再作討論。」

2018 年 6 月 21 日

173. 工作小組 2018 年 6 月 21 日第三次會議的紀錄提到[聽證會文件 KMB-12(A)：英文原文第 4908-7 至 4908-8 頁，第 25 至 26 段]：

「與會者備悉，在所有新巴士乘客座椅安裝符合相關國際標準的安全帶，在技術上可行，而所有專營巴士營辦商均承諾，所有新專營巴士的全部乘客座椅均會安裝安全帶。

至於現有巴士，與會者備悉，在現有個別型號雙層巴士上層所有乘客座椅加裝安全帶應該可行。九巴／龍運表示，會在巴士上層所有乘客座椅加裝安全帶，或調配已在所有乘客座椅安裝安全帶的巴士行走接載長途乘客的路線，以及行經快速公路且甚少乘客在中途站上落的路線。

[會後備註：九巴／龍運表示，到了 2019 年年中，所有乘客座椅均裝有安全帶的新巴士會有約 400 輛。九巴／龍運會調配這些巴士行走所需路線。至於在現有巴士加裝安全帶，須視乎當時實際情況或要求而定。]

174. 會議紀錄續提到[聽證會文件 KMB-12(A)：英文原文第 4908-8 頁，第 27 段]：

「……與會者經討論後，因考慮到在現有巴士加裝安全帶的技術可行性、香港大部分專營巴士獲編配行走准設企位的市區路線的營運情況、在所有現有巴士

加裝安全帶涉及的成本和停運時間，以及海外經驗，認為沒有充分理據強制規定所有巴士的全部乘客座椅均須安裝安全帶。」

175. 關於城巴／新巴的立場，會議紀錄載述如下[聽證會文件 KMB-12(A)：英文原文第 4908-8 頁，第 28 段]：

「城巴／新巴被要求考慮為調配行走接載長途乘客的選定路線的巴士，或行經快速公路且甚少乘客沿途上落的路線的巴士，在其上層所有乘客座椅加裝安全帶。城巴／新巴表示，按公司目前的營運情況，旗下巴士會在一天內行走多條不同路線，難以調配某些巴士只行走特定路線。此外，*城巴／新巴留意到，很少乘客會佩戴安全帶*，因此在現有巴士所有乘客座椅加裝安全帶，在財政上並不可行。城巴／新巴提出，如政府希望現有巴士加裝安全帶，便請政府就此提供資助。」[斜體為本文所加]

#### *加強專營巴士安全：2018 年 7 月 25 日*

176. 運輸署在 2018 年 7 月 19 日致函委員會，提交一份由運房局和運輸署擬備題為《加強專營巴士安全》的文件，並在立法會交通事務委員會 2018 年 7 月 25 日會議上討論。該文件載列工作小組就進一步加強專營巴士安全所作研究的結果和提出的建議[聽證會文件 TD-1：英文原文第 403 至 404 頁，第 1 及 3 段]。

#### *海外經驗／做法*

177. 就香港的專營巴士乘客座椅安裝安全帶一事，該文件在作出建議前指出，工作小組已「……檢視海外在巴士上安裝及佩戴安全帶的現行做法或規定」。文件附件列出，經檢視的司法管轄區包括美國、英國、荷蘭、維多利亞省、新西蘭、加拿大和新加坡。關於檢視的結果，該文件指出[聽證會文件 TD-1：英文原文第 409 頁，第 15 段]：

「現時，就城際或跨境路線而言，有部分海外司法管轄區(例如美國、英國和荷蘭)規定須為所有乘客座椅安裝安全帶，亦有部分司法管轄區(例如英國、荷蘭及澳洲(維多利亞省))規定須佩戴安全帶。然而，*就行走市區路線或准設企位的巴士而言，工作小組至今所檢視的海外司法管轄區，均沒有法例規定在其乘*

客座椅上裝設安全帶。這些司法管轄區的運輸當局認為，市區巴士通常都用作時間和路程均較短的行程，並以中等車速行走市區路線，所以並無需規定這些市區巴士的乘客座椅必須安裝安全帶。」[斜體為本文所加]

178. 關於工作小組提出在專營巴士乘客座椅安裝安全帶的建議，考慮到所有專營巴士營辦商均同意這樣做，文件指出工作小組建議「日後購置的**新巴士必須為所有座椅安裝安全帶。**」[聽證會文件 TD-1：英文原文第 409 頁，第 16(a)段]

179. 巴士製造商表示，現有巴士的地台結構(尤其是下層)在設計上並不適宜安裝安全帶，因此在乘客座椅加裝安全帶「須在巴士底盤進行大規模改裝及加固工程」。該文件提到，巴士製造商認為「……在巴士上下層所有乘客座椅加裝安全帶，技術上即使不是不可行，也是不切實際。」不過，該文件指出，「較可行的做法是，在現有雙層巴士車隊中，**為部分型號巴士的所有上層乘客座椅加裝安全帶。**」[聽證會文件 TD-1：英文原文第 408 頁，第 12 至 13 段]

180. 由於巴士製造商在香港並沒有進行有關改裝工程所需的資源，該文件指出部分巴士營辦商持保留態度，認為「加裝安全帶不單會帶來龐大財政負擔，還會耗用大量時間和人力資源，更遑論在整個過程中須重新調配或購置額外巴士，以維持現有巴士服務水平」。對於「龐大財政負擔」，該文件的註腳指出，「在未有詳細研究在所有上層座椅加裝安全帶的技術詳情下，粗略估計一輛巴士的加裝成本約為港幣 20 萬元(不包括人力及相關間接成本)。」[聽證會文件 TD-1：英文原文第 409 頁，第 14 段]

181. 不過，該文件載述工作小組的建議如下[聽證會文件 TD-1：英文原文第 409 頁，第 16(b)段]：

「視乎技術、營運及財政可行性的進一步評估，考慮為**行走指定巴士路線(即途經快速公路並較少停站的長途路線)的巴士上層所有座椅加裝安全帶。**」

另一註腳提到，據專營巴士營辦商表示，共有約 2 000 輛巴士行走該等路線。

182. 總警司白令嘉作供時表示，他不知道有此工作小組，也不知道他們在制訂建議時有否諮詢警方[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 37 及 40 頁，中文本第 14 至 15 頁]。關於在所有新巴士安裝安全帶及如可行的話便在現有巴士加裝安全帶的建議，總警司白令嘉續稱[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 48 頁，中文本第 17 頁]：

「……警方相信安全帶可以救到你一命……

如果〈純粹〉喺道路安全角度嚟睇，我哋會鼓勵儘量使用安全帶。」

183. 總警司白令嘉續稱[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 48 頁，中文本第 18 頁]：

「我覺得乘客應該係要有選擇，當然呢個選擇都係要確保乘客係儘量安全。如果有加裝安全帶，當然就連選擇都有。」

## 第 9 章 — 招聘及培訓

184. 城巴／新巴在書面意見表示，公司已在 2018 年 3 月着手研究為應徵車長的申請人進行心理評估是否可行及有何成效。城巴／新巴的吳智光先生說，公司曾與一名精神科醫生和一名心理學學者舉行多次會議，並計劃與一名具有相關經驗的機械工程系教授會面。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 85 頁，中文本第 40 頁]

### 培訓

#### 城巴／新巴

185. 城巴／新巴在書面意見表示，公司會為所有新聘的車長提供培訓。[聽證會文件 CTB-1：英文原文第 37 頁，第 10 段]沒有巴士駕駛執照的新聘全職車長，會獲安排以 5 名學員對 1 名導師的分組形式，接受為期 15 天的駕駛訓練，其後會參加巴士駕駛執照考試。未能通過考試的新聘人員，將獲提供額外 5 天的駕駛訓練。通過考試的全職新聘人員會安排參加「入職培訓」，當中包括 1 天的課堂培訓，以及 10 至 15 天的駕駛訓練，當中共有 24 小時的駕駛時數。至於持有巴士駕駛執照的新聘人員，則只會獲安排參加「入職培訓」。新聘車長完成相關課程後，城巴／新巴的督察會考核他們的駕駛技術。城巴／新巴的鄭偉波先生說，負責教授課程的導師都是十分資深的車長，並且持有駕駛教師執照。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 93 頁，中文本第 43 頁]

#### 駕駛複修課程

186. 城巴／新巴至少每 3 年安排全職車長參加複修培訓課程，接受課堂訓練。課程內容除了涵蓋防衛性駕駛概念、緊急事故處理方法及意外成因分析外，還包括顧客服務及情緒管理。[聽證會文件 CTB-1：英文原文第 38 頁]

### 駕駛技術矯正課程

187. 因違例駕駛而被記 8 分或以上的全職及兼職車長須參加為期 1 天的駕駛技術矯正課程。車長會在第一節半天課堂上學習防衛性駕駛及如何維持正確的駕駛態度，在第二節則由駕駛督察考核車長的駕駛技術。課程結束時，車長須參加駕駛筆試。[聽證會文件 CTB-1：英文原文第 38 頁]

188. 城巴／新巴在 2018 年 5 月 18 日的書面意見表示，另鄭偉波先生代表公司作供時亦在開場發言申明，其安全委員會已在檢討培訓工作時確認須予改善之處[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 2 至 3 頁，中文本第 1 至 2 頁；聽證會文件 CTB-1：英文原文第 54 至 63 頁]：

- 第一，為使車長更加熟悉巴士路線，日後他們除了須以乘客身分乘搭將獲派駕駛的巴士路線外，還須在不載客的情況下駕駛該條巴士路線。[聽證會文件 CTB-1：英文原文第 60 頁，第 6 (f)至(g)分段]
- 第二，日後新聘兼職車長須接受 16 小時駕駛訓練，而並非目前的 8 小時；此外，他們還要接受 4 小時課堂培訓，內容涵蓋顧客服務、情緒管理和交通安全意識。[聽證會文件 CTB-1：英文原文第 54 至 55 頁；第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 113 頁，中文本第 53 頁]
- 第三，兼職車長日後須接受複修培訓，安排與全職車長一樣，即每 3 年一次。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 114 頁，中文本第 54 頁]

189. 鄭偉波先生在作供時表示，對於曾參加駕駛技術矯正課程的車長中有 23.7%在隨後 6 個月內涉及須負罪責的交通意外，他同意情況值得關注。他說，公司計劃詳細分析導致每宗意外的成因。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 102 至 103 頁，中文本第 47 至 48 頁]

## 嶼巴

190. 嶼巴的黃焯安先生在 2018 年 6 月 19 日聽證會作開場發言時表示，嶼巴近月「做咗一啲同埋將會做一啲」措施[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 2 頁，中文本第 1 頁]：

「提升車長訓練時數及導師與車長學員嘅比例；……

成立車長訓練學校以協助合資格人士考取巴士駕駛執照；以及

引用國際標準提高行車安全水平。」

191. 嶼巴在 2018 年 4 月 24 日的書面意見中表示，公司只會聘請持有巴士駕駛執照的人士擔任全職或兼職車長。[聽證會文件 NLB-1：英文原文第 22 頁，第 10 段]嶼巴會為獲聘車長提供為期 5 天的訓練，訓練日數最近更增至 6 天。車長受訓後須接受嶼巴駕駛導師的考核，通過後才可開始執行職務。在職車長會獲提供 1 至 2 天的複修培訓，內容包括提升服務訓練；至於表現不足的車長，會獲提供 1 至 3 天的訓練。[聽證會文件 NLB-2：英文原文第 467 頁，附件 10；第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 67 頁，中文本第 31 頁]

192. 然而，李春暉先生在作供時說，嶼巴正籌備成立車長訓練學校，並已向運輸署申請專營巴士的受限制駕駛教師執照(即「GP2」)，以便訓練新聘車長考取巴士駕駛執照。嶼巴建議把巴士駕駛導師人數由 4 人增至 6 人。倘若訓練學校一如預期成立，已持有巴士駕駛執照的車長的訓練期便會增至 9 天；至於僅持有私家車駕駛執照而沒有巴士駕駛執照的車長，其訓練期則會增至 18 天。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 67 至 72 頁，中文本第 31 至 33 頁]

193. 黃焯添先生解釋，嶼巴曾在遠期計劃中，概述有意尋求其他專營巴士營辦商的合作，以培訓嶼巴新聘車長；在 2018 年聘任李春暉先生後，



此事已無須落實。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 76 頁，中文本第 34 頁]

### 兼職車長

#### 城巴／新巴

194. 公司主要是聘請持有巴士駕駛執照的人士擔任兼職車長。從未受僱駕駛專營巴士的新聘兼職車長，會獲安排接受為期 2 天的巴士駕駛訓練，當中共有 8 小時的駕駛時數，以熟習將獲派駕駛的巴士型號和路線。

195. 城巴／新巴在 2018 年 4 月 27 日的書面意見中解釋聘用兼職車長的理由，指出巴士服務需求有兩個繁忙時段，分別是早上 7 時至 9 時及下午 5 時至 8 時，因此[聽證會文件 CTB-1：英文原文第 28 至 29 頁，第 4(a)段]：

「……我們有很多巴士每天行走約 14 小時，安排工作時數為 10 小時的全職車長與工作時數為 4 小時的兼職車長分擔這 14 小時的駕駛工作，是最有效率的運作方式。否則，我們便須調配兩名全職車長每天各工作 7 小時，即少於全職車長 8 小時的基本工作時數，這樣不但會浪費人手，還會對招聘工作造成額外負擔。」

196. 城巴／新巴在 2018 年 4 月 27 日的書面意見表示，其全職車長編制分別為 2 193 名及 1 607 名，而登記的兼職車長則分別有 346 名及 314 名。[聽證會文件 CTB-1：英文原文第 29 頁，第 4(a)段]

197. 城巴／新巴在 2018 年 5 月 18 日的書面意見指出[聽證會文件 CTB-1：英文原文第 55 頁，第(c)段]：

「由 2018 年 6 月 1 日起，為了改善監察兼職車長在執行駕駛職務前的休息時間，我們會強制規定所有兼職車長(包括在職和新聘車長)申報正職的工作時數和工作日模式的詳情。」

城巴／新巴會以書面形式向現有兼職車長和日後招聘的兼職車長收集該等詳細資料。

198. 城巴／新巴在 2018 年 6 月 8 日致委員會的函件中，附上「兼職車長申報書」副本。根據該表格，兼職車長須申報「所有外間工作」，包括僱主名稱和兼職車長所擔任的職位。基於某些原因，要求兼職車長申報的第一項資料是從外間工作賺取的金額，其次是一周內每天的具體工作時間，包括每天「基本工作時數」和「加班工作時數」，以及是否要「輪班工作」。此外，還須提供「休息日」的資料。[聽證會文件 CTB-3：英文原文第 571-1 至 571-2 頁，中文本第 571 頁]

### 嶼巴

199. 嶼巴在 2018 年 4 月 24 日的書面意見表示，在 2018 年 2 月嶼巴聘有 173 名全職車長和 50 名兼職車長。兼職車長與全職車長的比例與 2015 年相比有顯著增加；在 2015 年，嶼巴聘有 145 名全職車長和 26 名兼職車長。[聽證會文件 NLB-1：英文原文第 17 頁]黃焯安先生作供時說，全職或兼職工作視乎求職者的選擇，並非由嶼巴決定。不過，他認為如此僱員比例的原因之一是，「……可能……個工資比較又唔係話真係□咁遠」。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 6 至 7 頁，中文本第 3 頁]

200. 對於嶼巴收集兼職車長其他工作的性質和時數的資料，黃焯安先生確認職位申請表並無要求申請人填寫在其他地方工作的時數。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 11 頁，中文本第 4 頁]不過，陳天龍先生說：

「……我哋……加強……要求……兼職車長……申報番佢哋個正職係乜嘢，同埋佢哋個工作時數有幾多，……保障番我哋符合運輸署所訂出嚟嘅指引嘅。」

陳先生續稱，「呢個措施係我哋最近喺 6 月份開始嘅」。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 9 頁，中文本第 4 頁]

201. 黃焯安先生作供時表示，嶼巴已向兼職車長提出有關問題，他們有些申報了其他工作和相關工作時數。他說[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 14 頁，中文本第 6 頁]：

「我哋初步嘅資料……兼職嘅同事……例如係做一個酒店嘅車長嘅……根據佢去報畀公司，佢每周平均嘅工作係五天，咁每個工作日平均嘅駕駛時間就係八小時……」

黃先生續稱：

「當而家已經回覆嘅就有三十幾位，接近我哋兼職嘅八成嘍喇，係喇，即係三十幾位喇。」

202. 儘管嶼巴曾作該等陳述，但根據嶼巴在 2018 年 6 月 27 日提交附有「新職位申請表」樣本的書面意見：

「新申請表將於 2019 年或之前推出。」

九巴

203. 九巴特別委員會在 2018 年 3 月 12 日發表意外報告，在招聘標題下陳述[聽證會文件 KMB-1(A)：第 104 頁，第 13 段]：

「停止聘用兼職車長

九巴已停止聘用所有工作時間低於每周 18 小時的兼職車長。然而，為應付繁忙時段的巴士服務需求，九巴已向之前聘用的兼職車長提議轉為合約時薪制車長，或轉任九巴其他崗位」。

兼職車長苦主大聯盟

204. 兼職車長苦主大聯盟（「大聯盟」）作供時，於開場發言中解釋，該組織因應九巴所採取的行動而成立[第 10 日聽證會紀錄本：2018 年 7 月 31 日，英文本第 142 頁，中文本第 71 頁]：

「我哋係一班嘅兼職車長，係因為 2 月 10 號嗰宗嘅慘劇之後就組織起嚟嘅，冇幾耐之後，九巴<停止分配工作俾我哋>，我哋都係覺得唔開心，因為嗰個意外牽涉嘅司機佢話係兼職車長，而我哋作為一班嘅兼職司機，覺得就受到其他嘅工會不當、冇基礎、失實嘅攻擊，仲有其他公眾人士都係咁攻擊我哋，就懷疑我哋嗰個工作……」

205. 大聯盟在最後一輪書面意見中重申其感受，並表示樂見「各專營巴士公司就如何管理兼職車長事宜」所作出的改變。[聽證會文件 TU-1(D)：英文原文第 294-19 頁]

206. 對於城巴／新巴所作出的改變，大聯盟提到，兼職車長須提交申報書，申報的「資料包括全職僱主的名稱、每天及每周工作時數、從該等職位賺取的收入等。申報書會由高層管理人員簽收，副本會交回相關的兼職車長。」另外，大聯盟還提及，兼職車長現在也可報讀以往只供全職僱員修讀的年度複修課程；對於這個做法，大聯盟顯然贊同。[聽證會文件 TU-1(D)：英文原文第 294-20 頁]

207. 對於九巴所作出的改變，大聯盟表示[聽證會文件 TU-1(D)：英文原文第 294-20 頁]：

「1 – 兼職車長須每年申報其全職工作的詳情，並承諾在情況有變時立即通知公司；

2 – 兼職車長須同意准許公司每年取閱其扣分紀錄；以及

3 – 兼職車長須就不曾駕駛過的路線接受強制訓練，在導師監督下駕駛有關路線。」

## 第 10 章 — 嶼巴使用非專營巴士及司機

208. 嶼巴在書面意見提到，為應付周末和公眾假期急增的乘客量，嶼巴在取得運輸署同意下，租用非專營巴士及其司機。這項與運輸署訂立的安排已實施逾 20 年，嶼巴須每年重新申請兩次。目前，嶼巴獲准分別使用 80 和 50 輛非專營巴士，在星期日／公眾假期和星期六提供服務，該等巴士以其車輛登記號碼識別。

209. 嶼巴使用該等巴士須受運輸署施加的條件限制，當中包括[聽證會文件 NLB-1：英文原文第 38 頁]：

「(d) 有關巴士必須裝有提供專營服務所需的類似車上設施，例如錢箱、路線目的地展示板等。」

黃焯安先生說，他明白有關條款規定安裝行車記錄儀、限速器和其他設施。

210. 黃焯安先生表示，嶼巴已與母公司冠忠遊覽車有限公司(冠忠)訂立巴士和司機租賃合約。[聽證會文件 NLB-2：英文原文第 491 頁]冠忠會就嶼巴所租用的巴士，向嶼巴提供 Openmatics 有關安裝和測試行車記錄儀的報告。[聽證會文件 NLB-2&3：英文原文第 500 至 501 頁]。

211. 黃焯安先生確認，就冠忠隨租用巴士一併向嶼巴提供的車長的駕駛資歷和紀錄，嶼巴並無作出類似要求。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 34 頁，中文本第 14 頁]他說，嶼巴尚未決定是否要求冠忠提供有關資料。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 37 及 38 頁，中文本第 16 頁]

212. 委員會詢問「嶼巴是否須確保隨冠忠的非專營巴士一併租賃的車長的工作情況……符合《指引》」，運輸署於 2018 年 7 月 20 日回覆：[聽證會文件 TD-1：英文原文第 436 頁]

「有關的指引並不適用於非專營巴士的司機。由於這些司機並非嶼巴僱員，故運輸署未有規定嶼巴提供有關他們符合《指引》的報告。然而，嶼巴在實際運作時，已主動參考《指引》安排他們的駕駛職務。」

## 第 11 章 — 行車記錄儀／車載智能通訊系統或「黑盒」

### 香港公路學會

213. 香港公路學會在 2018 年 5 月 17 日的書面意見中提出，科技裝置可用於加強巴士安全[聽證會文件 MISC-1(C)：英文原文第 156-3 頁]：

「駕駛行為雖然難以控制，但應可安裝某類裝置，在整個行車過程監察車輛和司機，這或有助營辦商監控個別司機的駕駛行為。有關裝置已見於市面，並應安裝在所有巴士上。巴士行走固定路線，因此可沿途檢查司機的駕駛態度，以確定他們有否危險駕駛。現今科技應能進行聯機及實時監察，一旦發現司機有不恰當的駕駛行為，便可向司機發出警報，並發送訊息至營辦商的中央控制室，以便即時採取行動。此舉或有助避免因危險駕駛而引致的交通意外。」

214. 令人感到意外的是，工作小組曾考慮的科技裝置，並不包括新的行車記錄儀／車載智能通訊系統。

### 城巴／新巴

215. 城巴及新巴在其意見書中表示，擬於 2018 年第三季「更新黑盒，增設實時功能」。城巴及新巴指出系統的「實時」功能，「如出現超速情況，黑盒系統會即時經由駕駛室的黑盒控制板自動發出警號(即嗶嗶聲響)，提醒車長。」[聽證會文件 CTB-1：英文原文第 58 頁，第 4 段]。列俊華先生解釋，有關數據每隔 15 秒便會由專營巴士傳送至公司的電腦。

216. 列俊華先生表示，約在 2015 年，即城巴獲批專營權續期前，運輸署作出規定，要求公司有責任向乘客提供巴士預計到站時間。2017 年，公司開始主動安裝名為 Real-Time System-2(「RTS-2」)的實時系統，倘若巴士超速，系統會向車長作出警報。不過，系統不會就其他不良駕駛行為作出警報。

217. 關於現有系統，鄭偉波先生說，巴士黑盒會記錄有關超速、加速、減速和巴士車門有否關上等數據。如巴士以超出時速 75 公里或在 25 條車

速限制為每小時 50 公里的選定路段以超出時速 55 公里的速度連續行駛了 10 秒，黑盒即會製備超速報告。他表示，按照原意，只限在現時所訂指標下才會就超速向車長發出聲效警報。至於超速持續的時間長短，會在與工會商議後訂出，其中一項考慮因素是讓車長在得悉巴士超速時，可在一段時間內平穩地減慢速度，避免突然減速。

218. 鍾澤文先生同意，該 25 條選定路段只佔公司所有巴士路線行經道路的極小部分。鄭先生表示，公司計劃在系統隨機加入更多車速限制為每小時 50 公里的選定路段，以監察超速情況。不過，此前會先與工會進行商討。

219. 鄭先生確認，選定該 25 個路段的準則包括該等路段是一段相當長的下坡路或沿途有急彎，而且全為曾有嚴重交通意外或意外頻生的地點。鍾澤文先生表示，公司認為巴士在該等路段以高於時速 50 公里行駛會構成一定危險。公司先在 2013 年 6 月選定首 11 個路段，其後在 2014 年 9 月選定另外 3 個路段，最後在 2018 年 3 月再選定 11 個路段。所有車長均獲發《巴士車長手冊》，當中對該等路段有詳細描述。

220. 鄭偉波先生解釋，現時安裝在巴士的黑盒所錄得的數據會在巴士完成當天服務後在公司車廠上載至公司電腦。系統會自動製備超速事件報告，而在其後約 5 天內從車長開始值勤時使用八達通卡所產生的數據找出涉事車長。接着，系統會自動發送電郵給公司內相關專營權的營運部門。之後，公司會向涉事車長展開適當紀律程序。

221. 鄭偉波先生表示，只有在回覆乘客投訴或發生涉及專營巴士的意外時，才會檢視超速以外的其他數據。系統不會就這類數據自動製備報告。  
[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 18 頁，中文本第 9 頁]

222. 城巴在 2018 年 10 月 15 日的意見書中表示[聽證會文件 CTB-1：英文原文第 98 頁]：



「自 2018 年 9 月 18 日起，我們運用了運輸署提供的『車速限制』數據開始監察我們的巴士在所有道路上的車速。製備超速事件報告的準則維持不變如下：

- 在車速限制為每小時 50 公里的路段，以超出時速 55 公里的速度連續行駛超過 10 秒；或
- 在車速限制為每小時 70 公里或以上的路段，以超出時速 75 公里的速度連續行駛超過 10 秒。

我們亦引入了實時聲效警報，提醒巴士車長在以下情況減慢車速：

- 在車速限制為每小時 50 公里的路段，以超出時速 53 公里的速度連續行駛超過 5 秒；或
- 在車速限制為每小時 70 公里或以上的路段，以超出時速 73 公里的速度連續行駛超過 5 秒。

我們正與黑盒製造商聯絡，研究在遇有急速剎車或突然加速的情況下，向巴士車長發出實時警報的可行性。我們亦正研究有關自動製成急剎或突然加速的事件報告，以識別經常顛簸駕駛的巴士車長。」

### 九巴／龍運及嶼巴

223. 九巴在 2018 年 4 月 24 日的補充書面意見中表示[聽證會文件 KMB-1(A)：英文原文第 91 頁，第 19 段]：

「自 2015 年起，九巴主動在旗下巴士裝設車速限制器、黑盒及監視鏡頭，以監察巴士車長的駕駛表現和協助交通意外調查。此等設備其後悉數列作專營權的規定。」

224. 因應委員會查詢該等專營權規定為何，九巴在 2018 年 5 月 18 日的書面意見中表示[聽證會文件 KMB-1(A)，英文原文第 175 頁]：

「在討論新專營權時，政府要求九巴承諾採納多項加強安全的設備，包括但不限於車載電子數據處理器(又稱黑盒)、車速限制器及監視鏡頭，作為購買新巴

士的標準裝置(請參閱 2017 年 3 月 10 日運輸署信函的摘錄)。九巴已向運輸署表示會在新專營權下履行這些承諾。」

225. 應委員會的要求，九巴提供了 2017 年 3 月 10 日致運輸署函件的副本，信中九巴表示會履行該等承諾。信中標題為《提供巴士車載設施》的附件提到[聽證會文件 KMB-9(B)：英文原文第 3997 頁]：

「根據新專營權條文第 7 條，九巴承諾：

- (a) 在獲批新專營權後，購買**新巴士**時會採納以下設置和設施，作為標準裝置：

改善服務、無障礙及方便長者的設置及設施：

(i)

.....

(x)

加強安全的設置：

(i)

.....

(iii) 電子數據處理器；」

226. 梁健宏先生作供時承認，運輸署沒有要求九巴加強黑盒的用途或功能。[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 80 頁，中文本第 38 頁]九巴沒有承諾做任何事情。應注意的是，運房局在其擬備、日期為 2017 年 3 月 28 日的立法會參考資料摘要中，把行政長官下令批出新專營權給九巴的情況知會立法會，文中雖有不少篇幅提及九巴的服務承諾，但卻沒有提及九巴承諾任何加強黑盒的安全功能[聽證會文件 TD-2&3：英文原文第 496 至 569 頁]。運輸署亦承認，就九巴在 2017 年的承諾而言，

「關於電子數據處理裝置／黑盒的書面技術要求沒有特別更新，與 2003 年 10 月的相同。」[聽證會文件 TD-1：英文本第 431 頁第 6 段，中文本第 447 頁第 6 段]

*Openmatics*：九巴及龍運的車載智能通訊系統供應商

227. 代表 ZF Friedrichshafen AG 及其附屬公司 ZF services Hong Kong Limited 和 Openmatics s.r.o. 的中倫律師事務所在 2018 年 6 月 26 日致函委員會，表示 Openmatics 在 2013 年 4 月 16 日與九巴和龍運簽訂合約，向該公司供應車載智能通訊系統[聽證會文件 BM-1：英文原文第 64 至 72 頁]。2018 年 7 月 14 日，Openmatics 聘用的系統工程師 Jan Kuliš 先生在捷克共和國通過視像作供。[第 6 日聽證會紀錄本：2018 年 7 月 14 日，英文本第 136 至 177 頁，中文本第 55 至 72 頁]

228. Openmatics 最初供應給有關公司的車載智能通訊設備為「莫扎特盒」(「Mozart Box」)，其後則供應 2015 年夏天推出的新一代「巴克盒」(「Bach Box」)；後者已供應給冠忠。這些設備能通過司機反饋裝置，在就巴士的速度、加速、減速、引擎空轉和傾側角度達到臨界值的情況下，能逐秒提供視覺和聲效反饋。只要在校正裝置時輸入各項參數的臨界值，當達到各項經校正後的臨界值，設備便會發出嗶嗶聲，而發光二極管燈也會亮着。

229. 在 2018 年 2 月 10 日的大埔公路意外中，肇事九巴專營巴士裝有 Openmatics 的車載智能通訊設備，其螢幕截圖顯示各項經校正後的臨界值如下：

**加速值設定**

*加速訊號來源	[車速改變]
*加速[米／秒 <sup>2</sup> ]	[1.15]
*減速[米／秒 <sup>2</sup> ]	[2.3]
*傾側角度[度]	[44.0]

**超速值設定**

\*速度[公里／小時] [75.0]

\*地方速度[公里／小時] [75.0]

**空轉值設定**

\*空轉時間[分]／[秒] [15] [0]

**引擎值設定**

\*引擎轉數[轉數／分鐘] [3 000]

230. Jan Kuliš 先生解釋，雖然司機的聲效和視覺警報系統會在減速和加速時啟動，但卻不會記下有關數據的數值；這是九巴的決定。加速和減速視乎車速變化而定，而車速則由速度計測定。Jan Kuliš 先生指出，傾側角度已輸入 44 度的數值，這實際上是令該項警告功能停止。他表示該設備能處理兩個不同的速度值，「譬如……有一啲地方係 50，有啲地方係 70」。[第 6 日聽證會紀錄本：2018 年 7 月 14 日，英文本第 150 頁，中文本第 61 頁]螢幕截圖沒有顯示一項就不同地方作詳細設定的功能，如果車輛的全球定位系統訊號暫時消失，便會以演算法計算車輛位置。該兩項校正速度均輸入相同數值，意味着這項功能沒有被使用。

231. Jan Kuliš 先生指出，在事故發生時，伺服器上的應用程式能收到訊號和事故發生位置的資料。肇事巴士上的儀器已校定為每 30 秒把數據傳送到伺服器，有關校定是可以選擇的。最低的有效傳送率約為每 5 秒 1 次，有關數據可通過 Openmatics 的門戶網站和伺服器上的附加應用程式傳送，亦可由顧客本身提供的資訊科技系統傳送，九巴採用了第二種方法。按照設定，系統可與數碼地圖一併使用，按兩個不同的限定車速發出警報，但通過應用軟件，亦可輕易地把處理範圍擴大至更多限定車速。

232. Jan Kuliš 先生表示，有關數據可供分析，以便就個別司機的駕駛行為特徵編製報告，例如超速、加速和減速行為特徵。在德國，當局會通過分析這些和其他數據，檢視貨車司機的駕駛行為。最後，他表示有關軟件

可上載至車載智能通訊設備中的數據以作分析之用，以記錄司機的駕駛時間。

## 九巴

233. 梁健宏先生代表九巴作供時表示，2018年2月10日大埔公路意外肇事巴士的黑盒雖然沒有記錄加速和減速的資料，但有關數據已傳送至九巴的伺服器，可供取閱。[第12日聽證會紀錄本：2018年8月7日，英文本第93頁，中文本第44頁]他指出，減速、加速及速度的臨界值，分別為1.15米/秒<sup>2</sup>、2.3米/秒<sup>2</sup>及時速75公里；而據Jan Kuliš先生說，這些由九巴提供的數值已設定於黑盒內。梁先生表示九巴並不知道「區域嘅速度」設定為每小時75公里。另一方面，九巴知悉但沒有提供傾側值為44度這項資料，九巴無法從ZF取得有關傾側度的任何參考數值。當時九巴車隊的所有黑盒均已設定這些臨界值。[第12日聽證會紀錄本：2018年8月7日，英文本第101至103頁，中文本第48至49頁]2018年2月23日，速度臨界值由每小時75公里已經改為每小時70公里。[第12日聽證會紀錄本：2018年8月7日，英文本第97頁，中文本第46頁]

234. 蘇偉基先生表示，縱然黑盒記錄的數據傳送至九巴的伺服器是延時的，但不會影響數據分析，因為「……有real-time analysis<sup>23</sup>」。[第12日聽證會紀錄本：2018年8月7日，英文本第89頁，中文本第42頁]

235. 梁健宏先生承認，如果九巴設有系統，不但可在車長以超出時速75公里的速度限制駕駛時發出警報，還可在超出50公里的速度限制駕駛時提示車長，這會更為理想。[第12日聽證會紀錄本：2018年8月7日，英文本第104頁，中文本第49頁]

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<sup>23</sup> 「real-time analysis」即「實時分析」。

## 數碼地圖

236. 就此而言，梁健宏先生表示九巴欣悉運輸署有數碼地圖可供使用。他是從運輸署於 2018 年 6 月 7 日發給九巴的信函，得知有數碼地圖可供使用。他認為署方是因為委員會的關注，才會這樣做。[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 107 至 109 頁，中文本第 50 至 52 頁]。為此，九巴安排 Openmatics 協助把數碼地圖納入黑盒系統，並已進行測試，以確認系統能提供實時資料，顯示巴士在某個地點超出車速限制。九巴最新的行動計劃提及已與 Openmatics 安排在 2018 年 7 月 31 日測試，並表示[聽證會文件 KMB-1(A)：英文原文第 231 頁第 16 段]：

「試駕結果顯示，在設定每小時 50 公里及每小時 70 公里的速度限制區域內，超速警報均會響起。」

237. 按運輸署 2018 年 6 月 7 日發給所有專營巴士營辦商的信件的副本[聽證會文件 TD 1：英文原文第 477 頁]：

### 「道路網絡暨車速限制資訊」

加強專營巴士安全工作小組最近曾舉行會議，討論採用**全球定位系統或地理圍欄系統**的車載安全裝置的建議。

謹此通知貴公司，現可於資料一線通網站(<http://www.data.gov.hk>)，下載運輸署轄下道路網絡中以地理資訊系統格式製成的車速限制數據集……」

貴公司可以利用這些地理資訊系統數據集，與巴士製造商或其他有關方面，探討以全球定位系統或地理圍欄系統用於車速限制在技術上是否可行，並進行有關測試。除上述車載安全裝置的建議外，我得知貴公司現時亦有使用黑盒資料，以監察司機行為，我們相信有關的地理資訊系統數據集，能為貴公司提供轄下巴士路線在車速限制方面更精確的資料。」

238. 運輸署在 2018 年 8 月 20 日的書面意見解釋，「車速限制」及「道路中心線」的數據最初於 2010 年由運輸署製作，至於數碼底圖由地政總署擬備和更新。2008 年 7 月，運輸署設置內部電腦系統，「以管理道路交

通資訊，包括道路車速限制及道路中心線數據」。鑑於數據可作更廣泛用途，運輸署遂於 2010 年 11 月 22 日首度公開發售該些數據，並於同日在該署網頁公布此事，有關訊息一直保留在網頁。運輸署更致函準買家，包括新巴(經辦人：資訊科技經理)及九巴(經辦人：客戶服務部門主管)等邀請他們訂購。[聽證會文件 TD-1：英文原文第 481 頁，第 3 至 6 段；聽證會文件 TD-5：英文原文第 1752 至 1755 頁]。然而，新巴及九巴並無訂購有關服務。

239. 運輸署進一步解釋，指該署網頁已於 2018 年 1 月 18 日宣布，市民可「通過資料一線通免費下載」有關數據；同日，該署致函訂購用戶，但沒有致函新巴和九巴，原因是該 2 間公司並非訂購用戶。[聽證會文件 TD-1：英文原文第 481 至 482 頁]

#### *九巴以黑盒所錄得的數據監察司機行為*

240. 九巴在 2018 年 5 月 18 日的書面意見中解釋，車上黑盒所收集並傳送到公司伺服器關於車長如何駕駛巴士的資料，連同其他系統所收集的其他資料(包括巴士登記編號及路線號碼)，會由公司檢視。公司需時「約 10 天檢索有關資料以作分析」。[聽證會文件 KMB-1(A)：英文原文第 168 頁]

241. 梁健宏先生作供時表示，檢索和分析工作所需的時間現已縮短至 4 天。至於有關工作如何進行，他表示[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 136 至 137 頁，中文本第 63 至 64 頁]：

「點樣……可以 interface<sup>24</sup>去搵番……車長當日揸過咩嘢車、佢當日個駕駛狀況、經緯度，即係 location<sup>25</sup>。」

有咗呢啲資料，點樣……去判斷佢係<每小時>50 <公里>路段呢？亦都要再要 process<sup>26</sup>，因為亦都要 match<sup>27</sup>番 FMI，FMI 就 fleet management information

<sup>24</sup> 「interface」即「連接不同系統的界面」。

<sup>25</sup> 「location」即「位置」。

system<sup>28</sup>，……system……有嗰架車經過嗰個地點，知道係行邊段係<每小時>50<公里>、邊段係<每小時>70<公里>，從而知道……車長、有路線、有佢行車嘅情況……。

……所以點解呢個事情咁複雜……如果有個digital map<sup>29</sup>，……資料已經喺個黑盒嗰度有晒嘅話，……就更加快捷，我相信……個report<sup>30</sup>一日就可以有。」

242. 梁先生承認，簡化有關工作所需的技術存在已久。雖然被問及，但他並沒有解釋為何不早些使用有關技術。

### 車速異常報告

#### 每小時 50 公里的車速限制

243. 九巴黃祥明先生解釋，如車速在預設時限內超出臨界點，黑盒會製備異常報告。在車速限制為每小時 50 公里的區域內，如巴士以每小時 56 至 65 公里超速行駛，黑盒會在超速 30 秒後製備異常報告；如以每小時 66 至 75 公里超速行駛，則會在超速 15 秒後製備異常報告。最後，如車速介乎每小時 76 至 79 公里，異常報告會在 2 秒後製備。[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 134 至 135 頁，中文本第 62 至 63 頁；聽證會文件 KMB-1(B)：英文原文第 572 頁]

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<sup>26</sup> 「process」即「處理」。

<sup>27</sup> 「match」即「配對」。

<sup>28</sup> 「FMI」即「車隊管理資訊系統」。

<sup>29</sup> 「digital Map」即「數碼地圖」。

<sup>30</sup> 「report」即「報告」。



244. 九巴在 2018 年 10 月 3 日的意見書中向委員會澄清，黃祥明先生在做供時指出的時間及速度範圍臨界點是始於 2018 年 8 月 1 日或之後才適用。該日期前的超速報告是根據專營巴士以下列的速度範圍行駛而製備的：[聽證會文件 KMB-1(B)：英文原文第 572 頁]

- 以每小時 56 公里至 65 公里的車速行駛 60 秒或以上；
- 以每小時 66 公里至 75 公里的車速行駛 30 秒或以上；
- 以每小時 76 公里至 79 公里的車速行駛 30 秒或以上；及
- 以每小時 80 公里至 89 公里的車速行駛 2 秒或以上。

#### *每小時 70 公里的車速限制*

245. 黃祥明先生指出，在車速限制為每小時 70 公里的區域內，如專營巴士以每小時 76 至 79 公里的車速行駛 30 秒或以上及以每小時 80 至 89 公里的車速行駛 2 秒或以上，便會發出異常報告。九巴再次於 2018 年 10 月 3 日的函件澄清，有關的臨界點始於 2018 年 8 月 1 日或之後才適用，在該日期前的時間臨界點分別是 60 秒及 2 秒。[聽證會文件 KMB-1(B)：英文原文第 572 頁，第 3(A)II 段]

246. 凡在上述參數範圍內出現的超速情況，異常報告均會記錄巴士的最高車速(如有)及全球定位系統的經緯度座標。

#### *實時監察車長的駕駛行為*

247. 根據 Jan Kuliš 先生的證供，由於數據從九巴巴士黑盒傳送到伺服器只會延時 5 秒，因此使用附加軟件實時監察車長的駕駛行為，實屬可行。至於會否這樣使用黑盒，協助委員會的大律師已詢問九巴的意見。梁健宏先生表示公司曾考慮此事，但因以下原因而否決這項建議[第 13 日聽證會紀錄本：2018 年 8 月 10 日，英文本第 50 至 51 頁，中文本第 22 頁]：

「唔可行，因為我哋有成四千個車長，我哋唔可能有咁多個supervisor<sup>31</sup>去睇住四千個車長。」

248. 九巴應委員會要求，提交一系列涵蓋 2018 年 5 月 1 日至 7 日期間的超速異常報告，當中臚列多個分項數據，但僱員姓名及編號已被遮蓋[聽證會文件 KMB-9(B)：英文原文第 3993 至 3995-3 頁]。其中一項記錄顯示該系統某部分的操作情況[聽證會文件 KMB-9(B)：英文原文第 3995-1 頁]：

操作日期；	巴士編號；	出發地點；	出發時間；	路線編號；	行駛次數；	更次；
01/05/2018	TW 5352	藍灣半島	01/05/2018	606	03	2
0:00			19:26			

操作路線	操作時間；	持續時間(秒)；	最高速度；	全球定位系 統位置緯 度；	全球定位系 統位置經 度
606	01/05/2018	32	67.9	0	0
	20:07				

249. 梁健宏先生解釋有關數據為何重要[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 132 頁，中文本第 62 頁]：

「佢 exceed<sup>32</sup>某一個 setting<sup>33</sup>呢，就會 show<sup>34</sup>出嚟，換句話講，三十二秒鐘佢都 exceed 咗嗰個 setting，不過最高速就係 67.9，呢三十二秒佢都係超過我哋定嗰個速度。似乎呢個路段應該就係<每小時時速>50<公里>路段，因為如果<每小時時速>70<公里>路段，佢就唔應該出嚟嘅。」

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<sup>31</sup> 「supervisor」即「督導人員」。

<sup>32</sup> 「exceed」即「超出」。

<sup>33</sup> 「setting」即「設定值」。

<sup>34</sup> 「show」即「顯示」。

250. 雖然委員會要求有關方面提供顯示急速剎車及突然加速情況的類似文件，但並沒有收到有關文件，而是接獲一份每周報告。關於該份報告，梁健宏先生表示[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 138 頁，中文本第 64 頁]：

「呢個weekly report<sup>35</sup>就係睇番過往嗰星期個車長……駕駛情況，……幾多秒鐘係……超過……三個範疇，harsh braking<sup>36</sup>、sudden acceleration<sup>37</sup>同埋speeding<sup>38</sup>……」

### *超速、加速和減速臨界點的駕駛行為每周報告*

251. 每周報告記錄在 2018 年 7 月 24 至 30 日的一星期內，司機在超速、加速和減速時超出臨界點，並且累計時間超過指定分鐘的超速、急速剎車和突然加速的事故。[聽證會文件 KMB-1(A)：英文原文第 367 至 375 頁]有 57 名司機被指曾在超過 4 分鐘時間內以時速超過 75 公里行車，其中一人超速時間累計共 23 分鐘。有 51 名司機被指曾急速剎車(即減速率達每秒時速 8 公里以上)累計時間共超過 4 分鐘，其中 2 人的急速剎車累計時間共 7 分鐘。有 9 名司機被指曾突然加速(即加速率達每秒時速 4 公里以上)時間共超過 60 分鐘，其中 1 人的突然加速累計時間合共不少於 76 分鐘。明顯地，本質上每次急速剎車或突然加速的情況不大可能維持數秒以上，因此報告內容意味有關司機在該星期內曾多次急速剎車和突然加速。

### *2018 年 2 月 10 日大埔公路意外的肇事九巴巴士*

252. 鄧樂勤先生詢問，2018 年 2 月 10 日意外的肇事巴士曾否因超速或過度減速／加速而有異常報告，九巴黃祥明先生回應表示，「如果佢超過 75 公里，應該就會係喺呢個表……出現」，並認同如果加速率或減速率超

<sup>35</sup> 「weekly report」即「每周報告」。

<sup>36</sup> 「harsh braking」即「急速剎車」。

<sup>37</sup> 「sudden acceleration」即「突然加速」。

<sup>38</sup> 「speeding」即「超速」。

過臨界值，系統會自動製備報告。[第 14 日聽證會紀錄本：2018 年 8 月 11 日，英文本第 8 至 10 頁，中文本第 4 及 5 頁]黃先生表示，如果找到有關報告，他會提交予委員會。

253. 九巴在 2018 年 8 月 23 日的書面意見中就有關提問回覆[聽證會文件 KMB-1(B)：英文原文第 436 頁]：

「是的，該等異常報告已製備。該些報告沒有載列 2018 年 2 月 10 日大埔公路意外肇事巴士的車長的駕駛記錄。」

254. 回覆夾附了一份稱為 BOP<sup>39</sup> 207 紀錄(沙田車廠)的文件，記錄期為 2018 年 1 月 29 日至 2 月 13 日。[聽證會文件 KMB-1(B)：英文原文第 436 頁]該文件載列超速異常報告所涵蓋的大部分資料，並列明超速事件發生時的車速限制和地點，以及所採取的行動。2018 年 2 月 10 日錄得的唯一一宗符合九巴黑盒設定超速準則的事件是於 21:32 時發生，涉事巴士在城門隧道公路超速行駛 9 秒，最高時速為 82 公里[聽證會文件 KMB-1(A)：英文原文第 4828-4833 頁]。該輛巴士顯然並非大埔公路意外的肇事巴士。

255. 其他夾附於九巴回覆的文件，則屬突然加速(即加速率達每秒時速 4 公里以上)和急速剎車(即每秒減速率達時速 8 公里以上)事件的每周報告，但報告並無提供詳情，說明這些事件是否於 2018 年 2 月 10 日發生，而且車長的僱員編號有部分被遮蓋。無論如何，有關方面亦沒有向委員會提供大埔公路意外肇事巴士車長的僱員編號。

256. 九巴在 2018 年 12 月 10 日的意見書告知委員會[聽證會文件 KMB-1(B)：英文原文第 579 至 580 頁]：

「最近，已將由我們的系統製備超速異常報告的時間縮短至 4 天。所需的時間將會在本月內進一步縮短至 1 天。」

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<sup>39</sup> 「BOP」即「巴士車內監察系統項目 (Programme of the Bus Onboard Monitoring System)」。

該份意見書進一步指出：

「...我們認為向我們的車長發出即時超速警報是避免交通意外的有效方法。我們現時的系統只能在巴士車長以超過時速 70 公里的車速行駛時向他們發出警報。然而，我們會在本月稍後時間推出能在巴士車長以超過時速 50 公里的車速行駛時向他們發出警報的系統。我們會分階段在車隊安裝新的警報系統。」

### *九巴的實時車務管理系統*

257. 程艾樂先生是專門研究交通運輸事宜的管理顧問兼國際公共運輸組織(「UITP」)的導師。他於 2013 年 6 月獲九巴聘用，先後擔任策劃及發展部主管和副車務總監，直至 2016 年 12 月。

258. **Openmatics** 一直向九巴的專營巴士供應車載智能通訊系統，程艾樂先生加入九巴時已經如此。該系統用以向公眾發布行走九巴路線的巴士的預計到站時間。此外，九巴亦計劃設立「實時車務管理系統」，把車載智能通訊系統所收集和整理的數據，即車速、加速、減速、剎車、傾側角度、燃料消耗量及位置，實時傳送予營運控制中心。控制中心是設於九巴的荔枝角中心，九巴巴士的行車情況和相關數據會於該中心的屏幕顯示。  
[第 8 日聽證會紀錄本：2018 年 7 月 17 日，英文本第 83 至 87 頁及第 95 頁，中文本第 33 至 36 頁及第 39 頁]

259. 程艾樂先生表示，巴士如超出經校正的車速臨界點，理應會發出異常報告，經駕駛室的司機顯示系統向巴士車長發出警報，以及由營運控制中心的督導人員介入，通過司機顯示系統，或通過無線電或第三代流動通訊技術向司機發出聲效警告。建議以上述方式介入的原意是鼓勵車長改善駕駛技術。公司也曾考慮針對特定路線校正臨界值，例如在裝置校正不同地點的不同速度臨界值。然而，實時使用數據的計劃已取消。儘管如此，車載智能通訊系統的數據已於「事後」使用，即事發後使用。[第 8 日聽證會紀錄本：2018 年 7 月 17 日，英文本第 84、95 及 98 頁，中文本第 34、37 及 40 頁；聽證會文件 FE-1(A)：英文原文第 36 頁，第 2 段]

260. 程艾樂先生作供時說，他與九巴其他高層曾就使用車載智能通訊系統積極管理司機行為一事作多次報告 [第 8 日聽證會紀錄本：2018 年 7 月 17 日，英文本第 99 至 100 頁，中文本第 41 頁]。他在 2018 年 9 月 10 日的供詞中表示，他已不再受僱於九巴，因此不宜出示任何與實時車務管理系統有關的文件，但有電郵和檔案證明曾就該系統的使用曾作內部和公開的報告[聽證會文件 FE-1(A)：英文原文第 46- 299 頁及第 46-300 頁]。

261. 九巴方面，梁健宏先生就程艾樂先生對實時車務管理系統所作的證供表示[第 13 日聽證會紀錄本：2018 年 8 月 10 日，英文本第 41 頁，中文本第 18 頁]：

「呢個係一個車務實時嘅管理系統，係車務管理系統，係同駕駛安全係有關……」

梁先生補充[第 13 日聽證會紀錄本：2018 年 8 月 10 日，英文本第 47 頁，中文本第 20 至 21 頁]：

「係未有取消過嘅，呢個project<sup>40</sup>係 2014 年 10 月開始做嘅，仲未停止，仲繼續做緊……係一個實時車務管理系統，因為有呢個黑盒，有呢個巴士嘅實時地點，就可以令到車務調動更加有效率。」

262. 2018 年 8 月 10 及 23 日，九巴應委員會要求，出示與實時車務管理系統有關的紀錄[聽證會文件 KMB-1(B)：英文原文第 422 頁；以及聽證會文件 KMB-11：英文原文第 4484 至 4746 頁]。應注意的是，雖然並無檔案或電郵證明曾就以實時車務管理系統實時管理司機行為作報告，但 Chung Lim Chan (資訊科技) 與 Louisa Lam (車務發展部) 之間在 2016 年 2 月 25 日的電郵提到，「實時車務管理系統的範疇有變」，儘管並無提供變動方面的資料。[聽證會文件 KMB-11：英文原文第 4741 至 4742 頁]

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<sup>40</sup> 「project」即「計劃」。

## 第 12 章 — 車速限制

### 道路安全研究小組

263. 道路安全研究小組分別在 2014 年 9 月 16 日及 2016 年 6 月 16 日，就向城巴、嶼巴[聽證會文件 MISC-2：英文原文第 777 頁]和九巴批予新專營權的事宜，向立法會交通事務委員會提交文件，當中提出以下相同建議[聽證會文件 MISC-2：英文原文第 773 頁]：

- 「● 增加一項專營權規定，指明必須利用已安裝的黑盒設立監察司機的全面標準化系統；監察系統應以精簡程序作自動化操作，以便教育及再培訓司機。
- 主要監察措施包括：
- 加速和減速性能……對於處理乘客失去平衡的問題，至為重要；
- 設定駛經危險山路的車速，例如每小時 25 至 40 公里……對於預防災難性事故，至為重要；
- 設定駛經市區的車速，例如每小時 20 至 35 公里……對於保障行人及一般安全，至為重要；
- ……
- 設定駛經巴士站的車速，例如每小時 15 公里……；
- 跟車太貼；
- 在單車後面或附近行駛。」

264. 在 2016 年 6 月 16 日的書面意見中提到[聽證會文件 MISC-2：英文原文第 772 頁]：

「在巴士上運用黑盒的潛力甚大，但現時如何善用則不清楚。」

各項相關建議從無一項以任何形式反映在批予各個巴士營辦商的專營權條款中。

265. 道路安全研究小組在 2018 年 4 月的書面意見中，建議在道路安全方面採用「安全系統」模式，當中指出[聽證會文件 MISC-2：英文原文第 785 頁]：

「短期而言，根據運作程序制訂的積極措施及監察系統的部署，可以從速落實。」

266. 對於上述建議，道路安全研究小組表示[聽證會文件 MISC-2：英文原文第 785 至 786 頁]：

「最重要的積極措施，莫過於針對駕駛安全制訂新的運作程序；這些程序應涵蓋車速、加速和減速等事宜，可分為兩大類：

- 一般程序：針對典型情況，包括繁忙市區街道的車速
- 具體路線的程序：針對特定安全風險，例如狹窄山路中不設安全護欄的路段。

須以先進、實時及自動化的黑盒系統進行監察，目的是推廣符合上述程序的安全駕駛意識，而不是懲罰司機。」

267. 鄭子憲先生作供時解釋，實時報告的好處是[第 7 日聽證會紀錄本：2018 年 7 月 16 日，英文本第 35 頁，中文本第 14 頁]：

「……有一啲行動係極為不當嘅，係需要係適時……去發現同埋糾正……唔能夠話靠乘客嚟投訴，咁然後……派人去調查，……幾個星期之後先作出糾正。」

268. 對於自動化報告的重要性，鄭先生指出：



「……黑盒系統係可以產生大量嘅數據嘅，如果我哋單單係靠人手去搵……，又或者有關嘅程序唔係完全自動化嘅話，我相信涉及嘅人手資源好大概，咁樣做亦都唔能夠持久……」

### *低車速限制和車速限制區*

269. 道路安全研究小組在最後一輪書面意見中確認，其意見書是根據委員會收集的證供而撰寫的。對於運輸署擬在香港進行車速限制低於每小時 50 公里的測試，小組表示歡迎。小組留意到很多國家，包括荷蘭、英國、挪威、瑞典、丹麥、法國、西班牙、德國、新西蘭、美國、瑞士和芬蘭，都採用每小時 30 公里的車速限制，亦有少數國家採用每小時 40 公里的車速限制。為此，小組建議以下車速限制[聽證會文件 MISC-2：英文原文第 820-109 頁]：

「(a) 香港市區街道的車速限制一般應規定為每小時 40 公里，而次要街道、住宅區和市中心等地方則應以每小時 30 公里為限。」

270. 為支持其建議，道路安全研究小組指出[聽證會文件 MISC-2：英文原文第 820-110 頁]：

「巴黎正把 90% 街道的車速限制改為每小時 30 公里；

馬德里已開始把 85% 街道改為時速 30 公里的限速區；

愛丁堡差不多把整個市中心的車速限制設定為每小時 30 公里。」

### *專營巴士車速監察*

271. 委員會委託了理大科技及顧問有限公司，在選定的 20 個路段監察行經的專營巴士的車速。監察在 2018 年 8 月 29 日至 9 月 23 日每日不同時間，於 1 個車速限制為每小時 70 公里的路段及 19 個車速限制為每小時 50 公里的路段進行。總計監察了 2 381 輛巴士的車速，沒有錄得任何一輛巴士在車速限制為每小時 70 公里的路段超速行駛，在車速限制為每小時

50 公里的路段上行駛的專營巴士，則有 234 輛超速行駛，而當中只有 48 輛專營巴士錄得以超出時速 56 公里或以上的車速行駛。

## 第 13 章 — 車長薪金

### 新巴及城巴

272. 城巴及新巴在其書面意見中表示，兼職車長時薪為 80 元[聽證會文件 CTB-1：英文原文第 36 頁]，並確認兩間公司所聘巴士車長薪酬不同，視乎首次受聘日期而定。鄭偉波先生同意，兩間公司的巴士車長所獲薪金的水平全屬公司事務，與運輸署無關。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 40 頁，中文本第 18 頁]

### 城巴

273. 根據書面意見指出，城巴車長可獲得：

- (i) 底薪；
- (ii) 駕駛機場巴士津貼；
- (iii) 農曆新年獎金；以及
- (iv) 超時津貼，每小時津貼額為按現時底薪計算的時薪，而底薪則視乎首次受聘日期而定。

根據書面意見，在 1999 年 3 月 9 日或之前受聘者的底薪為 17,106 元；在 1999 年 3 月 10 日至 2004 年 3 月 8 日期間受聘者的底薪為 15,874 元；在 2004 年 3 月 9 日或之後受聘者的底薪為 15,364 至 15,764 元。

### 新巴

274. 與此相比，新巴車長可獲得[聽證會文件 CTB -1：英文原文第 35 至 36 頁]：

- (i) 底薪；

- (ii) 農曆新年獎金；以及
- (iii) 超時津貼，每小時津貼額為按現時底薪計算的時薪，而底薪則視乎首次受聘日期而定。

在 1998 年 9 月 1 日受聘的新巴車長，底薪為 18,184 至 18,664 元；在 1998 年 9 月 1 日後至 2001 年 8 月 23 日期間受聘者的底薪為 15,764 至 17,178 元；在 2001 年 8 月 24 日至 2004 年 3 月 8 日期間受聘者的底薪為 15,764 元；在 2004 年 3 月 9 日或之後受聘者的底薪由 15,364 至 15,764 元不等，薪金範圍反映按服務年資而定的增薪額。[聽證會文件 CTB -1：英文原文第 35 至 36 頁]

275. 城巴/新巴的鄭先生認同，在 2004 年 3 月 9 日或之後受聘的車長，薪金低於在較早日期受聘者。他解釋，在某個特定時間的薪金反映「……當時勞工市場……供求情況」。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 41 至 42 頁，中文本第 19 頁]

### 獎金

276. 書面意見中標題為「良好表現獎勵」的部分指出，兩家公司的巴士車長均合資格獲發三項獎金，即(i)安全獎金、(ii)表現獎金及(iii)勤工獎金，但鄭先生表示，因應巴士車長及其代表的要求，公司自 2018 年 3 月 1 日起把各項獎金「歸納咗落去底薪裏面」。[第 3 日聽證會紀錄本：英文本第 61 頁，中文本第 28 頁]因此，所有獎金不可被扣減，並已成為薪金的一部分，而超時津貼額是根據底薪計算的。鄭先生解釋，各項獎金(包括安全獎金)以往可予扣減，以反映車長的行為或出勤記錄。他承認，現已再無金錢誘因鼓勵巴士車長安全駕駛。[第 3 日聽證會紀錄本：英文本第 66 頁，中文本第 30 頁]

277. 吳智光先生解釋，車長底薪在 2018 年 2 月為 12,536 元。關於為何城巴及新巴在書面意見中列明在 2004 年 3 月 9 日或之後的薪金至少為

15,364 元，鄭先生表示，把三項獎金納入底薪和計及加薪額後，底薪便為 15,364 元。[第 3 日聽證會紀錄本：英文本第 69 至 70 頁，中文本第 32 頁]

### 嶼巴

278. 嶼巴在 2018 年 4 月 24 日的書面意見中，說明自 2017 年 7 月起車長所得薪酬的組成部分。大嶼山線的月薪制全職車長須每日工作至少 9 小時，可獲底薪每月 6,400 元。底薪隨服務年資遞增，服務 10 年或以上者底薪每月增加 1,000 元。此外，還會發放以下津貼和獎金[聽證會文件 NLB-1：英文原文第 21 至 22 頁]：

- (i) 值日津貼 — 每日 230 元；
- (ii) 安全獎金 — 每月 1,700 元；
- (iii) 勤工獎金 — 每月 750 元；
- (iv) 星期六／星期日／公眾假期津貼 — 每日 200 元；以及
- (v) 休息日工作津貼 — 每日 625 元。

279. 深圳灣線的車長為全職僱員，每個工作日值勤 12 小時，可獲底薪每月 6,000 元。底薪隨服務年資遞增，服務 10 年或以上者底薪每月增加 1,000 元。深圳灣線全職車長的獎金和津貼大致與大嶼山線相若，但他們的安全獎金較高，每月為 2,200 元。

280. 黃焯安先生表示，一般全職車長每月工作 24 或 25 日。他解釋，勤工獎金會按缺勤日數扣減：第一日扣減 200 元，第二日扣減 250 元，第三日扣減 300 元，如此類推。此外，嶼巴每季會向全職車長另外發放 450 元安全獎金。他認同，津貼和獎金制度旨在鼓勵車長為嶼巴工作，「……信念本身嘅核心，就係……多勞多得」。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 111 頁，中文本第 50 頁]

281. 日薪制兼職車長須每日工作至少 9 小時，平日日薪為 565 元，周末日薪為 625 元，星期日及公眾假期日薪則為 675 元；除了每日 30 元的安全獎金外，並無其他獎金或津貼。時薪制兼職車長的薪金為每小時 76 元。[聽證會文件 NLB-1：英文原文第 21 頁]

282. 黃焯安先生表示，鑑於新巴、城巴和九巴於 2018 年 3 月與其車長工會達成協議而把獎金和津貼納入底薪，嶼巴亦同意於 2018 年 9 月向其車長發放特別獎金。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 103 至 104 頁，中文本第 46 至 47 頁]

### 九巴／龍運

283. 九巴委任的特別委員會於 2018 年 3 月 12 日向署長提交了意外報告。該報告詳列巴士車長薪酬中的底薪水平(視乎首次受聘日期而有所不同)，以及所發放津貼和獎金的上下限。根據該報告，在 2004 年之前受聘的車長，其「薪級頂點」底薪為 13,915 元，可獲發放的獎金和津貼種類包括安全獎金 1,778 元、特別更津貼 1,951.50 元、通宵更津貼 3,218 元、機場津貼(只適用於龍運)780 元，以及酌情發放的年終獎金(據稱相等於 1 個月底薪)。然而，報告亦稱[聽證會文件 KMB/LWB-1(A)：英文原文第 108 頁，第 29 段]：

#### 「改善巴士車長的薪酬架構

2018 年 2 月 21 日，九巴和龍運宣布，由 2018 年 3 月 1 日起，安全獎金和良好表現獎金將納入底薪。」

284. 九巴和龍運在 2018 年 4 月 24 日向委員會提交的書面意見中，詳列 2018 年 3 月 1 日起生效的巴士車長薪酬範圍(按首次受聘日期而定)和超時津貼。書面意見列明「各類巴士車長的平均實收薪金」[聽證會文件 KMB -1(A)：英文原文第 75 頁]：

### 九巴

月薪制(2004年之前受聘)	23,425 元
月薪制(2004年之後受聘)	21,486 元
日薪制	29,884 元
退休重聘(月薪制)	21,062 元
退休重聘(時薪制)	17,572 元
合約時薪制	5,968 元

#### 龍運

月薪制(2004年之前受聘)	25,857 元
月薪制(2004年之後受聘)	22,022 元
日薪制	30,946 元
退休重聘(月薪制)	21,996 元
退休重聘(時薪制)	17,669 元
合約時薪制	6,909 元

285. 梁乃鵬博士作供時表示，更改薪酬架構可使「月薪巴士車長底薪大概每一個月係 15,400 元」，其超時津貼和年終獎金亦會按比例增加。[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 11 頁，中文本第 6 頁]關於公司因此而承擔的費用，書面意見指出「有關更改會令九巴和龍運分別承擔每年大約 1.7 億港元和 1,000 萬港元的費用」。[聽證會文件 KMB-1(A)：英文原文第 61 頁]梁博士續稱，他正建議進一步增加車長薪酬，即把車長級別由現時 3 個擴展至 5 個，而每年增薪點由 8 個增加至 20 個。對於這項建議，他表示[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 25 至 26 頁，中文本第 13 頁]：

「因此我最主要嘅目標就係要去增加、提升巴士車長總體嘅收入。我希望我唔單只可以招募新嘅巴士車長，我仲可以係挽留現職嘅巴士車長。」

### 2018 年 9 月 1 日薪級表

286. 其後，委員會獲悉有關建議已由 2018 年 9 月 1 日起生效，梁博士提及[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 93 頁，中文本第 39 頁]：

「……由 9 月 1 號開始，如果即係有新車長加入九巴或者龍運，佢嘅薪金就會係月薪 – 即係佢每個月大概係會賺 2 萬 3000 蚊<蚊>，係包括年終嘅雙糧嘅，所以比起之前嘅薪酬係大幅上升嘅。」

287. 九巴在 2018 年 9 月 21 日的書面意見中，向委員會提供比對表，說明 2018 年 9 月 1 日更改薪酬架構的影響，以及與 2018 年 3 月之前車長所得薪酬互作比較。月薪制車長的入職底薪點據稱現為 16,466 元。如車長每日工作 8 小時(包括 1 小時用膳時間，以及休息時間)，而每月工作 26 日，便會獲發薪金 16,466 元；與此相比，如車長每日工作 10 小時(包括 1 小時用膳時間，以及休息時間)，即每日超時工作 2 小時，而每月工作 26 日，該月便會獲發總薪金 21,817.50 元。此外，上述兩名車長均會獲得相等於底薪的第 13 個月薪金。因此，工作 26 日、每日 8 小時的車長，平均月薪為 17,838.20 元；工作 26 日、每日 10 小時的車長，平均月薪為 23,189.60 元。對比 2018 年 3 月之前，後者所得的總薪金增加了 15.7%，前者的增幅則為 9%。[聽證會文件 KMB -1(B)：英文原文第 517 頁]

288. 日薪制車長按兩個不同的工作模式(即在 26 個工作日內每日工作 8 小時或 10 小時)計算月薪[聽證會文件 KMB -1(B)：英文原文第 520 頁]，每月入息分別可得 23,028 元及 29,277 元。然而，年終獎金和農曆新年獎金根據適用於「全年總入息」的方程式計算；計及這些獎金後，兩個平均月薪分別為 24,947 元及 31,717 元，差距更大。對比 2018 年 3 月之前，後者所得的總薪金增加了 7.9%，前者的增幅則為 5%。[聽證會文件 KMB -1(B)：英文原文第 520 頁]



## 20 個增薪點

289. 在 2018 年 9 月 1 日引入包含 20 個增薪點的制度之前，車長分為 3 個級別，增薪點共有 8 個，底薪由 15,366 元至 16,266 元不等。在 20 個增薪點的制度下，設有 5 個車長級別，每級 4 個增薪點，底薪由 16,466 元至 18,901 元不等。

## 2018 年 3 月 1 日九巴更改薪酬架構

290. 汽車交通運輸業總工會代表張子琦先生作供時，提及津貼和獎金已於 2018 年 3 月 1 日起納入底薪，並表示[第 9 日聽證會紀錄本：2018 年 7 月 30 日，英文本第 91 頁，中文本第 41 頁]：

「我哋呢個要求已經係有十多年多喇，但係一直未被認同，因為當時個環境。」

## 第 14 章 — 招聘車長的困難

### 城巴／新巴

291. 城巴及新巴在書面意見表示，招聘和挽留車長方面的困難，主要是車長須在非正常工作時間內值勤，並要長途跋涉往返住所(通常位於新界)與車廠(上下班地點)。至於車長的薪酬要達到甚麼水平才能吸引應徵者，鄭偉波先生說「個個人唔同」，但「每日我哋公司都有人嚟應徵做……巴士車長嘅，但……應徵嘅人同我哋嘅空缺都仲有一個距離」。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 49 頁，中文本第 23 頁]

292. 關於巴士公司在改善車長薪酬條件和工時方面所受到的整體限制，城巴／新巴在書面意見表示「員工薪酬約佔其總營運成本的 52%」。[聽證會文件 CTB-1：英文原文第 41 頁，第 c 段]他們堅稱，雖然票價調整安排容許有 9.7%的固定資產平均淨值回報率，但「我們預計，在截至 2018 年 6 月 30 日止的財政年度內，城巴(專營權一)和新巴的固定資產平均淨值回報率會低於 1%」。至於隨之而來的後果，他們認為[聽證會文件 CTB -1：英文原文第 42 頁，第 g 段]：

「如員工開支和燃料成本大幅增加，兩個專營權業務都很可能會出現虧蝕。因此，莫說要賺取合理回報，巴士公司的商業營運能力一旦受影響，公司便無法提供公眾所期望的優質和高效的服務，或推出具吸引力的薪酬條件來招聘和挽留員工。」

293. 鑑於巴士公司上次獲准調整票價已是在 2008 年，有投訴指雖然城巴(專營權一)和新巴於 2017 年 8 月提出票價調整申請，但「政府仍正審批」有關申請。對於「市民的接受程度及負擔能力」是政府決定票價調整申請的考慮因素之一，有投訴指「……這個因素極按酌情處理和非常主觀，而且一直受政界人士隨意濫用」。[聽證會文件 CTB -1：英文原文第 41 頁，第 f 段]就此，他們認為[聽證會文件 CTB -1：英文原文第 41-42 頁，第 f 段]：

「雖然我們曾有多次機會，可在充分理據下根據票價調整安排要求調整票價，但我們一直都沒有提出申請，主要是因為票價調整安排成效不彰，而且在高度政治化的環境下，公用事業加價勢必遭到反對。」

## 九巴

294. 九巴在 2018 年 4 月 24 日的書面意見提及，招聘專營巴士車長的困難，並稱[聽證會文件 KMB-1(A)：英文原文第 60 頁]：

「香港運輸業面對商用車輛司機人手短缺和高齡化問題。立法會曾在 2016 年 6 月的會議上討論這個問題……由於問題加劇，……在 2018 年 4 月 20 日的會議上討論。」

295. 2016 年 6 月，時任運房局局長在立法會發言時表示，「基本問題不在於合資格人士的供應，而在於如何吸引他們(特別是較年輕者)加入行業」。他續說[聽證會文件 KMB-9(A)：英文原文第 3841 頁]：

「就陸上運輸而言，專營巴士及專線小巴營辦商一直以不同方式吸引新血，例如改善薪酬福利、聘請兼職司機以照顧繁忙時段的服務需求等。專營巴士公司同時透過改善工作環境和站頭設施以及提升晉升機會，減少車長流失。」

296. 根據勞工處處長在 2018 年 4 月 20 日發給立法會的回覆，專營巴士車長的職位空缺數字由 2013 年的 192 個增加至 2017 年的 366 個。[聽證會文件 KMB-9(A)：英文原文第 3847-3 頁]

297. 九巴在書面意見續稱[聽證會文件 KMB-1(A)：英文原文第 60 至 61 頁]：

「雖然我們已增加招聘渠道(例如在巴士總站招聘、派出流動招聘車、利用社交媒體和招聘網站、張貼招聘海報，以及在人多地點派發傳單)，但車長職位申請數目仍不足以應付我們的需求

……

巴士車長遇襲個案不斷上升、巴士站違例泊車情況日益加劇，以及交通擠塞問題越趨嚴重等因素都有礙新人入行。」[斜體為本文所加]

298. 為應對 2018 年 2 月實施的《指引》而須增聘車長的影響，九巴的彭樹雄先生表示[第 13 日聽證會紀錄本：2018 年 8 月 10 日，英文本第 137 頁，中文本第 60 至 61 頁]：

「如果……用呢個新指引呢，我哋要額外請多二百個車長，同埋新指引底下有一個所謂特別更，呢個特別更，如果我哋係將來取消呢個特別更，一更過……，我哋更加額外要請多一千個車長。」

299. 運輸署在書面意見表示[聽證會文件 TD-1：英文原文第 65 頁，第 7 段]：

「……預計須增聘共 250 名車長，以全面落實《指引》。專營巴士營辦商已承諾加強招聘車長的工作，並會改善薪酬待遇以吸引新人入行。此外，隨着值班時數有所減少，車長的實收薪金將受到影響。運輸署也已敦促專營巴士營辦商在調整車長的值勤表時要顧及這點，並考慮除每年調整車長的薪酬外，也提高他們的薪酬水平，以補償他們在實收薪金方面的損失。如專營巴士營辦商因增聘車長和改善車長薪酬待遇而需要申請加價，運輸署會按照既定做法處理任何這類加價申請。」

300. 九巴於 2018 年 9 月 12 日作供時，在總結發言時有以下的對話：[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 99 至 100 頁，中文本第 41 至 42 頁]：

「歐陽先生：我哋用咗今日好多時間，就講緊點樣能夠改善車長嘅工作環境。你可唔可以描述一下你請司機嘅成功率，譬如上個月同六個月之前比較，係咪容易咗，就成功率係高咗？」

蘇偉基先生：唔該委員。而家嘅情況，我哋大約每個禮拜係請到有二十五至三十個嘅新嘅車長，比對我諗半年前，三個月都係短嘅時間，當時係請緊十至十五個嘍。呢個當然係市場供應一個考慮，我哋自己公司喺期間亦都做咗幾樣嘢。

第一樣嘢就係嗰個薪酬個樣，正如頭先主席講，我哋係喺今年 3 月一次嘅優化，跟住喺啱啱 8 月嗰陣時，亦都係做咗今年嘅加薪，接近其實全年都有十五個 per cent<sup>41</sup>嘅增幅。呢個人工高咗，就多啲人吸引咗。

第二就係嗰啲嘅 condition<sup>42</sup>，頭先我哋講即係多啲嘅休息設施……

第三就係我哋喺招聘嗰度，亦都係即係加大力度……」

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<sup>41</sup> 「percent」即百分比

<sup>42</sup> 「condition」即條件

## 第 15 章 — 巴士車長的壓力及困擾

### 道路安全議會

301. 道路安全議會在日期為 2018 年 5 月 10 日的書面意見表達了關注，「……尤其是對巴士司機的工時、身心健康及駕駛態度。」意見書指出司機在交通擠塞時駕駛，情緒可能變差，並指出若巴士司機無法處理各種「心理壓力，有可能會藉着較為不小心的駕駛行為來宣洩。」[聽證會文件 MISC-1(C)：英文原文第 127-1 至 127-2 頁，第 2 至 3 段]

### 壓力及困擾

#### (i) 巴士站的違例泊車情況

##### 城巴／新巴

302. 上述看法與鍾澤文先生所關注巴士站常見違例泊車有關。他形容問題「幾普遍同嚴重」，令人關注到安全問題。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 121 頁，中文本第 56 頁]汽車交通運輸業總工會代表在作供時亦表達了相同的關注。他們建議加裝閉路電視，以起「阻嚇作用」。[第 9 日聽證會紀錄本：2018 年 7 月 30 日，英文本第 81 頁，中文本第 37 頁]

##### 巴士業職工會聯盟

303. 巴士業職工會聯盟在日期為 2018 年 4 月 24 日的書面意見提到，南昌街近窩仔街的巴士站有違例泊車問題，雖然已多次向運輸署投訴，但在 2017 年 8 月 30 日一名九巴車長遇襲時，問題仍未獲解決。當時，巴士站有車輛違例停泊，車長未能停站，被指「飛站」。[聽證會文件 TU-1(A)：中文原文第 176 頁，英文譯文第 226-30 頁；聽證會文件 KMB-1(A)：英文原文第 217-19 頁]2 名工會代表均表示，如採用此方案，他們認同車長須參與以電子方式記下巴士前置鏡頭所錄得巴士站違例泊車情況的時間。

304. 鄭偉波先生作供時，表示反對民主陣線在意見書中提出中有關採用新加坡模式的建議，即在專營巴士安裝可錄影鏡頭，以識別在巴士站違例停泊的車輛。[聽證會文件 MISC-2：中文原文第 644 頁，英文譯文第 644-2 頁]這並非車長的責任。相反，警方應該執法。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 126 頁，中文本第 57 至 58 頁]一如後來所知，新加坡陸路交通管理局(「管理局」)向委員會提交的書面答覆中解釋，在新加坡，把其他車輛佔用巴士線的情況錄影下來作證據，車長的責任僅限於啟動可錄影鏡頭錄下佔用情況，以及通知所屬巴士公司。其後，巴士公司會把錄影片段交給管理局跟進。[聽證會文件 EXP-1(C)：英文原文第 249-9 頁]

#### 香港警務處

305. 總警司簡迪文在代表香港警務處提交日期為 2018 年 8 月 10 日的書面意見表示，由發展局領導的「起動九龍東辦事處」，就針對與交通擠塞相關的移動中車輛的罪行和違例泊車，研究了在執法行動中使用閉路電視的可行性，並分 2 個階段推行。首階段是針對移動中車輛，在 2018 年 1 月展開，警務人員會使用閉路電視攝影機，所得證據，在有需要時，會用以支持警務人員的口頭證供。次階段是針對違例泊車，在 2018 年 8 月展開。關於該計劃，總警司簡迪文表示[聽證會文件 MISC-1(C)：英文原文第 124-539 頁]：

「有關在燈柱上裝設自動攝影機以監察未經授權而停在巴士站的車輛，上述起動九龍東計劃的顧問現正研究利用科技識別罪行的可行性，但在燈柱供電問題上仍有法律方面的限制和技術事宜待解決。」

306. 就涂謹申議員的提問，運房局局長在 2018 年 5 月 23 日的書面答覆中，告知立法會有關香港警務處 2017 年 12 月及 2018 年 1 月在新界北及九龍東推行為期兩個月先導計劃的結果。先導計劃利用攝錄機協助警務人員就 6 項訂明的交通罪行執法，包括「未經授權而在巴士站、公共小巴士站、的士站或公共小巴停車處停車」。上述期間在 6 個警區發出的 25 張

有關這項罪行的定額罰款通知書中，全部 25 張均在上水發出。[聽證會文件 SEC-3：英文原文第 1424 至 1428 頁]

307. 總警司邱倩雯作供中時解釋，違例停泊車輛的法例規定，定額罰款通知書須交給車輛司機或固定於車輛上。她提出相關條文是《定額罰款(交通違例事項)條例》(第 237 章)第 15(2)條<sup>43</sup>。她說[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 65 頁，中文本第 25 頁]：

「如果係用一個類似電子告票咁樣，或者係一個閉路電視影到嘅影像，然後發告票，喺現時嘅法例，係唔可以做到。」

總警司邱倩雯說，她知悉運房局已就修訂法例建議展開工作，以解決有關問題。

308. 總警司簡迪文在 2018 年 11 月 7 日向委員會提交的最後一輪書面意見提及，警方從律政司所得的法律意見，指出該但書條文「不應理解為削弱第 15(2) 條的強制性質的約制，也不表示容許以遙距方式送交定額罰款通知書。」[聽證會文件 MISC-1(C)：英文原文第 124-613 頁，第 5 段]

309. 就如何解決此難題，總警司簡迪文表示[聽證會文件 MISC-1(C)：英文原文第 124-613 頁，第 7 段]：

「有關上述違例停泊車輛定額罰款通知書交付模式的條文的修訂案，擬在立法會 2019/2020 年度的會期內提交，使日後定額罰款通知書可在事後交付。」

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<sup>43</sup> 《定額罰款(交通違例事項)條例》(第 237 章)第 15 條訂明：

- (1) 警務人員如有合理理由相信有違例事項正在或已經發生，即可給予有關車輛的登記車主或……須負法律責任的司機一個機會藉繳付定額罰款而解除其就該宗違例事項所負的法律責任。
- (2) 為施行第(1)款的規定，採用訂明格式的通知書須面交掌管該車輛的人或固定於該車輛上；但即使未有遵從本款的規定，亦不影響本條或第 16 條的實施。



310. 不過，正如總警司簡迪文在 2018 年 10 月 12 日的函件中承認，要檢控違例停在巴士站的車輛的司機，引用《定額罰款(刑事訴訟)條例》(第 240 章)第 3(1)及(2)條更為恰當。該條文的內容相若，但有提述「表列罪行」。[聽證會文件 MISC-1(C)：英文原文第 124-604 頁，第 2 段]然而，他表示由於巴士站的範圍有限，因此有必要經常對在緊貼巴士站的範圍內停車而阻礙巴士進出的車輛提出檢控。有關表列罪行是指《道路交通(交通管制)規例》(第 374 章附屬法例 G)第 45 條下未經授權在巴士站停車的罪行，即：

「……在道路的車輛的司機不得在一個指定作巴士站用途的地區內停車，除非該車輛是專利巴士……」

#### *就違例泊車發出電子通知書*

311. 就此，須留意的是，縱然當局在 2012 年已首次考慮就違例泊車發出電子通知書的提議，總警司簡迪文指出由於遇到技術問題，已在 2016 年擱置相關試驗計劃。然而，運房局在 2018 年年初召開關於交通管理及交通違例事項執法的科技應用研討會(Forum on Application of Technologies and Traffic Management and Traffic Contravention Enforcement)上重提此事。[聽證會文件 MISC-1(C)：英文原文第 124-538 頁]

#### *自動車牌識別系統*

312. 總警司白令嘉表示，自動車牌識別系統曾在 2013 年試行，但只是「<十分有限度地>」進行，即只適用於涉及交通拘捕令但該命令尚未執行的人士。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 68-69 頁，中文本第 26 頁]運房局、保安局和香港警務處在立法會保安事務委員會 2018 年 4 月 13 日的會議上提交題為「打擊違例行車事項的執法工作」的文件，當中表示[聽證會文件 SEC-3：英文原文第 1418 至 1423 頁]：

「警方自 2015 年開始使用『自動車牌識別系統』，讓交通執法人員使用該系統偵測相關交通違例事項，包括行車證已過期、登記車主已被停牌或牽涉交通

拘捕令。過去三年(2015 年至 2017 年)，警方利用『自動車牌識別系統』執法發出定額罰款通知書 996 張及拘捕 46 人。」

### 巴士優先

313. 城巴／新巴鄭偉波先生表示，他歡迎把巴士優先行駛燈號系統引進香港的建議，一如新加坡和首爾的做法。該系統讓巴士可較其他車輛優先使用流量有限的路口[聽證會文件 SEC-2：英文原文第 822 頁]。他表示，會向運輸署提出有關建議。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 128 至 130 頁，中文本第 59 至 60 頁]

314. 鍾澤文先生同樣表示，有關係統規定巴士在駛離指定巴士站時其他車輛須讓路，一如新加坡的規定，巴士公司會歡迎此做法。不過，由於過往香港曾有人反對設立巴士專線，以致部分巴士專線被取消，他對有關係統在香港能否成功推行有所保留。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 129 頁，中文本第 59 頁]

### (ii) 辱罵／襲擊巴士車長

315. 汽車交通運輸業總工會和巴士業職工會聯盟的代表在書面意見和證供中都提到，經常有乘客辱罵車長，襲擊車長事件更越來越多；他們對此深表關注，並提供了一些詳情。應委員會的要求，九巴提供了有關的統計數字，臚列 2015 年 1 月 1 日至 2018 年 7 月 22 日期間，九巴和龍運人員遇襲並已向公司呈報和報警處理的事件。[聽證會文件 KMB-1(A)：英文本第 217-1 至 217-29 頁，中文本第 213 至 217 頁]2017 年，此類個案有 35 宗，但在 2018 年，僅僅 6 個多月內便已錄得 41 宗。整體而言，很多個案都沒有追究至檢控涉嫌施襲者。如提出檢控，則通常是控告普通襲擊或襲擊致造成身體傷害。只有少數個案成功定罪。統計數字所記錄的 188 宗個案，並沒有任何一宗判處監禁。少數個案處以罰款，但罰款額都不高。

