FINAL

Management Study on Procurement and Related Management Issues

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香 港 特 別 行 政 區 政 府

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

TABLE OF CONTENTS

List of Appendices

1. List of Interviewees
2. Sample Procurement Strategy Template
3. Procurement Model
4. Setting up of a Procurement Group
5. Proposed duty list for Electrical and Mechanical Engineer (Fire Appliances)

Management Study on Procurement and Related Management Issues

EXECUTIVE SUMMARY

At the request of the Security Bureau and the Fire Services Department (FSD), the Efficiency Unit conducted a management study on the FSD with a view to expediting the procurement process of fire services equipment, and ensuring timely delivery and use of newly acquired equipment. This executive summary presents the main findings and recommendations of the study.

Procurement of Fire Services Equipment

2. The FSD employs various fire services equipment such as fire appliances, fireboats, protective equipment, fire fighting equipment, rescue equipment and communications systems to deliver its core service of fire fighting and rescue.

3. In 2009-10, $515 million was set aside for the FSD to procure fire services equipment, an increase of 130% compared with 2008-09. This reflects the drastic increase in procurement activities arising from bunching of large-scale replacements of breathing apparatus, radio communications system and fire appliances.

Main Findings

4. In recent years, the department has introduced various measures to improve the procurement of fire services equipment. The major ones include making an early start on tender preparations for supply of some fire services equipment before funding approval, expanding the Standard Stowage Review Committee's scope to cover fire services equipment, closely monitoring of uniform inventory level, and improving the availability of training materials.

5. Our main findings are:

(a) The FSD lacks a holistic strategy that sets out its long-term plan on procurement of strategic fire services equipment. This probably accounts for the bunching of major equipment replacements in recent years which taxed the department's efforts to effectively manage its procurement projects. For individual procurement projects, the department does not have a structural planning and management

process. This hinders its procurement effectiveness and efficiency, e.g. procurement of fire appliances.

(b) For uniform, it is difficult to manage staff requests since the information on consumption and inventory level of individual sizes of uniform is not readily available. Various procurement practices have affected the market interest on supply of uniforms to the department. The batch processing of large amount of requests for uniform has lengthened the delivery time to about two months.

(c) Depending on the type of equipment involved, fire services equipment procurement is mainly handled by various business units (eight in total) without supplies professionals. While the Logistics Unit is staffed by supplies professionals, it is tied up with minor purchases and can only provide limited support for major procurement projects.

(d) The department does not have an effective management framework for monitoring its procurement performance and early detection of potential issues.

(e) The department does not have an integrated procurement computer system. Many transactions have to be conducted in a manual, labour intensive manner. There is no readily available management information to enable the department to monitor the effectiveness of its procurement and inventory management operations, assess its suppliers' performance and support procurement planning.

Main Recommendations

6. Our study indicates that the FSD should focus its effort to improve its procurement capability in relation to: planning and process, organisation, performance management, and information technology.

7. Our recommendations are summarised below.

Improving procurement planning and processes

8. A procurement strategy that supports FSD's corporate objectives should be drawn up. The strategy should outline the priority areas on procurement and include a long-term plan on procurement of strategic fire services equipment, e.g. fire appliances and information system, etc. To enhance project delivery, a

comprehensive project plan should be developed for each major procurement exercise. The project plan should encompass the whole project cycle from identification of needs to disposal of equipment. To ensure that end-user can use the new equipment effectively, the project plan should outline the training arrangements. Best project delivery practices such as project management and risk management should be employed.

9. For fire appliances, the above measures are of particular relevancy since many fire appliances are due for replacement in the coming years. To ensure timely completion of the procurement, the initiative of making an early start on tender preparations should be adopted for procurement of fire appliances and other fire services equipment.

10. For uniforms, comprehensive records on the consumption and inventory of individual sizes of uniforms should be built. A replenishment mechanism, with pre-determined safety stock levels, should be established. To increase market interest on uniform supply contracts, existing contracts should be bundled into large term contracts with longer durations. Regarding the batch processing of requests, the batch size should be reduced by at least half to shorten the request-to-delivery time. In the medium-term, the FSD should explore the option of tapping the private sector's skills and technologies on logistics for end-to-end delivery of uniforms to end users.

Enhancing organisational capability

11. A Procurement Group comprising the Logistics Unit and fire officers with operational experience should be established to coordinate all procurement projects. To cater for projects with various levels of complexity, a centre-led procurement model is recommended. Under this model, the Procurement Group takes charge of the entire procurement process for general equipment. For complex procurement, e.g. those involving specialist equipment, a cross functional project team comprising members from the Procurement Group and user section(s) should be formed. This would enable the project team to possess the necessary procurement expertise as well as subject knowledge of the equipment to be procured.

12. We propose that the Procurement Group be set up by reorganising the Safety and Logistics Group and creating four new posts, namely, a Divisional Officer, an Assistant Divisional Officer, a Senior Station Officer/Station Officer and a Senior Supplies Officer. Appropriate training should be provided to the Procurement Group staff. A knowledge management system should be developed to enable effective retention of procurement knowledge.

13. FSD should also explore the feasibility of delegating the authority for minor purchases to user sections.

14. To cope with the additional workload arising from procurement of FA, the existing time-limited Electrical and Mechanical Engineer (Fire Appliances) post in the Workshops and Transport Division should be converted into a permanent one.

Strengthening performance management

15. Meaningful performance measures should be developed. As a start, the FSD should structure its performance measures along the objectives of (a) getting the right equipment to end users at the right time at acceptable cost, and (b) achieving the targets set out in the procurement strategy.

16. A performance reporting mechanism should be set up so that the management can regularly review the performance of the procurement function and ensure that it meets the operational needs of the department.

Improve information technology capability

17. An integrated computer system should be developed to help improve FSD's procurement efficiency and effectiveness. It is noted that the department is planning to develop an Asset Management and Maintenance System (AMMS). The key modules include planning, acquisition, purchase order, inventory control, asset management and maintenance, and disposal.

18. Given the complexity of the system, it has been decided that a business process review should be conducted by the Efficiency Unit. The review will map out the business process such as procurement, scheduled and unscheduled maintenance, asset replacement, inventory management, etc under the computerised environment. We will commence the review shortly.

Way forward

19. There are long-term and short-term implementation arrangements. In the short term, FSD should :

(a) establish a Procurement Group;

(b) develop a comprehensive procurement strategy;

(c) formulate project plans for all complex procurements;

(d) develop performance measures and a reporting mechanism to facilitate the monitoring of procurement performance;

(e) explore the feasibility of devolving minor purchases to user sections;

(f) convert the existing time-limited engineer post into a permanent one;

(g) make an early start on tender preparations for procurement of fire appliances and other fire services equipment;

(h) build a comprehensive uniform inventory record and reduce the batch size of requests for uniform items.

20. In the medium to long term, the FSD should develop the AMMS to support planning and procurement. FSD should also develop market interest for uniform supply and explore end-to-end delivery of uniforms by private sector.

21. Fire services equipment is a critical component for delivery of FSD's fire fighting and rescue services. Upon endorsement of this report, a working group should be formed to work out and execute the detailed implementation plan. A high level task force should be set up to monitor the implementation.

INTRODUCTION

This report presents the findings and recommendations of the management study on procurement of fire services (FS) equipment and related management issues of the Fire Services Department (FSD).

BACKGROUND

2. At the meeting of Legislative Council Panel on Security on 4 May 2010, the representatives of two FSD staff associations raised concerns on procurement of FS equipment such as fire appliance, staff uniform and operation equipment. Their main concerns include the lack of a centralised procurement team; insufficient procurement staff; long procurement lead time; inadequate training on equipment acceptance test; unavailability of Chinese operation manuals for over 70% of newly acquired equipment; stock-out of certain sizes of uniforms; no centralised computer inventory system, etc.

3. Panel Members also expressed serious concerns on the problems raised, and requested the FSD to conduct a review and report to the Panel.

4. In June 2010, the Security Bureau (SB) and the FSD co-commissioned the Efficiency Unit to conduct a management study on procurement and related management issues of the FSD.

STUDY OBJECTIVES AND TERMS OF REFERENCE

5. The study objectives are to expedite the procurement process of FS equipment, and ensure timely delivery and use of newly acquired equipment.

6. In the context of this study, FS equipment refers to personal protective equipment (PPE), uniform, operation equipment[1], breathing apparatuses (BA), fire appliances (FA), fireboats, and information, communication and technology (ICT) systems.

7. The terms of reference are:

(a) examine the existing procurement arrangement with a view to speeding up the process and ensuring timely delivery and use of new equipment;

(b) review the organisation, manpower and expertise required for effective procurement at the FSD, examine roles and responsibilities of those

[1] Including fire fighting tools (e.g. fog applicator) and rescue tools (e.g. rescue cushion)

involved and see if they are equipped with the requisite skills and knowledge to perform their roles effectively and efficiently;

(c) explore potential application of IT management systems in support of a more effective logistic and supply chain management;

(d) review the training arrangement for frontline staff in the use of newly procured equipment;

(e) review the effectiveness of coordination and cooperation between the FSD and relevant departments (e.g. Government Logistics Department and Electrical and Mechanical Services Department); and

(f) make recommendations on improvement measures.

