

**For discussion  
on 5 January 2016**

**Legislative Council Panel on Security**

**Creation of a Chief Pilot post in the Government Flying Service  
for strengthening management and enhancing flight safety**

**PURPOSE**

The Government Flying Service (“GFS”) proposes to create a permanent Chief Pilot (“CP”) [GDS(C)1 or D1 equivalent] post for enhancing flight safety management and strengthening the overall management of the department. This paper seeks Members’ views on the proposal.

**BACKGROUND**

2. The GFS was established on 1 April 1993 under the GFS Ordinance (Cap. 322) upon the disbandment of the former Royal Hong Kong Auxiliary Air Force (“RHKAAF”). Its functions include search and rescue, air ambulance, fire-fighting, aerial survey and supporting law enforcement, etc.

3. The GFS is headed by the Controller, GFS (“C, GFS”) who is supported by the following four professional sections and an administrative section:

- (a) Operations Section;
- (b) Training and Standards Section;
- (c) Engineering Section; and
- (d) Quality and Flight Safety (Q&FS) Section.

4. At present, three out of the four professional sections are led by directorate officers (at GDS(C)1 or D1 equivalent) who supports C, GFS in their respective areas of expertise. These directorate officers are:

- (a) CP(Operations) – He is the Head of the Operations Section who directs the provision of flying services for all emergency response and operational matters;
- (b) CP(Training & Standards) – He is the Head of the Training and Standards Section who oversees matters relating to the professional standards, training and development of all aircrew; and
- (c) Chief Aircraft Engineer – He is the Head of the Engineering Section who administers the provision of aircraft and mission equipment maintenance services according to the standards required of an approved maintenance organisation under the Hong Kong Aviation Requirements (“HKAR”) 145 and an approved design organisation under HKAR 21 to support the flying services and the operation of the fleet.

5. As the only section without direct leadership of a directorate officer, the Q&FS Section is the GFS’ “internal auditor” responsible for all flight safety and engineering quality assurance duties. It is currently headed by two officers at the rank of Senior Pilot (“SP”) and Senior Aircraft Engineer (“SAE”) respectively. The SP, working for the Q&FS Section on a part-time basis in addition to his normal line flying and training<sup>1</sup> duties, is responsible for ensuring that GFS’ flying operations<sup>2</sup> are conducted in compliance with the relevant civil aviation requirements. The SAE is responsible for ensuring that all engineering activities conform to the civil aviation regulations and the more stringent internal requirements of the GFS. Without directorate leadership, the Q&FS Section is now required to report directly to C, GFS, who is also responsible for directly coordinating safety initiatives which involve both flying and aircraft maintenance.

6. The job descriptions of the three directorate posts mentioned in paragraph 4 above are at **Enclosures 1(a) to 1(c)** respectively. The existing organisation chart of the GFS is at **Enclosure 2**.

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<sup>1</sup> Including the duties as an instructor and examiner in the GFS.

<sup>2</sup> Except where exemptions have been obtained. See paragraph 8 below.

## JUSTIFICATIONS

### *The self-regulatory role of the GFS*

7. Upon the disbandment of the RHKAAF on 1 April 1993, the status of the GFS changed from a military organisation to a civilian one. The GFS needs to conform to the operational standards and practices required of a commercial flying organisation and is subject to commercial licensing and regulatory requirements. Meanwhile, the GFS also has to perform paramilitary missions, including search and rescues, fire-fighting and support for law enforcement, which are often beyond the bounds of the civil aviation rules and regulations<sup>3</sup>.

8. Given the specific operational requirements mentioned above, the GFS needs to obtain exemptions from certain civil aviation rules and regulations, and special permissions from the Hong Kong Civil Aviation Department (“HKCAD”) under the Air Navigation (Hong Kong) Order 1995 (“AN(HK)O 1995”)<sup>4</sup>. To manage the risks involved in paramilitary missions<sup>5</sup>, it is vital for the GFS to develop specific rules and take up a self-regulatory role for accident prevention by instilling a broad-based safety culture, implementing appropriate risk management strategies as well as operating standards and procedures, and continuously reviewing the effectiveness of its safety management measures in an objective manner. At the same time, it is also necessary for the senior management of the GFS to proactively give safety instructions to frontline staff on safety issues of paramilitary missions in order to ensure that the GFS conducts such operations with the highest safety standards.