316. 九巴和龍運在書面意見指出，鑑於襲擊其公司車長的事件有所增加，公司採取了相應措施，除了 2015 年起投入服務的新巴士全部設置拍

攝到司機座位的監察閉路電視，現有巴士亦加裝閉路電視，此外，從 2018 年 6 月開始，在車長駕駛室安裝保護罩，分隔車長與乘客空間。[聽證會文件 KMB-1(A)：英文本第 62 頁]至於汽車交通運輸業總工會的代表，則對該等保護罩甚為不滿，投訴保護罩不夠大，而且反光致令車長分神，還產生噪音。[第 9 日聽證會紀錄本：2018 年 7 月 30 日，英文本第 34-35 頁，中文本第 16 頁]

317. 警司李大偉先生作供時表示，在九巴提及的個案中，香港警方能識別調查結果的個案佔 182 宗；當中共有 131 宗屬於巴士車長於工作期間遭巴士乘客毆打。有 99 宗施襲者身份已獲確定，其中 83 宗經警方提出檢控後，75 宗成功定罪。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 82 至 84 頁，中文本第 33 頁]

318. 九巴在書面意見表示，警方在檢控巴士乘客時，要多引用《公共巴士服務規例》(第 230A 章)第 13A(1)(a)條；該條文訂明任何乘客均不得「故意阻礙或妨礙巴士司機，或故意分散他們的注意力」，違者可處罰款 3,000 元及監禁 6 個月。就此，警司李大偉先生表示[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 98 頁，中文本第 39 頁]：

「……最理想嘅方法就係喺事件未發展到咁差嘅時候，就警察開始介入就可以平息咗佢，或者係用比較容易嘅方法處理，譬如話可唔可以考慮到 230A<章>嘅控罪，但係好多時候警察去到現場，……已經係可能肢體發生衝突又或者有人受傷嘅情況。」

319. 對於這類情況，李警司表示：「如果係實質係一啲肢體衝突、係毆打嘅案件，警方一定會用番……最適合嘅控罪……」。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 101 頁，中文本第 40 頁]

320. 總警司邱倩雯女士作供時指出，2016 年只有一次根據有關《規例》檢控一名巴士乘客，在 2018 年則沒有以該罪行提出過檢控。[第 17 日聽證會紀錄本：2018 年 9 月 24 日，英文本第 103 頁，中文本第 41 頁]

321. 其後得悉，根據新加坡法例第 256A 章《保障免受騷擾法》(Protection from Harassment Act)，任何人「(b)對……公共服務人員」(包括巴士司機)「作出任何……帶恐嚇、辱罵或侮辱成分的言行」，即屬違法，可處罰款或／及監禁最長 12 個月。

(iii) 休息及洗手間設施

322. 正如前述，很多行業工會代表均主動向委員會投訴，指巴士站及巴士總站沒有足夠的休息及洗手間設施。張子琦先生作供時提到當前的情況：[第 9 日聽證會紀錄本：2018 年 7 月 30 日，英文本第 45 頁，中文本第 21 頁]

「好多……總站係仍然都係未有洗手間同……休息室嘅。尤其有一啲嘅屋邨入面……我哋一再向運輸署反映，舊嘅就一定要同我哋儘快爭取番嚟，……以後逢係新設嘅巴士總站必須要有洗手間同埋員工休息室，呢個先係一個完整配套嘅巴士總站。如果有嘅話，我哋係拒絕呢一種提供嘅服務嘅。」

九巴

323. 九巴的彭樹雄先生作供時指出，巴士站及巴士總站欠缺洗手間，以致他們的車長要使用其他地方的洗手間[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 64 至 65 頁，中文本第 26 頁]

「……淨係來回<去洗手間>個步程都可能要八分鐘、十分鐘，……休息時間相對地有所減少，……幾困擾我哋嘅車長。」

同埋我亦都有啲驚奇就係，一啲現有嘅總站，你有一個永久嘅洗手間，……我哋公司譬如話我哋會加自己嘅化廁等等，但係一啲啱啱起好嘅新嘅巴士總站，我覺得都頗為詫異就係，佢完全冇 factor in<sup>44</sup>到一啲 permanent<sup>45</sup>嘅洗手間嘅

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<sup>44</sup> 「factor in」解作「考慮」。

<sup>45</sup> 「permanent」解作「永久」。

裏面。我舉幾個例，例如西九龍高鐵巴士總站，一個係好有規模嘅巴士總站，但係完全係冇洗手間」

324. 九巴董事總經理李澤昌先生就提供休息設施時說：[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 60 頁，中文本第 24 頁]

「站頭嘅設施……政府批一個kiosk<sup>46</sup>，……40 平方呎咁大……係咪特別更，或者係一般嘅車長嘅休息嘅設施，都係需要，而家我哋係冇刻意話邊一個係特別更……我哋講緊係一個 40……平方呎嘅……東西……唔係一個可以瞓覺嘅地方。」

325. 運輸署在 2018 年 7 月 20 日的書面意見中指出，「在巴士總站設計時，已適當地採納了專營巴士營運商對洗手間及休息設施的要求及意見」[聽證會文件 TD-1：英文本第 438 頁，第 28 段，中文本第 454 頁，第 28 段]，李澤昌先生在回應誰負責設計巴士總站的問題時表示[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 86 頁，中文本第 36 頁]：

「有幾種嘅巴士總站嘅，有啲巴士總站係應該屬於政府嘅地，或者政府嘅產業……。咁喺做嘅時候，其實佢政府都未必決定咗係邊一間公司巴士營辦商入嚟行嗰條巴士線，……好少係搵咗邊一間公司巴士營辦商界意見。佢哋運輸署亦都係有一班專業嘅團隊，或者佢有佢自己嘅顧問係設計個巴士站。所以……過去咁多年，……應該就未有人諮詢過我哋嗰啲洗手間應安裝喺邊度，呢啲問題。」

## 運輸署

326. 運輸署在 2018 年 10 月 19 日的書面意見中，反駁九巴指稱該署沒有就在西九龍站巴士總站(高鐵西九龍站巴士總站)提供配套設施一事徵詢該公司意見[聽證會文件 TD-1：英文原文第 513 頁]：

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<sup>46</sup> 「kiosk」即「休息亭」。

「……在 2010 年 7 月規劃階段，運輸署曾就在西九龍站巴士總站提供配套設施(包括站長室和洗手間)等事宜諮詢九巴。九巴回覆時提出其屬意自資設置可移動的站長室和其他設施(包括休息室和洗手間)。」

327. 事實上，運輸署曾在 2009 年 5 月 6 日去信九巴，提供擬建公共運輸交匯處的設計圖則，並就該擬建設施提述如下[聽證會文件 TD-6：英文原文第 2147 頁]：

「……建議在該幅用地設置站長室連洗手間設施的結構物。如需要這個站長室結構物，貴公司便需支付建築費。」

此外，運輸署邀請九巴就「該公共運輸交匯處的設計圖則，尤其是站長室的大小和位置，從巴士運作角度發表初步意見。」

328. 其後，九巴與運輸署就設置連／不連洗手間的站長室事宜通信。九巴在 2009 年 9 月 2 日去信運輸署，表示[聽證會文件 TD-6：英文原文第 2167 頁]：

「本公司知悉在擬設的九巴站長室超過 200 米外有一個公共洗手間。為便利本公司的巴士運作，謹建議在本公司站長室旁設置洗手間設施。煩請修改設計以納入以上要求。」

329. 運輸署在 2009 年 12 月 17 日去信通知九巴[聽證會文件 TD-6：英文原文第 2187 頁]：

「不連洗手間的站長室的建築費估算約需 100 萬元，連洗手間的則約需 120 萬元……貴公司屬意如何，請通知本署……」

330. 九巴曾在 2010 年 1 月 15 日就估算建築費去信運輸署，其後，運輸署在 2010 年 6 月 3 日去信通知九巴[聽證會文件 TD-6：英文原文第 2195 頁]：

「……政府無意代貴公司興建站長室。不過，如貴公司有意按運作需要興建該等設施，我們樂意為貴公司與港鐵公司聯絡，以安排貴公司所聘請的承建商進入該幅用地。」

331. 九巴在 2010 年 6 月 29 日致函反對運輸署所表明的政府立場[聽證會文件 TD-6：英文原文第 2196 頁]：

「對於政府為何無意代九巴興建站長室，我們不甚了解其依據及理由。事實上，九巴一直遵照貴部門訂定的程序……(參考檔號……日期為 1996 年 8 月 29 日)……原因在於以下已知的問題：

- (a) 巴士總站啟用時間與配套設施完工時間相隔頗長
- (b) 當局需要很長時間審批九巴的建築圖則，導致進一步延誤
- (c) 工程協調／整合不足，引致技術問題，因而影響在巴士總站設置公用設施。」

332. 運輸署在 2010 年 7 月 7 日去信通知九巴，表示九巴或其承建商或巴士總站的建築代理商可以建設配套設施，並總結如下[聽證會文件 TD-6：英文原文第 2201 至 2202 頁]：

「……我們不予反對，事實上還鼓勵貴公司按需要在佐敦道的永久公共運輸交匯處興建配套設施，利便日常運作。」

333. 運輸署在 2010 年 7 月 14 日發電郵通知九巴[聽證會文件 TD-6：英文原文第 2204 頁]：

「就提供站長室連洗手間及其他設施，九巴有三個可行選項……(1)九巴興建永久結構物；(2)巴士總站的建築代理興建永久結構物……以及(3)以設計妥善的流動式組件構成臨時結構物。」

334. 關於九巴的選項，運輸署表示：

「……就選項(2)而言，貴公司或需考慮所涉及的費用，因為港鐵公司提供的初步估算建築費約 200 萬元，並會在詳細報價中有所調整。就選項(3)而言，化糞式廁所不大可能在諮詢階段獲地區人士接受，而貴公司的職員或需使用設於巴士總站旁的公廁，該處距離巴士停泊區約 70 至 200 米。」

335. 九巴在 2010 年 9 月 28 日回信給運輸署，表示[聽證會文件 TD-6：英文原文第 2205 頁]：

「在貴部門提供的三個選項中，九巴選擇選項 3，即以設計妥善的流動式組件構成臨時結構物。」

不過，九巴接着表示「請注意，由於公廁距離我們擬設的辦公室和車長休息區約 200 米，因此，仍需要在永久巴士總站提供廁所。」

336. 九巴在 2012 年 4 月 17 日發電郵予運輸署，確認「會設置／興建自身的站長室及洗手間，包括接駁一切所需的公用設施，以支持運作。」[聽證會文件 TD-6：英文原文第 2240 頁]

337. 在 2013 年運輸署與九巴互通的電郵中，九巴表示有意在巴士站安裝化糞式廁所[聽證會文件 TD-6：英文原文第 2241 至 2243 頁]。其後在 2013 至 2018 年期間，雙方一直有通信討論在巴士站何處設置該設施。最後，運輸署在 2018 年 9 月 28 日發信批准九巴設置各類休息亭及一些化糞式廁所的申請。[聽證會文件 TD-6：英文原文第 2300 至 2308 頁]

338. 2018 年 10 月 3 日，主席與秘書處人員視察高鐵西九龍站巴士總站的設施，該巴士總站已於 2018 年 9 月 16 日啟用。據當時所見，該處設有 7 個九巴的休息亭，其中 2 個為車長休息設施，但並無化糞式廁所。[聽證會文件 MISC-3：英文原文第 1275 至 1286 頁]

339. 顯然地，欠缺洗手間或有關設施與巴士車長駕駛日程中作休息的地方相距甚遠，會引起巴士車長不必要的困擾。欠缺休息設施或休息設施不足讓巴士車長在駕駛日程中作休息，尤其是負責特別更的巴士車長，明顯是潛在原因導致巴士車長疲勞，與專營巴士安全攸關重要。



## 專家證供

### 第 16 章 — John Stanley 教授：墨爾本

340. 為了參考國際的經驗和做法，了解在香港將專營權批予巴士公司以營運專營巴士服務的機制，以及監察和規管有關服務的方法，委員會委任 John Stanley 教授和 Mike Weston 先生，分別就墨爾本和倫敦的專營巴士制度撰寫報告。此外，他們獲邀識別該兩個司法管轄區與香港在相關事項的異同，最後向委員會提出可在香港推行的改革建議，以提升專營巴士的安全。

#### John Stanley 教授

341. John Stanley 教授自 2008 年起擔任悉尼大學(University of Sydney)運輸及物流研究學院(Institute of Transport and Logistics Studies)客席教授及可持續陸上運輸的巴士業聯盟(Bus Industry Confederation)高級研究員。在 1991 年至 1999 年期間，他擔任澳洲國家道路運輸委員會(Australian National Road Transport Commission)副主席，負責處理重 4.5 公噸及以上車輛的事宜。該委員會負責制訂新措施，以改善澳洲陸上運輸的生產力、安全及環保表現。在 1999 年至 2008 年期間，他擔任維多利亞巴士協會(Bus Association Victoria)執行董事，該協會的 500 名會員均為巴士營辦商。他以這身份代表會員與省政府商討合約，但亦關注研究公共運輸(尤其是巴士)對社會的價值。該協會旗下亦有道路安全檢查(Road Safety Inspections)的業務，負責在墨爾本及 Regional Victoria 營辦巴士的道路安全檢查服務；他現時是該公司董事局的成員。[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 2 至 10 頁，中文本第 1 至 4 頁；聽證會文件 EXP-1(A)：英文原文第 107 頁]

342. John Stanley 教授是多本有關運輸事宜的書籍的作者或合著者，並曾以此為題發表多份文章。就其寫作範疇，John Stanley 教授說，「政策主要係我嘅關注嘅地方，同埋策略規劃，點樣可以去執行嗰個政策嘅」。

[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 10 至 15 頁，中文本第 4 至 5 頁；聽證會文件 EXP-1(A)：英文原文第 108 至 114 頁]John Stanley 教授在其報告中坦白地表示，「作者並非巴士營運方面的專家，但對於巴士營運的公共機構環境及其如何影響巴士營運表現方面，具備專業知識」。[聽證會文件 EXP-1(A)：英文原文第 56 頁]

### *墨爾本*

343. John Stanley 教授留意到，2017 年，墨爾本的人口為 480 萬人，但人口密度遠較倫敦為低。維多利亞省政府於 2018 年發表的統計數字顯示，每年乘搭火車、電車及巴士的人次分別為 2.4 億、2.05 億和 1.2 億。因此，巴士乘客人次佔全年公共交通工具乘客人次的 21%。相比之下，香港每日約有 400 萬名乘客乘搭專營巴士，全年乘客人次約為 14 億。約有 1 700 輛專營巴士申請行走墨爾本的巴士路線。[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 17 至 19 頁，中文本第 6 至 7 頁]

344. John Stanley 教授表示，墨爾本約三分之一的定線巴士服務以競投方式招標，三分之二經協商合約批出。現時，只有一間營辦商 Transdev Melbourne (法國公司)以具競爭性方式投標取得營運合約。這是最大的巴士營辦商，營運車隊有 500 輛巴士。相比之下，12 間營辦商持有共 15 份協商的合約。[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 20-21 頁，第 26 頁及第 34 至 36 頁，中文本第 7 至 8 頁，第 10 頁及第 13 至 14 頁]這些合約為期 7 年，其後再協商或重新招標。沒有想延續協商合約的巴士營辦商未獲續約。[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 43 及 48 頁，中文本第 16 及 18 頁]

### *認證、安全準則及安全職務*

345. 對於維多利亞省的《2009 年巴士安全法》(Victorian Bus Safety Act 2009)，John Stanley 教授表示[聽證會文件 EXP-1(A)：英文原文第 22 頁，第 3.3.2 段]：

「該法令對定線巴士營運十分重要，主要有兩個原因。首先，該法令提供兩個途徑，任何有意營辦定線巴士服務的人士必須合格，才符合營辦有關服務的資格。該途徑是**巴士營辦商認證**……第二亦是最重要的一點，就是透過**安全準則**及**安全職務**，連同一些主要的合規機制，確立巴士營運的安全要求。」

## 認證

346. 認證制度要求每個合約定線服務營辦商必須有一名高層代表修畢為巴士營辦商開辦的安全管理課程。唯一認可課程由蒙納士大學(Monash University)開辦，包括 4 個科目：[聽證會文件 EXP-1(A)：英文原文第 8 及 22 頁]

- 巴士安全簡介
- 巴士營辦商的巴士安全風險管理
- 財務管理
- 業務發展

此外，巴士營辦商必須設有管理資訊和保養管理系統，以符合由安全總監通知巴士營辦商的規定。

347. 關於《2009 年巴士安全法》的運作，John Stanley 教授表示[聽證會文件 EXP-1(A)：英文原文第 22 至 23 頁，第 3.3.2 段]：

「該法令的重要部分，是在**安全準則**及**安全職務**方面對巴士營辦商的要求。兩項原則如下：

- **共同責任準則**(第 9 條第 2 部分)。這項準則指出巴士服務的安全運作是營辦商、巴士安全作業人員、採購人員、決定巴士站點的人員、或設計、建造、裝設、修改或保養巴士站點或巴士站基建的人員、安全總監及市民的共同責任。因此，這項準則與責任鏈及國家法律息息相關……

- **管理安全風險的問責準則**(第 10 條)講述分散風險：「*最能夠控制關乎提供巴士服務的風險的人士有責任管理該風險。*」

348. 該法令第 14 條訂明[聽證會文件 EXP-1(A)：英文原文第 23 頁]：

*「(1) 為免產生疑問，在合理和可行的情況下，根據本法令或確保安全的規例指定某人承擔的職責規定該人須：*

*(a) 在合理和可行的情況下，消除安全風險，以及*

*(b) 倘消除安全風險並不可行，則在合理和可行的情況下，減低有關風險。」*

### *監管巴士安全*

349. John Stanley 教授解釋，維多利亞運輸局(Transport for Victoria)是「相關部長的職責範疇的政策機構及主要顧問」。相比之下，監管巴士營辦商的工作則由維多利亞公共運輸部(Public Transport Victoria)、維多利亞運輸安全部(Transport Safety Victoria)、維多利亞警方和 VicRoads 負責。[聽證會文件 EXP-1(A)；英文本第 28 頁，第 4.1 段]維多利亞公共運輸部、維多利亞運輸安全部和獨立的運輸安全總監都是根據《2010 年維多利亞省運輸整合法》(Victorian Transport Integration Act, 2010)設立的。[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 106 至 107 頁，中文本第 38 頁]

### *維多利亞公共運輸部*

350. John Stanley 教授表示，維多利亞公共運輸部「是合約經理，負責監察營辦商的表現是否符合其服務合約的規定」。[聽證會文件 EXP-1(A)：英文原文第 28 頁，第 4.2 段]不過，他留意到[聽證會文件 EXP-1(A)：英文原文第 26 頁，第 3.4 段]：

「安全並非合約規定的主要表現指標，安全表現也不受合約的獎勵／懲罰條文約束，但如營辦商的安全表現欠佳，安全總監可取消其認證，使其喪失合約。」[斜體為本文所加]

351. 關於維多利亞公共運輸部的角色，John Stanley 教授表示[聽證會文件 EXP-1(A)：英文原文第 29 頁，第 4.2 段]：

「維多利亞公共運輸部定期與定線巴士營辦商舉行合約會議，討論關乎行業／營辦商的問題，會議上亦可能會討論特定的安全問題，例如致命意外和大型車輛的保養問題等。會議讓各方能坦誠溝通，尋求改善安全的方法，特別是系統層面上的方法。」

### 維多利亞運輸安全局

352. John Stanley 教授指維多利亞運輸安全局的工作「重點是監察定線巴士的安全」。監察方法主要有兩種[聽證會文件 EXP-1(A)：英文原文第 29 至 30 頁，第 4.3 段]：

「首先，該局設有**合規計劃**，主要涉及在路邊(主要針對貨車)和旅遊熱點(主要針對巴士和旅遊巴士)進行檢查。」

不過，John Stanley 教授指出「維多利亞運輸安全局表示該局每年進行約 30 至 40 次合規檢查，當中大部分屬區域性檢查。」

353. 關於監察巴士安全的第二個方法，John Stanley 教授表示[聽證會文件 EXP-1(A)：英文原文第 30 頁，第 4.3 段]：

「維多利亞運輸安全局設有安全審核計劃，查證的事項包括經認證的定線巴士營辦商所必須備有的管理資訊系統和保養管理系統。」

354. 關於審核計劃的範圍，John Stanley 教授表示[聽證會文件 EXP-1(A)：英文原文第 31 頁，第 4.3 段]：

「維多利亞運輸安全局表示該局每年進行約 560 次審核，顯示營辦商審核的次數遠少於每年一次。鑑於資源所限，該局採用的方法是把營辦商按風險水平分

類，並針對其認為可能出現安全欠佳結果的營辦商，增加審核次數。該局指每年發出的違章通知書一般約有 100 份，另外有些營辦商則被暫時撤銷認證(當中沒有都會區定線巴士營辦商)，但無任何營辦商被取消認證。」

### 運輸安全總監

355. 關於運輸安全總監一職，John Stanley 教授稱總監「……自己有一個機構，有職員……我估……大概係三、四十人」。他指現任總監是「安全風險管理嘅專家……背景同埋經驗就係……航空界嗰方面」。[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 107 至 108 頁，中文本第 38 至 39 頁]

356. 關於運輸安全總監的角色，John Stanley 教授表示[聽證會文件 EXP-1(A)：英文原文第 99 頁，第 6.2 段]：

「運輸安全總監着重於發展及改良巴士業的安全文化和安全風險管理，與營辦商和業內人士合力改善作業方式。已備有的指南材料包括 2016 年 9 月的《安全文化指南》(Guidance – Safety Culture, September 2016) (維多利亞運輸安全局 2016)。」

357. 關於總監獨立地位的重要性，John Stanley 教授表示[聽證會文件 EXP-1(A)：英文原文第 99 至 100 頁，第 6.2 段]：

「運輸安全總監具備獨立地位，既可提升安全，帶來理想的政策成效，亦可在安全步驟和成效事宜上提供獨立的問責源頭及透明度，而較之於把(定線)巴士安全事宜全盤交由公共交通規管機構及／或政府部門管理，能達致更佳的功效。通過運輸安全總監的審核程序和業界的參與，公共交通規管機構得出結論，就是墨爾本的定線巴士服務和作業方式是安全的；關於安全的焦點應在於發展積極主動而具前瞻性的安全風險管理文化，而不是出現安全問題後才作出應對。」

## 建議

### (i) 管理

358. John Stanley 教授審視墨爾本與香港現行的管理制度之間的分別，認為香港制度缺少墨爾本制度所具備的下列特點[聽證會文件 EXP-1(A)：英文原文第 79 頁，第 3.4 段]：

- 巴士營辦商必須先獲認可，才可持有定線服務合約；
- 要求所有與專營巴士運作相關的人士承擔安全責任；
- 由獨立的運輸安全規管者／審核者管理專營巴士的安全事宜；  
以及
- 施加有關培訓的合約責任。

359. 因此，John Stanley 教授建議[聽證會文件 EXP-1(A)：英文原文第 80 頁]：

「若能採用這些墨爾本的措施，便大有可能提高香港專營巴士系統的安全水平。」

John Stanley 教授特別建議委員會考慮作出以下提議[聽證會文件 EXP-1(A)：英文原文第 100 頁，第 6.2 段]：

- 對提供定線巴士服務的全線各方，施加可強制執行的安全責任；
- 開設獨立的運輸安全總監職位，負責管理有關安全責任的事宜，以及確保合規及以執行；

- 規定所有專營巴士營辦商必須得到運輸安全總監認證，作為擁有定線服務專營權的先決條件。得到認證與否，取決於營辦商是否有能力透過使用符合以安全風險管理為重點的 ISO 39001 標準系統，履行安全責任；以及
- 將這項認證規定的適用範圍擴大至所有商業巴士服務。

(ii) 車長培訓

360. John Stanley 教授指運輸署頒布的培訓實務守則「意念良好」，但培訓框架[聽證會文件 EXP-1(A)：英文原文第 90 頁，第 5.1 段]：

「……需包含有關疲勞駕駛管理的特定內容，作為職業健康和單元組成的部分，並將主管人員加入為培訓對象。」

他建議香港實施規定[聽證會文件 EXP-1(A)：英文原文第 94 頁，第 5.3 段]：

「……疲勞駕駛管理的培訓要成為車長訓練的重要組成部分。」

361. 如上文所指，John Stanley 教授建議香港在專營權事宜上採用墨爾本的做法，在與巴士營辦商簽訂的合約中加入規定，為所有職員(包括車長)提供培訓。他指出墨爾本所採用的合約有條文訂明[聽證會文件 EXP-1(A)：英文原文第 78 頁，第 3.3.3 段]：

「作為營辦商須履行本合約的責任之一，營辦商必須……確保所有職員已妥為受訓、具備充分經驗，或適合執行有關職務。」

合約條文接著訂明所提供培訓的範疇：

- 殘疾乘客的服務要求；
- 處理持對抗態度或難纏的乘客和人身安全事宜；



- 職業健康和安​​全事宜；以及
- 乘​​客服務的標準和​​要求。

(iii) 《巴士車長工作、休息及用膳時間指引》

362. John Stanley 教授建議把《巴士車長工作、休息及用膳時間指引》納入規例，「以強調《指引》及加強合規的重要性」[聽證會文件 EXP-1(A)：英文原文第 94 頁，第 5.3 段]，原因是他留意到運輸署的書面意見顯示，專營巴士營辦商遵行《指引》的比率僅為 96%而非 100%[聽證會文件 TD-1：英文原文第 66 頁]；相反，有關規定已納入維多利亞省的規例。此外，他留意到香港的《公共巴士服務條例》(第 230 章)第 35 條特別訂明有關訂立規例的條文。[聽證會文件 EXP-1(A)：英文原文第 91 頁，第 5.1.1 段]

363. 對於署長作供指現行通過《指引》頒布規定的做法的優點是「可以適時咁樣去檢討同埋修訂」指引，John Stanley 教授表示[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 176 頁，中文本第 65 頁]：

「我覺得你要去決定……指引抑或係規例係對於當局係咪方便，同埋對於公眾嗰個嘅結果，……結果對於合規方面會唔會係好啲。」

364. John Stanley 教授進一步提議成立巴士車長工作／駕駛／休息時間常務委員會[聽證會文件 EXP-1(A)：英文原文第 94 頁，第 5.3 段，第 5 分段]：

「……(至少)由政府代表／提名人士、專營巴士營辦商和疲勞工作方面的專家組成，每年最少開會兩次，以處理各項事宜，包括(1)檢討有關《指引》的合規情況……(2)檢視這範疇的國際經驗及(3)檢視對於引起司機疲勞的成因和處理疲勞駕駛的較佳方法的新見解。」

(iv) 巴士安全常設委員會

365. John Stanley 教授建議成立巴士安全常設委員會，每年召開至少兩次會議[聽證會文件 EXP-1(A)：英文原文第 94 頁，第 5.3 段，第 6 分段]：

「……以檢討及評估可能影響巴士安全(特別是定線巴士運作)的最新科技，並就專營巴士車隊及其他巴士系統宜納入的安全措施向政府提供意見。新成立的加強專營巴士安全工作小組可成為該委員會的主要部分，但應擴大委員會的成員，以納入其他巴士營辦商。」

366. John Stanley 教授作供時澄清，他認為應加入小巴業界代表，表示小巴機構佔「市場佔有率」。另外，他表示表面上可見，他支持將工會代表加入常設委員會。最後，他表示最好能夠公開有關結論及研究。[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 114 至 115 頁，中文本第 41 至 42 頁]

(v) 向公眾披露專營巴士安全數據

367. John Stanley 教授在其報告中特別提到由專營巴士營辦商擬備及向運輸署提供的五年遠期計劃所載的數據，他表示[聽證會文件 EXP-1(A)：英文原文第 66 頁，第 2.2.3 段]：

「(計劃)載有非常有用的安全成效及安全措施分析及討論，例如意外率與車長年齡、車長年資、工作時數、車長駕駛有關路線的經驗等因素之間的相互關係評估，此等資料非常有用。」

368. 他特別提到「意外率似乎在工時介乎 6 至 8 小時的情況下略為增加……這項可能的相互關係需要更仔細研究，以確認是否屬實，如確認屬實，則應調查原因，並探討可採取的解決辦法。」

369. 最後，他繼而建議[聽證會文件 EXP-1(A)：英文原文第 67 頁]：

「據了解，遠期計劃文件為相關專營巴士營辦商與運輸署之間的機密文件。作者認為，當中所載的數據分析，是營辦商展示有能力營辦妥當及高效服務的重要部分……

營辦商對其安全表現公開問責，有助促使營辦商在表現壓力下維持表現。鑑於意外對社會造成廣泛損失，我們有充分理據支持公開遠期計劃內關於巴士安全的章節。」

370. 具體而言，他建議檢討「6至8小時及12至14小時的工作時段，查看這些時段內有何安全措施可予加強，可能意味着要將14小時的工時上限降低」。[聽證會文件 EXP-1(A)：英文原文第94頁，第5.3段]

(vi) 安全帶

371. John Stanley 教授在作供時表示，澳洲的市區巴士無須配備安全帶，原因是當地普遍認為「嗰個巴士嘅重量本身係會有畀乘客有足夠嘅保護」，而「加裝亦都係會有啲困難，同埋個成本會關注」。[第16日聽證會紀錄本：2018年9月15日，英文本第124頁，中文本第45頁]他表示，如這問題在澳洲出現，當局會以「規管影響陳述書的過程」去處理，該過程為成本／效益分析。

372. John Stanley 教授在參閱委員會所收到關於考慮應否在新的專營巴士上安裝安全帶及在現有巴士上加裝安全帶的部分證供後，包括城巴／新巴董事總經理鄭偉波先生證供紀錄本的相關部分、加強專營巴士安全工作小組及其轄下小組的會議紀錄／會議紀錄擬稿，以及由運輸署和運房局為立法會交通事務委員會2018年7月25日的會議擬備的文件。當被問及對新巴士安裝安全帶及現有巴士加裝安全帶的意見時，他表示[第16日聽證會紀錄本：2018年9月15日，英文本第144至145頁，中文本第52頁]：

「規管……有兩個方面，第一，就係技術上係咪可行，係咪可以喺巴士嘅某啲地方安裝安全帶？例如話新巴士嘅上層，或者係所有現有巴士都係加裝呢？……技術上係咪可行？」

第二，就係如果係技術上可行，嗰個成本效益嘅比率係點樣呢？……即係意思安裝安全帶要幾多錢，然後減少意外嘅程度又會係點樣？同埋裝咗安全帶，啲人會唔會纜呢？又係要考慮。

喺任何具體情況，我都有咩嘢意見話纜安全帶係好定唔好，但……應該要做一個規管影響嘅陳述，就會睇下嗰個或然率，譬如話唔同嘅種類嘅意外嘅影響係點呢？你亦都可以畀一個金額佢，就話以金額嚟計算，可以減少幾多意外，同埋亦都睇下如果纜咗安全帶係咪可以減少傷害嗰個或然率亦都可以計算。

*因此就需要先做埋嗰個成本效益嘅分析，政府先至可以能做到一個政策決定，到底係咪需要裝安全帶，係咪可行，係咪值得。所以我對呢個問題嘅睇法就係首先要做一個成本效益嘅分析。」* [斜體為本文所加]

373. 對於可能帶來的效益，John Stanley 教授表示[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 149 頁，中文本第 54 頁]：

「……你需唔需要睇下有啲咩嘢類型嘅意外呢？同埋係咪嗰啲企喺度嘅人受傷，定係坐喺度嘅人受傷呢？到底喺呢啲意外嘅時候，如果真係坐喺呢啲冇遮擋嘅位置嘅人戴咗安全帶，係咪就會減少咗意外呢？同埋要做啲乜嘢去鼓勵大家戴安全帶？」

374. 至於應參與進行妥善及有效的成本／效益分析的各方，John Stanley 教授表示，除巴士製造商外，亦應委託顧問進行顧客意見調查，以找出「有啲咩嘢因素會影響佢哋係咪纜安全帶」。就此，他建議參照已規定安裝安全帶的司法管轄區，「睇下啲人係咪會纜安全帶」。*[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 146 至 147 頁，中文本第 53 頁]*他同意亦有必要諮詢警方及巴士營辦商。最後，他建議向進行意外研究的機構(例如大學或研究中心)尋求意見。*[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 150 頁，中文本第 54 頁]*

第 17 章 — *Mike Weston* 先生：倫敦

375. *Mike Weston* 先生自 2016 年 10 月起擔任巴士業獨立顧問。之前，他曾任職倫敦運輸局 (Transport for London) 及前倫敦運輸局 (London Transport) 約 20 年。他也曾任倫敦巴士的巴士基建主管 (1999 年至 2003 年)、巴士營運主管 (2003 年至 2004 年) 及營運總監 (2004 年至 2013 年)，並由 2013 年 10 月至 2016 年 9 月出任倫敦運輸局巴士部總監。

376. 以下幾項主要數據反映倫敦與香港的公共交通系統 (特別是專營巴士) 的異同：

- 2017-18 年度，倫敦的巴士載客量約 22 億人次，而香港的巴士載客量則約 14 億人次；[聽證會文件 EXP-1(A)：英文原文第 120 頁，第 2.2 段；聽證會文件 THB-2：英文原文第 103 頁]
- 2014 年，倫敦每天使用公共交通工具的人佔人口約 30%，香港則佔約 90%；[聽證會文件 THB-2：英文原文第 2 頁]
- 2017 年，香港使用專營巴士的人佔使用公共交通工具的人約 31%，倫敦則佔 56%；[聽證會文件 THB-2：英文原文第 103 頁；第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 10 頁至 11 頁，中文本第 4 頁]
- 2018 年，倫敦的專營巴士總數約 9 200 輛，當中 6 800 輛是雙層巴士，而香港的專營巴士總數則約 6 000 輛；[聽證會文件 EXP-1(A)：英文原文第 126 頁，第 3.4 段；聽證會文件 THB-1：英文原文第 30 頁]
- 2017-18 年度，倫敦專營巴士車隊行車 4.9 億公里，平均每年每輛巴士行車約 53 000 公里；而香港的車隊行車 5 億公里，平均每年每輛巴士行車約 83 000 公里；[聽證會文件 EXP-1(A)：英

文原文第 120 頁，第 2.2 段；第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 12 頁，中文本第 4 頁]

### 倫敦運輸局

377. Mike Weston 先生形容，由前倫敦運輸局過渡至現今的倫敦運輸局期間，倫敦提供巴士及其他服務的模式經歷蛻變，蛻變過程始於 1985 年，當時部分巴士路線開始改為招標，讓私人營辦商競投。前倫敦運輸局屬於公營機構，擁有巴士及車廠，並僱用營運人員。到 1998 至 1999 年左右，所有專營巴士路線均以招標方式營運，而現今的倫敦運輸局則在 2000 年成立。[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 20 頁，中文本第 6 頁；聽證會文件 EXP-1(A)：英文原文第 119 頁]

378. 2017 年 4 月，由 6 個大型巴士營辦商集團為倫敦運輸局營運的專營巴士，合共佔該局每年專營巴士預定行車里數約 94%，這些巴士營辦商集團的最終控股公司如下[聽證會文件 EXP-1(A)：英文原文第 126 頁]：

- Abellio Transport Holding BV (荷蘭) - 8.1%
- Arriva Passenger Services Limited (德國) - 17.2%
- Comfort Delgro Corporation Limited (新加坡) - 19.2%
- Go Ahead Group Plc (英國) - 23.7%
- RATP Development (法國) - 11.6%
- Stagecoach Group Plc (英國) - 14.6%

379. 倫敦運輸局負責[聽證會文件 EXP-1(A)：英文原文第 127 頁，第 4.1 段]：

- 外判服務及訂立表現標準；

- 規劃服務／路線；
- 監察及管理合約；
- 提供巴士乘客基建設施；
- 提供乘客資訊；
- 票務及車輛定位設備。

相對而言，外判巴士營辦商的角色是：

- 競投個別巴士路線；
- 僱用司機、控制員、工程師及其他營運人員；
- 按倫敦運輸局的標準營運服務；
- 擁有資產 — 車廠及巴士。

380. Mike Weston 先生表示，招標對個別巴士路線的一項重大影響是營辦商「無可避免地在合約期不同階段均有合約」。[聽證會文件 EXP-1(A)：英文原文第 137 頁]

381. Mike Weston 先生把倫敦運輸局批出巴士路線合約的程序簡述如下 [聽證會文件 EXP-1(A)：英文原文第 128 頁，第 4.2 段]：

「倫敦運輸局設有資格預審制度，新的營辦商須填妥資格預審問卷。問卷經審批後，會要求獲批的供應商簽訂框架協議，並邀請他們就個別巴士路線投標。

倫敦運輸局會就每條招標的路線公布服務規格，訂明有關該巴士路線的所有特定要求，包括一天內某些時段的規定班次、行車路線，以及車輛類型 — 雙層或單層等。

框架協議涵蓋所有一般合約條款，並附有路線的特定資料 — 例如時間表、最低表現標準、路線合約內訂明的車輛類型。」

### 車輛規格

382. Mike Weston 先生表示，框架協議除了載有國家初步簽發巴士證書的要求，亦詳載了倫敦運輸局對車輛規格的要求，包括「防襲屏障、引擎艙滅火系統、閉路電視系統連接車輛監控器」。不過，他留意到[聽證會文件 EXP-1(A)：英文原文第 134 頁]：

「目前英國並無法律規定固定班次服務的巴士須為巴士司機或乘客座椅安裝安全帶。」[斜體為本文所加]

383. 再者，他指出「目前倫敦的營辦商均沒有在倫敦運輸局的合約巴士上的乘客或司機座椅安裝安全帶」。他又指出[聽證會文件 EXP-1(A)：英文原文第 134 及 142 頁]：

「雖然所有營辦商在過去數年已採用 Green Road 及 Mixtelematics 等多間供應商的車載智能通訊系統，但目前倫敦運輸局並無強制要求使用這些系統。」[斜體為本文所加]

### 評審標書

384. Mike Weston 先生表示，每份標書都須通過評審程序，以「尋求『最大的經濟利益』成果」。但他續說「對營辦商的競標進行技術評審工作中，會評估營辦商目前在各方面的表現，包括安全方面」。[聽證會文件 EXP-1(A)：英文原文第 129 頁]

### 倫敦運輸局與巴士營辦商簽訂的合約

385. 關於倫敦運輸局與營辦商的合約模式，Mike Weston 先生表示[聽證會文件 EXP-1(A)：英文原文第 125 頁]：



「倫敦運輸局採用的是總成本合約，營辦商按行駛的每一里路程獲付費用，並視乎服務可靠與否獲發額外獎金或扣減費用。從乘客獲得的車資收入歸倫敦運輸局所有……」

### 乘客車資收入：補貼

386. 關於從乘客獲得的車資收入與整體服務成本的比例，Mike Weston 先生表示[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 33 至 34 頁，中文本第 11 頁]：

「……2016 年<至 17 年>，七成嘅成本係乘客嘅收入……，三成就係<補貼>……就係<6 億>2 千 600 萬<英鎊>。」

### 合約獎金及扣減費用

387. 關於該優質服務獎勵合約的運作，Mike Weston 先生說[聽證會文件 EXP-1(A)：英文原文第 131 頁，第 4.3.3 段]：

「(它)把總成本合約的基本付款機制，與按照相對於路線協議所載最低表現標準的實際服務質素指標表現，而額外支付或扣減款項的機制結合起來。付款會按相對於合約所訂最低標準的額外等候時間的每 0.10 分鐘變動，以及準時表現的每 2.0 分鐘變動(就班次不頻密路線而言)，而作出分等級的增減。付款的增減範圍在+15%/-10%之間，目的是令營辦商在重視數量(即所行駛里數)之餘，亦重視服務的可靠性，而這正是總成本合約的重點。」

班次頻密路線(每 12 分鐘 1 班或更頻密者)的服務質素，是以額外等候時間來衡量，而班次不頻密路線則以準時表現來衡量。額外等候時間所量度的是班次頻密服務的乘客所多花的等候時間，當中的假設是乘客在隨機時間到達巴士站，因此理想的平均等候時間為編定班次相隔時間的一半。」

388. Mike Weston 先生解釋，把巴士營辦商與倫敦運輸局議定的合約價格，除以每年的編定里數，便得出每里的合約價格。營辦商可就行駛的每里獲付按該價格計算的費用，但基於營辦商本身所能控制的理由而未有行駛的里數，「譬如話……有……司機或者係有……巴士……有機件故

障……」，則會被扣減按合約所訂的每里費用。不過，基於營辦商不能控制的理由而無行駛的里數，例如「交通阻塞、改道……係一啲計劃、冇計劃嘅事項」，則無須扣減費用。最後，他表示「根據佢哋……係咪可靠，……畀額外嘅獎金」。[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 23 至 24 頁，中文本第 8 頁]

389. Mike Weston 先生表示，關於額外等候時間的計算[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 27 頁，中文本第 9 頁]：

「過去都係人手……積累啲數據，而家基本上都係自動咁樣係透過呢個<車輛定位>系統……去計……，<所以以前好簡單，而家>其實我哋嘅數據就係<百分比>根據個巴士嚟到去計嘅。」

### 合約期

390. 關於合約期，Mike Weston 先生說[聽證會文件 EXP-1(A)：英文原文第 129 頁]：

「倫敦巴士合約通常先簽訂 5 年，並可根據在合約期第 3 年及第 4 年的 4 個季度的營辦表現續約 2 年……如果營辦商符合續約準則，便有資格自動續約。營辦商可決定是否願意接納續約。」

391. 關於營辦表現準則，Mike Weston 先生表示「營辦商的表現須高於最低表現標準(準時或額外等候時間方面)，才有資格續約。」不過，儘管合約可作出改動以加入其他條件，例如安全表現，他指出「……目前只有額外等候時間表現或準時表現屬於續約準則的一部分」。[聽證會文件 EXP-1(A)：英文原文第 130 頁]

### 每年調整合約價格

392. Mike Weston 先生表示，所有路線協議合約「均可在中標日期滿一年後調整合約價格，以反映成本上漲。計算調整的公式包含一籃子的加權

因素，當中包括平均收入指數、零售價格指數及柴油價格上升指數。」[聽證會文件 EXP-1(A)：英文原文第 135 頁，第 4.5.4 段]

### *終止合約*

393. 框架協議第 27 條就終止路線協議作出規定，「可基於多項理由，包括嚴重違反路線協議的條文、表現未達到……路線協議所要求的標準」。不過，Mike Weston 先生表示，「實際上終止合約的條文鮮有引用」。[聽證會文件 EXP-1(A)：英文原文第 132 頁，第 4.5.1 段]

394. Mike Weston 先生解釋[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 42 至 43 頁，中文本第 14 頁]：

「路線為本嘅招標嘅好處，相對於譬如話新加坡嘅<範圍為本>專營嘅制度嘅好處就係……運輸局就可以透過呢一個路線招標令到呢間公司……隨時可以有彈性增大或者係減細嘅。<大範圍專營權嘅困難係如果某方面嘅表現不符合約標準，>……要終止合約，尤其是譬如話啲四百或者……四百五十部巴士嘅，係一個好大嘅決定，……成個巴士嘅服務<及對公眾>都係……好大嘅影響。

<倫敦系統嘅好處係>……好明顯……對於……唔好嘅營運商呢，我哋就係<一段時間>唔批新嘅合約畀佢，就對佢哋嚟講，<不會嚴重影響佢哋嘅業務，但>係一個好強嘅訊息，就係佢哋做得唔好<，一定要改善表現>。」

### *合約監察及表現管理*

#### *負責監察表現的客務經理*

395. Mike Weston 先生表示，倫敦運輸局向每個合約巴士營辦商分派一名負責監察表現的經理，其職責是「……查找表現問題，然後與營辦商一起尋求解決辦法，並落實計劃以解決問題」。[聽證會文件 EXP-1(A)：英文原文第 136 頁]

396. Mike Weston 先生在概述合約監管機制時，指出以下與「成效」相關的因素[聽證會文件 EXP-1(A)：英文原文第 136 頁]：

- 已行駛里數；
- 可靠性(額外等候時間表現／準時表現)；
- 駕駛標準 — 車長質素監察；
- 合約審計 — 駕駛時數、里數報表等；以及
- 工程標準 — 工程質素監察。

397. 他又指出，專營巴士使用者的看法亦與合約監管相關，顧客滿意程度調查及顧客的溝通同樣攸關。再者，經訓練的調查員會以所謂的「神秘乘客調查」方式，從「是否樂於協助乘客、對乘客的態度等非技術角度」評核司機的表現。[聽證會文件 EXP-1(A)：英文原文第 136 至 137 頁，第 5.2 至 5.3 段]

#### *司機訓練*

398. Mike Weston 先生表示，所有專營巴士司機均須接受特定的駕駛考試並取得公共服務車輛牌照，而為了保持牌照有效，須每隔 5 年接受 5 天認可培訓。大部分司機每年進行 1 天的培訓，藉此繼續持有專業技能證書。另外，倫敦運輸局規定所有新的專營巴士司機須在 1 年內取得獲 City&Guilds 認可的二級專業巴士駕駛資格。[聽證會文件 EXP-1(A)：英文原文第 144 頁，第 6.6 段]司機獲編配路線後，須熟習路線風險評估資料。巴士營辦商負責提供該份資料，作為框架協議的一部分，「……藉以辨別路線沿途的潛在風險。」[聽證會文件 EXP-1(A)：英文原文第 142 至 144 頁，第 6.4 及 6.6 段]

#### *「In the Zone」課程*

399. 在 2015 年和 2016 年，倫敦運輸局開辦一項名為「In the Zone」的課程，由巴士營辦商的訓練員教導所有司機辨別冒險行為並作出應對，以

緩減冒險行為的後果。Mike Weston 先生表示，該培訓課程實際上通過影片「話畀司機知道點樣可以去處理……危機」。[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 176 頁，中文本第 58 頁；聽證會文件 EXP-1(A)：英文原文第 144 頁，第 6.6 段]

「Hello London」課程

400. 由 2016 年至 2018 年，倫敦運輸局為巴士營辦商所有合共 24 500 名司機，提供為期 2 天名為「Hello London」的認可專業技能證書課程。課程的主要目的是改善巴士司機在不同處境下提供的顧客服務。Mike Weston 先生表示，該課程[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 178 頁，中文本第 59 頁]：

「……由倫敦運輸局係去統籌嘅，所以呢個係一項承諾。」[斜體為本文所加]

401. 倫敦運輸局的承擔規模見於該局 2016 年 11 月 8 日的局方文件《巴士司機訓練》，Mike Weston 先生對此表達其看法時提到[聽證會文件 MISC-3：英文原文第 1370 頁，第 4 段]：

「『Hello London』的模式是利用創新的處境劇促進反思。經過競爭程序，訓練合約最後批予專業的供應商 Steps Drama。該項訓練為期兩年，預算費用為 650 萬英鎊。」

402. 在「Hello London」課程中，演員通常會就特定處境與參與的巴士司機作互動對話，例如：巴士不停站或有停站但卻沒有開門讓乘客上車各種情況及其後果；巴士不是在巴士站停車的後果；以及因巴士遲到令乘客忿怒、母親拒絕摺起嬰兒車或乘客用粗言穢語辱罵司機等情況引致司機與他們發生磨擦。另外，課程亦會針對處理因挫敗感和注意力分散而令司機在駕駛時作出冒險舉動的風險。[聽證會文件 EXP-1(A)：英文原文第 144 至 145 頁，第 6.6 段] Mike Weston 先生表示，後者正是安全的關鍵「令到佢哋喺同乘客互動嘅時候就有咁大壓力，<同埋之後揸車嘅時候注

意力有咁分散>……」。[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 177 至 178 頁，中文本第 59 頁]

### *車長質素監察*

403. 倫敦運輸局僱用了合資格的司機督導員，每年從每個專營巴士營辦商中抽樣選出司機進行暗中監察。所採用的「計分表」按乘客關顧、其他安全及駕駛能力這三個獨立項目列出多項要素。[聽證會文件 EXP-1(A)：英文原文第 137 及 159 頁]

### *工程質素監察*

404. Mike Weston 先生表示，營辦商除了須根據法規保養巴士及每年驗車之外，倫敦運輸局亦僱用了一名專門承辦商，每年對每個專營巴士營辦商約四分之一的車隊進行突擊檢查。[聽證會文件 EXP-1(A)：英文原文第 138 頁，第 5.4 段]

### *巴士合約審計*

405. Mike Weston 先生表示，倫敦運輸局設有合約審計組，該組會定期到訪個別車廠，以審查不同項目的紀錄是否符合規定，包括沒有行走的里數及司機工時。[聽證會文件 EXP-1(A)：英文原文第 138 頁，第 5.5 段]

### *倫敦運輸局與巴士營辦商的合作*

#### *巴士營辦商論壇*

406. Mike Weston 先生表示，除合約監察及表現管理外，倫敦運輸局與巴士營辦商亦有合作關係，具體例子是巴士營辦商論壇。論壇每 8 周舉行一次，與會一方為各巴士營辦商的董事總經理，另一方為倫敦運輸局的總監和高級經理。他又表示，該論壇已成立了至少 15 年，他本身曾有六、七年擔任該論壇主席。設立該論壇是一項積極主動的措施，而非為回應個

別事件。[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 83 及 89 頁，中文本第 27 及 30 頁]巴士營辦商有機會於會上提出一些「一般的問題和關注」，而倫敦運輸局則可介紹該局的工作計劃日後對巴士營辦商的影響。[聽證會文件 EXP-1(A)：英文原文第 139 頁，第 5.7 段；第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 83 至 84 頁，中文本第 27 至 28 頁]

### 小組

407. 除了巴士營辦商論壇，尚有一系列小組，包括一個工程小組及一個安全小組。這些小組同樣每 8 周舉行會議，討論共同關注的事項及最佳的作業方式。

### 安全小組

408. 關於安全小組的會議，Mike Weston 先生表示[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 85 頁，中文本第 28 頁]：

「……安全小組其實就係所有巴士公司都有參與嘅，有陣時嗰啲董事經理或者係一啲總監或者係嚟安全方面嘅負責人係會有參與嘅。亦都係大家討論一啲安全嘅問題。

個論壇亦都係等巴士公司可以大家分享……交通事故所汲取嘅教訓。」

### 工程小組

409. Mike Weston 先生表示，工程小組一般由工程總監組成，成員就車輛保養方面的事宜互相交流。據他所說，會議亦是「大家互相合作、互相係分享一啲最好嘅做法」的場合[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 87 頁，中文本第 29 頁]：



## 巴士營辦商論壇、轄下小組及工會

410. Mike Weston 先生表示，工會代表不會參加巴士營辦商論壇或其轄下小組的會議。據他所知，95%的巴士司機均為 Unite 工會成員，所以「從倫敦運輸局的角度而言，要聯繫工會相對容易」。關於巴士安全問題，Mike Weston 先生指倫敦運輸局[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 88 至 89 頁，中文本第 29 頁]：

「係同工會的確有定期嘅會議……分享一啲巴士安全標準……嘅諗法，呢個就視乎巴士公司睇下點樣處理佢哋嘅當地嘅工會<，處理本身嘅問題同條款及條件>。」

## 倫敦運輸局：巴士安全管理

### 倫敦運輸局的巴士安全小組

411. Mike Weston 先生表示，倫敦運輸局在 2015 年年初[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 94 頁，中文本第 31 頁]：

「……成立一個專責嘅隊伍係集中睇呢個巴士安全嘅計劃，呢個係有運輸局嗰個道路安全小組嗰度調咗一啲人手過嚟，等佢哋……專門改善巴士嘅安全同埋係推行呢一個嘅巴士安全計劃嘅。」

所以當時係有一隊嘅專門隊伍，係有兩、三人係專門係負責處理呢一方面嘅工作嘅，同埋係促進呢個巴士安全。」

## 智能車速輔助系統

412. Mike Weston 先生表示，倫敦運輸局早在 2009 年委託一間市場顧問公司(2CV)撰寫報告，探討司機對智能車速輔助系統所持態度。該系統提供車速資料，藉以透過三種模式之一限制車速，即建議模式、自願模式及強制模式。[聽證會文件 MISC-3：英文原文第 943 頁]他作供時說，「喺 2009 年 5 月……運輸局就係開展最新嘅試驗計劃」這句提到的試驗，是在車輛上進行，其目的是評估該系統是否適合用於車輛(不一定針對巴士)。



[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 102 至 103 頁，中文本第 35 頁]

413. 不過，Mike Weston 先生表示，倫敦運輸局在 2015 年委託運輸研究實驗室(Transport Research Laboratory)就「倫敦巴士使用智能車速輔助系統」(*Intelligent Speed Assistance on London Buses*)撰寫測試報告。該實驗所是道路運輸及相關技術評估方面的專業顧問。有關測試選取了兩條巴士路線，測試由 2015 年 6 月開始，至 2016 年 11 月發表全面報告。[聽證會文件 MISC-3：英文原文第 1002 至 1133 頁]關於技術方面，Mike Weston 先生表示[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 97 頁，中文本第 33 頁]：

「科技……就係關於呢個數碼地圖，然後……巴士佢又裝置呢個系統嘅時候，就會令到……車速可以係限制嘅，……就係會令到司機係唔會超速。」

414. 關於運輸研究實驗所的角色，Mike Weston 先生表示該實驗所可提供既精確又獨立的分析，他表示[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 97 至 101 頁，中文本第 33 至 34 頁]：

「係倫敦運輸局資助嘅<兩條路線用嘅技術>，亦都係……研究中心去監察」

#### *巴士安全計劃：2016 年 2 月*

415. Mike Weston 先生說倫敦運輸局於 2016 年 2 月推出巴士安全計劃，計劃要素包括[聽證會文件 EXP-1(A)：英文原文第 146 頁]：

- 具透明度的巴士碰撞數據分析；
- 合約及表現管理；
- 車輛設計；以及
- 巴士司機訓練。

## 數據收集及透明度

416. Mike Weston 先生表示，巴士營辦商須按照合約規定，利用「意外報告資訊系統」(Incident Reporting Information System)提交「關於事故及意外的完整數據」。每一季度，倫敦運輸局會發布由警方所整理、關於涉及人身傷亡的撞車事故數據「STATS 19」。至於趨勢分析則通過一個「巴士安全儀錶板」(Bus Safety Dashboard)發布。另外，倫敦運輸局每季度亦會就涉及專營巴士的意外事故，以試算表形式發布題為「導致有人傷亡須送院及在現場治理的意外事故詳情」。*[聽證會文件 EXP-1(A)：英文原文第 141 頁]*

### 倫敦巴士安全儀錶板 — 2018 年第一季度報告

417. 倫敦巴士安全儀錶板的「2018 年第一季度報告」的「季度摘要」於倫敦運輸局網站發布，摘要內容包括*[聽證會文件 MISC-3：英文原文第 1327 頁]*：

- 「● 第一季度，每 100 萬乘客人次中的受傷人次佔 2.9%。
- 因滑倒、絆倒和跌倒而受傷的百分比自 2017 年第四季的 47% 升至 2018 年第一季的 51%。
- 在所有受傷個案中，撞車引致的受傷佔 13%，這是自 2014 年以來最低的百分比。
- 在第一季接報的 16 912 宗事故中，受傷佔 8.6%。本季度是自 2014 年以來最少事故的一季。」

### 倫敦運輸局公布的巴士安全數據

418. 倫敦運輸局網站的「倫敦運輸局公布的巴士安全數據」標題下有以下內容*[聽證會文件 MISC-3：英文原文第 1338 頁]*：

「所有數據均取自倫敦多間使用內部數據記錄系統的巴士公司，倫敦每間巴士公司都連接該系統。巴士公司必須呈報所有事故，不論事故的責任誰屬及嚴重程度。記錄系統的作用，是提供數據作統計，以支援安全評估的工作。巴士公司只會就表面事實向倫敦運輸局提交關於事故的初步資料。意外事故的調查工作由涉事的巴士公司負責進行，調查所得的資料由他們管有。」[斜體為本文所加]

419. 倫敦運輸局就數據的使用而說明須注意的事項[聽證會文件 MISC-3：英文原文第 1338 頁]：

「有關數據並非旨在提供一個可靠途徑，賴以比較個別巴士路線或巴士公司在安全方面的表現。主要原因在於巴士路線往往各具不同特點，而其他主要因素如密度、班次、交通流量及所用的巴士類型……亦有所不同。」

420. Mike Weston 先生在其報告中指出，據他觀察所得，試算表載列的資料包括：日期、路線、營辦商及集團名稱；事故發生的區份；傷者性別、屬成人或兒童、是否乘客；以及事故類型和相應的處理方法。[聽證會文件 EXP-1(A)：英文原文第 141 頁]倫敦運輸局在其網站解釋，對於死亡事故的描述，並不包括「與健康狀況有關的事件，例如懷疑心臟病發的情況。」最後則描述傷者是否只須在現場接受治理，或是否須要送院救治。[聽證會文件 MISC-3：英文原文第 1338 頁]

421. 倫敦運輸局網站還載述以下內容：

**「道路安全統計數字(STATS 19)**

STATS 19 是倫敦道路安全數據的主要來源，亦是用作分析整個倫敦市道路傷亡數字的權威資料來源。」

該網站接着載述以下內容：

「由於巴士公司將事故記錄在案時，無法即時將受傷個案的性質一一核實，因此現提示所有閱覽該些數據的人士，不應將其當作道路交通傷亡數字的權威資料來源。至於 STATS 19 發布的資料則應作此用途，特別是要確定傷勢的嚴重程度時。」

## 核實數據

422. Mike Weston 先生表示，倫敦運輸局有一套程序，核實送交該局的數據[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 50 頁，中文本第 16 頁]：

「而巴士公司亦要將佢哋嘅事故嘅數據係輸入呢一個系統，<呢個係主要資料來源，>倫敦運輸局就會進行審核去確保啲巴士公司係正確咁樣去輸入呢啲資料嘅。而呢啲數據亦都係會同警方嘅數據係交叉去檢查」

### 「安全創新基金」(Safety innovation fund)

423. 倫敦運輸局設立一個「安全創新基金」，於 2017 年 8 月邀請巴士公司申請，其後於同年 11 月向 6 間巴士公司撥款合共 50 萬英鎊，用以就安全科技裝置進行試驗。Mike Weston 先生表示正試驗的科技裝置包括自動剎車系統、防止誤踏踏板裝置、望後鏡設計和車頭防撞保護裝置。[聽證會文件 EXP-1(A)：英文原文第 146 至 148 頁]

424. Abellio 公司的安全總監 Lorna Murphy 女士於 2018 年 8 月向 Mike Weston 先生和主席報告前置攝影機「神眼」(Mobileye)的測試結果，指該裝置通過顯示車速限制的改變，以及提醒司機與前面車輛的距離及與行人和騎單車人士可能出現的碰撞，能減少意外發生達 28%，並減少車上乘客受傷的機會達 75%。

425. RATP 公司的安全和風險主管 Jon Pike 先生報告，他們就 Guardian 公司一款能偵測睡意的攝影機 (Seeing Machine)進行試驗的結果顯示，在進行試驗的路線上，該攝影機能減低發生交通意外的機會達 25%。當系統偵測到一個人的眼皮閉上超過 1.5 秒時間，便會向中央控制室傳送警報訊號，而當中央控制室核實該警報訊號是真確無誤後，便會聯絡車廠，然後車廠再以無線電聯絡司機。Mike Weston 先生和主席於 2018 年 8 月 28 日觀看了一段示範錄影片段，片段中的巴士司機就是在此情況下引發警報訊

號。Mike Weston 先生和主席並獲告知車廠於 5 分鐘內便能直接與司機聯絡。[聽證會文件 EXP-1(A)：英文原文第 146 至 147 頁]

426. Mike Weston 先生表示[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 101 頁，中文本第 34 頁]：

「運輸研究中心<即運輸研究實驗所>亦都係有參與<倫敦>呢一個嘅最新……<巴士>安全標準<評估>……，特別係喺呢個科技上面。」

### 《巴士安全標準》

427. Mike Weston 先生表示，巴士安全計劃的一個關鍵部分是要制訂一套《巴士安全標準》，為此，倫敦運輸局自 2016 年開始與運輸研究實驗所、羅浮堡大學(Loughborough University)、巴士營辦商及巴士製造商合作進行有關工作。Mike Weston 先生表示他們採取嚴謹的方法「利用成本效益分析評估各個可行方案，從中鎖定一些就所花的每英鎊在減少受傷／意外事故方面可取得最大成效的介入措施」。制訂安全標準的目的，是要減少巴士意外中的死亡和重傷人數。[聽證會文件 EXP-1(A)：英文原文第 148 頁，第 7.5 段]

### 《安全表現指標》

428. Mike Weston 先生表示，作為制訂巴士安全計劃和《巴士安全標準》工作的一部分，倫敦運輸局制訂了「安全表現指標」(*Safety Performance Indicators*)，他預期倫敦運輸局在頒布《巴士安全標準》時，會同時公布巴士安全指標。關於巴士安全指標，他表示[聽證會文件 EXP-1(A)：英文原文第 150 頁，第 7.8 段]：

「……安全表現指標的作用，是用以監察一籃子的措施，包括事故數據和觀察措施得出的結果，從而給予營辦商一個整體評分，而基準分為 80 分。各間營辦商日後的表現會與基準分作一比較，以看看他們的表現是退步或進步。設計該制度的目的，並非要將各間公司作出比較，而是記錄個別公司的表現趨向。」

## 安全帶

429. Mike Weston 先生表示，倫敦運輸局代表告知他和主席，該局「並無審視」專營巴士安裝安全帶的事宜[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 119 頁，中文本第 40 頁]。就此，他表示：

「佢哋<明顯>嘅睇法就係<不需要探討安全帶，>佢哋知道個成本係點樣，同埋就相對於其他嘅選項嗰個嘅效益係點樣。」

430. Mike Weston 先生確認英國運輸部在 2010 年 5 月發出一份聲明，就立法規定市區巴士須安裝安全帶提供指引及意見。該聲明表示，鑑於自 2001 年 10 月 1 日起已有規定，所有新巴士須設有安全帶，該份聲明指出[聽證會文件 MISC-3：英文原文第 1274 頁]：

「唯一可獲豁免受這項規定限制的，是在市區行走並提供乘客企位而設計的巴士。這類巴士一般行走市區路線，行車時間及距離均不長，車速中等，因而可獲豁免。」

431. 最後，他表示預計倫敦運輸局在 2018 年 10 月 16 日公布《巴士安全標準》首階段的規定，其後在 2021 年及 2022 年推出另外 2 個階段的規定。[聽證會文件 EXP-1(A)：英文原文第 148 頁]

### *《巴士安全標準》：2018 年 10 月*

432. 2018 年 10 月 16 日，倫敦運輸局推行《巴士安全標準》。在該標準的行政摘要中，倫敦運輸局巴士營運總監 Claire Mann 女士講述該局於 2016 年 2 月推行巴士安全計劃後採取的行動 [聽證會文件 EXP-1(B)：英文原文第 189-308 頁]：

「其後，我們委託了運輸研究實驗所研究和制訂有關標準。這是以實據為本的合作項目，並就技術可行性、時間表及實施情況諮詢巴士製造商和營辦商。」

433. Claire Mann 女士指出，「不是所有技術都可即時應用，部分需要時間研發，因此本局的巴士安全路線圖載列巴士的未來計劃，讓製造商有時間投資研發這些新的安全功能。」就此，該路線圖現在提供「一個『理想』日期，早於任何『指定』日期」，而到「指定」日期「市場上應有多個巴士型號可供選用，以及到時應會是『理想』日期之後數年。」[聽證會文件 EXP-1(B)：英文原文第 189-308 及 189-324 頁]

434. Mike Weston 先生在補充報告中，提及所公布的措施按以下不同標題分類[聽證會文件 EXP-1(A)：英文原文第 189-65 頁，第 3.1 段]：

#### *司機輔助裝置*

- 自動緊急剎車系統；
- 智能車速輔助系統；
- 經改良的直接和間接視野裝置；
- 防止誤踏踏板裝置；以及
- 防止巴士滑動裝置。

#### *其他道路使用者輔助裝置*

- 加強音效和視效程度。

#### *其他道路使用者保護裝置*

- 保護車頭碰撞時易受傷害的道路使用者。

#### *乘客保護裝置*

- 保護乘客的車廂和防滑裝置。

435. Mike Weston 先生指出，預計「自 2019 年起，有關標準會適用於所有新巴士(每年約 700 輛)」，惟「也會考慮是否可在現有巴士上加裝有關裝置，或可作為現有巴士投入服務約 7 年後所需進行的部分中期翻新工程。」[聽證會文件 EXP-1(A)：英文原文第 189-64 頁，第 2.3 段]

### *司機輔助措施*

#### *(i) 智能車速輔助系統*

436. 在司機輔助設施方面，於 2018 年年底前必須安裝的設備只有智能車速輔助系統。Mike Weston 先生指出，這項措施被「視為對司機特別有用，因為倫敦的每小時 20 英里車速限制區的數目正增加。」[聽證會文件 EXP-1(A)：英文原文第 189-66 頁，第 3.3 段]

#### *自動緊急剎車系統*

437. 行政摘要承認巴士的自動緊急剎車系統「因乘客就座但沒有扣上安全帶，或他們可能站着而帶來獨特的新挑戰」，並承認「……每次錯誤啟動亦令乘客有受傷之虞。」[聽證會文件 EXP-1(B)：英文原文第 189-311 頁]就此，Mike Weston 先生說：「路線圖認同這項規定仍需要繼續進行研發工作，因此預計這項功能要到 2024 年才可供應用。」他說亦有意見指因自動緊急剎車系統錯誤啟動而令巴士乘客受傷的已知風險，會「……因巴士外面發生的致命和嚴重受傷事故減少而抵消。」[聽證會文件 EXP-1(A)：英文原文第 189-66 頁，第 3.3 段]

#### *司機的直接及間接視線*

438. 行政摘要察悉，司機能否在即將撞車時作出反應，視乎他對巴士外或周圍的情況看得有多清楚，故指出《巴士安全標準》可「減少柱子對直接視線的阻擋，並通過使用鏡子，或日後通過使用盲點資訊系統及攝影機監察系統，改善間接視線。」攝影機監察系統或可取代車身外置鏡，避免



這些外置鏡撞到巴士外的人或物件。[聽證會文件 EXP-1(B)：英文原文第 189-313 至 189-314 頁，第 2.3 段]

#### *防止誤踏踏板*

439. Mike Weston 先生解釋，「誤踏踏板是指司機想踏制動踏板時卻誤踏油門，導致車輛意外加速的情況」。當局正考慮多個解決辦法，包括安裝儀錶板燈，以顯示加速及剎車。[聽證會文件 EXP-1(A)：英文原文第 189-67 頁]

#### *防止巴士滑動*

440. 為防止巴士滑動的「罕見」情況，倫敦運輸局將於 2020 年規定「安裝聯鎖系統，一旦司機離開座位時因某些情況而忘記拉下停泊制動器，可防止巴士滑動」。[聽證會文件 EXP-1(A)：英文原文第 189-67 頁]

#### *其他道路使用者輔助措施*

441. 鑑於使用電動及混合動力巴士的情況有所增加，為協助其他道路使用者，倫敦運輸局將會規定所有「新型號」巴士須由 2019 年 9 月起安裝聲效車輛警報系統，而所有「新車」則須由 2022 年起安裝。該系統協助巴士外的人察覺有巴士。至於加強巴士視效的測試及試驗工作仍在進行。[聽證會文件 EXP-1(B)：英文原文第 189-317 至 189-318 頁]

#### *其他道路使用者保護措施*

442. 就巴士外容易引致受傷的道路使用者，Mike Weston 先生表示[聽證會文件 EXP-1(A)：英文原文第 189-68 頁，第 3.5 段]：

「保障行人的車頭設計可加入多項特點，以便一旦撞車時為行人及其他容易引致受傷的道路使用者提供更佳保護。這些特點包括更改巴士車頭的形狀設計、防撞裝置及吸收撞擊力評估，以及防止輾過行人的措施，例如巴士車底裝設氣

袋，如巴士碰到行人便會啟動。這些規定亦會包括側鏡的防撞表現，以及側鏡能否以攝影機監察系統取代。

## *保護乘客*

### *(i) 座椅*

443. 由於「大量輕傷個案是因非撞車事故例如車輛急剎而起」[聽證會文件 EXP-1(B)：英文原文第 189-321 頁]，行政摘要指「倫敦運輸局的《巴士安全標準》會優先支援改善巴士乘客的安全措施」。此外，乘客可能「因受到前方撞擊，又或巴士剎車以致撞向前面座椅」而受傷；而在面向車尾的座椅使用低椅背設計，可能在上述情況下導致乘客頸部承受大幅拉力。因此，行政摘要內亦表示「倫敦運輸局尋求可提供更強保護的創新座椅設計」。[聽證會文件 EXP-1(B)：英文原文第 189-322 頁，第 5.1 段]

### *(ii) 防滑保護*

444. 《巴士安全標準》「……會對巴士內裝設的防滑地板，擬定最低防滑要求的規定」。[聽證會文件 EXP-1(B)：英文原文第 189-322 頁第 5.2 段]

## *巴士安全創新技術的挑戰*

445. Mike Weston 先生表示，巴士安全創新技術挑戰 (Bus Safety Innovation Challenge) 是倫敦運輸局將於 2019 年年初推出的資助基金，可供巴士製造商、供應商和營辦商申請。申請人須先行闡述擬避免或減輕的安全問題，以及有關的安全措施如何應用；然後提出證據，證明該項創新技術已經過測試，可有效而適當地應用於巴士上，並說明「措施在預計可減免的傷亡數字方面的預期效益」，輔以量化的「現實情況的證據」，即「措施實際上取得的效益，對運作的各項影響，例如車長或乘客對有關係統的反應，以及所需成本」。[聽證會文件 EXP-1(A)：英文原文第 189-70 頁，第 4.2 段；聽證會文件 EXP-1(B)：英文原文第 189-325 頁]

## 安全表現指數

446. 倫敦運輸局鼎力相助，向 Mike Weston 先生提供了安全表現指數的概況。有關指數自 2017 年開始試用於該局監管的巴士公司，由 8 個「籃子」共 81 項指標組成：[聽證會文件 EXP-1(C)：英文原文第 189-743-1 頁及第 189-754 至 189-775 頁]

- 顧客安全；
- 職員安全(僱員和供應商的員工)；
- 交通網絡安全；
- 巴士工程；
- 駕駛標準；
- 事項管理及保證系統；
- 基礎設施的安全；以及
- 巴士站的安全。

447. 定期安全表現指數得分按照以下算式計算：

- 安全表現指數 = 分數 • m + 100

[「m」是指有關業務範疇的表現達到目標 80(常數 100 代表達到最佳表現)的獨有梯度。]

- 分數 = 比重 × 事故宗數總和

[分數是一個函數，代表比重與任何時段期間發生的事故總宗數兩者相乘。比重值介乎 1 至 5，比重值 5 代表最嚴重。]

比重值和「m」的值並無公開。

### 成本／效益分析

448. 同樣，倫敦運輸局也提供成本效益模式的資料，並形容這個成本效益分析方法涉及一連串步驟[聽證會文件 EXP-1(C)：英文原文第 189-746 頁]：

- 計量
  - 問題
  - 說明解決方案
- 目標人口
  - 有關的傷亡人數是多少？
- 車隊安裝
  - 需要多久才能在整個車隊裝設？
  - 新建造及加裝
- 效益
  - 對目標人口效用如何？
- 成本
  - 多少成本？
  - 製造及營運成本？
- 時間線
  - 何時可實施解決方案？
- 重複
  - 與甚麼其他安全措施重複？

449. 為說明按採用《巴士安全標準》部分擬議措施計算的成本效益比率，Mike Weston 先生把採用這些措施的成本效益比率提供如下[聽證會文件 EXP-1(C)：英文原文第 189-743-1 至 189-743-2 頁]：

- 車頭碰撞時易受傷害的道路使用者—最低形狀要求

成本效益比率 = 1:9.98-28.15(不包括保險申索);

- 內部第 2 層

成本效益比率 = 1: 7.99-20.2 (不包括保險申索); 以及

- 間接視線標準要求

成本效益比率 = 1:1.69-7.39(不包括保險申索)

450. 因此，根據計算，基於有關車頭碰撞時易受傷害的道路使用者的要求，用於改善巴士車頭設計的每一英鎊會產生由 9.98 至 28.15 英鎊不等的效益。Mike Weston 先生留意到由於巴士服務營辦商的預期效益不包括保險申索，反映倫敦運輸局採用保守方法分析成本效益。[聽證會文件 EXP-1(C)：英文原文第 189-743-2 頁]

#### *Mike Weston 先生的建議*

##### *(i) 資助專營巴士營辦商試驗及安裝科技安全裝置並訓練巴士司機*

451. 鑑於香港的專營巴士網絡不靠公帑資助營運，情況可算獨特，Mike Weston 先生表示，這令人想到「專營巴士營辦商的投資是否受到過度限制，特別是在發展和引進新科技和創新方面的投資」。他建議應考慮由運輸署資助「採用新的安全科技，以及針對安全的巴士司機訓練」。就此，他指出為倫敦運輸局營運的巴士在改善安全方面的費用，最終反映於專營巴士營辦商提高競投路線的出價。[聽證會文件 EXP-1(A)：英文原文第 152 頁，第 8.3 段]

##### *(ii) 採用新科技*

452. 關於專營巴士採用新科技安全裝置，Mike Weston 先生表示 [聽證會文件 EXP-1(A)：英文原文第 155 頁，第 8.9 段]：

「倫敦的經驗清楚顯示，採用新科技必須經過深思熟慮，確保任何財務投資取得最大收益，而且顯然要了解各項科技方案的成本和效益，確保任何投資在減少意外方面達致最大效益。」

453. 關於九巴率先決定在所有新巴士安裝安全帶，其後加強專營巴士安全工作小組作出相同決定的情況，以及該工作小組一直考慮在現有專營巴士加裝安全帶，Mike Weston 先生表示[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 158 至 159 頁，中文本第 52 頁]：

「我認為喺好多評估……冇睇到嘅就係……成本效益嘅問題，安全帶嗰個成本，加裝安全帶亦都係一個好大概成本負擔……主要嘅問題就係投資呢啲錢落去，個效益係點樣，安全帶喺減少交通意外傷亡嘅時候……相對於嗰啲錢擺喺其他嘅措施嗰方面係點樣比較呢？

<因此我認為這裡遺漏了一整項工作，>每一釵<蚊>使落去，愛嚟提升安全係咪可以係取得更加好嘅效益呢？，譬如話……通過智能速度調節／輔助、嗰個車頭嘅設計、自動減速、自動煞車等等……措施，嗰啲錢係咪花得更加有成本效益，還是把錢花在其他方面更為精明呢？而我認為要擔心嘅係錢一旦用在這方面，便是用了。

……始終問題就係點樣使呢啲錢，<可否用於其他科技>……點樣可以取得更加好嘅成效。……錢都唔係少嘅。」

454. 因此，Mike Weston 先生建議[聽證會文件 EXP-1(A)：英文原文第 155 頁，第 8.9 段]：

「由於英國兩間主要的巴士製造商是倫敦和香港的主要供應商，倫敦運輸局制訂巴士安全標準的方法尤其值得香港考慮。

隨着汽車業擁有更多自主，安全科技亦會繼續發展。就此，車輛安全設計會不斷發展，新科技的評估及應用須持續進行，而任何標準亦須一直與時並進。」

(iii) 安全資料的透明度

455. 鑑於從倫敦的經驗可見「巴士網絡的安全表現資料的透明度增加，不只令持份者和公眾可加強監察，亦使交通當局及其合約巴士營辦商加倍注意安全事宜。開放事故資料的模式促使問責」，Mike Weston 先生表示 [聽證會文件 EXP-1(A)：英文原文第 153 頁，第 8.4 段]：

「應考慮哪些有關香港專營巴士網絡的安全資料可放在公眾領域。」

456. John Stanley 教授作供時大力支持該項建議 [第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 181 頁，中文本第 66 頁]。正如前述，鑑於 5 年遠期計劃所載的資料包括「一些有關安全成效及安全措施非常有用的分析和討論」，他在報告中建議公布遠期計劃中關於巴士安全的專章。[聽證會文件 EXP-1(A)：英文原文第 66 至 67 頁，第 2.2.3 段]

(iv) 法規：專營巴士營辦商與運輸署合作

457. 從運輸署的意見書中專營巴士規管制度概覽 [聽證會文件 TD-1：英文原文第 34 至 53 頁] 看來，「……在安全方面顯然非常依賴法規作為專營巴士營辦商進行安全管理的主要動力」，Mike Weston 先生指出 [聽證會文件 EXP-1(A)：英文原文第 153-154 頁，第 8.6 段]：

「……過度依賴適用於所有車輛的法規，而未能針對巴士營運的某些特點，尤其是其負載逾百名乘客的能力。過度依賴合規的做法，亦可能同時限制了運輸署和專營巴士營辦商在安全方面創新。」

458. 相比之下，Mike Weston 先生表示，倫敦的專營巴士營辦商會「非常自覺」地遵守有關車輛和司機的法規，因此認為 [聽證會文件 EXP-1(A)：英文原文第 154 頁，第 8.6 段]：

「……正是除該等法規以外的措施、項目和合作，在以往和將來均使安全得到實際改善。倫敦巴士營辦商與倫敦運輸局之間的合作，以及他們願意創新和嘗

試新科技及方法，配合巴士安全計劃，在減少事故及傷亡方面帶來及將會帶來實效。」

459. 故此，他建議「運輸署應考慮如何加強與專營巴士營辦商合作」。

*(v) 獨立安全規管機構*

460. 雖然 Mike Weston 先生承認英國巴士業並無獨立安全規管機構，但表示英國有獨立鐵路安全標準委員會(Rail Safety Standards Board)，而倫敦運輸局及其他機構正在考慮為電車成立輕鐵安全標準委員會(Light Rail Safety Standards Board)。他認為在香港成立專營巴士獨立安全規管委員會一事值得考慮。[聽證會文件 EXP-1(A)：英文原文第 156 頁，第 8.11 段]

*(vi) 巴士司機訓練*

461. 儘管培訓巴士司機屬巴士營辦商的責任，鑑於倫敦運輸局負責為所有巴士司機制訂部分標準訓練課程，Mike Weston 先生建議，由於香港有多個專營巴士營辦商，而公眾期望有共同一致的標準，「...運輸當局通常最有資格制訂一般訓練要求，尤其在技術性駕駛技能以外的專題範圍。」[聽證會文件 EXP-1(A)：英文原文第 155 頁，第 8.8 段]

*(vii) 不超過每小時 50 公里的車速限制*

462. Mike Weston 先生在其報告中沒有提及在若干道路實施每小時不超過 50 公里的車速限制的問題。不過，他作供時被問及對加強專營巴士安全應否考慮此事的意見。

463. 鑑於倫敦及英國其他地方日漸推廣每小時 20 英里車速限制區，他便被問到對此事有何意見。倫敦運輸局 2015 年 10 月的刊物《倫敦街道安全；我們的法》(Safe London streets; Our approach)指出「時速每減 1 英里，市區的撞車宗數可減少約 6%。」另外，該文又表示[聽證會文件 MISC-3：英文原文第 987 頁]：



「接近 25%的首都道路現時設有每小時 20 英里車速限制。2015 年 3 月，我們為部分道路網絡的 8 個新試點訂定計劃……」

464. 英國運輸部在 2013 年 1 月發出的通告《設定地方車速限制》(Setting Local Speed Limits)指出[聽證會文件 SEC-3：英文原文第 1025 頁，第 89 段]：

「每小時 20 英里的車速限制區對減少撞車及受傷是非常有效的。1996 年一項研究顯示，每年整體平均撞車宗數可減少約 60%，而涉及兒童的撞車事故宗數可減少達三分之二。」

465. Mike Weston 先生作供時表示[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 194 頁，中文本第 64 頁]：

「……需要明白平均嘅車速係點……同埋大致上嗰個幅度係幾多。」

466. 關於就這個問題的解決方法進行成本效益分析，Mike Weston 先生補充說[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 195 頁，中文本第 65 頁]：

「要所有嘅巴士減速，……要維持所有嘅班次不變……需要更多嘅巴士、更多嘅司機<，係有成本>。返番去我哋頭先講嘅一點，……還是再裝置更多嘅安全裝置更加有效呢？我哋應該係有所有嘅數據<選項>，然後先至做選擇。」

(viii) 為專營巴士改善安全表現提供誘因

467. Mike Weston 先生作供時表示，他在其報告中指出「巴士公司就有啲關注……直接嘅財務嘅獎勵<可會導致巴士公司作出不當行為>，就會令到佢地唔願意分享資訊<和合作>。」[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 199 頁，中文本第 66 頁]就此，他表示，即使巴士營辦商涉及有人死亡及嚴重受傷的事故，但仍向其支付改善安全的獎金，「……情況就變得好奇怪」。另一方面，他表示，如果因安全表現欠佳而扣減款項，巴士營辦商在原本的合約價中「……就會將呢樣嘢擺埋落去」，以減

輕影響。[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 199-200 頁，中文本第 66 頁]

468. 因此他表示[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 200 頁，中文本第 66 至 67 頁]：

「<我諗關於係咪將財政誘因同巴士合約掛鈎有好多考慮。>……喺倫敦運輸局 2015 年嘅文件之中，佢哋都有提到呢一點，佢哋都解釋過就係財務嘅獎金或者鼓勵其實都係<唔>好嘅。」

469. 值得留意，倫敦運輸局在其 2015 年 8 月 12 日發出的《倫敦批出巴士服務經營合約和招標程序》(*London's Bus Contracting and Tendering Process*)述明[聽證會文件 EXP-1(A)：第 189-0-21 頁，第 7.12 段]：

#### 安全

「倫敦巴士公司利用一系列數據，作為評核營辦商提供安全服務能力的方法之一，表現不及格可導致損失合約，而表現未如理想亦會引致失去獲得新合約的機會。獎勵與支付／扣減款項並無直接關係，以免令人以為在計及成本時，營運安全是有商量餘地的，這一點十分重要。」

## 第 18 章 — 加強專營巴士安全工作小組報告

470. 運輸署於 2018 年 10 月 3 日致函委員會，隨函附上日期為 2018 年 10 月的《加強專營巴士安全工作小組報告》。[聽證會文件 TD-5：英文原文第 1757 至 1816 頁]該報告的「*建議摘要*」部分探討了多項議題[聽證會文件 TD-5：英文原文第 1801 至 1804 頁，第 5 章]

- 建議安裝的車內安全裝置；
- 試驗新的安全科技；
- 乘客座椅加裝安全帶；
- 專營巴士車長訓練；
- 諮詢；以及
- 運輸署的建議行動。

### *建議安裝的車內安全裝置*

471. 對於建議安裝的車內安全裝置，該報告指出[聽證會文件 TD-5：英文原文，第 1801 頁，第 5.3 至 5.4 段]：

「由 2018 年 7 月起購置的*新雙層巴士*，都會配備：

- (a) 電子穩定控制系統；以及
- (b) 具減速功能的車速限制器。」[下劃線為本文所加]