METHODOLOGY

8. In carrying out this study, the study team:

(a) interviewed relevant staff of procurement units to understand their procurement practices and identify improvement opportunities;

(b) collected staff's feedback on procurement arrangements through focus group meetings with staff at fire stations and representatives of staff unions;

(c) collected views from external stakeholders such as suppliers and the Government Logistics Department;

(d) conducted desktop research on leading practices in supply chain management;

(e) studied case files, tender documents, contracts, reports and other relevant documents; and

(f) collected and analysed relevant data and statistics on procurement.

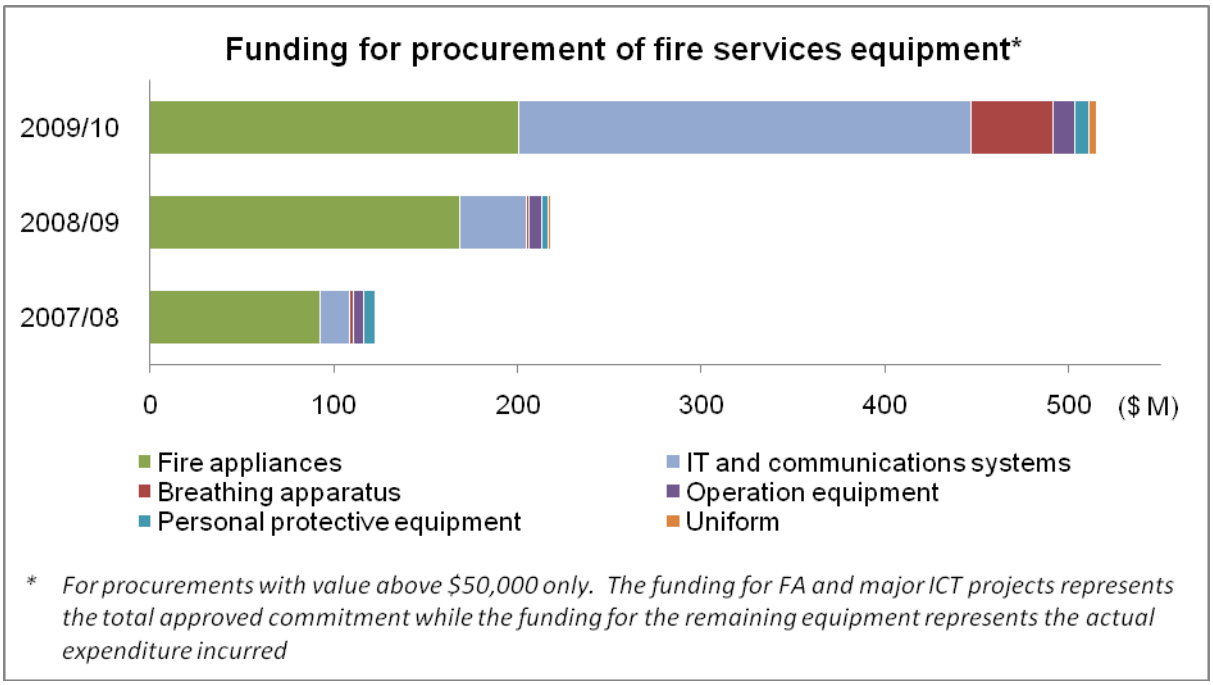
9. A list of interviewees is at **Appendix 1**.

EXISTING SITUATION

PROCUREMENT PROFILE

10. FS equipment is indispensable in modern fire fighting and rescue operations. It is one of the largest areas of FSD expenditure after personal emolument. In 2009-10, the FSD spent $191 million on FS equipment[2].

11. Since many major procurement projects take years to complete, the annual expenditure does not fully reflect the amount of procurement activities taken place in the year. To better understand the actual situation, we have conducted an analysis of the funding allocated for procurement of FS equipment in the past three years.



* *For procurements with value above $50,000 only. The funding for FA and major ICT projects represents the total approved commitment while the funding for the remaining equipment represents the actual expenditure incurred*

12. The analysis above shows that there was a drastic increase in procurement of FS equipment in recent years. Further analysis reveals that the increase was mainly caused by the replacement of about one-third of the FA fleet, as well as other infrequent, large-scale exercises for replacement of BA and development of ICT systems:

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[2] In 2009-10, $515 million was set aside for FSD to procure fire services equipment. The sum included provisions for some major procurement projects that could not be completed within one year and have instalment payment arrangements. As such, only $191 million was spent in 2009-10.

FS equipment	Year of funding allocation	Funding amount ($M)
Fire appliances	2007/08 – 2009/10	463
Integrated Licensing, Fire Safety and Prosecution System (LIFIPS)	2007/08	33
Breathing apparatus	2008/09 – 2009/10	45
Radio communications system	2009/10	178
	Total	**719**

13. Except for FA, the procurement for other types of major equipment is not too frequent because of their longer serviceability. For example, the last large-scale replacements of BA and radio communication system were conducted in 1985 and 1997 respectively.

TYPES OF PROCUREMENT PROJECTS

14. Procurement of FS equipment can be broadly divided into two categories, namely routine procurement and complex procurement. Routine procurement refers to the procurement of simple equipment which is usually arising from replenishment/ replacement of old equipment. Changes in technical requirements are comparatively minor. Examples are routine procurement of uniform, PPE, equipment spare parts, and operation equipment stowed on FA. The expenditures involved are usually met by FSD's recurrent budget.

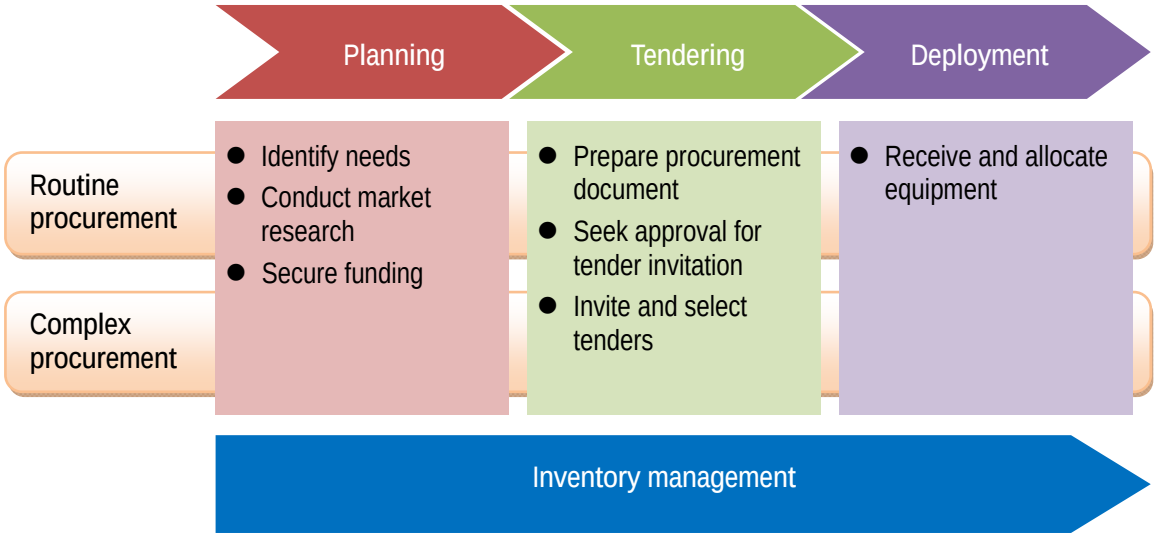
15. At the other end of the spectrum are the high-value complex procurements. These procurements are usually less frequent, but may involve specialist equipment purchased for the first time, replacement of existing equipment that requires substantial changes to the specifications, or procurement of high-value equipment. Examples are large-scale replacements of BA, PPE, and mobilising & communications systems, and regular replacement of FA. Extra funding from the Centre is normally required.

PROCUREMENT PROCESS

16. The procurement process of FS equipment covers not only tendering but spans the whole cycle from identification of needs to asset disposal. The time required for the entire process depends very much on the complexity of the equipment, its

specifications, price and the quantity procured. It may range from two months for routine procurement such as regular replenishment of uniform items, to over two years for complex procurement as in the case of FA, which are bespoke vehicles requiring substantial design work and long manufacturing time.

17. The process for both routine procurement and complex procurement can be divided into three stages:



Planning

Identify needs and conduct market research

18. A need for procurement can arise due to demand for stock replenishment, change in operational requirements, advances in product technology, updates in international standards, launch of new services, etc. The responsible procurement unit (see the next section for details) collects initial requirements from users, carries out preliminary studies and market research to identify potential suppliers and products, and estimates the costs required.

19. For equipment with department-wide application, extensive staff consultation may be required. For specialist equipment, the procurement unit may acquire product samples and conduct detailed evaluations to ascertain their operational applicability.

Secure funding

20. For those high-value procurements which cannot be absorbed by FSD's budget, the department would prepare funding papers for consideration by appropriate authorities.

Tendering

Prepare procurement documents

21. The procurement unit collects detailed requirements from end-users, draws up technical specifications and other requirements, and drafts terms and conditions of the tender and contract. A marking scheme may be designed for tender evaluation purposes. Further market and product research may be conducted during the process.

Seek approval for tender invitation

22. The procurement unit seeks approval from appropriate authorities for issue of quotations and tenders, and, if applicable, the use of marking scheme. Depending on the estimated value of the tender, legal clearance may be sought. In general, multiple rounds of revisions are required for finalisation of the procurement documents for issue.