### *Changes in operating environment*

9. The Director of Audit’s No. 64 Value-for-Money Audit Report published in April 2015 pointed out that the overall flying services provided by the GFS in terms of flying hours had increased by 18% between 2010 and

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<sup>3</sup> For example, the aircrew of the GFS are often required to conduct in-shore/mountain search and rescue as well as other paramilitary missions in confined areas which are, from time to time, surrounded by dense vegetation, tall trees, deep slopes or hills. The risks involved are much higher than those of a commercial flight.

<sup>4</sup> For example, special permissions are sought by the GFS for carriage of weapons and live firing from helicopters for law enforcement flights, and for carriage of water buckets for fire-fighting.

<sup>5</sup> Including the regular and frequent training flights with law enforcement agencies for these purposes.

2014 with all types of emergency services recording significant increase ranging from 9% to 65% –

Type of Services	Number of flying hours					Percentage increased over the past 5 years
	2010	2011	2012	2013	2014	
Air ambulance	1010	1100	1236	1317	1270	26%
Search and rescue	574	488	592	567	687	20%
Law enforcement	178	232	185	210	211	19%
Fire fighting	77	212	94	130	127	65%
Other services for bureaux and departments	1414	1586	1537	1580	1538	9%
Overall	3253	3618	3644	3804	3833	18%

10. Noting the increase in service demand, the Legislative Council Public Accounts Committee pointed out in its report published in July 2015 that the GFS was overstressing its resources to cope with the ever-increasing demand for flying services.

11. Also as a result of the substantial increase in overall flying hours, the Q&FS Section has not been able to fully implement new safety initiatives (see paragraph 14 below) and make continuous improvement to the existing measures given its limited resources.

12. Meanwhile, technological advancement has been changing the way the GFS operates. Arrangements are being made to replace the existing GFS aircraft in phases from late 2015 to 2018<sup>6</sup> with new ones fitted with state-of-the-art systems and equipment to improve the standards of GFS' services. Since the new aircraft are more advanced and sophisticated than the existing aircraft, their airworthiness and safety management issues (such as reviews of the operating and maintenance manuals, analysis of flight data, as well as conducting more regular and complicated liaison with the HKCAD, the aircraft manufacturers and other aviation operators) will be more complicated. To ensure the smooth implementation of these new tasks, it is necessary to strengthen the leadership of the Q&FS Section at the senior level.

<sup>6</sup> Funds were approved by the Legislative Council for the replacements of the two fixed-wing aircraft and the seven helicopters in the GFS, which had been in service since 1999 and 2002 respectively. .

### *The need to align with the international flight safety standards*

13. Flight safety is always the first priority in the missions carried out by the GFS. All operations of the GFS are currently conducted in strict accordance with the relevant statutory requirements and international standards. In recent years, the trend of the international aviation industry is to regard flight safety as a key subject for research and development, with many leading flight organisations and institutions in the industry taking a more proactive approach to strengthening their data analyzing work, with a view to enhancing their safety management system for preventing accidents from happening, as well as ensuring that staff involved in maintenance, training, flight operations, and other different aspects of work, will have more standardised and comprehensive safety standards to follow.

14. To ensure that the GFS can align with the international requirements and standards for flight safety management, it is necessary for the department to put in more manpower resources to strengthen the relevant work. Upon the creation of the new Chief Pilot post, it is expected that that the GFS can implement the following new safety management initiatives –

(a) *Implementing an integrated Safety Management System (“SMS”)*

To bring the local practice in line with the requirements imposed by the International Civil Aviation Organization (“ICAO”), the HKCAD amended the AN(HK)O 1995 in 2008 by adding a new article stipulating that all Hong Kong Air Operator Certificate Holders and Aircraft Maintenance Organizations (including the GFS) are required to implement a SMS<sup>7</sup> with effect from 1 January 2009. To comply with this new statutory requirement, the GFS has deployed four officers (including one SP, one SAE and two Aircraft Engineers) for such work since 2008 and the Q&FS Section was formally set up in 2009 to oversee the implementation of the SMS.

However, due to the lack of a dedicated directorate leader, the

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<sup>7</sup> The SMS requires the development of a documented system that could: (a) identify safety hazards and manage associated risks; (b) ensure that remedial action necessary to maintain an acceptable level of safety is carried out; (c) provide for continuous monitoring and regular assessment of the safety level achieved; (d) aim to make continuous improvement to the overall level of safety; and (e) be appropriate to the size, nature and complexity of the activities concerned and the safety hazards and risks related to such activities.