472. 對於在現役巴士加裝這些裝置，該報告指出，運輸署和專營巴士營辦商會為現有巴士中約 3 300 輛較新型號巴士，「繼續緊密合作研發」這些裝置。

473. 該報告前文提及，兩個巴士製造商(即亞歷山大丹尼士有限公司和富豪)表示需時 12 至 24 個月研發可裝設於若干現有型號巴士的電子穩定控制系統。根據初步估計，在現有 6 000 輛專營巴士中，可為其中 3 300 輛加裝該系統。專營巴士營辦商是否同意在所有現役雙層巴士上加裝有關裝置，須視乎營辦商按照「詳細的加裝建議(包括成本影響、所需人手和巴士停用時間)」所作的評估，以及「加裝建議的商業可行性」。[聽證會文件 TD-5：英文原文第 1765 至 1768 頁，第 2.4 至 2.9 段]專營巴士營辦商是否同意加裝具減速功能的車速限制器，須視乎相同的考慮因素。[聽證會文件 TD-5：英文原文第 1768 至 1770 頁，第 2.10 至 2.14 段]

### *試驗新的安全科技*

474. 對於試驗新的安全科技，該報告指出，專營巴士營辦商正就以下各項裝置進行試驗「以確定應用上的技術可行性和成本效益」[聽證會文件 TD-5：英文原文第 1801 至 1802 頁，第 5.5 至 5.6 段]：

- 巴士監察及控制系統，當中具備定位功能、運作資料監察功能，以及採用地理圍欄科技的可變限速功能；
- 碰撞警報裝置及保持行車線裝置；以及
- 監察司機裝置。

475. 該報告指出，工作小組認為應該優先研發和試驗巴士的監察及控制系統，而不是「催促安裝」專營巴士上的車速顯示器。

### *巴士監察及控制系統*

476. 對於巴士監察及控制系統，該報告載述[聽證會文件 TD-5：英文原文第 1770 頁，第 2.15 段]：

「……工作小組曾研究是否可以兼用車速限制器和全球定位系統／地理圍欄科技，以便按照道路上或預定界限內當時的車速限制設定可變限速功能，令市區內或快速公路上的最高車速分別自動限於每小時 50 公里或每小時 70 公里。」

477. 該報告指出，有關系統的運作涉及通過全球定位系統追蹤車輛的實時位置，並「與數碼地圖互動，以識別車輛所在道路上當時的車速限制」；如果車輛超速，「有關機制便會通過減少引擎的燃油供應和啟動變速減速器等方法，自動將車速減低至設定車速限制內」。

#### *碰撞警報裝置及保持行車線裝置*

478. 該報告前文指出，即使有些專營巴士營辦商質疑碰撞警報裝置及偏離行車線預警安全裝置的成效，但城巴和新巴均同意於 2018 年年底或之前，在旗下 5 輛專營巴士試驗兩項裝置，而九巴、龍運和嶼巴亦同意於 2018 年年底或之前，試驗從不同供應商取得的相類裝置。工作小組的結論是，採用緊急剎車輔助系統的碰撞警報裝置不適用於香港。[聽證會文件 TD-5：英文原文第 1773 至 1776 頁，第 2.23 至 2.28 段]

#### *偵測司機睡意的裝置*

479. 該報告前文亦指出，九巴和龍運於 2018 年 6 月底在旗下 4 輛專營巴士上，試用偵測車長睡意的安全裝置，而城巴、新巴和嶼巴亦會於 2018 年年底或之前，試驗由不同供應商提供的相類裝置。[聽證會文件 TD-5：英文原文第 1776 至 1777 頁，第 2.29 至 2.30 段]

#### *其他科技裝置*

##### *(i) 車速顯示器*

480. 車速顯示器會在設於乘客車廂的屏幕上顯示巴士的實時車速。公共小型巴士已加設這項裝置。該報告指出，專營巴士營辦商對於在專營巴士安裝車速顯示器「有所保留」，並鄭重提醒工作小組這項裝置可能「引發

車長與乘客進一步磨擦」。儘管如此，該報告載述，「需要蒐集市民和各職工會的意見」。專營巴士營辦商會諮詢各職工會。工作小組認為，應視乎「職工的意見或回應」，考慮是否規定專營巴士安裝車速顯示器。[聽證會文件 TD-5：英文原文第 18 至 19 頁，第 2.34 至 2.36 段]

(ii) 黑盒

481. 2018 年 8 月，運輸署發布「電子數據記錄儀最低基本要求」的更新本，以取代日期為 2003 年 10 月的相類文件所載的最低要求。[聽證會文件 TD-5：英文原文第 1773 及 1807 頁，第 2.22 段]除 2003 年的要求外，有關裝置還須記錄和儲存以下資料：

- 啟動剎車掣
- 後門狀態
- 全球定位系統同步
- 啟動按鈴

而且，有關裝置須以無線方式傳送所有資料到後端伺服器。偵測減速的臨界值亦由 0.2G 改為 0.4G。

482. 該報告指出，自 2018 年 5 月起，九巴和龍運委託富豪巴士在 1 輛巴士上進行試驗，「使用全球定位系統科技以測試二段限速功能」，而城巴和新巴正在研發第二代實時系統，以在「指定關鍵路段提供超速警報」。[聽證會文件 TD-5：英文原文第 1772 頁，第 2.20 段]

483. 該報告指出，所有專營巴士營辦商均同意分兩個階段進行試驗。第一階段的試驗由 2018 年年底或之前展開，以確定有關系統能否偵測超速情況，並向車長提供實時警報。如第一階段成功，則於 2019 年展開第二階段，在專營巴士上試驗加強限速功能。

*(iii) 數碼車速限制地圖*

484. 該報告指示，「以電腦可讀格式繪製車速限制數據圖像並非嶄新技術」，並提到運輸署已於 2010 年 11 月 22 日推出有關數據供市民購買，以及已就此事書面通知九巴和新巴。其後，自 2018 年 1 月 18 日起，有關數據可供市民免費下載。最後，運輸署於 2018 年 6 月 7 日就數據可供下載的程序致函通知所有專營巴士營辦商。[聽證會文件 TD-5：英文原文第 1771 頁，第 2.18 段]

485. 運輸署的陳英傑先生確認，委員會秘書處於 2018 年 6 月 1 日發電郵通知運輸署，委員會從城巴和新巴所接獲的證供表示「佢哋冇全套嘅電子數據係顯示晒香港所有道路……法定時速限制」，並要求運輸署向委員會提供「一啲電子地圖係顯示香港所有道路嗰個法定時速限制嘅」。陳英傑先生表示，從委員會函件所載的資料，他假設城巴不知道數碼地圖已經存在。為此，他說「所以點解我哋寫信畀佢哋，提醒佢哋有關嘅數據其實已經存在」。委員會的函件和運輸署致專營巴士營辦商的函件，兩者互有關連。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 135 至 138 頁，中文本第 51 至 52 頁]

486. 陳英傑先生被問及，為何運輸署在發生大埔公路巴士意外之後而非之前才考慮工作小組報告所載有關加強巴士安全的多項可行措施；他同意區議會、立法會和媒體對這宗意外所作的討論推動了運輸署研究有關範疇。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 141 頁，中文本第 53 頁]他說，運輸署所作的研究，大部分於 2018 年 2 月即大埔意外發生後進行。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 125 頁，中文本第 47 頁]

*車長訓練*

487. 工作小組報告整個第 4 章專為探討專營巴士車長的訓練事宜。2018 年 8 月，在該報告發表之前，運輸署發布了《專營巴士車長訓練綱領實務

守則》[聽證會文件 TD-5：英文原文第 1813 至 1816 頁]。實務守則載明，其目的是「為整個專營巴士行業訂立一套標準做法……，包括課程單元的基本要求、課程長度和內容比重，讓個別專營巴士公司可據此進行內部監察和審查工作」。[聽證會文件 TD-5：英文原文第 1813 頁，第 1 至 2 段]不過，實務守則載明，專營巴士公司「各自在不同的營運環境下經營不同的巴士網絡」，須由個別專營巴士公司「根據共同標準，設計切合其營運需要的訓練計劃」。

488. 實務守則載明，專營巴士營辦商需就遵守實務守則的情況進行內部監察，而運輸署亦需監察這些內部監察工作。就此，實務守則載述[聽證會文件 TD-5：英文原文第 1816 頁，第 7 至 8 段]：

「7. 為確保車長獲得足夠和合適的培訓，專營巴士營辦商應設立內部監察及審查機制，以達致下列目的：

- (a) 監察遵守本實務守則的情況；
- (b) 就訓練車長的制度，訂定成效指標(例如涉及意外的比率、針對駕駛技巧和表現的投訴等)；以及
- (c) 因應(b)項得出的結果，檢討並決定合適的行動或措施。

8. 專營巴士營辦商的管理層應就上文第 7 段所述事宜得出的結果，定期(最少每半年一次)向其董事局提交周期報告。」

489. 對於周期報告，該報告載述[聽證會文件 TD-5：英文原文第 1798 至 1799 頁，第 4.27 段]：

「……專營巴士營辦商將須向運輸署提交其為董事局擬備的周期報告……運輸署會研究這些報告，並根據營辦商建議的主要指標，評估其內部監察及審查機制的成效。運輸署會與營辦商共同採取跟進行動，以確保營辦商已設立有效的監察及審查機制，並按規定根據實務守則所訂的架構去設計及推行培訓計劃。」



490. 對於訂定主要的服務表現指標，署長表示[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 30 頁，中文本第 12 頁]：

「就發展一啲主要嘅表現指標係可以監察到巴士公司嘅表現，即係就住現有車長嘅培訓同埋一啲嘅溫習課程、一啲跟進課程，呢啲就可以有效係矯正一啲犯下駕駛錯誤車長嘅表現或者係行為嘅。而<我地亦觀察到，>巴士公司表示佢就會係為現有嘅車長提供實地嘅駕駛訓練，但係呢一類<為現職車長提供>嘅培訓<其實達唔到我地期望嘅程度>。」

491. 對於運輸署在這方面的期望，署長表示[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 30 至 31 頁，中文本第 12 頁]：

「而我哋係希望專營巴士公司，……<啱呢啲方面發展主要嘅表現指標>佢哋就可以更加有效地進行內部嘅監核。」

492. 對於專營巴士營辦商董事局向運輸署提交的半年周期報告，署長表示[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 31 頁，中文本第 12 頁]：

「……而呢啲報告亦都係要提供畀運輸署，令到我哋可以定期去監察，同埋啱我哋同佢哋嘅管理層會面嘅時候，亦都可以定期檢討嘅。」

493. 對於運輸署需要持續檢討培訓事宜，該報告載述[聽證會文件 TD-5：英文原文第 1799 頁，第 4.28 段]：

「……由於車長的培訓需求會隨時間改變，運輸署會密切留意是否需與專營巴士營辦商檢討實務守則，力求定出最佳的業內標準做法，以應付不斷改變的營運需要。」

494. 就此，署長在作供時的開場發言表示，工作小組會繼續相關工作，定期召開會議商議各項事宜，包括「檢視業內嘅一啲嘅做法<關於車長訓練架構的實務守則>」。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 8 頁，中文本第 4 頁]

495. 對於 Mike Weston 先生的建議，即運輸署考慮撥款予專營巴士營辦商以用作「車長嘅訓練，目標就係要加強安全」，陳英傑先生表示，與倫敦運輸局相比，香港的情況是[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 169 頁，中文本第 64 頁]：

「……巴士公司就要負責營運巴士嘅所有成本，所有開支，咁我哋相信<營運、>……器材、巴士，都係由巴士公司去提供，咁佢哋應該繼續。」

儘管如此，陳英傑先生續說，「但係對一啲個別嘅項目，我哋都係持開放嘅態度，可以係討論嘅，如果巴士公司認為有需要嘅話」。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 170 頁，中文本第 64 頁]

### 安全帶

496. 對於為乘客座椅安裝安全帶，該報告載述[聽證會文件 TD-5：英文原文第 1802 頁，第 5.7 至 5.8 段]：

「由 2018 年 7 月起購置的*所有新巴士*，其乘客座椅將會全部安裝**安全帶**。

至於*現有巴士*，會視乎技術、營運和財政可行性方面的進一步評估，考慮為編配行走**特定路線**(即途經快速公路及較少停站的長途路線)的巴士的**所有上層座椅加裝安全帶**。」[下劃線為本文所加]

### 海外司法管轄區

497. 該報告載述，工作小組已檢視「海外在巴士上安裝及佩戴安全帶的現行做法或規定」。該報告附件 IV 載明，這些司法管轄區為美國、英國、荷蘭、維多利亞省、新西蘭、加拿大和新加坡。至於檢視結果，該報告載述[聽證會文件 TD-5：英文原文第 1788 頁，第 3.11 段]：

「……關於市區巴士或准設企位的巴士，*至今所檢視的海外司法管轄區當中*，無一在法例上規定乘客座椅必須裝設安全帶。這些管轄區的運輸當局認為，市區巴士通常行走時間和車程皆短的短途線，車速中等，無需規定這些巴士的乘客座椅安裝安全帶。」[斜體為本文所加]

### 為新購置專營巴士安裝安全帶

498. 儘管得出上述結果，該報告載述，所有專營巴士營辦商均同意工作小組的建議，即日後由 2018 年 7 月起購置的新巴士，全部座椅均應安裝安全帶。[聽證會文件 TD-5：英文原文第 1784 頁，第 3.4 段]

499. 署長在作供時憶述，在運輸署擬備並向立法會交通事務委員會提交日期為 2006 年 10 月的文件中提及，對相同的 7 個司法管轄區進行檢討後得出一樣的結果，即檢討所涵蓋的管轄區當中無一規定市區巴士或設有企位的巴士須為乘客座椅安裝安全帶，而運輸署當時表示「我們認為不宜強制專營巴士安裝安全帶和強制巴士乘客佩戴安全帶」。對此，署長認同「似乎海外對於市內巴士乘客座位安裝安全帶嘅立場大致一樣」。[聽證會文件 SEC-1：英文原文第 266 至 273 頁，第 19 至 20 段；第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 37 頁，中文本第 15 頁]

500. 對於期間有何改變以致工作小組現在得出不同的建議，署長表示[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 37 頁，中文本第 15 頁]：

「喺立法會嘅交通事務委員會都提過數個建議<經過多次討論>，我哋需要好小心咁樣考慮呢一個課題。我哋由唔同嘅角度考慮，首先係道路交通同埋公共交通安全；第二，我哋亦都考慮到技術可行性，對於新採購巴士同埋現有巴士安裝乘客嘅安全帶；第三，我哋亦都考慮如果額外加裝所有乘客座位嘅安全帶嘅話，額外嘅成本。」

### 成本效益分析

501. 對於曾否就專營巴士上不佩戴安全帶的在座乘客的傷亡率、安裝成本，以及這些乘客如有佩戴安全帶的得益作出成本效益分析，邱國鼎先生表示「冇一個特定嘅<關於公共交通嘅>研究」。然而，他確認知悉警方就此事所收集的數據，儘管他說這些數據未曾在任何成本效益分析中予以考慮。[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 42 至 47 頁，

中文本第 17 至 19 頁；聽證會文件 MISC-1-(C)：英文原文第 124-562 頁，第 4 段]

502. 總警司簡迪文先生於 2018 年 10 月 3 日致函告知委員會關於「巴士上不佩戴安全帶的在座乘客的受傷數字」，所提供的資料包括[聽證會文件 MISC-1 (C)：英文原文第 124-562 頁]：

<u>年份</u>	<u>佩戴安全帶</u>	<u>不佩戴安全帶</u>
2015	211	364
2016	252	365
2017	323	515

警方沒有作出分析，以決定受傷時不佩戴安全帶的乘客會否因為佩戴安全帶而有得益。

503. 邱國鼎先生知悉，為新的專營巴士安裝安全帶的估計成本為每輛 5,000 英鎊，而一輛新雙層巴士的費用「超過 300 萬港元」，並表示[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 42 頁，中文本第 17 頁]：

「喺比較總成本嚟講，係比較低嘅，但係呢一個帶嚟<幾好>嘅保護，呢個得益係好高嘅。」

504. 署長在作供時表示[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 50 頁，中文本第 20 至 21 頁]：

「……喺我哋工作小組嘅討論嘅當中，運輸署嘅睇法就係安全帶就會提供畀乘客一個多一層嘅保障，但係可唔可以達到我哋希望達到嘅成果呢？亦都係視乎嗰個乘客會唔會使用或者佩戴呢啲安全帶，同埋佢哋係咪真係坐喺度嘅乘客。」

我哋知道有限制嘅，對於呢一個安全帶有冇效，但係即使係咁，*我哋認為係新巴士嚟講，如果我哋要配有安全帶，其實都幾有成本效益，亦都會係提供額外嘅保障，而嗰個額外嘅成本亦都唔係咁大嘅。*」[斜體為本文所加]

為現有專營巴士安裝安全帶

505. 對於為現有專營巴士安裝安全帶，該報告載述[聽證會文件 TD-5：英文原文第 1786 頁，第 3.7 段]：

「巴士製造商認為，為 2013 年以後生產的亞歷山大丹尼士 Enviro 500、富豪 B90L 歐盟五期及猛獅 A95 型號的現役巴士的**上層座椅全部**加裝安全帶在技術上可行；然而，為**下層**座椅加裝安全帶在技術上即使不是不可行，也是不切實際……」

506. 該報告續說，為現有巴士加裝安全帶會有其他後果，巴士重量會增加 300 至 400 千克，載客量將減少 7 至 8 名乘客。此外，巴士製造商估計，為 1 輛巴士加裝安全帶需時 1 星期及需用 3 至 4 名技術人員；巴士製造商不能提供所需人手。該報告載述，根據粗略估計，如由巴士營辦商重新調配現有的車輛維修保養隊伍為 3 300 輛專營巴士進行加裝工程，將需 6 至 12 年才能完成。按照每輛專營巴士需要 3 名技術人員和 1 星期加裝安全帶作出估算，得出上述估計年數；如調配更多人手，估計年數便可縮短。該報告在註腳載述，「粗略估計 1 輛巴士的加裝成本約為 20 萬港元(不包括人力及相關間接成本)」。[聽證會文件 TD-5：英文原文第 1786 至 1787 頁，第 3.8 段]

507. 陳英傑先生確認，為 3 300 輛專營巴士進行加裝工程，每輛估計需用 20 萬元，當中不包括加裝期間巴士不能使用所引致的損失。署長作供時確認，加裝工程的整體成本為 4 億港元，而該成本會因 3 個可變因素而提高。[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 57 至 62 頁，中文本第 24 至 26 頁]

508. 該報告載述，對於為某些型號的現役巴士加裝安全帶的建議，專營巴士營辦商意見不一。[聽證會文件 TD-5：英文原文第 1787 頁，第 3.10 段]該報告亦載述：

「視乎巴士製造商的建議，九巴和龍運會為上層乘客座椅加裝安全帶，或調配乘客座椅全部設有安全帶的巴士，行走服務長途乘客或途經快速公路而中途站上落客不多的路線。」

509. 此外，該報告載述：

「其餘 3 個營辦商(城巴、新巴及嶼巴)不支持加裝工程，因為預期使用率不高及加裝費用不菲；他們表示，*擬議加裝工程如要進行，則要求政府提供資助。*」[斜體為本文所加]

510. 最後，該報告總結[聽證會文件 TD-5：英文原文第 1788 至 1789 頁，第 3.13 段]：

「工作小組認為，強制規定所有巴士為全部乘客座椅加裝安全帶的做法，理據不足。然而，工作小組認同，對於沒有遮擋的座椅及不設企位的巴士車廂，安全帶可為在座乘客提供額外保護。因此，工作小組**建議**，而所有專營巴士營辦商均**同意**，為現有巴士加裝安全帶的可行性須作進一步研究。*視乎技術、營運和財政可行性方面的進一步評估，為編配行走途經快速公路及較少停站的長途路線的巴士的所有上層座椅加裝安全帶。*」[斜體為本文所加]

### 諮詢

511. 該報告在結論中載述，就安裝安全帶所得結果及所作建議已於 2018 年 7 月 17 日呈交道路安全研究委員會。該委員會表示[聽證會文件 TD-5：英文原文第 1803 頁，第 5.10 段]：

「……歡迎為巴士安裝安全帶的建議，並支持獲推薦的安裝計劃，即視乎技術、營運和財政可行性方面的進一步評估，為編配行走途經快速公路及較少中途站的長途路線的巴士的全部上層座椅加裝安全帶。」

該報告亦載述，立法會交通事務委員會和交諮會分別於 2018 年 7 月 25 日及 30 日獲告知上述結果和建議，兩個委員會均表示「大致歡迎並支持工作小組的建議」。

## 城巴／新巴

512. 一如城巴和新巴向工作小組提交的意見書所述，代表該兩個營辦商向委員會提交最後一輪書面意見的鄭偉波先生表示，行政長官在《施政報告》稱當局已預留 5 億元「以資助專營巴士營辦商在巴士上加裝電子穩定控制系統、自動車速限制系統及上層座椅安全帶」，並指資助只彌補 80% 加裝費用。他說，「城巴和新巴無法在不大幅提高票價的情況下應付因落實建議所引致的龐大財政承擔」。其後，他說「我們認為，政府有必要提供全額財政支援」，否則應該優先安裝電子穩定控制系統和自動車速限制系統的裝置，「因為這些安全裝置可以避免意外發生」。他說，為上層座椅加裝安全帶反而屬次優先，「因為如不立法強制乘客佩戴安全帶，加裝安全帶的成本效益或會成疑」。[聽證會文件 CTB-1：英文原文第 103 至 104 頁]

513. John Stanley 教授和 Mike Weston 先生的報告及 John Stanley 教授的證供均指出，規定專營巴士加裝安全裝置之前需作嚴謹的成本效益分析。就此，署長表示[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 73 頁，中文本第 29 頁]：

「我哋同意喺車上面係安裝一啲嘅裝置去改善巴士安全標準，我哋係需要有一個嚴謹同埋小心嘅評估。」

514. 署長續說[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 73 至 74 頁，中文本第 29 頁]：

「我哋而家喺現有嘅巴士加裝安全帶似乎唔係咁符合成本效益，……<而當中涉及>幾個因素<。好明顯，>……係咪應該成為一個強制或者法定嘅規定，……現有巴士……<全部>加裝安全帶，<特別係上層，>我哋真係要去認真去睇下，……睇番成本同埋個技術嘅可行性<，可以達到幾大嘅邊際效益>。」

515. 署長總結說[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 74 頁，中文本第 29 頁]：

「<我同意>專家……<所講>，如果我哋係需要有個強制嘅要求嘅時候，我哋需要係進行一啲成本效益分析或者係做一啲影響嘅研究。」

### 專營巴士上現有安全帶的使用率

516. 署長表示，她未就專營巴士上現有安全帶的使用率取得任何數據，但有此打算。對於專營巴士營辦商表示使用率低的眼光，她說[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 75 至 76 頁，中文本第 30 頁]：

「……而家個使用率係相對較低嘅，但係呢個唔係一個我哋應該關鍵去考慮嘅因素，當我哋去考慮就應唔應該喺現有巴士裏面加裝安全帶，因為我哋認為無論係政府或者係巴士公司，應該係做多啲乘客教育嘅。」

### 使用安全帶的強制規定

517. 關於能否訂立強制規定，即如專營巴士上設有安全帶則乘客必須佩戴，署長表示她「同意專家嘅觀察，我哋係需要有一個嚴謹嘅規管影響研究，先至決定係咪應該係<立法或>強制啲人一定係要配戴安全帶」。[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 77 頁，中文本第 31 頁]。她說「我唔會低估<實際營運涉及>嗰個<問題或者>困難嘅，……特別係話點樣去執法」。[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 78 頁，中文本第 31 頁]

### 行政長官《施政報告》

518. 行政長官於 2018 年 10 月 12 日發表《施政報告》，當中公布：

#### 「改善公共交通服務」

264. 為進一步加強專營巴士的營運安全，政府會資助專營巴士營辦商在現有巴士上加裝合適安全裝置，包括在部分巴士的上層所有座位加裝安全帶。」

519. 在其後的新聞發布會上，運房局局長陳帆公布：



「為進一步提升專營巴士的營運安全，我們建議預留約五億元資助專營巴士營辦商在合適的現有巴士上加裝三項安全裝置，包括電子穩定控制系統、具減速功能的車速限制器、以及在途經快速公路並較少停站的長途巴士路線的巴士所有上層座椅加裝安全帶。我們建議資助專營巴士營辦商八成相關費用，其餘費用和日後的維修保養則由專營巴士營辦商承擔。」

520. 署長於 2018 年 10 月 16 日作供時，解釋她較早前就現役巴士加裝安全帶所給供詞中的陳述[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 130 頁，中文本第 50 頁]：

「……係安全帶嘅裝置我哋特別係需要係仔細嘅評估，無論係技術、財務同理營運嘅可行性方面都要評估嘅。」

521. 署長接着確定，評估需要「成本效益分析，……技術、營運同理財務嘅可行性」。[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 131 頁，中文本第 50 頁]就此，她同意施政報告所載的，與運房局局長所述的，均為有條件的說明，要視乎成本效益分析的結果。她闡釋，「……政府……<嘗試>提供<及預留金錢>……作為資助」。她同意，第一步的工作是「<睇下>成本效益分析係咪……<得出正面結果>?」。[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 132 及 134 頁，中文本第 51 頁]

522. 對於就加裝安全帶進行成本效益分析，署長表示，此事會由成為常設平台的加強專營巴士安全工作小組作探討。至於工作小組的成員現時只限運輸署、巴士製造商和巴士營辦商，她表示會考慮加入道路安全議會的成員，以及精於運輸事務和運輸科技的專業人士及學者。此外，她留意到已有關於成本影響的初步回應，包括營運成本方面，並認為對識別及分析為專營巴士加裝安全帶所產來的效益，至為重要。對於是否需要委聘獨立顧問擔任有關工作，她說運輸署可「研究」此事。[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 140 至 141 頁，中文本第 53 頁]

523. Mike Weston 先生在其補充報告中，概述倫敦運輸局於 2018 年 10 月 16 日公布的巴士安全標準。一如該報告載述，管理局已委任倫敦運輸

研究實驗所「……進行大量研究，並提供適切的技術支援，以協助制訂有關建議」，而該等建議是「……按照證據主導的方法，針對每個方案的成本及效益」予以制訂。Mike Weston 先生特別指出[聽證會文件 EXP-1(A)：英文原文第 189-63 頁，第 2.2 段]：

「倫敦運輸局已採用嚴謹的方法，藉成本效益分析，評估每個潛在方案，以針對旨在減少受傷／意外的干預措施，務使所花費的每 1 英鎊都能產生最大的回報。倫敦運輸研究實驗所亦強調，考慮每個解決方案的成本，是評估的重要一環，可令成本效益分析得以進行。」

第 19 章 — 運輸署對委員會收到的書面意見和證供持續作出的回應

524. 署長在 2018 年 10 月 4 日作供時，在開場發言指出[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 6 頁，中文本第 3 頁]：

「喺我哋上一次 5 月出席聽證會之後，我哋知道委員會係邀請唔同人士提供口述證供，亦都係有唔同人士提供咗好多嘅文件嘅。」

525. 接着，她說「我只係想特別係提及幾點，就我哋相信係委員會過去表達關注嘅」，她並指出多項已作出的決定和建議採取的行動[第 19 日聽證會紀錄本：英文本第 7 至 10 頁，中文本第 3 至 5 頁]：

- 建議在運輸署內「成立一個特別嘅隊伍係實施道路安全審核」，而所需的資源已獲批准；
- 加強專營巴士安全工作小組會「繼續做佢嘅工作，就會定期開會，就係去監察有關嘅跟進工作嘅進度，同埋會檢視業內嘅一啲嘅做法，<以及巴士車長訓練實務守則>」；
- 建議「試行同埋可行性嘅研究……亦都係……同埋巴士製造商合作一齊去做嘅……係巴士監察管理系統 BMCS……有地標圍欄……時速限制等等」；以及
- 運輸署正爭取人力資源「希望我哋有一個專責小組會做，就睇下<運輸科技>點可以加快有關嘅測試<和工作>」。

526. 此外，她說運輸署在 2017 年 12 月成立了專責小組，由相關政府部門和專營巴士營辦商的代表組成，負責監察在公共交通交匯處、巴士站和總站提供公共交通輔助設施及加強有關設施的情況。

常設工作小組／巴士營辦商論壇

527. 之後，署長在作證時表示[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 82 頁，中文本第 32 頁]：

「……我哋根據經驗，同埋喺呢一個嘅檢討小組裏面嘅一啲建議，運輸署都覺得工作小組係一個好有用嘅一個制度，我哋會繼續用嗰個機制將所有相關嘅各方就係坐埋一齊，我哋就會睇下點樣用一啲係有用嘅措施嚟到去改善<專營巴士營辦商嘅>安全表現呢個問題。<我地會係個論壇度進一步做。>」

528. 署長確定工作小組會成為常設單位，與倫敦運輸局的巴士營辦商論壇相似。運輸署是在接納 Mike Weston 先生的建議後，成立常設工作小組。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 82 至 83 頁，中文本第 32 頁]

529. 關於工作小組成員限於運輸署、專營巴士營辦商和巴士製造商，陳英傑先生說[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 178 頁，中文本第 67 頁]：

「咁但係我哋可以睇下個成員嘅組成，咁然後我哋會睇下可唔可以引入一啲獨立嘅意見，咁可以為……<小組嘅運作>提供獨立嘅意見。」

530. 對於羅康錦教授建議，道路安全議會的成員可加入由工作小組改組而成的常設論壇。對於該建議陳英傑先生表示歡迎，並說「道路安全議會嘅成員都係頗為獨立嘅」。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 179 頁，中文本第 68 頁]

531. 得知運輸署內部並無專責處理巴士安全的組別，以及工作小組現由專營巴士營辦商、巴士製造商及運輸署的代表組成，城巴／新巴在其最後一輪書面意見中指出[聽證會文件 CTB -1：英文本第 106 頁，第 3 段]：

「現時的做法，是當有一項建議成熟時運輸署和巴士公司便會請工會提供意見，工作小組在推行有關建議前會因應所得意見適當地作出微調。我們認為現時的做法行之有效，無必要請工會加入工作小組。」

### 運輸署技術小組

532. 署長承認，運輸署沒有專門負責巴士安全的小組，這項責任由巴士及鐵路科、道路安全及標準研究部和車輛安全及標準部分擔，她繼而表示[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 96 頁，中文本第 37 頁]：

「<其實我哋經過呢個獨立檢討委員會<sup>47</sup>嘅程序學到好多嘢。>喺過去嗰一年左右，車輛安全及標準部，即係陳英傑先生所帶領，佢係負責去睇一啲嘢車輛保養同埋安全方面嘅一啲新技術，我哋有一個特定嘅單位同埋一啲額外嘅人手，呢個部門係負責推廣一啲新嘅技術。」

533. 其後，署長補充說[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 96 頁，中文本第 37 頁]：

「……我哋見到<要改善部門係交通科技嘅研究能力，係>有一個獨立隊伍嘅重要性同埋需要嘅，即係正如我哋喺倫敦同埋其他嘅地方嘅例子度睇到……。我哋亦都係爭取一啲人力嘅資源，包括一啲工程師、運輸主任同埋一啲機電嘅工程師，同埋我哋目標係去喺部門之內係創立一個交通嘅科技隊伍。」

534. 陳英傑先生承認，運輸署在工作小組成立並在 2018 年 3 月 13 日舉行首次會議之前已經展開的工作，是於 2018 年 2 月 10 日在大埔公路發生意外之後才進行的。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 125 頁，中文本第 47 頁]

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<sup>47</sup> 意指「香港專營巴士服務獨立檢討委員會」

## 公開意外數據

535. 對於 John Stanley 教授提出並獲 Mike Weston 先生認同的觀點，即公開專營巴士公司每年擬備的 5 年遠期計劃中巴士安全章節所載的「好有資料性」的數據，署長在回應時首先表示，現時要求巴士公司提供的資料包括巴士公司無須在年報作全面披露的材料，但她指出[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 87 頁，中文本第 34 頁]：

「……仲未係去叫巴士營辦商去分析每一條巴士路線嘅意外原因嘅……我唔係話呢樣嘢會有商業敏感性，但係我哋都要明白如果呢一個巴士安全嘅章節都要變成全面披露嘅資料嘅話，我哋都要由商業敏感性呢一個角度去考慮佢。」

536. 然而，當署長閱讀了以往的巴士安全章節後，她表示[第 20 日聽證會紀錄本：2018 年 10 月 6 日，英文本第 101 頁，中文本第 39 頁]：

「我就覺得似乎有一個好重要嘅資料係可能牽涉公司一啲嘅商業敏感資料嘅。」

537. 因此，署長總結指：

「我同意係要數據有更高透明度，尤其係同安全有關，牽涉公眾關注嘅，而家嘅方向……<同埋>我哋做法就係運輸署會<積極>同巴士公司繼續商量。」

她還建議在未來數月與巴士公司商討這個問題，但不能肯定何時會有決定。

## 低車速限制區

538. 運輸署在 2018 年 10 月 3 日的意見書附件 2 中表示，在與加強道路安全相關的車速限制方面，運輸署與時並進，緊貼國際最新發展情況。運輸署續說，「最近有些海外城市實行車速限制為每小時 20 英里(每小時 32 公里)的低車速限制區，並錄得良好安全記錄」。不過，運輸署亦指出，單單減低車速限制並不會令車輛行駛速度自動降低，而修改交通規劃和採取

交通紓緩措施更能達此目的。然後，運輸署表示，在香港行之已久的車速限制制度以每小時 50 公里為最低的車速限制，並說[聽證會文件 TD-5：英文原文第 1820 頁]：

「考慮到低車速限制區可能帶來的安全裨益，運輸署現正研究在適當修改道路規劃和採取交通紓緩措施的情況下，在香港實行低車速限制區是否可行及適用。為了確定相關的道路設計及交通紓緩措施類型，特別是低車速限制對降低車速和意外的成效和表現，我們現正考慮挑選一些人流較多的合適市區道路，在顧及對附近交通流量的影響下，試行低車速限制區，車速限制為每小時 30 公里。由於專營巴士路線可能駛經這些道路，我們正研究如何為巴士設計交通紓緩措施，以降低巴士車速，這也是試行計劃的一部分。」

539. 邱國鼎先生作供時確認，運輸署知悉英國運輸部於 2013 年 1 月公布的《設定地方車速限制指引》(*Setting Local Speed Limits*)，就決定是否適宜實行每小時 20 英里車速限制或每小時 20 英里車速限制區提供了指引。當中特別建議在車速本已較低且無須修改道路規劃以作出交通紓緩措施的區域實行每小時 20 英里車速限制；如設立每小時 20 英里的車速限制區，則須修改道路規劃。

540. 報告指出，設定每小時 20 英里車速限制只須在起始點設置車速限制標誌及至少一個重複標誌，但無須採取交通紓緩措施，並載述「僅設每小時 20 英里車速限制標誌的研究顯示，這個做法通常只令行車速度稍減。僅設置每小時 20 英里車速限制標誌的做法，最適宜用於車速本已很低的區域」。[聽證會文件 SEC-3：英文原文第 1026 頁，第 95 段]在每小時 20 英里車速限制區可採用的交通紓緩措施包括「緩衝路拱、之字路，或每隔一定距離加設重複的車速限制標誌及／或路面圓形限速標記，致使區內任何一點的 50 米範圍內均設有任何一項上述措施」。[聽證會文件 SEC-3：英文原文第 1023 至 1024 頁，第 80 段]

541. 邱先生作供時表示指[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 79 頁，中文本第 31 頁]：

「我哋而家就睇下一個研究，可唔可以引入一啲係以試行嘅形式去做一啲低車速限制區域嘅，<如果試行成功嘅話，>亦都可以考慮喺我哋而家嘅車速限制嘅架構入面加上呢個低速嘅區域嘅。」

《每小時 20 英里研究報告》(20 mph Research Study)

542. 英國運輸部曾委託有關機構評估每小時 20 英里(僅設標誌)車速限制的成效，並於 2018 年 11 月 22 日公布《每小時 20 英里研究報告》[聽證會文件 MISC-4：英文原文第 1379 至 1599 頁]。該項研究以英國 12 個個案研究對象為基礎，並參考了 2013 年公布的《設定地方車速限制指引》當中的指引。作為研究對象的區域均無採取任何實體交通紓緩措施，亦無更改街道設計。該項研究另外利用 3 個對照區域，以找出撞車事故和傷亡的背景因素；該 3 個區域具有與作為研究對象的區域類似的特點，但實行每小時 30 英里車速限制。

543. 關於每小時 20 英里車速限制的遵守情況，報告指「住宅區的 47% 駕駛者和市中心區的 65% 駕駛者(等於 2 個類別一併計算的 51%)遵守了新的每小時 20 英里車速限制，以低於每小時 20 英里的車速駕駛」。關於對車速的影響，報告指「……住宅區汽車時速中位數下降 0.7 英里，市中心區則下降 0.9 英里」。關於影響遵守情況的因素，報告指，「市民普遍認為每小時 20 英里車速限制沒有執行，超速而被發現的可能性非常小。這是作為研究對象的區域的車速不見得有較大減幅的原因之一。」

544. 關於撞車事故率和傷亡率，報告總結指，「短期內，並無足夠證據確定在住宅區實行每小時 20 英里車速限制之後，撞車事故和傷亡的情況有顯著改變」。報告還指出，實行每小時 20 英里車速限制的區域和對照區域的統計數據均顯示車速有所降低，未來 2 年進行的數據分析不一定會發現顯著改變。



## 第 20 章 — 專營巴士營運商對委員會收到的書面意見及證供作出的回應

### 九巴

545. 九巴李澤昌先生代表九巴作供時的總結發言指：[第 15 日聽證會紀錄本：2018 年 9 月 12 日，英文本第 113-114 頁，中文本第 47 頁]

「喺……聽證會裏面，呢件過程，……九巴一定要與時並進，要喺呢方面做多啲工夫去提升我哋嘅服務。例如喺我哋個科技方面係要做得全面，同埋……準確性，……安全嘅系統係要真係與時並進……。」

至於喺車長方面，……喺個管理同埋喺……培訓方面係要做得更加要好，喺佢個設施，……休息室同埋……洗手間嘅服務，其實我哋係未停過。」

### 科技應用

546. 很明顯地，從委員會收集到的證供來看，在大埔公路 2018 年 2 月 10 日發生意外前，專營巴士營辦商只是相當有限地使用可應用的科技來加強專營巴士的安全。

### 數碼車速限制地圖

547. 正如前述，九巴作供時承認他們並不知道運輸署有免費提供香港道路的數碼車速限制地圖，直至委員會收到的證供促使後，運輸署才於 2018 年 6 月 7 日通知他們這件事。信件是因應城巴作供時表示他們無法取得香港道路的數碼車速限制地圖而發出。顯然地，香港道路的數碼車速限制地圖是應用專營巴士上現存黑盒的功能的關鍵，使它能夠在不同車速限制區域提供超速警報及記錄超速的情況。

548. 正如九巴在作供時通知委員會，九巴已即時安排 Openmatics 於 2018 年 7 月 31 日為配對系統進行測試，值得稱許。隨後，九巴在他們 2018 年 12 月 10 日的書面意見指出，「...在本月後期，我們將會推出警報

系統，亦能在巴士車長於車速限制為每小時 50 公里的地點超速時，發出警報。」[聽證會文件 KMB-1(B)，英文本第 580 頁]

### *超速駕駛：異常報告*

549. 同樣地，雖然九巴的代表作供時表示他們需要最少 10 天才可以製成超速駕駛的異常報告，委員會在該信得悉：

「最近，已將由我們的系統製成超速異常報告的時間縮短至 4 天。所需的時間將會在本月內進一步縮減至 1 天。希望這樣能儘早識別曾超速駕駛的巴士車長，以便杜絕他們的超速行為，減低交通意外的風險。」[聽證會文件 KMB-1(B)，英文本第 579 頁]

550. 正如前述，2018 年 8 月 1 日九巴已調整有關製成超速異常報告的臨界值，當中在車速限制為每小時 50 公里的道路，達到每小時 56 至 65 公里車速範圍的時間臨界值由 60 秒改為 30 秒，以及達到每小時 66 至 75 公里車速範圍的時間臨界值由 30 秒改為 15 秒。同樣地，在當日有關製成於在車速限制為每小時 70 公里的道路的超速異常報告，達到每小時 76 至 79 公里車速範圍的時間臨界值亦由 60 秒改為 30 秒。

551. 九巴於 2018 年 12 月 10 日致函委員會，指出：

「我們的統計顯示在 2018 年 11 月，超速事故的數目較之前幾個月有明顯的減少。」[聽證會文件 KMB-1(B)，英文本第 579 頁]

552. 九巴在其 2018 年 12 月 10 日的信件中確認會持續作出努力：

「我們會繼續努力加強我們對巴士安全的知識。我們的董事總經理及車務總監曾前往新加坡與當地兩間專營巴士營辦商會面並交流經驗。我們的主席梁乃鵬博士亦將於 2019 年 1 月率領我們與新加坡陸路交通管理局及前述兩間巴士營辦商會面。我們亦會安排到世界各地進行更多考察，擴闊我們有關安全的知識。」[聽證會文件 KMB-1(B)，英文本第 580 頁]

### 數碼車速限制地圖

553. 城巴在 2018 年 5 月 30 日作供時，表示未有留意到運輸署有提供免費數碼車速限制地圖。當時，他們監察專營巴士超速的臨界點是以每小時 75 公里或以上的車速連續行駛 10 秒或以上。另外，在他們選定的 25 條車速限制為每小時 50 公里的路段，把監察超速的臨界值定為以超過每小時 55 公里車速連續行駛了 10 秒或以上。當被問及為何未有將城巴及新巴行經所有車速限制為每小時 50 公里的路段納入他們的監察系統時，鍾澤文先生回覆說[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 24 頁，中文本第 12 頁]：

「理論上係可以嘅，不過嗰個要花嘅工夫就會好長，因為我哋要分番我哋所有唔同路線，或者香港嘅道路係全部要喺嗰個電子地圖裏面就分番邊啲係 50 公里，邊啲係 70 公里，……呢個比較花嗰個工夫。」

554. 城巴就最終得知的資料作出跟進，值得稱許。城巴在 2018 年 10 月 15 日的書面意見指出：[聽證會文件 CTB-1：英文本第 98 頁]

「我們公司以往只監察 25 條車速限制為每小時 50 公里的選定路段及所有車速限制為每小時 70 公里或以上的路段。由 2018 年 9 月 18 日起，我們開始應用運輸署提供的『速度限制』資料來監察我們的巴士在所有路段的車速。製成的超速事件報告的標準維持不變...」

555. 另外，城巴表示他們已推出「實時聲效警報」系統，當車輛在車速限制分別為每小時 50 公里或 70 公里的路段上以超過每小時 53 或 73 公里的車速行駛，便對有關巴士車長發出聲效警報。此外，城巴說他們正研究「在遇有急剎或突然加速的情況下，向巴士車長發出實時警報」的可行性，並自動製成事件報告，以「辨識經常顛簸駕駛的巴士車長」。

## 第 21 章 — 新加坡陸路交通管理局

556. 新加坡陸路交通管理局(「管理局」)(Land Transport Authority of Singapore)提供非常有用的資料，在 2018 年 10 月 17 日的覆函中回應委員會的查詢，說明最高載客量為 15 人的「小型巴士」須安裝安全帶，並解釋在何種情況下決定不須規定當地大型專營巴士為乘客座椅安裝安全帶[聽證會文件 EXP-1(C)：英文原文第 249-5 頁，第 4 至 5 段]：

「與小型巴士相比，大型巴士在設計、大小及體型方面更能吸收撞擊力。大型巴士上的乘客所感受到的撞擊力很可能低於小型巴士的乘客。因此，發生碰撞時，小型巴士的乘客所受傷勢一般較大型巴士的乘客嚴重。」

第 4 段所述的考慮因素，加上大型巴士的現行安全規定，例如強制定期驗車、嚴謹車速限制和必須安裝車速限制器……不能成為規定較大型巴士安裝安全帶的誘因或有力理由。」

557. 關於規定較大型專營巴士安裝安全帶所涉及的費用，管理局續說[聽證會文件 EXP-1(C)：英文原文第 249-6 頁，第 5 段]：

「根據以往對小型巴士實施安全帶裝設規定的經驗，我們須進行審慎研究，因為有關規定會對巴士營辦商(例如所招致的成本、對業務營運的影響等)和其他持份者(例如車身製造商的物流籌備、巴士乘客承擔的額外車費、政府提供的財政資助等)造成重大影響。」

558. 關於為小型巴士加裝安全帶，管理局表示已委聘工場負責相關工作，亦已委聘認可車輛檢查中心確保合規。此外，當地政府為小型巴士營辦商提供財政資助，以協助支付符合有關規定或購置新車以作更換的費用。

### 培訓

559. 管理局解釋，新加坡所有新聘車長均須修讀由 2016 年 10 月設立的新加坡巴士學院(Singapore Bus Academy)所開辦的《職業執照強化培訓課程》(Enhanced Vocational Licence Training Programme)，該課程為期 5

天，由 6 個單元組成，導師來自該學院、全國交通工會聯合會(National Transport Workers' Union)和兩個巴士營辦商。其中，關於服務業語言能力的單元旨在教導車長有關應付難纏乘客的技巧。[聽證會文件 EXP-1：英文原文第 249-11 頁]

560. 在新加坡巴士學院完成基礎訓練後，新車長獲調派負責乘客收費服務前，須接受由僱主／巴士營辦商所提供「平均為期 5 至 6 星期的訓練」。全職和兼職車長均獲提供複修訓練課程，而屢犯安全規定的車長則須參加矯正訓練。[聽證會文件 EXP-1(C)：英文原文第 249-11 至 249-12 頁]

### 辱罵車長

561 管理局表示，車長在執行職務時，受到《保障免受騷擾法令》(第 256A 章)(Protection from Harassment Act, Cap 256A)保護，免受辱罵行為所對待。該法令第 6(1)條訂明，任何人不得以任何方式，就諸如公共服務人員的受害人所執行的職務，「(b)對……公共服務人員作出任何……帶恐嚇、辱罵或侮辱成分的言行」。《2014 年保障免受騷擾(公共服務人員)令》(Protection from Harassment (Public Service Worker Order) 2014)第 8 條界定「公共服務人員」一詞，當中涵蓋受聘於巴士服務持牌人任職巴士司機的僱員。一經定罪，被告可處監禁不超過 12 個月，或處罰款不超過 5,000 元，或兩者兼施。[聽證會文件 EXP-1(C)：英文原文第 249-13 頁]

### 科技裝置

562. 管理局表示，新加坡所有專營巴士均已裝設電子穩定控制系統、牽引控制系統及車速限制器，把最高車速限於每小時 60 公里。另外，當地約 15%的巴士亦已安裝防止碰撞裝置。自 2018 年 1 月起付運的專營巴士會加裝供應商 Guardian 的防止疲勞駕駛系統。約 40%的巴士已裝設車載智能通訊系統，讓巴士營辦商監察駕駛行為。[聽證會文件 EXP-1(C)：英文原文第 249-3 至 249-4 頁]

## 巴士專線

563. 管理局表示，巴士專線於 1974 年首次實施，至 2018 年年底或之前共有 211 公里的路段專供巴士行走。物色適合用作巴士專線的路段時，管理局首先會確定「在相關巴士專線生效時間內有大量巴士往來的地點」，然後考慮推行巴士專線對一般交通情況的影響，以及「巴士營辦商、居民和區內商戶等持份者的關注，他們的活動可能會因擬設巴士專線而受影響」。最後，會視乎成本效益分析的結果制訂建議。[聽證會文件 EXP-1(C)：英文原文第 249-7 至 249-8 頁，第 1 至 4 段]

## 執法

564. 交通督導員主要負責有關巴士專線的執法工作，方法是拍攝違規的情況。此外，巴士營辦商會就違規事項提供旗下巴士的攝錄機所錄得的片段，以協助管理局執法。司機只須「在目擊違規事項後……按下按鈕，啟動錄影功能」。管理局強調，巴士營辦商「無須負責有關巴士專線的執法工作」。[聽證會文件 EXP-1(C)：英文原文第 249-9 頁，第 8 至 9 段]

## 巴士優先格

565. 巴士優先格計劃自 2008 年起推行，規定其他車輛須讓示意離開巴士站的巴士優先行駛。路上劃有三角讓路標記，以警告駕駛者必須遵守規定，在上述情況下讓巴士優先行駛。新加坡共有 347 個這類巴士站，約佔當地巴士站的 7%。這項計劃不在「高速公路、單線道路或看不清交通情況的地點」實施，其交通影響「相對而言少於巴士專線」，因為駕駛者有機會轉線或減速，在車流中形成空位讓巴士駛離巴士站。[聽證會文件 EXP-1(C)：英文原文第 249-9 至 249-10 頁，第 10 至 13 段]

## 服務質素標準 — 罰則

566. 新加坡採用巴士路線外包模式 (Bus Contracting Model)，根據巴士服務可靠程度綱領和首尾班次準時程度來衡量巴士服務是否可靠。先前由

公共交通理事會(Public Transport Council)運作的系統中，只有 QoS 1.1 及 QoS 2.1 兩項服務質素標準(Quality of Service standard, QoS)予以保留。根據 QoS 1.1 標準，巴士營辦商每月提供的服務須達固定班次訂明里數的 96%，而 QoS 2.1 標準則規定，巴士營辦商每月每 10 萬公里的意外宗數必須少於 0.75 宗；相關罰則分別為每條違規路線每月罰款 2 萬新加坡元，每個不達標的事項每月罰款 10 萬新加坡元。陸路交通管理局表示[聽證會文件 EXP-1：英文原文第 249-15 頁，第 4 段]：

「自從轉用巴士路線外包模式，兩年來沒有公共交通營辦商在意外率方面達不到服務質素標準。」

### 城巴／新巴

567. 城巴／新巴在最後一輪的書面意見中，反對任何「施加與安全表現掛鈎的罰款的建議」。他們指出《條例》第 12(1)條的條文已訂明，持有專營權的專營公司須「維持達致署長滿意的程度的適當而有效率的公共巴士服務」；這項規定連同該條例第 22(2)條訂明的罰則，已經足以確保營辦商提供安全的巴士服務。

## 第 22 章 — 專營權競投安排

### 競爭事務委員會

568. 香港競爭事務委員會(「競委會」)是根據《競爭條例》(第 619 章)成立的獨立法定機構；競委會在 2018 年 10 月 31 日向委員會提交的最後一輪書面意見中，「就競爭如何能與規管共同在提升專營巴士服務的安全及其他方面發揮作用」提出意見。[聽證會文件 MISC-3：英文原文第 1374 頁]

569. 競委會知悉委員會已聽取有關證供，即Mike Weston先生在報告所指「香港專營巴士網絡自 1995 年起沒有引入任何競爭」<sup>48</sup>。就此，競委會指出[聽證會文件MISC-3：英文原文第 1376 頁]：

「競委會認為，如果缺乏或難以實行競爭程序，則對現有營辦商有利，而消費者無法享有競爭帶來的好處。實際有何好處取決於競爭程序所用的準則，這些好處可包括更低票價、更好服務、更多創意、更加安全，甚至全部兼備。

如果實行競爭程序，尤其當維持和提升安全的制度納入承辦條件時，營辦商便會承受競爭壓力而提升質量和安全，否則面臨被新營辦商或尋求擴張的現有巴士服務或其他交通工具奪去專營權的風險。這種競爭或會降低事故發生率，促進研發和採用提升安全的新技術或新程序。」

570. 競委會在書面意見的註腳引述題為「澳洲新近發展 — 外判市區巴士服務」(*The contracting of urban bus services – Recent Australian developments*)的論文；該文刊載於 2014 年出版的《交通經濟研究》(*Research and Transportation Economics*)第 48 期，當中的研究指出「澳洲的競投安排與服務質素有所改善」互有關連。然而，競委會沒有就專營巴士路線／範圍的競投安排與提升安全之間的關連引述任何這類研究。書面意見中另一註腳提述題為「懼怕乘搭飛機？關於航空安全的經濟分析」

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<sup>48</sup> 此處 1995 年的提述有誤。前文已提到，上一次關於專營巴士服務的公開競投安排是在 1998 年進行。



(*Fear of Flying? Economic Analyses of Airline Safety*)的論文；該文刊載於1992年出版的《經濟觀點期刊》(*Journal of Economic Perspectives*)第6期第2冊，當中研究美國於1978年放寬規管航空公司對航空安全有何影響。[聽證會文件 MISC-3：英文原文第1377頁]

571. 關於應對「推行有效競爭的挑戰」，競委會確認[聽證會文件 MISC-3：英文原文第1377頁]：

「……現有營辦商對巴士、車廠及其他與巴士服務相關的資產的擁有權，可能嚴重阻礙準營辦商加入市場；因此，如在批出新的巴士專營權時實行競爭程序，將對這些資產的擁有權產生影響。」

572. 儘管如此，競委會認為「但增加競爭可能對安全大有效益」，並建議政府[聽證會文件 MISC-3：英文原文第1378頁]：

「全面考慮為達效益而須對資產處理作出改動的相關成本，包括競爭帶來的安全效益。」

### 城巴／新巴

573. 城巴／新巴在最後一輪書面意見中，反對就香港的專營巴士服務實行公開競投安排，稱之為「不可行的方案」，並就此表示[聽證會文件 CTB-1：英文原文第104至105頁，第1段]：

- 「(a) 引入新營辦商會製造無謂競爭，產生更多廢氣，使本已嚴重的交通擠塞情況惡化。
- (b) 香港的土地資源短缺，公司的車廠和停車設施已經十分緊絀。我們認為，新營辦商要另覓新土地建造這些設施即使不是不可能，也會困難重重。
- (c) 專營巴士業務屬於資本密集型，投資回本期長；如在業務長遠持續發展上沒有合理保證，準營辦商不會願意作出投資。

- (d) 專營巴士業務屬於勞工密集型，目前招聘前線員工已甚艱難。如在工作長遠穩定上沒有合理保證，求職者不會願意入行。再者，如現有營辦商在其服務重新招標時不中標，則難免裁員，受影響的主要會是前線員工。」

## 第 23 章 — 建議

### 公共巴士專營權的批予、規管和監察：安全事宜

574. 現時向巴士營辦商批予專營權的法律框架和規定，對安全的關注完全不足。條例第 12 條僅要求獲批專營權的專營公司維持「適當而有效率的」公共巴士服務，對安全事宜則無明確規定。專營權協議內同樣沒有條款訂明這方面的規定。

575. 針對專營巴士的安全表現，運輸署除了採用 2 項指標(即巴士機件故障和意外率)外，並無任何詳盡而量化的安全表現指標讓署方能更好地評估專營巴士營辦商的表現。每天 14 次突擊抽查與巴士安全有關的毛病，涉及至少 47 個項目，看似非常徹底，而故障率亦極低，於 2012 至 2016 年這 5 年間，只有 11 宗成功檢控的個案[聽證會文件 TD-1：第 91 至 92 頁，第 9 至 11 段；聽證會文件 TD-4：第 1427 頁]。意外率為粗略指標，僅基於專營巴士每行駛 100 萬公里的意外率而計算。儘管專營巴士公司在其年報的全面披露文件中，已就各類意外後果(即死亡、重傷和輕傷)作出最基本的區分，但意外率指標並無提供各類後果的比重。

576. 條例第 35(1)條規定，運房局局長可就各項事宜，包括規管駕駛時數，以及車長休息和用茶點的相隔時間，訂立規例，但當局從未訂立有關規例，只曾發出指引。

### 被動的保障安全對策

#### 運輸署

577. 顯而易見，運輸署採取多項加強專營巴士安全的措施，均屬事故後的被動回應而非積極主動的措施。舉例而言，黎以德先生承認，2017 年 9 月 22 日深水埗專營巴士意外促使當局檢討 2012 年工作時間指引的說法，「咁講亦都係公道」。該項指引的修訂已於 2018 年 2 月 23 日頒布。[第 1 日聽證會紀錄本：2018 年 5 月 7 日，英文本第 77 頁，中文本第 28 頁]他

同樣承認，2018 年 2 月 10 日大埔公路專營巴士意外後，的確促使運輸署於同年 3 月初成立加強專營巴士安全工作小組。[第 1 日聽證會紀錄本：2018 年 5 月 7 日，英文本第 79 頁，中文本第 29 頁]當局原擬由工作小組在 3 個月內作出匯報，這有力地說明當局知道運輸署必須作出迫切回應。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 130 至 131 頁，中文本第 49 頁]

### *專營巴士營辦商*

#### *九巴*

578. 同樣地，專營巴士營辦商在 2018 年 2 月 10 日大埔公路意外後才採取多項措施，明顯是事後被動的回應而非積極主動的措施。例如九巴於 2018 年 2 月 23 日把向車長發出聲效／視覺警報的車輛超速臨界值，由每小時 75 公里改為每小時 70 公里。九巴在其 2018 年 3 月 12 日的意外報告指，該公司決定由 2018 年 3 月 5 日起，在所有採購的新巴士上安裝安全帶。報告指，公司「正在測試及與供應商核實」安裝電子穩定控制系統，同時亦正安排「在 10 輛巴士進行地理圍欄系統測試」。此外，報告指公司正「聯同供應商，試用一套監察車長駕駛時是否有睡意的系統」。至於僱用兼職車長方面，報告稱公司已終止聘請每周工時少於 18 小時的車長，但已提供其他條款聘用這些車長。在車長培訓方面，報告稱所有車長培訓項目已經過「重新評估」，並「已引入若干新元素，另有一些將稍後推行」。[聽證會文件 KMB-1：第 114 至 115 頁，第 41、42 及 47 段，以及第 104 頁，第 13 及 15 段]

#### *城巴／新巴*

579. 城巴／新巴之前並無設立安全委員會，直至 2018 年 5 月初才設立。鄭偉波先生作供時說，成立該委員會旨在「專責檢討所有有關營運安全嘅事項」。對於檢討所得，他表示「我哋初步確定有以下嘅範圍會作出改進」，接着說明 4 個關於加強巴士車長駕駛培訓的範疇，包括增加新聘

車長培訓的時數，以及提供「培訓……顧客服務同理情緒管理」。關於招聘事宜，他說「我哋已經開始探討對車長職位嘅申請人作心理評估嘅可行性」。然後，他表示由 2018 年 6 月 1 日起，兼職車長須就其正職的工作時間提供資料，「以便公司更了解佢哋是否有足夠嘅休息時間」。他續說按照建議，由本年第三季起，已升級的「車上嘅黑盒會自動發出警號提示車長」。最後，他說公司會繼續探討「引入新嘅科技，以提升駕駛安全」。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 2 至 3 頁，中文本第 2 頁]

580. 運輸署一直沒有規定專營巴士營辦商與時並進，引入先進科技的裝置以直接或間接加強巴士的安全，足見該署在監管專營巴士安全方面，欠缺長遠、審慎和積極主動的對策。運輸署在 2003 年 11 月規定營辦商須由 2004 年 7 月起在新購巴士上安裝具備指定功能的黑盒，但其後竟然要到 2018 年 8 月才再作出新規定，顯然就是一例。

581. 值得注意，雖然運輸署在 2010 年 11 月 22 日致函九巴和城巴，通知他們香港道路的數碼地圖已經推出及可向該署購買，並於 2018 年 1 月 18 日在其網站登載公告，讓市民知道數碼地圖已可免費下載[聽證會文件 TD-5：英文原文第 1771 頁，第 2.3 段]，但九巴及城巴似乎並不知情，要到該署在 2018 年 6 月 7 日致函通知，才知悉已有數碼地圖可用；九巴作供時確認此事。[第 14 日聽證會紀錄本：2018 年 8 月 11 日，英文本第 115 頁，中文本第 52 頁]城巴的鄭偉波先生作供時表示，「而家我哋都搵唔到有一個電子地圖有晒香港所有路段嗰個限速，而家係冇呢一樣嘢嘅，就變咗我哋現時個做法係要人手將呢啲路段寫落去我哋嗰個電子地圖上面嘅」。[第 4 日聽證會紀錄本：2018 年 5 月 30 日，英文本第 30 頁，中文本第 14 頁]

582. 毫無疑問，把數碼地圖與黑盒結合使用，既是監察車輛超速的簡單方法，也是智能車速輔助系統中重要的組成部分。運輸署的陳英傑先生作證時確定，在 2018 年 2 月之前，他甚至不知道倫敦運輸局公布了長篇報告，闡述於 2015 及 2016 年在倫敦就使用智能車速輔助系統進行的大規模

測試。[聽證會文件 MISC-3：英文原文第 1002 至 1133 頁；第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 155 頁，中文本第 58 頁]

### *倫敦運輸局在巴士安全方面的積極主動對策*

583. 相比之下，倫敦運輸局多年來顯然採用了長遠、審慎和積極主動的對策，以加強專營巴士的安全。在科技安全裝置和系統的範疇，這個對策證實有效；該局先在 2009 年考慮使用智能車速輔助系統，再於 2015 年及 2016 年在 2 條巴士線上對該系統進行廣泛的測試，隨後在 2016 年公布由倫敦運輸研究實驗所擬備的獨立監察報告，最後在 2018 年 10 月規定專營巴士須在該年年底或之前安裝智能車速輔助系統。

### *有關巴士安全的責任*

#### *運輸署*

584. 正如前述，運輸署署長確認署內沒有「單一嘅單位」負責專營巴士的安全事宜，而是由幾個相關科部負責，即巴士及鐵路科、道路安全及標準研究部，以及車輛標準及安全部。她亦確認，並無設立一個委員會定期開會商議及考慮專營巴士安全事宜。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 94 至 95 頁，中文本第 36 頁]

#### *城巴*

585. 同樣地，對於公司內誰人負責巴士安全這個問題，城巴的鄭偉波先生回應說，在 2018 年 5 月初設立安全委員會之前，「我哋冇特定話係邊一位僱員，因為有關安全嘅嘢，其實就係我哋即係今日坐喺呢處幾位公司嘅高級嘅人員大家都有責任」。[第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 25 至 26 頁，中文本第 12 頁]這是指不少於 6 位作供的城巴代表。

## 九巴

586. 在回應同一條問題時，九巴的蘇偉基先生說「而家公司個架構其實基本上每一個部門……都有佢安全個責任」，黃祥明先生則說「其實安全就並非一個公司、入面由一個人去負責」，李澤昌先生續說「安全……係跨部門」的事情。[第 12 日聽證會紀錄本：2018 年 8 月 7 日，英文本第 40 至 43 頁，中文本第 19 至 20 頁]

587. 誠如前述，John Stanley 教授建議香港採用維多利亞省的做法，設立巴士的獨立安全規管機構。Mike Weston 先生作供時表示，這個做法是否適用於香港，視乎現時「本地嘅<架構與>情況」，並說「透過合作——即係透過而家有嘅<架構與>機構互相<更加緊密>合作，可能係會更加快得到成果」。他指出，在倫敦現行架構(即沒有獨立安全規管機構)下「倫敦巴士嘅安全方面係有好大嘅改善」，以及巴士安全計劃由「巴士安全小組入面兩至三個人」設計及統籌。[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 108 至 116 頁，中文本第 37 至 39 頁]

588. 明顯地，要把 John Stanley 教授的建議付諸實行，香港現行的專營巴士架構必須作出根本和旁及的重大改變，並須訂立大量新法例，需時多年，這一點相當清楚。我們認為，採納 Mike Weston 先生所指若干相對簡單的步驟，可更快捷和更有效地加強本港專營巴士的安全。

### 589. 建議 — 運輸署專營巴士安全總監

- (1) 我們建議運輸署設立所需架構，建立積極主動的對策，以改善專營巴士的安全；
- (2) 我們建議，作為建議積極主動對策的第一步，運輸署應委任一名專營巴士安全總監，帶領小規模的專責巴士安全專責小組，並就專營巴士安全的各方面事宜負上整體責任，包括但不限於以下安全相關事宜：車長的招聘和訓練、工作時間、休息時間

和用膳時間；可供車長休息的設施；專營巴士的內外設計；以及物色和試用合適的科技安全裝置，並在適當時安裝該等裝置。安全總監執行職務時，肯定要與負責其他較廣闊範疇的同事就所知悉的各項事宜緊密合作。例如，無疑要與擬於署內增設的運輸科技專責小組合作。安全總監的重任是確保專營巴士的安全。

#### 590. 建議 — 專營巴士營辦商

- (3) 我們建議運輸署邀請專營巴士營辦商各自委任安全總監，負上專營巴士各方面安全事宜的整體責任，並讓營辦商就巴士安全問題，與運輸署的安全總監直接溝通，互相聯絡。

#### 常設工作小組／巴士營辦商論壇成員

591. 我們建議署長決定成立加強專營巴士安全常設工作小組，以類似倫敦巴士營辦商論壇的方式運作。倫敦運輸局的經驗明確顯示，設立常設組織方便巴士營辦商的高層管理人員，包括負責專營巴士各項安全相關事宜者，定期約每 8 個星期與倫敦交通管理局舉行會議，此舉能就安全事宜營造合作氣氛。

#### 592. 建議

- (4) 我們建議常設工作小組擴大成員範圍，除現有成員外，包括具備專營巴士專門知識的獨立人士。

#### 科技安全裝置：運輸署科技小組

593. 署長在作供時表示，該署「事實上正爭取人力資源」用以「在署內設立一個運輸科技專責小組。」



594. 其實適用於汽車(包括專營巴士)的科技安全裝置發展速度很快，而且範圍亦廣，運輸署沒有在數年前成立類似的專責小組，實在令人感到十分意外。無論以前或現在，運輸署都顯然需要設有這類小組，負責追上相關科技的發展；為切合香港現況的安全裝置進行測試；確保有關測試獨立進行而且經過成本／效益分析；以及建議在專營巴士安裝那些經分析後成效令人滿意的安全裝置或系統。

#### 595. 建議

- (5) 我們支持署長申請撥款，並建議趕快在運輸署轄下成立專責科技小組。
- (6) 另外，如運輸署成立該專責科技小組，我們建議小組與倫敦運輸局及新加坡陸路交通管理局等獲認受的海外司法管轄區的機構建立聯繫，分享所知有關嶄新和改良的科技安全裝置功能的資訊；在這些裝置的測試中得知的資料；有關成本／效益分析的結果；哪些裝置不獲接受；以及哪些已經安裝和取得何種成效。
- (7) 同樣地，我們建議專營巴士營辦商考慮委任轄下的職員負責公司內的相關事宜。就營辦商而言，他們應考慮與其他司法管轄區的專營巴士營辦商或國際巴士組織建立或加強聯繫，以便作出類似交流，就科技安全裝置互通資訊，從中得益。

#### 資助

##### 巴士安全創新基金

596. 倫敦運輸局於 2017 年向該局轄下的安全創新基金提供一筆相對小數額的 50 萬英鎊撥款，鼓勵當地的專營巴士公司利用該基金的資助，展開科技安全裝置的測試，而倫敦運輸局則與所有巴士公司分享測試的整體結果；這些公司一直在倫敦運輸局制訂巴士安全標準方面擔當重要角色。

做法看來已證明成功。另外，委員會得悉香港政府現時有撥款資助關於道路安全科技的測試。2018年，創新及科技基金向綠色安全科技有限公司撥款 967,000 元，以供進行「在政府車輛上試用先進駕駛輔助系統+4S 智能駕駛安全方案以提升及研究駕駛安全行為」的測試。

#### 597. 建議

- (8) 我們接納 Mike Weston 先生的建議，即運輸署應考慮為專營巴士營辦商「採用新的安全科技」提供資助。我們建議專為該目的設立一個相對小數額的基金。如果設立這個基金，其撥款規定須與倫敦運輸局即將推出的*巴士安全創新技術挑戰*資助計劃的嚴格規定看齊。

*資助：在部分專營巴士的座椅加裝安全帶及在所有專營巴士安裝電子穩定控制系統及具有減速功能的自動車速限制器*

598. 正如前述，行政長官在 2018 年 10 月 12 日的《施政報告》表示「政府會資助專營巴士營辦商在現有巴士上加裝合適安全裝置，包括在部分巴士的上層所有座位加裝安全帶」。首先為這個措施作出說明的是運房局局長，他在同日的記者會表示有關措施適用於「途經快速公路並較少停站的長途巴士路線的巴士所有上層座椅」，繼而是署長，她作供時表示[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 130 至 131 頁，中文本第 50 頁]：

「……安全帶嘅裝置我哋特別係需要係仔細嘅評估，無論係運作、技術、財務同埋營運嘅可行性方面都要評估。」

署長確認，有關評估包括成本／效益分析。

599. 雖然如此，除在部分巴士加裝安全帶外，政府的資助包括加裝「電子穩定控制系統、具減速功能的車速限制器……」運房局局長表示，「我

們建議資助專營巴士營辦商八成的相關費用，涉及開支約 5 億元，其餘費用和日後的維修保養則由營辦商自行承擔。」

600. 從城巴在最後一輪書面意見表達的立場可見，就部分巴士上層座椅加裝安全帶進行成本／效益分析是相當重要的。城巴不滿要由公司支付兩成的加裝費用，指這會對公司造成「沉重負擔」，因此要求政府供「全額資助」，並強調如不全額資助[聽證會文件 CTB-1：英文原文第 104 頁]：

「……應優先考慮安裝電子穩定控制系統及自動車速限制系統的安全裝置，預防意外發生。在巴士上層座椅加裝安全帶應屬次優先，因為如不立法強制乘客必須佩戴安全帶，加裝安全帶的成本效益或會成疑。」

601. 署長作供時表示，運輸署認為應就部分巴士上層座椅加裝安全帶一事進行全面的成本／效益分析，我們同意並予以支持。

602. *建議*

- (9) 我們建議應就部分專營巴士上層座椅加裝安全帶一事進行成本／效益分析，並應由獲認受的獨立顧問進行分析。
- (10) 同樣，我們建議應就擬議在專營巴士加裝電子穩定控制系統及具減速功能的車速限制器一事進行成本／效益分析。此外，如試用其他安全裝置後能證實其在技術上可行，我們建議先就使用該等裝置進行成本／效益分析，然後運輸署才規定或建議專營巴士營辦商安裝該等裝置。

### *安全表現指標*

603. 運輸署賴以評估專營巴士安全的安全表現指標有兩項，一是在檢驗專營巴士時(包括年度檢驗及抽驗)發現的機械安全毛病，二是專營巴士每 100 萬行車公里的意外率。關於倫敦運輸局採用的較為細分的做法，署長

在 2018 年 10 月 16 日《巴士安全標準》公布前表示[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 80 頁，中文本第 31 頁]：

「我覺得應該係有一個嘅表現指標嘅，起碼有一個指標等我哋去評估呢間巴士公司係咪安全。話雖如此，我覺得我哋應該要向住呢個方向發展，我哋要有好幾個相關嘅因素，然後要有一個單一嘅指數或者指標，呢一個範疇我哋可以再探究、研究嘅。」

604. 參閱運輸署與專營巴士營辦商之間的通訊，以及遠期計劃所載有關碰撞和非碰撞類意外成因的較詳細分析，運輸署似乎傾向選定較為細緻的安全表現指標，用以衡量專營巴士的安全表現。此點值得稱讚。

605. 署長作供時表示，關於倫敦運輸局為倫敦的巴士營辦商訂立安全表現指標的措施，運輸署較早前已安排人員參觀該局「去認識多啲佢哋關於道路安全同埋及公共交通安全的<項目>及計劃」。有關該 81 項安全表現指標的資料，在 2018 年 11 月提供予 Mike Weston 先生，並具載於「巴士安全表現指數計劃」(Bus Safety Performance Index Project)。

606. *建議*

- (11) 我們建議運輸署訂立較為細緻的安全表現指標，以衡量專營巴士的安全表現。
- (12) 我們建議運輸署邀請倫敦運輸局就現時用以衡量倫敦各巴士公司的安全表現的 81 項安全表現指標，詳加闡說及澄清。

*專營巴士意外數據*

607. 雖然運輸署在其網站公布交通意外的統計數字，但在涉及專營巴士的意外方面只提供了有限資料。有關數據來自香港警務處的案件管理資訊系統，該系統設有範本，就意外成因列出 60 項特定因素，當中提供「司機相關因素」的資料。運輸署分析上述數據後，把巴士車長駕駛方式屬意外成因之一的專營巴士意外分析資料，夾附在該署於 2018 年 5 月 21 日給

專營巴士營辦商的信件。信中指出 2018 年至 2023 年的遠期計劃須處理前述事宜。[聽證會文件 TD-5：英文原文第 1728 至 1731-1 頁；第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 63 至 66 頁，中文本第 25 至 26 頁]至於警方則沒有途徑取得專營巴士營辦商整理的意外數據。

608. 應運輸署的要求，專營巴士營辦商在其年度遠期計劃的巴士安全章節提供意外數據。有關資料至今仍未公開，只在專營巴士營辦商的年報作全面披露的部分有限度地披露。

609. 遠期計劃內的數據是經過一段時間搜集得來的統計數字。如 John Stanley 教授所述，計劃載有仔細分析，說明意外率與各項其他因素(例如車長的年齡、年資、工時及駕駛有關路線的經驗)之間的相互關係。根據最新的遠期計劃所作的分析，涉及碰撞的意外有 17 個確認成因，不涉及碰撞的意外有 9 個確認成因，雜項成因則納入「其他」一欄。[聽證會文件 KMB-12(A)：英文原文第 5020 頁，第 8.2.3.2 段]除非運輸署就某宗意外提出要求，否則專營巴士營辦商不會向運輸署提供意外的一手數據。

610. 此外，須留意，運輸署已自 2018 年 1 月起要求專營巴士營辦商提交每月報告，交代專營巴士嚴重超速駕駛及急速剎車的統計數字。何者屬上述兩種情況的準則似乎由專營巴士營辦商自行決定。舉例而言，在車速限制為每小時 50 公里的道路上，城巴的專營巴士如以時速 55 公里以上行駛 10 秒，便會製備嚴重超速駕駛報告；而在車速限制為每小時 50 公里的道路上，九巴的專營巴士以時速 55 至 65 公里行駛 30 秒或以上，才會製備嚴重超速駕駛報告。

611. 我們認同 John Stanley 教授及 Mike Weston 先生所提供意見的重點，要增加意外數據的透明度，令各方集中注意安全事宜，從而促使各方加強問責。我們接納 John Stanley 教授所述，「我們有充分理據支持公開遠期計劃內關於巴士安全的章節」。至於保密的問題，運輸署署長並無找到任何理由不公開有關資料。

## 612. 建議

- (13) 有鑑於此，我們建議公開遠期計劃中巴士安全章節內的意外數據資料。
- (14) 為向運輸署提供更多由不同途徑取得的專營巴士意外資料，我們建議運輸署要求專營巴士營辦商每月向運輸署匯報所有意外。

### 意外數據：劃一標準

613. 警方參照一個範本對意外的情況及成因進行分析，而專營巴士營辦商則以其他方式進行有關分析，而警方並不掌握相關資料。如上文所述，九巴和城巴製備嚴重超速駕駛及急速剎車報告所採用的臨界值均不同。

## 614. 建議

- (15) 我們建議運輸署考慮設立共同的意外數據匯報／分析系統。
- (16) 為求以一致的方式偵測及匯報嚴重超速駕駛及急速剎車的情況，我們建議運輸署指定專營巴士營辦商就製備該等報告採用劃一的臨界值。
- (17) 同樣，我們建議運輸署指定專營巴士營辦商就製備突然加速報告採用劃一的臨界值。

### 實時警報

615. 顯然地，當巴士車長有不當的駕駛行為時，現時黑盒的技術能夠向有關巴士車長發出警報及記錄有關事件。向九巴、龍運及嶼巴提供黑盒的 Openmatics 的 Jan Kuliš 先生作供時指出，2018 年 2 月 10 日大埔公路意外時巴士上的黑盒，不但能夠向司機發出有關嚴重超速(即每小時 75 公里)的

聲效及視覺警報，亦能提供減速（2.3 米／秒<sup>2</sup>）及加速（1.15 米／秒<sup>2</sup>）的警報。

616. 正如前述，城巴正與黑盒供應商探討向司機發出有關急速剎車或突然加速的警報的可行性。特別是，他們亦在探討自動製備有關司機不當駕駛行為的報告，以便識別「經常顛簸駕駛」的巴士車長，有關分析能協助他們提供矯正訓練或實行紀律行動。縱然是稍遲，但顯然是應用了現有的科技。

#### 617. 建議

- (18) 我們建議，如運輸署接納我們較早前的建議(即運輸署訂定劃一有關超速、減速及加速發出警報及報告的臨界值)，該署應規定專營巴士營辦商向巴士車長發出超速、減速及加速的實時警報。有關警報發出的紀錄能讓專營巴士營辦商識別巴士車長的不當駕駛行為的模式。
- (19) 我們建議，運輸署及專營巴士營辦商探討運用實時或接近實時的警報裝置，當司機有不當駕駛行為時，可向專營巴士營辦商的控制中心自動發出警報，通知有關不當駕駛行為的模式及時間，讓控制中心能適當地介入及聯絡巴士車長。

#### 車長培訓

618. 值得關注，在日期為 2018 年 8 月的《專營巴士車長訓練綱領實務守則》（「實務守則」）發布前，運輸署並無就專營巴士營辦商為車長提供的訓練的性質或綱領訂立任何規定或作出任何指示。車長接受妥當及充足的訓練，無疑是專營巴士安全運作非常重要的一環。不同的專營巴士營辦商提供不同水平的訓練。運輸署即使有監察訓練，也不過是要求專營巴士營辦商提交每季報告，證明已履行承諾，為所有新聘車長提供訓練，以及每三年為在職車長提供一次訓練。須留意，運輸署在其意見書表示，2016

年所有專營巴士營辦商均報稱百分百履行有關承諾。[聽證會文件 TD-2：英文原文第 305 至 320 頁；第 319 頁，附件 C]運輸署並無進行任何抽查或採取任何步驟進行獨立檢查。

619. 該實務守則的新條款所涵蓋的廣泛範圍，包括訂立培訓制度所須的架構，確定為車長提供的課程應包含的單元，以及要求專營巴士營辦商設立內部監察及審查機制，充分反映原有的安排實是嚴重欠妥。須留意，該實務守則要求專營巴士營辦商「就向車長提供培訓的制度，訂定成效指標」，並在有需要時採取適當的補救行動。

620. 其後留意到，John Stanley 教授建議在車長及其督導人員的培訓制度中加入疲勞工作管理。

621. 正如前述，Mike Weston 先生建議運輸署考慮資助車長就安全方面的訓練的。可說明這類資助的一例，是倫敦運輸局由 2016 年至 2018 年為倫敦專營巴士營辦商聘請的所有巴士司機提供的“Hello London”課程，當中包括裝備巴士司機加強處理憤怒及有辱罵行為的巴士乘客的能力。就此，須留意，運輸署及香港警務處正攜手籌備一個長遠的公眾教育計劃，教育市民認識當值車長在提供公共服務時，應受到尊重。

622. *建議*

- (20) 就車長培訓制度的成效而言，我們建議運輸署應在確定主要指標方面擔當積極角色，而非把確定主要指標、檢討這些指標，以及採取補救措施的所有責任推卸給專營巴士營辦商。很明顯，運輸署應該與專營巴士營辦商在這方面攜手合作。
- (21) 我們接納 John Stanley 教授的意見，並建議將疲勞工作管理納入車長培訓課程之中。同時，我們建議向專營巴士營辦商車長的督導人員及站長提供有關該課程的資料。



- (22) 我們建議運輸署考慮提供撥款，資助為車長而設的專門課程，幫助車長裝備自己，加強處理有辱罵行為和憤怒的乘客的能力。

《巴士車長工作、休息及用膳時間指引》

623. 如前所述，於 2018 年 2 月 23 日頒布的《巴士車長工作、休息及用膳時間指引》，當中第 1(b)條訂明設立特別更，很明顯是顧及車長的最長更次和駕駛時數縮減，並基於巴士營辦商在招聘和挽留車長方面遇到的困難；維持巴士服務的需要；以及如沒有特別更，巴士營辦商便要額外招聘多達 1 600 名車長所帶來的財務負擔。[第 2 日聽證會紀錄本：2018 年 5 月 8 日，英文本第 96 頁，中文本第 34 頁]而且，特別更明顯得到部分車長支持，因為他們可因而增加收入。

624. 新的特別更安排明顯是礙於一些情況而被迫妥協的結果，這些情況包括：取決於市場力量而令車長工資相對較低；新聘巴士車長長期短缺及現職巴士車長的流失；部分車長願意長時間工作以賺取較多薪酬；市民不願接受較高的巴士車費；以及政府不願向專營巴士營辦商提供資助。

625. 明顯可見，車長收取的薪酬跟招聘車長長久以來面對的困難有關連，而專營巴士營辦商和運輸署都明確承認這一點。如前所述，運輸署在其書面意見指出，專營巴士營辦商已承諾「改善薪酬以吸引新血」。九巴和城巴均兌現其承諾，自 2018 年 9 月 1 日起，其車長的薪酬大幅高於 2018 年 2 月《指引》制訂時可得的薪酬，即每周工作 6 天，每天工作 10 小時加每年花紅，收入約 23,000 元。九巴蘇偉基先生作供時表示，在 2018 年 9 月，九巴在一個星期內招聘的車長相當於以前 6 個月所招聘的一倍，並承認「人工高咗，就多啲人吸引」。[第 15 日聽證會紀錄本：2018 年 9 月 12 日；英文本第 99 至 100 頁，中文本第 42 頁]

626. 運輸署承認車長薪酬增加，難免會導致營辦商申請增加票價，並表示「……運輸署會按照既定做法，處理有關增加票價的申請」。<sup>[聽證會文件 TD-1：英文原文第 65 頁]</sup>

627. 委員會承認，車長的最高准許駕駛時數由 11 小時改為 10 小時，以及三個相連更次內的總休班時間不應少於 22 小時的規定，對各方都有很大影響。如前所述，運輸署在其書面意見中承認這點<sup>[聽證會文件 TD-1：英文原文第 64 頁]</sup>：

「如取消所有特別更次，便需要額外逾 1 000 名巴士司機，而額外聘請這麼多巴士司機並不可行，遑論當中所涉的財政開支。此外，現時駕駛特別更的巴士司機的實收薪金會因而減少。」

628. 《指引》的基本規定是「三個相連更次內的總休班時間不應少於 22 小時。」毫無疑問，有關限制是針對因巴士車長長時間當值和駕駛所累積的疲勞而引起的可見危險，即使是時間較短亦有這危險。特別更是在該限制下的例外情況，容許巴士司機每日當值 14 小時，並且駕駛 10 小時，每日和每周無間斷。顯然，該制度必然增加車長累積疲勞的風險，而且不單只較短時間如此，長時間亦如此。或許，正是這個原因令九巴和城巴同時表示他們打算將特別更的時數限制為 13 小時，城巴指出他們此舉是因為明白公眾對巴士安全問題的關注。該修訂的限制，符合三個相連更次內的總休班時間不少於 22 小時的規定。

629. 顯然地，運輸署就特別更可作為例外情況而不受基準安全條文的 22 小時休班規定所限，所提出的理據純粹在於經濟和實際方面。運輸署並無提出理由，解釋該例外情況為何不屬臨時性質以待招聘巴士車長的問題得到解決，亦沒有解釋符合基準安全條文所需的費用。凡此種種，均未見於其證供。

630. 由於委員會負責就加強香港專營巴士的安全提出建議，委員會所關注的，是上述因素之間的互動而促使在 2018 年 2 月頒布修訂《指引》，

會否對專營巴士的運作安全有負面影響。問題基本上是《指引》容許車長當值及駕駛專營巴士的時間，是否影響其安全駕駛的能力。

631. John Stanley 教授建議，應將《指引》納入規例中，並設立有關車長工作、休息及用膳時間常務委員會，成員要包括疲勞工作方面的專家。他建議檢討「……有什麼加強安全的措施可以支持 12-14 小時的工作時間，即可能要減少 14 小時的限制」[聽證會文件 EXP-1：英文原文第 94 頁，第 5.3(3)段]