Invite and select tenders

23. Quotations and tenders would be invited in accordance with the Stores and Procurement Regulations. The tender assessment panel would examine tender submissions and make a recommendation for award of contract. Upon approval of the recommendation, the contract would be awarded.

Deployment

Receive and allocate

24. Upon contract award, the procurement unit would monitor the supplier for the delivery and installation of the equipment procured. Upon product delivery, the procurement unit would, where necessary, arrange assembly/fit out of the product, carry out product acceptance tests, and distribute the equipment to end-users. The supplier is usually required to conduct the first-round of user and maintenance training.

The procurement unit would arrange further training sessions for end-users if required. It would also arrange for disposal of unserviceable equipment as necessary.

PROCUREMENT UNITS

Logistics Unit

25. At present, nine units in Headquarters Command, Hong Kong Command and New Territories Command take part in the procurement process. Among these units, the Logistics Unit of the Safety & Logistics Group is the only one that is staffed by supplies grade officers. Major duties of the unit include preparation and processing of quotations of value under $1.43 million, management of stores, inventory control and asset disposal. For purchases above $1.43 million, the unit forwards the tender requisition together with draft tender documents, if any, prepared by user sections to the Government Logistics Department (GLD). GLD vets, updates or prepares the draft tender documents, arranges for tendering, and, after tender evaluation, awards the contract on behalf of the FSD.

Other procurement units

26. The other eight procurement units comprise mainly fire officers. Their procurement related duties include market and product research, drafting specifications and tender documents, tender evaluation, and allocation of FS equipment. It should be noted that these units have their designated roles and responsibilities and their involvement in the procurement process is on a part-time basis.

Group/unit	Core business	Equipment procured	Recent procurement activities
Headquarters Command			
Occupational Safety and Health Unit	Advise on occupational safety and health matters	PPE	▪ Large-scale replacement of fire tunics and over trousers to be completed in 2011. The last exercise was done in 1994. ▪ Ongoing replacement of PPE items such as fire gloves and helmets

Group/unit	Core business	Equipment procured	Recent procurement activities
Planning Group	▪ Planning and development of new FSD facilities ▪ Resources deployment ▪ Operational advice on district development plans and municipal and commercial projects	Operation equipment	▪ Ongoing evaluation and procurement of operation equipment, e.g. thermal imaging camera ▪ 23 procurements above $50,000 conducted in 2009-10
Management Group	▪ Staff posting & deployment ▪ Maintaining FS Orders and instructions ▪ Allocation of married quarters	Uniform	▪ Ongoing review of uniform scale and specifications of uniform items
Information Technology Management Unit	IT planning and project implementation	ICT	▪ Major ICT systems being replaced/developed include the Radio Communication System, and the Integrated Licensing, Fire Safety and Prosecution System
Workshop & Transport	Maintenance, servicing and repairs to fire appliances; fire-fighting and rescue equipment	FA	▪ The FA fleet comprises over 360 vehicles. Normal life spans are in the range of 8 to 15 years ▪ About one-third of FA is being replaced
Hong Kong Command			
Marine & Off-shore Islands Division	Maritime fire-fighting and rescue	Fireboats	▪ The fireboat fleet consists of 11 vessels. Their normal serviceable lives range from 10 to 20 years. ▪ Marine Department (MD) helps with the procurement of fireboats ▪ The last replacement exercise was made in 2008
Diving Unit	Aquatic search and rescue	BA and diving equipment	▪ One-off replacement of BA completed in 2010. This is to replace the BA in use since 1985. ▪ Ongoing replacement of BA and diving equipment
New Territories Command			
Airport Fire Contingent	Fire-fighting and rescue at airport	Specialised FA and vessels used within the airport	▪ The Contingent's fleet comprises 14 FA and 8 vessels ▪ Electrical and Mechanical Services Department (EMSD) and MD help with the procurement of FA and fireboats respectively ▪ Funding was approved in June 2010 by Finance Committee for replacement of a 12-year old Crash Fire Tender

27. The work of procurement units is aided by two cross-divisional working groups, namely the Working Group on Fire Appliances Review and the FS Equipment and Standard Stowage Review Committee. The Working Group on Fire Appliances Review collects feedback from operational commands, and provides comments on the design of new FA. The FS Equipment and Standard Stowage Review Committee meets regularly to review the standard stowage of FA and fireboat, and to consider whether an FS equipment should be procured and stowed on FA or fireboat. Both groups are chaired by the Chief Fire Officer of Kowloon Command. Their members include representatives from operational commands, procurement units and staff associations.

MANAGEMENT INITIATIVES

28. The FSD has implemented various initiatives in recent years to improve its procurement functions. The major ones are summarised below.

Speeding up the procurement and delivery process

29. To expedite the procurement process, the FSD has made an early start on the time-consuming but necessary procedures (e.g. drawing up specifications and tender documents, invitation for tender, etc) for procurement of selected equipment such as fire tunics and over trousers. Where possible, the department requests the manufacturer to advance the delivery of some of the equipment. This enables frontline personnel to become familiar with the operation of the new equipment before full delivery.

Improving the arrangements for replacement of staff uniforms

30. To avoid uniform items being out-of-stock, the department requested all fire stations and ambulance depots to provide an estimate of their requirements for common uniform items in 2010.

31. Since June 2010, the Logistics Unit has changed the delivery time of uniform replacements from one month upon receipt of requests to two months. This arrangement aims at providing more time for the unit to chase the outstanding items reordered from suppliers with a view to improving the request fulfilment rate.

Improving the availability of training materials

32. Since 2007, the FSD has required equipment suppliers to provide user manuals in both English and Chinese. At present, 120 types of equipment are identified with need for written operational instructions. The English versions of the manuals have been completed. Chinese translation of these manuals is expected to be finished within 2010.

33. Manuals regarding the application of the equipment in fire fighting and rescue operations (e.g. operating procedures) have to be compiled and be incorporated into the Fire Services Manual. To speed up the compilation, the FSD has employed temporary staff (retired fire officers and translators) to draft the manuals. It is expected that the task would be completed by mid-2011.

Other measure

34. In 2008, the FSD expanded the scope of work of the Standard Stowage Review Committee to include the evaluation and review of all equipment relating to rescue and fire fighting operations. The Committee meets bimonthly to discuss the introduction of new technology, equipment and apparatus.

FINDINGS AND RECOMMENDATIONS

35. We have examined the following aspects of FSD's procurement function:

(a) Process – strategy and planning, procurement process, and inventory management process

(b) Organisation – structure, roles and responsibilities, and capabilities

(c) Performance management

(d) Information technology

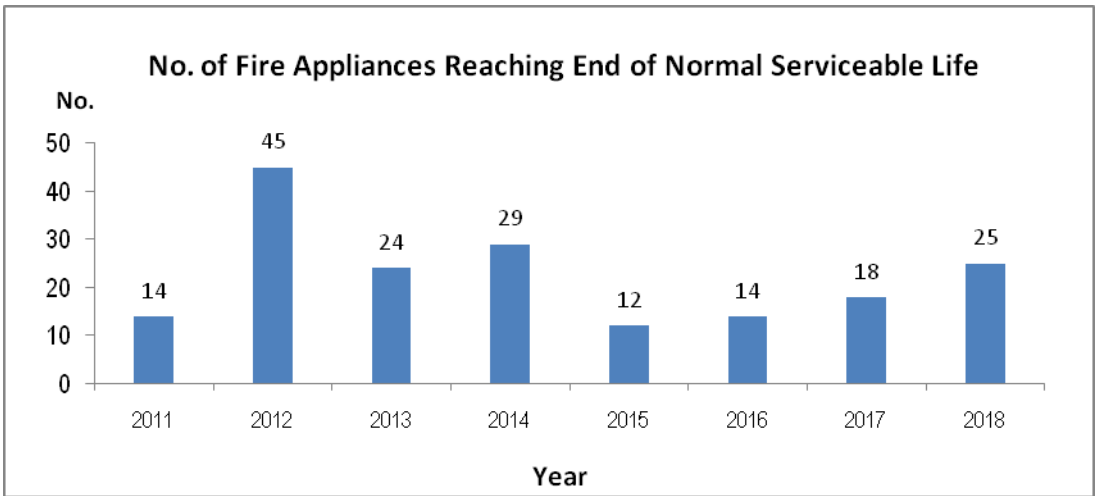
PROCESS

Strategic planning

36. The FSD has developed procurement plans for some FS equipment. Such plans include a 5-year replacement plan for FA[3], an annual forecast of uniform replacement items, and a departmental information technology plan (developed in 2003). These plans were largely developed by individual operation units for internal planning purposes, without the involvement of key stakeholders such as SB and the Financial Services and the Treasury Bureau (FSTB).

37. The current approach limits the extent to which the FSD can plan its procurement activities in a holistic and strategic manner and obtain the necessary resources to effectively implement the plans. This partly accounts for the bunching of major procurement exercises in recent years which taxed the department's efforts to effectively manage its procurement projects. As at the time of this study, nearly one-third of the 360 strong FA fleet was being replaced. Another peak for replacement of 98 FA may be due in the coming years (from year 2012 to 2014).

[3] A 15-year replacement plan was just developed in September 2010.



38. Desktop research conducted by the study team reveals that an increasing number of leading public (and private sector) organisations consider procurement as a strategic function for achieving their organisational goals. These organisations adopt a structural approach to plan their procurements. Practices adopted by some overseas jurisdictions, including fire and rescue services, are summarised below.