Q&FS Section was only able to collate the SMS for the department's work in flying safety and quality assurance of engineering activities separately on the basis of the established safety regulations. The basic statutory requirements were met but the Q&FS Section has not been able to integrate the safety regulations of these two areas and other aspects (including information technology security, occupational health, etc.) into a consolidated SMS applicable to the whole department, which is capable of providing the staff with consistent and comprehensive reference in terms of data and work objectives. To consolidate and implement the SMS more effectively, there is a strong need for the GFS to strengthen the Q&FS Section by establishing a new dedicated Safety section under the leadership of a directorate staff who is well conversant with GFS' operation and the regulatory requirements of the industry, and answerable directly to C, GFS.

(b) *Implementing a Flight Data Monitoring System ("FDM")*

As technology advances, it is now possible to install additional devices on the aircraft to capture the data of every flying mission and then pass them to the dedicated unit responsible for flight safety management for compilation and analysis after the operation. The data can help determine if the crew, aircraft systems or the aircraft have deviated from their normal operating conditions. The relevant initiative is also in line with the ICAO's working objective of encouraging all air operators to establish and maintain an operational FDM.

As the GFS offers a wide variety of services, and each flying mission bears different level of complexity and risks, if a GDM is developed, it can use the data for investigating into different incidents, and analyzing the trend of various ad hoc situations. The information can provide a useful basis for the crew to make necessary modifications to their procedures and adjusting their behavior proactively, in order to prevent incidents from happening. Given that the establishment and future maintenance of a FDM for the GFS calls for very high standards of professional knowledge and flying experience, the dedicated Safety Section of the GFS should be led by a directorate officer.

(c) *Implementing a Fatigue Risk Management System*

The Legislative Council Public Accounts Committee's report published in July 2015 expressed concern about the number of the Commander Discretion Reports (CDRs)<sup>8</sup> and recommended the GFS to implement effective measures to provide the aircrew with a safer and healthier working environment. To follow up, the GFS has planned to develop a new evidence-based and data-driven system for monitoring the fatigue risk of the crew, and to review the measures, procedures and training in all safety aspects in order to strike a balance between meeting the increasing service commitments and keeping the fatigue risks of the crew under control. As the establishment and maintenance of this system is directly related to flight safety, its importance requires support by a safety section with high level leadership.

***Strengthening the overall management of the GFS***

15. Taking into account the rapid increase in service demand in recent years, the GFS has planned to increase its manpower in the coming two years. In view of the expected manpower expansion, C, GFS will need to handle more human resource management work, including recruitment, training, and staff retention issues. Coupled with the on-going aircraft replacement programmes and other operational management issues, it would be difficult for C, GFS to devote sufficient time to focus on leading the Q&FS Section, as well as taking part in the direct supervision and coordination of the department's flight safety management work.

16. In view of the fast development of technology and flying skills in the aviation industry, and the new flight safety requirements and rapidly changing operating environment in recent years, the existing supervision of the Q&FS Section by two non-directorate officers is unable to provide the required support to the department continuously and effectively. Considering the utmost importance of safety management to the operation of the GFS, a

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<sup>8</sup> The GFS operates in accordance with civil aviation rules and regulations which require the setting of the maximum flying hours, maximum duty hours and minimum rest hours for pilots and air crewman officers in different shifts to ensure their safety and health in flight operations. Due to the complexity and dynamic nature of the operational responses, any need to extend the flying hours or duty hours, or to reduce rest time has to be recorded in a CDR.

directorate officer is needed to lead and direct a new Safety Section to assist the GFS in planning, devising, implementing, monitoring and reviewing all aviation safety matters comprehensively.

17. Furthermore, due to the increase in service demand for operations, training, maintenance, and other aspects of work, the workload of the three existing directorate officers in the department is extremely heavy already, making it difficult for them to attend to new requirements relevant to flight safety management or to review their operating procedures proactively. The creation of the new directorate post would alleviate the duties of C, GFS and the other members of the senior management, improving the overall management of the department.