632. 很明顯，專營巴士營辦商並無任何正式制度監察其巴士車長的疲勞工作狀況。運輸署並無對他們提出此項要求。

633. 建議

#### 規例

- (23) 我們建議按法例所規定，制定規例並在規例中訂明《巴士車長工作、休息及用膳時間指引》。由於此事對專營巴士的安全極為重要，在行政上是否方便政府不時修改條文僅屬次要考慮。事實上，我們預期將條文納入規例後，可令公眾更多參與監察條文的修改，這是我們樂見的。

#### 疲勞工作方面的專家

- (24) 我們接納 John Stanley 教授的意見，並建議常設工作小組的成員應包括識別和管理疲勞工作方面的特設專家。考慮該等事宜時，應參考其他司法管轄區的做法和制度。

#### 當值時數

- (25) 我們特別考慮到九巴及城巴已自覺不採納在特別更制度中以 14 小時為最高工時的作法，現建議常設工作小組應在顧及累積疲

勞的風險的情況下，考慮每更 14 小時的特別更制度是否符合巴士安全。

### *駕駛時數*

- (26) 考慮到巴士車長累積疲勞，會有增加巴士意外風險之虞，我們建議常設工作小組在考慮限制車長在一段期間內(例如 14 日或 28 日)的總駕駛時數時，應參考其他獲認受的司法管轄區的做法。
- (27) 我們建議考慮上述(25)及(26)的建議事項，常設工作小組應聘任獨立顧問去進行成本／效益分析，以分析廢除不受 22 小時規定的特別更後所帶來的影響，特別是有可能需要的安全改善措施，所需的額外巴士車長的數目及成本，以及對專營巴士票價的影響。

可以肯定的是，如要加強專營巴士安全，現行工作時數規範下受惠的某些甚或全部相關各方均需付出代價。

### *城巴採用特別更制度：提供休息設施*

- (28) 由於城巴迄今仍未為其車長實施特別更制度，同時亦考慮到九巴多年來嘗試為其車長提供合適的休息設施時，面對到不同的第三方所造成的困難，我們建議運輸署和城巴緊密合作，以確保城巴在不同路線採用特別更制度時有足夠的休息設施，讓其巴士車長可在不同的巴士站及總站享有連續最少三小時的休息時間。

### *兼職車長：其他受僱工作*

634. 所有專營巴士營辦商均聘請兼職車長。2018 年，兼職車長佔城巴聘用的車長總數達 13.9%，佔全部專營巴士營辦商聘用的車長總數達

8.4%[聽證會文件 TD-1：英文原文第 67 頁]。他們對專營巴士運作貢獻良多。與全職車長相比，沒有證據顯示兼職車長對專營巴士安全構成更大的風險。然而，重要的是專營巴士營辦商須知道他們的其他受僱工作是甚麼，尤其是該些工作的性質及工時會否影響他們擔任巴士車長的工作表現。

635. 由 2018 年 6 月 1 日起，城巴要求兼職車長詳細申報他們擔任的其他工作，包括職位及每天的工作時間。[聽證會文件 CTB-3：英文本第 571-1 至 571-2 頁，中文本第 571 頁；第 3 日聽證會紀錄本：2018 年 5 月 29 日，英文本第 81 至 84 頁，中文本第 38 至 39 頁]在 2018 年 2 月 10 日大埔公路意外前，九巴並無要求兼職車長申報他們擔任的其他工作。[第 14 日聽證會紀錄本：2018 年 8 月 11 日，英文本第 59 至 60 頁，中文本第 28 頁]然而，其後獲聘每星期工作 10 至 18 小時的兼職車長須填寫聲明書，提供其「公司以外的全職／兼職工作」詳情，包括其職位及工時。[聽證會文件 KMB-11：英文本第 4785 至 4788 頁，中文本第 4782 至 4783 頁]

636. 2017 年，嶼巴聘請的車長當中，有 29%是兼職車長。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 3 頁，中文本第 2 頁]嶼巴的代表於 2018 年 6 月 19 日作供後，向委員會提供「非全職車長申報表格」。該表格要求兼職車長提供其職位、每工作日平均工作時數及每周平均工作日數的詳情。雖然陳天龍先生代表嶼巴作供時表示，該表格於 2018 年 6 月已「開始」使用，但嶼巴在 2018 年 6 月 27 日的書面意見中表示擬「於 2019 年或之前引入新表格」。[聽證會文件 NLB-1：英文原文第 47 頁]委員會要求嶼巴澄清，從嶼巴 2018 年 7 月 11 日的書面意見中獲得一份「非全職駕駛職位申報表」表格，該表格要求兼職車長提供在擔任其他工作中一星期每天工作的時數詳情。雖則如此，有何制度已經生效、何時生效或尚未生效，依然含糊不清。[聽證會文件 NLB-1：英文原文本第 74 至 78 頁]

637. 根據在運輸署的同意下的一項長期安排，嶼巴依據與冠忠遊覽車有限公司(「冠忠」)簽訂的合約，獲提供「至少 30」輛非專營巴士連司機，

以應付在周末及公眾假期增加的需求。不過，黃焯安先生承認目前並無安排，讓嶼巴取得駕駛該些非專營巴士的車長的資歷和駕駛紀錄詳情。他也表示，公司並無要求該些車長就其正職的工作時數作出聲明。在這方面嶼巴並未決定如何處理。[第 5 日聽證會紀錄本：2018 年 6 月 19 日，英文本第 37 至 38 頁，中文本第 16 至 17 頁]現時似乎沒有設立制度，要求相關司機把他們為嶼巴執行駕駛職務前的工作和駕駛時數及休班時間通知嶼巴。

638. 運輸署則表示：「運輸署未有要求新大嶼山巴士提供有關遵守該指引有關非專營巴士部分之報告，因為他們非新大嶼山巴士之員工」。[聽證會文件 TD-1：英文本第 436 頁，中文本第 452 頁]為確保巴士安全，嶼巴應該要知道相關司機的當值和駕駛時數及休班時間，從而可信納他們具備執行車長職務的良好狀態。但嶼巴並不知道該些資料，實在極不理想。

#### 639. 建議

- (29) 我們建議運輸署訂明專營巴士營辦商獲取、備存及更新有關兼職車長的其他受僱工作的資料，包括工作性質及時間。
- (30) 我們建議運輸署要求嶼巴獲取並備存由冠忠、或嶼巴任何其他巴士和司機供應商向其提供有關車長在其他受僱工作中的當值、駕駛時間及休班時間等紀錄；而且該些資料須令嶼巴信納有關車長在為嶼巴執行駕駛職務時均遵守《巴士車長工作、休息及用膳時間指引》。

#### *為車長提供休息和廁所設施*

640. 如前述，根據與各專營巴士營辦商簽訂的專營權協議，他們須自費負責在巴士總站或公共交通交匯處提供附屬設施，包括洗手間和休息設施。設施可由公共交通交匯處或巴士總站的建築代理，或專營巴士營辦商的承辦商建造。上文亦顯示，九巴在新的西九龍站巴士總站提供上述設施的

過程一波三折。因此，所有各方似乎認同，專營巴士營辦商較政府更難取得批准興建永久構築物，以用作休息和洗手間設施。

641. 運輸署黃志光先生作供時確認，該署備有《運輸策劃及設計手冊》，訂明[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 16 頁，中文本第 7 頁]：

「洗手間同埋食堂設施係畀<營辦商>職員嘅，……咁呢啲就唔會喺巴士總站度提供，如果喺附近嘅物業發展嗰度有嘅話。」

黃先生表示，運輸署轄下有關《運輸策劃及設計手冊》的工作小組會「<檢討及>修改」上述條文。[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 30 頁，中文本第 13 頁]

642. 《香港規劃標準與準則》訂定關於公共交通總站專營巴士設施的條文，當中第八章第 4.1.6 段為巴士總站的標準訂立條文，指明[聽證會文件 MISC-3：英文原文第 1317 頁]：

「巴士總站必須設置站長室及其他附屬設施。」

643. 規劃署於 2018 年 9 月 27 日致函回覆委員會，表示第 4.1.6 段只提及但無「具體說明何謂『其他附屬設施』」，該署亦無收到「運房局／運輸署提出闡釋該詞句」的要求。[聽證會文件 MISC-3：英文原文第 1313 至 1315 頁]

644. 陳英傑先生作供時表示，運輸署會請規劃署提供更詳盡的解釋，以說明「其他附屬設施」是指洗手間和休息設施。[第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 45 頁，中文本第 18 頁]

645. 運輸署於 2018 年 10 月 3 日呈交書面意見，表示該署處理部分專營巴士營辦商的申請，其餘申請則由「房屋署、地政總署、政府產業署和領匯房地產投資信託基金等其他各方」處理。[聽證會文件 TD-5，英文原文

第 1824 頁]平均而言，後者遠較前者耗費時間處理。運輸署似乎為回應延誤處理有關申請所引起的關注，而於 2017 年 12 月成立了由相關政府部門和專營巴士營辦商的代表組成的專責小組。對於成立專責小組的目的，運輸署署長表示該署[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 10 頁，中文本第 4 頁]：

「……會繼續<通過定期開會>密切同各方一齊合作，尤其是係一啲負責審批嘅部門，等我哋可以係儘快去處理相關嘅申請。」

646. 對於署方擬採取「已計劃的行動」，以改善於公共交通交匯處和巴士總站為車長提供附屬設施的情況，運輸署於 2018 年 10 月 3 日的書面意見中表示[聽證會文件 TD-5：英文原文第 1825 頁，第 15 段]：

「……運輸署會徵詢相關的政府政策局和部門的意見，研究以政府出資的方式，在新落成的公共交通交匯處和巴士總站設置固定的構築物作為附屬設施，包括站長室，以及休息室連洗手間，但專營巴士營辦商須負責支付使用設施的租金和經常開支。」

#### 647. 建議

- (31) 我們建議運輸署修訂《運輸策劃及設計手冊》，以刪除以下條文：鄰近發展項目如設有洗手間設施，便無須在巴士總站為營辦商員工提供該等設施。
- (32) 我們建議運輸署請規劃署修訂《香港規劃標準與準則》中有關巴士總站的標準的條文，以特別闡釋關於提供「其他附屬設施」的規定，並訂明必須提供洗手間和休息設施。
- (33) 我們讚同署長採取的措施，建議由政府出資在新建的公共交通交匯處和巴士總站設置固定的構築物作為附屬設施，包括站長室，以及休息室連洗手間，條件是使用設施的專營巴士營辦商承擔租金和經常開支。



- (34) 我們建議運輸署考慮增加專責小組成員，加入運房局局長的代表，以監察有關提供或提升公共交通交匯處和巴士總站的附屬設施的事宜，讓運房局有機會與其他政策局和部門合作處理相關事項。

### 辱罵和襲擊車長

648. 遺憾的是，車長在執行公共服務職務時受到辱罵和襲擊的情況明顯呈上升趨勢。同樣明顯地，除了車長外(如工會的書面意見所述)，專營巴士營辦商也十分關注這個問題。經運輸署同意後，九巴正陸續在巴士安裝防襲屏障以保護其車長。

649. 顯而易見，應對這些問題的首要方法是教育公眾。我們欣賞並贊同運輸署 [第 1 日聽證會紀錄本：2018 年 5 月 7 日，英文本第 40 至 41 頁，中文本第 15 頁；第 2 日聽證會紀錄本：2018 年 5 月 8 日，英文本第 24 至 27 頁，中文本第 8 至 9 頁；第 21 日聽證會紀錄本：2018 年 10 月 16 日，英文本第 50 至 52 頁，中文本第 20 至 21 頁] 及警方[聽證會文件 MISC-1(C)：英文原文第 124-547 至 124-555 頁] 採取的初步措施，宣傳辱罵車長的行為是不能接，並且構成刑事罪行。

### 650. 建議

- (35) 我們建議運輸署及香港警務處在新聞媒體、電視及社交媒體推行長期計劃，教育公眾辱罵執行職務的巴士車長是不能接受且構成刑事罪行。
- (36) 我們建議在適當地方張貼告示提醒專營巴士乘客，這種行為不能接受且構成刑事罪行。
- (37) 其次是加強執法。我們建議運輸署在符合私隱法例規定的前提下，規定所有專營巴士的車門和巴士車長座位旁的位置須裝設可錄音攝錄機，以及張貼告示告知乘客車上裝有攝錄機及其功

能，以及(視乎情況)錄影片段可能會用於刑事程序。這類裝置及相關告示也常見於其他司法管轄區的公共交通工具、巴士、鐵路和車站。

對於因辱罵及／或襲擊專營巴士車長而涉嫌干犯刑事罪行的乘客，將會由警方負責提出檢控。當然，專營巴士營辦商也有責任協助警方進行檢控。基本上，這可能只涉及翻查攝錄機錄得有關事件的影像和聲音記錄，以及在必要時提供證據證明該等材料的攝錄、儲存和翻查系統是完整的。

- (38) 為了使「不能接受的辱罵車長行為」有更明確的識別準則，我們建議考慮訂立具體法例條文，把對正在執行公共服務職務的車長發出「帶恐嚇、辱罵或侮辱成分的言行」定為一項罪行。  
[見新加坡《2014年保障免受騷擾法令》第6(1)條]

#### *在專營巴士車站及附近違例停車*

651. 其他車輛在專營巴士車站及附近違例停車，是巴士車長和專營巴士營辦商一直以來十分關注的問題。這種違例行為有時會阻礙車長停站，或致使車長把巴士停在馬路上讓乘客上落。後者顯然是不安全的，而兩種情況都可能導致車長與乘客之間產生完全不必要的磨擦。

652. 目前，對於在專營巴士車站及附近違例停車的行為，主要執法方法是由警務人員向司機發出定額罰款通知書或將通知書固定在有關車輛上；這種做法極度浪費有限的警方資源。2012年，香港警務處開始研究電子化定額罰款通知書系統(「電子化系統」)，並在2014年進行試驗計劃，但在2016年擱置該計劃。4年前，即2014年12月，交諮會向運房局局長提交「香港道路交通擠塞研究報告」，當中提到鑑於警方資源有限，故同意推行試驗計劃，「利用電子化系統發出定額罰款通知書」，並表示「預期會於2017年應用」電子化系統。然而，該計劃沒有如期實行。有關當局似乎在2018年採取措施重新推行該系統，而且「運房局現正就使用電子化

系統送達定額罰款通知書通知書所需的法例修訂做準備」。[聽證會文件 MISC-1 (C)：英文原文第 124-538 至 124-539 頁，第 3 段]遲遲不能採用電子化技術和落實簡單法例修訂以便更有效執法，實在令人失望。

653. 委員會獲悉，關於把定額罰款通知書送達車輛登記車主地址所需的法例修訂建議，擬在立法會 2019/2020 年度的會期才提交。

654. *建議*

- (39) 我們建議，為實行把定額罰款通知書送達車主，而不是固定在車輛上或交付司機，以及為開始使用電子化系統送達通知書所需的法例條文，均應盡快提交各立法會提交。
- (40) 我們建議運輸署和香港警務處攜手合作，並聯同其他相關單位，探討在合適地點(或許是經常出現嚴重違例停車情況的巴士站的鄰近燈柱和周圍範圍)設置閉路電視攝錄機，以便利用科技協助執法，堵塞在專營巴士車站違例停車的情況；在這方面該兩個部門肯定需要與其他相關各方合作。自動車牌識別系統無疑將有助於識別違例停在巴士站或附近的車輛的登記車主。
- (41) 由於在選定的專營巴士車站設置專用閉路電視攝錄機成本較昂貴，我們建議專營巴士營辦商和車長與警方合作，向警方提供已安裝在專營巴士的前置攝錄機所錄得在專營巴士車站及附近違例停車的影片。在新加坡，車長在這方面的責任僅限於按下攝錄機按鈕，記錄巴士專線違例情況的時間並通知僱主。專營巴士營辦商會向警方提供錄影片段，並可能需要提供證據證明該等材料的攝錄、儲存及翻查系統是完整的。警方負責對違例者提出檢控，但有權要求受違例行為影響的人士協助檢控。

### 為專營巴士而設的優先措施

655. 載滿乘客的巴士的乘客數目較任何其他車輛為多，單憑這一點已有充分理據讓專營巴士優先使用公共道路。像香港那樣飽受交通擠塞之苦的城市，鼓勵市民使用公共交通工具乃為民設想的重要目的。

### 656. 建議

#### 離開專營巴士站

- (42) 鑑於新加坡自 2008 年起推行一個十分成功的制度，就是巴士離站時享有優先權駛回道路；我們建議運輸署考慮在香港試行同樣制度。如新加坡陸路交通管理局指出，由於已有警報預先提醒其他道路使用者，離站的巴士有優先權駛出，他們可以在未到巴士站前改行道路上其他行車線；因此該制度對他們帶來最少不便。

#### 巴士專線

- (43) 據新加坡陸路交通管理局從經驗觀察所得，我們知道在新加坡「巴士專線不受駕駛者歡迎，因為他們覺得道路被佔用」，這一點與香港駕駛者的看法十分一致，他們有部分投訴指相對較少使用的巴士專線浪費道路資源[運房局局長在 2018 年 6 月 13 日立法會會議上的回覆；聽證會文件 SEC-3：英文原文第 1525-1536 頁]。然而，為了上述原因，我們建議運輸署對合適地點的巴士專線予以更加細分的使用。如果實行，我們建議採用新加坡陸路交通管理局的方式，即物色有大量巴士駛經的地點，然後仔細分析巴士專線對整體交通流量的影響，當中顧及或會對居民和商戶的活動有影響，而且只有在效益大於成本的情況下設立巴士專線。[聽證會文件 EXP-1(C)：英文原文第 249-8 頁第 3 段]

## 車速限制

657. 巴士車長駕駛專營巴士有時會違法超出車速限制，這事實無可爭議，從專營巴士營辦商每月向運輸署提供的超速駕駛報告亦清楚可見。由於城巴和九巴各自用獨特的方式界定超速，我們已就該方面分別提出了建議，不過專營巴士整體的違法超速情況仍然不明確。儘管如此，委員會委託進行的調查清楚顯示，雖然在車速限制為每小時 50 公里的道路上有違法超速情況，但超速幅度在每小時 60-64 公里範圍的情況相對較少。以上調查記錄違法超速情況時不用參考超出車速限制的時間和速度的臨界值。

658. 更加重要的問題或許不單止是違法超速，而是一輛專營巴士在設有車速限制的範圍內的某個位置的行車速度。據幾名證人所講，道路上作規管用途的車速限制並無規定司機須以該速度駕駛。車輛的適當安全行車速度須視乎多個因素而定，包括車種、位置、天氣和交通情況。

## 659. 建議

### 「路線風險」評估

- (44) 就此，我們接納 Mike Weston 先生的建議，及建議運輸署要求專營巴士營辦商向運輸署就旗下巴士行走的各條路線提供「路線風險」評估。

### 低車速限制和低車速限制區：每小時 20 英里／每小時 30 公里

660. 從 Mike Weston 先生的證供和英國的相關報告清楚可見，在適當地點設定低車速限制和設立低車速限制區的情況日趨普遍。鄭子憲先生指出，這個方法已見於其他歐洲大陸國家。

661. 鄭子憲先生作證時說他曾量度專營巴士在德輔道中由東至西行的車速。這是由於專營巴士會在該處超越其他停站的巴士，但後者形成盲點，而很多行人在該沒有行人過路設施的位置橫過馬路，他於是特別在該位置

量度專營巴士車速。據他判斷，該處的安全車速大約應為每小時 30-35 公里，不過他曾量度到一輛專營巴士的車速為每小時 49 公里。他明確判定這是不安全的車速，但亦在合法限制之內。[第 7 日聽證會紀錄本：2018 年 7 月 16 日，英文本第 86 至 87 頁，中文本第 33 頁]

#### 662. 建議

- (45) 鑑於運輸署邱國鼎先生說該署「正研究引進低車速限制區作試驗」，我們建議運輸署物色適當的地點，例如行人較多的市區地點，試行低車速限制區，而限速或可定為每小時 30 公里。

#### 競爭

663. 雖然 Mike Weston 先生作供時說倫敦的專營巴士制度是一個公開的招標競投制度，有意營辦者可在所有巴士路線現有專營權在 5 年(或獲續期至 7 年)屆滿時投標。他認為改善專營巴士安全與公開招標競投巴士路線的制度並無關連，而這制度最多只會對安全毫無影響。[第 18 日聽證會紀錄本：2018 年 9 月 27 日，英文本第 63 至 67 頁，中文本第 5 頁]至於 John Stanley 教授亦持相同意見，他甚至指出公開競投對巴士安全帶來潛在負面後果。[第 16 日聽證會紀錄本：2018 年 9 月 15 日，英文本第 50 至 54 頁，中文本第 20 頁]

664. 另外，在並非討論改善安全的場合，署長表示雖然運輸署並無計劃即時重新就專營巴士路線進行公開招標，但不排除這樣做，而「政府嗰個目標一向都係想係促進呢個競爭嚟到去改善服務水平嘅」。[第 19 日聽證會紀錄本：2018 年 10 月 4 日，英文本第 25 至 26 頁，中文本第 10 頁]

665. 委員會並無收到任何實質證據，證明公開競投專營巴士路線會有礙改善專營巴士安全。

安全：獎勵和懲罰

666. Mike Weston 先生和 John Stanley 教授均不支持使用安全獎勵。Mike Weston 先生在其報告中指出[聽證會文件 EXP-1：英文原文第 153 頁，第 8.5 段]：

「與倫敦巴士營辦商討論時，營辦商明顯不支持在路線協議中訂立有關直接給予的安全獎勵。營辦商擔憂直接給予金錢獎勵可能會導致錯誤行為，特別是公司內較低層人員的錯誤行為，包括可能助長通報不足的現象。營辦商還認為，如果將安全表現與支付金錢掛鉤，可能會使營辦商不願意與其他營辦商就安全相關問題合作，因為這關乎競爭和商業利益。總括而言，在巴士合約中訂立安全獎勵不被視為正面的舉措。」

667. Mike Weston 先生在作供時表示支持這意見，他指出如果巴士營辦商即使曾涉及嚴重傷亡事故，但仍向其支付改善安全的獎金，做法「好奇怪」。Mike Weston 先生繼續說[第 18 日聽證會記錄本：2018 年 9 月 27 日，英文本第 199 至 201 頁，中文本第 66 至 67 頁]：

「我對於呢一個嘅安全表現有財務獎勵，我有好大保留，<因為我認為呢個方法錯> .....其實佢仍然有意外嘅時候，你仍然係畀緊佢咁嘅獎金，然後或者<你地扣錢但>佢地係會<係合約>將佢計埋個成本落去。」

668. John Stanley 教授作供時表示他同意 Mike Weston 先生的意見，表示「我都承認呢個係有一個風險嘅，如果你可能係會鼓勵人哋有事唔報嘅」。[第 16 日聽證會記錄本：2018 年 9 月 15 日，英文本第 91 頁，中文本第 33 頁]

669. 正如前述，另一項極相關的事宜，就是運輸署仍未訂立細分的安全表現指標。結果，我們在作出判斷時，沒有實質證據支持究竟應該就專營巴士營辦商的安全表現加以獎勵還是懲罰。

## 第 24 章 — 建議摘要

670. 委員會在合計 21 日的聽證會上聽取了 19 個獲識別相關團體／人士及兩位專家證人的口述證供，亦收到他們和其他團體／人士提交的書面意見／報告及由協助委員會的大律師所提供的總結意見書，從中有所得益。書面意見／報告合共超過 22 000 頁，載於聽證會文件<sup>49</sup>。經考慮所收到的一切資料，並為了維持安全可靠的專營巴士服務，委員會作出以下 45 項安全相關措施的建議，並提交行政長官。

### 建立積極主動的對策以確保巴士安全

#### (i) 專營巴士安全總監

- (1) 運輸署設立所需架構，從而建立積極主動的對策，以確保巴士安全。
- (2) 運輸署委任一名專營巴士安全總監，並成立小規模的巴士安全小組。
- (3) 專營巴士營辦商各自委任安全總監。

#### (ii) 旨在加強專營巴士安全的常設工作小組

- (4) 常設工作小組擴大成員範圍，包括具備專營巴士專門知識的獨立人士。

#### (iii) 科技安全裝置：運輸署科技小組

- (5) 運輸署趕快成立專責科技小組。
- (6) 專責科技小組與海外司法管轄區內獲認受的機構(例如倫敦運輸局或新加坡陸路交通管理局)建立聯繫，分享資訊。

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<sup>49</sup> 見附錄 VI。



- (7) 專營巴士營辦商委任轄下職員負責科技安全裝置，並與獲認受的海外司法管轄區內專營巴士營辦商建立聯繫，分享資訊。

(iv) 資助

*巴士安全創新基金*

- (8) 運輸署設立小數額的基金，資助專營巴士營辦商採用新的安全科技。

*加裝安全帶、電子穩定控制系統及具有減速功能的自動車速限制器*

- (9) 運輸署委聘獨立顧問，就部分專營巴士上層座椅加裝安全帶，進行成本／效益分析。
- (10) 運輸署委聘獨立顧問，就加裝電子穩定控制系統、具有減速功能的車速限制器及證實技術上可行的所有其他安全裝置，進行成本／效益分析，然後才要求專營巴士營辦商安裝該等裝置。

(v) 安全表現指標

- (11) 運輸署訂立較細緻的安全表現指標。
- (12) 運輸署邀請倫敦運輸局就其採用的安全表現指標，詳加闡明及澄清。

(vi) 專營巴士意外數據

- (13) 公開遠期計劃中巴士安全章節內的意外數據資料。
- (14) 運輸署要求專營巴士營辦商每月向運輸署匯報所有意外。

*劃一標準*

- (15) 運輸署考慮設立有關專營巴士意外數據的共同匯報／分析系統。
- (16) 運輸署就報告超速駕駛或急速剎車事件，指定專營巴士營辦商

採用劃一臨界值。

- (17) 運輸署就報告突然加速事件，指定專營巴士營辦商採用劃一臨界值。

(vii) *實時警報*

- (18) 運輸署要求專營巴士營辦商就超速、減速及加速向車長發出實時警報，以及製備這些事件的紀錄。
- (19) 運輸署及專營巴士營辦商探討以下可行性：向營辦商控制中心發出實時或接近實時有關超速、減速及加速的自動警報，以及在適當時與車長溝通。

(viii) *巴士車長培訓*

- (20) 運輸署與專營巴士營辦商合作，以確定車長培訓制度的主要成效指標。
- (21) 運輸署規定，須把疲勞管理納入車長培訓課程。
- (22) 運輸署撥款資助車長修讀專門課程，學習處理辱罵他人和憤怒的乘客。

(ix) *《巴士車長工作、休息及用膳時間指引》*

- (23) 在規例中訂明《指引》。
- (24) 委任識別和管理疲勞駕駛方面的專家加入常設工作小組，成為特設委員。
- (25) 常設工作小組考慮每更 14 小時的特別更是否符合巴士安全。
- (26) 常設工作小組考慮限制車長在一段期間(例如 14 日或 28 日)內的總駕駛時數。
- (27) 常設工作小組委聘獨立顧問進行成本／效益分析，以探討廢除特別更例外於 22 小時值勤規定有何影響，特別是潛在的安全

改善、須增聘車長的人數和成本，以及對專營巴士票價的影響。

- (28) 城巴／新巴和運輸署緊密合作，以確保城巴／新巴為當特別更的車長提供足夠的休息設施。

*(x) 兼職車長：其他受僱工作*

- (29) 運輸署訂明專營巴士營辦商須就兼職車長的其他受僱工作獲取、備存及更新的資料，包括工作性質和時間。
- (30) 運輸署要求嶼巴獲取及備存由冠忠或任何其他巴士和司機供應商向其提供的車長在其他受僱工作中當值、駕駛時間及休班時間的紀錄，而嶼巴必須信納這些車長為嶼巴執行駕駛職務時符合《指引》。

*(xi) 為巴士車長提供休息和洗手間設施*

- (31) 運輸署修訂《運輸策劃及設計手冊》，以刪除以下條文：鄰近發展項目如設有洗手間設施，便無須在巴士總站為巴士營辦商員工提供該等設施。
- (32) 運輸署邀請規劃署修訂《香港規劃標準與準則》第八章第 4.1.6 條，以訂明巴士總站必須提供洗手間和休息設施。
- (33) 政府在新建的公共交通交匯處和巴士總站設置固定構築物，用作站長室及附設洗手間設施的休息室。
- (34) 運輸署邀請運房局局長的代表成為運輸署專責小組的成員，以監察在公共交通交匯處和巴士總站提供附屬設施的事宜。

*(xii) 辱罵和襲擊車長*

- (35) 運輸署和香港警務處推行長期計劃，透過新聞媒體、電視台及社交媒體，教育公眾明白辱罵正在執行職務的車長既不能接受，亦會構成刑事罪行。
- (36) 運輸署要求專營巴士營辦商張貼告示，以提醒專營巴士乘客辱罵車長既不能接受，亦會構成刑事罪行。

- (37) 運輸署要求專營巴士營辦商在巴士前門和車長座位安裝可錄音攝錄機。
- (38) 運輸署建議訂立具體的法例條文，把向正在執行公共職務的車長作出帶恐嚇、辱罵或侮辱成分的言行，訂為罪行。

*(xiii) 在專營巴士站及附近違例停車*

- (39) 盡快將有關的法例條文提交立法會，以訂明定額罰款通知書必須送達車主而不是固定在車輛上或交付司機，以及准許送達電子通知書。
- (40) 運輸署和香港警務處探討以下可行性：在合適的有利地點(特別是燈柱)安裝閉路電視攝錄機，以監察專營巴士站及附近的違例停車黑點。
- (41) 專營巴士營辦商與警方合作，向警方提供安裝在專營巴士的攝錄機所錄得在專營巴士車站及附近違例停車的閉路電視影片。

*(xiv) 為專營巴士而設的優先措施*

- (42) 運輸署考慮設立有關制度，讓巴士離站時優先駛回道路。
- (43) 運輸署在合適地點，更多使用巴士專線。

*(xv) 路線風險評估*

- (44) 運輸署要求專營巴士營辦商就旗下巴士行走的各條路線，向運輸署提供路線風險評估。

*(xvi) 車速限制*

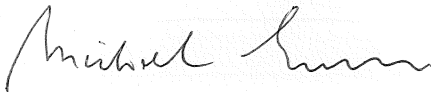
- (45) 運輸署物色合適地點，試行每小時 30 公里的低車速限制區。



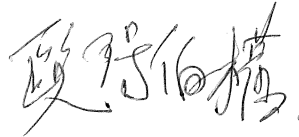
## 紀念

677. 本報告於此作結，委員會謹向 2018 年 2 月 10 日大埔公路巴士意外及近期其他巴士意外的罹難者表示哀悼，並向他們的親友和意外中的傷者致以深切慰問。


678. 委員會期望通過採納本報告所建議的安全措施，可有助防止巴士意外再次發生，並使香港的專營巴士服務維持安全可靠。



倫明高法官，GBS



歐陽伯權先生，JP



羅康錦教授，JP

2018 年 12 月 31 日

# 附錄





利益申報

為確保檢討具透明度，委員會願披露羅康錦教授已知會委員會有關多年來他協助不同政府部門和其他機構進行的各個項目。羅教授曾兩度獲運輸署委聘的機構付費以提供研究服務，有關項目分別為 2009 年至 2013 年期間的《提升整體運輸研究模型》，以及 2010 年 7 月至 2011 年 8 月期間的《在香港的學生服務車輛上裝設安全帶》。就前者而言，他為奧雅納公司提供分判顧問服務；至於後者，他則擔任香港大學土木工程系和交通運輸研究所的項目顧問。運輸署曾分別委聘奧雅納公司及香港大學土木工程系和交通運輸研究所進行上述研究。羅教授就提供以上服務合共收取 105,600 元。

由此可見，羅教授在出任委員會的成員之前，最後一次是在逾 4 年前間接為運輸署提供服務。

羅教授和委員會的其他成員均信納當中不涉及利益衝突，無損羅教授全面和妥當地履行職能及向行政長官提出與安全相關的建議，以維持香港的專營巴士服務安全可靠。

## 主要事件時序表

事件 / 聽證會	日期 / 年份	運輸署 / 巴士營辦商的行動
<u>9月22日</u> ：深水埗意外	2017年9月	
	2017年10月	<u>10月初</u> ：運輸署就修訂《巴士車長工作、休息及用膳時間指引》事宜，與專營巴士營辦商和工會會面
	2017年11月	
	2017年12月	<u>12月</u> ：運輸署設立有關休息設施的工作小組
	2018年1月	
<u>2月10日</u> ：大埔公路意外；行政長官宣布將成立獨立檢討委員會	2018年2月	<u>2月11日</u> ：九巴成立調查委員會 <u>2月12日</u> ：大埔區議會舉行特別會議 <u>2月15日</u> ：(i) 立法會交通事務委員會舉行會議；並通過數項議案 (ii) 九巴停止招聘兼職車長 <u>2月23日</u> ：(i) 有關工時的《指引》獲修訂 (ii) 九巴將超速報告的臨界點由每小時 75 公里下調至 70 公里
<u>3月13日</u> ：獨立檢討委員會成立 <u>3月28日</u> ：委員會展開工作	2018年3月	<u>3月1日</u> ：九巴及城巴將巴士車長的表现獎金和其他津貼與底薪合併 <u>3月12日</u> ：九巴提交意外報告 <u>3月13日</u> ：運輸署的加強專營巴士安全工作小組舉行第一次會議
<u>4月17日</u> ：獲委員會識別的相關團體／人士提交書面意見的最初截止日期 <u>4月30日</u> ：公眾人士提交書面意見的最初截止日期	2018年4月	<u>4月9日</u> ：運輸署宣布多項大埔公路的安全改善措施 <u>4月10日</u> ：九巴提交行動計劃 <u>4月27日</u> ：大埔公路部分路段的車速限制降至每小時 50 公里

事件 / 聽證會	日期 / 年份	運輸署 / 巴士營辦商的行動
<p><u>5月7及8日</u>：運房局及運輸署出席聽證會</p> <p><u>5月29及30日</u>：城巴 / 新巴出席聽證會</p>	2018年5月	<u>5月初</u> ：城巴成立安全委員會
<p><u>6月1日</u>：委員會秘書處就數碼車速限制地圖的提供致電郵予運輸署</p> <p><u>6月19日</u>：嶼巴出席聽證會</p>	2018年6月	<u>6月7日</u> ：運輸署致函巴士營辦商，通知他們數碼車速限制地圖已有提供
<p><u>7月14、16及17日</u>：三個區議會、Openmatics、道路安全研究小組，以及程艾樂先生出席聽證會</p>	2018年7月	<p><u>7月25日</u>：立法會交通事務委員會討論運輸署有關其工作小組的研究結果和建議的文件</p> <p><u>7月</u>：開始在所有新巴士會配備電子穩定控制系統、具有減速功能的車速限制器及在所有乘客座椅裝設安全帶</p>
<p><u>7月30及31日，以及8月1日</u>：工會及僱員組織、鄭桂興先生以及數位九巴僱員出席聽證會</p>	2018年8月	<p><u>8月1日</u>：九巴提交最新的行動計劃</p> <p><u>8月28日</u>：城巴修訂其薪酬表，並追溯至2018年1月1日</p> <p><u>8月</u>：運輸署頒布培訓實務守則，有關守則在2018年10月實施</p>
<p><u>8月7、10及11日</u>：九巴 / 龍運出席聽證會</p>	2018年9月	<p><u>9月1日</u>：九巴進一步修訂其薪酬表</p> <p><u>9月18日</u>：城巴開始運用運輸署提供的數碼車速限制地圖，在所有道路監察其巴士有否超速</p> <p><u>9月</u>：九巴開始在黑盒內加入數碼地圖</p>
<p><u>9月12日</u>：九巴 / 龍運出席聽證會</p> <p><u>9月15及27日</u>：委員會專家出席聽證會</p> <p><u>9月24日</u>：警務處出席聽證會</p>	2018年10月	<p><u>10月3日</u>：運輸署向委員會提交其工作小組的報告</p> <p><u>10月10日</u>：行政長官在其2018年《施政報告》中宣布，為專營巴士營辦商提供資助，以在巴士上加裝合適安全裝置，以及在行走一些路線的部分巴士上加裝安全帶</p>
<p><u>10月4、6及16日</u>：運輸署出席聽證會</p>	2018年11月	
<p><u>11月7日</u>：提交最後一輪書面意見的截止日期</p> <p><u>11月29日</u>：協助委員會的大律師提交最後一輪書面意見</p>	2018年12月	

巴士車長工作、休息及用膳時間指引

(2010 年 10 月修訂)

- 指引 A — 車長工作 6 小時後最少應有 30 分鐘**休息時間**<sup>1</sup>；在 6 小時的更次內應有合共 20 分鐘的**小休**，其中不少於 12 分鐘應安排在首 4 小時的工作時間內提供。**車長在總站準備開出下一班巴士和監察乘客上車的時間，不應視為休息時間。**
- 指引 B — 一個**工作日**內最長的工作時間（包括所有**休息時間**）不應超逾 14 小時。
- 指引 C — 一個**工作日**內的駕駛時間（即最長的工作時間減去所有每次最少 30 分鐘的**休息時間**）不應超逾 11 小時。
- 指引 D — 兩個相連**工作日**之間的休息時間不應少於 **10** 小時。
- 指引 E — **車長一個工作日內的工作時間不少於 8 小時便應獲提供用膳時間。巴士公司應在 2011 年第 3 季或之前提供不少於 45 分鐘的用膳時間，然後再在隨後一年進一步改善至不少於 1 小時。**

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<sup>1</sup>用膳時間亦視為休息時間

根據 2016 年 6 月 1 日前批予專營公司的專營權文件第 28(1)條

專營公司須備存及提供的巴士服務相關資料及記錄

(包括但不限於以下資料)

- (a) 每天在各指明路線上運載的巴士乘客人數及每天因此獲得的收入；
- (b) 專營公司每天經營各指明路線的公共巴士服務的班次及時間；
- (c) 每天在各指明路線使用的巴士的數目及載運量，以及專營公司為本專營權的目的或與本專營權相關而使用、備存或訂購的其他車輛及其技術規格；
- (d) 每天每輛巴士行走在各指明路線的旅程次數及公里總數；
- (e) 每天各指明路線巴士行走的額外旅程；
- (f) 每天各指明路線獲派的司機人數；
- (g) 每天預留的司機總數(為當值司機替假)；
- (h) 司機每天的工作時間；
- (i) 各指明路線每天分別因交通擠塞、意外、壞車及車輛和人手不足而失去的旅程次數及公里總數；

- (j) 巴士及其他車輛的維修時間表，以及物料記錄；
- (k) 按下述的調查釐定每天在各指明路線的巴士站及繁忙時間上落巴士的乘客人數。為本條款的目的，專營公司每年須至少一次在平日(公眾假期或八號或以上暴風信號或黑色暴雨警告正生效的日子除外)進行調查；
- (l) 按下述的調查釐定各指明路線巴士來往總站之間的旅程時間。為本條款的目的，專營公司須按署長指明的時間及方式進行調查；以及
- (m) 巴士服務的營運或日後的營運。

根據 2016 年 6 月 1 日或以後批予專營公司的專營權文件第 28(1)條附表II

專營公司須備存及提供的巴士服務相關資料及記錄

- (a) 各指明路線的每天運載乘客人數；
- (b) 各指明路線各巴士站每隔一小時的上落乘客人數及巴士離站時的載客率，該等資料須以調查或署長在徵詢專營公司後指明的任何其他方式收集。為本條款的目的，專營公司每年須至少一次在平日(公眾假期或八號或以上暴風信號或黑色暴雨警告正生效的日子除外)收集該等資料。
- (c) 署長指明的任何指明路線的巴士站每隔半小時的巴士離站時的乘客人數及載客率。
- (d) 為本專營權的目的或與本專營權相關的各指明路線每天使用的巴士數目及每輛該等巴士的載運量。
- (e) 按下述的調查所得各指明路線巴士來往總站之間的旅程時間。為本條款的目的，專營公司須按署長指明的時間及方式進行調查。
- (f)
  - (i) 各指明路線每天每次旅程的編定及實際出發時間，編定出發時間指巴士按各指明路線的行車時間表由總站出發的時間；以及
  - (ii) 旅程經調整的巴士由指定車站出發的實際時間。

- (g) 署長指明專營公司每天各段時間在各指明路線營運的編定旅程次數、實際旅程次數及額外旅程次數；編定旅程次數指專營公司按照各指明路線的行車時間表營運的旅程次數。
- (h) 每天由於壞車、車輛不足、司機不足、交通擠塞、意外、惡劣天氣、公眾活動、重新調配巴士及其他原因，或署長指明的任何其他類別的原因，而令專營公司未能在各指明路線營運的編定旅程次數。
- (i) 專營公司每個曆月為本專營權的目的或與本專營權相關的目的而備存的巴士的載運量及技術規格。
- (j) 專營公司每個曆月為本專營權的目的或與本專營權有關的目的使用各種類巴士及其他車輛的數目，以及訂購的巴士數目。
- (k) 各指明路線每天行走的旅程次數及公里總數，以及可產生收入和不能產生收入的公里的分項數字。
- (l) 按署長的規定，在一天就所經營的所有指明路線按照行車時間表安排的當值巴士司機人數；以及在按署長指明的樣本數目選定的巴士司機當中，遵守署長經諮詢專營公司後發出的巴士司機工作及休息時間安排指引者所佔百分比。



- (m) 在每個曆月月底，按照行車時間表經營所有指明路線所需的巴士司機人數和可當值的巴士司機人數；以及過剩或短缺的巴士司機人數。
- (n) 在每個曆月內，辭職、退休、因其他原因離職、新聘及重新受僱的巴士司機總人數。
- (o) 各指明路線每天藉運載乘客獲取的收入。
- (p) 巴士維修作業表。
- (q) 其他車輛的維修作業表及物料庫記錄。

**曾提供書面意見和口述證供的相關團體／人士**

**政府決策局及部門**

- 運輸及房屋局
- 運輸署
- 香港警務處

**公營及諮詢機構／組織**

- 大埔區議會
- 沙田區議會
- 深水埗區議會

**專營巴士公司**

- 九龍巴士(1933)有限公司／龍運巴士有限公司
- 新大嶼山巴士(1973)有限公司
- 城巴有限公司／新世界第一巴士服務有限公司

**巴士及黑盒裝置製造商**

- 采埃孚香港有限公司 / ZF Friedrichshafen AG 及其附屬公司  
Openmatics s.r.o.

**工會或僱員組織**

- 汽車交通運輸業總工會〔包括各分會，即城巴分會、九龍巴士分會、龍運巴士分會、新大嶼山巴士分會及新世界巴士分會〕
- 巴士業職工會聯盟〔包括各會員工會，即九巴員工協會、新世界第一巴士公司職工會及城巴有限公司職工會〕
- 九巴僱員工會代表
- 九巴職員權益工會代表
- 月薪車長大聯盟代表
- 兼職車長苦主大聯盟代表

**其他團體／人士**

- 道路安全研究小組
- 數位現職九龍巴士(1933)有限公司的人士〔黃綺玲女士、楊晉璋先生〕
- 數位曾任職於九龍巴士(1933)有限公司的人士〔程艾樂先生、鄭桂興先生〕

### 委員會委任的專家

- John Stanley 教授
- Mike Weston 先生

曾於倫敦與委員會主席及 **Mike Weston** 先生會面作口頭介紹及提供書面資料的英國倫敦運輸局和倫敦巴士公司代表

- 英國倫敦運輸局（秘書處自行翻譯名稱）
- RATP Dev London（巴士公司）
- Abellio London（巴士公司）
- Go Ahead London（巴士公司）

## 只提供書面意見的相關團體／人士及公眾

### 政府決策局及部門

- 律政署
- 規劃署

### 公共及諮詢機構

- 立法會交通事務委員會
- 交通諮詢委員會
- 道路安全議會
- 東區區議會
- 離島區議會
- 西貢區議會
- 葵青區議會
- 中西區區議會
- 北區區議會
- 南區區議會
- 荃灣區議會
- 屯門區議會
- 灣仔區議會
- 元朗區議會

### 巴士及黑盒安裝製造商

- 亞歷山大丹尼士（亞太）有限公司（秘書處自行翻譯名稱）
- 合德汽車有限公司
- 富豪巴士香港有限公司
- 日本電氣香港有限公司
- 萊斯栢根（中國）有限公司

### 海外議會組織、相關部門及巴士公司

- 新加坡陸路交通管理局（秘書處自行翻譯名稱）
- 澳洲新南威爾斯議會下議院（秘書處自行翻譯名稱）
- 澳洲新南威爾斯交通局（秘書處自行翻譯名稱）
- 澳洲維多利亞州議會上議院及下議院（秘書處自行翻譯名稱）
- 澳洲維多利亞州公共交通局（秘書處自行翻譯名稱）
- Stagecoach London（巴士公司）

## 工會或僱員組織

- 九龍巴士職工總會〔包括其分會，即龍運巴士分會〕
- 港九勞工社團聯會
- 香港職工會聯盟

## 其他團體/人士

- 香港工程師學會
- 香港公路學會
- 數位現職九龍巴士(1933)有限公司的人士〔潘振剛先生、黃子健先生、黃裕廷先生、麥成邦先生〕
- 數位曾任職於九龍巴士(1933)有限公司的人士〔*Eric Lee* 先生, *Alice Luk* 女士, *Lelia Wong* 女士, *Clara Leung* 女士, *Louisa Lam* 女士, *Gary Wong* 先生, *James Louey* 先生〕

## 公眾人士

### 公共機構

- 香港骨科醫學院
- 競爭事務委員會

### 團體／組織

- 香港公共交通智庫
- 公共運輸研究組
- 工黨
- 民主陣線
- 東區泛民會議

### 個別人士（按首次提交書面意見日期排序）

- 譚文豪議員
- Paul Surtees 先生
- 譚榮勳先生（大埔區區議員）
- John Brewer 先生
- 陳慶輝先生
- Edward Logsdail 先生
- 林志傑先生
- 潘國和先生
- Pi Chan 先生
- David Ho 先生

- 駱文華先生
- 九龍巴士(1933)有限公司 259D 線車長 [鍾世國先生、黃承佳先生、盧穎恒先生、黃禮錦先生、葉偉民先生、馬衛天先生、王敏女士、何玉琮女士、陳國科先生、黃宏華先生、李榮輝先生、余銘洸先生、吳志強先生、張永財先生、柯典文先生、陳小強先生、方偉雄先生、楊志強先生、李吉佯先生、林景波先生、陳培國先生、周先生] (根據委員會收到的意見書上手寫的名字盡量辨識)
- Yuen Hoi Yan 女士
- Franklin Tse 先生
- 蘇心渝女士
- 陳嘉朗先生
- SH Chan 女士
- Dennis Wong 先生
- 羅先生
- 余鑑忠先生
- Mike Grimsdick 先生
- 鄭暉霖先生
- Edmond Lee 先生
- Peter Mann 先生
- Peter Kwok 先生
- Peter Crush 先生
- Lam Chi Kit 先生
- Brien Mak 先生
- Henry Chan 先生
- 陳先生
- 郭平先生 (離島區區議員)







# Report of the Independent Review Committee on Hong Kong's Franchised Bus Service

The Honourable Mr Justice Michael Lunn, GBS  
Mr Rex Auyeung Pak Kuen, JP  
Professor Lo Hong Kam, JP

December 2018



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[www.irc-bus.gov.hk](http://www.irc-bus.gov.hk)



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- Appendix VI – Specifically identified interested parties who provided both written submissions and oral evidence; specifically identified interested parties and members of the public who provided written submissions only**



## LIST OF ABBREVIATIONS

### A

ADL	Alexander Dennis Limited
AEB	Automated Emergency Braking
ANFA	Average Net Fixed Assets
ANPR	Automatic Number Plate Recognition
ASLS	Active Speed Limiting System

### B

BCM	Bus Contracting Model (adopted in Singapore)
BMCS	Bus monitoring control system

### C

CBR	Cost: benefit ratio
CCTV	Closed-circuit television
CE	Chief Executive of the Hong Kong Special Administrative Region of the People's Republic of China
CMIS	Case Management Information System
Commissioner	Commissioner for Transport
Committee / IRC	The Independent Review Committee on Hong Kong's Franchised Bus Service
CPC	Certificate of Professional Competency
CTB	Citybus Limited

### D

DQM	Driver quality monitoring
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### E

EKEO	Energising Kowloon East Office
EQ	Emotional quotient
EQM	Engineering Quality Monitoring
ESC	Electronic Stability Control
ETA	Estimated Time of Arrival
E-ticketing	Electronic fixed penalty ticketing system
EWT	Excess Wait Time

**F**

FAA	Fare Adjustment Arrangement
FB	Franchised bus
Federation	The Federation of Bus Industry Trade Unions
FPP	Forward Planning Programme

**G**

GIS	Geographical information system
GPS	Global Positioning System
Guidelines	Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks

**I**

ISA	Intelligent Speed Assistance
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**K**

KCM	Kwoon Chung Motors Company Limited
KMB	The Kowloon Motor Bus Company (1933) Limited

**L**

LTA	Land Transport Authority of Singapore
LWB / LW	Long Win Bus Company Limited

**M**

MTRCL	MTR Corporation Limited
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**N**

NLB	New Lantao Bus Company (1973) Limited
NWFB	New World First Bus Services Limited

**O**

Ordinance / PBSO	The Public Bus Services Ordinance, Cap. 230
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**P**

Police	Hong Kong Police Force
PSTH(T)	Permanent Secretary for Transport and Housing (Transport)
PTI	Public transport interchange

**Q**

QoS Quality of Service standards

**R**

Regulations The Public Bus Service Regulations, Cap. 230A

ROM Real-Time Operations Management System

RSC Roll Stability Control

**S**

SDU Speed display unit

Secretary for TH Secretary for Transport and Housing

SPI Safety Performance Indicator

SPIx Safety Performance Index

**T**

TAC Transport Advisory Committee

TD Transport Department

TfL Transport for London

THB Transport and Housing Bureau

TRL Transport Research Laboratory

TSV Transport Safety Victoria

**W**

WG / Working Group Working Group on Enhancement of Safety of Franchised Buses



# THE REPORT

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*The Report is written in English, with a Chinese translation.*





# **The Independent Review Committee's report on Hong Kong's Franchised Bus Service**

## *CHAPTER 1 – The terms of reference*

1. On 13 March 2018, the Chief Executive announced that the Independent Review Committee on Hong Kong's Franchised Bus Service ("the Committee") had been set up and that Mr Justice Michael Lunn had been appointed Chairman and Mr Rex Auyeung Pak Kuen and Professor Lo Hong Kam<sup>1</sup> members of the Committee.

### *The Terms of Reference*

2. The Committee's Terms of Reference are:

From the point of view of safety, in the light of the fatal accident on February 10 and other recent serious incidents involving franchised buses in Hong Kong:

- (a) to examine the operation and management of bus franchises under the current legislative, franchise and other contractual requirements;
- (b) to examine the present regulatory and monitoring system for franchised buses; and
- (c) in relation to the above, to make recommendations to the Chief Executive on safety-related measures with a view to sustaining a safe and reliable franchised bus service in Hong Kong.

3. The Committee may invite submissions from interested parties and from the public on the above matters and should use its best endeavours to submit its report within nine months. Issues relating to the causes and liability of persons involved in the fatal accident on 10 February 2018 will be investigated by the Police and fall outside the Committee's terms of reference.

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<sup>1</sup> Declaration of Interest at Appendix I.

*The prosecution of the driver of the franchised bus involved in the fatal accident on 10 February 2018*

4. By a letter, dated 25 October 2018, a representative of the Commissioner of Police informed the Committee that the driver of the franchised bus involved in the fatal accident on 10 February 2018 on Tai Po Road at Tai Po Mei Tsuen had been charged with nineteen charges of manslaughter by gross negligence, contrary to Common Law, and eighteen charges of causing grievous bodily harm by dangerous driving, contrary to section 36A of the Road Traffic Ordinance, Cap. 374. Each of the deceased and the injured was a passenger on the bus.

5. The Particulars of Offence of each of the manslaughter charges alleged that, in breach of a duty of care owed to each of the deceased passengers on the bus, the bus driver failed to take reasonable care for the safety of that passenger by:

- (a) driving at an increasing and excessive speed along the downhill carriageway of Tai Po Road, Tai Po bound, and at the start of the right bend before the bus stop at Tai Po Mei Tsuen, Tai Po;
- (b) failing to slow down the Bus when negotiating the right bend;
- (c) failing to apply footbrake engine brake sufficiently or at all when approaching and negotiating the right bend;

It was alleged that the breach of duty amounted to gross negligence, in consequence of which the Bus toppled over and crashed, and was a substantial cause of the death of each of the passengers.

6. The Committee was informed that the proceedings will be transferred from the Magistracy to the High Court for trial. Of course, that will be trial by judge and jury. In conducting these proceedings the Committee has been conscious of the need to ensure that it does not give any currency to material that might prejudice the future fair trial. As noted earlier, our Terms of Reference stipulate that “the causes and liability” of persons involved in that fatal accident fall outside our terms of reference.

*CHAPTER 2 – The course of the Committee’s work*

7. On 28 March 2018, the Committee issued a notice on its website stating that it was inviting “specifically identified interested parties” to provide written submissions initially, on or before 17 April 2018, concerning the existing operation and management of bus franchises under the legislative regime, current franchises and other contractual requirements. The passengers and family members of the victims of the accident on Tai Po Road on 10 February 2018, together with members of the public, were invited to make their submissions on or before 30 April 2018.

8. In a notice issued on 12 April 2018, the Committee announced the appointment of counsel assisting the Committee, namely Mr Peter Duncan S.C., Ms Maggie Wong and Mr Derek Chan, and Wilkinson & Grist as solicitors for the Committee.

9. In due course, the Committee received written submissions from a great majority of the interested parties from whom assistance had been sought, from members of the public and from interested associations and a statutory body. Although the Committee received some anonymous submissions, it has not had regard to them in its deliberations. Similarly, written submissions provided by persons who identified themselves but who, when asked, declined to give oral evidence in support of the assertions made in those submissions have not been taken into account.

10. On 3 May 2018, the Committee issued a notice stating that it was in the process of inviting specified interested parties to give oral evidence to the Committee through nominated representatives and that the first of those hearings was to commence on 7 May 2018. On the same date, the Committee published on its website the Rules of Procedure that would govern the receipt of such evidence. Although the Committee indicated that it would consider applications by any of the interested parties to be assisted by a legal representative in leading evidence-in-chief, no such application was made. In the result, evidence was led

from witnesses by counsel assisting the Committee on a total of twenty one hearing days from 7 May to 16 October 2018. Some of the witnesses chose to make an opening statement. As was stated in the notice, a transcript in English and Chinese was made of all the oral evidence received and was posted on the Committee's website. In addition, the submissions and attachments identified for use by the Committee were posted on the website and Hearing Bundles.

11. On the 25 June and 13 July 2018, the Committee appointed Professor John Stanley, Adjunct Professor of the Institute of Transport and Logistics Studies, University of Sydney Business School, and Mr Mike Weston, an Independent Passenger Transport Consultant and formerly the Director of Buses of Transport for London, respectively to assist the Committee by giving their respective expert opinions in written reports and by way of oral evidence. In due course, both Professor Stanley and Mr Weston provided the Committee with written reports and gave oral evidence.

12. In a notice, dated 12 October 2018, in anticipation of the receipt of oral evidence concluding on 16 October 2018, the Committee announced that it was inviting specified interested parties and members of the public to make closing written submissions on recommendations that the Committee ought to make or not make to the Chief Executive "on safety-related measures with a view to maintaining a safe and reliable franchised bus service in Hong Kong", on or before 7 November 2018.

13. Subsequently, the Committee received written closing submissions, including one from the Competition Commission.

14. On 29 November 2018, the Committee received closing submissions from counsel assisting the Committee.

*CHAPTER 3 – The grant, regulation and monitoring of public bus service franchises and their renewal*

*The statutory framework*

*The Road Traffic Ordinance*

15. The Road Traffic Ordinance, Cap. 374 and its subsidiary legislation provides for the regulation of road traffic and the use of vehicles on roads. All the references to “public buses” or “buses” in those provisions are applicable to the buses operated by franchised bus operators.

*The Public Bus Services Ordinance*

16. Section 5(1) of the Public Bus Services Ordinance, Cap. 230 (“the Ordinance”) provides that the Chief Executive in Council may grant to any company registered under the Companies Ordinance (Cap. 622) the right to operate a public bus service on such routes as he specifies by order.

17. Section 5(3) provides that:

“A franchise-

- (a) may be granted following a public tender or in such other manner as the Chief Executive in Council thinks fit;
- (b) ...
- (c) shall be subject to such conditions as the Chief Executive in Council specifies;”.

18. Pursuant to section 6(1), the franchise may be granted for a period not exceeding 10 years. Section 6(2) provides that, on the grantee giving notice in writing of a request for an extension, the Chief Executive in Council may extend a franchise for a period not exceeding 5 years. By section 12(1), the grantee is

required to "...maintain to the satisfaction of the Commissioner<sup>2</sup> a proper and efficient public bus service", whereas section 12(2) provides that the grantee does not satisfy that requirement "...unless it maintains the service and operates the same in accordance with its franchise, this Ordinance, any direction or requirement under its franchise or this Ordinance and any programme or any approval under section 16A."

19. Section 9 of the Ordinance provides that the Chief Executive may appoint not more than two persons to be additional directors of a grantee. In their written submissions, the Transport and Housing Bureau ("THB") said that the power had been exercised and two directors had been appointed to each of the companies granted a bus franchise. In his evidence, Mr Joseph Lai, Permanent Secretary for Transport and Housing (Transport) ("PSTH(T)") said that the Commissioner and the Deputy Secretary responsible for bus service had been appointed as those directors.

20. Sections 22(1) and (2) of the Ordinance provide that the Chief Executive in Council may require the payment of a financial penalty "in respect of any failure by a grantee to comply with its franchise or this Ordinance or any direction or requirement under its franchise or this Ordinance, or with any programme or any approval under section 16A." Section 22(3) provides that the financial penalty shall not exceed \$10,000, \$20,000 and \$50,000 for the first, second and subsequent occasions on which a penalty is imposed.

21. In his evidence on behalf of the THB, Mr Joseph Lai, PSTH(T), said that, to the best of his recollection, the financial penalty sections had never been invoked due to the safety issue. For his part, Mr Joseph Lai said that he was not aware of any such application having been made in "recent times".

22. Section 24 of the Ordinance provides that the Chief Executive in Council may revoke the franchise, if satisfied, amongst other things, that the grantee has

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<sup>2</sup> Section 2: "Commissioner" means the "Commissioner for Transport".

failed “to maintain a proper and efficient public bus service” and the grantee has not shown cause why such right should not be revoked.

*Public Bus Service Regulations*

23. Section 35(1) of the Ordinance provides that:

“(1) The Secretary for Transport and Housing may make regulations for all or any of the following matters-

...

(d) generally as to the conduct of passengers and intending passengers on buses used by a grantee;

...

(j) regulating, in relation to the drivers of buses used by a grantee-

(i) the maximum number of hours during which any such driver may be permitted to drive such a bus; and

(ii) the intervals to be provided by a grantee for the rest and refreshment of such drivers,

in any period specified by the regulations;”

Section 35(2) of the Ordinance provides that the Chief Executive in Council may provide by regulation that a contravention of any regulation is an offence and provide for a penalty of a fine not exceeding \$5,000 and imprisonment not exceeding 6 months.

24. Regulations 9-12 of the Public Bus Service Regulations, Cap. 230A (“the Regulations”), provide, amongst other things, for the conduct of a driver of a bus, whereas Regulation 13A provides for the conduct of passengers. Regulation 11(d) provides that a driver “shall take all reasonable precautions to ensure the safety of passengers in or on or entering or alighting from the bus”. Regulation 13A(1)(a) provides that no passenger or intending passenger shall “wilfully obstruct, impede or distract the driver of the bus”. Regulation 25(3) provides that any person who,

without reasonable excuse, contravenes various regulations, including regulations 11(d) and 13A(1), commits an offence and is liable to a fine of \$3,000 and imprisonment for 6 months.

25. In his evidence Mr Joseph Lai, PSTH(T), said that no review had been conducted of the regulations and because it was thought that the provisions were sufficient. However, he said that in the aftermath of the Tai Po Road incident, and having received reports that there were occasions of “rising tension between drivers and passengers”, the Transport Department (“TD”) had been tasked to produce an “education plan” to remind passengers to behave in a civil and orderly manner and to inform them that there were avenues to make complaints. He said that it was anticipated that, in doing so, the TD would have regard to the sufficiency of the regulations. [Transcript Day 1; 7 May 2018, pages 40-41]

#### *By-laws*

26. Section 36 of the Ordinance provides, subject to the approval of the by-laws by the Legislative Council, for the making of by-laws:

“(1) Subject to this Ordinance and its franchise, a grantee may make by-laws for all or any of the following matters-

...

(c) the safe and efficient operation of the grantee’s public bus service;

...

(e) generally as to the conduct of passengers while using the grantee’s buses...”

Section 36(3) provides that a contravention of any such by-laws shall be an offence, the penalty for which shall not exceed a fine of \$2,000.

27. No such by-laws have been made. For his part, Mr Samuel Cheng, the Managing Director of CTB/NWFB, said that he was unaware of the provision and that no consideration had been given by the companies to making by-laws. [Transcript Day 4; 30 May 2018, pages 62-63] Mr Godwin So of KMB said that



the company had not and were not considering passing by-laws, because if it was to do so it would have the responsibility to enforce the by-laws and because of concerns about the availability of staff to deal with the matter immediately. By contrast, he said the police had the resources and the professionalism to deal with the matters arising from difficulties with passengers. [Transcript Day 13; 10 August 2018, page 83]

*Guidelines: Working Hours, Rest Times and Meal Breaks*

28. Although, as noted earlier, specific provision is made in the Ordinance for the making of regulations to govern the maximum hours which a bus captain may drive and in respect of his/her rest time and refreshment, no such regulations have been made. Rather, since 1983 the TD has promulgated “*Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks*” (“the Guidelines”), which Guidelines have been revised from time to time. The Guidelines of October 2010<sup>3</sup> and February 2018 encompass the following elements in respect of a working day:

- (i) the maximum working hours;
- (ii) the maximum driving hours;
- (iii) the duration and distribution of rest time;
- (iv) the duration of the break between successive working days; and
- (v) the arrangements for a meal break.

29. Of the February 2018 Guidelines, it is to be noted that the TD stated in their submissions of 25 April 2018 that, as agreed with the franchised bus operators, the Guidelines: [TD-1; page 65, paragraph 7]

“...would be implemented by phases starting from the second quarter of 2018, with full compliance by the second quarter of 2019, subject to the recruitment of sufficient bus

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<sup>3</sup> Appendix III.

captains to fill up the shortfall arising from the shortening of duty hours and driving hours of the existing bus captains.”

30. In their submissions, dated 25 April 2018, the TD said that it monitored compliance with the Guidelines by requiring the franchised bus operators to submit quarterly reports and, after January 2018, monthly reports of compliance with the Guidelines. In addition, the TD engaged independent contractors “to carry out annual field surveys so as to assess the actual situation of compliance with the Guidelines by the FB<sup>4</sup> companies.” The TD noted that “the overall compliance rate is over 96% in the past three years”. [TD-1; page 66, paragraph 8]

### *The franchised bus agreements*

31. The Chief Executive in Council has granted the current right to operate a public bus service, specified in the appropriate Schedule of Routes order from time to time in force under section 5(1) and in notices under sections 14 and 15 of the Ordinance, to the following companies for the periods of time stipulated in the general geographical areas described:

- (i) Long Win Bus Company Limited (“LWB”) - 1 May 2013 to 1 May 2023 in North Lantau and the Airport;
- (ii) Citybus Limited (“CTB”) - 1 May 2013 to 1 May 2023 in North Lantau and the Airport;
- (iii) New World First Bus Services Limited (“NWFB”) - 1 July 2013 to 1 July 2023 in Hong Kong Island, Cross-Harbour, Kowloon and Tseung Kwan O;
- (iv) CTB - 1 June 2016 to 1 June 2026 in Hong Kong Island and Cross-Harbour;
- (v) New Lantao Bus Company (1973) Limited (“NLB”) - 1 March 2017 to 1 March 2027 in Lantau and one New Territories route; and
- (vi) The Kowloon Motor Bus Company (1933) Limited (“KMB”) - 1 July 2017 to 1 July 2027 in Kowloon, Cross-Harbour and the New Territories.

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<sup>4</sup> “FB” means “franchised bus”.

32. Clause 1(3) of each of the six operative franchises requires that “unless there is express provision to the contrary, the Grantee shall at no cost to the Government comply with any direction and requirement given under this franchise by the Commissioner”. [TD-2, page 323] Clause 7 of each of the six operative franchises requires that: [TD-2, page 325]

“(1) The Grantee shall, as far as practicable, acquire, provide, adopt, maintain, or modify to the satisfaction of the Commissioner such safety or service enhancement facilities, installation, fixtures, fittings, apparatus or equipment on its buses as may be reasonably required by the Commissioner after consultation with the Grantee.

(2) Subject to Clauses 9 and 10, the Grantee shall acquire, provide, adopt, maintain, modify, or remove to the satisfaction of the Commissioner such Facilities as may be reasonably required by the Commissioner after consultation with the Grantee.”

Clause 1(1) defines “Facilities” as including “bus regulators’ offices and kiosks”. Clause 8 makes a similar provision in respect of “canteens, washrooms and toilets for its employees”.

33. Section 18(1) of the Ordinance provides that the grantee of a franchise shall keep proper records in respect of stipulated matters and provide copies of the same at the request of the Commissioner.

34. Each of the grants of a franchise to the respective bus companies provides that the grantee must, as required by the Commissioner, provide to the Commissioner in writing copies of the records kept by the grantee, together with information relating to the Bus Service, including without limitation the matters stipulated in the grant of franchise.

35. The operative franchises granted to grantees prior to 1 June 2016 stipulate the same records and information, identified as items (a) to (m)<sup>5</sup>, whereas those

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<sup>5</sup> Appendix IV.

granted on and after 1 June 2016 each stipulate the same records and information, identified in Schedule II as items (a) to (q)<sup>6</sup>.

*Forward planning programme*

36. Section 12A of the Ordinance provides that not later than 30 June in each year of an operative franchise, the grantee shall “prepare a programme of the operations of the grantee for the following 5 years in respect of the matters specified in the Schedule” and that the grantee and the Commissioner shall take all reasonable steps to reach agreement on the programme by 30 September of that year, failing which, pursuant to section 12A(4) the Secretary for Transport and Housing (“Secretary for TH”) shall “decide on the point (in disagreement)”. In his evidence, Mr Joseph Lai, PSTH(T), confirmed that the Secretary for TH had never been called upon to make that decision. [Transcript Day 1; 7 May 2018, page 46]

37. Paragraphs (a) to (g) of the Schedule to section 12A stipulate specific material that shall be contained in the programme, but paragraph (h) also provides that it shall contain “any other matters, whether or not specified in paragraphs (a) to (g) inclusive, as may be required by the Commissioner by notice in writing to the grantee.”

38. A letter from the TD to CTB, dated 17 May 2017, attached to the CTB submissions [CTB-2, pages 3-19] illustrates the process by which the grantees are informed by the TD of the matters required to be encompassed in their five-year forward planning programme, which programme is provided to the TD on an annual basis. The letter states that CTB was being provided with “a set of guidelines and requirements covering the following aspects for your compliance in preparation of the Five-Year Forward Planning Programme (2018-2022) (“FPP”)”. Under the heading “*Bus Safety*” it is stated:

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<sup>6</sup> Appendix V.

“Your FPP submission should include a separate chapter on “Bus Safety” with the following information-

- (a) An analysis of the types/causes of accidents for the past 2 calendar years, relationships of accident rates with different factors including:
  - (i) driver age;
  - (ii) length of service of bus captain;
  - (iii) length of driving hours before the accident happened;
  - (iv) experience of the bus captains on the route;
  - (v) experience of the bus captains on the bus model operated;
  - (vi) the number of routes which a bus captain operates in one shift; and
  - (vii) the number of buses a bus captain operates in one shift.
- (b) The target for reduction of accident involvement rate per million km yearly for the coming 5 years.
- (c) Programmes planned in the next two years to reduce common types/causes of accidents.
- (d) Programmes/plans in the next two years to enhance the safety of the elderly and persons with disabilities on buses.
- (e) *A plan for automation of monitoring of bus captain driving behaviour through data captured in black boxes or similar devices.*
- (f) Publicity programmes/plans in the next two years to enhance passenger safety.
- (g) Programmes/plan in the next two years to enhance bus captain training.
- (h) Programmes of retrofitting of double hand rail on double deck buses with straight staircases.
- (i) Please provide a study on the feasibility of installation of seat belts on (a) all seats and (b) all seats on the upper deck on all new buses.” [Italics added.]

*The Franchised Bus Operators' Five-Year Forward Planning Programme ("FPP") (2018-2022)*

39. Although in its written submissions the TD had declined, on the basis of commercial confidentiality, to provide the Committee with copies of the Five-Year FPP submitted on an annual basis by the grantees to the TD, as a result of a request of Ms Mable Chan, the Commissioner, in her oral testimony by counsel assisting the Committee, and with the consent of all the grantees, the Committee was provided with the chapter on Bus Safety in the respective FPPs submitted to the TD in 2017. Subsequently, at the request of the Committee, KMB/LWB provided copies of the chapter on Bus Safety for each of their annual FPPs for the overall period 2019-2023.

40. The chapter on Bus Safety in the KMB's FPP for 2018-2022 set out an analysis of accidents by their nature in respect of the two years 2015-2016. It is to be noted that it stated that 51.5% of the accidents in that period involved "Passenger Loss of Balance". There were about 450 such accidents for each of the two years. Of that, it was said "(m)ore than half of these cases were caused by the bus braking in traffic". In an analysis of "Accidents by Liability", it was stated that in 25% of the accidents the bus captain had been "Negligent", whereas the bus captain was said to be "Innocent" in respect of 75% of the accidents. [TD-1, pages 183-184]

41. In his evidence on behalf of the Hong Kong Police Force, Chief Superintendent Baker said that the police compiled their own accident statistics, namely the Case Management Information System ("CMIS"), which was shared with the TD. The police officer investigating any particular accident inputted data into that system by using a template, which detailed sixty specific "driver contributory factors" in respect of the cause of an accident. In addition, the template contained boxes that addressed the possibility that there were "Other driver factor" and "No driver factor". He said that he was unaware of the existence of the information contained in the FPP of the franchised bus operators, but acknowledged that it would be useful if the police had access to such detailed

information. [Transcript Day 17; 24 September 2018, pages 13-14, 19 and 28-30] The focus of the data was on the causes not the consequences of an accident. The template did not provide a box for the “failure to use a seat belt”. [Transcript Day 17; 24 September 2018, page 33]

*Black boxes*

42. The responses of the different grantees in respect of the TD’s respective requests of them for information of their plans for automation of monitoring of bus captains driving behaviour through data captured in Electronic Data Recording Devices (“black boxes”) or similar devices illustrate the fact that all that is required of grantees is that they have a tachograph with basic capabilities fitted to their buses. That requirement was imposed by the TD on the franchised bus operators by a letter, dated 17 October 2003, and came into effect on 1 July 2004 in respect of buses first registered after that date. Of the purpose of the requirement, significantly it was stated: [CTB-2(A), page 206]

“ **Basic Minimum Requirements for Electronic Data Recording Device**

1. The purpose of the Electronic Data Recording Device is to *provide tools for the bus company to monitor and manage* the on-road speed- and safety-related behaviour of its buses, and indirectly to encourage better driving behaviour.”  
[Italics added.]

43. Of the requirements of the device itself, it was stated:

“2. The device should sample the following data at 1 second intervals, and store data every 30 seconds for a period of 2 weeks:-

(a) Operation Times (real time)

- start time
- rolling time
- idle time
- finish time

## (b) Vehicle Speed

3. The software for analysing onboard or downloaded data to be capable of reporting the following:-
  - (a) Accident Report - vehicle speed profile at time interval of 1 second for the 3 minutes period preceding detection of a a (sic) 0.2G deceleration.
  - (b) Overspeeding Report - frequency, maximum speed attained and overspeeding duration the speeds over 70 km/h.”

44. Of course, it is to state the obvious to note that whilst 70 km/h is the maximum speed that franchised buses may travel on the roads of Hong Kong, most of their journeys are on roads on which a maximum speed limit of 50 km/h only is imposed.

45. As noted subsequently, the TD informed the Committee on 3 October 2018 that in August 2018 that the ‘*Basic Minimum Requirements for Electronic Recording Device*’ had been revised. One change was to the threshold value of detecting deceleration from 0.2G to 0.4G. [TD-5; page 1773, Chapter 2.22 and page 1807]

46. A programme to retrofit tachographs to franchised buses was begun by some of the franchised bus operators in 2004 and progressed gradually over the years, so that briefing papers to the Legislative Council Panel on Transport, dated November 2009 and 26 November 2012, asserted that in September 2009 and January 2012 respectively about 70% and 85% respectively of the franchised buses had been equipped with black boxes. [SEC-1; page 350, paragraph 7 and page 409, paragraph 16]

47. No subsequent specific additional requirements in respect of that device, reflecting advances in technology, were made of grantees by the TD until August 2018. However, in the course of negotiations between the TD and CTB, on the one hand, and TD and NLB, on the other hand, for the renewal of their respective



franchises, CTB and NLB committed in August 2015 to providing service enhancement initiatives, including: [CTB-3, page 582; NLB-2, page 34]

“(a) Clause 14 of New Franchise

- (1) provide Real Time Bus Information System (RTBIS) for dissemination of estimated time of departure or arrival of bus trips at bus termini and stops (as appropriate) for all bus routes operated by your Company based on real time data through mobile devices (including but not limited to smart phone, tablet and computer), and supplemented with display panels installed at... bus termini...”

48. In his evidence, Mr James Wong, the managing director of NLB, said [Transcript Day 5; 19 June 2018, page 133]:

“After 2003, while we were required to install black box, so all along we have been using an old model of black box. We couldn’t upload certain data to our server, and when we started discussing the new franchise in 2016, we needed to work on ETA<sup>7</sup>, so we replaced the old black box with a new model of the black box.”

49. In their five-year FPP submitted in 2017 for the years 2018-2022, KMB and LWB asserted: [TD-1; pages 187-188 and 218, paragraph 8.3.2]

*KMB*

“Speed monitoring and limiting devices are already installed or are being installed on buses.

- The electronic tachographs are being used to monitor bus captain performance, especially with regard to speeding. An electronic tachograph is standard equipment on new buses. At the end of April 2017, a total of 3,922 KMB buses (i.e. 100% of registered licensed fleet) were installed with electronic tachographs; and,

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<sup>7</sup> “ETA” means “Estimated Time of Arrival”.

- Real-time Driving Indicators are installed on all buses which can help bus captains to utilize the driving skills learnt in the Eco-safe Driving Training Course.”

*LWB*

“Speed monitoring and limiting devices are already installed or are being installed on buses.

- The electronic tachographs are being used to monitor bus captain performance, especially with regard to speeding. An electronic tachograph is standard equipment on new buses. At the end of May 2017, a total of 24 buses (i.e. 100% of registered licensed fleet) were installed with electronic tachographs; and,
- Real-time Driving Indicators 駕駛提示器 are being installed in buses from mid-2013 which can help bus captains to utilize the driving skills learnt in the Eco-safe Driving Training Course.”

50. By contrast, under the heading “*Plan for automation of monitoring bus captain driving behaviour through data captured in black boxes or similar devices*”, NLB stated: [TD-1; pages 236-237, paragraph (C)(e)]

“Retrieval of data from black box is usually conducted after a traffic accident; these data, which are electronic in nature, would require special analysis.

Analysis results could be put forward for prevention studies to avoid accidents of similar nature.

Specialist’s support would be required for retrieval, analysis and recommendations.”

51. In their written submissions in response to questions posed of them by the Committee in respect of the use made of the data capability of black boxes installed on their buses, NLB said: [NLB-1, page 33]

“To record and manipulate all these large number of data, it is require (sic) heavy capital investment of data transmission, data storage system and sophisticated software to do so. At the time being, is it (sic) not a mandatory requirement for franchise bus operator to perform real-time bus captain performance monitoring by black box system, and the

utilisation of technology to perform real-time bus captain monitoring is subject to each operator's operations needs and financial affordability.”

52. However, in his evidence, Mr Timothy Wong, a Director of NLB, said that, although NLB was unable to produce an exceptional over speed report at present, it was intended that NLB system would be capable of generating such a report in the fourth quarter of 2018. No determination had been made as yet of the criteria to be applied for the generation of such a report. NLB was “...hoping to upload data from the black box per second” in the future. That involved additional transmission of data costs of around \$100 per bus per month, compared with the transmission of data every 30 seconds at present. On the other hand, Mr Timothy Wong said that NLB was still considering whether or not to provide a real-time alert to their bus captains of over speeding. This was a matter for discussion with labour unions. [Transcript Day 5; 19 June 2018, pages 125-128]

53. The 2015 Annual Report of Transport International Holdings Limited, the holding company of KMB and LWB, published in March 2016, stated: [KMB-5, page 1526]

**“Bus Estimated Time of Arrival (“ETA”)**

At the end of 2015, the in-house developed ETA service had been applied to all solely-operated KMB and LWB routes, making them the first two bus companies in Hong Kong to provide such a service across the entire fleet. Passengers are able to obtain bus arrival information via display panels at bus termini and bus stops, as well as the KMB/LWB smartphone app and the KMB and LWB websites.”

54. In a Legislative Council Brief, dated 28 March 2017, [TD-2 and TD-3, pages 496-569] the THB informed the Council that in advance of the renewal of the KMB franchise on 1 July 2017, KMB had given an undertaking to implement commitments in respect of service enhancement and enhanced safety features, including [TD-3, page 543]:

*“Passenger information*

- (ii) providing real-time bus arrival information through website and smartphone application, and installing display panels at suitable bus stops in phases for disseminating such information.”

55. Although in their written submissions, dated 13 July 2018, the TD said that at meetings with KMB and CTB in 2005, 2009 and 2016, the TD had suggested to the franchised bus operators that they made greater use of the data recorded by the black boxes on their buses “to monitor bus captains’ driving manner and behaviour”, it appears that the first time that the TD required any specific report of information obtained from the black boxes to be provided to the TD was in January 2018. That requirement was made “following the bus accident in Sham Shui Po in September 2017”. It appears that prior to that date it was a matter for the respective franchised bus operators to determine what use to make of the tachographs/black boxes for that purpose. [TD-1, pages 50 and 394-395]

56. In their submissions, dated 25 April 2018, the TD said that: [TD-1; page 50, paragraph 40]

“All FB operators are required to submit to the TD the following monthly reports starting from January 2018-

- (i) the results of random check on the operational data recorded in black boxes and the corresponding follow-up actions;”

57. The Monthly Report on Monitoring Measures relating to Bus Safety for January 2018 indicated that the TD template required, *inter alia*, “Checking Black Box Data for Monitoring of Driving Behaviours of Bus Captains” on two bases, namely: “Rout(e)ine (sic) Checks on Black Box Data Conducted (as at end Month)” and “Ad-hoc Checks on Black Box Data Conducted (For instance, complaints) (as at end Month)” in respect of “-Speeding-Braking Suddenly-Others (please specify)” and the “Follow up actions taken”. Of 8,552 checks conducted in the Routeine (sic) category, 271 cases of speeding were reported, in respect of which a total of 271 verbal, written and final warnings were issued. Of the 400 Ad-hoc checks,

5 cases of speeding and 8 cases of braking suddenly were reported, in respect of which 13 verbal warnings were issued.

58. Of the statement in the TD's submissions, dated 4 May 2018, that the TD "reviewed the monthly report submitted by the FB operators to ascertain that the FB operators have been monitoring the driving behaviour of their drivers and have taken/will take follow-up action", [TD-1, page 163] when asked by the Chairman whether reference to the term "reviewed" meant merely that the TD read the document, the Commissioner did not answer the question directly, rather she said: [Transcript Day 2; 8 May 2018, page44]

"This monitoring mechanism by means of a monthly report serves to provide us with basic information on how the bus companies conduct the checks, either on mysterious ride or black box data, and the follow-up actions. This serves as one of the tools for us to do the assessment on the bus company on an annual basis, coupled with our independent analysis based on the accident data in respect of the bus operators and the contributing factors, if any, say in relation to the driving behaviour of bus captains."

### *Training*

59. In respect of programmes/plan "in the next two years to enhance bus captain training", CTB, in respect of both Franchises 1 and 2, and NWFB stated: [TD-1; pages 200 and 232, paragraph 5.11(ii); page 208, paragraph 5.3(ii)]

"Provide refresher driving training to every Bus Captain. The course content shall be reviewed periodically and shall include defensive driving concept, accident prevention tips and traffic accident black spots."

60. Of their programmes/plans, KMB and LWB said: [TD-1; pages 187 and 218, paragraph 8.3.1]

"Driving performance monitoring is carried out with systematic checking by driving instructors and followed up with disciplinary actions if required. Moreover, real-time Driving Indicators (駕駛提示器) will also help to identify those bus captains who have a higher incidence of 'harsh braking' on a given route than is normal. This

information can be used as to ensure that appropriate proactive feedback is given to a bus captain with aim of promoting improved driving behaviour that will in turn serve to prevent/reduce ‘loss of balance’ cases (as well as accidents in general).”

61. By contrast, NLB stated: [TD-1; page 237, paragraph C(g)]

*“Programmes/plan in the next two years to enhance bus captain training*

NLB may seek to cooperate with fellow franchised bus operators to achieve the above, by sending bus captains to the training programmes offered by other operators, subject to mutual acceptance and cooperation.

Co-operation with external professional bodies in providing driving skills enhancement training for existing and newly recruited drivers.”

62. In her oral evidence, the Commissioner explained: [Transcript Day 1; 7 May 2018, page 89]

“As far as bus captains are concerned, franchised bus operators have also voluntarily made performance pledges on providing training to all new recruits, and training once every 3 years for in-service bus captains. They submit information on training to the TD on an annual basis for monitoring.”

63. In answer to a question from Mr Duncan, as to whether the TD was dependent on information supplied by the franchised bus operators or whether it conducted independent checks of the training of bus captains, the Commissioner said: [Transcript Day 1; 7 May 2018, page 107]

“The bus companies have provided information in this regard in their annual programme to meet their voluntary performance pledges. We take note of the information supplied in that programme and we review their work on an annual basis.

But I would like to emphasise that the Transport Department does not, as in the previous case, perform our independent checks on that, because I must admit that the *training is not a requirement that flows from the franchise or that flows from the ordinance. It was actually formulated by the bus company on a voluntary basis* as part of our

discussions with them to improve and enhance bus safety, but there is no such legal requirement nor requirement in the franchise.

So, up to the present moment, *Transport Department does not do any spot-checks or independent checking on the training provided by bus companies.*” [Italics added.]

64. The Commissioner confirmed that the TD did not “specify specific requirement on training or on specific measures to be taken”, nor issue “any directive” to the franchised bus operators in respect of training and answered in the affirmative the question “So that’s a matter left entirely to the bus companies?” (Transcript Day 1; 7 May 2018, pages 132-133)

65. On the other hand, in their submissions, dated 25 April 2018, the TD said: [TD1; pages 50-51, paragraph 40]

“The FB operators are required to submit quarterly reports to the TD in respect of the training provided to the newly recruited bus drivers and the training offered to the in-service bus drivers (i.e. once for every three years).”