Organisation	Procurement planning
Queensland, Australia	Every government agency must prepare a Corporate Procurement Plan which links the agency's procurement to its strategic plan. The plan must be approved by the agency's accountable officer, and reviewed annually.
New South Wales, Australia	The New South Wales (NSW) Government Procurement Policy requires all government agencies, including Public Trading Enterprises, to annually prepare a procurement plan. To align this plan with an agency's strategic business plan, the procurement plan is made on a three-year forward basis. Agencies are required to update their procurement plan annually, and submit an annual progress report on their performance against their plan to NSW Treasury.
London Fire Brigade	The London Fire Brigade produced its 3-year procurement strategy first since 2002. The current strategy focuses on: ● Efficiency and value for money ● E-procurement ● Collaborative procurement and partnerships ● Responsible procurement ● Business continuity ● Performance management ● Training and development ● Information and communication ● Stakeholder engagement

39. Provision of suitable FS equipment is instrumental to the safety and work efficiency of frontline fire officers in life saving operations. A more structured and strategic planning process that involves FSD's top management and relevant external stakeholders is necessary for the FSD to effectively manage its procurement activities.

Recommendation: Develop a procurement strategy

40. We recommend the FSD draw up a procurement strategy. The key objectives of the strategy are:

(a) To provide a corporate focus to procurement

(b) To align procurement activities with FSD's corporate strategy

(c) To identify the challenges ahead and devise corresponding strategies

(d) To ensure that key activities pertaining to procurement are effectively planned, monitored and reviewed.

41. A proposed procurement strategy template is at **Appendix 2**. Two critical components are elaborated below.

(a) The strategy should outline the priority areas on procurement. A work plan detailing the actions and broad activities required to deliver on these priority areas, and a timetable, should be formulated.

(b) A long-term replacement plan for strategic equipment, especially FA, should be drawn up. Given that such equipment usually has a long life span, a 10-year replacement plan is recommended. In particular, action plans should be devised to:

- maintain the average age of strategic equipment at healthy levels;
- spread out major replacement projects to minimise the competition of staff and financial resources for project implementation; and
- establish objective replacement criteria for various strategic equipment.

Regarding the replacement plan of FA, given the fleet comprises of a variety of vehicles with different life spans, a higher priority should be accorded to the front-line fire appliances[4].

[4] Front-line appliances refer to hydraulic platforms, major pumps, turntable ladders and light/major rescue units. They account for 63% of the FA fleet.

42. To enable effective implementation, the FSD should develop the FA replacement plan in consultation with relevant stakeholders such as SB, FSTB, GLD and EMSD[5].

43. The strategy should be reviewed annually to take account of new requirements and changing circumstances.

44. To take into consideration the rapid changes in business and technology, departments should regularly update their information system strategies. The FSD should develop an updated Information Systems Strategy Plan to replace the one prepared in 2003 to reflect its current needs.

Planning of complex procurement projects

45. A complex procurement project may take some time to complete and involve as much as hundreds of millions of dollars. It includes various pre-tender and post-tender activities such as identification of needs, product manufacture, product evaluation, risk assessment, transition management, product acceptance test and staff training. Most of these activities are not governed by the Stores and Procurement Regulations, and FSD's internal instructions and guidelines. Procurement units (and procurement officers) generally adopt an ad hoc approach in implementing such projects.

46. In our case studies of FA procurement, we observed that there were issues that could be avoided or mitigated had robust project planning and risk assessment been adopted at the outset. In some cases, the suppliers were required to conduct a factory acceptance test before shipment of FA to the FSD but were not required to submit the factory acceptance test plan for FSD's prior approval. In addition, the payment terms had allowed suppliers to receive milestone payments for a large portion of contract payment before the completion of local testing. We also observed that there might be scope for wider use of marking schemes to increase the chance of attracting tender proposals that offer better features after meeting the essential requirements.

47. There are rooms for improvement in project planning of complex procurement exercises.

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[5] EMSD may be consulted on matters related to the FA replacement criteria.

Recommendation: Formulate project plans for complex procurements

48. At individual project level, a more systematic approach should be adopted to enhance the delivery of complex procurement projects. It is recommended that the project owner should develop a comprehensive project plan for endorsement by the senior management. The project plan should encompass the whole project cycle from identification of needs to disposal of equipment. A typical project plan should include:

Project objectives	● Explain how the proposal would contribute to FSD's objectives
Project description	● Equipment to be procured
User requirements	● High-level specifications and other requirements
Justification	● Reasons for the proposed procurement ● Feasibility assessment, e.g. market and product evaluation
Financial implications	● Estimated capital and recurrent costs
Stakeholder consultation	● Stakeholders' views on the user requirements
Implementation plan	● Procurement strategy (e.g. phased procurement) ● Product acceptance arrangements ● Risk management plan ● Transition plan ● Training plan ● Maintenance arrangement ● Asset disposal ● Project schedule
Project governance	● Project control mechanism ● Procurement team ● Change management process ● Reporting and monitoring mechanism

49. Risk management is one of the best practices in project planning. We recommend a risk assessment exercise be conducted during the project planning stage to evaluate the potential risks that may arise at each stage of project implementation. Appropriate measures should be developed for mitigating the identified risks.

50. Some examples of risk mitigation measures for the procurement of FA are shown below. It should be noted that there is no one-size-fits-all set of mitigation

measures. We recommend the FSD consider taking appropriate measures that are commensurate with the potential risks involved. Factors such as the value of FA involved, complexity of the product specifications, availability of proven products and resource requirement should be considered.

Stage	Potential risk	Possible mitigation measures
Preparation of tender document	Specification failing to meet operation requirement	● Involve users in development of specifications ♦ To incorporate the latest user requirements ♦ To improve existing specifications ● Conduct more extensive market and product research to facilitate the development of appropriate specifications
Tender evaluation	Selection of unqualified suppliers	● Ensure the tender assessment criteria are robust enough to disqualify incapable bidders, e.g.: ♦ Impose relevant mandatory requirements such as supplier's experience and track records, and type approval certification ♦ Use an appropriate tender marking scheme to attract tender proposals that, apart from meeting the essential requirements, offer better features
Acceptance test	Acceptance of sub-standard FA	● Adopt appropriate acceptance tests- ♦ Develop a robust product test plan which sets out clearly the items to be tested, the test methods, the responsibilities of the contractor and the FSD, etc ♦ Stipulate the high-level requirements on product acceptance test in the contract ♦ Engage users in developing the test plan and conducting functional test(s) to ensure that the FA meets their operational needs. Appropriate briefing/training should be provided. Where necessary, specialists such as engineers or third parties should be engaged to conduct technical test(s). ● Consider the need or the supplier to provide sample FA for thorough testing; bulk delivery would only be approved after acceptance of the sample FA ● Revise the payment terms to reduce the amount of advance payment prior to acceptance of the FA delivered

Stage	Potential risk	Possible mitigation measures
Operation	Existence of latent defects	● Ensure the warranty period (with appropriate payment terms) is long enough for the procurement in question

51. To ensure that end-users can use the new equipment effectively, the project plan should outline the training arrangements. The project owner should evaluate the training needs, and incorporate relevant project deliverables (e.g. content of training courses and training materials to be provided by supplier) into the plan. The ongoing arrangements on refresher training should also be set out.

Procurement process of fire appliances

52. Replacement of FA is a complex procurement project which is frequently conducted due to the large fleet size. The procurement of FA involves many steps, which include drawing up specifications, tendering, manufacture, installation, testing and training. It normally takes two to three years to complete the whole process. Under the existing practice, the FSD starts drawing up the design and specifications at the beginning of a financial year in April.

53. We noted that for equipment such as fire tunics and overtrousers, and ambulances, the FSD has already adopted a proactive approach by making an early start on the time-consuming but necessary steps (e.g. drawing up specifications and tender documents, invitation for tender, etc). This enables the procurement contracts be awarded as soon as possible after funding is available. We consider that a similar approach could be applied to the procurement of FA.

Recommendation: Advance tender preparation of Fire Appliances

54. The long procurement lead time of FA can be reduced by making an early start on preparation of tender documents. We recommend the FSD proceed with the FA tender preparation work at an early stage and schedule the tender exercise in such a way that the procurement contracts could be awarded as soon as possible after funding is available. By doing so, completion of the whole procurement process can be advanced by about one year. This recommendation should be extended to other fire services equipment.

Supply and issue of uniform items

55. To meet the routine operational needs, all fire officers are issued with four types of uniforms, namely No. 1 uniform, No. 2 uniform, No. 3 uniform and incident uniform in

accordance with the approved uniform scale. Apart from normal wear and tear, uniform items of fire officers are subject to damage that may arise from daily fire and rescue or training operations. Frequent and timely replenishment and replacement of uniform items is required.

56. The Uniform Store of the Logistics Unit is responsible for the replenishment and replacement of uniform items for fire officers and ambulancemen.

Inventory management

57. The Logistics Unit has taken various measures to address the staff's concern over the shortage of uniform supply. Examples are:

Time	Measure
August 2009	Collection of the estimated requirements for different sizes of uniform items for 2010 from fire stations and ambulance depots
April 2010	Development of a spreadsheet for capturing detailed information on the requested items (down to size level) for tracking delivery of uniform items and monitoring out-of-stock situations
June 2010	Extension of the delivery time of uniform items requested from one month to two months. This arrangement is intended to provide extra time for replenishment of stock-out (or low stock) items.