## **PROPOSAL**

18. It is proposed that a new CP post be created to head a new Safety Section for replacing the existing Q&FS Section. The new CP will be responsible for steering and managing all safety-related initiatives in an independent, focused and comprehensive manner. He will guide and direct cross-functional safety management matters, such as safety and quality assurance, incident/accident prevention and investigation procedures, monitoring of flight safety data and records, and safety data integration. The job description of the proposed CP post is at **Enclosure 3**. The proposed organisation chart is at **Enclosure 4**.

## **ALTERNATIVES CONSIDERED**

19. We have critically examined other alternatives, but were unable to identify one which is operationally feasible taking into account that –

- (a) C, GFS and the three existing directorate officers have already been fully stretched with their own schedule of responsibilities; and
- (b) safety matters should be coordinated by a designated directorate officer independent from other operational areas, in order to effectively perform his internal safety auditor role and avoid conflict of interest.



20. The GFS has also considered creating a new Chief Aircraft Engineer post to lead the new Safety Section. However, considering that the new post holder needs to possess practical flying experience for reviewing the flight safety procedures of the Operations Sections and the Training and Quality Assurance Section, and that the staff in the Pilot grade also possess general basic knowledge on aircraft structure and maintenance, a new CP post is considered more appropriate.

## **FINANCIAL IMPLICATIONS**

21. The proposed creation of a CP post will bring about an additional notional annual salary cost at mid-point of \$1,663,200. The additional full annual average staff cost of the proposal including salaries and staff on-cost is \$2,313,000. There is sufficient provision in the 2016-17 Estimates to meet the cost of the proposed creation of a CP post.

## **WAY FORWARD**

18. Members are invited to support the proposed creation of a permanent CP post to head a new Safety Section in the GFS. Subject to Members' views, we plan to submit the proposal to the Establishment Subcommittee of the Finance Committee for consideration in February 2016.

Security Bureau  
Government Flying Service  
December 2015

**Job Description for Chief Pilot (Operations)**

**Rank** : Chief Pilot (GDS(C)1)

**Responsible to** : Controller, Government Flying Service (GDS(C)3)

**Main Duties and Responsibilities –**

- (a) To be responsible for the overall management of all aspects of operational policy and regulations, and to ensure that all operations are conducted in a safe and effective manner and in compliance with the approved Flight Time Limitation scheme.
- (b) To oversee the operational performance and service delivery of the GFS, and to ensure the effective deployment of operational resources to meet all emergency services commitments and government task demands for the GFS.
- (c) To monitor all Search and Rescue and Law Enforcement operating standards and procedures, and to conduct regular review on the part of the GFS Operations Manual relating to flight operations.
- (d) To oversee the manpower planning, staff management and routine deployment arrangements of the Operations Section which includes all operational aircrew, i.e. both Helicopter and Fixed-wing Pilots, Air Crewman Officers as well as the Flight Operations Section; and the grade management of the Air Crewman Officer grade in the GFS.
- (e) To oversee all major projects relating to the flight operations of the GFS, and to liaise with and provide technical/expert advice to government bureaux/departments and various organization and third parties in relation to various government infrastructure projects, which involves/affects the integrity the GFS flight operations.
- (f) To act as a helicopter examiner and training captain, and to perform instructional flights, licence/role proficiency checks and maintenance test flights as required.
- (g) To perform operational line flying as required.

**Enclosure 1(b)**

**Job Description for Chief Pilot (Training & Standards)**

**Rank** : Chief Pilot (GDS(C)1)

**Responsible to** : Controller, Government Flying Service (GDS(C)3)

**Main Duties and Responsibilities –**

- (a) To be responsible for the overall management and planning of all aspects of flying and simulator training for the GFS Pilots and Air Crewman Officers, and to ensure the high standards of competence, operational efficiency and standardisation of the GFS aircrew.
- (b) To organise, control and monitor all mandatory and GFS-required flight checks as well as all related documentation.
- (c) To oversee all the conversion training and Mandatory Continuous Training requirements, and to coordinate and supervise all GFS training captains.
- (d) To oversee the staff management of the Training and Standards Division, and the grade management of GFS pilots.
- (e) To conduct constant review on the part of the GFS Operations Manual relating to flight training and standards.
- (f) To act as a helicopter examiner and training captain, and to perform instructional flights, licence/role proficiency checks and maintenance test flights as required.
- (g) To perform operational line flying as required.