### *Vehicle Maintenance*

66. In their submissions, dated 25 April 2018, the TD said that the issue of ensuring the vehicle safety of franchised buses was addressed not only by the annual examination but also by monthly inspection of in-service franchised buses conducted by the franchised bus operators, in respect of which they were required to provide a “Monthly Return of Vehicle Maintenance Under Clause 18(2) of the PBSO<sup>8</sup>”. Amongst other things, that document provided information of the breakdowns on the road of franchised buses, stipulating the particular defect. In addition, the TD conducted “spot checks on 14 FBs per day”, for which vehicles were chosen randomly [TD-1; pages 90-92, paragraph 9, TD-4, pages 1390-1391] It was noted that: [TD-1; page 92, paragraph 11]

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<sup>8</sup> “PBSO” means the “Public Bus Services Ordinance”.

“...the number of safety-related defects per bus examination undertaken by the TD on the FB fleet of respective bus operators in 2012 to 2016 only ranges from 0 to 0.08.”

*The TD’s assessment of the performance of franchised bus operation*

67. In the TD’s written submissions, it was stated that the TD had regard to information provided by the franchised bus operators, and information obtained independently by the TD, in making an annual assessment in respect of the “*Performance of Franchised Bus Operation*”. In her oral evidence, Ms Mable Chan said that the assessment was provided to the Transport Advisory Committee (“TAC”), which advises the Chief Executive in Council. [Transcript Day 2; 8 May 2018, page 3] In making the assessment, regard was given to nine key indicators, two of which were specifically related to safety, namely “(s)afety-related defects per examination” and the number of buses “involved in accidents per million vehicle-kilometre”. [TD-2, page 316]

68. The assessment for 2016, dated September 2017, was provided to the Committee as an illustration of the process. Annex B to the assessment addresses *Measures to Enhance Safety of Bus Operation*. Under the heading *Enhanced safety facilities and on-bus design features*, it was stated: [TD-2; page 317, paragraph (b)]

“The whole franchised bus fleet has been equipped with speed limiters which limit the speed of a bus to 70 kilometres per hour. All have also been retrofitted with a black box.”

69. Under the heading *Training for bus captains*, it was stated: [TD-2, page 317]

“The franchised bus operators continue to adopt measures to improve their bus captains’ driving skills, driving attitude and safety awareness. In addition to the training for new recruits, all bus operators provide enhancement, refresher and remedial training courses on safe driving to their serving bus captains. *There are also incentives schemes which give safety bonus and safe driving awards to bus captains.*” [Italics added.]



70. Under the heading *Improvement of the rest time for bus captains*, having noted that the Guidelines were last revised in October 2010, it was asserted: [TD-2; page 318, paragraph (d)]

“The Guidelines were fully implemented starting from the fourth quarter of 2012 when all bus operators increased meal break time to no less than one hour. Bus operators are required to submit regular reports on the compliance with the Guidelines to TD. TD also conducts regular surveys to assess compliance with the Guidelines and has found the situation satisfactory.”

*The renewal of franchises*

71. As noted earlier, the grant of a franchise may follow a public tender “or in such other manner as the Chief Executive in Council thinks fit”. No open public tender has been conducted for the grant of a franchise since 1998, when the Administration determined not to renew the franchise of China Motor Bus Company Limited and invited tenders for the grant of a five-year franchise in respect of various routes. Rather, existing franchises have been renewed following an assessment by the government of whether or not the grantee was providing “a proper and efficient public bus service”. [TD-1, page 74]

72. The renewal of the franchises of NWFB, LWB and CTB in 2013 illustrates the process. By a Discussion Paper, dated July 2011, the Legislative Council Panel on Transport was informed that the Administration planned to renew their respective franchises. In that context, the THB stated: [SEC-1; page 378, paragraph 6]

“According to the established practice, bus companies who have proved themselves to be capable of providing proper and efficient services, and are willing to further invest in their franchised bus operations are granted new franchises for a period of 10 years.”

73. Of the process of the determination of whether or not the grantee was providing proper and efficient services, it was asserted: [SEC-1; page 378, paragraph 7]

“...The Transport Department (“TD”) has been conducting regular reviews of their performance through passenger satisfaction surveys, site surveys, vehicle inspections, examination of regular returns and public feedback.”

74. There then followed “Assessments”, analysed under the headings “Service Performance and Operational Efficiency”; “Safety and Service Enhancement Measures”; and “Public Opinion on Bus Services”, before it was stated that it was the view of the Commissioner that the grantees “...have been providing proper and efficient bus services and have demonstrated their willingness to invest for further improvements.” In conclusion, it was stated that “...the Administration plans to negotiate with the three franchised bus companies respectively new ten-year franchises to take effect immediately upon the expiry of their existing franchises in 2013.” [SEC-1; page 379-383]

75. Having conducted meetings on 26 July 2011 and 27 March 2012, the TAC advised the Secretary for TH by letter, dated 10 April 2012, that it supported “the Administration’s recommendation in granting new ten-year franchises to the three bus companies upon the expiry of their current ones...” [TD-4, page 1372] Then, in a Legislative Council Brief dated April 2012, the THB informed the Legislative Council that at a meeting on 24 April 2012, the Executive Council had advised and the Chief Executive had ordered that new ten-year franchises be granted to the three grantees to take effect at different dates in 2013. In doing so, reference was made to the fact that the views of the “public and the Traffic and Transport Committees of all District Councils” had been sought and the Legislative Council Panel on Transport and the TAC had been consulted. [TD-4, page 1275]

76. In her evidence, the Commissioner said that recent examples of competitive tendering for new franchised bus routes included the West Kowloon Station and the Hong Kong-Zhuhai-Macau Bridge. However, she clarified that those tenders were restricted to existing franchised bus operators and were not open public tenders. Ms Amy Tse, Principal Transport Officer of the TD, said that the last open public tendering exercise was in 1998, when routes previously operated by

China Motor Bus Company Limited were offered for tender. [Transcript Day 19;  
4 October 2018, pages16-26]

*CHAPTER 4 – Responses to the widespread publicly expressed concerns as to the safety of franchised buses*

*A. Sham Shui Po fatal accident-22 September 2017*

77. On 22 September 2017, three persons were killed when a franchised bus collided with the rear of taxi, which had stopped at traffic lights, travelled forward and collided with pedestrians standing, who were on the pavement waiting to cross the junction and, having collided with an overhanging canopy cane to a stop. A passenger on the upper deck and two pedestrians on the pavement were killed.

78. Beginning in early October 2017, the TD had a series of meetings with representatives of various unions and franchised bus operators in which the question of a revision of the Guidelines was considered. In February 2018, the TD promulgated a revised set of the Guidelines which provided, *inter-alia*, for a reduction in the maximum number of hours per day a bus captain was permitted to drive a bus.

*B. Tai Po Road fatal accident-10 February 2018*

79. In the immediate and ongoing aftermath of the fatal accident involving a franchised bus on the Tai Po Road on 10 February 2018, in which 19 persons were killed and many more injured, a range of meetings took place and initiatives were embarked upon.

*(i) 12 February 2018-special meeting of the Tai Po District Council*

80. At a special meeting of the Tai Po District Council held on 12 February 2018, to address widespread concerns arising out of the accident on the Tai Po Road on 10 February 2018, the Commissioner advised the meeting that KMB had undertaken to provide an accident report to the TD within one month, informing members that the Chief Executive had determined to constitute an Independent Committee of Inquiry. [DC-2, page 786]

*(ii) 15 February 2018- the Legislative Council Panel on Transport meeting*

81. The Legislative Council Panel on Transport meeting of 15 February 2018 was informed by the Secretary for TH of “the follow-up actions taken by the Administration in the aftermath of the February 10 accident”. In the result, three motions were carried. One of the motions called for the TD to explore the feasibility of retrofitting all seats with seat belts. Another motion urged the Administration not only to explore that possibility but also to make it “compulsory in phases for passengers to wear seat belts.” That motion also called for the modification of speed limiters and the installation of automatic emergency braking. Finally, it urged the franchised bus companies to review the working hours, remuneration and training of bus captains. [SEC-3; pages 1345-1346 and 1360-1362]

*(iii) 12 March 2018-KMB accident report*

82. On 12 March 2018, KMB provided the Commissioner with the accident report arising from its investigation of the accident of 10 February 2018. [KMB-1(A), pages 98-116]

*(iv) Mid-March 2018-Working Group on Enhancement of Safety of Franchised Buses*

83. In written submissions, dated 25 April 2018, the TD informed the Committee that in mid-March 2018 it constituted a Working Group on Enhancement of Safety Franchised Buses, which was comprised of the five operators of franchised buses, representatives of three bus manufacturers and representatives of the TD. [TD-1, page 95; TD-5, pages 1761-1763] It is to be noted that the first meeting of the Working Group was held on 13 March 2018, the day after the Commissioner had received the report from the Special Committee of KMB on the Tai Po Road accident.

*(v) 10 April 2018-KMB Action Plan*

84. By letter, dated 10 April 2018, KMB provided the TD with an Action Plan, which addressed implementation of the key recommendations contained in the accident report, dated 12 March 2018. [KMB-1(A), pages 145-151]

*(vi) Early May 2018-CTB's Safety Committee*

85. In early May 2018, CTB constituted a *Safety Committee* headed by Mr Samuel Cheng, the Managing Director. [CTB-1, page 54; Transcript Day 3, 29 May 2018, pages 2, 24-27]

*CHAPTER 5 – Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks*

86. As noted earlier, the Guidelines in force in respect of the working hours, rest times and meal breaks for bus captains were the revised Guidelines provided by the TD in October 2010 until the second quarter of 2018, when implementation of the revised February 2018 Guidelines began, it being proposed, subject to recruitment of bus captains, that there be full implementation by the second quarter of 2019.

Guidelines : 23 February 2018

87. Although Guideline (1)(a) provides that the maximum duty hours, namely the time from the beginning to the end of the shift including all rest breaks, shall not exceed 12 hours, namely time spent performing driving duty plus short rest breaks in a shift, nevertheless Guideline 1(b) provides for a special shift “arranged to cater for service demand in the morning and evening peaks” which may exceed 12 hours but which is limited to a maximum of 14 hours of duty, albeit that the maximum driving hours remained at 10 hours, but with the requirement for a rest break of no less than three consecutive hours.

88. Guideline (2) provides: [TD-4, page 1086]

“The off-duty break between 2 successive shifts should not be less than 10 hours. The total off-duty breaks in 3 successive shifts, *other than special shift duties*, should not be less than 22 hours.” [Italics added.]

The position of the TD

89. In their written submissions, the TD noted that: [TD-1; page 64, paragraph 6, Footnote 3]

“(M)ore than one half of the FB routes are operating with much more frequent headways during the morning and evening peak periods. During off-peak period, the

demand for these routes is low and thus much less drivers are required. Currently, the FB operators have a total of about 1,500 special shift duties. Removal of all special shift duties will result in a demand for more than 1,000 additional bus drivers, *and recruiting such a large number of additional bus drivers is quite impracticable, let alone the financial costs to be incurred. Besides, the take-home pay of bus drivers who are currently working under special shift duty will be reduced.*" [Italics added.]

90. Of the fact that the requirements of Guideline (2), in respect of minimum off-duty breaks between three successive shifts, do not apply to special shift duties, the TD explained: [TD-1; page 65, paragraph 6, Footnote 4]

“(T)he new requirement that the total off-duty break period in three successive duty shifts should not be less than 22 hours cannot be applied because the existing maximum duty hours of 14 and existing provision of a minimum of 10-hour off-duty break period between two successive shifts are maintained for the special shift duties *to cope with operational needs.*”

### *The position of the trade unions*

91. As noted earlier, in early October 2017, following the fatal bus accident on 22 September 2017 in Sham Shui Po, the TD held meetings with representatives of various trade unions in which they were consulted, *inter-alia*, about the existing Guidelines, meal breaks and rest times.

### *Motor Transport Workers General Union*

92. In his evidence, Mr Lam Tin Fu of the Motor Transport Workers General Union acknowledged that the position taken by the union was as stated in a notice published on 17 October 2017: [TU-1(D), page 289-274]

“It is not advisable to lower the upper limit of the working hours in the work guidelines within a short period without considering the specific situations. Instead, the problem should be addressed by adopting transitional or interim measures;”



93. Mr Lam said: [Transcript Day 9; 30 July 2018, pages 63-64]

“...when we met Frank Chan, the Secretary for Transport and Housing, we made it very clear that 14 hours is the maximum duty hours. It doesn't mean that all bus captains should have 14-hour duties.

The second point is that for the 14-hour duty to be reduced to 12 hours, it will have a huge impact on income. If there is a reduction by two hours per day, it will translate to a reduction of salary by \$5,000 a month. If 14 hours is to be reduced to 12 hours that means bus companies will have to give those reduced hours to some other staff members with shorter duty hours. Say there are 2,000 staff members with KMB, that means they will need another 2,000 staff members, and they will have to employ another 400 people, which cannot be done within a short time.

If they can't employ additional staff, that means the reduced hours will go to staff members with shorter duty hours.

We think that rest time, rest facilities are more important. This will provide a better working environment for bus captains.

So we should not just look at a 14-hour shift. This should not be demonised. We need flexibility. Bus captains will have to apply to work special shift. They are not just being assigned these duties.”

94. For his part, Mr Cheung Tsz Kei acknowledged that other unions had suggested that the limit for duty hours be reduced to 12 hours.

95. Of the need for adequate rest facilities for bus captains, Mr Lai Siu Chung said: [Transcript Day 9; 30 July 2018, pages 56-57]

“For instance, when it comes to Kowloon Bay Depot, the bus driver may live in Tuen Mun so he has to find a rest kiosk or a rest on the bus or go back to the depot. He will have to choose the location. Whether the facilities are sufficient, well, maybe around 70 per cent of them... whether there are sufficient rest facilities, not always the case, the rest kiosk may be very noisy, they may go to 7/11, McDonald's to take a rest.”

*The Federation of Bus Industry Trade Unions*

96. In his evidence for the Federation of Bus Industry Trade Unions (“the Federation”), Mr Lam Kam Piu confirmed that the Federation advocated reducing the maximum working hours from 14 to 12 hours. For his part, Mr Lau Kai Him pointed to the references made in an Annex to the written submissions of the Federation, in which the practices of work hours in the European Union, the United States of America, Singapore and South Korea were cited in support of the position. [Transcript Day 9; 30 July 2018, pages 119-120; TU-1(B), pages 260-351 to 260-388] It is to be noted, that no written information was provided in the Annex in respect of either the United States of America or South Korea.

97. Of the Federation’s objections to the special shift described in the 2018 Guidelines, Mr Chung Chung Fai complained that the TD had not stipulated whether or not the continuous three-hour break “will come with pay or not” and asserted that: [Transcript Day 9; 30 July 2018, pages 121-122]

“(T)here is no proper ...rest facility for us to take a proper rest. And the bus captains have to sort of roam around during the rest break, so how can they replenish during the rest break?”

98. In their written submissions, dated 24 April 2018, the Federation said “when revising the working guidelines for bus captains, the TD promised to improve the resting facilities for bus captain.” In that context, it was asserted: [TU-1(A), page 226-25]

“...establishment of resting facilities, like lounge room, also involves several government departments, such as Transport Department, Lands Department, Food and Environmental Hygiene Department, Housing Authority, Police and so on, and is subject to approval by the Home Affairs Department and a series of consultation procedures. Taking Quarry Bay (Yau Man Street) Terminal of Hong Kong Island as an example, after nearly ten years’ efforts, a small resting space has still not been approved up to now; the establishment of a lounge room in Lok Wah Estate Terminal has turned into a small-scale opposition.”

99. It is to be noted that in the THB's letter, dated 18 April 2018, to the Federation of Bus Industry Trade Unions, contained in the latter's submission dated 16 July 2018, it was asserted that "Meanwhile, the franchised bus companies have pledged to consider providing suitable salary terms to bus captains during their rest breaks and to further improve the resting environment and facilities for bus captains." [TU-1(B), page 260-341-4]

*The KMB Employees Union*

100. In their written submissions, KMB Employees Union submitted that the "reasonable maximum working hours per day shall be 12 hours". [TU-1(A); page 90-7, paragraph 5]

101. Mr Wong Kin Wai gave evidence that he worked as a bus captain for KMB driving on a special shift. He did so on a roster of five or six days work followed by one day's leave, working the same hours each day. As an illustration of the routine of his work pattern, he described his work on 26 June 2018, about a month before he gave evidence. He left his home in Kwai Shing West Estate at 06:30 hours and, having travelled by bus first to Mei Foo he travelled by KMB coach to Stonecutters Island bus depot, where he clocked in at about 07:20 hours before he boarded a bus which he drove to Kwai Shing East Estate Bus Terminus from where he began driving on his route at 08:00 hours. At 12:45 hours, he returned to that bus terminus, from where he took a bus to Kwai Shing West Estate Bus Terminus where he began his break at 14:08 hours, resting in the staff facilities. There were no rest facilities at Kwai Shing East Estate Bus Terminus. He resumed driving at 15:55 hours. He was scheduled to finish work 20:43 hours at Stonecutters Island. However, prior to that, he was involved in a traffic accident, as a result of which he had been on sick leave ever since. [Transcript Day 10; 31 July 2018, pages 40-48]

102. In their closing submissions, the KMB Employees Union submitted: [TU-1(A), page 112-127]

“the arrangement of working for 14 hours per day is a policy that disregards safety no matter what excuses are used. Working 12 hours a day, of which 10 hours of driving time is the limit of the human body, as *there will be accumulated fatigue for resting one day only after working for many days continuously* (regardless of those bus captains who only take two or three rest days a month).” [Italics added.]

### *Monthly-Rated Drivers Union*

103. Mr Yan Kin Ming, a KMB bus captain and member of the newly formed Monthly-Rated Drivers Union, gave evidence illustrating his routine work as a bus captain driving a special shift by reference to his movements the previous day. He left home in Mong Kok about 06:00 hours and travelled to the Tsing Yi Island Bus Depot, where he clocked in at 07:00 hours. There, he boarded the bus he was to drive that day and drove to Cheung Hang Bus Terminus and at 07:45 hours drove first to Yau Tong Bus Terminus and then to Discovery Park Estate in Tsuen Wan, where he began to drive the bus on route 42M to and from Cheung Wang Bus Terminus. At about 12:30 hours he parked the bus at Tsing Yi Airport Station and took a break until 15:20 hours during which he rested at the staff facilities at the Cheung On Bus Terminus. From 15:35 hours he drove the bus on the route 41A between Cheung On Bus Terminus and Tsim Sha Tsui East before returning the bus to the Tsing Yi Island Bus Depot where, after refuelling the bus, he clocked off at 21:00 hours before returning home at 21:40 hours that night. [Transcript Day 10; 31 July 2018, pages 120-126]

### *KMB*

104. In his evidence, Mr Patrick Pang of KMB said that “about 23 per cent” of the company’s bus captains were on special duties, namely where “working hours would not exceed 14”. Mr Pang acknowledged that the significant difference between the new and existing Guidelines was that the driving hours were limited to 10 hours and the requirement that “bus captains must have a rest break of no less than three hours and on a continuous basis.” He added “we would never force any colleague to take up any special or split shift duties. All bus captains who are

on such split shift duties do so on a voluntary basis.” [Transcript Day 14; 11 August 2018, pages 65-67] For his part, Dr Norman Leung, Chairman of the KMB, said that “Although this is permitted by the Transport Department, to have 14 working hours per day, we will review that, and our intention is to reduce the working hours from 14 to 13.” [Transcript Day 14; 11 August 2018, page 69]

105. Of the rest facilities available for KMB bus captains operating special shifts, Mr Patrick Pang said: [Transcript Day 15; 12 September 2018, page 81]

“9 per cent of bus captains doing special shifts, that is 134 of them, they will take their rest at the four depots. As Mr Lee<sup>9</sup> has said, we do have horizontal beds. So 134 of them would have their rest breaks at the depots. For others taking the rest at their bus termini, 17 per cent of them, in other words 262 of them. Then for those who go home for the three-hour rest break, in fact they account for 74 per cent of the special shift captains, 1,117 of them”.

106. The information was a succinct summary of statistical data that had been provided to the Committee at its request of the movements of bus captains performing split shift schedules on 11 August 2018. The information in respect of LWB, stated that 8% of the drivers took their split shifts break at a depot, whereas 31% and 61% respectively to the split shifts at the termini or at home. [KMB-12(A), page 5010]

107. Earlier, Mr Roger Lee, Managing Director of the KMB, confirmed that the four depots were located at Lai Chi Kok, Kowloon Bay, Tuen Mun and Sha Tin and that each of them enjoyed the same facilities as those at Tuen Mun, which had been inspected by the Chairman and the Secretariat, in particular sleeping facilities. [Transcript Day 15; 12 September 2018, pages 55-58]

108. Mr Lee said of the 217 termini used by KMB: [Transcript Day 15; 12 September 2018, page 61]

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<sup>9</sup> “Mr Lee” is Mr Roger Lee, Managing Director of the KMB.

“...we have 50 termini with purpose-built toilets, and we have 66 termini with chemical toilets and about 100 would rely on surrounding facilities, including shopping malls. One terminus has no toilet facilities.”

109. For his part, Mr Patrick Pang said: [Transcript Day 15; 12 September 2018, pages 65]

“I am quite surprised that some termini have no toilets. Even we can add chemical toilets, but for new termini, I am quite surprised that they have not factored in a permanent toilet.

... For example, the West Kowloon Express Railway Station bus terminus. It’s a sizeable bus terminus but there is no toilet. For Hung Luen Road in Hung Hom, there is a new terminus to replace the Hung Hom Pier terminus. It is a public transport interchange; again, there is no toilet, there is no rest kiosk. For the Hong Kong-Macau-Zhuhai Bridge terminus, as we see now, there will be no toilet.”

### *The position of the franchised bus operators*

#### *CTB/NWFB*

110. In his evidence, Mr William Chung said that hitherto CTB did not deploy its bus captains on special shifts. Furthermore, he said that although the February 2018 Guidelines permitted the employment of bus captains on special shifts for up to 14 hours on duty, CTB/NWFB intended to limit such a special shift to a maximum of 13 hours on duty when the special shift was implemented in the third quarter of 2018. He said that the decision was taken in light of public concern about safety. The delay in implementation of the Guidelines was brought about by the need to recruit 121 additional bus captains in order to accommodate the new guidelines and in order to provide additional rest facilities for bus captains. [Transcript Day 4; 30 May 2018, page 75] Mr Chung said that it was proposed that a bus captain employed in such a shift would be paid eight hours at the basic salary rate, plus five hours at the overtime rate.

111. Mr William Chung said that there were different practices in respect of special duty shifts in CTB as opposed to NWFB. In the former, bus captains were assigned a roster of driving duties, which might include split-shifts for some of the duties. It was open to a bus captain to swap those duties with a colleague if he wished. On the other hand, bus captains in NWFB had the option of choosing to drive split-shifts or not. If they chose the former, those for the duties assigned to them.

112. In his closing submissions on behalf of CTB/NWFB, Mr Samuel Cheng said: [CTB-1; page 107, paragraph 6]

“We noted that some union representatives had raised objection to the introduction of special duty under the revised Guidelines on Bus Captains Working Hours, Rest Times and Meal Breaks issued by the Transport Department in February 2018. Special duty is necessary for franchised bus companies to cater for the morning and evening peak demand. Despite the fact that the maximum duty spread of a special shift is 14 hours, a rest break of no less than three consecutive hours is required in the duty and therefore, the maximum driving of 10 hours under a special duty is the same as that of a normal duty.”

### *NLB*

113. In their written submissions, dated 27 June 2018, NLB said that they operated 24 routes, 9 of which “require special shift arrangement.” However, NLB went on to assert: [NLB-1, page 51]

“Since our bus captains are mainly living near their sign-on/sign-off location, if bus captains required to perform special shift duty, they most likely return to their home for take rest without difficulties. We have no special facilities provided to bus captain for such special shift resting purpose, but basic facilities, such as microwave oven, refrigerator, distilled water supply, table, seating bench, air-conditioned room in major bus terminus are providing for staff meal break.”

*TD*

114. In written submissions dated 20 July 2018, the TD said: [TD-1, page 438]

“There are no specific guidelines issued to the FB operators on the provision of toilets and rest facilities. It is because toilets and rest facilities are generally part of the basic facilities to be considered when new bus termini are designed. Requirements and comments from the FB operators on toilets and rest facilities would be incorporated in the design of the bus termini as appropriate.”

115. Of the assistance given to franchised bus operations in securing such facilities, the TD said: [TD-1, page 438]

“When relevant departments/authorities consider and vet the applications for setting up these staff facilities, the TD has been providing appropriate coordination so as to facilitate early installation of such facilities.”



## CHAPTER 6 – KMB’s Accident Report and Action Plan

### Accident Report

116. In their written submissions to the Committee, dated 24 April 2018, KMB provided the Committee with a redacted copy of a report provided to the Commissioner, dated 12 March 2018, of the “*Investigation to Examine the Bus Accident*” on the Tai Po Road on 10 February 2018 by a Special Committee, comprised of Dr Norman Leung and Dr John Chan, the Chairman and Deputy Chairman of the company, and Mr Andy Tsang. [KMB-1(A), pages 98-116] The provision of that report had been requested in a letter, dated 12 February 2018, by the Commissioner in which KMB had been asked “to conduct an investigation to examine the accident and review all safety-related issues of bus operation holistically”, including the following stipulated issues, namely: [KMB-1(A), pages 117-118]

- “(a) Qualification and recruitment requirements of bus captains, and general and route-specific training to bus captains (full time and part time);
- (b) KMB’s policy on part-time bus captains and details of these captains, including the number of part time captains, deployment and working hours, etc;
- (c) Monitoring mechanism of full-time and part-time bus captains’ performance and measures to enhance the monitoring system on safe driving of buses in operation as well as measures to enhance the awareness of the bus captains on the consequences of the monitoring system, in terms of disciplinary action and other penalties; and
- (d) KMB’s policy on bus captains (full time and part time) with traffic accident and/or traffic-related offence records before and after joining KMB, and any measures to ensure such bus captains are fit for driving.”

117. Part 4 of the report addressed *RECOMMENDATIONS* under various headings, namely:

- A. Recruitment;

- B. Training;
- C. Performance;
- D. Working conditions; and
- E. Psychological support.

118. Part 5 addressed *OTHER MEASURES TO ENHANCE BUS SAFETY*, namely:

- Safety Belts;
- Electronic Stability Programme;
- Geo-Fencing;
- Tilt Alarm;
- Speed Alarm;
- Speed Limitation;
- Condensation; and
- Drowsiness of Bus Captain.

119. The ambit of the matters considered by the Special Committee of the KMB under the heading “Other Measures to Enhance Bus Safety”, as was noted in the preamble to that chapter of the report, reflected matters that had been raised by Members of the Legislative Council, amongst others. Clearly, that was a reference to matters raised by Members of the Legislative Council Panel on Transport in a special meeting on 15 February 2018, some of which matters had been the subject of three unanimous motions of the Panel, at which meeting Dr Norman Leung and Mr Roger Lee, amongst other senior officers of the KMB, were in attendance. [SEC-3; pages 1360-1362]

*Recommendations: safety belts and safety devices*

120. In its report, the Special Committee made a series of “recommendations” in respect of various safety devices, which it stated that the KMB’s management “will be implementing or further examining.” [KMB-1(A); page 114, paragraph 39]

121. Of safety belts, the report said: [paragraph 40]

“KMB has already requested its suppliers to install safety belts on all seats as a standard feature for new buses ordered after 5 March 2018. As for buses that are currently in service, where certain routes so require, safety belts will be installed on the upper deck of KMB buses phase by phase.”

122. Of Electronic Stability Control on buses and driver’s drowsiness monitoring devices, it was stated that they were being tested (the former) or would be tested (the latter) in trials and, if the results were satisfactory, they would be installed in KMB buses. [paragraphs 41 and 47] Of Geo-Fencing, it was said that tests would be performed on ten buses and, if the testing was satisfactory, consideration would be given to implementing the technology in the fleet and, if implemented, priority would be given to routes with steep slopes or sharp bends. [paragraph 42] Of automatically activated Speed Limitation, involving braking or retardation by use of the gearbox, it was said that it could be installed on new buses after a period of testing. [paragraph 45] It was stated that the problem of driver windscreen condensation would be addressed by either the installation of hot air demisters or heated windscreens [paragraph 46] and that a tilt alarm “will be installed on every bus of the entire fleet.” [paragraph 43] Finally, it was noted that the threshold for activation of the audio and warning light speed alarm in the bus captain’s cockpit had been adjusted from the previous threshold of 75 km/h to 70 km/h.

*Action Plan*

123. In a letter, dated 19 March 2018, the TD requested, amongst other things, to be provided with an “expected timetable” for the implementation or completion

of study of the recommendations made in respect of measures to enhance bus safety by the use of safety devices at paragraphs 39 to 47 of the Special Committee's report. [KMB-1(A) pages 134-137] In response, by a letter, dated 10 April 2018, KMB provided the TD with an "Action Plan" which addressed the progress and results of trials and, where appropriate, the progress of implementation of such safety devices. [KMB-1(A), pages 138-151]

124. In KMB's Action Plan, dated 10 April 2018, it was stated that it was not feasible to retrofit safety belts on the lower deck of buses, but that ongoing enquiries were being made as to the feasibility of installing them on the upper decks of buses. Of the Electronic Stability Control Device, it was stated that they would be installed on new Euro VI buses and that ongoing enquiries were being made as to the feasibility of retrofitting them to existing buses. It was said that feasibility studies were ongoing in respect of geo-fencing, the threshold to be set for the tilt alarm and the installation of automatic speed limitation system by engaging brakes and the gearbox on new buses; whereas, the bus driver's drowsiness monitoring device would be tested on four buses from the end of April 2018. In fact, the test was carried out in June 2018. [TD-5, page 1803 and KMB-1(A), page 232] The retrofitting of hot air demisters or heated windscreens on existing buses would take place over the following 12 months. [KMB-1(A); pages 150-151, paragraphs 14-21]

*CHAPTER 7 – A review of the safety measures on the Tai Po Road*

125. At the meeting of the Tai Po District Council on 12 February 2018, at which meeting the Commissioner was in attendance, several District Councillors asked the TD to review the speed limit set on the section of the Tai Po Road in which the accident of 10 February 2018 had occurred. [DC-2(B); pages 783-800, that paragraphs 17, 21 and 24] For her part, the Commissioner said “the Department will consider appropriate accident-improvement measures in consideration of the number and nature of past accidents, road design, site environment, and the impact on the drivers.” [DC-2(B); page 798, paragraph 34(ii)]

*Reduction of speed limit*

126. In a paper circulated to the Tai Po District Council, dated 9 April 2018, the TD said that it had reviewed the speed limit of the road section of the Tai Po Road between Tsun King Road, Sha Tin and Yung Yi Road and had done so in accordance with the “established regular mechanism to review the speed limit of the road with a view to ensuring road safety and maintaining smooth traffic.” In doing so, the TD had regard to the following factors: [TD-5, page 1617-1 to 1617-4]

- “(a) traffic accident records of the subject road section;
- (b) speeds of vehicles travelling on that road section; and
- (c) road environment and features such as gradient, sightline of motorists, road intersections, pedestrian traffic, etc.”

127. Superintendent Lee Tai Wai testified that two or three years earlier he had attended meetings of the Working Group on Speed Limit Review. It had been convened first in 2000. It was made up of representatives of the TD, the Police, the Hong Kong Automobile Association and the Institute of Advanced Motorists Hong Kong met at the headquarters of the TD, which provided secretarial services

and set the agenda. [TD-1, page 121; Transcript Day 17; 24 September 2018, pages 107-112]

128. Of that exercise, in respect of the section of the Tai Po Road between Chek Nai Ping and Yung Yi, the TD noted: [TD-5; page 1617-2, paragraph 4(c)]

“The traffic accident rate of the relevant road section was on a rising trend and above the overall average traffic accident rate in Hong Kong in the past year. The detected vehicular speeds in recent months were lower than those of the past and generally below the current speed limit of 70 km/hour. In addition, as there have been many large-scale development projects being completed or constructed in Pak Shek Kok in recent years, there has been a significant increase in the vehicular traffic on this road section via the flyover at Pok Yin Road, Yau King Lane and Lookout Link. The proportion of heavy vehicles has been on the rise also.”

129. In the result, noting that the Working Group on Speed Limit Review agreed with the recommendations and that the Highways Department was arranging to direct appropriate traffic signs, the TD concluded: [TD-5; page 1617-2 to 1617-3, paragraph 4(c)]

“In light of the aforementioned new circumstances, the speed limit of the relevant road section has scope for downward adjustment. The speed limit of 70km/hour is recommended to be lowered to 50km/hour for further enhancing road safety.”

130. Finally, TD stated that the new speed limit would come into force on 27 April 2018 and noted: [TD-5; page 1617-3, paragraph 6]

“TD is currently seeking resources and aims to firm up the installation of a fixed speed enforcement camera at the section near Chek Nai Ping of Tai Po Road... before the end of this year.”

*Planned installation of a fixed speed enforcement camera*

131. The THB, Security Bureau and Hong Kong Police Force’s paper, “*Law Enforcement against Moving Traffic Offences*”, which reference was made earlier,

noted that there were only “24 speed enforcement cameras operating at 130 camera housing locations across the territory.” [SEC-3; page 1420, paragraph 7] In her evidence Chief Superintendent Yau Sin Man explained that “from time to time, the cameras are placed at different housings.” She went on to say that when the THB obtained funding from the Legislative Council the THB “provided a certain ratio”. However, she said that “(t)he latest discussion is such that there should be a camera placed at each housing. I think that is our main focus of the discussion.” In that context, she explained that the delay in locating a fixed speed camera on the Tai Po Road as recommended in the TD’s discussion paper circulated to the Tai Po District Council, dated 9 April 2018, was related to funding which she had been informed had now been obtained by the TD. [Transcript Day 17; 24 September 2018, pages 141-143]

*Earlier requests for additional safety measures on Tai Po Road*

132. By letter, dated 5 June 2017, addressed to the Traffic Branch Headquarters of the Hong Kong Police Force at Siu Lek Yuen, Tai Po District Councillor Mr Chan Siu Kuen said that he had received complaints “from the residents in the vicinity of Tai Po Road because there are often speeding and unlawful motor racing on Tai Po Road”, as a result of which he requested the installation “as soon as possible (of) a “speed camera” on Tai Po Road near the location between Deerhill Bay and Tai Po Mei”. [DC-2(B), page 840-74]

133. In reply, by letter dated 16 June 2017, copied to senior police officers, police officer Lam Chi Hang replied: [DC-2(B), page 840-73]

“The locations for installation of fixed speed monitoring cameras are mainly determined by the Transport Department. After installation, the Police is responsible for taking enforcement action. This Office understands that the Transport Department currently has no plans to install fixed speed monitoring cameras in the captioned road section.”

134. For his part, Superintendent Lee Tai Wai said that the matter at issue being a speed camera and not speed limits was not a matter that would have been referred

to the Working Group on Speed Limit Review. [Transcript Day 17; 24 September 2015, page 119]

135. At the meeting of the Traffic and Transport Committee of the Tai Po District Council on 13 March 2015, the request of Mrs Juliet Ashton of the Japanese International School, in a letter dated 10 February 2015, that the speed limit in the vicinity of the school near Deerhill Bay on the Tai Po Road be reduced from 70 km/h to 50 km/h was addressed. The request was made in light of the fatal accident of a pedestrian which had occurred on the road outside the school. The representative of the TD in attendance at the meeting said “the TD would examine whether the present speed limit of the road section was appropriate.” [DC-2(B), pages 840-84, 840-91 to 840-93]

136. For his part, Superintendent Lee Tai Wai said that, given that the representative of the TD had dealt with the matter at the meeting, the Police would not have referred the matter to the Working Group on Speed Limit Review. [Transcript day 17; 24 September 2018, page 124]

137. In a letter, dated 24 July 2015, to Mr Wong Kwok Leung of the TD, Tai Po District Councillor Mr Chan Siu Kuen pursued the request “to expeditiously install the “50km” speed limit signs” around the bend of Savanna Garden on Tai Po Road. [DC-2(B), page 840-75] In his evidence, Mr Chan confirmed that the letter was a request that the speed limit be reduced from 70km/h to 50km/h. [Transcript Day 6; 14 July 2018, page 9] Mr Chan said that “the Transport Department did not give me a direct reply. However, I have spoken to them on the phone.” He said that he had telephone conversations with Mr Wong in which he had been told that before the speed limit could be changed a study and consultations had to be conducted. [Transcript Day 6; 14 July 2018, pages 9-11]

138. For its part, in written submissions, dated 13 July 2018, the TD said “the TD did not receive the letter dated 24 July 2015 from the Councillor Mr Chan Siu Kuen according to the record.” [TD-1; page 396, paragraph 11]



139. For his part, Superintendent Lee Tai Wai said that the correspondence was not copied to the Police, who had no records of the matter. [Transcript Day 17; 24 September 2018, page 130]

## CHAPTER 8 – Working Group on the Enhancement of Safety of Franchised Buses

### *Membership and terms of reference*

140. Of the establishment of the Working Group and its purpose, the Committee was informed in the TD’s written submissions, dated 24 April 2018, that: [TD-1; page 95, paragraph 4]

“...the TD set up a Working Group (“WG”) with representatives from all FB companies and bus manufacturers in mid-March 2018 to review the technical feasibility and desirability of installing some new safety devices or applying new technology on the safety devices of FB for enhancing protection to bus passengers.”

141. The TD’s submissions went on to assert that the Working Group was also giving consideration to the training of bus captains, stating that the Working Group would: [TD-1; page 131, paragraph 15]

“... review, among others, the training arrangements for the bus captains (including both full-time and part-time). The Working Group will focus on the need to align the **re-training requirements** for drivers who have committed key traffic offences or have traffic accident records.

....

Whilst the review is still underway, *we have floated the idea of promulgating a set of **guidelines**, setting out the key principles and parameters for the induction training and ancillary training of bus captains (covering the structure of the training courses, relative weighting of each of the modules, range of duration, etc.) as well as the internal monitoring and audit mechanism within FB operators.* General feedback from FB operator representatives is positive. All the FB operators agree to work towards putting in place a common structure for the induction or ancillary training for bus captains, while reckoning the need to allow some flexibility for different FB operators to tailor make their training courses (such as duration, frequency, etc.) to meet the different scale of operation and operating environments of individual FB companies...”

[Italics added.]

142. By a letter dated 7 May 2018, the TD provided the Committee with a document entitled: [TD-1, page 351]

**“Working Group on Enhancement of Safety of Franchised Buses**

Scope of Work”

The scope of work of the Working Group was set out in three separate items. The first item was concerned with the training of bus captains and the third with the “technical feasibility, cost-effectiveness, applicability and any other issues relating to the installation of on-vehicle safety device”, including seven stipulated items. The second item stated:

“To examine the technical feasibility, cost effectiveness, applicability and any other issues relating to installation of seat belts on all seats other than exposed seats;”

Of training of bus captains, it stated:

“(1) To review and enhance the training arrangements targeting different types of bus captains (e.g. new recruits, in-service captains and in-service captains having committed traffic offence or having involved in accident, etc.);”

*Safety devices*

*(i) Seat belts*

143. Having noted that “... the 3 double-decked bus manufacturers (i.e. Alexander Dennis Limited “ADL”, Volvo and MAN)” have confirmed that it was technically feasible to install seat belts for all seats, the TD’s submissions stated **“all FB operators indicate that they agree to incorporate this requirement for procurement of new buses”** [TD-1; page 96, paragraph 7]

144. The submissions noted that the feasibility and costs of retrofitting seat belts to existing buses was being explored, but noted “the retrofitting work will involve substantial modifications”. [TD-1; page 97, paragraph 8]

(ii) *Electronic Stability Control (“ESC”) and Roll Stability Control (“RSC”)*

145. Having noted that 170 franchised buses in Hong Kong had been fitted with ESC, the TD’s submissions stated that **“all FB operators agree to incorporate the requirement of installing ESC system (which will include the function of RSC) for procurement of new buses.”** [TD-1; page 100, paragraph 15]

(iii) *Speed limiters*

146. Having noted that “... all FBs are now equipped with speed limiters to limit the maximum speed of a bus at 70 km/hour”, which operate by cutting off the fuel supply, the TD’s submissions stated “(i)n a free rolling situation, the vehicle speed is not determined by engine revolutions or gearing”. Then, having said that the three bus manufacturers advised that it was technically feasible to “engage retarder” to slow down a bus that was travelling downhill, the TD’s submissions stated **“all the FB operators indicate that they agree to incorporate this requirement for procurement of new buses.”** [TD-1; page 101, paragraphs 16-18]

(iv) *Geo-fencing*

147. The TD’s submissions stated that geo-fencing provides “a variable speed limiting function” within a predefined boundary, the position of the vehicle being determined by a GPS signal interacting with a digital map, with the speed of the vehicle being determined by a speed sensor. Further, it was stated that retardation of speed was achieved by “... a mechanism that retards the engine ignition timing for a short period or cuts the fuel supply or even applies the braking system.” The submissions stated that, whilst the three bus manufacturers said that system was “theoretically feasible”, nevertheless they expressed reservations about the accuracy of the Global Positioning System (“GPS”) signals as affected by high-rise buildings. Further, it was noted that it was a concern of the franchised bus operators that drivers might be encouraged to rely on the automatic function of the system rather than driving according to the prevailing conditions. [TD-1; pages 101-102, paragraphs 19-20]

(v) *Speed display unit (“SDU”)*

148. The TD’s submissions noted that the speed of a franchised bus, as recorded by the vehicle speed sensor, could be displayed on a screen visible to passengers on the bus, as was the requirement in Public Light Buses (“PLB”). However, noting that the franchised bus operators were concerned that the display of the information “would create conflicts and arguments between the bus captain and passengers”, the submissions concluded by stating “The FB operators consider that the SDU is not conducive in enhancing bus safety.” [TD-1; page 103, paragraph 22]

(vi) *Collision prevention and lane keeping devices*

149. The TD’s submissions noted that collision prevention systems, which relied on one of radar, laser beam or camera, provide an alert based on the distance of the vehicle in front of the vehicle in which the system was installed. Failure to react to the alert activated the braking system. Lane keeping systems deploy a forward-looking camera which detects lane markings on the road and provides corrective steering or braking or a warning.

150. Having noted the reservations of the three bus manufacturers to the use of the lane keeping system, given the necessity in Hong Kong for vehicles to change lanes frequently, and the less than positive experience of some of the franchised bus operators who had conducted trials of the systems, the TD’s submissions concluded “the FB operators do not consider that the installation of collision prevention and lane keeping devices are effective for enhancing the safe operation of FB services.” [TD-1; page 105, paragraph 26]

(vii) *Driver monitoring device*

151. The TD’s submissions noted that systems for monitoring the drowsiness/attention of drivers as they drove deployed cameras and provided a visual/voice alert to the driver. The submissions stated that two franchised bus

operators proposed conducting 3-month trials of such a system on four of their buses, beginning in May 2018. [TD-1; page 106, paragraph 28]

*CTB/NWFB-Safety Committee and participation in the Working Group*

152. As noted earlier in his evidence, on 29 May 2018, Mr Samuel Cheng, Managing Director of CTB/NWFB, said that about three weeks earlier CTB/NWFB had constituted a *Safety Committee* of which he was the Chairman, which comprised the heads of the Operations, Engineering and Human Resources and Administration departments, Mr William Chung, Mr Paul Li and Mr Gareth Ng respectively, together with the Senior Operations Manager and the Senior Engineering Support Manager. He acknowledged that the Safety Committee had been constituted in consequence of the formation by the TD of the Working Group and that prior to it being constituted some of those responsibilities fell to the head of Operations, who was responsible for service quality and the investigation of bus captains driving behaviour and accidents. The companies had relied mainly on their bus suppliers to acquaint them with proven developments in technology. [Transcript Day 3; 29 May 2018, pages 24-26] However, in 2014 they had acted on their own initiative, having been approached by an Israeli supplier, Neshtech as a result of which they had conducted an unsuccessful trial of Mobileye.

*Active speed limiter and electronic stability control*

153. Mr Samuel Cheng and Mr Paul Li confirmed that the decisions of the companies to procure new buses fitted with an active speed limiting system and with electronic stability control came after the suggestion had been made on an agenda provided by the TD to the Working Group. The companies had asked their bus suppliers to confirm whether or not retrofitting the devices was feasible and to provide an estimate of costs. [Transcript Day 4; 30 May 2018, pages 38-43 and 47-48]

*Geo-fencing*

154. Of the geo-fencing system, Mr William Chung said that the accuracy of the GPS signal in Hong Kong was a matter of concern but that the companies intended to obtain devices to test their accuracy for use in a geo-fencing system. [Transcript Day 4; 30 May 2018, page 46]

*Collision prevention*

155. Mr William Chung said that in 2014 the companies had tested a collision prevention system, Mobileye, but determined that it produced too many false alerts so that the companies determined not to install a collision prevention system or a system that gave an alert for lane changing. [Transcript Day 4; 30 May 2018, pages 50-52]

*Driver drowsiness/alertness*

156. Of the driver alertness monitoring system, Mr Paul Li said that the companies had made enquiries of three suppliers and were in the process of testing the efficacy of the systems and receiving quotations of the cost. One of the suppliers was Guardian, which the companies were aware, was the company from which the Singapore Land Transport Authority had procured the driver alertness monitoring system mandated for use on franchised buses in Singapore. [Transcript Day 4; 30 May 2018, pages 53-54, 57-58]

*Seat belts*

157. Of the installation of seat belts on franchised buses operated by the companies, Mr Paul Li said their companies had agreed that new buses delivered from June 2019 would be provided with three-point safety belts for all seats. However, in their written submissions, confirmed by Mr Samuel Cheng in his oral evidence, the companies observed that very few passengers seated in the “exposed

seats”, which were fitted with seat belts, wore those seat belts. Mr Cheng said: [Transcript Day 4; 30 May 2018, pages 59-61]

“If it is not mandated by law, then it is impossible to enforce the law. Currently, there is no requirement that when you are on a bus you have to put on your seat belt. Even if it is mandated by law, in the absence of law enforcement, I’m afraid it’s also a waste of resources.”

158. Mr William Chung said that when the companies raised with the TD their reservations about the limited use of seat belts on franchised buses by passengers, the TD had responded by saying that at least if it was available, a passenger had a choice to make as to whether or not he wore a seat belt. Of the consideration of retrofitting seat belts to existing franchised buses, Mr Paul Li said that ADL had indicated that it was feasible to fit seat belts on the upper deck to their buses manufactured post-2013, but that the preliminary estimate of costs was £15,000-£20,000 per vehicle. Given that the companies had 1,100 such buses, retrofitting seat belts to those buses would cost \$180 million to \$240 million. [Transcript Day 4; 30 May 2018, pages 61 and 67]

159. In his evidence, Chief Superintendent Baker endorsed the view of the TD in respect of affording passengers an option “I think that passengers should have an option to enable them to travel as safely as possible, ... (I)f seat belts are not fitted then that option is denied.” [Transcript Day 17, 24 September 2018, page 48] However, he went on to acknowledge: [Transcript Day 17, 24 September 2018, pages 48-49]

“...it can be seen from personal experience that most people don’t use seat belts on public light buses, and we can expect the same thing on franchised buses, for the reasons that have been discussed: convenience, short journeys, things like that.

So enforcement will be an issue, and I don’t think the police would be able to regularly enforce such regulations, if they existed.”



*NLB's participation in the Working Group*

160. For his part, Mr James Wong, Managing Director of NLB, acknowledged that NLB had participated in the three meetings of the working group convened by the TD up until then, held on 27 March, 30 May and 12 June 2018 at which there had been discussions in respect of the installation and use of safety devices on franchised buses. [Transcript Day 5; 19 June 2018, page117]

*Geo-fencing*

161. Of the use of geo-fencing to monitor or control speed, Mr Timothy Wong, Director of the NLB, said that NLB was “open-minded”. He suggested that fewer interferences for roads on Lantau made it more likely that it would be “easier for us to send the GPS data correctly to our server”. Further, he said that “What is important is that for the real-time transmission of the data from the GPS, and for it to interface with the computer on board, it takes time to develop the arrangement.” [Transcript Day 5; 19 June 2018, page 119]

*Speed Display Unit*

162. Of the use of speed display unit, Mr James Wong expressed concerns as to the likely response of passengers, if they were thereby informed that the bus captain was exceeding the speed limit, “...there is a high possibility, however, that the passengers will confront the bus captains.” Of that, he said “This is the last thing that we would like to see.” Rather, he said “...if there is a technical means to make sure there is no speeding of the buses, then we would prefer to do that.” [Transcript Day 5; 19 June 2018, pages 137-138]

*Electronic Stability Control*

163. Of the use of an electronic stability control system, Mr Patrick Yeung of NLB said: [Transcript Day 5; 19 June 2018, pages 81-82]

“There are two functions. One is to stop over-steering and to improve the steering. The other is anti-tilting. Before the critical speed is reached, the speed of the vehicle will be reduced to maintain stability of the vehicle.”

164. Mr Yeung said that rather than installing another alarm system, which might disturb the bus captain, “...we aim to enhance the stability of the vehicle itself.” [Transcript Day 5; 19 June 2018, page 82]

### *Ongoing work of the Working Group*

165. Having confirmed in her evidence on 8 May 2018 that minutes were kept of the meetings of the Working Group, when asked to disclose them to the Committee the Commissioner said: [Transcript Day 2; 8 May 2018, page 6]

“As far as minutes are concerned, because as a general rule it is comprised of internal deliberations, and our general principle is that we will not disclose the internal deliberations which may comprise incomplete analysis and research and may affect candid discussion within the government.”

166. Notwithstanding, the initial caution about providing the Committee with the minutes of the Working Group, the Committee was provided first with redacted “Notes” and “Draft Notes” of meetings of the Working Group and its component groups, namely the Technical Meeting on Training Arrangements for Bus Captains and the Sub-Working Group on On-Vehicle Safety Devices for Franchised Buses and finally, apparently with the agreement of all the parties of the Working Group, on 14 September 2018, with an un-redacted version of those documents.

### *Seat belts*

#### *13 March 2018*

167. The Notes of the first meeting of the Working Group, on 13 March 2018, at which representatives of all the franchised bus operators were in attendance, stated that, in respect of the issue of the installation of seat belts on franchised buses,

Ms Rachel Kwan, the Assistant Commissioner for Transport said: [KMB-12(A), page 4869-6, paragraph 13]

“Taking the technical feasibility into the account, TD proposed to install seat belts on all seats for new buses and retrofit seat belts on all seats on the existing buses.”

168. It was noted that the representatives of KMB/LWB and CTB/NWFB all agreed that, whilst it was feasible to have seat belts installed on buses at the time of procurement, difficulties arose subsequently. Installation of seat belts on the lower deck would increase the structural loading of buses. The floor of the lower deck was made up largely of fibreglass, which would make retrofitting difficult.

169. The Notes stated that the representatives of CTB/NWFB: [KMB-12(A), page 4869-6, paragraph 16]

“...queried the practicability of installation of seat belts on all seats to enhance passengers safety because it would be difficult for the bus captains to ensure passengers on buses wearing seat belts. Besides, CTB/NWFB also raised the concerns on the need of wearing seat belt by standees who could not be provided with seat belts.”

170. Of the response of the TD, the Notes stated: [KMB-12(A), page 4869-6, paragraph 16]

“TD advised that there were requests for a comprehensive review on seat belt installation on bus after the traffic accidents. *It had been more than a decade since the last review on the installation of seat belt on buses.* The objective of the prevailing discussion should focus on the technical feasibility, cost-effectiveness, applicability and other issues relating to installation of seat belts on all seats other than exposed seats.”<sup>10</sup>

[Italics added.]

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<sup>10</sup> 2007

It is to be noted that the issue of retrofitting seat belts on franchised buses and, in particular a review conducted of the practice of overseas jurisdictions, was addressed in the paper entitled “*Progress on Measures to Enhance Safety of Franchised Bus Operation*”, dated January 2007, prepared by the TD for the Legislative Council Panel on Transport. [SEC-1; pages 274-283 at pages 275-276, paragraphs 3-4]

23 April 2018

171. The Notes of the second meeting of the Working Group, on 23 April 2018, stated: [KMB-12(A), page 4887-5, paragraph 16]

“KMB/LW supplemented that it would cost about an additional of £5000 for each double-decker to install seat belts for all passenger seats. All bus operators agreed to incorporate this requirement in their new single-decked buses and double-decked buses to be procured.”

172. The Notes went on to state that: [KMB-12(A), page 4887-6, paragraph 18]

“For existing buses, CTB/NWFB and KMB/LW advised that the technical feasibility for installation of the seat belts on all passenger seats at upper deck was still uncertain. Even if it proved to be technical feasible, the subject still needed further deliberation taking into consideration the financial implications and impacts on bus operation (i.e. the availability of bus) due to the time required for the substantial modification of buses.”

The paper stated that information had been collected from six countries and the state of Victoria, the same jurisdictions to which reference was made in the paper prepared for the Legislative Council Panel on Transport meeting of 25 July 2018. The former paper asserted: [paragraph 4]

“So far, we have not found any country that have (sic) legal requirements for the provision of seat belts on passenger seats of buses designed for urban use and are allowed to carry standing passengers. According to the transport authorities of these countries, the benefit of imposing a seat belt requirement in their buses is uncertain.”

The issues of retrofitting seat belts on franchised buses and that of requiring passengers to wear seat belts where they were provided was addressed in the paper entitled “*Progress on Measures to Enhance Safety of Franchised Bus Operation*”, dated July 2007, prepared by the TD for the Legislative Council Panel on Transport. [SEC-1; pages 291-299] Of the latter issue, the paper noted: [SEC-1; page 295, paragraph 8]

“There are also practical difficulties for imposing such requirement on buses deployed on urban bus routes or buses that allow standing passengers. The enforcement of such requirement by the Police on franchised buses is much more difficult than on public light buses since passengers can stand or move around in a bus even when the bus is in motion.”

2004

The issue of the installation of seat belts on franchised buses had been addressed in the paper entitled “*Report on Franchised Bus Operators’ Review of Arrangements to Enhance Safety of Franchised Bus Operation*”, dated May 2004, prepared by the TD for the Legislative Council Panel on Transport. It stated that information had been collected from “6 overseas countries and the European Union” and observed: [SEC-1; pages 183-199 at pages 188-189, paragraph 23]

“Most countries examined require the installation of seat belt on driver’s seat but do not require the installation of seat belts on other seats on buses. For countries where the seat belt requirement applies, urban bus routes are exempted. Studies conducted in Australia and Canada indicated that the additional safety benefit of installing seat belt on all seats in a bus might not be as great as envisaged.”

*21 June 2018*

173. The Notes of the third meeting of the Working Group, on 21 June 2018, stated: [KMB-12(A); pages 4908-7 to 4908-8, paragraphs 25-26]

“The Meeting noted that it was technically feasible to supply all new buses with seat belts for all passenger seats conforming to relevant international standards and all FB operators committed that all new FBs would be incorporated with seat belts on all passenger seats.

As for existing buses, the Meeting noted that retrofitting seat belts on all passenger seats of the upper deck of some existing double-deck bus models should be feasible. KMB/LW advised that they would retrofit seat belts on all passenger seats of the upper deck or deploy buses with seat belts on all passenger seats on routes which serve long haul passengers or are operating on expressways with limited boarding or alighting activities at the enroute stops.

[Post-meeting note: KMB/LW advised that there would be about 400 new buses with seat belts on all passenger seats by mid-2019. KMB/LW would deploy these buses to the required routes. Retrofitting seat belts to existing buses would depend on the actual situation/requirement at that moment.]”

174. The Notes went on to state: [KMB-12(A); page 4908-8, paragraph 27]

“...the Meeting had discussed and come to the views that having regard to the technical feasibility in retrofitting seat belts on existing buses; operation of FBs in Hong Kong which were mostly deployed on urban routes with standing passengers; and the costs and downtime incurred to retrofit seat belts on all existing buses, as well as overseas experiences, that there were insufficient justifications to make it a mandatory requirement for all buses to be fitted with seat belts on all passenger seats.”

175. Of the stance taken by CTB/NWFB, the Notes stated: [KMB-12(A); page 4908-8, paragraph 28]

“CTB/NWFB was requested to consider retrofitting seat belts on all passenger seats on the upper deck for the buses operating selected bus routes for long haul passengers or

operating on expressways with limited boarding and alighting activities along the routes. CTB/NWFB indicated that it would be difficult for their companies to allocate their buses to solely operate specific routes as their buses would serve a number of routes in a day under their existing operations. In addition, CTB/NWFB *observed that very few passengers would make use of seat belts*, it would not be financially viable to retrofit existing buses with seat belts on all passenger seats. CTB/NWFB requested the Government to fund the retrofit of seat belts to existing buses if that was what the government wanted.” [Italics added.]

*Enhancement of the Safety of Franchised Buses: 25 July 2018*

176. By a letter, dated 19 July 2018, the TD provided the Committee with a paper entitled *Enhancement of Safety of Franchised Buses*, prepared by the THB and TD for discussion of the Legislative Council Panel on Transport for their meeting of 25 July 2018, stated that it set out the findings and recommendations of the Working Group to further enhance safety of franchised buses. [TD-1; pages 403-404, paragraphs 1 and 3]

*Overseas experience/practices*

177. Of the issue of the installation of seat belts on passenger seats on franchised buses in Hong Kong, prior to making recommendations, the paper stated that the Working Group had “...reviewed the prevailing overseas practices or requirements on the installation and wearing of seat belts on buses.” The attached Annex stipulated that the jurisdictions reviewed were the United States of America, the United Kingdom, the Netherlands, the state of Victoria, New Zealand, Canada and Singapore. Of the result of that review, it was stated: [TD-1; page 409, paragraph 15]

“Currently, for inter-cities or cross-boundary routes, some overseas jurisdictions (e.g. United States, United Kingdom and Netherlands) have mandated the provision of seat belts for all passenger seats, while others (e.g. United Kingdom, Netherlands, and Australia (Victoria) have imposed mandatory requirement of wearing seat belts.

Nevertheless, *for buses serving urban routes buses or buses allowed to carry standing passengers, none of the overseas jurisdictions that the WG has reviewed thus far have statutory requirement for the provision of seat belts on passenger seats.* According to the transport authorities of those jurisdictions, the urban buses are typically used for short journeys, in terms of both time and distance, and undertaken at moderate speeds on urban routes. Thus, no seat belt requirement at passenger seats on these urban buses has been imposed.” [Italics added.]

178. Of the recommendations of the Working Group in respect of the installation of seat belts on passenger seats on franchised buses, having noted that all the franchised bus operators agreed to do so, the paper stated that it was recommended that “seat belts should be provided for **all seats** in future procurement of **new buses**”. [TD-1; page 409, paragraph 16(a)]

179. Having noted that the bus manufacturers had advised that the floor structure of existing buses, particularly that of the lower deck, was not designed for the installation of seat belts so that the retrofit of seat belts on passenger seats “will involve substantial modification and reinforcement of the bus chassis”, the paper noted that it was their advice that “...it is technically impracticable, if not infeasible, to retrofit seat belts on all passenger seats of both upper and lower decks.” Nevertheless, it was asserted “it should be more feasible to retrofit seat belts on **all passenger seats of the upper deck only in some vehicle models** of the existing double-deck fleet. [TD-1; page 408, paragraphs 12-13]

180. Having noted that the bus manufacturers did not have resources available in Hong Kong to conduct the retrofitting work, the paper noted the reservation of some bus operators, namely that “retrofitting of seat belts would not only incur significant financial implication, but also considerable time and manpower resources, not to mention the need to re-deploy or procure additional buses to maintain the existing bus service level during the whole process.” Of the “significant financial implication” a footnote stated “With the absence of detailed study on the technical details for retrofitting seat belts on all seats in the upper deck,

a rough estimate on the costs of retrofitting a bus is about HK\$200,000 (excluding manpower and overhead costs).” [TD-1; page 409, paragraph 14]

181. Nevertheless, the paper stated that the Working Group recommended: [TD-1; page 409, paragraph 16(b)]

“subject to further assessment on the technical, operational and financial feasibility, consideration may be given to retrofitting all seats in the **upper deck with seat belts on buses deployed for specific bus routes**, i.e. long-haul routes which are operated via expressways with relatively few bus stops.”

A footnote stated that the franchised bus operators said that about 2,000 buses were deployed on such routes.

182. For his part, Chief Superintendent Baker said that he was not aware of the existence of the Working Group nor was he aware whether or not the police had been consulted when the recommendations were being formulated. [Transcript Day 17; 24 September 2018, pages 37 and 40] Of the recommendations that seat belts be fitted on all new buses and that they should be retrofitted to existing buses where that was feasible, Chief Superintendent Baker said: [Transcript Day 17; 24 September 2018, page 47]

“...the police believe that seat belts save lives...

Now, speaking purely from a road safety perspective, we would encourage the use of seat belts as widely as possible.”

183. Chief Superintendent Baker went on to say: [Transcript Day 17; 24 September 2018, page 48]

“I think that passengers should have an option to enable them to travel as safely as possible... if seat belts are not fitted then that option is denied.”



## *CHAPTER 9 – Recruitment and Training*

184. In their written submissions, CTB/NWFB said that in March 2018 they had begun exploring the feasibility and effectiveness of conducting a psychological assessment of bus captain applicants. Mr Gareth Ng of CTB/NWFB said that the companies had held meetings with a clinical psychologist and a psychologist academic and proposed to have a meeting with a professor of mechanical engineering who had relevant experience. [Transcript Day 3; 29 May 2018, page 85]

### *Training*

#### *CTB/NWFB*

185. In their written submissions, CTB/NWFB said that all newly recruited bus captains were provided with training. [CTB-1; page 37, paragraph 10] Full-time bus captains who did not possess a bus driving licence were given 15 days of driver training in groups of five recruits to an instructor, after which they sat the bus driver's licence test. If they failed the test, they were provided with another 5 days of driver training. Having passed the test, full-time recruits were provided with "induction training", which included one day in a classroom and 10 to 15 days of driver training with a total of 24 hours of driving. Recruits who possessed a bus driving licence were provided with the "induction training" only. At the completion of their respective courses, the driving skills of all recruited bus drivers were assessed by CTB/NWFB inspectors. Mr Samuel Cheng of CTB/NWFB said that such instructors held driving instructor licences and were very experienced bus captains themselves. [Transcript Day 3; 29 May 2018, page 93]

#### *Refresher driving course*

186. Full-time bus captains are provided with refresher training course in a classroom at least once every 3 years. In addition to receiving instruction on defensive driving concepts, emergency handling and the analysis of traffic

accidents, the course included customer services and emotional quotient (“EQ”) management. [CTB-1, page 38]

*Remedial driving course*

187. On incurring eight or more driving offence points, full-time and part-time bus captains are required to attend a one-day remedial training course. Half a day is spent in the classroom, in which the bus captain is instructed in defensive driving and in maintaining a proper attitude in driving. In the second half of the day, the bus captain’s driving is assessed by a driving inspector. Finally, the bus captain is required to participate in a written driving test. [CTB-1, page 38]

188. In their submissions of 18 May 2018, and in Mr Samuel Cheng’s opening statement in evidence on behalf of CTB/NWFB, it was asserted that, in their review of training, the Safety Committee had identified areas which required improvement. [Transcript Day 3; 29 May 2018, pages 2-3; CTB-1, pages 54-63]

- First, in order to improve the familiarity of bus captains with routes, in future they would be required not only to travel as a passenger on a bus plying a route, to which the bus captain would be assigned, but also they were required to drive that route in a bus without passengers. [CTB-1, page 60, subparagraphs 6(f)-(g)]
- Secondly, in future newly recruited part-time bus captains would be required to undergo sixteen hours of driving training, rather than the current eight hours, and in addition they would receive four hours of classroom training, which would include customer services, EQ management and traffic safety awareness. [CTB-1, pages 54-55; Transcript Day 3; 29 May 2018, page 113]
- Thirdly, in future, part-time bus captains would be required to attend refresher training in the same way as full-time bus captains, namely once every three years. [Transcript Day 3; 29 May 2018, page 114]

189. In his evidence, Mr Samuel Cheng accepted the fact that 23.7% of bus captains who had undergone a remedial driving course were involved in culpable driving accidents within 6 months was a matter of concern. He said that the

companies plan to perform a more detailed analysis of the causes of each accident. [Transcript Day 3; 29 May 2018, pages 102-103]

*NLB*

190. In his opening statement at the hearing on 19 June 2018, Mr James Wong of NLB said of measures that NLB “have implemented and will implement” in recent months were: [Transcript day 5; 19 June 2018, page 2]

“First, increasing the number of hours and the instructor-to-trainee ratio of driving training for our bus captains; ...

third, setting up a Bus Captain Training School to assist qualified persons in obtaining bus driving licences; and

fourthly, making reference to international standards in raising the standard of safe driving.”

191. In their written submissions, dated 24 April 2018, NLB stated that they only recruited bus captains, either full-time or part-time, who held bus driving licences. [NLB-1; page 22, paragraph 10] Those bus captains were provided with five days of training, which recently had been increased to six days. Finally, bus captains were required to pass an assessment made by an NLB driving instructor before they began duty. Refresher training including service enhancement training, of one to two days was provided to serving bus captains. Training of one to three days was provided to those bus captains who were found to be inadequate. [NLB-2; page 467, Annex 10; Transcript Day 5; 19 June 2018, page 67]

192. However, in his evidence, Mr Richard Lee said that NLB was in the process of establishing a Training School for bus captains and had applied to the TD for restricted instructor licences for franchised buses (“GP2”), so that NLB would be able to train bus captain recruits to sit the bus driving licence examination. It was proposed that the number of bus driving instructors be increased from four to six. If the Training School was established as envisaged,

training of bus captains who already held bus driving licences would be increased to nine days and training of those with a private car licence but not a bus licence, training would be increased to eighteen days. [Transcript Day 5; 19 June 2018, pages 67-72]

193. Mr Timothy Wong explained that the plan outlined by NLB in the FPP of seeking the cooperation of other franchised bus operators to train NLB bus captain recruits had been overtaken by the recruitment of Mr Richard Lee in 2018. [Transcript Day 5; 19 June 2018, page 76]

### *Part-time bus captains*

#### *CTB/NWFB*

194. Part-time bus captains were recruited mostly from those who held bus driver licences. Those recruits who had not worked previously for franchised buses were given 2 days of bus driving training, with a total of 8 hours driving, to familiarise them with bus models and the routes to which they would be assigned.

195. In their written submissions, dated 27 April 2018, CTB/NWFB offered an explanation for the employment of part-time bus captains. There are, they said, two peak periods of demand for bus services, namely 7:00 a.m. to 9:00 a.m. and 5:00 p.m. to 8:00 p.m. Of the consequences, it was said: [CTB-1; pages 28-29, paragraph 4(a)]

“...quite a number of our buses are operating for approximately 14 hours a day. Splitting these 14 hours between a full-time bus captain working for 10 hours and a part-time bus captain working for 4 hours can achieve the best operational efficiency. Otherwise we would need to deploy to 2 full-time bus captains each working for 7 hours a day, which is below their basic duty length of 8 hours. This will incur wastage and create additional burden on recruitment.”

196. In their written submissions, dated 27 April 2018, CTB/NWFB stated that their respective establishment of full-time bus captains was 2,193 and 1,607, whilst

they had 346 and 314 part-time bus captains respectively registered with those companies. [CTB-1; page 29, paragraph 4(a)]

197. In their written submissions, dated 18 May 2018, CTB/NWFB stated: [CTB-1; page 55, paragraph c)]

“Starting from 1 June 2018, to improve monitoring of rest time of part-time bus captains before commencing driving duties, we will mandatorily require all part-time bus captains, including those in-service and new recruits, to declare details of the working hours and working days pattern of their principal employment.”

Those details are to be obtained in written form from the current part-time bus captains and are to be obtained from future part time recruits.

198. Together with their letter to the Committee, dated 8 June 2018, CTB/NWFB provided a copy of a document entitled ‘DECLARATION FORM OF PART-TIME BUS CAPTAIN’. The form required a part-time bus captain to declare “all outside jobs”, including the name of the employer and the position occupied by the part-time bus captain. For some reason, the first information required was in respect of monies earned in outside employment. Secondly, detailed information was required in respect of the specific hours worked each day of the week, both in respect of daily “basic hours” and “overtime work” and whether that work was “shift” work. Further, information was required in respect of “rest day”. [CTB-3; page 571-1 to 571-2]

### *NLB*

199. In their written submissions, dated 24 April 2018, NLB stated that in February 2018, NLB employed 173 full-time bus captains and 50 part-time bus captains. The ratio of the employment of part-time bus captains in relation to the employment of full-time bus captains had increased significantly from 2015, when NLB employed 145 full-time bus captains and 26 part-time bus captains. [NLB-1, page 17] In his evidence, Mr James Wong said that the choice of whether to work full-time or part-time was a choice for the applicant for employment, not for

NLB. However, he suggested that, among other reasons, the explanation for that ratio of employees "...probably it is due to the fact that the pay isn't really that different". [Transcript Day 5; 19 June 2018, pages 6-7]

200. Of the information available to NLB of the nature and hours of work of other employment of part-time bus captains, Mr James Wong acknowledged that the application form for employment contain no requirement to state the number of hours worked elsewhere. [Transcript Day 5; 19 June 2018, page 11] However, Mr Benny Chan said:

"...we have enhanced the requirement that part-time bus captains declare to us their principal employment as well as the number of working hours, so as to safeguard us, so that we can meet the requirements of the Transport Department."

Mr Chan went on to say "it was introduced recently in June." [Transcript Day 5; 19 June 2018, page 9]

201. For his part, Mr James Wong said that those questions had been posed of part-time bus captains, some of whom had declared their other employment and the hours that they worked in that employment. He said: [Transcript Day 5; 19 June 2018, page 14]

"From the initial information we have received, there are part-time bus captains, according to them, that they are bus captains working for a hotel. According to the information supplied to the company, they work on average five days a week. Per working day, the average driving time is about eight hours. That is just an example."

Mr James Wong went on to say:

"There are 30 or so of them who have replied to us. It's about 80 per cent of our part-time bus captains, those 30 or so bus captains."

202. Notwithstanding those statements, the written submissions of NLB dated 27 June 2018, to which was attached a sample of the "new application form", stated:

"The new form will be introduced by year 2019."

*KMB*

203. In their Accident Report, dated 12 March 2018, the Special Committee of KMB stated under the heading Recruitment: [KMB-1(A); page 104, paragraph 13]

“Discontinuance of Employment of Part-Time BCs<sup>11</sup>”

KMB has discontinued the employment of all part-time BCs whose working hours fall below 18 hours per week. However, in order to meet the demand for bus services during peak hours, KMB has already offered the previous part-time BCs the option to convert to contract hourly rated BCs or to take up alternative duties in the Company.”

*Part-Time Drivers Union*

204. In their opening statement to the Committee in their evidence, the Part-Time Drivers Union explained that the union had been formed in consequence of the action taken by KMB: [Transcript Day 10; 31 July 2018, page 142]

“We are a group of part-time bus drivers who got together after the tragic accident on 10 February. Shortly after that, KMB have stopped duty allocation to us, and we were very upset about this. Because the immediate reaction after the accident was the driver was a part-time bus driver, and as a result, we as a group of part-time bus drivers were under immense unjust, unfounded and untrue attacks from other trade unions, other members of the public, which has led to a suspension of duty allocation to us.”

205. In their closing written submissions, having reiterated those sentiments, the Part-Time Drivers Union welcomed the changes that had taken place in “how franchised bus companies handled part-time bus captains”.

206. Of the changes in CTB/NWFB, they noted that the declaration required of part-time bus captains “contains information as to the name of full-time employers, daily and weekly work hours, income from such positions. These forms are acknowledged and signed by senior management with copies returned to the

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<sup>11</sup> “BC” means “bus captain”.

respective part-time bus captains”. Also they noted, with obvious approval, that annual refresher courses were now available to part time bus captains, which courses had previously been available to full-time employees only. [TU-1(D), page 294-20]

207. Of the changes in KMB, they said that: [TU-1(D), page 294-20]

“1-Part-time bus captains are required to make declaration on details about their full-time employment on an annual basis and undertake to notify the companies (of) any changes immediately;

2-Part-time bus captains are required to give consent to the companies to access their records in demerit points on an annual basis; and

3-Compulsory instructor supervised route training are offered to part-time bus captains on routes not previously served by such captains.”



*CHAPTER 10 – NLB’s use of non-franchised buses with drivers*

208. In their written submissions, NLB said that, with the agreement of the TD, in order to accommodate an upsurge in passenger usage at weekends and public holidays, NLB hired non-franchised buses and their drivers. The arrangement with the TD had been in place for over 20 years and was renewed twice per year and currently permitted for the use by NLB of 80 and 50 non-franchised buses, identified by their registration numbers, on Sundays/public holidays and Saturdays respectively.

209. Operation of the buses by NLB was subject to conditions imposed by TD, including that: [NLB-1, page 38]

“(d) the buses must be equipped with similar on-vehicle facilities such as, coin collection box, route destination display etc. for operating franchised service”

Mr James Wong said that he understood that the provision required, amongst other things the installation of a tachograph and a speed limiter.

210. Mr James Wong said that NLB had entered into a contract for the provision of the buses and drivers with Kwoon Chung Motors Company Limited (“KCM”), NLB’s ultimate holding company. [NLB-2, page 491] KCM shared the Openmatics reports in respect of the installation and commissioning of tachographs on the buses which NLB hired. [NLB-2&3, pages 500-501]

211. Mr James Wong acknowledged that there was no similar requirement of KCM to inform NLB of the qualifications and driving records of bus captains provided together with the hired buses. [Transcript Day 5; 19 June 2018, page 34] He said that NLB had yet to make a decision as to whether or not to require the provision of the information from KCM. [Transcript Day 5; 19 June 2018, pages 37 and 38]

212. In answer to the question of the Committee of whether or not “NLB is required to ensure that bus captains hired together with non-franchised buses from Kwoon Chung Motors Company Limited... comply with the ‘Guidelines on Bus Captains Working Hours, Rest Times and Meal Breaks’ ”, TD said in a reply, dated 20 July 2018: [TD-1, page 436]

“The Guidelines are not applied on NFB<sup>12</sup> drivers. The TD did not require NLB to provide the reports of compliance with the Guidelines in respect of the drivers of NFBs as they are not the employees of NLB. That said, NLB has taken initiative to take into account the Guidelines in arranging driving duty of the NFB drivers in actual operation.”

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<sup>12</sup> “NFB” means “non-franchised bus”.

*CHAPTER 11 – Tachograph/Telematics or ‘Black boxes’*

*The Hong Kong Institution of Highways and Transportation*

213. In their written submissions to the Committee, dated 17 May 2018, the Hong Kong Institution of Highways and Transportation said of the use of technological devices to assist in bus safety: [MISC-1(C), page 156-3]

“Driving behaviour is difficult to control, however some kind of device shall be in place to monitor the vehicle and driver along the whole journey, this may help the operator to monitor and control individual drivers driving behaviour. Such device is already available and shall be installed on all buses. Bus is running along fixed routing, it is feasible to check the driving manner along the route to identify whether the bus has been driven dangerously. Currently technology shall be able to provide on-line real-time monitoring, should any abnormal driving occur, warning alarm to the driver could be activate (sic) and send to operator’s central control room for immediate action. This may help to prevent accident caused by dangerous driving.”

214. Surprisingly, the technological devices considered by the Working Group did not include a consideration of new tachograph/telematics system.

*CTB*

215. In its submissions CTB and NWFB said that they intended to implement an “update to black-boxes with real-time capability” in the third quarter of 2018. The “real-time” capability of the system was described as being that the “black box system will emit an instant audio warning (i.e. a beeping sound) automatically through the black-box control panel in the driver cab to alert the bus captain whenever an overspeed event occurs.” [CTB-1; page 58, paragraph 4] Mr Kenneth Lit explained that the data would be transmitted to the company’s computers from the franchised bus every 15 seconds.

216. Mr Kenneth Lit said that in about 2015, in advance of the renewal of the CTB franchise, the TD made it a requirement that the company be in a position to provide an ETA of a bus to passengers. At their own initiative in 2017, the companies started to install a system called Real-Time System 2, which system would alert the bus captain when the bus was speeding. No such alert was given in respect of any other bad driving misbehaviour.

217. Of the current system, Mr Samuel Cheng said that the black boxes on buses recorded data in respect of excessive speed, acceleration, deceleration and, for example, whether or not the bus doors were open. An excessive speed report was generated when the bus travelled for 10 consecutive seconds at over 75 km/h and at over 55 km/h on 25 selected sections of roads with a speed limit of 50 km/h. He said that it was intended that the audio alert to be given to the bus captain of over speeding was to be limited to the existing parameters. The stipulation as to the time period of speeding was determined after consultations with the trade unions. One consideration was a need to avoid a bus captain braking sharply, if he noticed that he was travelling over the speed limit, rather than reducing speed more smoothly over a period of time.

218. Mr William Chung accepted that the 25 stipulated sections of road represented a very small proportion of the roads travelled on all of the routes plied by the companies. Mr Cheng said that it was planned to introduce into that system of monitoring of speeding additional randomly selected sections of roads to which a 50 km/h speed limit applied, but before that was done discussions would be held with trade unions.

219. Mr Cheng confirmed that the criteria employed in stipulating the 25 sections of road were that they were continuous downward slopes of significant length; or had sharp bends; all were the site of serious or frequent traffic accidents. Mr William Chung said that the view was taken in the companies that buses travelling at over 50 km/h on those sections of roads posed some danger. In June 2013, the initial eleven sections of roads had been identified. Subsequently, in September 2014 a further three sections had been identified and, finally, in March

2018 a further eleven sections of roads had been identified. All those sections of roads were described in detail in the Bus Captain Handbook, which was available to all bus captains.

220. Mr Samuel Cheng explained that currently the data from the black boxes installed on buses was uploaded to the computers of the company at the depots of the companies after the bus had completed service for the day. An automatic report of speeding was generated and over the ensuing period of about five days the driver was identified from data generated by the driver's use of an Octopus card when he began duty. Then, an email was generated automatically and sent to the operations division of the particular bus franchise in the companies. Thereafter, the appropriate disciplinary procedure of the identified driver was engaged.

221. Mr Samuel Cheng said that only in response to a passenger complaint, or when there had been an accident involving a franchised bus, was data other than excessive speed examined. No automatic reports were generated in respect of that data. [Transcript Day 4; 30 May 2018, page 18]

222. In their submissions, dated 15 October 2018, CTB said: [CTB-1, page 98]

“From 18 September 2018, we started monitoring the speed of our buses on all roads by applying the “Speed Limit” data provided by the Transport Department. The criteria for generating over speed event reports remain unchanged as follows:

- Speeds of over 55 km/h for more than 10 consecutive seconds on road sections with speed limit of 50 km/hr; or
- Speed of over 75 km/h for more than 10 consecutive seconds on road sections with speed limit of 70 k/hr or above.

We also introduced a real-time audio alert to remind bus captains to slow down under the following situations:

- Speed of over 53 km/hr for more than 5 consecutive seconds on road sections with speed limit of 50 km/hr; or

- Speed of over 73 km/hr for more than 5 consecutive seconds on road sections with speed limit of 70 km/hr or above.

We are liaising with our black-box supplier on the feasibility of providing real-time alert to bus captains when a harsh braking or sudden acceleration event occurs. We are studying the feasibility of generating harsh braking and sudden acceleration reports automatically to identify bus captains with frequent jerky driving events.”

### *KMB/LWB and NLB*

223. In their additional written submissions, dated 24 April 2018, KMB asserted that: [KMB-1(A); page 91, paragraph 19]

“Since 2015, KMB has taken the initiative to equip its buses with speed limiters, blackboxes and surveillance cameras to monitor the driving performance of bus captains as well as to assist in accident investigation. Such equipment has subsequently become part of the franchised requirements.”

224. In response to questions from the Committee that the particular franchise requirements be identified, in their written submissions, dated 18 May 2018, KMB asserted: [KMB-1(A), page 175]

“During the discussions of the new franchise, the Government has requested KMB to commit to adopt a list of enhanced safety features including but not limited to on-bus electronic data processing device (also known as black box), speed limiter and surveillance cameras, as the standard provisions when acquiring new buses (please refer to extracts of the letter from TD dated 10 March 2017...). KMB has given its undertaking to TD to implement these commitments under the new franchise.”

225. At the request of the Committee, KMB provided a copy of their letter to the TD, dated 10 March 2017 in which they undertook to abide by those commitments. Under the heading “*Provision of On-Bus Facilities*” and annexed to the letter stated: [KMB-9(B), page 3997]

“Pursuant to Clause 7 of the new franchise, KMB has committed:

- (a) to adopt the following features and facilities as the standard provisions when acquiring **new buses** after granting of the new franchise:

Service enhancement, barrier-free and elderly-friendly features and facilities:

(i)

...

(x)

Enhanced safety features:

(i)

..

(iii) Electronic Data Processing Device;”

226. For his part, Mr Leung Kin Wang agreed that KMB had not been asked by the TD to commit to any enhanced use of the black box or to any enhancement of its capabilities. [Transcript Day 12; 7 August 2018, page 80] There was no commitment by KMB to do anything. It is to be noted that the Legislative Council Brief, dated 28 March 2017, prepared by the THB to inform the Legislative Council of the circumstances in which the Chief Executive had ordered the grant of a new franchise to KMB, whilst referring at some length to the KMB’s service commitments, made no reference to a commitment by KMB to any enhanced safety features of the black box. [TD-2&3, pages 496-569] For its part, the TD acknowledged in respect of KMB’s 2017 commitments that “there was no particular updating in the written technical requirements in respect of electronic data processing devices/black boxes (which) (sic) are the same as those made in October 2003.” [TD-1; page 431, paragraph 6]

*Openmatics: supplier of telematics systems to KMB and LWB*

227. In a letter to the Committee, dated 26 June 2018, Zhong Lun Law Firm, acting on behalf of ZF Friedrichshafen AG and its subsidiaries ZF Services Hong Kong Limited and Openmatics s.r.o. said that on 16 April 2013 Openmatics had

entered into a contract to supply telematics systems to KMB and LWB. [BM-1, pages 64-72] On 14 July 2018 Mr Jan Kuliš, a systems engineer employed by Openmatics gave evidence by video link from Czech Republic. [Transcript Day 6; 14 July 2018, pages 136-177]

228. The telemetry units Openmatics supplied to the companies were first the “Mozart Box” and secondly, after it had been introduced in the summer of 2015, its successor the “Bach box”. The latter equipment had been supplied to KCM. By use of a driver feedback device, those units were capable of providing visual and acoustic feedback second by second of the fact that the vehicle had reached the threshold values in respect of speed, acceleration, deceleration, engine idling and the tilting angle of the bus. A beeping sound was emitted and a LED light lit if the respective calibrated thresholds were reached. It was necessary to calibrate the unit by inputting threshold values.

229. A screenshot depicted the calibrated threshold values of the Openmatic’s telemetry unit fitted to the KMB franchised bus involved in the accident on the Tai Po Road on 10 February 2018:

**Configuration of acceleration values**

*Acceleration signal source	[change in vehicle speed]
*Acceleration [m/s <sup>2</sup> ]	[1.15]
*Deceleration [m/s <sup>2</sup> ]	[2.3]
*Tilting angle [degrees]	[44.0]

**Configuration of excessive speed values**

*Speed [km/h]	[75.0]
*Speed in areas [km/h]	[75.0]

**Configuration of idling values**

*Idle time [min]/[sec]	[15] [0]
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### **Configuration of engine values**

\*Engine revolutions [RPM] [3000]

230. Mr Kuliš explained that, whilst the driver audio and visual alert system was enabled for deceleration and acceleration, values of that data were not recorded. That was determined by KMB. Acceleration and deceleration were determined from changes in the vehicle speed, which itself was determined from the speedometer. Mr Kuliš said that the value of 44°, which was inputted as the tilting angle, in effect deactivated that warning. He said that the equipment was capable of handling two different speed values “For example, you can have some areas with 50 and some with 70”. [Transcript Day 6; 14 July 2018, page 150] A feature, which was not depicted in the screenshot, enabled details of the different areas to be configured. An algorithm was used to calculate the position if the GPS signal was lost temporarily. The fact that the same speed was inputted into both calibrations for speed meant that the feature was not being used.