58. While the average request fulfilment rate[6] improved from 88.4% in June to 93.7% in September, the achievement is accomplished simply by the extension of the delivery time from one month to two months. Feedback collected from our discussions with frontline staff indicated that the performance has still fallen short of their expectation.

59. We consider that the new measures cannot fully address the stock shortage problem. Since the uniforms of fire officers and ambulancemen are subject to damage during their routine operations, they may not be able to provide a good estimate for replenishment planning. In addition, the Logistics Unit does not have comprehensive inventory records of uniform items at size level. These factors limit the unit's ability to effectively manage the demand for uniform items at various sizes and replenish the stock accordingly. The Uniform Store has to make extra effort to process the outstanding requests from user sections (e.g. arranging make up deliveries) arising from stock shortage.

[6] The proportion of requested items fulfilled at the first delivery.

60. The collection and consolidation of requests from user sections are conducted manually and are time-consuming. According to the Uniform Store's estimation, significant effort (1.25 Supplies Assistants) is spent on inputting the uniform request details into spreadsheets and the Departmental Stores Ledger Posting System II (DSLPS II). The data kept in the spreadsheets is used for tracking delivery of uniform items and monitoring out-of-stock situations down to size level. On the other hand, the data in DSLPS II is used for recording the total amount of items received and issued by the store. Size information is not available in the system. There is scope for further automation.

Recommendation: Develop a comprehensive uniform inventory database

61. The funding application for development of the Asset Management and Maintenance System is being processed (see paragraphs 98 to 100). It would take some time before the system is in operation. As a stop-gap measure, we recommend the FSD:

(a) build detailed inventory records for individual sizes of uniform items by conducting a full-scale stock checking exercise and maintaining updated information on the replenishment and issuance of uniform items;

(b) establish a safety stock level for each size of uniform item and a replenishment mechanism, taking into consideration the consumption pattern, replenishment lead time and storage requirement; and

(c) develop a standard e-form to support the submission of requests by fire stations and ambulance depots. The e-form is intended to supplement the existing GF forms in use. It can be in the form of a spreadsheet with structural data fields. A computer program should be developed to automate the capture of e-form data into the inventory database. This would eliminate the existing duplicated data input effort at the Uniform Store end so that staff there can focus their effort on stock management.

62. The study team noted that the FSD has already embarked on a project similar to the proposed inventory database and e-form mentioned above.

Market interest for supply of uniform

63. The FSD uses a mix of term contracts and one-off contracts for supply of uniforms. In September 2010, the department has seven term contracts for supply of frequently consumed uniform items, e.g. shirts and blue dacron trousers. The durations of these contracts range from one year to two years. In 2009/10, the

Logistics Unit had 19 one-off contracts with value over $50,000 for supply of other uniform items.

64. All the term contracts and one-off contracts are valued below $1.43 million. In each quotation exercise, the Logistics Unit invites potential suppliers, usually 5 to 13 suppliers, for submission of quotations in 21 days. To ensure the provision of quality products, bidders are required to provide test reports and cloth samples for tender evaluation.

65. The study team has examined the 26 uniform quotations issued in 2009/10 with value over $50,000, and noted that there was only one conforming offer in 24 of quotation exercises. The small number of qualified bidders has reduced FSD's chance to acquiring the best uniforms, and poses a risk on reliable supply of uniforms. Initial market feedback obtained by the study team reveals that the values and durations of existing contracts may not be attractive, and that new suppliers may need more time for preparation of test reports and cloth samples for tender submission. It is necessary to increase the attractiveness of uniform supply contracts and arouse market interest.

Recommendation: Develop market interest

66. We recommend the FSD:

(a) further bundle uniform items of similar nature, e.g. garment items, to form larger contracts with longer durations;

(b) use term contracts as far as practical;

(c) inform the market in advance of its tentative tender invitation timetable; and

(d) conduct more marketing exercises to source for new suppliers which may be capable of meeting FSD's requirements.

Processing of requests for uniform items

67. At present, fire stations and ambulance depots in Hong Kong Island and Kowloon (69 units) may submit their requests for uniform items before the 15th day of each even month while those situated in New Territories (51 units) may hand in their requests in odd months. Under this arrangement, the Uniform Store has to process a large number of requests (on average 7,000 uniform items) at the same time. As a result, it is not unusual that when the Uniform Store receives a new batch of requests, it is still in the process of clearing the backlog from the previous month. The current

practice of processing large batches of requests creates a bottleneck. While it only takes a few days to process a request, it is pended for action for extended period of time. On average, the request-to-delivery[7] time is around two months.

Recommendations

Short-term measure: Reduce the batch size of requests

68. We recommend the FSD reduce the batch size of requests so as to eliminate the bottleneck for processing the uniform requests. A possible arrangement is:

(a) to divide all fire stations and ambulance depots into four or more groups by geographical locations, with each group contains about 30 or less stations/depots;

(b) to reduce the request submission frequency from two months to one month; and

(c) to schedule the request submission dates of the groups taking into consideration of the Uniform Store's processing capability.

69. It is expected that the request-to-delivery time can be reduced to about 10 working days[8].

Medium-term measure: Explore end-to-end delivery by the private sector

70. To achieve further improvement in logistics efficiency, we recommend the FSD consider outsourcing inventory management and delivery services to the private sector. Two options are identified:

(a) Direct delivery from suppliers to users

Under this option, end-users place order electronically to suppliers direct (the FSD may require suppliers to provide an e-ordering system or develop one for use by all suppliers). The suppliers deliver the requested items according to a pre-defined schedule. The FSD pays the suppliers upon satisfactory receipt of the ordered items by end-users. A

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7 For first time delivery only, i.e. make up delivery is excluded

8 Based on the Uniform Store's estimation, 0.36 working day is required to pack the uniform items for each station. Under the new arrangement, the request submission frequency will be reduced by half from 2 months to 1 month, and so do the amount of items to be handled. The future packing time for one batch of requests (30 stations) will therefore be 5.4 working days (0.36 working day per station ÷ 2 x 30 stations). Taking into account the time required to consolidate and clarify the requests, arrange delivery, etc and the intrinsic overheads of having smaller batch size, it is estimated that the request-to-delivery time is about 10 working days.

performance-linked pricing model based on the order fulfilment rate can be adopted to incentivise good performance. Suppliers are responsible for maintaining sufficient stock to meet the department's requirement.

This option simplifies the outsourcing arrangement but end-users are required to receive uniforms from multiple suppliers.

(b) Delivery through a logistics agent

A logistics agent is appointed to collect the uniform items from FSD's suppliers, pack the items ordered by end-users and deliver them in accordance with a pre-defined schedule. Similar to the above option, an e-ordering system should be put in place; suppliers should be required to maintain sufficient stock; and a performance-linked pricing model can be adopted.

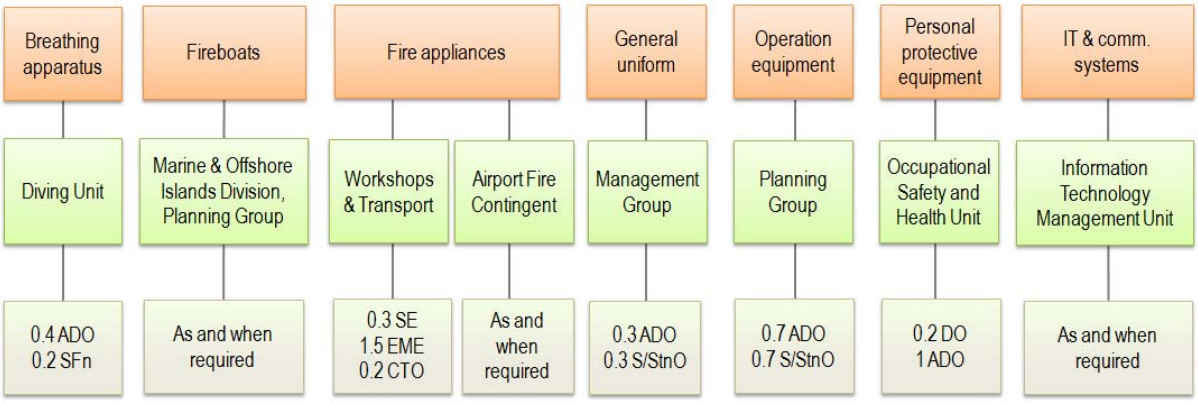
This option provides a one-stop service to end-users but requires more sophisticated outsourcing arrangement and close coordination between the logistics agent and suppliers.

71. The above options would enable the FSD to focus on its core business, reduce the logistic overhead, and allow the department to access private sector's latest skills and technologies.

ORGANISATION

Procurement units

72. Apart from the Logistics Unit, the procurement function is dispersed into eight units across the Headquarters Command and Operational Commands. The core businesses of most of these units are not related to procurement. For example, the Management Group is responsible for staff deployment, maintenance of orders and instructions, and allocation of married quarters. However, it is tasked with the procurement of uniforms. Due to conflicting priorities and manpower constraints, many of the units can only afford to spare staff to work on a part-time basis for procurement work. Consequently, there are delays in procurement exercises. Some basic procurement activities such as market research and post-procurement evaluation are not satisfactorily conducted.