**Job Description for Chief Aircraft Engineer**

**Rank** : Chief Aircraft Engineer (GDS(C)1)

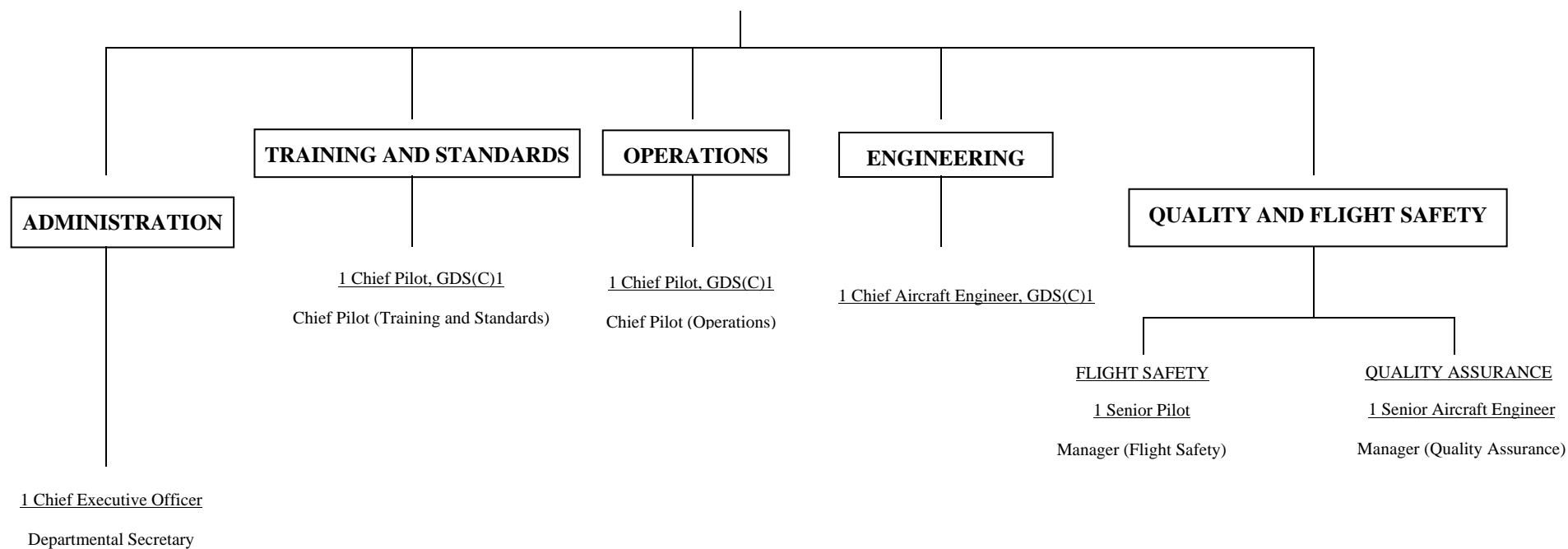
**Responsible to** : Controller, Government Flying Service (GDS(C)3)

**Main Duties and Responsibilities –**

- (a) To be responsible for the management, coordination and administration of the Engineering Section, and to provide airworthy aircraft and equipment to meet operational commitments.
- (b) To oversee various maintenance plans and tasks of the GFS aircraft, and to monitor and ensure the effective and efficient implementation of the set plans/tasks/schedules.
- (c) To direct the Engineering Section to achieve highest quality standards in aircraft maintenance to meet HKAR 145 as well as internal guidelines and operational needs of the GFS.
- (d) To oversee the grade management, and training of the GFS Aircraft Engineers and Aircraft Technicians.
- (e) To act as Head of the GFS Design Organisation, and to be responsible for the management of the HKAR 21 Design Organisation and approving modification and repair schemes/document.
- (f) To oversee major projects on the maintenance, replacement, procurement of the GFS aircraft and related spare parts.