231. Mr Kuliš said that an application running on the server was capable of receiving events as they appear, together with information as to the position where the event occurred. This particular unit was calibrated to transmit data to the server every 30 seconds, which calibration was a matter of choice. The lowest useful transfer rate was about 5 seconds. Such transmission of data could be achieved by an Openmatics portal and additional applications on the server or by the customers’ provision of its own IT system, the latter being the method employed by KMB. The system as configured could be used in conjunction with a digital map to generate alarms in respect of two different speed limits. However, by the application of software it could easily be extended to support more speed limits.

232. Mr Kuliš said that the data was susceptible to being analysed to produce a report of the driver behaviour characteristics of a particular driver, for example in respect of speeding events, acceleration and deceleration. In Germany, those and other values were analysed to examine the driving behaviour of truck drivers.

Finally, he said that software could be uploaded to analyse data in the telemetry units to log the drivers driving time.

*KMB*

233. In his evidence for KMB, Mr Leung Kin Wang said that, although the black box in the bus involved in the accident on 10 February 2018 on the Tai Po Road did not make a record of acceleration and deceleration, the data was transmitted to the KMB server, where it could be accessed. [Transcript Day 12; 7 August 2018, page 93] He said that the thresholds of deceleration, acceleration and speed, namely 1.15 metres per second squared, 2.3 metres per second squared and 75 km/h, and described by Mr Kuliš as having been set in that black box had been provided by KMB. He said that KMB was not aware that the speed of 75 km/h had been set in the configuration for ‘Speed in areas’. On the other hand, KMB was aware of, but had not provided, the ‘Tilt’ value of 44°. KMB had been unable to obtain any tilt reference value from ZF. Those thresholds had been set in the black boxes for all of the KMB fleet at the time. [Transcript Day 12; 7 August 2018, pages 101-103] On 23 February 2018, the threshold for speed had been changed from 75 km/h to 70 km/h. [Transcript Day 12; 7 August 2018, page 97]

234. Mr Godwin So said that the delay in transmitting data recorded in the black box to the KMB server had no impact on analysis of the data because “...we do not perform real-time analysis”. [Transcript Day 12; 7 August 2018, page 89]

235. Mr Leung Kin Wang acknowledged that it would be desirable for KMB to have a system which alerted the bus captain not only as to the fact that the bus he was driving was travelling in excess of the 75 km/h speed limit but also one which informed him if the bus was travelling in excess of a 50 km/h speed limit. [Transcript Day 12; 7 August 2018, page 104]

*Digital map*

236. In that context, Mr Leung King Wang said that KMB had been glad to learn of the existence of a digital map available from the TD. He learned that from a letter, dated 7 June 2018 sent by the TD to KMB, informing KMB that a digital map was available. He thought that it came about because of the concern expressed by the Committee. [Transcript Day 12; 7 August 2018, pages 107-109] As a result, KMB arranged for Openmatics to assist KMB to incorporate the digital map into the black box system and a test had been performed to confirm that real-time information could be provided of the fact that the bus had exceeded the speed limit at a particular place. The update of KMB's Action plan described a test having been arranged with Openmatics on 31 July 2018, of which it was said: [KMB-1(A); page 231, paragraph 16]

“The test drive showed that speed alert could be produced according to the defined 50km/h and 70 km/h speed limit zones.”

237. Copies of the TD's letter dated 7 June 2018 were sent to all the franchised bus operators. It stated, *inter-alia*: [TD 1, page 477]

**Road Network with Speed Limit Information**

I refer to our recent discussions on the proposed on-vehicle safety device of **Speed control by Global Positioning Service** (sic) (“GPS”) or **geo-fencing** during the meetings of the Working Group on Enhancement of Franchise Bus Safety.

I am pleased to inform you that dataset of speed limits under the road networks managed by TD in the geographical information system (“GIS”) format is already available to download from DATA.GOV.HK (<http://www.data.gov.hk>)...”

You may utilise these GIS data packages to explore the technical feasibility on speed control by GPS or geo-fencing with your bus manufacturers or other appropriate party(ies) and conduct relevant trials. Apart from the said on-vehicle safety advice, I understand your company currently also utilize the blackbox information to monitor the driver behavior and we trust that these GIS data package could provide you a more precise information on relevant speed limits of your bus routes.”

238. In their written submissions, dated 20 August 2018, the TD explained that the “Speed Limit” and “Road Centreline” data were first produced by the TD in 2010, whilst the digital base map was prepared and updated by the Lands Department. In July 2008, TD had established an internal computer system “to maintain road traffic information, including road speed limit and road centerline data”. Recognising that the data had the potential of a wider usage, the data was first made available for sale to the public on 22 November 2010, on which date an announcement to that effect was published on the TD website, and maintained thereafter, and letters were sent to potential buyers inviting them to subscribe, including NWFB (Attention: IT manager) and KMB (Attention: Head of Customer Service Department). [TD-1; page 481, paragraphs 3-6; TD-5, pages 1752-1755] However, the companies did not subscribe to the service.

239. The TD explained further that on 18 January 2018, it was announced on TD’s website that the data were now available to the public “to download free of charge via DATA.GOV.HK”. On the same date, letters were sent to subscribers, but not to NWFB and KMB because they were not subscribers. [TD-1, pages 481-482].

*KMB’s use of the data obtained by the black box to monitor driver behaviour*

240. In their written submissions, dated 18 May 2018, KMB explained that the information collected by the on-board black box, which was transmitted to the company’s server, in respect of the manner in which the bus was driven was examined, together with other data obtained from other systems as to the bus registration number and route number. It took “about 10 days to retrieve such data for analysis”. [KMB-1(A), page 168]

241. In his evidence, Mr Leung Kin Wang said that the time taken for the exercise of retrieval and analysis had now been reduced to four days. Of the mechanics of the exercise, he said: [Transcript Day 12; 7 August 2018, pages 136-137]

“We need to provide the interface between the systems so that we can tell the bus driven by a particular bus captain, the relevant locations and the performance.

Then we need to do more processing, to know which zones are 50 kmh sections. So we need to have the FMI, the fleet management information system, which can tell the journey, the locations, and which road sections are 50 kmh which are 70 kmh. So we need to know the route, the bus captain, the data of the journey, and so on. That’s why it’s complicated.

So if we have a digital map and everything is stored in the black box, we can do it much more quickly, and we will be able to produce the same report in one day.”

242. Mr Leung acknowledged that the necessary technology to simplify that task had been available for a long time. Although asked, he did not offer any explanation as to why use had not been made of it earlier.

### *Speed exception reports*

#### *50 km/h speed limit*

243. Mr James Wong explained that an exception report was generated by the black box if the speed exceeded a threshold for a predetermined amount of time. In a speed limit area of 50 km/h, if the speed exceeded the limit in the range of between 56 and 65 km/h an exception report was generated after 30 seconds of speeding, whereas speeding in the range of between 66 and 75 km/h generated an exception report after 15 seconds of speeding. Finally, an exception report was generated after 2 seconds if the speed was in between 76 and 79 km/h. [Transcript Day 12; 7 August 2018, pages 134-135; KMB-1(B), page 572]

244. In their submissions to the Committee, dated 3 October 2018, KMB clarified that the thresholds of time and range of speed described in evidence by Mr James Wong were ones that were applicable on and after 1 August 2018 only. Prior to that date an excess speeding report was generated when a franchised bus travelled at speeds on and between: [KMB-1(B); page 572, paragraph 3(A)I]

- 56 and 65 km/h for 60 seconds or more;
- 66 and 75 km/h for 30 seconds or more;
- 76 and 79 km/h for 30 seconds or more; and
- 80 and 89 km/h for two seconds or more.

### *70 km/h speed limit*

245. Mr James Wong said that in a speed limit area of 70 km/h, an exception report was generated when a franchised bus travelled at speeds between 76 and 79 km/h for 30 seconds or more and at speeds between 80 and 89 km/h for two seconds or more. Again, KMB clarified in their letter, dated 3 October 2018, that the thresholds were applicable on and after 1 August 2018 only and that prior to that date the thresholds were 60 and two seconds respectively. [KMB-1(B); page 572, paragraph 3(A)II]

246. On each occasion of excessive speeding within the parameters described, the maximum speed of the bus and, if it was available, its GPS coordinates of latitude and longitude were captured in the exception report.

### *Real-time monitoring of the bus captains driving behaviour*

247. In the context of Mr Kuliš's evidence that, given that data could be transferred with a delay of only five seconds to the server from the black box on KMB's buses, it was possible, with the use of additional software to conduct real-time monitoring of the bus captains driving behaviour the issue of whether or not the use of its black boxes in their way was canvassed with KMB by counsel assisting the Committee. Mr Leung Kin Wang said that the matter had been considered, but rejected as: [Transcript Day 13; 10 August 2018, pages 50-51]

“not practicable because we have 4,000 bus captains. We cannot have that number of supervisors to watch over 4,000 bus captains.”

248. At the request of the Committee, KMB produced a set of exception speeding reports for the period 1 to 7 May 2018, which provided data under a range of headings, with the employee name and number redacted: [KMB-9(B), pages 3993 to 3995-3). One of the entries illustrates the operation of part of the system: [KMB-9(B), page 3995-1]

<u>operating date</u>	<u>bus no.</u>	<u>location from</u>	<u>dept time</u>	<u>route no.</u>	<u>run no.</u>	<u>shift</u>
01/05/2018 0:00	TW5352	Island Resort	01/05/2018 19:26	606	03	2

<u>operating route</u>	<u>operating time</u>	<u>duration</u> (seconds)	<u>max. speed</u>	<u>gps-pos-lat</u>	<u>gps-pos-long</u>
606	01/05/2018 20:07	32	67.9	0	0

249. Mr Leung Kin Wang explained the significance of that data: [Transcript Day 12; 7 August 2018, page 132]

“When a certain setting is exceeded, information would be displayed. In other words, for a duration of 32 seconds, the setting was exceeded, but the maximum speed was 67.9. So over this period of 32 seconds, our pre-set setting was exceeded. So apparently this is a 50 kilometre per hour zone. If this is a 70 kilometre zone, this entry should not exist.”

250. Although the Committee asked to be provided with a similar document evidencing harsh braking and sudden acceleration no such document was provided, rather what was provided was a weekly report. Mr Leung Kin Wang said of that report: [Transcript Day 12; 7 August 2018, page 138]

“This weekly report will look back at the past week in respect of a bus captain and how many seconds of exceedance in those three areas: harsh braking, sudden acceleration and speeding.”

*Weekly report of driver behaviour in excess of thresholds: speed, acceleration and deceleration*

251. The weekly report describes the incidence of speeding, harsh braking and sudden acceleration in the week 24 to 30 July 2018 in respect of excess of thresholds of speed, acceleration and deceleration in which period drivers accumulated a total of more than the specified minutes of such behaviour. [KMB-1(A), pages 367-375] Fifty-seven drivers were described as having speeded at more than 75 km/h for more than 4 minutes, one of whom had done so for a total of 23 minutes. Fifty-one drivers were described as having braked harshly, namely a deceleration of more than 8 km/h per second for more than 4 minutes, two of whom had done so for a total of 7 minutes. Nine drivers were described as having accelerated suddenly, namely an acceleration of more than 4 km/h per second for more than 60 minutes, one of whom had done so for no less than a total of 76 minutes. Obviously, incidents of harsh braking or sudden acceleration by their nature are unlikely to last for more than several seconds on each occasion. So, the report speaks to multiple instances of harsh braking and sudden acceleration in the period of driving for one week.

*The KMB bus involved in the accident on 10 February 2018 on the Tai Po Road*

252. In response to Mr Duncan's question as to whether or not the bus involved in the accident on 10 February 2018 had generated an exception report in respect of either speeding or excess deceleration/acceleration, Mr James Wong said "(i)f the bus exceeded 75 km/h, it should show up on this table" and agreed that if the thresholds of acceleration and deceleration had been exceeded that would have automatically generated a report. [Transcript day 14; 11 August 2018, pages 8-10] Mr Wong said that if he was able to identify the report he would share it with the Committee.

253. In their written submissions, dated 23 August 2018, KMB responded to that enquiry: [KMB-1(B), page 436]



“Yes, such exception reports were generated. The driving records of the bus captain, who drove the bus involved in the Tai Po Road accident on 10 February 2018, do not appear in those reports.”

254. Annexed to that reply was a document described as being BOP<sup>13</sup> 207 records from 29 January to 13 February 2018 (Sha Tin Depot). [KMB-1(B), page 436] The document provided much of the information provided in the exception speeding reports for the period 1 to 7 May 2018, in addition to which it stipulated the speed limit and location of the speeding event and the action taken. The only speeding event meeting the criteria set in KMB’s black boxes, namely speeds in the range 76 to 79 km/h for 60 seconds and 80 to 89 km/h for 2 seconds, on 10 February 2018 was at 21:32 hours when a bus travelled in excess of the speed limit for 9 seconds at a maximum speed of 82 km/h at Shing Mun Tunnel Road. [KMB-12(A), pages 4828-4833] Clearly, that was not the bus involved in the accident on the Tai Po Road.

255. The other documents annexed to KMB’s reply were in the nature of weekly reports of sudden acceleration, namely greater than 4 km/h per second, and harsh braking, namely greater than 8 km/h per second, which provided no details of whether or not any of those incidents occurred on 10 February 2018, in respect of which the bus captains employee number had been partially redacted, notwithstanding the fact that the employee number of the bus captain on the bus involved in the Tai Po accident was not provided to the Committee in any event.

256. In their submissions, dated 10 December 2018, KMB informed the Committee [KMB-1(B), pages 579-580]:

“Recently, we have reduced the time required for our system to generate exception reports on speeding to 4 days. The time required will be further reduced to 1 day within this month.”

The submission went on to state:

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<sup>13</sup> “BOP” means “Programme of the Bus Onboard Monitoring System”.

“...we believe that instant alert of speeding for our bus captains is a more effective way in preventing traffic accidents. Our current system will only alert the bus captains when the speed exceeds 70 kph. However, later this month, we will launch an alert system that is also capable of alerting bus captains of speeding at locations whose limits are 50 kph. The new alert system will be installed in our entire fleet of buses phase by phase.”

### *KMB's Real-Time Operation Management System*

257. Mr Alok Jain, a management consultant specialising in transport and traffic matters and a trainer for the International Association of Public Transport, was employed by KMB from June 2013 until December 2016 first, as the Head of the Planning and Development Department and thereafter as the Deputy Operations Director.

258. When Mr Alok Jain joined KMB, Openmatics was supplying telematics equipment to KMB's franchised buses. That equipment was to be used to publish information to the public about the estimated time of arrival (“ETA”) of buses travelling on KMB's routes. In addition, it was planned to establish a “Real-Time Operation Management System (“ROM”) by the transmission in real-time of the data collected and collated by the telematics equipment, namely the speed, acceleration, deceleration, braking, tilting angle, fuel consumption and position to an Operation Control Centre. The centre was to be located in the Lai Chi Kok Centre, where the movements and relevant data in respect of KMB buses were to be depicted on screens. [Transcript Day 8; 17 July 2018, pages 83-87 and 95]

259. Mr Alok Jain said that it was envisaged that an “exception report” would be generated by a bus that was driven in a way that exceeded calibrated thresholds, enabling an alert to be given to a bus captain on a driver display unit in the bus cab and for an intervention by a supervisor in the Operation Control Centre to give the driver a warning, either by use of the driver display unit or an audio warning by radio or 3G communication. The intended purpose of those proposed interventions was to encourage bus captains to improve their driving skills.

Consideration was given to calibrating route specific thresholds so that, for example, different thresholds of speed at different locations could be calibrated into the equipment. However, the plan for real-time use to be made of the data was scrapped. Nevertheless, use was made of the telematics data “post-event”, namely after the event had occurred. [Transcript Day 8; 17 July 2018, pages 84, 95, 98; FE-1(A); page 36, paragraph 2]

260. Mr Alok Jain testified that he, and other senior management of KMB, had made a lot of presentations about actively managing driver behaviour by using telematics. [Transcript Day 8; 17 July 2018, pages 99-100] In his statement, dated 10 September 2018, he said that having ceased employment at KMB he was not in a position to produce any documents relating to the ROM system but emails and files had existed evidencing internal and public presentations of that use of the ROM system. [FE-1(A), pages 46-299 and 46-300]

261. For KMB, Mr Leung Kin Wang said of Mr Alok Jain’s evidence in respect of the ROM system: [Transcript Day 13; 10 August 2018, page 41]

“It is an operations real-time management system. It is about bus operations management. It has nothing to do with driving safety.”

Mr Leung added: [Transcript Day 13; 10 August 2018, page 47]

“It was never scrapped. This project started in October 2014. It has never been terminated. It’s ongoing.... This is about the real-time operation management system by using the black box and the availability of real-time location information, so that we can be more efficient in bus deployment.”

262. On 10 and 23 August 2018, at the Committee’s request, KMB produced records relating to the ROM System project. [KMB-1(B), page 422; KMB-11, pages 4484 to 4746] It is to be noted that, although there were no files or emails evidencing presentations of use of the ROM system for real-time driver behaviour management, in email correspondence between Chung Lim Chan (IT) and Louisa

Lam (ODD<sup>14</sup>), dated 25 February 2016, reference was made to there being a “change of scope of the Real-time Operations Management System”, although no information was provided as to the change. [KMB-11, pages 4741-4742]

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<sup>14</sup> “ODD” means “Operations Development Department” of the KMB.

## CHAPTER 12 – Speed Limits

### *Community for Road Safety*

263. In papers provided to the Legislative Council Panel on Transport, dated 16 September 2014 and 16 June 2016, in respect of the grant of new franchises to CTB and NLB [MISC-2, page 777] and KMB respectively, the *Community for Road Safety* made the same recommendation, namely that: [MISC-2, page 773]

- “• Incorporate into franchise requirement the need to set up a comprehensive standard and driver monitoring system using the installed black boxes. Monitoring systems should be automated with streamlined procedures to educate and retrain drivers.
- Key monitoring controls are:
  - Acceleration and deceleration characteristics... crucial to problem of passengers losing balance.
  - Speed through risky hilly roads - e.g. 25-40 km/h... crucial to prevention of disastrous events.
  - Speed through urban areas - e.g. 20-35 km/h... crucial to pedestrian and general safety.
  - ...
  - Speed through bus terminus - e.g. 15 km/h...
  - Tailgating
  - Driving behind and around bicycles.”

264. In the submission, dated 16 June 2016, it was observed: [MISC-2, page 772]

“There is vast potential of using black box in buses but is not clear how these are being used.”

None of those suggestions were reflected in any way whatsoever in the franchises granted to those several bus operators.

265. In their submissions, dated April 2018, the Community for Road Safety recommended that the “*Safe System*” approach should be adopted in respect of road safety, contending that: [MISC-2, page 785]

“In the short term, active measures based on operational protocols and deployment of monitoring systems can be quickly implemented.”

266. Of that recommendation, it was contended: [MISC-2, pages 785-786]

“The most important active measure is the formulation of new operational protocols for safe driving. These protocols should cover speed, acceleration, deceleration etc. There are two primary categories:

- General protocols-addressing typical scenarios including speeds on busy urban streets
- Route-specific protocols-addressing specific safety risks such as sections of narrow hillside road lacking a safety barrier

Monitoring will need to be based on advanced, real-time and automated black box systems. The purpose is to promote safer driving conforming to these protocols rather than being a tool to penalise drivers.”

267. In his evidence, Mr Julian Kwong explained the advantage of a real-time report: [Transcript Day 7; 16 July 2018, page 35]

“...some behaviours, which are grossly inappropriate, need to be identified and regulated in a very timely manner. We cannot rely on, say, passengers making complaints, and then having inspectors to investigate, and then only making recommendations, say, after a few weeks.”

268. Of the importance of an automated report, Mr Kwong said:

“...such black box systems are likely to generate an enormous amount of data, and if we solely rely on manual identification, or processes which are not fully automated, I presume that would require a lot of manpower, to the extent that the process is not sustainable.”

*Low speed limits/speed limit zones*

269. In their closing written submissions the Community for Road Safety acknowledged that their submissions were made in light of the evidence received by the Committee. The information that the TD intended to conduct trials in Hong Kong for speed limits of lower than 50 km/h was welcomed. Having noted the adoption of 30 km/h speed limits in many countries, including the Netherlands, the United Kingdom, Norway, Sweden, Denmark, France, Spain, Germany, New Zealand, United States, Switzerland and Finland, and the adoption of a 40 km/h speed limit in far fewer countries, it was submitted be limited, that: [MISC-2, page 820-109]

“(a) 40 km/h speed limit is needed for Hong Kong as a general rule for urban streets, whereas 30 km/h speed limit is applied to minor streets, residential neighbourhoods and urban centres etc.”

270. In support of that submission, it was asserted that: [MISC-2, page 820-110]

- “• Paris is on the way of transforming 90% of its streets with 30 km/h speed limit
- Madrid has commenced transforming 85% of its streets to 30 km/h zones
- Edinburgh has almost the entire city centre 30 km/h speed limit”

*Speed survey of franchised buses*

271. The Committee engaged the PolyU Technology & Consultancy Company Limited to conduct a survey of the speed at which franchised buses travelled on twenty selected road sections. The survey was conducted at different times of the day in the period 29 August to 23 September 2018 on one road subject to a 70 km/h speed limit and nineteen subject to a 50 km/h speed limit. Of the 2,381 buses surveyed, none was found to be speeding in the road section subject to the 70 km/h speed limit, whereas 234 franchised buses were found to be travelling in excess of the 50 km/h speed limit. However, only 48 of those franchised buses were found to be travelling at speeds in excess of 56 km/h or more.

## *CHAPTER 13 – Salary of bus captains*

### *NWFB and CTB*

272. In their written submissions, CTB and NWFB stated that part-time bus captains were paid at an hourly rate of \$80. [CTB-1, page 36] It was acknowledged that bus captains employed by the two companies were paid at different rates depending on the date of their first employment. Mr Samuel Cheng of CTB/NWFB agreed that the level of salary paid to the bus captains by the two companies was entirely a matter for them and had nothing to do with the TD. [Transcript Day 3; 29 May 2018, page 40]

### *CTB*

273. The submissions stated that CTB bus captains were paid: [CTB-1, pages 34-35]

- (i) a basic salary;
- (ii) an allowance for driving airport buses;
- (iii) a Chinese New Year bonus; and
- (iv) overtime at an hourly rate of current basic salary according to the date of first employment.

The basic salary was described as being \$17,106 for those recruited on or before 9 March 1999; \$15,874 for those recruited on and between 10 March 1999 and 8 March 2004; \$15,364 to \$15,764 for those recruited on or after 9 March 2004.

### *NWFB*

274. By contrast, NWFB bus captains were paid: [CTB-1, pages 35-36]

- (i) a basic salary;
- (ii) a Chinese New Year bonus; and



- (iii) overtime at an hourly rate of current basic salary according to the date of first employment.

The basic salary for NWFB bus captains recruited on 1 September 1998 was \$18,184 to \$18,664; \$15,764 to \$17,178 for those recruited on and between 1 September 1998 and 23 August 2001; \$15,764 for those recruited on and between 24 August 2001 and 8 March 2004; and 15,364 to 15,764, the range of salary reflecting increments for years of service, for those recruited on or after 9 March 2004.

275. Mr Samuel Cheng of CTB/NWFB accepted that there had been a decrease in the salary paid to bus captains who had been recruited on or after 9 March 2004 from what had been paid to those recruited at an earlier date. He explained that the salaries paid from any given point in time reflected "...the prevailing demand and supply in the labour market". [Transcript Day 3; 29 May 2018, pages 41-42]

### *Bonuses*

276. Although the written submissions stated, under the heading "*Reward for good performance*", that the bus captains of both companies were eligible for payment of bonus payments, namely (i) safety bonus; (ii) performance bonus; and (iii) attendance bonus, Mr Cheng said that at the request of the bus captains and their representatives, with effect from 1 March 2018, the bonuses had been "merged into the basic salaries". [Transcript Day 3; 29 May 2018, page 61] As a result, none of them were subject now to deduction and all of them now formed part of the salary on which the overtime rate was calculated. Mr Cheng explained that hitherto payment of the bonuses, including the safety bonus, was subject to deduction to reflect the behaviour or attendance record of the bus captain. He accepted that there was no longer a financial incentive for a bus captain to drive safely. [Transcript Day 3; 29 May 2018, page 66]

277. Mr Gareth Ng's explained that in February 2018 the basic salary had been \$12,536. In seeking to explain why the written submissions of CTB and NWFB

had stipulated that the salary was at least \$15,364 on and after 9 March 2004, Mr Cheng said that, following the merging of the three bonuses into the basic salary and the increase of the basic salary, the latter had become \$15,364. [Transcript Day 3; 29 May 2018, pages 69-70]

*NLB*

278. In their written submissions, dated 24 April 2018, NLB described the constituent parts of monetary payments made to their bus captains from July 2017 onwards. Full-time bus captains hired on monthly terms in the Lantau Group were required to work a minimum of 9 hours per day, for which they were paid a basic salary of \$6,400 per month. The basic salary was subject to incremental payments based on years of service was increased by \$1,000 per month for 10 or more years of service. In addition, the following allowances and bonuses were payable: [NLB-1, pages 21-22]

- (i) Duty allowance-\$230 per day;
- (ii) Safety bonus-\$1,700 per month;
- (iii) Attendance bonus-\$750 per month;
- (iv) Saturday/Sunday/public holiday bonus-\$200 per day; and
- (v) Rest day work allowance-\$625 per day.

279. Bus captains in the Shenzhen Bay Group worked full-time and were paid a basic salary of \$6,000 per month for 12 hours of duty per working day. The basic salary was subject to incremental payments based on years of service up to an increase of \$1,000 per month for 10 or more years of service. Although broadly speaking the bonuses and allowances they were paid were similar to the Lantau Group, they were paid a greater safety bonus, namely \$2,200 per month.

280. Mr James Wong said that typically a full-time bus captain would be required to work 24 or 25 days per month. He explained that the attendance bonus was subject to deductions for non-attendance: \$200 for the first day; \$250

for the second day; and \$300 for the third day, and so forth. Further, an additional safety bonus of \$450 was paid quarterly to full-time bus captains. He accepted that the objective of the allowance and bonus system was to encourage bus captains to work for NLB, "...our core belief is that the more you work, the more return you will get." [Transcript Day 5; 19 June 2018, page 111]

281. Part-time captains on daily terms were required to work a minimum of 9 hours per day and were paid \$565 per weekday, and \$625 per weekend day, and \$675 per Sunday and public holiday. They received no bonuses or allowances, save for a daily safety bonus of \$30. Part-time bus captains employed on hourly terms were paid \$76 per hour. [NLB-1, page 21]

282. Mr James Wong said that, in light of the agreement reached in March 2018 by NWF, CTB and KMB with their bus captains' unions to merge bonuses and allowances into basic salary, NLB had agreed to pay its drivers a special bonus in September 2018. [Transcript Day 5; 19 June 2018, pages 103-104]

#### *KMB/LWB*

283. The Accident Report of the Special Committee of KMB to the Commissioner, dated 12 March 2018, provided details of the different rates of remuneration of basic salary of bus captains, depending on the time of first employment, and the range of allowances and bonuses that were available for payment. The basic salary for bus captains employed before 2004 at "the highest pay scale point" was said to be \$13,915. The bonuses and allowances available for payment were: Safety Bonus \$1,778; Split Shift Duty Allowance \$1,951.50; Overnight Shift Allowance \$3,218; Airport Allowance (LWB only) \$780; and a year-end discretionary bonus, said to be one month's basic salary. However, it also stated: [KMB-1(A); page 108, paragraph 29]

#### "Salary structure enhancement for BC

On 21 February 2018, KMB and LWB announced that Safety Bonus and Good Service Bonus would be incorporated into Basic Salary effective from 1 March 2018."

284. In their written submissions to the Committee, dated 24 April 2018, the range of remuneration paid to bus captains from 1 March 2018, depending on the date of their first employment, together with overtime allowances was set out. It was asserted that the “average take-home of different categories of BCs” was: [KMB-1(A), page 75]

*KMB*

Monthly rated (employed before 2004)	\$23,425
Monthly rated (employed after 2004)	\$21,486
Daily rated	\$29,884
Retired and re-employed (monthly rated)	\$21,062
Retired and re-employed (hourly rated)	\$17,572
Contract hourly rated	\$5,968

*LWB*

Monthly rated (employed before 2004)	\$25,857
Monthly rated (employed after 2004)	\$22,022
Daily rated	\$30,946
Retired and re-employed (monthly rated)	\$21,996
Retired and re-employed (hourly rated)	\$17,669
Contract hourly rated	\$6,909

285. In his evidence, Dr Norman Leung said that the effect of the changes in the pay structure was that the “monthly rated bus captain will receive a basic salary of about \$15,400 a month” with proportionate increases in overtime payments and annual bonus. [Transcript Day 12; 7 August 2018, page 11] Of the cost to the companies, it was asserted in written submissions “This change costs approximately HK\$170 million and HK\$10 million per annum for KMB and LWB

respectively.” [KMB-1(A), page 61] Dr Norman Leung went on to say that he was proposing to make further enhancements to the remuneration received by bus captains, namely by increasing the three grades of bus captains to five grades and expanding the annual increments points from 8 to 20 increments. Of those proposals, he said: [Transcript Day 12; 7 August 2018, pages 25-26]

“So, my principal objective is to enhance the remuneration of the bus captains as a whole and hope that not only would I be able to recruit new bus captains but to retain the serving bus captains as well.”

### *1 September 2018 pay scale*

286. Subsequently, the Committee was informed that the proposals had been brought into effect from 1 September 2018, of which change Dr Leung said: [Transcript Day 15; 12 September 2018, page 93]

“...with effect from 1 September, if a new recruit joins KMB or Long Win as (a) bus captain, he will be earning about \$23,000 a month, inclusive of the double pay at the end of the year. That is a substantial increase over the previous remuneration.”

287. In written submissions, dated 21 September 2018, KMB provided the Committee with schedules to illustrate the effect of the changes to the pay structure of 1 September 2018 and to present a comparison with payments received by bus captains prior to March 2018. The basic salary at the entry point for a monthly rated bus captain was now said to be \$16,466. If a bus captain worked an eight hour day (including a meal break of one hour and rest time) for 26 days, he would receive a salary of \$16,466. By contrast if a bus captain worked ten hours a day (including a meal break of one hour and rest time), in other words including two hours of overtime per day, for 26 days he would receive a total salary of \$21,817.50 for the month. In addition, both bus captains would receive a 13th month payment of the basic salary. So, the average monthly salary for the bus captain who worked eight hours per day for 26 days would be \$17,838.20, whereas it would be \$23,189.60 for the bus captain who worked ten hours per day for 26 days. The latter represented an increase, compared with the total payments

received before March 2018, of 15.7%, whereas the former represents an increase of 9%. [KMB-1(B), page 517]

288. The calculation of the monthly salary that a Daily-rated Bus Captain [KMB-1(B), page 520] would receive for the two different patterns of work, namely eight hours per day and 10 hours per day for 26 working days, produce monthly incomes of \$23,028 and \$29,277 respectively. However, because the Year-End and Lunar New Year End bonuses were calculated on a formula applied to “total annual income”, there was an increased difference between the average monthly income, namely \$24,947 and \$31,717. The latter represented an increase, compared with the total payments received before March 2018, of 7.9%, whereas the former represented an increase of 5%. [KMB-1(B), page 520]

#### *The 20 increments points*

289. Prior to the introduction of a 20 increments point system on 1 September 2018 there were three grades of bus captains and eight salary points. The range of monthly basic salary was from \$15,366-\$16,266. The 20 increments points system applied to five grades of bus captains, four increment points for each grade, which resulted in a range of basic salary from \$16,466-\$18,901.

#### *1 March 2018 changes in KMB's pay structure*

290. In his evidence Mr Cheung Tsz Kei, a representative of the Motor Transport Workers General Union, said of the merging of allowances and bonuses into the basic salary with effect from 1 March 2018: [Transcript Day 9; 30 July 2018, page 91]

“We have been making this request for 10 years, but our request was never acceded to, because of the circumstances.”

*CHAPTER 14 – Difficulties in recruiting bus captains*

*CTB/NWFB*

291. In their written submissions CTB and NWFB said that the major problems encountered in recruiting and retaining bus captains was because of the unsocial hours they were required to work and the distance that they lived, often in the New Territories, from the depots where they began and ended their duty. Mr Samuel Cheng said that the level of pay for bus captains that attracted recruits “varies from person to person” but nevertheless “There are people turning up wanting to be bus captains every day, but there is a difference between the number of people turning up and the number of vacancies.” [Transcript Day 3; 29 May 2018, page 49]

292. Of the overall constraints on the ability of the companies to offer bus captains improved conditions of pay and working hours, in their written submissions CTB/NWFB said that “Staff wages represent approximately 52% of our total operating costs.” [CTB-1; page 41, paragraph c] It was asserted that, although the Fare Adjustment Arrangement (“FAA”) permitted a return on Average Net Fixed Assets (“ANFA”) of 9.7%, “We forecast that the Return of ANFA of CTB (F1) and NWFB will be below 1% for the financial year ending 30 June 2018.” Of the ensuing consequences, it was contended: [CTB-1; page 42, paragraph g]

“Should there be any significant increase in staff and fuel costs, both of these franchises may well become loss making. Therefore, let alone earning a reasonable return, when the Companies’ commercial viability is at stake, it will be impossible for our Companies to provide the high quality and efficient services expected by the public, and to offer attractive pay packages to recruit and retain staff.”

293. Having noted that the last time at which a fare adjustment had been permitted for the companies was in 2008, complaint was made that, although an application had been made for a fare adjustment by CTB (F1) and NWFB in August 2017 the application was “still being scrutinised by the Government.” Of

the fact that “(p)ublic acceptability and affordability” was a factor considered by the government in determining a fare adjustment application, complaint was made that “...this factor is highly discretionary and subjective and has been conveniently abused by politicians.” [CTB-1; page 41, paragraph f] In that context, it was contended that: [CTB-1; pages 41-42, paragraph f]

“Although we were fully justified to seek fare adjustments under the FAA on various occasions, no application had been made mainly due to the ineffectiveness of the FAA and the highly politicized environment against fare/price increases of public utilities.”

### *KMB*

294. In their written submissions, dated 24 April 2018, KMB addressed the issue of the difficulty of recruiting franchised bus captains and asserted: [KMB-1(A), page 60]

“The transport industry in Hong Kong has faced shortage and aging problem of commercial vehicle drivers. The issue had been discussed at a meeting of the Legislative Council in June 2016... discussed at a meeting of the Legislative Council on 20 April 2018... as the problem has intensified.”

295. In his June 2016 statement to the Legislative Council, the then Secretary for TH said “the fundamental issue is not about the supply of eligible persons. Rather, it is about how to attract them (especially younger people) to take up employment in the trades.” He went on to say: [KMB-9(A), page 3841]

“In respect of land transport, franchised bus and GMB<sup>15</sup> operators have been attracting new blood through different means, such as improvement of salaries and welfare, hiring of part-time drivers to meet service demand during peak hours, etc. Franchised bus companies have been trying to reduce the turnover of bus captains through improving the working environment and bus stop facilities as well as offering promotion prospects.”

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<sup>15</sup> “GMB” means “green minibuses”.



296. In the Commissioner for Labour’s reply to the Legislative Council on 20 April 2018 it was noted that the number of vacancies for positions as franchised bus captains had increased from 192 in 2013 to 366 and 2017. [KMB-9(A), page 3847-3]

297. In their written submissions, KMB went on to assert: [KMB-1(A), pages 60-61]

“Although we have extended our recruitment channels (e.g. outreach recruitment at bus termini, mobile recruitment car, recruiting through social media and online recruitment websites, posting recruitment posters and distributing flyers at busy locations), *the number of BC applications is inadequate to meet our demand*

...

Factors such as the surging number of assaults against BCs, the increasing occurrence of illegal parking on bus stops and the intensifying traffic congestion have hindered new entrants to the industry.” [Italics added.]

298. In addressing the effect of the requirement for additional bus captains in consequence of the introduction of the February 2018 Guidelines, Mr Patrick Pang of KMB said: [Transcript Day 13; 10 August 2018, page 137]

“If we are to follow the revised guidelines, we need to recruit an extra 200 bus captains. Then, under the revised guidelines, we have the special shift, this special shift, in future, if we are to do away with it and if we have a straight shift, then we need another extra 1,000 bus captains.”

299. For its part, in its written submissions, the TD said: [TD-1; page 65, paragraph 7]

“...it is estimated that a total 250 additional bus captains will be required for full implementation of the Guidelines. The FB operators have undertaken to step up their efforts in the recruitment of bus captains and would improve the remuneration packages to attract new blood. In addition, with the shortening of the duty shift hours, the take-home pay of bus captains will be affected. The TD have also urged the FB

operators to take this into account in adjusting the duty rosters for bus captains and to consider increasing the level of remuneration, on top of their annual pay adjustment, in order to compensate the bus captains for the loss in take-home pay. If the additional number of bus captains and improved remuneration package for the bus captains necessitate the FB operators to apply for fare increase, the TD would process any such fare increase application in accordance with established practice.”

300. At the conclusion of the oral evidence of KMB on 12 September 2018, the following interchange ensued: [Transcript Day 15; 12 September 2018, pages 99-100]

“Member Auyeung:

You spend a lot of time today talking about how to improve the working conditions of all the bus captains. Can you give us some description on the hiring successes of bus captains so far, using say the last month versus three months ago to six months ago? Are you having much success hiring bus captains?

Mr Godwin So: (Via interpreter)

At present, on a weekly basis, we can recruit 20 to 30 new bus captains. Compared with what it was six months ago, we were only able to recruit 10 to 15 bus captains. But it has to do with the market. But, at the same time, the company has done certain things. First of all, pay and remuneration. As our chairman has said, there was an enhancement in March, and then in August there was a pay increase. So altogether we are talking about 15 per cent increase in one year. With higher pay, we can attract more bus captains.

Secondly, we were talking about the conditions, more facilities for rest, and so on, and also in our recruitment we have stepped up our efforts.”

*CHAPTER 15 – Bus captain stresses and frustrations*

*The Road Safety Council*

301. In the submissions of the Road Safety Council, dated 10 May 2018, concern was expressed “...in particular about the working hours of bus drivers, the mental and physical health of bus drivers and the driving attitude of bus drivers.” It was noted that the driver’s mood could be exacerbated by driving in congested traffic conditions and it was suggested that bus drivers who were unable to handle the various “emotional stresses might allow their frustration to be released through less careful driving practices.” [MISC-1(C); pages 127-1 to 127-2, paragraphs 2-3]

*Stresses and frustrations*

*(i) Illegal parking at bus stops*

*CTB*

302. Those considerations are relevant to the concerns that Mr William Chung expressed about the prevalence of illegal parking at bus stops, which he described as “commonplace and serious problem” and giving rise to safety concerns. [Transcript Day 4; 30 May 2018, page 121] The representatives of the Motor Transport Workers General Union echoed those concerns in their testimony. They suggested that the installation of closed-circuit television (“CCTV”) would act as a “deterrent”. [Transcript Day 9; 30 July 2018, page 81]

*Federation of Bus Industry Trade Union*

303. In their written submissions, dated 24 April 2018, the Federation of Bus Industry Trade Unions referred to the problems of illegal parking at a bus stop in Nam Cheong Street, near Woh Chai Street which, although complaints had been made to the TD, were unresolved at the time when a KMB bus captain had been attacked on 30 August 2017. He had failed to stop at a bus stop, in which vehicles were illegally parked, and for which he was blamed for having “skipped the stop”. [TU-1(A), page 226-30; KMB-1(A), page 217-19] The representatives

of both unions indicated that, if such a scheme was adopted, they were prepared for bus captains to be involved in flagging in an electronic way the time at which the forward-looking camera on their buses captured illegal parking at bus stops.

304. For his part, Mr Samuel Cheng, of CTB, rejected the suggestion made in the submission by the Democratic Alliance that the system employed in Singapore, namely that use be made of video cameras installed on franchised buses to identify vehicles illegally parked at bus stops. [MISC-2, page 644-2] That was not the responsibility of a bus captain. Rather, it was for the Police to enforce the law. [Transcript Day 4; 30 May 2018, page 126] As is noted subsequently, the Singapore Land Transport Authority explained to the Committee in their written replies that the role of a bus captain in capturing video evidence of an infringement of a bus lane by another vehicle in Singapore was limited to activating the camera to capture the infringement and notifying his employer bus operator of that fact. Thereafter, the video recording was handed over by the bus operator to the Land Transport Authority for their action. [EXP-1(C), page 249-9]

#### *The Hong Kong Police Force*

305. In the written submissions on behalf of the Hong Kong Police Force, dated 10 August 2018, Chief Superintendent Cadman said that the feasibility of the use of CCTV in enforcement actions in respect of both congestion-related moving vehicle offences and illegal parking was considered by the “*Energising Kowloon East Office*” (“*EKEO*”), led by the Development Bureau and was launched in two phases. The phase in respect of moving vehicles began in January 2018 and involved police officers using CCTV cameras, which evidence, if necessary, was used to support the oral testimony of the police officers. The phase in respect of illegal parking commenced in August 2018. Of that project, Chief Superintendent Cadman said: [MISC-1(C), page 124-539]

“As regards mounting automatic cameras on lampposts to monitor unauthorised stopping at bus stops, the consultant in the above mentioned EKEO project is looking into the feasibility of using technology to identify the offence but there are still legal

limitations and the technical issues, about electricity supply in lampposts, that need to be overcome.”

306. In a written reply in response to a question raised by the Hon James To, dated 23 May 2018, the Secretary for TH informed the Legislative Council of the results of a two-month pilot scheme operated by the Hong Kong Police Force in the New Territories North and Kowloon East in December 2017 and January 2018 in which video cameras have been used to assist police officers to take action in respect of six stipulated traffic offences, including “unauthorised stopping at bus stop/public light bus stand/taxi stand/public light bus stopping place”. Of the 25 fixed penalty tickets for this offence issued in that period in six Police Districts, all 25 had been issued in Sheung Shui. [SEC-3, pages 1424-1428]

307. In her evidence, Chief Superintendent Yau Sin Man explained that the legislation in respect of illegal parking required that the fixed penalty ticket be handed to the driver of the vehicle or fixed on the vehicle itself. She said that the relevant provision was subsection 15(2) of the Fixed Penalty (Traffic Contraventions) Ordinance, Cap. 237<sup>16</sup>. She said: [Transcript Day 17; 24 September 2018, pages 65 and 89]

“If we use electronic ticketing or use CCTV image and then issue a ticket, under current legislation, we are unable to do it.”

Chief Superintendent Yau said that she was aware that the THB had started working on proposed legislative amendments to address the difficulty.

308. In written closing submissions to the Committee, dated 7 November 2018, Chief Superintendent Cadman said that the Police had received legal advice from the Department of Justice to the effect that the proviso “should not be read as a

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<sup>16</sup> Section 15 of the Fixed Penalty (Traffic Contraventions) Ordinance, Cap. 237, provides that:

- (1) If a police officer has reasonable cause to believe that a contravention is being or has been committed, he may give the registered owner of the vehicle concerned or... the driver liable an opportunity to discharge his liability in respect of that contravention by payment of a fixed penalty.
- (2) For the purposes of subsection (1) notice in the prescribed form shall be delivered personally to the person in charge of the vehicle or fixed on the vehicle: Provided that the operation of this section or section 16 shall not be affected by a failure to comply with this subsection.

qualification undermining the mandatory nature section 15(2) nor an indication to allow remote delivery of the fixed penalty tickets.” [MISC-1(C); page 124-613, paragraph 5]

309. Of resolution of the conundrum, Chief Superintendent Cadman said: [MISC-1(C); page 124-613, paragraph 7]

“Legislative amendments for the above provision about the mode of delivery of fixed penalty tickets for illegally parked vehicles, are planned to be introduced in the 2019/2020 Legislative Council sessions so that fixed penalty tickets could be delivered after the event in the future.”

310. However, as was conceded by Chief Superintendent Cadman, in a letter dated 12 October 2018, the more apposite provision for the prosecution of the driver of a vehicle for unlawful stopping at a bus stop is section 3(1) and (2) of the Fixed Penalty (Criminal Proceedings) Ordinance, Cap. 240, which is in similar terms but makes reference to a “scheduled offence”. [MISC-1(C); page 124-604, paragraph 2] Nevertheless, he said that because of the restricted limits of a bus stop, often it was necessary to prosecute vehicles for stopping in the immediate environs of a bus stop, in places where they impeded access or exit of buses. The Schedule refers in terms to the offence of unauthorised stopping at a bus stop, created by regulation 45 of the Road Traffic (Traffic Control) Regulations, (Cap. 374 sub. leg. G), namely that:

“...a driver of a vehicle on a road shall not stop within an area designated as a bus stop unless the vehicle is a franchised bus...”

### *Electronic ticketing for parking offences*

311. In that context, it is to be noted that although the topic of electronic ticketing for parking offences had been considered first in 2012, Chief Superintendent Cadman said that technical difficulties had been encountered and the pilot scheme and been shelved in 2016, albeit that it had been revived in early 2018 at the *Forum on Application of Technologies in Traffic Management and*

*Traffic Contravention Enforcement*, chaired by the THB. [MISC-1(C), page 124-538]

*Automatic number plate recognition*

312. Chief Superintendent Baker said that a trial of the automatic number plate recognition system had been conducted in 2013, but that it had been mounted on a “very limited basis” namely in respect of persons with outstanding traffic arrest warrants. [Transcript Day 17; 24 September 2018, pages 68-69] The THB, Security Bureau and Hong Kong Police Force’s paper, “*Law Enforcement against Moving Traffic Offences*” prepared for the Legislative Council Panel on Security meeting on 13 April 2018 stated: [SEC-3; pages 1418-1423]

“The Police have been using the Automatic Number Plate Recognition (“ANPR”) system since 2015. The system enables traffic enforcement officers to detect relevant traffic contraventions, including those involving expired vehicle licences, registered vehicle owners driving while disqualified or having traffic arrest warrants. In the past three years (2015 to 2017), the Police have issued 996 fixed penalty tickets and arrested 46 persons with the aid of the ANPR system.”

*Bus priority*

313. Mr Samuel Cheng of CTB said that he welcomed the suggestion that, like Singapore and Seoul, a signal priority system for buses be introduced in Hong Kong. Such a system afforded priority to a bus over other vehicles at intersections with limited capacity. [SEC-2; page 822] He said that the issue would be raised with the TD. [Transcript Day 4; 30 May 2018, pages 128-130]

314. Similarly, Mr William Chung said that the companies would welcome a system where other vehicles had to give way to a bus as it leaves a designated bus stop, as is required in Singapore. However, having regard to the objections that had been raised in Hong Kong in respect of bus only lanes, which had resulted in some of those bus lanes being discontinued, he expressed reservations about the

success of such a system in Hong Kong. [Transcript Day 4; 30 May 2018, page 129]

*(ii) Abuse/assaults on bus captains*

315. In both the written submissions and in evidence the representatives of the Motor Transport Workers General Union and the Federation of Bus Industry Trade Union expressed their serious concern at the regular pattern of abuse delivered by passengers to bus captains and the growing number of assaults on them, in respect of which they provided some detail. At the request of the Committee, KMB provided statistics of assaults on KMB and LWB staff reported to the companies and the Police in the period 1 January 2015 to 22 July 2018. [KMB-1(A), pages 217-1 to 217-29] In 2017, there were 35 such cases, but in the period of just over 6 months in 2018 there were 41 such cases. Overall, many cases were not pursued to charging of the alleged assailant. Typically, if a charge was laid it was of common assault or assault occasioning actual bodily harm. Few cases resulted in convictions. No sentences of imprisonment were imposed in any of the 188 cases described in the statistics. In a few cases in which sentences were imposed they were low level fines.

316. In their written submissions, KMB and LWB said that they had responded to the increased number of assaults on their bus captains by not only installing surveillance CCTV that covered the driver's seat on all new buses commissioned since 2015 and retrofitting CCTV on existing buses but also in June 2018 they had begun to install protective shields on their buses between the position occupied by the bus captain and passengers. [KMB-1(A), page 62] For their part, the representatives of the Motor Transport Workers General Union were highly critical of those shields, which they complained were not big enough, reflected light in a way which distracted bus captains and created noise. [Transcript Day 9; 30 July 2018, pages 34-35]

317. In his evidence, Superintendent Lee Tai Wai said that the Hong Kong Police Force had been able to identify the results in 182 of the cases described by



KMB: there were 131 assaults on bus captains in the course of their work by bus passengers. Assailants had been identified in 99 cases and prosecutions brought in 83 of those cases, in which 75 convictions had resulted. [Transcript Day 17; 24 September 2018, pages 82-84]

318. Of the submission made by KMB that, in prosecuting bus passengers, the Police ought to make greater use of Regulation 13A(1)(a) of the Public Bus Service Regulations, Cap 230A, which provides that no passenger shall “wilfully obstruct, impede or distract the driver of the bus”, for contravention of which regulation a fine of \$3,000 and a sentence of 6 months’ imprisonment might be imposed, Superintendent Lee Tai Wai said: [Transcript Day 17; 24 September 2018, page 98]

“The most ideal situation is that before an incident deteriorates, the police can intervene and then we can put a stop to the incident or we can use an easier method to handle it, say, for example, to use any offences under Cap. 230A. But very often, when the police arrive on the scene, there would be injuries and there would be physical contact already.”

319. In those circumstances, Superintendent Lee said “(i)f there is actual physical contact and if there is assault, I would think that we should go for the most appropriate offences.” [Transcript Day 17; 24 September 2018, page 101]

320. For her part, Chief Superintendent Yau Sin Man said that in 2016 a prosecution against a bus passenger under those Regulations had been brought only once, whereas no prosecution for that offence had been brought in 2018. [Transcript Day 17; 24 September 2018, page 103]

321. As noted subsequently, in Singapore the *Protection from Harassment Act*, Cap. 256A makes it an offence, punishable by a fine, or imprisonment for up to 12 months or both, for a person by any means to “(b) make any... threatening, abusive or insulting communication, towards or to a... public service worker”, including a bus driver.

*(iii) Rest and toilet facilities*

322. As noted earlier, many representatives of trade unions have been vocal in their complaints to the Committee about the inadequate provision of rest and toilet facilities at bus stations and bus termini. Of the current position, Mr Cheung Tsz Kei said in evidence: [Transcript Day 9; 30 July 2018, page 45]

“For a lot of termini, there are still no toilets or rest kiosks available, especially for those in public housing estates... We have been talking to the Transport Department, saying that for existing termini they have to be retrofitted, and for new ones, it must come with toilets and rest kiosk.

With these facilities, then they are considered to be a complete set of facilities at terminus. Without such facilities, we would not be able to provide the services we are supposed to.”

*KMB*

323. For his part, Mr Patrick Pang, of KMB said of the absence of the provision of toilets at bus stations and bus termini and the need for bus captains to use toilets elsewhere: [Transcript Day 15; 12 September 2018, pages 64-65]

“...they might have to walk eight or ten minutes to reach a toilet. Their rest time might be jeopardised as a result, and this issue has bothered our bus captains.

I am quite surprised that some termini have no toilets. Even we can add chemical toilets, but for new termini, I am quite surprised that they have not factored in a permanent toilet... For example, the West Kowloon XRL Station bus terminus. It’s a sizeable bus terminus but there is no toilet.”

324. Of the provision of rest kiosks, Mr Roger Lee, the Managing Director of KMB, said: [Transcript Day 15; 12 September 2018, page 60]

“As for terminus facilities, the kiosk approved by the government is about 40 square feet in area, and these are needed by bus captains, even those not on special shifts. We do not make a distinction for those on special shifts... We are talking about kiosks of 40 square feet. This is not a place to sleep.”

325. In the context of the assertion by the TD in their submissions, dated 20 July 2018, that “requirements and comments from the FB operators on toilets and rest facilities would be incorporated in the design of the bus termini as appropriate”, [TD-1; page 438, paragraph 28] and in answer to the question of who was responsible for the design of a bus terminus, Mr Roger Lee said: [Transcript Day 15; 12 September 2018, page 86]

“There are several types of termini. Some termini are on government land or government property. When they were built, the government might not have decided which bus operators would operate the routes there, and they seldom invited the operators for comment. The TD would have their own teams of consultants to design the termini. So, over the years, we were never consulted on whether toilets should be installed.”

*TD*

326. For their part, in their submissions, dated 19 October 2018, the TD refuted the assertion that KMB had not been consulted about the provision of ancillary facilities at the West Kowloon Station Bus Terminus (West Kowloon XRL Station Bus Terminus): [TD-1, page 513]

“...the TD had consulted KMB, among others, on the provision of ancillary facilities (including regulator’s kiosk and toilet) at the West Kowloon Station Bus Terminus during the planning stage in July 2010. In reply, KMB had provided their preference to place portable bus regulator office and other facilities (including restroom and toilets) on their own cost.”

327. In fact, in a letter dated 6 May 2009, the TD provided KMB with a layout plan of the prospective construction of the public transport interchange and said of the proposed facilities: [TD-6, page 2147]

“...a structural bus regulator office with toilet facilities is proposed to be provided at the site. Should this structural bus regulator office be required, you will be required to pay for the construction costs.”

In addition, the TD invited “initial comments, from bus operation point of view, on the PTI<sup>17</sup> layout, in particular, the size and location of bus regulator office”.

328. Correspondence ensued between KMB and the TD in respect of the provision of a regulator’s office with/without toilets. In a letter to the TD, dated 2 September 2009, KMB said: [TD-6, page 2167]

“We note that a public toilet is located more than 200 metres away from the proposed KMB regulator office. In order to facilitate our bus operations, we hereby propose to provide toilet facilities next to our regulator office. Grateful if you could revise and incorporate the above requirements.”

329. In a letter, dated 17 December 2009, the TD informed KMB: [TD-6, page 2187]

“The construction cost of the regulator office without the toilets is estimated to be around one million and the one with the toilets will be around \$1.2 million... Please let us have your preference...”

330. KMB having taken issue with the estimated costs of construction in a letter to the TD, dated 15 January 2010, the TD informed KMB in a letter, dated 3 June 2010: [TD-6, page 2195]

“...the government has no intention to construct the regulator office on your behalf. Nevertheless, if you wish to construct the facilities as per your operational needs we are pleased to liaise with MTRCL<sup>18</sup> for you to arrange your contractor to enter the site.”

331. By letter, dated 29 June 2010, KMB protested the position of government articulated by the TD: [TD-6, page 2196]

“We do not quite understand the rationale and the reasons why the government has no intention to construct the regulator office on behalf of KMB. In fact, KMB has been

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<sup>17</sup> “PTI” means “public transport interchange”.

<sup>18</sup> “MTRCL” means “MTR Corporation Limited”.

following the procedures laid down by your department... (ref... dated 29 August 1996)... due to the following identified problems:

- (a) There is considerable time lag between the opening of the bus terminus and the completion of the ancillary facilities
- (b) Delay was further aggravated by the long time required for the approval of KMB's building plans
- (c) Technical problems arising from the lack of engineering coordination/integration thus affecting the provision of utility service to the bus terminus"

332. In a letter, dated 7 July 2010, the TD informed KMB that the ancillary facilities could be constructed either by KMB, or its contractor, or by the construction agency of the bus terminus, concluding: [TD-6, pages 2201-2202]

"...we have no objection and in fact encourage your side to construct your own ancillary facilities at the Jordan Road permanent PTI as necessary to facilitate your daily operation."

333. In an email, dated 14 July 2010, the TD informed KMB: [TD-6, pages 2204]

"there may be three feasible options for KMB to provide the regulators kiosk cum toilet and other facilities... (1) permanent structure to be constructed by KMB, (2) permanent structure to be constructed by the construction agency of the bus terminus...and (3) temporary structure in the form of portable and well-designed units."

334. Of KMB's options, the TD said:

"...for option (2) you may need to consider the cost implications, as the initial estimated construction cost provided by MTRCL is about \$2M and will be subject to change in the detailed quotation. For option (3), it will be very unlikely that chemical toilets will be acceptable to locals during the consultation stage, and your staff may need to use the public toilets to be provided next to the B/T which is about 70 to 200 metres away from the bus stacking area."

335. In a letter of reply to the TD, dated 28 September 2010, KMB said: [TD-6, page 2205]

“Among the three options indicated by your department, KMB preferred Option 3-i.e. temporary structure in the form of portable and well-designed units.”

Nevertheless, KMB went on to state “Please note that the provision of toilets at permanent bus terminus is still required since the public toilet is about 200m away from our proposed office and bus captains’ rest area.”

336. In an email to the TD, dated 17 April 2012, KMB confirmed that it “will place/construct our own bus regulator office and lavatory including all necessary utilities connection to support its operation”. [TD-6, page 2240]

337. In emails exchanged between the TD and KMB in 2013, KMB indicated that it intended to install chemical toilets at the bus station. [TD-6, pages 2241-2243] Thereafter, in 2013 to 2018, correspondence was exchanged between KMB and TD about the location of the facilities to be installed at the bus station. Finally, by letter dated 28 September 2018, the TD approved KMB’s application to install various kiosks and some chemical toilets. [TD-6, pages 2300-2308]

338. On the occasion of the inspection of the facilities at the West Kowloon XRL Station Bus Terminus by the Chairman and the Secretariat on 3 October 2018, which terminus had come into operation on 16 September 2018, it was noted that there were seven KMB kiosks, two of which were rest facilities for bus captains, but no chemical toilets. [MISC-3, pages 1275-1286.]

339. Clearly, the absence of toilets or their location at lengthy distance from where the bus captain is taking a break in his driving is an unnecessary cause of frustration to the bus captain. The lack of provision of rest facilities or the provision of inadequate rest facilities for bus captains to rest in breaks in their driving, in particular those performing split shifts, is an obvious potential cause of fatigue and is highly relevant to the safety of franchised buses.

*EXPERT EVIDENCE**CHAPTER 16 – Professor Stanley: Melbourne*

340. To give an international context to understanding the mechanism under which franchises are granted to companies to run franchised bus service in Hong Kong and the way in which they are monitored and regulated, the Committee appointed Professor John Stanley and Mr Mike Weston to make reports in respect of the franchised bus systems in Melbourne and London respectively. Further, they were invited to identify the differences and similarities between those jurisdictions and Hong Kong and, finally to make recommendations to the Committee of changes that might be introduced in Hong Kong to enhance the safety of franchised buses.

*Professor John Stanley*

341. Professor John Stanley is, and has been since 2008, an Adjunct Professor and Bus Industry Confederation Senior Research Fellow in Sustainable Land Transport at the Institute of Transport and Logistics Studies of the University of Sydney. In and between 1991 and 1999, he was the Deputy Chairman of the Australian National Road Transport Commission, whose responsibility was for vehicles of 4.5 tonnes and above. The Commission is responsible for creating initiatives to improve the productivity, safety and environmental performance of road transport in Australia. In and between 1999 and 2008, he was the Executive Director of the Bus Association Victoria, whose 500 members were bus operators. In that role, he negotiated contracts for members with the state government, but was also concerned in identifying the value of public transport, and particular buses, to the community. The Association also had a business, Road Safety Inspections, which operated road safety inspections of buses in Melbourne and regional Victoria, of which he is currently a member of the board. [Transcript Day 16; 15 September 2018, pages 2-10; EXP-1(A), page 107]

342. Professor Stanley is the author and co-author of numerous books on issues arising in transport and has published multiple articles on the same subject. Of the ambit of his writings, Professor Stanley said that “policy has been my main focus, and strategic planning to help implement that policy”. [Transcript Day 16; 15 September 2018, pages 10-15; EXP-1(A), pages 108-114] In his report, Professor Stanley stated candidly “The author is not an expert on bus operation but has expertise in matters to do with the institutional environment within which bus operates (sic) and how this can impact performance.” [EXP-1(A), page 56]

### *Melbourne*

343. Professor Stanley noted that in 2017 Melbourne had a population of 4.8 million people, but had a much lower density of population than London. Victorian government statistics published in 2018 stated that the number of passengers boarding trains, trams and buses annually were 240 million, 205 million and 120 million. So, buses accounted for 21% of the number of passengers boarding public transport annually. By contrast, about 4 million passengers boarded franchised buses in Hong Kong per day, giving an annual figure of about 1.4 billion. About 1,700 franchised buses applied bus routes in Melbourne. [EXP-1(A), page 5; Transcript Day 16; 15 September 2018, pages 17-19]

344. Professor Stanley said that about one-third of the route bus services in Melbourne were competitively tendered, whereas two-thirds were negotiated contracts. Only one operator, Transdev Melbourne, a French company, currently operated a contract obtained by competitive tendering. It was the largest bus operator and operated over 500 buses. By contrast, 12 operators held the total of 15 negotiated contracts. [Transcript Day 16; 15 September 2018, pages 20-21, 26 and 34-36] The contracts were for a seven-year period, after which they were either renegotiated or re-tendered. No bus operators who wished to renew a negotiated contract had failed to secure that renewal. [Transcript Day 16; 15 September 2018, pages 43 and 48]



*Accreditation, safety principles and safety duties*

345. Of the Victorian Bus Safety Act 2009, Professor Stanley said: [EXP-1(A); page 22, paragraph 3.3.2]

“The Act is vital for route bus operation for two main reasons. First, it provides a two gateways through which anyone wanting to operate a route bus service must pass to be eligible to operate such a service. That gateway is **bus operator accreditation**...Second, and most importantly, it establishes the safety expectations within which bus operations take place, in terms of **safety principles** and **safety duties**, together with some key compliance mechanisms.”

*Accreditation*

346. The accreditation system requires that one senior representative of each contracted route service operator completes a course in Safety Management for bus operators. The only approved course is conducted by Monash University. The course comprises 4 subjects: [EXP-1(A), pages 8 and 22]

- Introduction to Bus Safety
- Bus Safety Risk Management for Bus Operators
- Financial Management
- Business Development

In addition, the bus operator must have in place both a Management Information and also a Maintenance Management system, compliant with the requirements notified to the bus operator by the Safety Director.

347. Of the operation of the Bus Safety Act 2009, Professor Stanley said: [EXP-1(A); pages 22-23, paragraph 3.3.2]

“Vital parts of the Act are **safety principles** and **safety duties** that are expected of bus operators. Two principles are noted here.

- **Principle of shared responsibility** (Part 2, Section 9). This principle states that the safe operation of bus services is the shared responsibility of the operator, bus safety workers, procurers, persons who determine the location of bus stopping points, or who design, construct, install, modify or maintain a bus stopping point or bus stop infrastructure, the Safety Director and members of the public. This principle thus links to the Chain of Responsibility and the National Law...
- **Principle of accountability for managing safety risk** (Section 10), which talks about risk allocation: *Managing risks associated with the provision of bus services is the responsibility of the person best able to control the risk.*”

348. Section 14 of the Act provides: [EXP-1(A), page 23]

*“(1) To avoid doubt, a duty imposed on a person under this Act or the regulations to ensure safety, so far as is reasonably practicable, requires the person to-*

- (a) eliminate risks to safety so far as is reasonably practicable; and*
- (b) if it is not reasonably practicable to eliminate risks to safety, to reduce those risks so far as is reasonably practicable;”*

### *The monitoring of bus safety*

349. Professor Stanley explained that Transport for Victoria is “the portfolio policy agency and main adviser to the responsible Ministers”. By contrast, monitoring of bus operators was conducted by Public Transport Victoria and Transport Safety Victoria, together with Victoria Police and VicRoads. [EXP-1(A); page 28, paragraph 4.1] Public Transport Victoria, Transport Safety Victoria and the independent position of Transport Safety Director were created by the Victorian Transport Integration Act, 2010. [Transcript Day 16; 15 September 2018, pages 106-107]

### *Public Transport Victoria*

350. Professor Stanley said that Public Transport Victoria “is the contract manager and monitors operator performance against the requirements of their

service contracts.” [EXP-1(A); page 28, paragraph 4.2] However, he noted that: [EXP-1(A); page 26, paragraph 3.4]

*“Safety is not a KPI<sup>19</sup> under the contracts and safety performance is not subject to incentive/penalty provisions under the contracts but poor safety performance could result in the Safety Director removing an operator’s accreditation, which would mean loss of contract.” [Italics added.]*

351. Of the role of Public Transport Victoria, Professor Stanley said: [EXP-1(A); page 29, paragraph 4.2]

“PTV<sup>20</sup> holds regular contract meetings with route bus operators, where industry/operator issues are discussed. Particular safety issues may be discussed in these meetings, such as fatal accidents, major vehicle maintenance concerns and such like. This is about open communication and identifying ways to improve safety, particularly at system level.”

### *Transport Safety Victoria*

352. Of Transport Safety Victoria’s role, Professor Stanley said that it “is front and centre in terms of monitoring route bus safety”. There were two main ways by which it monitored bus safety: [EXP-1(A); pages 29-30, paragraph 4.3]

“First, it has a **compliance program**, which mainly involves road-side inspections (primarily trucks), and inspections at major tourist destination locations (primarily buses and coaches).”

However, Professor Stanley noted that “TSV<sup>21</sup> advises that it typically undertakes about 30-40 compliance checks annually, most regional.”

353. Of the second method of monitoring bus safety, Professor Stanley said: [EXP-1(A); page 30, paragraph 4.3]

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<sup>19</sup> “KPI” means “Key Performance Indicator”.

<sup>20</sup> “PTV” means “Public Transport Victoria”.

<sup>21</sup> “TSV” means “Transport Safety Victoria”.

“TSV has a **safety audit** program that checks (for example) the Management Information System and Maintenance Management System that accredited route bus operators must have in place.”

354. Of the ambit of the audit programme, Professor Stanley said: [EXP-1(A); page 31, paragraph 4.3]

“TSV notes that it undertakes around 560 audits annually, which indicates that operator audit frequency is considerably less than annual. Given resource constraints, TSV’s approach is to categorise operators into risk levels and undertake more frequent audits on those operators thought more likely to be at risk of poor safety outcomes. It notes that around 100 infringement notices are typically issued annually and that some operators have had their accreditation suspended (no metropolitan route operators). None has had accreditation cancelled.”

*Transport Safety Director*

355. Of the position of Transport Safety Director, Professor Stanley said that the Director had “...his own organisation with a staff... I am guessing... probably around about 30 or 40”. He said that the incumbent was an “expert in safety risk management, I think in aviation was his experience background.” [Transcript Day 16; 15 September 2018, pages 107-108]

356. Of the role of the Transport Safety Director, Professor Stanley said: [EXP-1(A); page 99, paragraph 6.2]

“The Transport Safety Director has a strong focus on the development and improvement of safety culture in a bus business and safety risk management, working with operators and the industry to improve practice. Guidance material is available, such as *Guidance - Safety Culture, September 2016* (TSV 2016).”

357. Of the significance of his independence, Professor Stanley said: [EXP-1(A); pages 99-100, paragraph 6.2]

“The independence of the Transport Safety Director both elevates safety as a desirable policy outcome and provides an independent source of accountability and transparency on safety processes and outcomes that exceed what is likely to result if (route) bus safety was left solely to the public transport regulatory agency and/or a governmental department to manage. Transport Safety Director’s audit processes and industry engagement has led the agency to the conclusion that Melbourne’s route bus services and practices are safe and that the safety focus should be on developing a *proactive* and forward-looking **safety risk management culture**, as distinct from practices that *react* to safety concerns after they happen.”

## *Recommendations*

### *(i) Governance*

358. In his review of the differences between the regime of governance in Melbourne and that obtaining in Hong Kong, Professor Stanley noted the presence in Melbourne, but the absence in Hong Kong, of: [EXP-1(A); page 79, paragraph 3.4]

- requirement that bus operators be accredited before they can hold a route service contract;
- the imposition of safety duties on a whole range of persons connected with the operation of franchised buses;
- an independent Transport Safety regulator/auditor to administer the safety of franchised buses; and
- the imposition of contractual obligations regarding training.

359. In the result, Professor Stanley recommended: [EXP-1(A), page 80]

“The safety of the Hong Kong FB system is highly likely to be enhanced if these Melbourne measures were adopted.”

Specifically, he recommended that the Committee should consider recommending: [EXP-1(A); page 100, paragraph 6.2]

- introducing enforceable safety duties on all parties in the chain of responsibility for route bus service delivery;
- the creation of the independent position of Transport Safety Director, whose role is to be responsible for administering matters related to safety duties, ensuring compliance and enforcement;
- requiring that all franchised bus operators be accredited by the Transport Safety Director as a precondition for holding a route service franchise, this accreditation being dependent on their capacity to demonstrate a capacity to meet safety duties through use of systems that are consistent with ISO 39001 with a safety risk management focus; and
- extending this accreditation requirement to all commercial bus services.

*(ii) Bus captain training*

360. Whilst Professor Stanley said that the Practice Note on training, promulgated by the TD was “a good idea” he said that the training framework: [EXP-1(A); page 90, paragraph 5.1]

“...needs to include a specific component on fatigue management, which could form part of an Occupational Health and safety module and should extend to supervisors.”

He recommended a requirement in Hong Kong for the provision of: [EXP-1(A); page 94, paragraph 5.3]

“...training in fatigue management as an integral part of Bus Captain training.”

361. As noted above, Professor Stanley recommended the adoption in the franchises in Hong Kong of the practice in Melbourne of incorporating requirements in the contract with the bus operator for the training of all staff, including bus drivers. He noted that the provision in the Melbourne contract stated: [EXP-1(A); page 78, paragraph 3.3.3]

*“The Operator must... ensure that all Staff are properly trained, experienced and otherwise fit and proper, in relation to the duties to be performed by them as part of the Operator’s performance of its obligations under this document.”*

The contractual provision went on to require training in stipulated areas:

- service requirements of passengers with disabilities;
- management of confrontational or difficult passengers and personal safety;
- occupational health and safety issues; and
- passenger service standards and requirements.

*(iii) Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks*

362. Professor Stanley recommended that the Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks be embedded in regulations “to emphasise their importance and strengthen the importance of compliance.” [EXP-1(A); page 94, paragraph 5.3] He did so, having noted that the TD’s submissions showed a compliance with the Guidelines by the franchised bus operators of only 96%, not 100% [TD-1, page 66] and having noted that, by contrast, the requirement was contained in a regulation in Victoria. Further, he observed that section 35 of the Hong Kong Public Bus Services Ordinance, Cap. 230, made specific provision for the requirement to be made a regulation. [EXP-1(A); page 91, paragraph 5.1.1]

363. Of the Commissioner’s evidence that the advantage of the current system of promulgating the requirements in the Guidelines was that the Guidelines “could be reviewed and revised in a more timely basis” Professor Stanley said: [Transcript Day 16; 15 September 2018, page 176]

“It seems to me that you have to decide whether the guidelines or a regulation are about convenience to the authority or whether they are about outcomes to the public, and coming as a consequence of compliance.”

364. Further, he suggested the establishment of a Standing Committee on Bus Captains' Working/Driving/Rest hours: [EXP-1(A); page 94, paragraph 5.3, subparagraph 5]

“...consisting of (at least) government representatives/nominees, FB operators and fatigue experts, to meet at least twice a year, to inter alia, (1) review compliance with the relevant Guidelines... (2) review international experience in the field and (3) review emerging understanding of the causes of driver fatigue and ways of better managing fatigue.”

*(iv) Standing Committee on Bus Safety*

365. Professor Stanley recommended the establishment of a Standing Committee on Bus Safety, which he suggested meet at least twice a year: [EXP-1(A); page 94, paragraph 5.3, subparagraph 6]

“...to review and evaluate the latest technology that may impact on bus safety, particularly for route bus operation, and advise government on desirable safety inclusions in the FB fleet and other bus systems. The newly formed Working Group on Enhancement of Franchise Bus Safety could form the basis for this Committee but membership should be broadened to include other bus operators.”

366. In his evidence, Professor Stanley clarified that he had in mind including minibus organisations, which he noted formed a “significant part of your market”. Further, he said that *prima facie*, he was in favour of the inclusion of representatives of unions in the Standing Committee. Finally, he said that ideally its findings and research would be made public. [Transcript Day 16; 15 September 2018, pages 114-115]

*(v) Public disclosure of franchised bus safety data*

367. In his report, Professor Stanley referred specifically to the data contained in the Five-Year Forward Planning Programmes prepared by the franchised bus



operators and provided to the TD, of which he said: [EXP-1(A); page 66, paragraph 2.2.3]

“(they) contain some very useful analysis and discussion of safety outcomes and safety initiatives. The assessments, for example, of correlations between accident rates and factors such as Bus Captain age, Bus Captain years of experience, hours worked, route experience of Bus Captains, and such like are very useful.”

368. He noted, in particular, that “the accident rate seems to increase somewhat in the 6-8 hours working range... This possible correlation needs closer examination to test its validity and, if confirmed, reasons for its occurrence should be investigated and possible remedies explored.”

369. In the result, he went on to recommend: [EXP-1(A), page 67]

“The Forward Planning Program documents are understood to be confidential documents, as between the relevant FB operators and the Transport Department. The author believes that the data analysis they contain is an important part of the process of an operator demonstrating their capacity to operate a *proper and efficient* service...

Being publicly accountable for their safety performance would help to sustain performance pressure. There are solid arguments favouring publication of the Bus Safety chapter of the FPPs, because of the wider societal costs of accidents.”

370. In particular, he recommended examination of “the 6-8 hours and 12-14 hour(s) working periods to see what safety enhancements can be supported in these times, which may mean reducing the 14 hour limit.” [EXP-1(A); page 94, paragraph 5.3]

*(vi) Seat belts*

371. In his evidence, Professor Stanley said that seat belts were not required on urban buses in Australia. That was because of the belief that “the mass of the vehicle itself is normally going to provide sufficient occupant protection” and the challenge “with existing vehicles of retrofitting and the cost of so doing.”

[Transcript Day 16; 15 September 2018, page 124] He said that, if the issue arose in Australia, it would be addressed by “a process called a regulatory impact statement”, which was a cost/benefit analysis.

372. Having been taken through some of the evidence that the Committee had received in respect of the consideration of the installation of seat belts on new franchised buses and the retrofitting of seat belts on existing buses, including the transcript of relevant parts of the evidence of Mr Samuel Cheng, the Managing Director of CTB/NWFB, the Notes/draft Notes of the Working Group on the Enhancement of Bus Safety and its sub-groups, and the paper by the TD and THB prepared for the meeting of the Legislative Council Panel on Transport on 25 July 2018, when asked for his observations on the installation of seat belts on new buses and retrofitting them to existing buses, Professor Stanley said: [Transcript Day 16; 15 September 2018, pages 144-145]

“I think there are two levels to this particular question. The first level is: is it technically feasible to fit seat belts in certain kinds of positions on buses, for example on the upper deck of new buses, on retrofitting for older buses. That’s a technical question of feasibility.

The second level then is: if it is technically feasible, what is the cost/benefit ratio of doing that installation? In other words, what will it cost? That is the probability of particular kinds of accidents being reduced if those seat belts are installed? Will people wear them, is one of the questions that needs to be addressed in that setting?

I don’t have a view on any particular circumstances whether it is a good idea or not. What I would say is that that’s exactly the kind of problem that you should submit to a regulatory impact statement. There will be information around on the probabilities of accidents, these different varieties. You can put monetary values on the probability of those sorts of accidents being reduced. You probably can form a view too on the probability of wearing seat belts, which would affect the effectiveness of the wearing thereof.

*So I think this is an exercise that needs a serious piece of cost/benefit analysis done on it. Now government may decide it wants to make a policy decision to install seat belts*

*where it is technically feasible. That's fine. As a matter of course, the way I would approach this, though, is to say you need to go through that cost/benefit analysis first, and I think that's what should be done in this situation.*" [Italics added.]

373. Of the benefits that might be obtained, Professor Stanley said: [Transcript Day 16; 15 September 2018, page 149]

"...you need to look of what are the sorts of accidents that are happening in the vehicle, and, for example, is this happening to people who are standing; is it happening to people who are sitting; what is the probability that exposure to those sorts of accidents will be reduced in the event that seat belt-wearing is required, and what do you need to do to encourage that seat belt-wearing?"

374. Of the parties that ought to be involved in a proper and effective cost/benefits analysis, Professor Stanley said that, apart from bus manufacturers, consultants who conduct customer survey work ought to be engaged to identify "the sorts of factors that would be influencing the probability of these seat belts being worn". In that context, he suggested that regard ought to be had to jurisdictions in which the installation of seat belts was mandated to "see whether people are actually wearing their seat belts there". [Transcript Day 16; 15 September 2018, pages 146-147] He agreed that it would be necessary to consult both the Police and bus operators as well. Finally, he suggested that recourse ought to be made to those who perform accident research, perhaps at universities or research centres. [Transcript Day 16; 15 September 2018, page 150]

*CHAPTER 17 – Mr Weston: London*

375. Since October 2016, Mr Weston has been an independent consultant in the bus industry. Prior to that, he was an employee of Transport for London (“TfL”), and its predecessor London Transport, for about 20 years. Having been the head of Bus Infrastructure (1999-2003), Bus Operations (2003-2004) and Operations Director (2004-2013) of London buses, Mr Weston was the Director of Buses, TfL, from October 2013 to September 2016.

376. The similarities and differences of the public transport systems, in particular the franchised buses, in London and Hong Kong respectively are illustrated by some salient statistics:

- in 2017-18, there were about 2.2 billion passenger journeys on buses in London, whereas there were about 1.4 billion such passenger journeys in Hong Kong; [EXP-1(A); page 120, paragraph 2.2; THB-2, page 103]
- in 2014, the proportion of the population using public transport on a daily basis was around 30% in London, whereas it was around 90% in Hong Kong; [THB-2, page 2]
- in 2017, the proportion of the population using public transport who used franchised buses was around 31% in Hong Kong and 56% in London; [THB-2, page 103; Transcript Day 18; 27 September 2018, pages 10-11]
- in 2018, the total number of franchised buses in London was around 9,200, of which 6,800 were double deck; whereas in Hong Kong the total number was around 6,000 franchised buses; [EXP-1(A); page 126, paragraph 3.4; THB-1, page 30]
- in 2017-18, the franchised bus fleet in London operated 490 million kilometres, an average of around 53,000 kilometres per bus per year; whereas, in Hong Kong the fleet operated 500 million kilometres, an average of around 83,000 kilometres per bus per year [EXP-1(A);

page 120, paragraph 2.2; Transcript Day 18; 27 September 2018, page 12]

*Transport for London (“TfL”)*

377. Mr Weston described the metamorphosis of the model by which bus and other services were delivered in London from London Transport to TfL began in 1985 with the tendering of some bus routes to private operators. London Transport was a public corporation which owned buses and garages and employed the operating staff. By about 1998/1999 all franchised bus routes were operated on a tendered basis and in 2000 TfL came into being. [Transcript Day 18; 27 September 2018, page 20; EXP-1(A), page 119]

378. In April 2017, there were six large groups of bus operators who between them operated about 94 percent of the annual scheduled mileage of franchised buses operated for TfL, the ultimate holding company for which groups of bus operators were: [EXP-1(A), page 126]

- Abellio Transport Holding BV (Netherlands) - 8.1%
- Arriva Passenger Services Limited (Germany) - 17.2%
- Comfort Delgro Corporation Limited (Singapore) - 19.2%
- Go Ahead Group Plc (UK) - 23.7%
- RATP Development (France) - 11.6%
- Stagecoach Group Plc (UK) - 14.6%

379. TfL is responsible for: [EXP-1(A); page 127, paragraph 4.1]

- contracting of services and setting performance standards;
- service/route planning;
- contract monitoring and management;
- provision of bus passenger infrastructure;

- passenger information;
- ticketing and vehicle location equipment.

By contrast, the role of the contracted bus operators is to:

- tender for individual bus routes;
- employ drivers, controllers, engineers and other operating staff;
- operate services to TfL standards;
- own assets-garages and buses.

380. Mr Weston said that one significant consequence of the tender for individual bus routes was that operators “will inevitably have contracts at every stage of the contract life”. [EXP-1(A), page 137]

381. Mr Weston summarised the process by which TfL awarded bus route contracts as being: [EXP-1(A); page 128, paragraph 4.2]

“Transport for London operate a pre-qualification system with new operators being required to complete a prequalification questionnaire. Subject to successful evaluation of this questionnaire a newly approved supplier would then be asked to sign a Framework Agreement and invited to start bidding for individual bus routes.

For each route tendered TfL will issue a service specification setting out all the requirements specific to that bus route including frequency required at certain times of the day, route to be followed and vehicle type-double deck, single deck etc.

The Framework Agreement covers all the generic contract provisions with the route specific information in terms of the route - for example timetable, minimum performance standards, vehicle type being contained within the Route Agreement.”

### *Vehicle specifications*

382. Mr Weston said that the Framework Agreement detailed TfL’s requirements of vehicle specification, over and above national requirements for the initial certification of a bus, and included “assault screens, engine bay fire

suppression, CCTV systems including in vehicle monitors”. However, he observed: [EXP-1(A), page 134]

“Currently bus driver or passenger seat belts are *not* a legal requirement in the UK on scheduled bus services.” [Italics added.]

383. Furthermore, he noted “At present no London operators fit passenger or driver seat belts on buses contracted to TfL.” Also, he noted: [EXP-1(A), pages 134 and 142]

“Vehicle telematics systems are *not* currently mandated by TfL although all operators have adopted systems over the last few years from several suppliers including Green Road and Mixtelematics.” [Italics added.]

#### *Tender evaluation*

384. Mr Weston noted that each tender was subject to an evaluation process which “will seek the ‘most economically advantageous’ outcome.” However, he went on to say that “The technical evaluation of an operator’s bid will include an assessment of all aspects of their current performance including safety.” [EXP-1(A), page 129]

#### *TfL contracts with bus operators*

385. Of the contract model operated by TfL with bus operators, Mr Weston said: [EXP-1(A), page 125]

“Gross cost contracts are used by TfL with the operators being paid for each mile operated with additional bonuses and deductions based on the reliability of the service. Passenger revenue is retained by TfL...”

#### *Passenger revenue: subsidy*

386. Of the ratio of passenger revenue to the overall cost of the service, Mr Weston said: [Transcript Day 18; 27 September 2018, pages 33-34]

“...in the financial year 2016/17, 70 per cent of the cost of the network was covered by passenger revenue. So the other 30 per cent was subsidy, which was £626 million.”

### *Contract bonuses and deductions*

387. Of the operation of that Quality Incentive Contract, Mr Weston said that: [EXP-1(A); page 131, paragraph 4.3.3]

“(it) combined the base payment regime of gross cost contracts with additional payments or deductions based on the actual Quality of Service Indicator (“QSI”) performance compared to the minimum performance standard contained within the route agreement. Payments are graduated with an increase or decrease in the payment for every 0.10-minute change in Excess Wait Time (“EWT”) and every 2.0-minute change in on-time performance for low frequency routes compared with the contract minimum standard. These payments could range between +15/–10% and were aimed at increasing operators focus on reliability of the service in addition to quantity (i.e. mileage operated) which had been the focus of the gross cost contracts.