73. In addition, the fragmented organisation structure hinders the performance of FSD's procurement function:

(a) Overall planning and coordination. There is no central body to oversee and coordinate the work of different procurement units.

(b) Skills development. Most of the procurement staff work on a part-time basis. In units such as the Management Group, the procurement duty of individual staff does not align with the unit's core business. The current organisation structure is not conducive to the development of procurement skills, and sharing of experience and best practices.

(c) Sharing of manpower resources. The manpower requirements for individual procurement projects vary according to their complexity. Yet, it is difficult to share manpower resources under the existing structure.

Logistics Unit

74. The Logistics Unit, staffed by supplies professionals, is responsible for purchase of goods and services for the department. However, the unit is tied up with day-to-day procurement activities and have little capacity to provide professional inputs to other procurement units on major tender exercises (i.e. those valued over $1.43 million).

75. In 2009, the Logistics Unit handled 5,339 purchases under $1.43 million, of which over 96% were of value below $50,000. An analysis of the small purchases made by Purchasing Cards in 2009/10 reveals that over half were below $5,000 while over 20% were below $1,000.

76. Apart from purchase of goods and services, the unit is also responsible for:

(a) operation of five stores of fire appliances spares parts, general medical consumables and uniform items; and

(b) maintenance of inventory records for the whole department.

77. As a result, the Logistics Unit cannot render the much needed support to procurement units whose procurement staff are not trained for procurement work. The table below shows the current working relationship between the Logistics Units and other procurement units.

Logistics Unit	Procurement units
● Forward tender requisitions and draft tender documents, if any, to GLD ● Refer GLD's queries to procurement unit ● Send tender proposals received to procurement units for evaluation ● Scrutinise Tender Assessment Panel's recommendation for submission to GLD	● Conduct market research ● Draft specifications and tender documents ● Handle queries from GLD and/or Department of Justice ● Seek clarification from tenderers ● Conduct tender evaluation

Recommendation: Establish a Procurement Group

78. We propose establishing a Procurement Group in the Headquarters Command to oversee all procurement matters. The core functions of the Procurement Group are:

(a) procurement strategy, policy, planning and review

(b) best practice research

(c) market and product search

(d) user requirement collection

(e) tender and contract development

(f) supplier performance management

(g) asset management.

Procurement model

79. Given the wide range of FS equipment, a centre-led procurement model[9] is recommended. Under this model, the Procurement Group will take charge of the entire procurement process for general equipment. For complex procurement projects, a cross-functional project team comprising members from the Procurement Group and user section(s) should be formed. This would enable the project team to have access to both procurement expertise and the necessary product/operation knowledge.

80. An illustration of the demarcation of responsibilities between the Procurement Group and user section is at **Appendix 3**.

Staffing

81. We propose the Procurement Group be created by reorganising the Safety and Logistics Group:

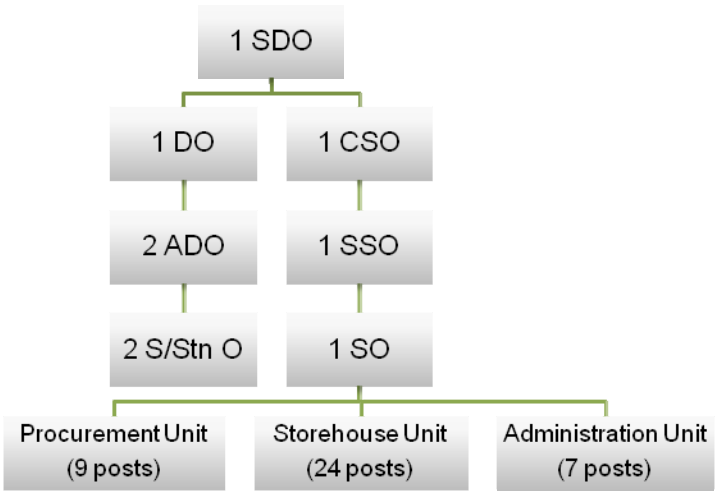
(a) the Occupational Safety and Health Unit be detached from the group;

(b) one Assistant Divisional Officer (ADO) and one Senior Station Officer (S/StnO) posts from the Planning Group be redeployed to the new group; and

(c) four new posts, namely one Divisional Officer, one ADO, one S/StnO and one Senior Supplies Officer posts be created.

82. The structure of the new group is illustrated below. Given the flexible operating arrangement under the centre-led model, the Procurement Group should adopt a dynamic approach in deploying its staff resources, including those under the Logistics Unit.

[9] Centre-led procurement is a hybrid between centralised and decentralised procurement. It blends aggregated purchasing, process standardisation, and knowledge and resource sharing attributes of centralisation with the local empowerment and execution characteristics of the decentralised model. Centre-led procurement is not itself an operating model, but rather a framework for applying different operating models according to individual scenarios.



83. Proposed duty lists of the new posts in the Procurement Group are at **Appendix 4**.

Capacity building

84. To equip group members with the necessary skills, we propose that appropriate training on areas such as government procurement principles and procedures, project management, and risk management be provided. The FSD should arrange in-house training conducted by supplies grade staff and liaise with the GLD Training Unit and other training institutes for assistance in provision of appropriate courses.

85. On top of this, the FSD should develop a knowledgebase for capturing and managing procurement knowledge. The knowledgebase may contain relevant rules, regulations and procedures, lessons learned from past procurements, sample templates, latest requirements of approving authorities such as the Central and GLD Tender Boards, market intelligence, supplier performance reports, etc.

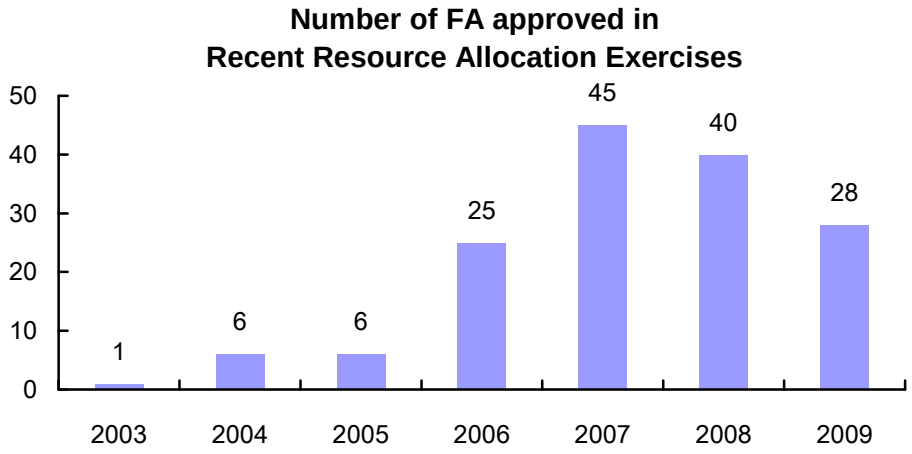
Recommendation: Explore the feasibility of devolving minor purchases to user sections

86. To maximise the use of scarce manpower resources of in-house supplies professionals, we recommend the FSD explore the feasibility of delegating the authority for minor purchases to user sections. Given the special operation requirements of Operational Command, careful consideration should be given to the financial limit to be devolved.

Workshops and Transport Division

87. The Workshops and Transport Division (WTD) runs three workshops for maintenance, servicing and repairs of FA. It is also responsible for procurement of FA. The divisional headquarters has seven permanent posts, including one Senior Electrical and Mechanical Engineer, one Electrical and Mechanical Engineer (EME) and five other posts[10].

88. In recent years, the workload on procurement of FA has increased significantly as revealed by the number of FA approved.



89. To cope with the increased workload, the FSD created a time-limited EME (FA) post for two years, from 6 November 2009 to 5 November 2011, for FA procurement.

90. It is expected that the procurement workload would remain high in the coming years (see paragraph 37). Also, there would be additional workload arising from the proposed enhancements in project planning and risk management, for example, conducting more extensive market and product evaluation, enhancing the tender specifications, strengthening the tender evaluation process, and adopting a more vigorous product acceptance test. There is a need to strengthen the permanent staff establishment in the WTD.

[10] Including one Chief Technical Officer, two Mechanical Inspectors, one Assistant Clerical Officer and one Clerical Assistant.

Recommendation: Convert the time-limited Electrical and Mechanical Engineer (Fire Appliances) post into a permanent one

91. To cope with the additional workload discussed, we recommend the FSD convert the time-limited EME post in the Workshops and Transport Division into a permanent one. A proposed duty list is at **Appendix 5**.

PERFORMANCE MANAGEMENT

92. Performance measures on many aspects of the procurement functions are not yet established. Examples are:

(a) Procurement effectiveness and efficiency:
- Procurement overheads
- Average waiting time for replacement of equipment
- Number of outstanding requests for uniforms from users

(b) Equipment performance:
- Number of over-aged equipment in operation
- Number of equipment failing to meet the maintenance schedule

93. It is difficult for the FSD management to have a good understanding of the existing situation so that potential issues can be timely identified, and proactive actions be taken. It is also difficult for the department to measure the effectiveness of its new initiatives.

Recommendation: Develop performance measures to strengthen performance management

94. We recommend the FSD develop meaningful performance measures to:

(a) provide objective indicators to demonstrate effective management;

(b) gauge performance against pre-set targets; and

(c) provide a framework for self-monitoring and continuous improvement.