**Existing Organisation Chart of the Government Flying Service**

1 CONTROLLER, GOVERNMENT FLYING SERVICE, GDS(C)3



**Proposed Job Description for the new Chief Pilot post**

**Rank** : Chief Pilot (GDS(C)1)

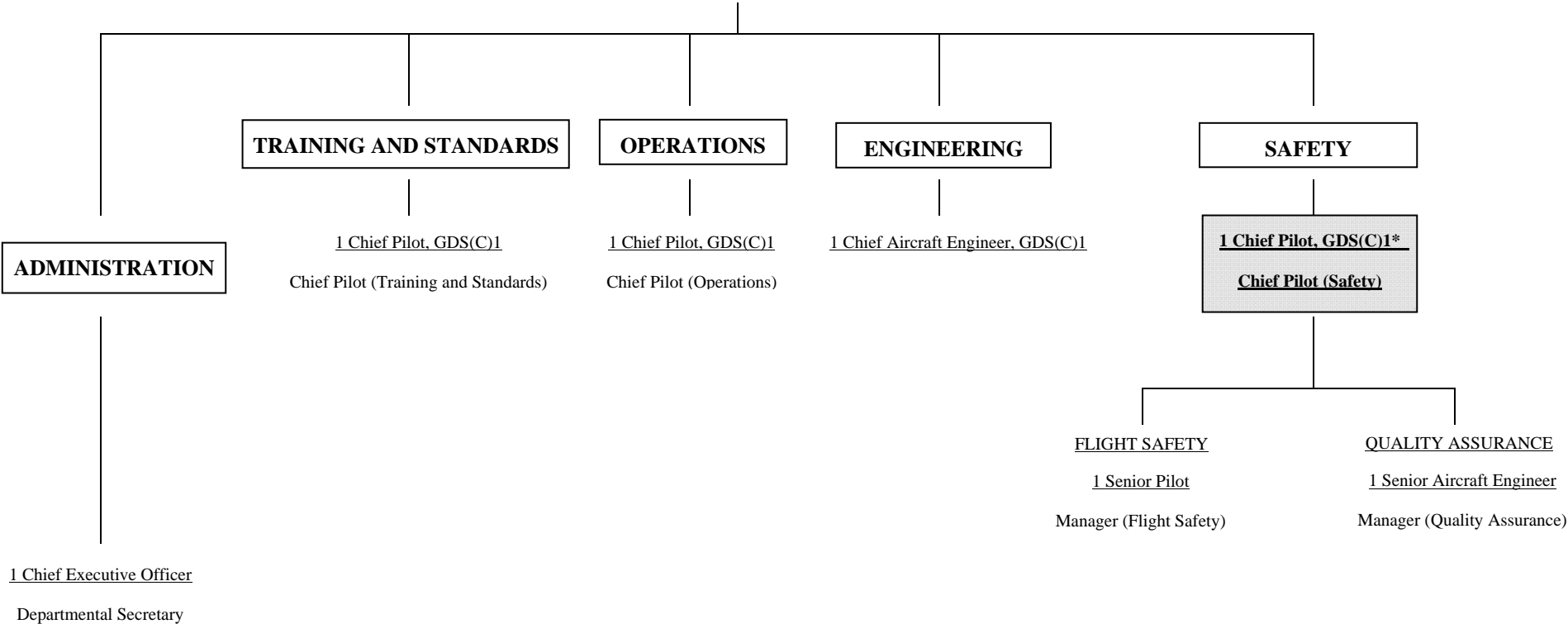
**Responsible to** : Controller, Government Flying Service (GDS(C)3)

**Main Duties and Responsibilities –**

- (a) To be responsible for the planning, design, assessment and support of all safety matters in the Government Flying Service (GFS), as well as reviewing and mitigating all risks involved.
- (b) To plan and supervise the safety-related aspects of in-house audit programmes / studies or those conducted by external organisations.
- (c) To oversee and ensure the effective implementation and monitoring of appropriate safety initiatives and strategies; and to enhance the safety awareness and competence of the GFS staff.
- (d) To devise, implement and monitor new safety-related initiatives in the GFS (e.g. a new flight data monitoring system for GFS aircraft, a holistic safety management system, a new fatigue risk management system for the GFS aircrew, etc.).
- (e) To liaise with the relevant regulatory authorities (e.g. the Civil Aviation Department, the Labour Department, and other aviation organizations) in relation to regulatory, aviation and occupational safety matters as appropriate.
- (f) To be the Chief Incident/Accident Inspector in the GFS and to report the subsequent findings and recommendations to the Controller, GFS and other government departments concerned as appropriate.
- (g) To act as GFS Information Technology Security Officer and advise on related matters.

**Proposed Organization Chart of the Government Flying Service**

1 CONTROLLER, GOVERNMENT FLYING SERVICE, GDS(C)3



**\* New directorate post proposed to be created**