For high frequency route (every 12 minutes or more) the measure of quality of service is EWT and for low frequency routes the on-time performance is measured. EWT measures the excess wait passengers experience on high frequency services where it is assumed they arrive randomly at the bus stop and should therefore ideally wait on average half the scheduled headway.”

388. Mr Weston explained that the contract price agreed between the bus operator and TfL, divided by the annual schedule mileage, produced a contract price per mile. The operator was paid that rate per mile for every mile they operated, but lost the contract rate per mile for mileage that they failed to operate due to reasons within their control “for example, if they have no driver to run the journey or they have no bus because of mechanical failure”. However, for mileage lost for reasons beyond their control, for example “traffic delays, or diversions due to planned or unplanned events” payments were not deducted. Finally, he said that “there is a relationship with these additional payments for reliability of the service.” [Transcript Day 18; 27 September 2018, pages 23-24]



389. Mr Weston said that of the calculation of EWT: [Transcript Day 18; 27 September 2018, page 27]

“Historically...it was done by manual data collection. Now it is calculated automatically through the vehicle location system. So historically it was a sample; now it is effectively 100 per cent statistic based on all buses on that route.”

### *Length of the contract*

390. Of the length of the contract, Mr Weston said: [EXP-1(A), page 129]

“London bus contracts typically run for an initial period of 5 years with the potential for a two-year extension based on operational performance during four quarters of years 3&4... If operators meet the contract extension criteria, then they are eligible for an automatic extension. The operator can decide whether they wish to accept the extension.”

391. Of the operational performance criteria, Mr Weston said “operators are required to exceed the minimum performance standard (On-time or Excess Wait Time) to be eligible for a contract extension”. However, having said that the contract could be varied to include other matrices, such as safety performance, he noted “...at present only EWT or On-time performance form part of the extension criteria.” [EXP-1(A), page 130]

### *Annual Contract Price Adjustment*

392. Mr Weston said that all route agreement contracts were “eligible for an annual Contract Price Adjustment on the anniversary of the date of tender to reflect cost inflation. The formula used to calculate that adjustment was a weighted basket of factors, including Average Earnings Index, Retail Price Index and Index for diesel price increase. [EXP-1(A); page 135, paragraph 4.5.4]

### *Termination of the contract*

393. Section 27 of the Framework Agreement makes provision for termination of the Route Agreement “for several reasons including a material breach of any provisions of the Route Agreement, including where performance in respect of the route agreement is not... to the standards required.” However, Mr Weston noted that “In practice the contract termination provisions have been rarely used”. [EXP-1(A); page 132, paragraph 4.5.1]

394. Mr Weston explained: [Transcript Day 18; 27 September 2018, pages 42-43]

“One of the big advantages of the route level tendering system over perhaps an area-based franchising system, such as for example in Singapore, is that the ability of the authority to adjust the size of a company through route awards is very, very flexible. The challenge with a big area franchise is that if performance in certain aspects of the contract isn’t up to standard, it is a very big decision to terminate that contract. You may have a contract for 400 of 450 buses. A very, very big decision and potentially very disruptive to the transport network and members of the public.

The benefit of the London system is that you can send some very clear messages to the operator by not awarding them some contracts for a period of time. It doesn’t have a devastating effect on their business but sends a very strong message that they’ve got to improve their performance.”

### *Contract Monitoring and Performance Management*

#### *Performance Account Manager*

395. Mr Weston said that each contracted bus operator was allocated a Performance Account Manager by TfL, whose role was to “...identify performance issues and then work with the operator to identify solutions and implement plans to resolve the issue.” [EXP-1(A), page 136]

396. In summarising the contract monitoring regime, Mr Weston identified the following relevant factors of “output”: [EXP-1(A), page 136]

- Mileage Operated;
- Reliability (Excess Wait Time/On-Time performance);
- Driving Standards-DQM;
- Contract Audits-driving hours, mileage returns etc; and
- Engineering Standards-EQM.

397. In addition, he said that the perceptions of the users of the franchised buses were relevant and regard was had to customer satisfaction surveys and customer correspondence. Further, assessment was made by trained surveyors of drivers “from a non-technical viewpoint in terms of helpfulness, attitude to passengers etc” in what were called Mystery Traveller Survey. [EXP-1(A); pages 136-137, paragraphs 5.2-5.3]

### *Driver Training*

398. Mr Weston noted that all franchised bus drivers were required to take a specific driving test and obtain a Public Service Vehicle Licence (“PSV”) and, in order to maintain eligibility for that licence, to undertake 5 days accredited training every 5 years. Most drivers underwent a one day course every year and, thereby, were able to maintain a Certificate of Professional Competency (“CPC”). In addition, TfL required that all new franchised bus drivers obtain within one year Level 2 of the Professional Bus Driving qualification, accredited by City & Guilds. [EXP-1(A); page 144, paragraph 6.6] Drivers allocated to a route were expected to be familiar with the Route Risk Assessment (“RRA”) which bus operators were required to produce as part of the Framework Agreement “...to identify potential risks along a route.” [EXP-1(A); pages 142-144, paragraphs 6.4 and 6.6]

*In the Zone*

399. In 2015 and 2016, TfL developed a course ‘In the Zone’ delivered by the bus operators’ trainers to all their drivers to enable them to identify and respond to risk-taking behaviour to reduce the consequences of risk-taking. Mr Weston said the course was effectively a training course which use videos which showed “how drivers manage and assess risk”. [Transcript Day 18; 27 September 2018, page 176; EXP-1(A); page 144, paragraph 6.6]

*Hello London*

400. In 2016-2018, TfL delivered to all the bus operators’ 24,500 drivers a two-day, CPC accredited course, *Hello London*, the primary objective of which was to improve customer service delivered by bus drivers in different situations. Mr Weston said that the course was delivered: [Transcript Day 18; 27 September 2018, page 178]

“...centrally by Transport for London contractors. So *it was a big commitment.*” [Italics added.]

401. The context of Mr Weston’s observation as to the size of TfL’s commitment is to be found in TfL’s Board Paper “*Bus Driver Training*”, dated 8 November 2016, which noted: [MISC-3; page 1370, paragraph 4]

“(T)he Hello London approach has been to harness innovative situation drama with reflective facilitation. Following a competitive process, the training contract was awarded to specialist supplier Steps Drama. The budget for the training, delivered over two years, is £6.5m.”

402. In the *Hello London* programme, actors were used to create an interactive dialogue with the bus driver participants about specific situations, for example: the various circumstances in which a bus does not stop at a bus stop, or if it stops does not open its doors to allow passengers to board, and the resulting consequences; the consequences of a bus not stopping at a bus stop; and conflicts between angry

passengers and the bus driver arising from the bus being late, a mother refusing to collapse a child's buggy or from an aggressive foulmouthed passenger who abuses the bus driver. Further, the course addressed the risk of the resulting frustration and distraction leading the driver to take risks whilst driving. [EXP-1(A); pages 144-145, paragraph 6.6] Mr Weston said that it was the latter factor that was the link to safety "if drivers can become less stressed and agitated by the way in which they deal with passengers, then hopefully they are less distracted when they are driving the vehicle after that incident or that interaction". [Transcript Day 18; 27 September 2018, pages 177-178]

#### *Driver quality monitoring ("DQM")*

403. Qualified driving instructors were employed to undertake covert surveillance of a sample of each of the franchised bus operator's drivers each year. The 'Scoring Sheet' identified multiple factors under three separate headings: Passenger Consideration; Other Safety; and Driving Ability. [EXP-1(A), pages 137 and 159]

#### *Engineering Quality Monitoring ("EQM")*

404. In addition to being required to maintain the buses in accordance with laws and regulations and to being subjected to an annual test, Mr Weston said that TfL employ a specialist contractor who inspected approximately 25% of the fleet of each of the bus operators each year in unannounced inspections. [EXP-1(A); page 138, paragraph 5.4]

#### *Bus contract Audit*

405. Mr Weston said that TfL had a contract audit team who visited individual garages on a regular basis to undertake audits of compliance of making records of various items, including lost mileage and drivers hours. [EXP-1(A); page 138, paragraph 5.5]

## *Collaboration between TfL and bus operators*

### *Bus Operator Forum*

406. In addition to contract monitoring and performance management, Mr Weston said that there existed a relationship of collaboration between TfL and bus operators as evidenced, in particular, by the Bus Operator Forum which met about every eight weeks and is comprised of the managing directors of the bus operators on the one hand and directors and senior managers of TfL on the other hand. He said that the forum had been established at least 15 years earlier and that he had chaired it for 6 or 7 years. It had been established as a proactive measure, rather than being reactive to particular events. [Transcript Day 18; 27 September 2018, pages 83 and 89] Those meetings afforded the bus operators the opportunity to raise “generic issues and concerns” and for TfL to indicate future consequences for the bus operators of TfL’s business plan. [EXP-1(A); page 139, paragraph 5.7; Transcript Day 18; 27 September 2018, pages 83-84]

### *Sub-groups*

407. In addition to the Bus Operator Forum, there existed a series of sub-groups, including one in Engineering and another in Safety. Those sub-groups met in a similar cycle of eight weeks and discussed issues of common interest and best practice.

### *Safety sub-group*

408. Of the meetings of the safety sub-group, Mr Weston said: [Transcript Day 18; 27 September 2018, page 85]

“...the safety sub-group is attended, again, by all the bus companies, sometimes at a managing director or director level, sometimes by the bus companies’ head of Safety. That’s where again common issues around safety would be discussed.

The forum is also used as a place for operators to share lessons learned from incidents, road traffic incidents.”

*Engineering sub-group*

409. Mr Weston said that the engineering sub-group is generally made up of engineering directors who shared issues around the maintenance of vehicles. That he said was another forum “for collaboration and sharing good practice.” [Transcript Day 18; 27 September 2018, page 87]

*The Bus Operators Forum, its sub-groups and Trade unions*

410. Mr Weston said that trade union representatives did not attend the meetings of the Bus Operators Forum or its sub-groups. He noted that 95% of bus drivers belong to the Unite trade union so that “liaising with the trade union from TfL’s point of view is relatively easy.” Of issues of bus safety, Mr Weston said of TfL: [Transcript Day 18; 27 September 2018, pages 88-89]

“...they would meet with the trade unions probably to share some of their thoughts on the bus safety standard, for example. But it is left down to the individual bus companies to deal with their local trade union representative in terms of local issues and local terms and conditions.”

*TfL: Bus Safety Management*

*TfL’s Bus Safety team*

411. Mr Weston said that in early 2015 TfL: [Transcript Day 18; 27 September 2018, page 94]

“...set up a dedicated team to focus on the bus safety programme, and it included somebody who was seconded from the road safety team of TfL, and the aim was so they would focus, and that team is still focusing, on improving bus safety and delivering the bus safety programme.

So there is a dedicated team of two or three people whose job is purely focused on this agenda and driving bus safety.”

*Intelligent Speed Assistance (“ISA”)*

412. Mr Weston acknowledged that earlier, in 2009, TfL had commissioned a report conducted by 2CV, a marketing consultancy, to explore drivers’ attitudes towards Intelligent Speed Adaption, which provided speed limit information which could be acted on to limit the speed of a vehicle in one of three modes: namely; Advisory, Voluntary and Mandatory. [MISC-3, page 943] Of the statement “In May 2009, Transport for London commenced a trial of one of the latest ISA systems”, which trial was in cars and the purpose of which was to evaluate the appropriateness of the system in vehicles, not specifically buses. [Transcript Day 18; 27 September 2018, pages 102-103]

413. However, Mr Weston said that in 2015 TfL commissioned a report of a trial of “*Intelligent Speed Assistance on London Buses*” conducted by Transport Research Laboratory (“TRL”), a consultancy specialising in road transport and technical assessment of road transport matters. Two bus routes were selected for the trial, which began in June 2015 and resulted in a comprehensive report published in November 2016. [MISC-3, pages 1002-1133] Of the technology, Mr Weston said: [Transcript Day 18; 27 September 2018, page 97]

“...it uses the digital speed map that’s available for London, and each of the vehicles fitted with equipment talk to the digital speed map, and therefore restricts the driver’s ability to accelerate beyond the speed limit. So it controls the driver’s speed at the speed limit.”

414. Of TRL’s role, Mr Weston said that they provided not only a rigorous analysis but also an independent analysis, noting: [Transcript Day 18; 27 September 2018, pages 97-101]

“So this technology was funded on these two routes by Transport for London, but they commissioned TRL to do the monitoring.”



*Bus Safety Programme: February 2016*

415. Mr Weston noted that in February 2016, TfL launched its Bus Safety Programme, core elements of which included: [EXP-1(A), page 146]

- transparent bus collision data analysis;
- contract and performance management;
- vehicle design; and
- bus driver training.

*Data collection and transparency*

416. Mr Weston said that bus operators were required by their contract to submit “comprehensive data relating to incident and accidents” and did so through the Incident Reporting Information System. On a quarterly basis, TfL published data compiled by the police, “STATS 19”, of road collisions involving death or personal injury. A trend analysis was provided on a “bus safety dashboard”. Also, on a quarterly basis, TfL published Excel spreadsheets, entitled “Details of incidents resulting in a fatality or injuries which required hospital attendance and treated on scene”, of incidents involving franchised buses. [EXP-1(A), page 141]

*London Buses Safety Dashboard-Q1, 2018*

417. The Quarter Summary of the ‘*Quarter One Report 2018*’ of the London Buses Safety Dashboard, published on the TfL website, included the statement: [MISC-3, page 1327]

- “• In Q1, there were 2.9% injuries for every one million passenger journeys.
- The proportion of injuries attributed to slip trip fall went up from 47% in Q4 2017 to 51% in Q1 2018.
- Collisions accounted for 13% of all injuries; this is the lowest proportion since 2014.

- 8.6% of the reported 16,912 incidents in Q1 resulted in injuries. This quarter is the lowest for incidents since 2014.”

*TfL’s Bus Safety Data Publication*

418. Beneath the heading “*TfL Bus Safety Data Publication*”, the TfL website states: [MISC-3, page 1338]

“All data is gathered from London Bus operating companies using an in-house data logging system which every London bus operating company has access to. *Bus companies are required to report incidents regardless of blame and severity.* The logging system is intended to provide data for statistical reasons to support safety evaluation. Only initial information relating to incidents are provided to TfL by bus operating companies on prima facie basis. Incident investigations are carried out by the operating companies involved who retain resultant information.” [Italics added.]

419. The caveat entered by TfL in respect of the use of the data states: [MISC-3, page 1338]

“It is not considered to offer a reliable means of comparing individual bus routes or bus operating companies in relation to safety. This is mostly due to the fact that route characteristics are often different as are other key factors such as density, frequency, traffic volume and the bus type used...”

420. As Mr Weston observed in his report, the information listed in the Excel spreadsheets included: the Date; Route; Operator and Group name; the Borough in which the incident occurred; the gender, the adult/child, passenger/or not status of the injured person, together with the type of incident and resulting treatment. [EXP-1(A), page 141] The TfL website explains that the description of the incident, as involving a fatality, excludes “health related events such as suspected heart attack.” Finally, a description is given of whether or not an injured person was treated at the scene only or whether or not hospital attendance was required. [MISC-3, page 1338]

421. The TfL website goes on to state that:

**“Road Safety Statistics (STATS19)**

STATS19 is the main source of road safety data for London and is used as the authoritative source for analysing road casualties across the city.”

Further, the website states:

“Due to the fact that bus operating companies are unable to verify the nature of injuries in all cases at the time of logging incidents, anyone viewing this data is advised against using it as an authoritative source of statistics on road traffic casualties. STATS19 publications should be used for this purpose, particularly when seeking to ascertain the severity of injuries sustained.”

*Verification of the data*

422. Mr Weston said that TfL had a process of verification of the data provided to it: [Transcript Day 18; 27 September 2018, page 50]

“So all operators have a requirement to enter all the incidents onto the central database, and that’s the main source of information, and there’s audits undertaken by Transport for London to ensure that operators are correctly populating that database. In addition, that data is cross-referenced with the police data for serious incidents.”

*Safety innovation fund*

423. TfL established a *Safety Innovation Fund* and having invited bids from bus operators in August, in November 2017 it awarded a total of £500,000 to six bus operators to conduct trials on technological safety devices. Mr Weston said that the technological devices being examined included autonomous braking, pedal confusion prevention, mirror design and frontal crash protection. [EXP-1(A), pages 146-148]

424. Ms Lorna Murphy, the Safety Director of Abellio, reported to Mr Weston and the Chairman in August 2018 that its tests of Mobileye, a forward-facing

camera which displayed changes to speed limits and alerted drivers of the distance between the vehicle in front and possible conflicts with pedestrians and cyclists, have resulted in a 28% reduction in accidents and a decrease of on-board injuries of 75%.

425. Mr Jon Pike, Head of Safety and Risks of RATP, reported that its trial of the Guardian ‘Seeing Machine’, a drowsiness detection camera, had resulted in a 25% reduction in accidents on the route on which the trial being conducted. The system detected the fact that a person’s eyelids were closed for a period of more than 1.5 seconds and transmitted an alert to a central control room from where, after verification that the alert was positive, communication was made with the garage who, in turn, contacted the driver by radio. Mr Weston and the Chairman viewed an example of a video recording of a bus driver in such circumstances, which had led to an alert on 28 August 2018, and were told that contact was made directly with the driver within 5 minutes. [EXP-1(A), pages 146-147]

426. Mr Weston noted that: [Transcript Day 18; 27 September 2018, page 101]

“TRL have also been engaged in the assessments of all the other technologies that are being considered as part of the new bus safety standard in London.”

### *Bus Safety Standard*

427. Mr Weston said that a core part of the Bus Safety Programme was the establishment of a Bus Safety Standard on which TfL had been working since 2016 in collaboration with TRL, Loughborough University, bus operators and bus manufacturers. He noted that a rigorous approach had been adopted “to the assessment of each potential option using cost/benefit analysis to target the interventions which will give the greatest return for each £ spent in terms of injury/accident reduction.” The primary objective was to reduce the number of those killed and seriously injured in bus accidents. [EXP-1(A); page 148, paragraph 7.5]

*Safety performance indicators (“SPI”)*

428. Mr Weston said that, as part of the development of the Bus Safety Programme and Bus Safety Standard, TfL had developed a *Safety Performance Indicator*, which he anticipated would be announced publicly by TfL at the time that the Bus Safety Standard was to be promulgated. Of the SPI, he said: [EXP-1(A); page 150, paragraph 7.8]

“...SPI monitors a basket of measures including incident data and outputs from the observational measures giving operator an overall score which is benchmarked at 80. Their individual future performance is then measured against the benchmark to track for either deterioration or improvement. The system is not designed to compare bus companies between each other but to track the trend of an individual company.”

*Seat belts*

429. Mr Weston said that he and the Chairman had been told by representatives of TfL that TfL had “(n)ot looked at” the installation of seat belts on franchised buses. [Transcript Day 18; 27 September 2018, page 119] Of that he said:

“The view has clearly been taken that they don’t want to pursue seat belts, I suspect because they know what the cost is and they feel that there are greater benefits from some of the other options”.

430. Mr Weston acknowledged that, in May 2010, the Department for Transport of the United Kingdom had issued a statement providing guidance and advice on the legislative requirements in respect of the installation of seat belts on urban buses. Having noted that it had been a requirement, since 1 October 2001, that seat belts be fitted on seats in all new buses, the statement said: [MISC-3, page 1274]

“The only exemption from this requirement is for buses that are designed for urban use with standing passengers. An exemption is permitted for these vehicles because they are typically used for short journeys, in both time and distance, undertaken at moderate speeds on urban routes.”

431. Finally, he said that it was anticipated that TfL would announce the first phase of the Bus Safety Standard on 16 October 2018 and that two further phases would follow in 2021 and 2022. [EXP-1(A), page 148]

*Bus Safety Standard: October 2018*

432. TfL launched its Bus Safety Standard on 16 October 2018. In the accompanying Executive Summary, Ms Claire Mann, the Director of Bus Operations of TfL, said of the steps taken since the launch of the Bus Safety Programme in February 2016: [EXP-1(B), page 189-308]

“Since then we have commissioned TRL (the Transport Research Laboratory) to research and develop that standard. This has been an evidence-based and collaborative project, consulting with bus manufacturers and operators on technical feasibility, timelines and implementation.”

433. Ms Mann noted that “(n)ot all the technologies are available immediately and some will require development time, so our bus safety roadmap sets out our future plans for the buses, to give the manufacturers time to invest in these new safety features.” Of that, it was noted that it now presented “a ‘Preferred’ date earlier than any ‘Required’ date.” The latter, represented the date when multiple bus models “would be expected to be available to the market and will typically follow a few years later.” [EXP-1(B), pages 189-308 and 189-324]

434. In his Supplemental Report, Mr Weston noted that the measures announced were categorised under separate headings: [EXP-1(A); page 189-65, paragraph 3.1]

*Driver Assist*

- Advanced Emergency Braking;
- Intelligent Speed Assistance;
- Improved Direct and Indirect Vision;
- Pedal Application Error; and
- Runaway Bus Prevention.

*Partner Assist*

- Acoustic and Visual Conspicuity.

*Partner Protection*

- Vulnerable Road Users Frontal Crashworthiness.

*Occupant Protection*

- Occupant Friendly Interiors and Slip Protection.

435. Mr Weston noted that it was envisaged that “the standards will apply to all new buses from 2019 onwards (around 700 per annum )”, but that “consideration is also being given to the potential to retro-fit existing buses possibly as part of their mid-life refurbishment which takes place after around 7 years.” [EXP-1(A); page 189-64, paragraph 2.3]

*Driver Assist measures**(i) ISA (Intelligent Speed Assistance)*

436. Of the Driver Assist measures, only ISA was required by the end of 2018. Mr Weston noted that this measure was “considered especially helpful to drivers as the number of 20mph zones increases across London.” [EXP-1(A); page 189-66, paragraph 3.3]

*AEB (Automated Emergency Braking)*

437. The Executive Summary acknowledged that advanced emergency braking on buses provided “a unique additional challenge because of the multiple passengers that are seated and unbelted, or who might be standing” and acknowledged that “...each false activation also carries a risk that it could cause passenger injury.” [EXP-1(B), page 189-311] Of that, Mr Weston said “The roadmap recognises this requirement for further development work and therefore envisages this feature being delivered from 2024.” He said that it was claimed

that the acknowledged risk of injury to passengers on board the bus, from false activation of the AEB system, would be “...off-set by a reduction in the number of fatal and serious injuries outside the bus.” [EXP-1(A); page 189-66, paragraph 3.3]

#### *Driver’s Direct and Indirect Vision*

438. Having noted that a driver’s ability to respond to an imminent collision was dependent on how well he could see out of or around the bus, the Executive Summary said that the Bus Safety Standard would “minimise direct vision obstructions from pillars and improve indirect vision via the use of mirrors, or blind spot information systems and Camera Monitor Systems in the future.” The latter system might replace external mirrors and remove the risk of collision with those mirrors by those outside the bus. (EXP-1(B); pages 189-313 to 189-314, paragraph 2.3)

#### *Pedal Confusion Prevention*

439. Mr Weston explained that “(p)edal confusion refers to situations where a driver presses the accelerator when intending to press the brake thus leading to an unintended acceleration”. A variety of solutions were being considered, including dashboard lighting to indicate the acceleration and braking. [EXP-1(A), page 189-67]

#### *Runaway Bus Prevention*

440. To prevent the “rare” circumstances of a runaway bus, in 2020 TfL will require “a system of interlocks to prevent the bus from rolling away if circumstances lead to the driver forgetting to apply the parking brake” when leaving his seat. [EXP-1(A), page 189-67]



### *Partner Assist*

441. Having regard to the increased use of electric and hybrid buses, in order to assist other road users, TfL will require all “new models” be fitted with an Acoustic Vehicle Alerting System from September 2019 and all “new builds” from 2022. That system assists those outside the bus to detect the presence of the bus. Testing and trials of improved visual conspicuously of buses were still underway. [EXP-1(B), pages 189-317 to 189-318]

### *Partner Protection*

442. Of vulnerable road users (“VRU”) outside the bus, Mr Weston said: [EXP-1(A); page 189-68, paragraph 3.5]

“Pedestrian friendly front end design could incorporate a variety of features designed to better protect pedestrians and other VRU in the event of a collision. This includes changes to the geometric front-end design of the bus, impact protection and energy absorption assessment, and runover prevention measures such as an airbag device located under the bus which is activated if the bus comes into contact with a pedestrian. These requirements will also include the impact performance of wing mirrors and their potential replacement with camera monitoring systems.”

### *Occupant Protection*

#### *(i) Seats*

443. Having noted that “a large number of slight injuries occur in non-collision incidents such as harsh braking” [EXP-1(B), page 189-321], the Executive Summary asserted “TfL’s BSS<sup>22</sup> is supporting safety improvements for bus passengers as a priority.” Having noted that passengers could be injured “in frontal impacts or when the bus brakes because this causes them to move forward into the seat in front” and that low backed seats allows large neck extension in rear

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<sup>22</sup> “BSS” means the “bus safety standard”.

facing seats in such circumstances, the Executive Summary said “TfL calls for innovation to develop a seat design that can provide greater protection”. [EXP-1(B); page 189-322, paragraph 5.1]

*(ii) Slip Protection*

444. The Bus Safety Standard “...will require a minimum skid resistance of the anti-slip flooring fitted in the buses.” [EXP-1(B); page 189-322, paragraph 5.2]

*Bus Safety Innovation Challenge*

445. Mr Weston said that the Bus Safety Innovation Challenge was a TfL fund to be launched in early 2019, which was open to bus manufacturers and their suppliers, as well as bus operators. First, an applicant had to describe the safety problem that it was intended to avoid or mitigate and how the safety measure worked. Secondly, evidence was required of how the innovation had been tested and its effectiveness and suitability for use on buses demonstrated together with a description of “the expected benefit in terms of the number of casualties it is expected to avoid”, quantified by “real world evidence” of the benefits “actually achieved, operational implications such as driver or passenger reaction to the system and costs.” [EXP-1(A); page 189-70, paragraph 4.2; EXP-1(B), page 189-325]

*Safety Performance Index*

446. Most helpfully, TfL provided Mr Weston with general information of the Safety Performance Index (“SPIx”), which had been employed on a trial basis with its bus companies since 2017. The SPIx comprises eight “baskets”, which contain a total of 81 indicators: [EXP-1(C); pages 189-743-1; 189-754 to 189-775]

- Customer Safety;
- Staff Safety (Employees and Suppliers Staff);
- Network Safety;

- Bus Engineering;
- Driving Standards;
- Issue Management & Assurance System;
- Infrastructure Safety; and
- Bus Station Safety.

447. The periodic SPIx Score is calculated by the application of the formulae:

- $SPI = \text{score} \cdot m + 100$

[Where “m” is the gradient unique to the business area on the degree to reach the target of 80 with a constant of 100 (best performance).]

- $\text{Score} = \text{weight} \times \sum \text{incidents}$

[The score is a function of multiplying a weight from 1 to 5, where 5 is the most serious, with the total number of incidents for any given period.]

The weighting value and the value of “m” are not publicly available.

### *Cost/benefit analysis*

448. Similarly, TfL provided information about their cost/benefit model. The approach to a cost benefit analysis was described as involving a series of steps: [EXP-1(C), page 189-746]

- **Measure**
  - Problem
  - Description of solution
- **Target population** - What are the relevant casualties?
- **Fleet penetration**
  - How long to enter the fleet?
  - New build and retrofit
- **Effectiveness** - How well will it work on the target population?
- **Costs** - How much will it cost?

- Manufacturing and operational costs
- **Timeline** - When is the solution feasible to implement?
- **Overlaps** - What other safety measures does it overlap with?

449. As an illustration of the resulting cost: benefit ratio (“CBR”) calculated in respect of some of the proposed measures to be adopted in the bus safety standard, Mr Weston said that the following CBRs had been calculated in respect of these measures: [EXP-1(C), pages 189-743-1 to 189-743-2]

- Vulnerable Road User Frontal Collision-minimum geometric requirements  
CBR = 1:9.98-28.15 (excluding insurance claims);
- Interiors Level 2  
CBR = 1:7.99-20.2 (excluding insurance claims); and
- Indirect Visual Standard Requirements  
CBR = 1:1.69-7.39 (excluding insurance claims).

450. So, it was calculated that every £ spent on the improvement of the design of the front of buses, in consequence of the Vulnerable Road User Frontal Collision requirements, would result in benefits of between £9.98 and £28.15. Mr Weston observed the exclusion of the anticipated benefit to bus operators, resulting from their insurance claims, reflected a conservative approach by TfL to the cost benefit analysis. [EXP-1(C), page 189-743-2]

*Mr Weston’s recommendations*

*(i) Subsidised trials and installation by franchised bus operators of technological safety devices and bus driver training*

451. Having observed that Hong Kong was probably unique in operating a franchised bus network without public subsidy, Mr Weston said that begged the question of whether that was overly restrictive of “investment the franchised

operators can make in the network especially in terms of developing and introducing new technology and initiatives.” He suggested that consideration be given to funding by TD of the “uptake of new safety technology and bus driver training targeted specially at safety”. In that context, he noted that the cost of safety improvements in buses operated for TfL was ultimately reflected in the increased bids made by franchised bus operators for routes. [EXP-1(A); page 152, paragraph 8.3]

*(ii) Adoption of new technology*

452. Of the adoption of new technological safety devices on franchised buses, Mr Weston said: [EXP-1(A); page 155, paragraph 8.9]

“It is clear from London’s experience that the adoption of new technology needs to be done *in a considered way* to ensure that the benefits from any financial investment are maximised. It is clearly necessary to understand both the cost and benefits of various technology options to ensure that any investment made maximises the benefits in terms of accident reduction.” [Italics added.]

453. Of the circumstances in which the decision had been made, first by KMB and then by the Working Group on the Enhancement of Safety on Franchised Buses to install seat belts on all new buses and the ongoing considerations of the Working Group of retrofitting them to existing franchised buses, Mr Weston said: [Transcript Day 18; 27 September 2018, pages 158-159]

“I think in my mind the bit that is missing in a lot of this assessment is really the cost/benefit, and really considering the cost of seat belts, and certainly the retrofitting is a huge cost... The key question is what are the benefits of that investment in terms of seat belts, in terms of reducing injuries, compared with how that money could be spent on other safety measures across the network...

So I think there’s a whole piece of work missing here about, for every dollar that’s invested in bus safety, are there bigger benefits to be obtained by intelligent speed adaptation/assistance, autonomous braking, front-end design, can that money be spent

more wisely on other things? And I think the worry is once the money has been spent on this, it's been spent.

... it's a significant amount of money, and I would question whether it could be spent on other forms of technology that would get better results.”

454. In the result, Mr Weston recommended: [EXP-1(A); page 155, paragraph 8.9]

“The approach adopted by TfL in the development of its Bus Safety Standard is worthy of consideration in Hong Kong especially given the main two UK bus manufacturers are key suppliers to both London and Hong Kong.

Safety technology will also continue to develop as the vehicle industry sees increasing autonomy. In this regard the assessment and adoption of new technology needs to be an ongoing process as vehicle safety features will continue to develop and any standards need to constantly respond to these developments.”

*(iii) Safety data transparency*

455. Having noted that it had been the experience in London that “greater transparency of data in relation to the safety performance of the bus network not only leads to greater stakeholder and public scrutiny it also leads to a sharper focus from both the transport authority and its contracted bus operators on the safety agenda. An open approach to incident data leads to accountability”, Mr Weston said: [EXP-1(A); page 153, paragraph 8.4]

“Consideration should be given to what safety data in relation to the Hong Kong franchised bus network could be placed into the public domain.”

456. In his evidence, Professor Stanley endorsed that suggestion forcefully. [Transcript Day 16; 15 September 2018, page 181] As noted earlier, having noted that the data contained in the Five-Year Forward Planning Programmes contained “some very useful analysis and discussion of safety outcomes and safety initiatives”, in his report Professor Stanley recommended the publication of the

Bus Safety Chapter of the Five-Year Forward Planning Programmes. [EXP-1(A); pages 66-67, paragraph 2.2.3]

*(iv) Statutory regulation: collaboration between franchised bus operators and TD*

457. Having said that it appeared, from the submissions of the TD “*An Overview of the Regulatory and Monitoring Regime of Franchised Bus*”, [TD-1, pages 34-53] “...that in terms of safety there is clearly a strong reliance on statutory regulations as the main thrust of safety management for the FB operators”, Mr Weston suggested that: [EXP-1(A); pages 153-154, paragraph 8.6]

“...an over dependency on the statutory regulations applying to all vehicles and fails to recognise some of the unique features of the bus operation especially in terms of their ability to carry upwards of 100 passengers. This over reliance on ensuring compliance with statutory regulations may also stifle innovation in terms of safety by both the TD and the FB operators.”

458. By contrast, Mr Weston said that in London compliance with statutory requirements relating to both vehicles and drivers was “very much expected” of franchised bus operators, with the result that in his view: [EXP-1(A); page 154, paragraph 8.6.]

“...it is the initiatives, projects and collaborative working beyond these that have and will make the real-world differences to safety. The collaboration between the London bus operators and TfL and their willingness to innovate and try new technologies and approaches has, and as part of the Bus Safety Programme, will deliver real results in terms of incident and injury reduction.”

459. In the result, he recommended that “The TD should consider how they can improve the collaborative working with the FB operators.”

*(v) Independent Safety Regulator*

460. Although Mr Weston acknowledged there was no Independent Safety Regulator for the bus industry in the United Kingdom, nevertheless, having noted that in the United Kingdom there was an independent Rail Safety Standards Board and that consideration was being given by the TfL and others to the establishment of a Light Rail Safety Standards Board for trams, Mr Weston suggested that the establishment of an Independent Safety Regulator for franchised buses in Hong Kong was a matter that deserved consideration. [EXP-1(A); page 156, paragraph 8.11]

*(vi) Bus driver training*

461. Having noted the role of TfL in developing some standard training courses for all bus drivers, albeit that the responsibility for driver training was imposed on the bus operators, Mr Weston suggested that, given that there were multiple franchised bus operators in Hong Kong and the public expected common and consistent standards, "...the transport authority is often best placed to set common training requirements especially in the topic areas beyond technical driving skills." [EXP-1(A); page 155, paragraph 8.8]

*(vii) Speed limits lower than 50 km/h*

462. In his report Mr Weston had not addressed the issue of the implementation of speed limits of less than 50 km/h on certain sections of roads. Nevertheless, in his oral evidence he was asked to express his view as to whether or not that was a matter that ought to be considered in enhancing safety of franchised buses.

463. In context, he was asked to do so given the increasing the extensive use of 20 mph speed limit zones in London and elsewhere in the United Kingdom. In the TfL publication "*Safe London streets; Our approach*", dated October 2015, it was asserted "A 1mph reduction speed could reduce the frequency of collisions by around six per cent in urban areas." Also, it was stated that: [MISC-3, page 987]



“Almost 25 per cent of the Capital’s roads now have 20 mph speed limits. In March 2015, we outline plans for eight new pilots on parts of our road network...”

464. The United Kingdom’s Department for Transport’s Circular “*Setting Local Speed Limits*”, dated January 2013, noted that: [SEC-3; page 1025, paragraph 89]

“20 mph zones are very effective at reducing collisions and injuries. Research in 1996 showed that overall average annual collision frequency could fall by around 60 %, and the number of collisions involving injury to children could be reduced by up to two-thirds.”

465. For his part, Mr Weston said: [Transcript Day 18; 27 September 2018, page 194]

“I think the answer to that question is somebody should probably first understand what the average speed is and what the range of speeds are.”

466. Of the issue of applying a cost benefit analysis to the resolution of the issue, Mr Weston added: [Transcript Day 18; 27 September 2018, page 195]

“...if you do slow all the bus routes down because you don’t go as fast, then to run the same frequency you potentially need more buses and more drivers, so there is a cost to that, and it’s back to the earlier point, is that more beneficial than fitting other safety features to the buses? It’s trying to take an overview of all the options that are available and making an informed choice...”

*(viii) Incentivising the safety performance of franchised buses*

467. In his evidence, Mr Weston said that he had noted in his report “concerns expressed by the bus operators...whether direct financial incentives potentially drive the wrong behaviours in a bus company and potentially reduce information-sharing and collaboration with their peer group.” [Transcript Day 18; 27 September 2018, page 199] Of that, he said it would be “...rather a strange link” to pay a financial incentive for improvements in safety where, nevertheless the bus operator had been involved in fatalities and serious injuries. On the other hand,

he said that if deductions were to be made for safety performance then bus operators "...will just build those deductions into their original contract price to mitigate the impact." [Transcript Day 18; 27 September 2018, pages 199-200]

468. In the result, he said: [Transcript Day 18; 27 September 2018, page 200]

"I think there is a whole host of concerns around directly linking financial incentives to the bus contracts. I think that's supported by TfL in their document about the bus route tendering process dated 2015, where they explain why they don't think the financial incentive would be right."

469. It is to be noted that TfL's publication *London's Bus Contracting and Tendering Process*, dated 12 August 2015: [EXP-1(A); page 189-0-21, paragraph 7.12]

#### **Safety**

A range of data is used by London Buses as part of the assessment of an operator's ability to provide a safe service and failure can result in the loss of a contract. Unsatisfactory performance can also lead to the failure to win new contracts. The incentive is not directly related to payments/deductions due to the importance of avoiding the suggestion that safety of operation is in any way a negotiable trade-off against cost.

*CHAPTER 18 – Report of the Working Group on Enhancement of Safety of Franchised Buses*

470. By a letter, dated 3 October 2018, the TD provided the Committee with the Report of the Working Group on Enhancement of Safety of Franchised Buses, dated October 2018. [TD-5, pages 1757-1816] In what was described as the ‘*Summary of recommendations*’, various topics were addressed: [TD-5; pages 1801-1804, Chapter 5]

- Proposed installation of in-vehicle safety devices;
- Trials of new safety technology;
- Installation of seat belts on passenger seats;
- Training for FB captains;
- Consultations; and
- TDs proposed actions.

*Proposed installation of in-vehicle safety devices*

471. Of the proposed installation of in-vehicle safety devices, it was stated that: [TD-5; page 1801, paragraphs 5.3-5.4]

“*All new double-deck buses procured from July 2018 onwards will be incorporated with:-*

- (a) **ESC**, and
- (b) **speed limiting retarder.**” [Underline added.]

472. Of the retrofitting of those devices to existing buses, it was stated that the TD and the franchised bus operators would “continue to work closely on the development” of those devices for approximately 3,300 existing buses of newer models.

473. Earlier in the report, it was noted that two bus manufacturers, ADL and Volvo, had indicated that it would take 12-24 months to develop ESC to be retrofitted to certain existing models. On a preliminary basis, it was estimated that it might be feasible to retrofit ESC to 3,300 double-deck buses of the existing 6,000 franchised buses. The agreement of the franchised bus operators to retrofit the devices on all existing double-deck buses was subject to an assessment by the bus operators of not only “the detailed retrofitting proposal (including cost implications, manpower required, and bus downtime” but also was subject to “commercial viability of the retrofitting proposal”. [TD-5; pages 1765-1768, paragraphs 2.4-2.9] The agreement of the franchised bus operators to retrofit speed limiting gearbox retarders was subject to the same considerations. [TD-5; pages 1768-1770, paragraphs 2.10-2.14]

#### *Trials of new safety technology*

474. Of the trials of new safety technology, it was stated that the franchised bus operators were launching trials “with a view to establishing the technical feasibility and cost effectiveness of their application” in respect of: [TD-5; pages 1801-1802, paragraphs 5.5-5.6]

- Bus monitoring control system (“BMCS”) with positioning function, operational information monitoring function, and variable speed limiting function with geo-fencing technology;
- collision alert and lane keeping devices; and
- driver monitoring devices.

475. The report stated that it was the view of the Working Group that priority should be given to the development and trials of the bus monitoring control system, rather than “pressing for the installation” of speed display units on franchised buses.

### *Bus monitoring control system*

476. Of the bus monitoring control system, the report stated: [TD-5; page 1770, paragraph 2.15]

“...the WG has examined the possibility of using speed limiter in conjunction with the GPS/geo-fencing technique so as to provide a variable speed limiting function according to the prevailing speed limit of the road or a pre-defined boundary such that the maximum speed of the vehicle can be limited automatically to 50 km/hour in urban areas or 70 km/hour on expressways.”

477. The report noted the operation of the system involved the tracking by GPS of the real-time position of the vehicle “(which) will interact with the digital map to identify the prevailing speed limit on the road where the vehicle is travelling.” So that, if the vehicle was speeding, it would be “decelerated automatically to the imposed speed limit by a mechanism “such as cutting the fuel supply to the engine or applying the gearbox retarder, etc.” [TD-5; pages 1770-1771, paragraph 2.16]

### *Collision alert and lane keeping devices*

478. Earlier in the report, it was stated that, although some franchised bus operators were doubtful about the usefulness of collision alert and lane keeping forward-looking safety devices, CTB and NWFB had agreed to conduct trials on such a safety device on five of their franchised buses and that KMB, LWB and NLB had agreed to conduct trials on similar devices obtained from different suppliers by the end of 2018. The Working Group concluded that collision alert devices that engaged an emergency brake assist might not be suitable in Hong Kong. [TD-5; pages 1773-1776, paragraphs 2.23-2.28]

### *Devices to detect driver drowsiness*

479. Also, it was stated earlier in the report that KMB and LWB had embarked on a trial on four of their franchised buses in late June 2018 of a safety device that detected drowsiness in bus captains and that CTB, NWFB and NLB would conduct

a trial on similar devices, provided by different suppliers, by the end of 2018. [TD-5; pages 1776-1777, paragraphs 2.29 -2.30]

*Other technological devices*

*(i) Speed display unit (“SDU”)*

480. A speed display unit depicts the real-time speed of the bus on a screen in the passenger compartment. Such devices are installed on public light buses. The report noted that franchised bus operators had “expressed reservations” about the installation of SDUs on franchised buses, having cautioned that their installation might “give rise to possible further cause of conflicts” between bus captains and passengers. Nevertheless, it was stated that “it would be necessary to solicit views from the public and the staff unions”. The franchised bus operators would consult the staff unions and, subject to the “views or feedback from staff”, consideration should be given to requiring the installation of SDUs on franchised buses. [TD-5; pages 1778-1779, paragraphs 2.34-2.36]

*(ii) Black box*

481. In August 2018, the TD had promulgated an updated Basic Minimum Requirements for Electronic Data Recording Device. That replaced the minimum requirements stipulated in a similar document, dated October 2003. [TD-5; pages 1773 and 1807, paragraph 2.22] In addition to the requirements, stipulated in 2003, the device was required to record and store data of:

- Activation of Brake
- Status of Rear Door
- GPS Coordination
- Activation of Push Bell

Also, it was required to be able to transmit all the data to the back-end server wirelessly. The threshold value for detecting deceleration was changed from 0.2G to 0.4G.

482. The report noted that since May 2018 KMB and LWB had engaged Volvo to conduct a trial on a bus “to test the two-speed limiting function by utilising GPS technology” and that CTB and NWFB were developing a second-generation of real-time system to “provide alert for speeding at identified critical road sections.” [TD-5; page 1772, paragraph 2.20]

483. The report stated that it had been agreed by all the franchised bus operators that the trial would proceed in two phases. In Phase 1, trials were to be begun by the end of 2018 to determine whether or not the system did detect speeding and could provide a real-time alert to the bus captain. Then, if Phase 1 was successful, in Phase 2 during 2019 the enhanced speed limiting functions would be applied to the franchised buses.

*(iii) Digital speed limit maps*

484. Having noted that the “mapping of speed limit data in machine readable format is not novel”, the report noted that the TD had made that data available for sale to the public on 22 November 2010, and informed KMB and NWFB of that in writing. Further, on 18 January 2018, the data had been made available to be downloaded for free by the public. Finally, in a letter, dated 7 June 2018, the TD had informed all the franchised bus operators of the processes by which the data could be downloaded. [TD-5; page 1771, paragraph 2.18]

485. Having acknowledged that the Secretariat of the Committee had informed the TD in an email, dated 1 June 2018 that in evidence received by the Committee, CTB and NWFB had said that “they did not have a full set of digital data detailing the speed limit of all roads in Hong Kong” and that the TD had been asked to provide the Committee “with digital maps showing the statutory speed limits of roads in Hong Kong”, Mr YK Chan said that he presumed from the information

provided in the letter of the Committee that CTB did not know of the availability of the digital map. Of that, he said “That’s why we sent a letter to them to advise the data(s) are actually available.” There was a connection between the Committee’s letter and the letter to the franchised bus operators. [Transcript Day 19; 4 October 2018, pages 135-138]

486. When asked why the numerous potential enhancements to bus safety identified in the working group report had been considered only after, rather than before, the Tai Po Road bus accident, Mr YK Chan agreed with the suggestion that resulting discussions in the District Councils, the Legislative Council and in the press had provided the impetus for the TD to look into those areas. [Transcript Day 19; 4 October 2018, page 141] He said that a large part of the research had been done by the TD in February 2018, after the Tai Po accident. [Transcript Day 19; 4 October 2018, page 125]

#### *Training for bus captains*

487. The whole of Chapter 4 of the Working Group’s report is devoted to the issue of the training of franchised bus captains. In August 2018, in advance of the issue of the report, the TD promulgated a *Practice Note On Training Framework for Franchised Bus Captains*. [TD-5, pages 1813-1816] The Practice Note stated that its objective is “to lay down a set of industry-wide standard practices... including the basic requirements on modules, duration and weighting, so as to provide a common basis for internal monitoring and audit within individual franchised bus companies.” [TD-5; page 1813, paragraphs 1-2] Nevertheless, having acknowledged that the franchised bus companies “have different bus networks operating in different operating environment”, the Practice Note stated that it was for the individual franchised bus companies “to make specific training programmes in order to suit their respective operational needs on the basis of the common standard”.



488. Acknowledging the need for internal monitoring of the compliance with the Practice Note by the franchised bus operators and of monitoring of those activities by the TD, the Practice Note stated: [TD-5; page 1816, paragraphs 7-8]

“7. To ensure that adequate and appropriate trainings are provided to the bus captains, the franchised bus operators should set up an internal monitoring and audit mechanism in order to achieve the following objectives:

- (a) To monitor the compliance of this Practice Note;
- (b) To develop key indicators on the effectiveness of the training system provided to bus captains (e.g. accident involvement rates, complaints on driving skills and performance and etc.); and
- (c) In the light of the findings of (b), to review and determine appropriate actions or measures.

8. The management of franchised bus operators should submit regular periodic reports (at least half-yearly) to their respective Boards of Directors in respect of their findings on matters in para. 7 above.”

489. Of the periodic reports, the report stated that: [TD-5; pages 1798-1799, paragraph 4.27]

“...the FB operators will be required to submit to the TD the regular periodic reports prepared for the respective Boards of Directors... The TD will study those reports, and assess the effectiveness of the FB operators internal monitoring and audit mechanism as against their proposed key indicators. The TD will take follow-up actions with the FB operators to ensure that the FB operators have put in place effective monitoring and audit mechanism, and that the training programmes of respective FB operators have been designed and conducted in accordance with the framework laid down in the Practice Note as required”.

490. Of the development of key performance indicators, the Commissioner said: [Transcript Day 19; 4 October 2018, page 30]

“The proposal of developing key performance indicators will cover the performance of the bus operators, in providing training of in-service bus captains for refresher course, remedial course, and also for those that are necessary to rectify the driving misbehaviour of those bus captains committing traffic offences. And, on the other hand, we have also observed that while the bus operators have mentioned that they will provide behind-the-wheel training for the in-service bus captains, this may not be actually provided for the in-service bus captains to the extent that we expect.”

491. Of the TD’s expectations in that respect, the Commissioner said: [Transcript Day 19; 4 October 2018, pages 30-31]

“So we are expecting the franchised bus operators to develop key performance indicators along these fronts, so that it is easier and more efficient for the bus operators to achieve an internal monitoring and audit mechanism.”

492. Of the provision of half-yearly periodic reports from the Board of Directors of the franchised bus operators to the TD, the Commissioner said: [Transcript Day 19; 4 October 2018, page 31]

“In parallel, these reports should be provided to the Transport Department for our regular monitoring and also for us to review with them in our regular meetings with them, with their senior management.”

493. Of the necessity for the TD to maintain an ongoing review of training, the report stated: [TD-5; page 1799, paragraph 4.28]

“...since the training requirements of bus captains may evolve with time, the TD will keep in view the need to review the Practice Note with the FB operators in order to strive for the best industry-wide standard practices to cater for the ever-changing operating needs...”

494. In that context, the Commissioner said in her opening statement that the Working Group would continue its work and meet on a regular basis, amongst other matters, to “review the practice note on training framework for bus captains”. [Transcript Day 19; 4 October 2018, page 8]

495. Of the suggestion made by Mr Weston that the TD to consider giving funds to the franchised bus operators for “bus driver training targeted especially at safety”, Mr YK Chan said that in contrast to TfL, in Hong Kong: [Transcript Day 19; 4 October 2018, page 169]

“...the bus companies should be responsible to pay for all the outlays for operating the bus services and we believe that the operation, the equipment and buses are being provided by the bus companies and they should normally continue to do so.”

Nevertheless, Mr YK Chan went on to say “(b)ut for individual items, certainly we are open-minded about it and it should be discussed, if the bus companies see there is a need to do so.” [Transcript Day 19; 4 October 2018, page 170]

### *Seat belts*

496. Of the installation of seat belts on passenger seats, the report stated: [TD-5; page 1802, paragraphs 5.7-5.8]

“**All new buses** ordered from July 2018 onwards will have all passenger seats installed with **seat belts**.”

For **existing buses**, subject to further assessment on the technical, operational and financial feasibility, consideration may be given to **retrofitting** all seats in the **upper deck with seat belts on buses deployed for specific bus routes** i.e. long-haul routes which are operated via expressways with relatively fewer bus stops.” [Underline added.]

### *Overseas jurisdictions*

497. The report stated that the Working Group had reviewed “the prevailing overseas practices or requirements on the installation and wearing of seat belts on buses”. Annex IV of the report identified those jurisdictions as being: the United States of America, the United Kingdom, the Netherlands, the state of Victoria, New Zealand, Canada, and Singapore. Of that review, it was noted: [TD-5; page 1788, paragraph 3.11]

“...for the urban buses or buses allowed to carry standing passengers, *none of the overseas jurisdictions that have been reviewed thus far have statutory requirements for the provision of seat belts on passenger seats.* According to the transport authorities of those jurisdictions, the urban buses are typically used for short journeys, in terms of both time and distance, and undertaken at moderate speeds on urban routes. Thus, no seat belt requirement for passenger seats on these urban buses has been imposed.”  
 [Italics added.]

*Installation of seat belt on newly procured franchised buses*

498. Notwithstanding those findings, the report stated that all franchised bus operators had agreed with the recommendation of the Working Group that seat belts should be provided for all seats in future procurement of new buses ordered from July 2018 onwards. [TD-5; page 1784, paragraph 3.4]

499. Having been reminded that in a paper, dated October 2006, prepared by the TD for the Legislative Council Panel on Transport a review of the same seven jurisdictions had produced the same finding, namely that no jurisdiction that had been reviewed required the fitting of seat belts on passenger seats of buses designed for urban use or carrying standing passengers, and that the TD had said then “we consider that it is not appropriate to introduce mandatory requirements for installation and wearing of passenger seat belts for franchised buses”, the Commissioner acknowledged that “the overseas jurisdictions’ stance towards the installation of seat belts for urban bus routes remains generally the same.” [SEC-1; pages 266-273, paragraphs 19-20; Transcript Day 20; 6 October 2018, page 37]

500. Of what had changed in the meantime to lead to the different recommendations now being made by the Working Group, the Commissioner said: [Transcript Day 20; 6 October 2018, page 37]

“There has been a number of discussions raised in the Legislative Council Panel on Transport, so we have to look into this subject very carefully. We consider it from different aspects. First, it’s from a road safety and public transport safety aspect.

Secondly, we also look into the technical feasibility of installation of seat belts for new buses and on existing buses. Thirdly, we also look into the cost and financial implications of doing this extra installation of seat belts for all passenger seats.”

### *Cost benefit/analysis*

501. Of the issue of whether or not a cost benefit analysis had been conducted in respect of the incidence of fatalities/injuries sustained by seated passengers on franchised buses who were not wearing a seat belt, the cost of installation and the benefits to such passengers if they wore a seat belt, Mr Tony Yau said “there are no specific study on public transport”. However, he acknowledged that he was aware of data that the police collated on that subject, albeit he said that the data had not been considered in any such analysis. [Transcript Day 20; 6 October 2018, pages 42-47; MISC-1(C); page 124-562, paragraph 4]

502. In a letter, dated 3 October 2018, Chief Superintendent Cadman had informed the Committee that the Police had some statistics “on the number of passengers who were injured while seated on a bus and not wearing a seat belt”. The information provided included: [MISC-1(C), page 124-562, paragraph 4]

<u>Year</u>	<u>Wearing</u>	<u>Not wearing</u>
2015	211	364
2016	252	365
2017	323	515

The police had not conducted any analysis to determine whether or not the passengers who have been injured while not wearing a seat belt would have benefited from having worn a seat belt.

503. Noting that the estimated cost of fitting seat belts in new franchised buses was estimated to be £5,000 per bus, the cost of which was “over HK\$3 million”, Mr Yau said: [Transcript Day 20; 6 October 2018, page 42]

“So comparatively the cost is quite low, and the protective benefit is quite good, very significant.”

504. For her part, the Commissioner said: [Transcript Day 20; 6 October 2018, page 50]

“... in the course of the working group discussion, the Transport Department’s point of view is that the seat belt would render additional protection to passengers, but whether or not it can achieve the effect that we would like to would depend very much on whether the passenger will use the seat belt, in the first place, and whether or not they are seated.”

“We know the constraints that may affect the effectiveness of the seat belt, but notwithstanding that *we think that for new buses, the installation of seat belts is cost-effective*, but it will render additional protection, while the additional cost is not significant.” [Italics added.]

#### *Retrofitting seat belts on existing franchised buses*

505. Of the retrofitting of seat belts on existing franchised buses, the report noted: [TD-5; page 1786, paragraph 3.7 ]

“The bus manufacturers have advised that it is technically feasible to retrofit seat belts on **all passenger seats of upper deck** of the existing buses for ADL Enviro 500 manufactured after 2013, Volvo B9TL Euro V and MAN A95 buses. However it is technically impracticable, if not infeasible, to retrofit seat belts for seats in the **lower deck** of the above-mentioned bus models...”

506. The report went on to note that there were other consequences of retrofitting seat belts on to existing buses, namely the weight of the bus would increase by 300-400kg and the passenger capacity would be reduced by 7 to 8 passengers. Moreover, the bus manufacturers estimated that it would take about one week, for 3 to 4 skilled workers to retrofit seat belts to one bus. The bus manufacturers were unable to provide that manpower. The report said that a rough estimate was that it would take 6 to 12 years to complete the retrofitting of

3,300 franchised buses, if the retrofitting was done by redeployment of the bus operators' existing vehicle maintenance teams. That estimate was based on it taking 3 technical members of staff one week to retrofit each franchised bus. The deployment of more labour would reduce that time estimate. It was noted in a footnote that the rough estimate of the cost of retrofitting a bus was "about HK\$200,000 (excluding manpower and overhead costs). [TD-5; pages 1786-1787, paragraph 3.8]

507. Mr YK Chan conceded that, in addition, the estimated cost of retrofitting each of 3,300 franchised bus of \$200,000 did not include the cost of the loss of the use of the bus during the time of retrofitting. For her part, the Commissioner acknowledged that the overall cost for the retrofitting operation was \$400 million, a cost that was to be enhanced by those three variables. [Transcript Day 20; 6 October 2018, pages 57-62]

508. The report noted that there was a division between the franchised bus operators as to the proposal to retrofit seat belts to some existing bus models: [TD-5; page 1787, paragraph 3.10] On the one hand, it was noted that:

"Subject to the proposal from bus manufacturers, KMB and LW would retrofit seat belts on upper deck passenger seats or deploy buses with seat belts at all passenger seats on routes which serve long haul passengers or are operated on expressways with limited boarding or alighting activities at the enroute stops."

509. On the other hand, it was noted that:

"The remaining three FB operators (i.e. CTB, NWFB and NLB) do not support the retrofitting works due to the expected low utilisation rate and huge retrofitting cost, and *request for government subsidy should the proposed retrofitting be taken forward.*" [Italics added.]

510. In the result, the report concluded: [TD-5; pages 1788-1789, paragraph 3.13]

“The WG considers that there are insufficient grounds to make it a mandatory requirement for all buses to be fitted with seat belts on all passenger seats. Nevertheless the WG recognizes that as in the case of exposed seats and in bus compartment with no standees allowed, seat belts may offer extra protection to seated passengers. Hence, the WG **recommends**, and all FB operators have **agreed**, that the feasibility of retrofitting of existing buses for installation of seat belts has to be further examined. *Subject to further assessment on the technical, operational and financial feasibility*, consideration should be given to retrofitting all seats in the upper deck with seat belts on those buses deployed for specific bus routes, i.e. those long-haul routes which are operated via expressways with relatively fewer bus stops.” [Italics added.]

### *Consultations*

511. At the conclusion of the report it was stated that its findings and recommendations in respect of the installation of seat belts had been presented to the Road Safety Research Committee on 17 July 2018 and the Committee had: [TD-5; page 1803, paragraph 5.10]

“...welcomed the proposal of installation of seat belts on buses and supported the recommended approach of installation, viz subject to further assessment on the technical, operational and financial feasibility, retrofitting the seats on the upper deck with seat belts in respect of buses deployed on long haul routes operating via expressways with relatively fewer bus stops.”

Similarly, it was stated that, having been provided with those findings and recommendations on 25 and 31 July 2018 respectively, the Legislative Council Panel on Transport and the TAC had “...generally welcomed and supported the recommendations of the WG.”

### *CTB/NWFB*

512. Consistent with their submissions to the Working Group, in his closing submissions to the Committee on behalf of CTB and NWFB, Mr Samuel Cheng noted that in the Policy Address, the Chief Executive stated that the Administration



had set aside \$500 million “to subsidize franchised bus companies in retrofitting Electronic Stability Control (“ESC”), Active Speed Limiting System (“ASLS”) and seat belts for the upper deck seats of buses”, and observed that the subsidy covered only 80% of the retrofitting costs. He said that “we will not be able to afford the huge financial commitments for implementing the recommendations without substantial fare increases.” In the result, he said “In our view, full financial support from the Government is essential”, failing which he said that the retrofitting of the ESC and ASLS devices should be given priority “as these safety devices may prevent accidents from happening.” By contrast, he said that the retrofitting of seat belts on the upper deck seats should be accorded a secondary priority “as the cost-benefit of this may not be justified if the wearing of seat belt remains not mandated by law.” [CTB-1, pages 103-104]

513. Having been taken to passages of the reports of Professor Stanley and Mr Weston and the evidence of Professor Stanley of the need to conduct a rigorous cost/benefit analysis before requiring the installation of safety devices on franchised buses, the Commissioner said: [Transcript Day 20; 6 October 2018, page 73]

“I agree that for any installation of in-vehicle device to improve the bus safety standard, we would need to go through a robust and careful assessment.”

514. The Commissioner went on to say: [Transcript Day 20; 6 October 2018, pages 73-74]

“Given the retrofitting of the existing buses for seat belts appears to be not cost-effective at the present moment, and it involves a number of considerations, obviously should there be any decision to make it mandatory or statutory requirement for all existing buses to be installed with seat belts, in particular on the upper deck, we would have to look into seriously on how much marginal benefit we can achieve as compared with the cost and the technical considerations.”

515. In conclusion, the Commissioner said: [Transcript Day 20; 6 October 2018, page 74.]

“I agree with the expert advice that if we want to go forward with a mandatory requirement, we have to go through some cost/benefit analysis or impact assessment.”

*Utilisation rate of seat belts currently installed on franchised buses*

516. The Commissioner said that she had not obtained any data of the utilisation rate of seat belts currently installed on franchised buses, but that was something that she intended to do. Of the view expressed by the franchised bus operators, that the utilisation rate was low, the Commissioner said: [Transcript Day 20; 6 October 2018, pages 75-76]

“...we don’t think, if it is true, that the current low relatively low utilisation rate of seat belts should not be a key factor to stop us from exploring or examination or assessment of the installation of seat belts on existing buses, because I think this is something that both government and also the bus operators should do more in passenger education.”

*Mandatory usage requirement*

517. Of the possibility of a mandatory requirement that, if installed on franchised buses, passengers must use the seat belts, the Commissioner said that she agreed “with the expert observation that we have to go through a robust impact assessment before making it a statutory or mandatory requirement.” [Transcript Day 20; 6 October 2018, page 77] She said “I would not underestimate the issues or difficulties involved in an actual operation context, in particular the enforcement.” [Transcript Day 20; 6 October 2018, page 78]

*The Chief Executive’s Policy Address*

518. In her Policy Address on 12 October 2018, the Chief Executive announced:

“Improving Public Transport Services

264. To further enhance the operational safety of franchised buses, the Government will subsidise franchised bus operators in retrofitting existing buses with appropriate safety devices, including retrofitting all seats on the upper deck of some buses with seat belts.”

519. At a subsequent press conference, the Secretary for TH, Mr Frank Chan, announced:

“With a view to further enhancing the operational safety of the franchised buses, we propose to subsidise the franchised bus operators for retrofitting of three safety devices on appropriate existing buses, including the electronic stability control system, speed limiters with retardation function, and seat belts for all seats on the upper deck of long-haul buses running on expressways with fewer stops. We will be funding 80% of the relevant costs, including about \$500 million. For the remaining costs as well as a subsequent maintenance and repair works, they will be borne by the franchised bus operators.”

520. In her evidence on 16 October 2018, the Commissioner explained those statements in the context of her earlier evidence in respect of the retrofitting of seat belts to existing buses: [Transcript Day 21; 16 October 2018, page 130]

“...the installation of seat belts will particularly have to undergo a detailed assessment including operational, technical and financial feasibility assessment.”

521. The Commissioner went on to confirm that the assessment required a “cost/benefit analysis, covering technical, operational and financial feasibility.” [Transcript Day 21; 16 October 2018, page 131] In that context, she agreed that the statements in the Policy Address and those of the Secretary for TH were conditional on that cost/benefit analysis, explaining that the statements were “...an attempt by the government to provide and set aside the money...for providing the funding.” She agreed that the first exercise was “to see if the cost/benefit analysis delivers a positive result?” [Transcript Day 21; 16 October 2018, pages 132, 134]

522. Of the conduct of the cost/benefit analysis in respect of retrofitting seat belts, the Commissioner said that the issue would be examined by the standing forum that the Working Group on Enhancement of Safety on Franchised Buses was to become. It having been pointed out that the membership of the Working Group was currently restricted to the TD, bus manufacturers and the bus operators, the Commissioner said consideration could be given to recruiting members from

the Road Safety Council, professionals and academics with expertise in transport and transport technology. Further, having noted that there had been initial feedback about the cost implications, including operational costs, she said that it was important to identify and analyse the benefit to be generated from retrofitting seat belts to franchised buses. In response to the enquiry as to whether it would be necessary to engage independent consultants to perform those tasks, the Commissioner said that was a matter that the TD could “look into”. [Transcript Day 21; 16 October 2018, pages 140-141]

523. As Mr Mike Weston noted in his Supplementary Report, in which he summarised the Bus Safety Standard announced by TfL on 16 October 2018, TfL had appointed the Transport Research Laboratory “...to undertake a significant amount of research and to provide appropriate technical input to help develop the proposals”, which development had been “...based on an evidence led approach to both the costs and benefits of each option.” In particular, Mr Weston noted: [EXP-1(A); page 189-63, paragraph 2.2].

“TfL have adopted a rigorous approach to the assessment of each potential option using cost/benefit analysis to target the interventions which will give the greatest return for each £ spent in terms of injury/accident reduction. TRL also stressed that considering the cost of individual solutions was important as part of the assessment so that cost/benefit analysis could be undertaken.”

*Chapter 19 – The TD’s ongoing response to the submissions and evidence received by the Committee*

524. At the outset of her evidence on 4 October 2018, in an opening statement that the Commissioner said at the outset: [Transcript Day 19; 4 October 2018, page 6]

“Since our last attendance at the hearings in May, we know that the Committee has invited other parties to provide oral evidence and have closely followed through the submissions made by the various parties.”

525. Then, having said that she wished to “address a number of aspects on which we think the Committee has expressed keen interest”, she identified various decisions that had been made and proposals of action to be taken: [Transcript Day 19; 4 October 2018, pages 7-10]

- it was proposed “to set up a dedicated team to implement road safety audit” within the TD and that approval had been given for the necessary resources;
- the Working Group on Enhancement of Safety of Franchised Buses “will continue its work and will meet on a regular basis so as to monitor the progress of follow-up actions and review the Practice Note on training framework for bus captains”;
- it was proposed to engage a “service provider” to carry out “an independent trial on vehicles, to evaluate the applicability and effectiveness of using geo-fencing technology to control vehicle speed, which is one of the vital parts of the BMCS”; and
- the TD was securing manpower resources “to have a dedicated team to oversee transport technology, which will help speed up the process of such trials and initiatives”.

526. In addition, she said that in December 2017, the TD had set up a task force with representatives of relevant government departments and franchised bus

operators to monitor the provision or upgrading of the public transport ancillary facilities at public transport interchanges, bus stops and termini.

*Permanent Working Group/Bus Operators Forum*

527. Subsequently, in her evidence, the Commissioner said: [Transcript Day 19; 4 October 2018, page 82]

“...with the learning of the various experiences and views and suggestions through this Independent Review Committee, both the operators and the TD find the working group as a very useful forum. We will continue our work on that front and that will be an appropriate forum to bring the parties together to pursue all these meaningful initiatives to enhance measurement of safety performance of franchised bus operators. We will take it forward in that forum”.

528. The Commissioner confirmed that the Working Group would become permanent, similar to the TfL’s Bus Operators forum in that the TD was accepting Mr Weston’s recommendation that such a forum be constituted and be permanent. [Transcript Day 19; 4 October 2018, pages 82-83]

529. Of the limited membership of the Working Group, namely the TD, franchised bus operators and bus manufacturers, Mr YK Chan said: [Transcript Day 19; 4 October 2011, page 178]

“I think we can further look into the membership of this group and see whether it is possible to bring in independent opinions into the group, to provide independent opinions on the operations and running of this group.”

530. In response to the suggestion of Professor Lo, that members of the Road Safety Council might become members of the permanent Forum to emerge from the Working Group, Mr YK Chan said that he welcomed that suggestion and said “...members from the Road Safety Council are actually quite independent members.” [Transcript Day 19; 4 October 2011, pages 178-179]

531. Having acknowledged that there was no team within the TD dedicated to bus safety and that the Working Group was currently comprised of representatives of the franchised bus operators, bus manufacturers and the TD, in their closing written submissions, CTB/NWFB said: [CTB-1; page 106, paragraph 3]

“The present practice is that the Transport Department and bus companies will seek comments from unions when a proposal is mature and in response to such comments, the Working Group will fine-tune the proposal, as appropriate, before implementation. We opine that the present practice is effective and the involvement of unions in the Working Group is not necessary.”

### *TD Technology Team*

532. As noted earlier, having acknowledged that there was no team within the TD dedicated to bus safety and that responsibility lay between the Bus and Railway Branch, the Road Safety and Standards Division and the Vehicle Safety and Standards Division, the Commissioner said: [Transcript Day 19; 4 October 2018, pages 95-96]

“Actually we learned a lot through this IRC<sup>23</sup> process. Over the past year or so, the Vehicle Safety and Standards Division, headed by Mr YK Chan, has been overseeing the new technology advancements in vehicle standards and maintenance. While there is no dedicated team or extra manpower resources, their division is driving for new technological advancements.”

533. Subsequently, the Commissioner added: [Transcript Day 19; 4 October 2018, page 96]

“...we see the need and the importance of having a dedicated team, as in the case of London and in other jurisdictions, of enhancing transport technology research capability within the Department. We are actually securing and bidding necessary manpower

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<sup>23</sup> “IRC” means the “Independent Review Committee’s report on Hong Kong’s Franchised Bus Services/the Committee”.

resources involving engineers, transport officers and electrical and mechanical engineers, to set up a dedicated transport technology team within the Department.”

534. Mr YK Chan acknowledged that the work that had been done by the TD in advance of the constitution of the Working Group and its first meeting on 13 March 2018 had been done only after the Tai Po Road accident on 10 February 2018. [Transcript Day 19; 4 October 2018, page 125]

*Publicly available accident data*

535. In response to Professor Stanley’s opinion, endorsed by Mr Weston, that the “really informative” data contained in the Bus Safety Chapter of the annual Five-Year FPP of the franchised bus operators ought to be made publicly available, the Commissioner observed initially that the data now required of the bus operators, including material not required for the Fuller Disclosure parts of the Annual Report of the bus operators, but: [Transcript Day 20; 6 October 2018, page 87]

“...ventured into the area of asking the bus operators to diagnose the accident causes, say by bus route, down to bus route... So I’m not saying that may be commercially sensitive, but I think we have to be conscious that should that “Bus Safety” Chapter be made as a fuller disclosure to the public - I mean, the commercial sensitivity angle would have to be taken into account.”

536. However, having had the opportunity to review past Bus Safety Chapters, the Commissioner said: [Transcript Day 20; 6 October 2018, page 101]

“It appears to me that there may not be a significant part of the information that may directly relate to the commercial sensitivity of the companies involved.”

537. In the result, she concluded:

“So more transparency, greater transparency of data, in particular on safety that is of concern to members of the public, is an approach and a direction that I think TD would actively pursue and discuss with the bus operators.”



She said that she proposed to raise the issue with the bus operators in the coming months, but was unable to indicate when a decision might be made.

*Low speed limit zones*

538. In Annex 2 of the TD's submissions, dated 3 October 2018, it was asserted that the TD kept abreast of the latest worldwide developments in speed limit in relation to road safety enhancement. In that context, the TD went on to note that "low speed limit zones with speed limits of 20 mph (32kph) have recently been implemented in some overseas cities with proven safety records". However, the TD said that simply reducing the speed limit did not automatically reduce the speed at which vehicles travelled, which was better achieved by changing the traffic layout and introducing traffic calming measures. Then, having noted that the long-standing speed limit regime obtaining in Hong Kong generally called for a lowest speed limit of 50 km/h, the TD said: [TD-5, page 1820]

"Considering the potential safety benefits of low speed limit zones, the TD is studying its feasibility and applicability for use in Hong Kong with adequate modification of road layouts and the introduction of traffic calming measures. To ascertain relevant road designs, types of traffic calming measures, especially the effectiveness and performance of low speed limit zone in reducing vehicle travelling speed and accidents, we are considering to select some suitable roads in urban district with high pedestrian flow for trial of low speed limit zone with a speed limit of 30 km/h having regard to the impact on traffic flow in the vicinity. As franchised bus routes may fall within those roads, we are also studying the design of traffic calming measures for buses to lower their traveling speed as part of the trial."

539. In his evidence, Mr Tony Yau acknowledged that the TD was aware of the publication by the United Kingdom Department for Transport in January 2013 "*Setting Local Speed Limits*", and that guidelines were provided to determine whether or not it was appropriate to impose 20 mph speed limits or 20 mph speed limit zones. In particular, 20 mph speed limits were recommended for areas in

which the speed were already low and did not require road layout changes for traffic calming measures, whereas they were required in 20 mph speed limit zones.

540. Having noted that 20 mph speed limits required only terminal speed limit signs, with at least one repeater speed limit sign but did not require traffic calming measures, the report said “Research into signed-only 20 mph speed limits shows they generally lead to only small reductions in traffic speeds. Signed-only 20 mph speed limits are therefore most appropriate for areas where vehicle speeds are already low.” [SEC-3; page 1026, paragraph 95] The range of calming measures to be deployed in 20 mph zones included “speed humps, chicanes or repeater speed limit signing and/or rondel road markings at regular intervals, so that no point within a zone is more than 50 m from such a feature.” [SEC-3; pages 1023-1024, paragraph 80]

541. For his part, Mr Yau said: [Transcript Day 21; 16 October 2018, page 79]

“(W)e are now studying to see whether the low speed limit zone can be introduced, as a trial, and if the trial is a success, we may consider to include a low speed limit zone in our current speed limit structure.”

### *20 mph Research Study*

542. On 22 November 2018, the United Kingdom Department for Transport published *20 mph Research Study*, a report it had commissioned to evaluate the effectiveness of 20 mph (signed only) speed limits. [MISC-4, pages 1379-1599] The research was based on twelve case study schemes in England with reference to the guidelines included in the 2013 publication *Setting Local Speed Limits*. None of those areas involved the introduction of physical traffic calming measures or changes to the street design. Three comparator areas, with similar characteristics, but with speed limits of 30 mph were used to identify background trends in collisions and casualties.

543. Of compliance with the 20 mph speed limit, the report noted “47% of drivers in residential areas and 65% of drivers in city centre areas (equating to 51%

across both categories) complied with the new 20 mph speed limit, travelling at speeds of less than 20 mph.” Of the effect on the profile of the speed of vehicles, it was noted “...the median speed has fallen by 0.7 mph in residential areas and 0.9 mph in city centre areas.” Of the factors influencing compliance, it was noted “there is a widespread view among the public that 20 mph limits are not enforced and the likelihood of being caught exceeding the limit is very small; and this is one reason why bigger reductions in speed have not been observed in scheme areas.”

544. Of the collision and casualty rates, it was concluded that “there is insufficient evidence to conclude that there has been a significant change in collisions and casualties following the introduction of 20 mph limits in residential areas, in the short term”. Having noted that there had been reductions in those statistics in both the 20 mph speed limit areas and the comparator areas, the report suggested that an analysis to be made two years in the future might or might not reveal a significant change.

*Chapter 20 – The franchised bus operators’ response to the submissions and evidence received by the Committee*

*KMB*

545. In his closing submissions in evidence on behalf of KMB, Mr Roger Lee said: [Transcript Day 15; 12 September 2018, pages 113-114]

“In the process of giving evidence, we come to realise that KMB must progress with the times. We have to do more in this regard to enhance our service. Say, for example in terms of the use of technologies, we need to be comprehensive, and we have to aim at precision we have to work more on our safety system, and we need to catch up with the times.

Now I turn to the bus captains. The management of bus captains, the training of bus captains, are areas that we need to improve. And in terms of our facilities - and in fact just now we have talked about the rest facilities as well as the toilets - well, in fact we haven’t stopped making improvements in such areas.”

*The use of technology*

546. As is apparent from the description of the evidence received by the Committee, prior to the accident on 10 February 2018 on Tai Po Road, very little use was made by franchised bus operators of the available technology to enhance the safety of franchised buses.

*Digital speed limit map*

547. As noted earlier, KMB acknowledged in evidence that they did not know of the existence of a digital speed limit map of Hong Kong roads freely available from the TD until, prompted by evidence received by this Committee, by letter dated 7 June 2018 the TD informed them of that fact. That letter was prompted by evidence from CTB that they were unable to obtain a digital speed limit map of Hong Kong roads. Clearly, a digital speed map of Hong Kong roads was vital to the use of the capabilities of the existing black box installed on franchised buses to

provide an alert and record the fact of excess speeding in difference speed limit areas.

548. To their credit, as they informed the Committee in their evidence, KMB immediately arranged with Openmatics to perform trials of the combined system on 31 July 2018. In the result, as KMB informed the Committee in their submission, dated 10 December 2018, "...later this month we will launch an alert system that is also capable of alerting bus captains of speeding at locations whose limits are 50 kph." [KMB-1(B), page 580]

*Excessive speeding: exception reports*

549. Similarly, although in evidence the representatives of KMB said that it took them no less than 10 days to generate exception reports in respect of excessive speeding, the Committee was informed in the same letter:

"Recently, we have reduced the time required for our system to generate exception reports on speeding to 4 days. The time required will be further reduced to 1 day within this month. It is hoped that earlier identification of bus captains having exceeded speed limits will eradicate their speeding behaviours, hence reducing the risk of traffic accidents." [KMB-1(B), page 579]

550. As noted earlier, on 1 August 2018 KMB adjusted the threshold value at which an exception report in respect of speeding was generated on roads with a speed limit of 50 km/h at speeds in the range of 56-65 km/h from 60 seconds to 30 seconds and at speeds in a range of 66-75 km/h from 30 seconds to 15 seconds. Similarly, on that date the threshold value at which an exception report in respect of speeding was generated on roads with a speed limit of 70 km/h at speeds in the range of 76-79 km/h was adjusted from 60 seconds to 30 seconds.

551. In their letter to the Committee, dated 10 December 2018, KMB said:

“Our statistics show that in November 2018, there was a notable decrease in the number of speeding incidents when compared with those of the previous months.”  
[KMB-1(B), page 579]

552. Of KMB’s ongoing efforts, it was asserted in their letter, dated 10 December 2018, that:

“We have continually strived to enhance our knowledge on bus safety. Our Managing Director and Operations Director made a trip to Singapore meeting two franchised bus operators there and exchanging our experiences. A second trip to Singapore will be led by Dr. Norman Leung, our Chairman, in January 2019, during which we shall be meeting with the Land Transport Authority of Singapore and the said two bus operators. We will make more visits to other parts of the world to broaden our safety knowledge.”  
[KMB-1(B), page 580]

*CTB/NWFB*

*Digital speed limit map*

553. At the time that they gave evidence on 30 May 2018, CTB were unaware of the existence of a digital speed limit map provided freely by the TD. At that time, they monitored excessive speeding at a threshold of a franchised bus travelling at or more than 75 km/h for 10 consecutive seconds or more. In addition, they had added 25 sections of road with a speed limit of 50 km/h on which they monitored excessive speeding at a threshold value of more than 55 km/h for 10 consecutive seconds or more. In answer to the question of why all roads with speed limits of 50 km/h on which CTB and NWFB buses travelled were not incorporated in their system, Mr William Chung said: [Transcript Day 4; 30 May 2018, page 24]

“In theory, yes, but it would involve a lot of efforts, because then we would have to separate all the different routes and everything would be separated out. In the electronic map, we have to split the 50 kph and 70 kph. That would take a lot of efforts.”

554. To their credit, CTB have acted on the information now known to them and in their submissions, dated 15 October 2018, CTB said: [CTB-1, page 98]

“Our companies previously monitored the speed of our buses on 25 selected road sections with speed limit of 50 km/hr and all road sections with speed limit of 70 km/hr or above. From 18 September 2018, we started monitoring the speed of our buses on all roads by applying the “Speed Limit” data provided by the Transport Department. The criteria for generating over speed event reports remain unchanged...”

555. Also, as noted earlier, CTB went on to say that they had introduced “a real-time audio alert” for the bus captain when the vehicle travelled at speeds of 3 km/h per hour more than the respective speed limits of 50 km/h and 70 km/h. Furthermore, they said that they were exploring providing “real time alert to bus captains when a harsh braking or sudden acceleration event occurs” and generating reports automatically to “identify bus captains with frequent jerky driving events.”

*CHAPTER 21 – The Singapore Land Transport Authority*

556. In their most helpful reply, dated 17 October 2018, to the enquiries of the Committee, the Land Transport Authority of Singapore (“LTA”), having noted that seat belts were required to be fitted on “small buses” with a capacity of up to 15 passengers, explained the circumstances in which it had been determined not to require the fitting of seat belts for passengers on large franchised buses in Singapore: [EXP-1(C); page 249-5, paragraphs 4-5]

“Larger buses, by virtue of their design, size and mass, can better absorb the impact of a collision compared to small buses. The forces of a collision felt by occupants in a large bus are likely to be less than those experienced in small buses. As a result, in the event of a collision, the injuries for passengers on a small bus in general tend to be more severe than those in a bigger bus.

The consideration stated in paragraph 4, coupled with the current safety requirements for big buses, such as the compulsory periodic inspections, strict speed limit and speed limiter requirements for big buses... do not provide the impetus or compelling reasons to require bigger buses to be fitted with seat belts.”

557. Of the cost implications of a requirement that bigger franchised buses be fitted with seat belts, the LTA went on to say: [EXP-1(C); page 249-6, paragraph 5]

“Careful study will be necessary as the impact on the bus operators (e.g. costs incurred, disruptions to business operations, etc.) and other stakeholders (e.g. logistics preparations by the best body builders, additional cost to be borne by bus passengers, financial assistance provided by the government, etc.) will be significant, given our previous experience in implementing the seat belt requirements for small buses”.

558. Of the retrofitting of seat belts to small buses, the LTA noted that they had appointed workshops to undertake the work and authorised vehicle inspection centres to ensure compliance. Further, the government provided financial assistance to the operators of small buses to help defray the cost of compliance with the requirements or replacing their buses with new ones.



### *Training*

559. The LTA explained that all newly employed bus captains in Singapore are required to undergo a five-day “Enhanced Vocational Licence Training Programme” conducted by the Singapore Bus Academy, which was opened in October 2016. The programme, which consists of six modules, is conducted by trainers from the Singapore Bus Academy, the National Transport Workers’ Union and two of the bus operators. The Service Literacy module endeavours to provide bus captains with skills to deal with difficult passengers. [EXP-1(C), pages 249-11, 249-13]

560. Following their foundational training by the Singapore Bus Academy, new bus captains “undergo an average of 5-6 weeks’ training” by the employer/bus operator before they are deployed on revenue services. Refresher training courses are provided to both full-time and part-time bus captains, whilst remedial training is provided to bus captains who identified as repeated safety offenders. (EXP-1(C), pages 249-11, 249-12)

### *Abuse of bus captains*

561. The LTA noted that bus captains are protected from abusive conduct, whilst performing their duties by the *Protection from Harassment Act*, Cap. 256A. Section 6(1) of the Act provides that no person shall by any means “(b) make any ... threatening, abusive or insulting communication, toward or to a... public service worker” in relation to the execution of the victim’s duty as such ... public service worker. Paragraph 8 of the Protection from Harassment (Public Service Worker Order) 2014 defines a “public service worker” as including an employee, working as a bus driver, of a bus service licensee. On conviction, a defendant is liable to imprisonment for a term not exceeding 12 months or to a fine not exceeding \$5,000 or to both. [EXP-1(C), page 249-13]

### *Technological devices*

562. The LTA said that some franchised buses in Singapore were fitted with electronic stability control, traction control and speed limiters, which limited the maximum speed to 60 km/h. Also, about 15% of the buses were fitted with a collision prevention device. Franchised buses delivered from January 2018 will be fitted with the Guardian anti-fatigue system. About 40% of the buses were fitted with telematics systems, which allow the bus operators to monitor driving behaviour. [EXP-1(C), 249-3 and 249-4]

### *Bus lanes*

563. The LTA said that, having first introduced bus lanes in 1974, by 2018 there were 211 km of bus lanes in operation. In identifying a stretch of road as suitable for the operation of a bus lane, the LTA first identified “locations where high-volume of buses ply the road during relevant bus lane operating hours”. Then, it had regard to the impact on general traffic flow of the introduction of a bus lane, together with “concerns from stakeholders, such as bus operators, residents, and local businesses, whose activities may be affected by the proposed bus lanes”. Finally, the proposal was subjected to a cost benefit analysis. [EXP-1(C); pages 249-7 and 249-8, paragraphs 1-4]

### *Enforcement*

564. Traffic wardens were charged with the primary task of enforcing bus lanes. That was achieved through the use of photographs. In addition, the LTA was assisted by the provision by bus operators of video footage captured by video cameras on their buses of infringements. All that was required of the bus driver was that he “...press a button to start recording of a video footage after witnessing a violation”. The LTA emphasised that the bus operators “are not responsible for the enforcement of the bus lanes.” [EXP-1(C); page 249-9, paragraphs 8 and 9]

*Bus priority boxes*

565. A bus priority box scheme has been in operation since 2008, which required other vehicles to afford priority to buses as they indicated that they were leaving a bus stop. Triangular give-way markings were painted onto the road to warn motorists of the requirement that they give priority to buses in such circumstances. There were 347 such bus stops, approximately 7% of all the bus stops in Singapore. The scheme is not implemented on “high-speed roads, single lane roads or sites where there is no clear sight of traffic.” The impact of the scheme on traffic was “relatively minor compared to bus lanes” because motorists had the opportunity to change lanes or to slow down to create a gap in traffic to allow a bus to exit the bus stop. [EXP-1(C); pages 249-9 to 249-10, paragraphs 10 and 13]

*Quality of service standards-penalties*

566. The Bus Contracting Model (“BCM”) operated in Singapore measures bus service reliability using the Bus Service Reliability Framework and the First and Last Bus Punctuality. Only two Quality of Service standards (“QoS”), namely QoS 1.1 and QoS 2.1 have been retained from the previous system operated by the Public Transport Council. For QoS 1.1, the bus operator provides 96% of the stipulated schedule mileage per month whereas, QoS 2.1 requires the bus operator to have less than 0.75 accidents per 100,000 bus-km per month, the respective penalties for which are SG\$20,000 per month on each non-compliant route and SG\$100,000 per month on each non-compliant standard. The LTA said: [EXP-1(C); page 249-15, paragraph 4]

“Since the move to the BCM, no PTO<sup>24</sup> has failed the QoS Standard regarding accident rate in the last two years.”