95. As a start, FSD can consider developing a series of performance measures around the procurement objective of delivering the right equipment to FSD staff at the right time at acceptable cost:

Aspect	Performance measure
Right equipment	● % of over-aged FA ● request fulfilment rate

	● equipment performance
Right time	● procurement lead time ● request-to-delivery time ● % of procurement projects completed on time
Acceptable cost	● procurement overhead ● inventory carrying cost ● logistics cost ● equipment maintenance costs

96. During the implementation of the procurement strategy, action plans or individual project plans, it is imperative that the progress is regularly reviewed to ensure that they have brought about the desirable outcomes at the approved time frame. It is recommended that FSD should incorporate performance management as part of its procurement strategy.

97. Besides designing meaningful performance measures, FSD should develop a reporting mechanism to regularly check against the achievement of its performance targets on procurement.

INFORMATION TECHNOLOGY

98. In examining the procurement process on planning, purchasing and equipment deployment, the study team observed that many of the transactions are conducted in a manual and labour intensive manner. Although the department has several procurement-related computer systems[11], they work in an isolated manner and cannot provide readily available management information to enable the procurement units to monitor the procurement operations in terms of equipment availability, staff's effectiveness or supplier performance. For instance, the DSLPS II used by the Uniform Store does not capture the inventory level of individual sizes of uniform items.

99. To address the above issues, the FSD is planning to develop an Asset Management and Maintenance System (AMMS). Major functions to be included in the new system are:

(a) Acquisition planning: the proposed system should provide facilities for user to maintain stock planning details;

(b) Inventory control: it should provide a centralised database for inventory record keeping for all store locations within the Department;

[11] These include the DSLPS II, the Workshops and Transport Information Management System, the Government Financial Management Information System, and the Procurement and Contract Management System.

(c) Asset Management and Maintenance: it should enable users to access asset information including information on spare parts/ equipment and uniform items; and

(d) Reporting: it should provide an end-user reporting tool that will allow user to generate ad-hoc reports in various output formats with various types of charts.

100. Given that the system will support the FSD in a wide range of functions, including planning, acquisition, inventory control, asset management and maintenance, and disposal processes, and that it will share data / join services with other government departments, it has been decided that a business process review should be conducted by the Efficiency Unit. The review will map out the business processes such as procurement, scheduled and unscheduled maintenance, asset replacement, inventory management, etc under the computerised environment. We will commence the review shortly.

EXPECTED BENEFITS

101. It is expected that implementation of the proposed recommendations will bring about the following benefits:

(a) Better procurement capabilities. With proper training, access to procurement expertise and operational knowledge, and a well-managed knowledgebase, the Procurement Group would be in a position to develop as a centre of excellence in procurement.

(b) Improved procurement effectiveness. With a procurement strategy supported by key stakeholders and robust project planning, the FSD would have a structural framework for effective implementation of its procurement projects.

(c) Improved procurement efficiency

- With the establishment of the Procurement Group, there will be a dedicated office with appropriate skill sets to oversee all procurement matters. There would be efficiency gain in the preparation of technical specifications, tender documents and marking schemes.
- By making an early start on the tender preparation work, the completion of the procurement process of FA can be advanced by about one year.

(d) Better customer service

- The development of a uniform inventory database and the reduction of the batch size of requests would increase the request fulfilment rate and reduce the request-to-delivery time from two months to one month.
- The Procurement Group would provide a single point of contact to all user sections.

(e) Improved accountability

- The establishment of a dedicated Procurement Group with clear roles and responsibilities would enhance the ownership of the procurement function. The introduction of performance measures would provide an objective means for gauging its performance.
- The adoption of robust project management approach would define clear ownership of individual procurement projects, and hence enhance accountability.

IMPLEMENTATION

102. Upon endorsement of this report, a working group should be formed to work out and execute the detailed implementation plan. A high level task force should be set up to monitor the implementation.

IMPLEMENTATION ARRANGEMENTS

103. The recommendations made in this study contain both short-term and long-term ones, and some of them should be implemented after completion of the others. More details on the implementation arrangements are discussed below.

104. In the short-term, the FSD should:

(a) Establish a Procurement Group. The major tasks involve:

- Bid new money for creation of the proposed new posts
- Select appropriate staff to fill the posts
- Reshuffle the roles and responsibilities with other procurement units
- Source and arrange staff training
- Develop a knowledgebase

(b) Develop a procurement strategy. Upon establishment of the Procurement Group, it should draw up a list of priority areas for action and develop a procurement strategy. In particular, it should collaborate with the Workshops and Transport Division to formulate a long-term replacement plan for FA. Special emphasis should be made to spread out the replacement of front-line appliances and maintain their working conditions at healthy level. The plan should be worked out in consultation with relevant external stakeholders.

(c) Formulate project plans for complex procurements. All procurement units should be required to develop detailed project plans for their complex procurements. Upon establishment of the Procurement Group, it should develop appropriate guidelines and templates.

(d) Develop performance measures. The FSD should develop clear definitions for the performance measures, define clearly the sources of data to be used, and formulate the performance reporting arrangements. The FSD management should regularly review the performance reports.

(e) Explore the feasibility of devolving minor purchases. The department should explore the practicality of the option in consultation with user sections.

(f) Convert the existing time-limited Electrical and Mechanical Engineer (Fire Appliances) post in the Workshops and Transport Division into a permanent one.

(g) Make an early start on the tender preparation work for procurement of FA and other fire services equipment.

(h) Build a comprehensive uniform inventory record. The Logistics Unit should conduct a full-scale stock taking exercise, build a detailed inventory record, and monitor the development of the e-form for submission of requests for uniform items.

(i) Reduce the batch size of requests for uniform items. The Logistics Unit should work out the optimal batch size and the detailed arrangements for processing requests for uniform items. Appropriate transition measures should be developed to handle the backlog, etc. It should closely monitor the results and fine tune the arrangements accordingly.

105. In the medium to long term, the FSD should:

(a) Develop the integrated computer system to help improve procurement efficiency and effectiveness;

(b) Develop the market interest for uniform supply. The Procurement Group should develop a plan to bundle the existing supply contracts, taking into account the market segmentation, future demand, existing stock level, and draw down positions and expiry dates of existing contracts; and

(c) Explore end-to-end delivery of uniforms by the private sector. The Procurement Group can conduct a market sounding exercise to evaluate the market capability and interest, determine the outsourcing option to be adopted, and work out the likely costs and benefits. This would enable the department to make an informed decision.

OTHER CONSIDERATIONS

106. While the recommendations developed focused on the procurement of FS equipment, they may be applicable to other procurements. The FSD is advised to consider applying the measures to other procurements to ensure that a consistent procurement approach is adopted across the department.

List of Interviewees

Name	Post
A. Fire Services - Headquarters Command	
Mr. S.C. WONG	Chief Fire Officer (Headquarters)
Mr. K.Y. LI	Deputy Chief Fire Officer (Headquarters)
Management Group	
Mr. Penny CHAN	Divisional Officer (Management Group)2
Mr. K.Y. LEE	Assistant Divisional Officer (Management Group)3
Planning Group	
Mr. W.K. YAU	Senior Divisional Officer (Planning Group)
Mr. C.M. CHAN	Assistant Divisional Officer (Planning Group)1
Mr. H.O. WONG	Assistant Divisional Officer (Planning Group)5
Logistics Unit	
Ms. Katherine CHAN	Chief Supplies Officer
Ms. Kate TO	Supplies Officer
Mr. Max LAM	Assistant Supplies Officer (Tender)
Ms. Stacey LI	Assistant Supplies Officer (Quotation)
Ms. Alice KO	Senior Supplies Supervisor
Occupational Safety and Health Unit	
Mr. S.F. MAN	Divisional Officer (Occupational Safety and Health) (Ag.)
Workshops and Transport Section	
Mr. W. C. CHAN	Senior Electrical & Mechanical Engineer
Mr. Eddie CHEUNG	Electrical & Mechanical Engineer (Fire Appliances)
Mr. W.H. OR	Electrical & Mechanical Engineer (Technical Support)
Mr. P.S. CHAN	Assistant Divisional Officer (Transport)
Information Technology Management Unit	
Mr. W.K. NG	Senior Divisional Officer (Information Technology Management Unit)
Mr. K.S. MAK	Divisional Officer (Information Technology Management Unit)
Mr. Vincent YUEN	Information Technology Officer (Information Technology Management Unit)
Fire Services Training School	
Mr. W.K. CHENG	Assistant Divisional Officer (Special Rescue Squad)

Name	Post
Driving Training School	
Mr. T.W. LEUNG	Officer-in-charge (Driving Training School)
B. Fire Services - Hong Kong Command	
Marine & Offshore Islands Division (Diving Unit)	
Mr. K.W. KWAN	Divisional Commander (Marine and Off-shore Islands)
Mr. H.W. LAI	Divisional Officer (Diving) (Ag.)
C. Fire Services - Kowloon Command	
Central Division	
Mr. C.H. LAU	Divisional Commander (Kowloon Central)
Mr. C.S. CHAN	Station Commander (Kowloon Tong Fire Station)
D. Fire Services - New Territories Command	
Airport Fire Contingent	
Mr. L.M. LI	Divisional Commander (Air)
Mr. Thomas CHUNG	Divisional Officer (Air)
E. Ambulance Command	
Planning Group	
Mr. Johnson LO	Superintendant (Planning Group)
Mr. Eric CHAN	Senior Ambulance Officer (Planning Group)1
Mr. William TANG	Senior Ambulance Officer (Planning Group)2
Mr. L.J. NG	Senior Ambulance Officer (Planning Group)3
F. Other Departments	
GLD	
Mrs.Cassandra CHUI	Controller (Procurement)
Mr. M.C. YIP	Principal Supplies Officer (Procurement 1)
Miss Angel LIN	Senior Supplies Officer (Group B) (Ag.)
Ms. Selina CHEUNG	Principal Supplies Officer (Supplies Surveys and Stores Verification)
Mr. M.K. LIU	Senior Supplies Officer (Systems Adm-2)
FEHD	
Mr. C.Y. LEE	Principal Supplies Officer
Ms. Fanny CHAN	Senior Supplies Officer
Ms. K. CHAN	Supplies Officer (Procurement)
Ms. Carmen CHENG	Supplies Officer (Supplies Management)