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<sup>24</sup> “PTO” means “public transport operators”.

## CTB/NWFB

567. In their closing submissions CTB/NWFB opposed any “suggestion of imposing financial penalties linked to safety performance”. They submitted that the provisions of section 12(1) of the Ordinance, which required the grantee of a bus franchise “maintain to the satisfaction of the Commissioner a proper and efficient public bus service”, together with the available penalty, pursuant to section 22(2) of the Ordinance, were sufficient to ensure the provision of a safe bus service. [CTB-1, page 105]

## CHAPTER 22 – Competitive tendering for franchises

### Competition Commission

568. In a written closing submission to the Committee, dated 31 October 2018, the Hong Kong Competition Commission, an independent statutory body established under the Competition Ordinance (Cap. 619) provided its comments “on how competition can play a role, alongside regulation, in enhancing safety and other aspects of franchised bus services.” [MISC-3, page 1374]

569. Having noted that the Committee had received evidence, in the report of Mr Mike Weston, that “the Hong Kong franchised bus network has not been subject to any open competition since 1995”<sup>25</sup>, it asserted that: [MISC-3, page 1376]

“(T)he Commission is of the view that the lack of a competitive process or the slim possibility that such a process will be applied, favours incumbents and deprives consumers of the benefits of competition. What those benefits are would depend on the criteria used in the competitive process. They could include lower fares, higher quality services, greater innovation, enhanced safety or indeed all of these.”

“In particular, with a competitive process where the contracting criteria includes systems for upholding and enhancing safety, operators will face competitive pressure to improve quality and safety, or risk losing franchises to new entrants or existing bus services or other transportation providers looking to expand. This competition may be in terms of reduced incident rates as well as the development and adoption of new technology or processes which enhance safety.”

570. The Commission cited in a footnote a paper “*The contracting of urban bus services - Recent Australian developments*” published in 2014 in volume 48 of the Research and Transportation Economics, as research that linked “competitive tendering in Australia has been linked to improvements in service quality”.

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<sup>25</sup> The reference to 1995 was made in error. As noted earlier, the last open, public competitive tender for franchised bus services was in 1998.

However, it cited no such research in respect of a link between competitive tendering for franchise bus routes/areas and enhanced safety. Reference was made in another footnote to a paper “*Fear of Flying? Economic Analyses of Airline Safety*”, published in 1992 in Volume 6, Number 2, of the *Journal of Economic Perspectives*, which examined the effect on airline safety of the deregulation of airlines in the United States of America in 1978. [MISC-3, page 1377]

571. In the context of addressing what was acknowledged to be the “challenges of bringing about effective competition”, the Commission acknowledged that: [MISC-3, page 1377]

“...the ownership of buses, depots, and other bus service-related assets by the incumbents may constitute a serious barrier to entry to potential entrants, and hence the introduction of a competitive process in the renewal of bus franchises will have implications on the ownership of such assets.”

572. Nevertheless, having asserted that “(t)he benefits to safety from enhanced competition have, however, the potential to be considerable”, the Commission suggested that the Government: [MISC-3, page 1378]

“to fully consider the costs associated with any required change in asset treatment relative to the benefits, including the safety benefits of competition.”

### *CTB/NWFB*

573. In their closing written submissions, CTB/NWFB opposed the introduction of competitive open public tendering for franchised bus service in Hong Kong, describing it as “not a viable option”. In doing so, it was asserted that: [CTB-1; pages 104-105, paragraph 1]

- (a) Bringing in new operators will create wasteful competition, generate more emission and aggravate the already heavy traffic congestion.

- (b) Hong Kong is short of land resources. Our Companies are already very tight in depot and parking facilities. We believe that new operators will find themselves difficult, if not impossible, to secure new land for such facilities.
- (c) Franchised bus business is capital intensive and the payback period is long. Without a reasonable assurance of the long term sustainability of the business, potential operators will be reluctant to invest.
- (d) Franchised bus business is labour intensive and it is already very difficult to recruit frontline staff at the moment. Without a reasonable assurance of long-term job security, people will be reluctant to join the industry. Further, when an incumbent operator is not successful in the re-tender of its services, redundancy of staff, mainly at the frontline level, will be inevitable.”

## *Chapter 23 – Recommendations*

### *The grant, regulation and monitoring of public bus franchises: safety*

574. The current legislative regime and the requirements of the franchises granted to bus operators provide a wholly insufficient emphasis on safety. There is no express requirement in respect of safety in section 12 of the Ordinance, which merely requires that the grantee of a franchise maintain a “proper and efficient” public bus service. Similarly, there is no such requirement in the conditions imposed in the franchise agreements.

575. Save for the two indicators used by the TD of the safety performance of franchised buses, namely mechanical failure and the accident rate of buses, there are no detailed quantifiable safety performance indicators to enable the TD to better assess their performance. Whilst the 14 per day spot checks on vehicle safety defects appear to be very thorough, involving no less than 47 items, and the failure rate very low, there being only 11 successful prosecutions in the five year period 2012-2016, [TD-1; pages 91-92, paragraphs 9-11: TD-4, page 1427] the accident rate indicator is crude, being based only on the accident rate per million kilometres travelled by franchised buses. It gives no weighting to the different consequences of accidents, namely: fatalities, serious injuries and minor injuries, albeit that at least that bare distinction is made in the Fuller Disclosure contained in the Annual Reports of the companies who operate franchised buses.

576. Although section 35 (1) of the Ordinance provides for the making of regulations by the Secretary for TH, *inter-alia*, to regulate the driving hours, rest and refreshment intervals of bus captains, no such regulations have been made. Rather, mere Guidelines have been issued.



*A reactive approach to safety*

*The TD*

577. As is readily apparent, many of the measures taken by the TD to enhance the safety of franchised buses were reactive to events, rather than being proactive. For example, Mr Joseph Lai conceded that it was “fair to say” that the franchised bus accident in Sham Shui Po on 22 September 2017 prompted the review of the 2012 Guidelines on Working Hours, the revised version of which was promulgated on 23 February 2018. [Transcript Day 1; 7 May 2018, page 77] Mr Lai made a similar concession in respect of the setting up of the Working Group on the Enhancement of Safety of Franchised Buses in early March 2018 in relation to the franchised bus accident on Tai Po Road on 10 February 2018. [Transcript Day 1; 7 May 2018, page 79] The fact that initially it was intended that the Working Group report be completed within three months speaks eloquently about the perceived need for an urgent reaction by the TD. [Transcript Day 19; 4 October 2018, pages 130-131]

*The franchised bus operators*

*KMB*

578. Similarly, it is clear that many of the measures taken by the franchised bus operators subsequent to the Tai Po Road accident on 10 February 2018 were reactive to that event, rather than being proactive. For example, on 23 February 2018, KMB changed the threshold value at which an audio/visual alert is given to a bus captain of excessive speeding from 75 km/h to 70 km/h. Its Accident Report, dated 12 March 2018, said that it had been determined that from 5 March 2018 all new buses procured by the company would be fitted with seat belts. In that report, it was stated that installation of electronic stability control was “under testing and verification with the supplier”, whereas arrangements were being made “to test geo-fencing on 10 buses.” Moreover, it was said that the company was “conducting a trial with a supplier on monitoring drowsiness of BCs while they are

driving.” Of the employment of part-time bus captains, it was stated that the employment of those whose working hours fell below 18 hours per week had been discontinued, albeit that an offer had been made to them to be employed on different terms. Of training of bus captains, it was said all training features of bus captains had been “reassessed” and that “some new elements have already been introduced, while some will be executed at a later stage.” [KMB-1(A); pages 114-115, paragraphs 41, 42 and 47, and page 104, paragraphs 13 and 15]

### *CTB*

579. For its part, not having had a Safety Committee hitherto, such a committee was constituted by CTB in early May 2018. In evidence, Mr Samuel Cheng said that the purpose of forming the committee was “to specifically examine all matters related to operational safety.” Of that examination, he said that “Initially, we have identified the following areas for improvement.” He went on to describe four areas in which bus captain driver training was to be strengthened, including increasing the number of hours of training for newly recruited captains and providing “training on customer service and EQ management”. Of recruitment, he said “we have started to explore the feasibility of conducting psychological assessment of bus captain applicants.” Then, he said that from 1 June 2018 part-time bus captains would be required to provide information of their working hours with the principal employment “to enable the companies to better understand whether they have sufficient rest time.” Next, he said that in the third quarter of the year it was proposed that the upgraded “on board black-box will automatically give out alert signals to the bus captain.” Finally, he said that the companies would continue to explore “the feasibility of introducing new technologies for enhancing safe driving.” [Transcript Day 3; 29 May 2018, pages 2-3]

580. The absence of a long-term, measured proactive approach by TD to franchised bus safety is best illustrated by the TD’s failure to require the franchised bus operators to keep abreast of advances in technology of devices that are directly or indirectly related to enhancing safety. For example, it is striking that having required, in November 2003, the franchised bus operators to install black boxes of

stipulated capabilities on new buses from July 2004, no additional requirements were stipulated by the TD until August 2018.

581. It is to be noted that, notwithstanding the fact that the TD had written to KMB and CTB on 22 November 2010 informing them of the existence of a digital map of Hong Kong's roads available for purchase from the TD and that on 18 January 2018 the public was informed by a notice on the TD's website that it was now available for free, [TD-5; page 1771, paragraph 2.3] it appears that KMB and CTB were not aware of its existence until the TD wrote to them by letter, dated 7 June 2018, informing them of that fact. KMB confirmed as such in terms in evidence. [Transcript Day 14; 11 August 2018, page 115] For his part, Mr Samuel Cheng of CTB said in evidence "...currently we are not able to get a digital map which includes all the speed limits of all the roads in Hong Kong. Currently there isn't such a digital map. So what we have to do is to manually mark such road sections onto our digital map." [Transcript Day 4; 30 May 2018, page 30]

582. Of course, a digital map, used in conjunction with a black box, was a simple way of monitoring excessive speed and was also an important component of an Intelligent Speed Assistance system. In evidence, Mr YK Chan of the TD confirmed that prior to February 2018 he was not even aware of the fact that TfL had published a lengthy report of extensive trials conducted in London in 2015 and 2016 of the use of ISA. [MISC-3, pages 1002-1133. Transcript Day 19; 4 October 2018, page 155]

#### *TfL's proactive approach to bus safety*

583. By contrast, it is clear that for many years TfL have adopted a long-term, measured, proactive approach to enhancing the safety of franchised buses. That approach is evidenced, in the field of technological safety devices and systems, by TfL's consideration of the use of the ISA system: first, in 2009, followed by an extensive trial of the system on two bus routes in 2015 and 2016, and the subsequent publication of the independently monitored report by TRL in 2016,

resulting in TfL's requirement in October 2018 that franchised buses be equipped with the ISA system by the end of 2018.

*Responsibility for bus safety*

*TD*

584. As noted earlier, the Commissioner for Transport acknowledged that there was no "single team" responsible for franchised bus safety within the TD. Rather, she pointed to a number of Branches and Divisions of the TD, namely the Bus and Railway Branch, the Road Safety and Standards Division and the Vehicle Safety and Standards Division. Further, she acknowledged that there was no Committee which met on a regular basis to discuss and consider franchised bus safety. [Transcript Day 19; 4 October 2018, pages 94-95]

*CTB*

585. In a similar vein, Mr Samuel Cheng of CTB said, in response to the question of who, within CTB, was responsible for bus safety that, prior to the establishment of a Safety Committee in early May 2018 "We didn't have a specific employee for that purpose. This is because, for safety-related matters we who are seated here today from the senior management share such responsibility." [Transcript Day 3; 29 May 2018, pages 25-26] That was a reference to the no fewer than six representatives of CTB who gave evidence.

*KMB*

586. In answer to the same question, Mr Godwin So of KMB said "At present, the company structure is such that every Department has some responsibility for safety. Mr James Wong said "Actually, safety should not be the responsibility of just one person in the company." Mr Roger Lee said "...safety is an interdepartmental matter." [Transcript Day 12; 7 August 2018, pages 40-43]

587. As noted earlier, Professor Stanley recommended that Hong Kong adopts the practice in Victoria in which there is an Independent Safety Regulator for buses. For his part, Mr Weston said that whether or not that was appropriate for Hong Kong would depend on the existing “local structures and circumstances”. He said “...maybe progress can be made quicker through collaboration and the current structures and the current players working together more closely.” He noted that “quite significant progress is being made around safety agenda for buses in London” within the existing structure in London, namely one without an Independent Safety Regulator. Moreover, he noted that the Bus Safety programme had been designed and coordinated “by two or three people within the buses safety team.” [Transcript Day 18, 27 September 2018, pages 108-116]

588. Quite clearly, Professor Stanley’s recommendations involve a very significant root and branch change to the existing franchised bus structure in Hong Kong and would require extensive new legislation and would take many years to implement. In our judgment, the enhancement of safety of franchised buses in Hong Kong can be achieved more quickly and efficiently by adoption of some of the relatively simple steps identified by Mr Weston.

589. *Recommendation: TD franchised bus Safety Director*

- (1) We recommend that the TD establishes a structure to develop a proactive approach to enhancing the safety of franchised buses;
- (2) We recommend that, as the first step towards developing a proactive approach, the TD appoints a franchised bus Safety Director, in charge of a small team dedicated to bus safety, who would have overall responsibility for all aspects of safety of franchised buses, including but not limited to these aspects of safety: recruitment and training; working hours, rest times and meal breaks of bus captains; the facilities available to rest for bus captains; the interior and exterior design of franchised buses; and the identification and trial of appropriate technological safety devices and, where appropriate, their

installation. In discharging those duties, no doubt the Safety Director would work closely with other colleagues responsible for the broader aspects of the various subjects identified. For example, no doubt he would do so with the team it is proposed be created within the TD to be dedicated to transport technology. The Safety Director's overarching responsibility would be franchised bus safety.

590. *Recommendation: Franchised bus operators*

- (3) We recommend that the TD invites the franchised bus operators to appoint their own Safety Directors, to have overall responsibility for all aspects of the safety of franchised buses, to permit ready direct contact between the TD's Safety Director and the franchised bus operators, and each other, on issues of bus safety.

*Membership of the Permanent Working Group/Bus Operators Forum*

591. We commend the Commissioner for deciding to constitute a Permanent Working Group on the Enhancement of Safety of Franchised Buses to operate in a manner similar to the Bus Operators Forum in London. Clearly, it is the experience of TfL that a permanent structure which facilitates regular meetings, every eight weeks or so, of senior managers of the bus operators, including those responsible for different aspects of safety of franchised buses, with TfL engenders an atmosphere of collaboration on the issue of safety.

592. *Recommendation*

- (4) We recommend that the membership of the Permanent Working Group be expanded beyond its current membership to include independent members with expertise relevant to franchised bus safety.

*Technological safety devices: TD's technology team*

593. In her evidence, the Commissioner said that the TD was “actually bidding necessary manpower resources” in order to “set up a dedicated transport technology team within the Department.”

594. Given the speed and ambit of the advances in technological safety devices suitable for use on motor vehicles, including franchised buses, it is very surprising that such a dedicated team was not established within TD some years ago. Clearly, such a team was and is needed by the TD to be responsible for keeping abreast of those advances; arranging for trials of those safety devices thought to be suitable to the circumstances prevailing in Hong Kong; ensuring that the results of such trials are independently tested and subjected to a cost/benefit analysis; and recommending installation on franchised buses of those safety devices or systems found to have satisfied that analysis.

595. *Recommendations*

- (5) We support the Commissioner's application for funding and recommend that a dedicated technology team be formed in the TD urgently.
- (6) In addition, we recommend that, if constituted, the TD's technology team establishes lines of communication with well-respected overseas jurisdictions, such as TfL in London and LTA in Singapore, to share information of what is known of the capabilities of not only new but also improved technological safety devices; what has been learned in the trials of such devices; the results of cost/benefit analyses; what devices were rejected and which ones were installed and with what success.
- (7) Similarly, we recommend that the franchised bus operators consider appointing members of their own staff to be responsible for those matters within their companies and, in their case, to consider

establishing or strengthening existing relationships with franchised bus operators in other jurisdictions or international bus organisations, so that they may also benefit from a similar flow of information in respect of technological safety devices.

### *Subsidies*

#### *Bus safety innovation fund*

596. It appears that the provision of a relatively small sum of money in 2017 by TfL, £500,000, in TfL's *Safety Innovation Fund* has proved to be a successful means by which franchised bus companies have been encouraged to embark on testing technological safety devices, the overall results of which are shared by TfL with all bus operators and which have played, and are playing, an important part in the development of TfL's Bus Safety Standard. On the other hand, the Committee is aware of the current availability in Hong Kong of government funded grants for trials of road safety technology. In 2018, the Innovation and Technology Fund approved the grant of \$967,000 to Greensafety Technology Limited for a trial of "Application of Advanced Driver Assistance Systems + 4S solution to government vehicles" to study and enhance driving safety on roads.

#### 597. *Recommendation*

- (8) We accept Mr Weston's suggestion that consideration be given by the TD to funding "uptake of new safety technology" by franchised bus operators and recommend that a relatively small fund of monies be made available for that specific purpose. If such a fund was created, disbursement of the monies ought to be subject to similar rigorous requirements identified in TfL's soon to be launched *Bus Safety Innovation Challenge*.



*Subsidies: retrofitting seat belts on some franchised buses and Electronic Stability Control (“ESC”) and active speed limiting retarders on all franchised buses*

598. As noted earlier, the statement on 12 October 2018 in the Chief Executive’s 2018 Policy Address that “the government will subsidise franchised bus operators in retrofitting existing buses with appropriate safety devices, including retrofitting all seats on the upper deck of some buses with seat belts” was qualified, first by the Secretary for TH, in a statement made at a press conference on the same day, who said that it applied to “all seats on the upper deck of long-haul buses running on expressways with fewer stops” and secondly, by the Commissioner who said in evidence that: [Transcript Day 21; 16 October 2018, pages 130-131]

“...the installation of seat belts will particularly have to undergo a detailed assessment including operational, technical and financial feasibility assessment.”

The Commissioner confirmed in terms that the assessment included a cost/benefit analysis.

599. Having said that, in addition to retrofitting seat belts on some buses, the government funding included retrofitting of “the electronic stability control system, speed limiters with retardation function” the Secretary for TH said “we will be funding 80% of the relevant cost, involving about \$500 million. For the remaining costs as well as subsequent maintenance and repair works, they will be borne by the franchised bus operators.”

600. The importance of conducting a cost/benefit analysis in respect of the retrofitting of seat belts on the upper deck of some buses is evidenced by CTB’s position in its closing submissions. Having complained of the “huge burden” on the companies of funding the 20% of the retrofitting costs and having asked that the government provide “full financial support”, it was asserted that, failing that eventuality: [CTB-1, page 104]

“...priority should be given to the retrofitting of ESC and ASLS as these safety devices may prevent accidents from happening. Retrofitting of seat belts on the upper deck seats

should be accorded with a secondary priority as the cost-benefit of this may not be justified if the wearing of seat belt remains not mandated by law.”

601. We endorse and support the Commissioner’s evidence that the TD intends that the retrofitting of seat belts on the upper deck of some franchised buses should undergo a thorough cost/benefit analysis.

602. *Recommendations*

- (9) We recommend that a cost/benefit analysis of the retrofitting of seat belts on the upper deck of some franchised buses be conducted and that it be performed by a well-respected independent consultant.
- (10) Similarly, we recommend that a cost/benefit analysis be conducted in respect of the proposed retrofitting to franchised buses of the electronic stability control system and speed limiters with retardation function and, if the trials of other safety devices proved to be technically successful, we recommend that a cost/benefit analysis be performed in respect of the use of those devices before such installation is required or recommended of franchised bus operators by the TD.

*Safety Performance Indicators*

603. The two performance indicators to which the TD has regard to assess the safety performance of franchised buses are, first the mechanical safety defects detected in the examination of franchised buses, both those conducted annually and those conducted on a random basis and secondly, the accident rate of franchise buses per million vehicle kilometres. In the context of the more nuanced approach taken by TfL, but prior to the publication of their Bus Safety Standard on 16 October 2018, the Commissioner said: [Transcript Day 19; 4 October 2018, page 80]

“We think there should be a performance indicator, at least a performance indicator for us to evaluate safety of the bus company. That said, we also think that if we can move towards the direction of embracing a number of key relevant factors, and come up with a simple index or indicator, that could be an area that we can further explore and study and examine.”

604. It is also to be noted from correspondence between the TD and the franchised bus operators and the more detailed analysis of the causes of accidents, both collisions and non-collisions, to be found in the Forward Planning Programmes that the TD appears to be moving towards identifying more nuanced safety performance indicators with which to measure the safety performance of franchise buses. That is to be commended.

605. In evidence the Commissioner said, in the context of the initiatives by TfL to establish Safety Performance Indicators for bus operators in London, that arrangements had been made some time ago for TD officers to visit TfL “to learn more about their road safety and public transport safety programme and plans”. Information in respect of those 81 Safety Performance Indicators was provided to Mr Weston in November 2018 and is set out in the *Bus Safety Performance Index (“SPI”) Project*.

606. *Recommendation*

- (11) We recommend that the TD established more nuanced safety performance indicators to measure the safety performance of franchised buses.
- (12) We recommend that the TD seek elucidation and clarification from TfL of the 81 Safety Performance Indicators now used by TfL in measuring the safety performance of bus companies in London.

*Franchised bus accident data*

607. Although the TD does publish road accident statistics on its website, only limited information is provided in respect of accidents involving franchised buses. The provenance of the data is the Hong Kong Police Force's CMIS, which provides information as to "driver contributory factors" in respect of the causes of accidents from a template of sixty specific factors. For its part, having analysed that data, TD produced an analysis of franchised accidents in which the bus captain's driving was a factor in the cause of the accident, which was attached to the letter, dated 21 May 2018, from the TD to the franchised bus operators. The letter identified matters to be addressed in the 2018-2023 Forward Planning Programme. [TD-5, pages 1728 to 1731-1. Transcript Day 19; 4 October 2018, pages 63-66] For their part, the police do not have access to the accident data compiled by the franchised bus operators.

608. As required by the TD, the franchised bus operators provide accident data in the Bus Safety section of their annual Forward Planning Programmes. Hitherto, that material has not been made public. A limited disclosure of such material is made in the Fuller Disclosure part of the Annual Report of the franchised bus operators.

609. The data contained in the Forward Planning Programme is a collation of statistics for a period of time. As Professor Stanley noted, it contains a detailed analysis of the correlation between accident rates and various other factors, such as age, years of experience, hours worked and route experience of the bus captains. In its latest iteration it identified seventeen causes of accidents in which a collision was involved and nine in which no collision was involved, together with the catchall "Others". [KMB-12(A); page 5020, paragraph 8.2.3.2] Other than when required to do so by the TD in respect of a particular accident, the franchised bus operators do not provide primary data to the TD in respect of accidents.

610. It is to be noted that, in addition, since January 2018 the TD have required the franchised bus operators to provide monthly reports of the statistics of

excessive speeding and harsh braking of franchised buses. It appears that the parameters by which those events are triggered have been left to the franchised bus operators to determine. For example, a report of excessive speeding is generated by CTB if their franchised bus exceeds 55 km/h for 10 seconds on a road with a speed limit of 50 km/h, whereas a report of excessive speeding is generated by KMB if its franchised bus travels for 30 seconds or more at a speed in the range of 55 to 65 km/h on a road with a speed limit of 50 km/h.

611. We agree with the thrust of the opinions of both Professor Stanley and Mr Weston that greater transparency in data in respect of incidents focuses attention on the issue of safety and is likely to lead to greater accountability. We accept Professor Stanley's statement that there are "solid arguments favouring publication of the Bus Safety Chapter" of the Forward Planning Programme. In respect of the issue of confidentiality, the Commissioner for Transport did not identify any reason why that material should not be publicly available.

612. *Recommendations*

- (13) Accordingly, we recommend that the accident data material in the Bus Safety Chapter of the Forward Planning Programme should be made available to the public.
- (14) In order to provide the TD with more information from more sources about accidents involving franchised buses, we recommend that the TD requires the franchised bus operators to report all accidents to the TD and to do so on a monthly basis.

*Accident data: common standards*

613. The analysis conducted by the police of the circumstances of an accident and its causes is conducted by reference to one template and that conducted by the franchised bus operators is conducted differently and is unknown to the police. As noted earlier, the threshold values applied by KMB and CTB to the generation of excessive speeding and harsh braking reports is different.

614. *Recommendations*

- (15) We recommend that consideration be given by the TD to instituting a common reporting/analysis system of franchised bus accident data.
- (16) For purposes of consistency of detecting and reporting instances of excessive speeding and harsh braking, we recommend that the TD stipulate to the franchised bus operators common thresholds at which those reports are to be generated.
- (17) Also, we recommend that the TD stipulate to the franchised bus operators a threshold at which a report is generated for sudden acceleration.

*Real-time Alerts*

615. Clearly, the currently available black box technology is capable of providing real-time alerts to bus captains of driving misbehaviour and of recording those events. It is to be noted that Mr Kuliš, of Openmatics, the supplier of black boxes to KMB, LWB and NLB, testified that the black box installed on the bus involved in the Tai Po Road accident on 10 February 2018 was enabled to provide the driver, not only with an audio and visual alert for excessive speeding (75 km/h) but also for deceleration ( $2.3 \text{ m/s}^2$ ) and acceleration ( $1.15 \text{ m/s}^2$ ).

616. As noted earlier, CTB are exploring with their black-box supplier the feasibility of providing driver alerts in respect of harsh braking and sudden acceleration. More particularly, they are also exploring the automatic generation of reports of such driver misbehaviour in order to identify bus captains with “frequent jerky driving events”, from which analysis they would provide remedial training or impose disciplinary sanctions. That is an obvious, albeit belated, use of the available technology.

### 617. *Recommendations*

- (18) We recommend that, if the TD follows our earlier recommendation that the TD stipulate the threshold values for the generation of alerts and reports of speeding, deceleration and acceleration, the TD requires the franchised bus operators to provide real-time alerts of excessive speeding, deceleration and acceleration to bus captains, which alerts are to generate a record to enable the franchised bus operators to identify patterns of driving misbehaviour by bus captains.
- (19) We recommend that the TD and franchised bus operators explore the feasibility of making use of the generation of real-time, or near real-time, reports of driver misbehaviour to provide an automatic alert to the franchised bus operator's Control Room of a pattern of driving misbehaviour over a period of time, to enable intervention and communication by the Control Room with the bus captain, if appropriate.

### *Bus Captain Training*

618. Remarkably, prior to the issue of the Practice Note on Training Framework for Franchised Bus Captains, dated August 2018, the TD did not stipulate any requirements or make any directives as to the nature of or the framework for the training of bus captains by franchised bus operators. There is no doubt that the proper and adequate training of bus captains is a very important component part of a safe franchised bus operation. Different franchised bus operators provided different levels of training. Insofar as training was monitored at all by the TD, all that was required by TD was that the franchised bus operators submit quarterly reports that they had complied with their pledges to provide training for all new recruits and training for in-service bus captains once every three years. It is to be noted that in its submissions the TD said that in 2016 all the franchised bus operators reported virtually 100% compliance with those pledges. [TD-2;

pages 305-320; at page 319, Annex C] The TD did not perform any spot checks or take any steps to make independent checks.

619. The width of the new provisions in the Practice Note stipulating the requisite structure of the training system and the identification of the modules required in the courses to be provided to bus captains, together with the requirement that the franchised bus operators set up an internal monitoring and audit mechanism, speak eloquently of the wholly inadequate nature of the pre-existing arrangement. It is to be noted that the Practice Note requires the franchised bus operators “to develop key indicators on the effectiveness of the training system provided to bus captains” and to take appropriate remedial action, if necessary.

620. As is noted subsequently, Professor Stanley recommended that fatigue management be included in the training regime of both bus captains and their supervisors.

621. As noted earlier, Mr Weston recommended that consideration be given by TD to subsidising a safety aspect of bus captain training. An illustration of such subsidy by TfL is the provision of the *Hello London* programme in 2016-2018 to all bus drivers employed by franchised bus operators in London. In part, it addressed better equipping bus drivers to deal with angry and abusive bus passengers. In that context, it is to be noted that TD is involved, together with the Hong Kong Police Force, in the steps being taken in the long-term process of educating the public to treat bus captains on duty with the respect they deserve as persons providing a public service.

622. *Recommendations*

- (20) Rather than abdicating responsibility to the franchised bus operators for the identification of key indicators, their review and the taking of remedial measures, in respect of the effectiveness of the bus captain training system, we recommend that the TD itself plays an active role



in identifying those key indicators. Obviously, it should do so in collaboration with the franchised bus operators.

- (21) We accept Professor Stanley's suggestion and recommend to the TD that fatigue management form part of the training courses provided to bus captains. Moreover, we recommend that information relevant to that subject be provided to the bus captains' supervisors and regulators in the franchised bus operators.
- (22) We recommend that the TD providing funding for a special course/programme for bus captains to better equip them to deal with abusive and angry passengers.

### *Guidelines on Working Hours, Rest Times and Meal Breaks*

623. As noted earlier, it is clear that Guideline 1(b) of the Guidelines on Working Hours, Rest Times and Meal Breaks promulgated on 23 February 2018, which provides for a special shift, was formulated, having regard to the reduction in the maximum duty and driving hours of bus captains, in the context of the difficulty encountered by the bus operators of recruiting and retaining bus captains, the need to maintain bus services, together with the financial cost to the franchised bus operators of having to recruit up to 1,600 extra bus captains in the absence of a special shift. [Transcript Day 2; 8 May 2018, page 96] Also, it is clear that the special shift has the support of some bus captains, because of the enhanced income it allows them to earn.

624. The new split shift arrangement was clearly a compromise brought about by force of circumstances: namely, relatively low salaries of bus captains determined by market forces; a consequent chronic shortage of bus captain recruits and the loss of currently employed bus captains; the willingness of some bus captains to work very long hours to obtain greater remuneration; the reluctance of the public to accept increased bus fares and the equal reluctance of the Government to provide subsidies to franchised bus operations.

625. It is to state the obvious to note that there is a link between the remuneration paid to bus captains and the chronic difficulties encountered in the recruitment of bus captains. That much was clearly acknowledged by both the franchised bus operators and the TD. As noted earlier, in their written submissions the TD noted that the franchised bus operators had undertaken to “improve the remuneration packages to attract new blood.” Both KMB and CTB have honoured those undertakings and the remuneration package available to bus captains after 1 September 2018 is radically different from that available at the time of the making of the Guidelines in February 2018, namely a total of about \$23,000 for a 6 day week of 10 working hours per day when combined with an annual bonus. For his part, Mr Godwin So, of KMB said in evidence that in September 2018 KMB was able to recruit twice the number of bus captains per week than KMB had been able to recruit six months earlier, acknowledging “With higher pay, we can attract more bus captains.” [Transcript Day 15; 12 September 2018, pages 99-100]

626. For its part, the TD acknowledged the inevitable link between an increased remuneration package for bus captains and an application for an increase in fares, stating that “...the TD would process any such fare increase application in accordance with established practice.” [TD-1, page 65]

627. The Committee acknowledges that the change in the maximum number of driving hours permitted for bus captains from 11 to 10 hours and the requirement for an off-duty break of 22 hours in three successive duty shifts had significant consequences for different parties. As noted earlier, the TD acknowledged as much in their written submissions: [TD-1, page 64]

“Removal of all special shift duties will result in a demand for more than 1,000 additional bus drivers, and recruiting such a large number of additional bus drivers is quite impracticable, let alone the financial costs to be incurred. Besides, take-home pay of bus drivers who are currently working under special shift duty will be reduced.”

628. The primary requirement of the Guidelines is that “the total off-duty breaks in three successive shifts should not be less than 22 hours.” No doubt, that limit addresses the perceived danger of accumulated fatigue brought about by lengthy hours on duty and driving, even in a relatively short period of time. It is a benchmark of safety. The special shift has been permitted as an exception to that limit. It permits a bus captain to be on duty for 14 hours and to drive 10 hours per day, day after day and week after week. Obviously, that regime necessarily increases the risk of accumulated fatigue in bus captains, not only in a relatively short period of time but also over extended periods of time. Perhaps, that is why both KMB and CTB have said that they intend to limit the hours of duty in a special shift to 13 hours, the latter stating that they did so in acknowledgement of public concerns about bus safety. That modified regime would permit compliance with the requirement of total off-duty breaks of 22 hours in three successive shifts.

629. Clearly, the justifications advanced by the TD for the special shift, as an exception to the benchmark safety provision of the 22 hours off-duty requirement, are simply economic and pragmatic. No reason has been advanced by the TD that the exception should be other than temporary, pending resolution of the recruitment issue and that of the cost of complying with the benchmark safety provision. None has been suggested in evidence.

630. Given that this Committee is charged with making recommendations to enhance the safety of the franchised buses in Hong Kong, the Committee’s concern is whether or not the interplay of the forces identified above, which resulted in the promulgation of the revised Guidelines in February 2018, has had a negative impact on the safety of franchised bus operations. Primarily, at issue is whether or not the Guidelines permit bus captains to be on duty and drive franchised buses for periods of time that impact on their ability to drive safely.

631. For his part, Professor Stanley recommended that the Guidelines be embedded in regulations and that there be established a Standing Committee on the Working Hours, Rest and Meal Breaks of bus captains, whose members would

include fatigue experts. He recommended examination of the "...12-14 hour working period to see what safety enhancements can be supported in these times, which may mean reducing the 14 hour limit." [EXP-1(A); page 94, paragraph 5.3(3)]

632. It is clear that the franchised bus operators do not have any formal system to monitor the fatigue of their bus captains. None is required of them by the TD.

633. *Recommendations*

#### *Regulations*

- (23) We recommend that the Guidelines on the Working Hours, Rest Times and Meal Breaks of bus captains be stipulated in regulations, as provided for by the legislation. Administrative convenience to the Administration in changing the provisions from time to time is a secondary consideration, given the importance of the issue to franchised bus safety. Indeed, it is to be expected that encapsulating the provisions in regulations would result in more and welcome public scrutiny of changes to the provisions.

#### *Fatigue experts*

- (24) We accept Professor Stanley's suggestion and recommend that the membership of the Permanent Working Group include an expert(s) on an *ad hoc* basis, in the area of fatigue identification and management. Those issues ought to be considered in the context of the practices and systems obtaining in other jurisdictions.

#### *Duty hours*

- (25) Having regard in particular to the fact that KMB and CTB have voluntarily eschewed using the maximum of 14 hour of duty permitted

in the split shift system, we recommend that consideration be given by that Permanent Working Group as to whether or not, having regard to the risk of accumulated fatigue, permitting 14 hours of duty in a split shift system is compatible with bus safety.

*Driving hours*

- (26) Having regard to the risk of accumulated fatigue in bus captains contributing to an increased risk of their having bus accidents, we recommend that consideration be given by the Permanent Working Group by reference to the practices of other respected jurisdictions, of restricting the total hours of driving by a bus captain in a period of, say 14 or 28 days.
- (27) We recommend that, having addressed the matters identified at recommendations (25) and (26), the Permanent Working Group engage an independent consultant to conduct a cost/benefit analysis of the effect of abrogating the special shift exception to the 22 hours of duty rule, in particular the potential safety improvements, the number and cost of the additional bus captains that would be required and the implication to franchised bus fares.

It has to be recognised that enhancing the safety of franchised buses may have to come at a cost to some or all of the parties who have interests in the current regime of working hours.

*CTB's use of the split system: availability of rest facilities*

- (28) Given that hitherto CTB have not used a split shift system for its bus captains, and having regard to the difficulties encountered with a range of third parties over the years by KMB in their attempts to provide suitable rest facilities for its bus captains, we recommend that TD and CTB work closely together to ensure that adequate rest facilities are available as the split shift system is deployed by CTB on

different routes, at which the minimum three hour continuous break is to be taken by bus captains at different bus stations and termini.

*Part-time bus captains: other employment*

634. All the franchised bus operators employ part time bus captains. In 2018, they represented 13.9% of the total number of bus captains employed by CTB and 8.4% of all the bus captains employed by the franchised bus operators. [TD-1, page 67] They make a considerable contribution to the operation of franchised buses. There is no evidence that they represent a greater risk to franchised bus safety than full-time bus captains. However, it is important that the franchised bus operators are aware of what other employment they have, in particular whether the nature and hours worked in that other employment might impact on the performance of their duties as bus captains.

635. From 1 June 2018, CTB required that part-time bus captains make a detailed declaration of their other employment, including the position they occupied and the hours that they worked each day. [CTB-3, pages 571-1 to 517-2 and Transcript Day 3; 29 May 2018, pages 81-84] Prior to the accident on 10 February 2018 on Tai Po Road, KMB did not require a part-time captain to declare what other employment he was undertaking. [Transcript Day 14; 11 August 2018, pages 59-60] However, subsequently part-time captains employed for between 10 and 18 hours per week were required to make a declaration in which they provided details of their “Full-time/part-time jobs not assigned by the Company”, including their position and their working hours. [KMB-11, pages 4785-4788]

636. In 2017, 29% of the bus captains employed by NLB were part-time bus captains. [Transcript Day 5; 19 June 2018, page 3] After their representatives had given evidence on 19 June 2018, the Committee was provided with a “Job Declaration Form for Non-Full-Time Bus Captain”. It required details to be provided of the position occupied by the part-time bus captain and the average working hours per working day and the average working days per week. Although in evidence and Mr Benny Chan, for NLB said that the form had been

“introduced” in June 2018, in their submissions, dated 27 June 2018, NLB said that it was intended that “The new form will be introduced by year 2019.” [NLB-1, page 47] Although the Committee sought clarification and, in a submission dated 11 July 2018, was provided with a form entitled “Non-Full-Time Driving Position Application Form”, which required details of the hours worked per day of the week in the other employment engaged by the part-time bus captain, the position as to what system was in force, when it came into force or was yet to come into force was confused. [NLB-1, pages 74-78]

637. Under a long-standing arrangement, with the consent of the TD, pursuant to a contract with Kwoon Chung Motors Company Limited (“KCM”), NLB is provided with “at least 30” non-franchised buses and drivers to meet increased demand at weekends and public holidays. However, Mr James Wong acknowledged that there was no arrangement under which NLB was provided with details of the qualifications and driving records of the bus captains provided with the non-franchised buses. Similarly, he said the bus captains were not asked to make a declaration in respect of the hours they worked in their primary employment. NLB had not decided what to do. [Transcript Day 5, 19 June 2018, pages 37-38] It appears that there is no system in which NLB is informed of the hours of duty and driving and the off-duty breaks of those drivers before they perform driving duties for NLB.

638. For its part, the TD said “The TD did not require NLB to provide a report of compliance with the guidelines in respect of the drivers of NFB’s as they are not the employees of NLB.” [TD-1, page 436] NFB is an acronym for non-franchised buses. It is wholly unsatisfactory that NLB are not aware of the hours of duty and driving and the off-duty breaks of those drivers, so that to ensure bus safety they are in position to be satisfied that those drivers are in a proper condition to perform their duties as bus captains.

639. *Recommendations*

- (29) We recommend that the TD stipulates to the franchised bus operators the information that they are required to obtain, maintain and update in respect of the other employment of part-time captains, including the nature of the employment and the hours worked.
- (30) We recommend that TD requires NLB to obtain information and maintain records of the duty and driving hours and off-duty breaks in their other employment of the bus captains provided to them by KCM, or any other supplier of buses and drivers to NLB, and that NLB is required to be satisfied that, when they are performing driving duties for NLB, they are compliant with the Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks.

*The provision of rest and toilet facilities for bus captains*

640. As noted earlier, under their respective franchise agreements the franchised bus operators are responsible for the provision of ancillary facilities at bus termini or public transport interchanges, including toilets and rest facilities. They must do so at their own expense. The facilities may be constructed by the construction agency of the public transport interchange or bus termini or by the franchise bus operators contractor. As noted earlier, in the consideration of the tortuous process leading to the provision of those facilities by KMB at the new West Kowloon Station Bus Terminus, it seems to be acknowledged by all parties that the franchised bus operators have more difficulty in obtaining approval for constructing permanent structures for rest and toilet facilities than does the government.

641. In evidence, Mr Patrick Wong of the TD confirmed that the TD had a *Transport Planning and Design Manual* and that it provided: [Transcript Day 21; 16 October 2018, pages 16]



“...toilets, washroom and canteen facilities for operator’s staff will not be required in the bus terminus of such facilities are available in nearby development.”

Mr Wong said that the working group within the TD on the Transport Planning and Design Manual would “review and revise” that provision. [Transcript Day 21; 16 October 2018, page 30]

642. *The Hong Kong Planning Standards and Guidelines* make provision for franchised bus facilities at public transport terminals. Paragraph 4.1.6 of Chapter 8 makes provision for Standards for Bus Termini. It states: [MISC-3, page 1317]

“A regulators kiosk and the other ancillary provisions would be required.”

643. In their reply to the Committee, dated 27 September 2018, the Planning Department said that there was no “specification for “other ancillary provisions” as used in paragraph 4.1.6 and that no request had been made by “THB/TD to particularise the phrase.” [MISC-3, page 1313-1315]

644. For his part, Mr YK Chan said that the TD would invite the planning department to provide a more detailed specification of the term “other ancillary provisions, namely to stipulate toilets and resting facilities. [Transcript Day 21; 16 October 2018, page 45]

645. In its submissions, dated 3 October 2018, the TD said that whereas it handles some of the applications by franchised bus operators, others are handled by “other parties such as HD, LandsD, GPA and Link Reit”. [TD-5, page 1824] On average these applications take considerably more time to process than those processed by the TD. Apparently, in response to the concerns caused by the delay in processing those applications the TD set up a ‘task force’ comprising representatives of relevant government departments and franchised bus operators in December 2017. Of the purpose of the task force, the Commissioner said that the TD: [Transcript Day 19; 4 October 2018, page 10]

“will continue to work closely with the relevant approving authorities through regular meetings, with a view to speeding up the processing of the applications.”

646. Of “planned action” to be taken by the TD to improve the provision of ancillary facilities for bus captains at public transport interchanges and bus termini, the TD said in its submissions dated 3 October 2018: [TD-5; page 1825, paragraph 15]

“...the TD will explore in consultation with the relevant government bureaux and departments on the approach for providing the ancillary facilities including bus regulator office(s), restrooms with toilets has built in structures in new PTI’s and bus termini at government cost, whilst the FB operators will pay the rent and recurrent costs for using these facilities.”

647. *Recommendations*

- (31) We recommend that the TD amends its Transport Planning and Design Manual to delete the provision that toilet facilities for operator’s staff will not be required in the bus terminus of such facilities are available in nearby development.
- (32) We recommend that the TD invites the Planning Department to amend the provision for Standards for Bus Termini in the Hong Kong Planning Standards and Guidelines to provide particularly for the meaning of the requirement to provide “other ancillary provisions” and to stipulate that the provision of toilets and rest facilities are required.
- (33) We commend the Commissioner’s initiative and recommend that the provision of ancillary facilities at new PTI’s and bus termini, including bus regulator offices and restrooms with toilets as built-in structures, be provided at Government cost, on the basis that franchised bus operators using those facilities would bear the rent and recurrent costs.
- (34) We recommend that the TD considers expanding its membership of the task force to monitor the provision or upgrading of ancillary facilities at public transport interchanges and termini to include a

representative of the Secretary for TH to provide an opportunity for the policy bureau to collaborate with other policy bureaux and their departments in addressing this issue.

*Abuse and assaults on bus captains*

648. Regrettably, it is clear that there is a growing trend of abuse and assaults of bus captains performing their duties in delivering a public service. Equally clearly, that is a matter of considerable concern not only to the bus captains, as expressed by the many submissions made by the trade unions, but also to the franchised bus operators. With the agreement of the TD, KMB has begun installing shields to protect their bus captains.

649. Obviously, the primary response to those problems is by education of the public, and we commend and endorse the initial steps taken by the TD [Transcript Day 1; 7 May 2018, pages 40-41; Day 2; 8 May 2018, pages 24-27; Day 21; 16 October 2018, pages 50-52] and the Hong Kong Police Force [MISC-1(C), pages 124-547 to 124-555] to promote the message that abusing a bus captain is unacceptable and a criminal offence.

650. *Recommendations*

- (35) We recommend that the TD and the Hong Kong Police Force conduct a long-term programme in the news print media, television and social media to educate the public that abusing a bus captain performing his duties is not only unacceptable but also a criminal offence.
- (36) We recommend that the TD requires the franchised bus operators to display notices where appropriate to remind franchised bus passengers that such conduct is unacceptable and constitutes a criminal offence.
- (37) A second limb of the response is to achieve a greater enforcement of the law. We recommend that, in compliance with privacy legislation, the TD requires the franchise bus operators to install a video camera(s)

with an audio capability at the entrance and next to the bus captains seating area on all franchised buses. Notices should be posted to advise franchised bus passengers of the presence of those cameras, their capabilities and, if appropriate, their potential use in criminal proceedings. Such equipment and related notification is commonplace on public transport and bus and railway and stations in other jurisdictions.

The prosecution of franchised bus passengers for criminal offences arising out of abuse and/or assaults of bus captains is a matter for the police. Obviously, the franchised bus operators have a role to play in assisting the police in such a prosecution. Primarily, it is likely that that will involve no more than retrieving the video and audio recordings of events captured on the camera and, if necessary, by providing evidence of the integrity of the system of the making, storage and retrieval of that material.

- (38) In order to better identify the threshold of unacceptable conduct by way of abuse of a bus captain, we recommend that the TD proposes specific legislation to make it an offence to make a “threatening, abusive or insulting communication” towards a bus captain performing his public duties. [See section 6(1) of the Singaporean Protection from Harassment Act, 2014]

### *Illegal stopping at and near franchised bus stops*

651. It is clear that illegal stopping by other vehicles at and near franchised bus stops is a cause of considerable ongoing concern to both bus captains and franchise bus operators. It appears that on occasions such illegal conduct prevents bus captains from stopping at bus stops or causes them to stop in the road to allow passengers to board or alight from the bus. The latter is clearly unsafe. Both are the potential cause of wholly unnecessary friction between bus captains and their passengers.

652. The current primary method of enforcement of offences of illegal stopping at and near franchised bus stops of police officers issuing fixed penalty tickets to vehicle drivers or affixing the fixed penalty tickets to the vehicles is disproportionately wasteful of scarce police resources. In 2012, the Hong Kong Police Force started studying an electronic fixed penalty ticketing system (E-ticketing). In 2014, a pilot scheme was conducted, but shelved in 2016. Four years ago this month, in December 2014, the Transport Advisory Committee reported to the Secretary for THB on a “*Study of Road Traffic Congestion in Hong Kong*” and, having noted the limits of police resources, endorsed a trial scheme of issuing “fixed penalty tickets through an e-ticketing system”. The Committee went on to note that it was “expected to be rolled out in 2017.” That date came and went without the scheme coming to fruition. It appears that in 2018 steps were taken to revive implementing the system and that “THB is preparing for the legal amendments on the method of e-ticket delivery”. [MISC-1(C); pages 124-538 to 124-539, paragraph 3] That delay in adopting the use of technology and effecting simple legislative changes to make enforcement of the law more effective is truly lamentable.

653. This Committee has been informed that the necessary legislative amendments to permit the service of fixed penalty tickets to the address of the registered owner of a motor vehicle is not intended to be introduced to the Legislative Council until the 2019/2020 session.

654. *Recommendations*

- (39) We recommend, that the legislative provisions necessary to implement the service of fixed penalty tickets other than by affixing them to the vehicle or giving them to the vehicle driver and to commence service by E-tickets should be presented to the Legislative Council as soon as possible.
- (40) We recommend that the TD and the Hong Kong Police Force, no doubt having to work together with other interested parties, explore

the feasibility of installing CCTV cameras at appropriate locations, perhaps lampposts adjacent to bus stops and the immediate area around the bus stop at which there is egregious and recurrent infringement of the law, as a technological aid in support of enforcement of illegal stopping at franchised bus stops. No doubt, the vehicle Automatic Number Plate Recognition (“ANPR”) system would assist in identifying the registered owners of vehicles illegally stopped at or near bus stops.

- (41) Recognising that the deployment of dedicated CCTV cameras at selected franchised bus stops may be a relatively expensive exercise, we recommend that franchised bus operators and bus captains cooperate with the Hong Kong Police to make available to the latter the video film captured by the forward-looking cameras, already installed on board franchised buses, of illegal stopping at and in the immediate vicinity of franchised bus stops. As in Singapore, in respect of bus lanes, the role of the bus captain need involve no more than pressing a button marking the time that the illegal conduct was detected and informing his employer. For its part, the franchised bus operators would provide the recording to the police and may need to provide evidence of the integrity of the system of the making, storage and retrieval of that material. The prosecution of the offender is a matter for the police, but they are entitled to expect the assistance of those who are affected by the illegal conduct in the prosecution of the offender.

*Priority measures for franchised buses*

655. The fact that a franchised bus full to capacity carries many more passengers than any other vehicle on the road is, by itself, a considerable justification for affording franchised buses priority in the use of public roads. In a city which suffers as much road congestion as Hong Kong, encouraging people to use public transport serves an important public purpose.

## 656. *Recommendations*

### *Exiting franchised bus stops*

- (42) Noting that since 2008 Singapore has implemented a successful system of affording priority to buses as they exit bus stops to rejoin the road, we recommend that the TD gives consideration to introducing a trial of such a system to Hong Kong. Obviously, as noted by the Singapore LTA, such a system causes least inconvenience to other road users when they are given advance warning of the priority to be afforded to buses exiting bus stops and other motorists are able to manoeuvre to other lanes of the road in advance of the bus stop.

### *Bus lanes*

- (43) Although we are acutely conscious that the observation by the Singapore LTA of their experience in Singapore that “bus lanes are not popular amongst the motorists who feel that road space is being taken away” resonates strongly with motorists in Hong Kong, some of whom complain that relatively lightly used bus lanes are a waste of road resources [Reply of the Secretary for THB in the Legislative Council, 13 June 2018, SEC-3, pages 1525-1536], nevertheless, for the reasons set out above, we recommend that the TD makes greater nuanced use of bus lanes in appropriate locations. In doing so, we recommend that the approach of the LTA be adopted; namely, locations are identified where a high volume of buses ply the road and then a detailed analysis is performed of the impact of a bus lane on general traffic flow, having regard to residents and local businesses, whose activities might be affected and that a bus lane is implemented only where benefits exceed costs. [EXP-1(C); page 249-8, paragraph 3]

### *Speed limits*

657. There is no dispute that on occasions bus captains drive franchised buses illegally in excess of the speed limit. That much is clear from the monthly reports of excessive speeding made by the franchised bus operators to the TD. Given the idiosyncratic way in which excessive speeding is determined by CTB and KMB, in respect of which separate recommendations have been made, the overall incidence of illegal speeding by franchised buses is uncertain. Nevertheless, it is clear from the survey conducted on behalf of the Committee, which did not require threshold values of time and excess speed over the speed limit before recording an instance of illegal speeding, that whilst there was illegal speeding on roads with speed limits of 50 km/h the incidence of illegal speeding, particularly in the range of 60-64 km/h, was relatively low.

658. Perhaps, the more important issue is not simply the fact of illegal speeding. Rather, it is the speed travelled by a franchised bus at a particular location within a speed limit zone. As several witnesses said, the governing speed limit on a road does not require the driver to drive at that speed. The appropriate safe speed that a vehicle is driven must have regard to multiple factors, including the nature of the vehicle, the particular location and the weather and traffic conditions.

659. *Recommendation*

#### *'Route Risk' assessment*

- (44) In that context, we accept Mr Weston's suggestion and recommend that TD requires the franchised bus operators to provide to the TD a 'Route Risk' assessment for each of the routes on which their buses ply.



*Low speed limits and low speed limit zones: 20 mph/30 km/h*

660. As is clear from the evidence received from Mr Weston and the related reports from the United Kingdom, there is a growing implementation of low speed limits and low speed limit zones in appropriate locations. Mr Julian Kwong pointed out that that approach has been mirrored in other countries in continental Europe.

661. In his evidence, Mr Julian Kwong described having measured the speed of franchised buses travelling from east to west on Des Voeux Road in Central. He had done so because of the particular circumstances of that location, namely because it was a place where franchised buses overtook stationary buses, whose presence created blind spots, and where many pedestrians cross the road without a pedestrian crossing. It was a place that he judged the safe speed to be about 30-35 km/h, although he measured the speed of one franchise bus as being 49 km/h. Clearly, he judged that to be an unsafe speed, but it was within the legal limit. [Transcript Day 7; 16 July 2018, pages 86-87]

662. *Recommendation*

- (45) Noting that Mr Tony Yau, of the TD, said that the TD was “studying whether the low-speed speed zone can be introduced as a trial”, we recommend that the TD identifies suitable locations, perhaps urban areas with high pedestrian traffic, to conduct trials of a low-speed zone, perhaps 30 km/h.

*Competition*

663. Although, in giving evidence about the franchised bus system in London, Mr Weston was describing a system in which there is open, competitive tendering for all bus routes following the expiry of an existing franchise after five years or, if it is extended, a total of seven years, it was his opinion that there was no link between enhanced franchised bus safety and an open, competitive tendering system

for bus routes. At best, it was neutral to safety. [Transcript Day 18; 27 September 2018, pages 63-67] For his part, Professor Stanley was of a similar view, even suggesting that there were potential negative consequences to bus safety from open, competitive tendering. [Transcript Day 16; 15 September 2018, pages 50-54]

664. Separately, not in the context of enhanced safety, the Commissioner said that, whilst the TD had no immediate plans to reintroduce open, competitive tendering for franchised bus routes, that was not ruled out and it was “always the government’s objective to promote competition and to improve service standards.” [Transcript Day 19; 4 October 2018, pages 25-26]

665. The Committee has received no empirical evidence that competitive, open tendering for franchised bus routes militates towards enhancing franchised bus safety.

*Safety: incentives and penalties*

666. Neither Mr Weston nor Professor Stanley supported the use of safety incentives. In his report, Mr Weston said: [EXP-1(A); page 153, paragraph 8.5]

“During discussions with the London bus operators it was clear that operators do not support the direct incentivisation of safety within the route agreement. Operators were concerned that direct financial incentivisation might drive the wrong behaviours, especially at lower levels within the company, including potentially encouraging under reporting. Also, operators felt that linking safety performance to financial payments could lead to a reluctance to collaborate with other operators on safety-related issues as it now had a competitive and commercial benefit. Overall options to incentivise safety within the bus contracts were not seen as a positive mood.”

667. In his evidence, Mr Weston supported that opinion, observing that it would be “rather a strange link” to pay a financial incentive for improvements in safety where, nevertheless the bus operator had been involved in fatalities and serious injuries. Mr Weston went on to say: [Transcript Day 18, 27 September 2018, pages 199-201]

“I think I have some big reservations about making financial incentives to do with safety because I think it just feels like the wrong approach, because you are either still paying people bonuses who are still having accident or you are making deductions that they just build into their contract.”

668. For his part, Professor Stanley agreed with Mr Weston, observing “I acknowledge that there is a risk that you could incentivise underreporting”. [Transcript Day 16; 15 September 2018, page 91]

669. Another highly relevant matter, as noted earlier, is the fact that as yet no nuanced Safety Performance Indicators have been identified by the TD. In the result, in our judgment there is no evidence that militates in favour of incentivising or penalising the safety performance of franchised bus operators.

## *Chapter 24 – Summary of Recommendations*

670. The Committee has benefited from having received oral evidence over a total of twenty-one days from the representatives of nineteen specifically identified interested parties, and that of two expert witnesses, together with their written submissions/reports and those of other parties, together with the closing submissions of Counsel assisting the Committee<sup>26</sup>. Those submissions/reports total over 22,000 pages of the Committee’s Hearing bundles. Having considered all that material, with a view to sustaining a safe and reliable franchised bus service, the Committee has identified the following forty-five recommendations of safety related measures which it makes to the Chief Executive.

### *Developing a proactive approach to bus safety*

#### *(i) Safety Director*

- (1) TD establishes a structure to develop a proactive approach to bus safety.
- (2) The TD appoints a Safety Director and a small bus safety team.
- (3) Franchised bus operators appoint their own Safety Directors.

#### *(ii) Permanent Working Group on the enhancement of safety of franchised buses*

- (4) Membership of the Permanent Working Group is expanded to include independent members with expertise relevant to franchised bus safety.

#### *(iii) Technological safety devices: TD’s technology team*

- (5) A dedicated technology team is formed urgently in the TD.
- (6) The technology team establishes lines of communication with well-respected overseas jurisdictions, such as TfL and LTA to share information.

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<sup>26</sup> Appendix VI.

- (7) Franchised bus operators appoint members of their own staff to be responsible for technological safety devices and to establish lines of communication with franchised bus operators in well-respected overseas jurisdictions to share information.

*(iv) Subsidies*

*Bus safety innovation fund*

- (8) The TD establishes a small fund to provide grants to franchised bus operators to promote the uptake of new safety technology.

*Retrofitting seat belts and Electronic Stability Control and active speed limiting retarders*

- (9) The TD engages an independent consultant to conduct a cost/benefit analysis in respect of the retrofitting of seat belts on the upper decks of some franchised buses.
- (10) The TD engages an independent consultant to conduct cost/benefit analyses in respect of the retrofitting of the electronic stability control system and speed limiters with retardation function, and all other safety devices proved to be technically successful, before the TD requires installation of those devices by franchised bus operators.

*(v) Safety Performance Indicators*

- (11) The TD establishes more nuanced Safety Performance Indicators.
- (12) The TD seeks elucidation and clarification from TfL of the Safety Performance Indicators adopted by TfL.

*(vi) Franchised Bus Accident Data*

- (13) The accident data material in the Bus Safety Chapter of the Forward Planning Programmes is made public.

- (14) The TD requires the franchised bus operators to report all franchised bus accidents to the TD on a monthly basis.

*Common standards*

- (15) Consideration is given by the TD to instituting a common reporting/analysis system of franchised bus accident data.
- (16) The TD stipulates to the franchised bus operators common thresholds for reporting instances of excessive speeding and harsh braking.
- (17) The TD stipulates to the franchised bus operators common thresholds of excessive acceleration.

*(vii) Real-time alerts*

- (18) The TD requires the franchised bus operators to provide real-time alerts of excessive speeding, deceleration and acceleration to bus captains and to generate records of those events.
- (19) The TD and franchised bus operators explore the feasibility of making use of the generation of real-time, or near real-time, of excessive speeding, deceleration and acceleration to provide an automatic alert to the franchised bus operators Control Room, permitting communication with the bus if appropriate.

*(viii) Bus captain training*

- (20) The TD collaborates with the franchised bus operators to identify key indicators of the effectiveness of the bus captain training system.
- (21) The TD stipulates that fatigue management form part of the training courses provided to bus captains.
- (22) The TD provides funding for a special course/programme for bus captains to deal with abusive and angry passengers.

*(ix) Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks*

- (23) The Guidelines are stipulated in regulations.

- (24) An expert(s) on fatigue identification and management is appointed as an *ad hoc* member of the Permanent Working Group.
- (25) Consideration is given by the Permanent Working Group of whether permitting 14 hours of duty in a split shift is compatible with bus safety.
- (26) Consideration is given by the Permanent Working Group to restricting the total hours of driving by a bus captain in periods of 14 or 28 days.
- (27) The Permanent Working Group engages an independent consultant to conduct a cost/benefit analysis of the effect of abrogating the special shift exception to the 22 hours of duty rule, in particular the potential safety improvements, the number and cost of the additional bus captains that would be required and the implication to franchised bus fares.
- (28) CTB and TD work closely together to ensure that CTB provides adequate rest facilities for drivers working on split shifts.

*(x) Part-time bus captains: other employment*

- (29) The TD stipulates to the franchised bus operators the information that they are required to obtain, maintain and update in respect of the other employment of part-time captains, including the nature of the employment and the hours worked.
- (30) The TD requires NLB to obtain information and maintain records of the duty and driving hours and off-duty breaks in their other employment of the bus captains provided to them by KCM, or any other supplier of buses and drivers to NLB, and that NLB is required to be satisfied that, when they are performing driving duties for NLB, they are compliant with the Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks.

*(xi) The provision of rest and toilet facilities for bus captains*

- (31) The TD amends the Transport Planning and Design Manual to delete the provision that toilet facilities for bus operator's staff will not be required in a bus terminus if such facilities are available in a nearby development.
- (32) The TD invites the Planning Department to amend paragraph 4.1.6 of Chapter 8 of the Hong Kong Planning Standards and Guidelines to stipulate that the provision of toilets and rest facilities are required at bus termini.
- (33) The Government provides built-in structures of a bus regulator's office, and restrooms with toilet facilities at new public transport interchanges and bus termini.
- (34) The TD invites a representative of the Secretary for TH to become a member of the TD's task force monitoring the provision of ancillary facilities at public transport interchanges and bus termini.

*(xii) Abuse and assaults on bus captains*

- (35) The TD and the Hong Kong Police Force conduct a long-term programme in the news print media, television and social media to educate the public that abusing a bus captain performing his duties is not only unacceptable but also a criminal offence.
- (36) The TD requires the franchised bus operators to display notices to remind franchised bus passengers that abusing a bus captain is unacceptable and constitutes a criminal offence.
- (37) The TD requires the franchised bus operators to install video cameras with audio capability at the entrance of buses and where the bus captain is seated.
- (38) The TD proposes specific legislation be enacted to make it an offence to make a threatening, abusive or insulting communication towards a bus captain performing his public duties.



*(xiii) Illegal stopping by vehicles at and near franchised bus stops*

- (39) Legislative provisions are presented to the Legislative Council as soon as possible to provide for the service of fixed penalty tickets, other than by affixing them to the vehicle or giving them to the vehicle driver, and to permit service by E-ticket.
- (40) The TD and the Hong Kong Police Force explore the feasibility of installing CCTV cameras at suitable vantage points, in particular lampposts, to monitor blackspots of illegal stopping by vehicles at and near franchised bus stops.
- (41) Franchised bus operators cooperate with the police to make available CCTV recordings obtained by cameras mounted on franchise buses of illegal stopping by vehicles at and near franchised bus stops.

*(xiv) Priority measures for franchised buses*

- (42) The TD gives consideration to introducing a system of affording priority to buses as they exit bus stops to rejoin the highway.
- (43) The TD makes greater use of bus lanes in appropriate locations.

*(xv) Route risk assessment*

- (44) The TD requires the franchised bus operators to provide the TD with a *route risk* assessment for each of the routes on which their buses ply.

*(xvi) Speed limits*

- (45) The TD identifies suitable locations to conduct trials of a low-speed zone of 30 km/h.

*Chapter 25 – Epilogue: acknowledgements and In Memoriam***ACKNOWLEDGEMENTS**

671. The Committee thanks the representatives of the specifically identified interested parties who have given oral evidence and/or provided written submissions, as well as all the many members of the public who provided written submissions.

672. The Committee wishes to acknowledge in particular the generous assistance provided by overseas authorities and the directors and members of staff of franchised bus companies in London. Stagecoach London provided a full written response to the Committee's questionnaire. Transport for London, Abellio London, Go Ahead London, and RATP were most generous in meeting the Chairman and Mr Weston in London and providing them with most informative presentations and demonstrations relating to the safety of franchised bus operations in London and in answering their questions.

673. Similarly, the Land Transport Authority of Singapore was most helpful in providing written information and answering follow-up questions about safety aspects of the operation of franchised buses in Singapore, including bus captain training, the trial and installation of technological safety devices and the affording of priority to buses in bus lanes and boxes to permit easier exit of buses from bus stops.

674. Next, the Committee thanks ZF Friedrichshafen AG and its subsidiaries, ZF Services Hong Kong Limited and Openmatics s.r.o., manufacturers of telematics/black boxes and suppliers of that equipment to KMB, for arranging for Mr Jan Kuliš, a systems engineer employed by Openmatics, [REDACTED]  
[REDACTED]

675. Further, the Committee readily acknowledges the on-going assistance provided by the Transport Department and the franchised bus operators in providing written submissions in response to the many questions and issues raised by the Committee throughout progress of its enquiries.

676. Finally, the Committee wishes to thank Mr Peter Chan Ping Fai, Secretary to the Committee, and his staff in the Secretariat, counsel assisting the Committee, their instructing solicitors, those who prepared the transcript of the hearings and those who provided interpretation services.

**IN MEMORIAM**

677. The final words of our report must be in remembrance of those who died in consequence of the bus accident on Tai Po Road on 10 February 2018 and in other recent bus accidents, and in offering condolences to their loved ones and deep sympathy to those who were injured in those accidents.

678. It is the Committee's hope and expectation that the adoption of the safety measures recommended in this report would assist in preventing recurrence of such bus accidents and in sustaining a safe and reliable franchise bus service in Hong Kong.



Mr Justice Michael Lunn, GBS



Mr Rex Auyeung Pak Kuen, JP



Professor Lo Hong Kam, JP

Dated : 31 December 2018

# **APPENDICES**



*Declaration of Interest*

For purposes of transparency, the Committee wishes to disclose that Professor Lo informed the Committee of various projects on which he had assisted various Departments of Government and others over many years. On two occasions Professor Lo provided services, for which he was paid by bodies that had been engaged by the Transport Department to conduct studies, namely: the Comprehensive Transport Study Model Enhancement, in and between 2009 and 2013, and the Installation of Seat Belts on Student Service Vehicles in Hong Kong, in between July 2010 and August 2011. In the former study, he provided sub-consultancy services to Ove Arup. In the latter, he served as a Project Advisor to the Department of Civil Engineering and Institute of Transport Studies of the University of Hong Kong. Ove Arup and the Department of Civil Engineering and the Institute of Transport Studies of the University of Hong Kong respectively had been engaged by the Transport Department to conduct those studies. In total, Professor Lo received \$105,600 for providing those services.

As is apparent, Professor Lo last preformed service indirectly for the Transport Department over four years prior to becoming a member of this Committee.

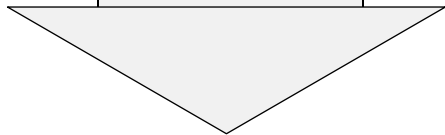
Professor Lo and the other members of the Committee are satisfied that there is no conflict-of-interest that would prevent Professor Lo from discharging his duties fully and properly in making recommendations of safety-related measures to the Chief Executive, with a view to sustaining a safe and reliable franchised bus service in Hong Kong.

**Chronology of Key Events**

Incident / Hearings	Date/Year	Action by TD / Bus Operators
<u>22 Sept</u> : Sham Shui Po Accident	September 2017	
	October 2017	<u>Early-Oct</u> : TD's meetings with franchised bus operators and trade unions on revisions to Guidelines on Bus Captain Working Hours, Rest Times and Meal Breaks
	November 2017	
	December 2017	<u>Dec</u> : TD's task force on rest facilities set up
	January 2018	
<u>10 Feb</u> : Tai Po Road Accident; CE announced plans to set up an Independent Review Committee	February 2018	<p><u>11 Feb</u>: KMB investigation committee formed</p> <p><u>12 Feb</u>: Tai Po District Council special meeting</p> <p><u>15 Feb</u>: (i) LegCo Panel on Transport meeting; motions passed (ii) KMB discontinued recruitment of part-time bus captains</p> <p><u>23 Feb</u>: (i) Guidelines on working hours revised (ii) Threshold for KMB's speeding report lowered from 75 km/h to 70 km/h</p>
<p><u>13 Mar</u>: The Independent Review Committee on Hong Kong's Franchised Bus Service ("Committee") set up</p> <p><u>28 Mar</u>: Committee commenced work</p>	March 2018	<p><u>1 Mar</u>: KMB and CTB merged performance and other allowances of bus captains with base salary</p> <p><u>12 Mar</u>: KMB accident report submitted</p> <p><u>13 Mar</u>: 1<sup>st</sup> meeting of TD's Working Group on the Enhancement of Safety of Franchised Buses</p>
<p><u>17 Apr</u>: Initial deadline for submissions to the Committee by specifically identified interested parties</p> <p><u>30 Apr</u>: Initial deadline for submissions from the public</p>	April 2018	<p><u>9 Apr</u>: Safety improvements to Tai Po Road announced</p> <p><u>10 Apr</u>: KMB Action Plan submitted</p> <p><u>27 Apr</u>: Reduced speed limits of 50 km/h for certain sections of Tai Po Road</p>



Incident / Hearings	Date/Year	Action by TD / Bus Operators
<p><u>7 &amp; 8 May</u>: Hearings with THB and TD  <u>29 &amp; 30 May</u>: Hearings with CTB/NWFB</p>	May 2018	<u>Early-May</u> : CTB Safety Committee set up
<p><u>1 Jun</u>: Email from Committee's Secretariat to TD on availability of digital speed maps  <u>19 Jun</u>: Hearing with NLB</p>	June 2018	<u>7 June</u> : Letter from TD to bus operators informing them of the availability of digital speed maps
<p><u>14, 16 &amp; 17 Jul</u>: Hearings with District Councils, Openmatics, Community for Road Safety and Mr Alok Jain  <u>30, 31 Jul &amp; 1 Aug</u>: Hearings with unions and staff organisations, Mr Raymond Cheng and KMB staff</p>	July 2018	<p><u>25 July</u>: LegCo Panel on Transport discussed TD's paper on findings and recommendations of Working Group  <u>Jul</u>: Electronic stability control, speed limiting retarder and seat belts for all passenger seats to be installed in all new buses</p>
<u>7, 10 &amp; 11 Aug</u> : Hearings with KMB/LWB	August 2018	<p><u>1 Aug</u>: KMB's updated Action Plan submitted  <u>28 Aug</u>: Pay scale changes by CTB with retrospective effect to 1 Jan 2018  <u>Aug</u>: Practice Note on training finalised by TD for implementation in October 2018</p>
<p><u>12 Sept</u>: Hearing with KMB/LWB  <u>15 &amp; 27 Sept</u>: Hearings with experts  <u>24 Sept</u>: Hearing with the Police</p>	September 2018	<p><u>1 Sept</u>: Further pay scale changes by KMB  <u>18 Sept</u>: CTB started using digital speed maps from TD for monitoring speeding by its buses on all roads  <u>Sept</u>: KMB started incorporating digital maps in black boxes</p>
<u>4, 6 &amp; 16 Oct</u> : Hearings with TD	October 2018	<p><u>3 Oct</u>: TD's Working Group Report submitted to the Committee  <u>10 Oct</u>: CE announced in her 2018 Policy Address a subsidy to franchised bus operators for retrofitting existing buses with appropriate safety devices and seat belts on some buses deployed on certain routes</p>
<p><u>7 Nov</u>: Deadline for closing submissions  <u>29 Nov</u>: Closing submission from counsel assisting the Committee</p>	November 2018	
	December 2018	



**Guidelines on Bus Captain  
Working Hours, Rest Times and Meal Breaks**

**(Revised in October 2010)**

- Guideline A - Bus captains should have a *rest time*<sup>1</sup> of at least 30 minutes after 6 hours of duty and within that 6-hour duty, they should have *rest times* of 20 minutes of which no less than 12 minutes should be within the first 4 hours of duty. *The time bus captains spend at a terminal point preparing for the next departure and monitoring passenger boarding should not be regarded as rest time.*
- Guideline B - Maximum duty (including all *rest times*) in a *working* day should not exceed 14 hours.
- Guideline C - Driving duty (i.e. maximum duty less all *rest times* each of 30 minutes or more) in a *working* day should not exceed 11 hours.
- Guideline D - The break between successive working days should not be less than *10* hours.
- Guideline E* - *Bus captains working for a duty of not less than 8 hours in a working day should have a meal break. Bus companies should complete the improvement of meal breaks to no less than 45 minutes by the third quarter of 2011, and further improvement to no less than one hour in one year thereafter.*

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1. *Meal break is also regarded as rest time.*

Information and Records Relating to the Bus Service to be Kept and Provided  
by the Grantee Included Without Limitation under Clause 28(1) of the  
Franchises Granted to Grantees Prior to 1 June 2016

- (a) the number of passengers carried daily on each specified route and the daily receipts therefrom;
- (b) the frequency at and the period on every day during which public bus service is operated by the Grantee on each specified route;
- (c) the number and carrying capacity of buses in use on each specified route on each day and the number of buses and other vehicles and their technical specifications, used, kept or ordered by the Grantee for the purposes of or in connection with this franchise;
- (d) the number of journeys and the total kilometres travelled by each bus daily on each specified route;
- (e) the number of additional journeys operated on each specified route on each day;
- (f) the number of drivers allocated to each specified route on each day;
- (g) the total number of drivers on reserve (for relief of duty drivers) on each day;
- (h) the working hours of drivers on each day;
- (i) the number of journeys and total kilometres lost each day in relation to each specified route due to traffic congestion, accidents, breakdowns and vehicle and staff shortages, respectively;

- (j) the maintenance schedule of the buses and other vehicles and inventory of stores;
- (k) the number of passengers boarding and alighting at bus stops daily and at peak-hours on each of the specified routes as determined by the survey hereinafter mentioned. For the purpose of this Clause, the Grantee shall conduct at least once in each year surveys on a weekday, other than a public holiday or a day on which the storm signal Number 8 (or higher) or a black rainstorm warning is hoisted;
- (l) the journey time for journeys between terminal points on each of the specified routes as determined by the survey hereinafter mentioned. For the purpose of this Clause, the Grantee shall conduct surveys at such time and in such manner as the Commissioner may specify; and
- (m) the operation or future operation of the Bus Service.

Information and Records Relating to the Bus Service to be Kept and Provided by the Grantee under Schedule II of Clause 28(1) of the Franchises Granted to Grantees on or after 1 June 2016

- (a) the number of passengers carried on every day on each specified route.
- (b) the number of passengers boarding and alighting at bus stops and the occupancy of buses when leaving each of the stops at hourly interval on each specified route as collected by surveys or any other means as the Commissioner may specify after consultation with the Grantee. For the purpose of this Clause, the Grantee shall collect such information at least once in each year on a weekday, other than a public holiday or a day on which the storm signal Number 8 (or higher) or a black rainstorm warning is issued.
- (c) the number of passengers and the occupancy of buses when leaving such stops at half-hourly interval on any of the specified routes as the Commissioner may specify.
- (d) the number of buses in use on each specified route on every day and the carrying capacity of each of such buses for the purpose of or in connection with this franchise.
- (e) the journey time for journeys between terminal points on each specified route as reflected from the survey hereinafter mentioned. For the purpose of this Clause, the Grantee shall conduct surveys at such times and in such manner as the Commissioner may specify.
- (f)
  - (i) the scheduled and actual departure time of each journey on every day on each specified route, where the scheduled departure time refers to the time when the journey departs from the terminus in accordance with the Schedule of Service of each specified route; and
  - (ii) the actual departure time of adjusted journey departs from the designated stop.

- (g) the number of scheduled journeys, actual journeys and additional journeys operated by the Grantee on every day on each specified route in each of the periods of a day specified by the Commissioner, where the number of scheduled journeys refers to the number of journeys that shall be operated by the Grantee in accordance with the Schedule of Service of each specified route.
- (h) the number of scheduled journeys that the Grantee fails to operate on every day on each specified route due to vehicle breakdown, vehicle shortage, driver shortage, traffic congestion, accidents, inclement weather, public events, redeployment of buses and others, or any other categorisation of reasons as specified by the Commissioner.
- (i) the carrying capacity and technical specifications of buses kept by the Grantee for the purpose of or in connection with this franchise in each calendar month.
- (j) the number of buses of each bus type and other vehicles used and the number of buses ordered by the Grantee for the purpose of or in connection with this franchise in each calendar month.
- (k) the number of journeys and total kilometres travelled with breakdowns of revenue-generated kilometres and non-revenue-generated kilometres on each specified route on every day.
- (l) the number of bus driver duties scheduled to operate all specified routes in accordance with the Schedule of Service on a day required by the Commissioner and the percentage of bus drivers, selected on the sample size as specified by the Commissioner, in compliance with the guidelines on arrangements in relation to working hour and rest time of bus drivers issued by the Commissioner after consultation with the Grantee.
- (m) the number of bus drivers at the end of each calendar month required and available to operate all specified routes in accordance with the Schedule of Service; and the surplus or shortage of bus drivers.

- (n) the total number of bus drivers resigned, retired, separated with other reasons, newly recruited and re-employed in each calendar month.
- (o) the daily receipts from the passengers carried on every day on each specified route.
- (p) the maintenance schedule of the buses.
- (q) the maintenance schedule of other vehicles and inventory of stores.

**Specifically identified interested parties  
who provided both written submissions and oral evidence**

**Government Bureaux and Departments**

- Transport and Housing Bureau
- Transport Department
- Hong Kong Police Force

**Public and advisory bodies**

- Tai Po District Council
- Sha Tin District Council
- Sham Shui Po District Council

**Franchised bus companies**

- The Kowloon Motor Bus Company (1933) Limited / Long Win Bus Company Limited
- The New Lantao Bus Company (1973) Limited
- Citybus Limited / The New World First Bus Services Limited

**Bus and black box installation manufacturers**

- ZF Services Hong Kong Limited / ZF Friedrichshafen AG and its subsidiary Openmatics s.r.o.

**Trade unions / associations**

- Motor Transport Workers General Union *[including its sub-unions, i.e. Citybus Branch, KMB Branch, Long Win Bus Branch, New Lantao Bus Branch and New World Bus Branch]*
- The Federation of Bus Industry Trade Unions *[including its members, i.e. KMB Staff Union, New World First Bus Company Staff Union and Citybus Limited Employees Union]*
- KMB Employees Union
- Staff Rights Association of KMB
- Monthly-Rated Drivers Union
- Part-time Drivers Union



**Other parties**

- Community for Road Safety
- Some current employees of The Kowloon Motor Bus Company (1933) Limited [*Ms Debbie Wong, Mr Kelvin Yeung*]
- Some former employees of The Kowloon Motor Bus Company (1933) Limited [*Mr Alok Jain, Mr Raymond Cheng*]

**Experts engaged by the Committee**

- Professor John Stanley
- Mr Mike Weston

**Representatives of Transport for London and London franchised bus companies who met the Chairman and Mr Weston in London and provided them with an oral presentation and written material**

- Transport for London, United Kingdom
- RATP Dev London
- Abellio London
- Go Ahead London

**Specifically identified interested parties and members of the public  
who provided written submissions only**

**Government Bureaux and Departments**

- Department of Justice
- Planning Department

**Public and advisory bodies**

- Panel on Transport of the Legislative Council
- Transport Advisory Committee
- Road Safety Council
- Eastern District Council
- Islands District Council
- Sai Kung District Council
- Kwai Tsing District Council
- Central & Western District Council
- Northern District Council
- Southern District Council
- Tsuen Wan District Council
- Tuen Mun District Council
- Wan Chai District Council
- Yuen Long District Council

**Bus and black box installation manufacturers**

- Alexander Dennis (Asia Pacific) Ltd
- Regal Motors Ltd
- Volvo Bus Hong Kong Ltd
- NEC Hong Kong Limited
- LKW Parts & Services Limited

**Overseas Parliamentary bodies, authorities and bus companies**

- Land Transport Authority, Singapore
- Legislative Assembly, Parliament of New South Wales, Australia
- Transport for New South Wales, Australia

- Legislative Assembly and Legislative Council, Parliament of Victoria, Australia
- Public Transport Victoria, Australia
- Stagecoach London (bus company)

### **Trade unions / associations**

- KMB Workers General Union *[including its sub-union, i.e. LWB branch]*
- The Federation of Hong Kong & Kowloon Labour Unions
- Hong Kong Confederation of Trade Unions

### **Other parties**

- Hong Kong Institution of Engineers
- Hong Kong Institution of Highways & Transportation
- Some current employees of The Kowloon Motor Bus Company (1933) Limited *[Mr Jeff Poon, Mr Ken Wong, Mr Utan Wong, Mr Douglas Mak]*
- Some former employees of The Kowloon Motor Bus Company (1933) Limited *[Mr Eric Lee, Ms Alice Luk, Ms Lelia Wong, Ms Clara Leung, Ms Louisa Lam, Mr Gary Wong, Mr James Louey]*

### **Members of the public**

#### *Public bodies*

- Hong Kong College of Orthopaedic Surgeons
- Competition Commission

#### *Organisations*

- Public Transport Think Tank of Hong Kong
- Public Transport Research Team
- Labour Party
- Democratic Alliance
- Pan-Democrats of Eastern District Council

#### *Individuals (listed in sequence in which their first submission was received)*

- Hon Jeremy Tam
- Mr Paul Surtees
- Mr Eric Tam, Tai Po District Councillor

- Mr John Brewer
- Mr Chan Hing Fai
- Mr Edward Logsdail
- Mr Lam Chi Kit
- Mr Poon Kwok Wo
- Mr Pi Chan
- Mr David Ho
- Mr Lok Man Wah
- A group of KMB 259D Bus Route Drivers  
*[Mr Chung Sai Kwok, Mr Wong Shing Kai, Mr Lo Wing Hang, Mr Wong Lai Kam, Mr Yip Wai Man, Mr Ma Wai Tin, Ms Wong Man, Ms Ho Yuk King, Mr Chan Kwok For, Mr Wong Wang Wah, Mr Lee Wing Fai, Mr Yu Ming Kwong, Mr Ng Chi Keung, Mr Cheung Wing Choi, Mr Or Din Man, Mr Chan Siu Keung, Mr Fong Wai Hung, Mr Yeung Chi Keung, Mr Lee Gut Yeung, Mr Lam King Bor, Mr Chan Pui Kwok, Mr Chow] (as best can be identified from the manuscript names provided to the Committee)*
- Ms Yuen Hoi Yan
- Mr Franklin Tse
- Ms So Sam Yu
- Mr Leslie Chan Ka Long
- Ms SH Chan
- Mr Dennis Wong
- Mr Lo
- Mr Peter Yu
- Mr Mike Grimsdick
- Mr Clifford Chang
- Mr Edmond Lee
- Mr Peter Mann
- Mr Peter Kwok
- Mr Peter Crush
- Mr Lam Chi Kit
- Mr Brien Mak
- Mr Henry Chan
- Mr Chan
- Mr Eric Kwok Ping, Islands District Councillor