Name	Post
G. Private Companies / Other Organisations	
S. K. Rosenbauer Pte Limited	
Zung Fu	
Hong Kong Lukyeelo Clothing Factory Limited	
Hong Kong Professional Uniform	
Hong Kong Logistics Association	

Sample Procurement Strategy Template

(A) Key Objectives

There is no hard and fast rule on how a procurement strategy should look like. However, a sound procurement strategy should be able to achieve the following objectives:

(a) to provide a corporate focus to procurement;

(b) to align procurement activities with FSD's corporate strategy;

(c) to identify the challenges ahead and devise corresponding strategies;

(d) to ensure that key activities pertaining to procurement are planned, monitored and reviewed effectively; and

(e) to provide readily available management information to enable the procurement units to monitor the procurement operations in terms of equipment availability, staff's effectiveness or supplier performance etc.

(B) Sample Template

A sample template is shown below.

Spend analysis	This section analyses: ● what was purchased ● how much was spent on various types of purchases ● how the products were purchased ● who the products were purchased from It also identifies procurement patterns and trends, and areas of procurement activity where improvements can be made.
Performance review	This section reviews: ● the progress of major procurements being conducted ● the major procurements completed and identifies lessons learned ● the achievement of performance targets ● the performance of key suppliers
Replacement timetable	This section presents a 10-year replacement timetable for all strategic equipment
Priority areas	This section lists:

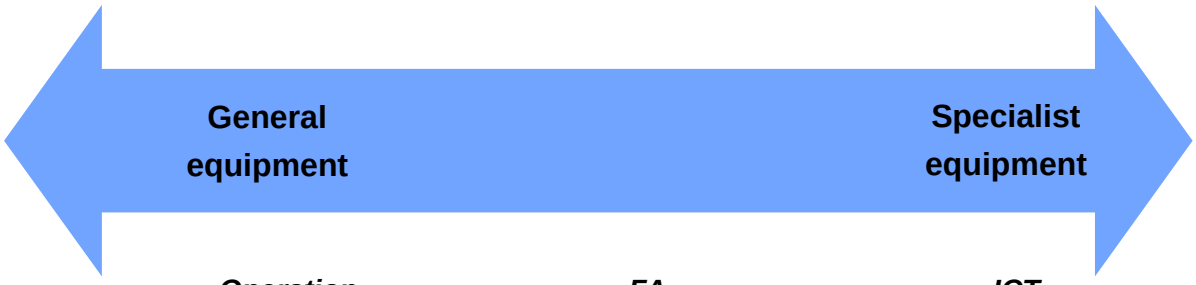
	● the priority areas to support FSD's corporate objectives and to address the challenges ahead ● the corresponding action plans (see part (c))

(C) Sample Action Plans

Task		Timeframe
Alignment of procurement function with department's overall aims and objectives		
1.	Draw up a replacement timetable with objective criteria with a view to maintaining the average age of FS equipment at healthy levels	Short term
2.	Conduct regular reviews of FS equipment against technological developments in the market and new requirements identified to meet new challenges and threats	On going
Efficiency and best value for money		
3.	Delegate authority for minor purchases to user sections to reduce administration overheads and turnaround time	Immediate
4.	Ensure that all future major procurement projects are subject to a full analysis of options	Immediate
5.	Develop procurement document templates that follow procurement best practices	Immediate to medium term
6.	Consider using e-procurement to improve procurement efficiency	Medium term
7.	Undertake a review of the logistics arrangements for delivery of stores to ensure efficient use of resources	Medium term
Risk management		
8.	Adopt a risk assessment and management approach in all procurement exercises	Immediate
9.	Identify goods and services with narrow supplier basis (e.g. uniform) with a view to developing countermeasures	Medium term
Performance management		
10.	Develop key performance indicators (KPIs)	Immediate
11.	Design data capture, analysis and monitoring mechanism for the	Ongoing

Task		Timeframe
	KPIs	
12.	Implement a supplier performance management system	Ongoing
Green procurement		
13.	Increase availability of green/recycled items in the store working tables	Medium term
14.	Replace aged FA with those meeting Euro-V standards	Medium term
15.	Share best practice on environmental clauses with other government departments	Medium term
Training and development		
16.	Arrange training for procurement staff on purchasing, project management and contract management	Immediate
17.	Formulate procurement procedures and manual, and use it as part of the induction process for new staff	Immediate
18.	Develop a knowledgebase for a systematic storage of procurement information and knowledge	Ongoing
Continuous improvement		
19.	Review procurement procedures across the department to identify further improvement opportunities	Immediate
20.	Conduct post-tender / contract reviews to identify improvement opportunities	Ongoing

Procurement Model



	Operation equipment, uniform	***FA***	***ICT***
Role of Procurement Group	Project owner • Take charge of whole procurement process	Project owner • Collect user requirements • Prepare general terms and conditions	Procurement expert • Prepare general terms and conditions • Advise on procurement matters
Role of User section (e.g. WTD, ITMU)	User • Advise on changes in requirement	Technical expert • Develop technical specifications • Coordinate acceptance test	Project owner • Collect user requirements • Develop technical specifications • Manage contract

Cross-functional project team

Setting up of a Procurement Group

(A) Core Duties of the proposed Procurement Group

In addition to the routine procurement duties, the Procurement Group will also be responsible for:

- Procurement strategy, policy, planning and review. The new group would collaborate with user sections to formulate and implement the procurement strategy and action items. Annual review will be conducted to monitor the implementation progress.
- Best practice research. The group will conduct research of procurement best practices adopted by local and overseas organisations.
- Market and product research. In-depth research will be carried out on an ongoing basis to keep in view of changes in market conditions and equipment technologies.
- User requirement collection. The group will form the focal point for collecting feedback and user requirements for procurement of PPE, uniform, operation equipment, FA, etc.
- Tender and contract development. The group will prepare tender and contract templates and sample marking schemes for use by other user sections. Common terms and conditions will also be developed for sharing within the department.
- Supplier performance management. The group will set up a mechanism for evaluating and managing the performance of suppliers. The evaluation results would provide valuable information for tender evaluation.
- Asset management. The group will develop appropriate policies and procedures for maintenance and replacement of strategic equipment.

(B) Proposed duty lists of the four new posts

Note: The FSD should further refine the duty lists below to take account of the duties in relation to procurement of goods and services other than FS equipment

Divisional Officer

1. To assist SDO in formulating a procurement strategy by identifying the priority areas of work
2. To coordinate with all user sections for the implementation and review of the procurement strategy and action plans, and monitor the progress
3. To oversee routine procurement projects
4. To co-ordinate complex procurement projects
5. To recommend new FS equipment for improving operation effectiveness and efficiency
6. To conduct regular review on the suitability of existing FS equipment
7. To manage major product evaluation exercises
8. To review the technical specifications and related requirements for procurement of FS equipment from operation perspectives
9. To promote knowledge management and best practices on procurement

Assistant Divisional Officer

1. To draw up and implement action plans on the priority areas identified in the procurement strategy
2. To conduct routine procurement projects
3. To co-ordinate and provide support to user sections on complex procurement projects, e.g. project planning, risk assessment and technical specifications
4. To conduct market and product research, and to collect requirements and feedback from end-users of FS equipment proactively
5. To evaluate and assess the suitability of FS equipment
6. To assess the training requirements of newly procured FS equipment and co-ordinate the training sessions
7. To maintain a knowledgebase on procurement of FS equipment
8. To organise studies and reviews on procurement exercises, and to recommend improvement measures from operation perspectives

Senior Station Officer

1. To assist in the implementation of procurement strategy and action plans
2. To assist in the conduct of market and product research, and the collection of requirements and feedback from end-users of FS equipment

3. To consolidate information and compile the progress reports on implementation of procurement projects
4. To assist in the preparation of technical specifications of tender documents
5. To co-ordinate the delivery, testing, installation and training of new FS equipment
6. To update the knowledgebase on procurement of FS equipment
7. To participate in procurement studies and reviews

Senior Supplies Officer

1. To assist the CSO on the day-to-day procurement matters
2. To advise user sections on procurement rules, regulations, procedures and best practices
3. To prepare tender and contract documents over the departmental direct purchase authority (currently at $1.43 million) in collaboration with user sections
4. To prepare tender marking schemes in collaboration with user sections
5. To liaise with GLD and other government departments on procurement and supplies matters
6. To develop standard procurement document templates
7. To assist in the development, implementation and management of procurement systems and procedures
8. To review and manage supplier performance
9. To research on procurement best practice
10. To conduct studies and reviews on procurement exercises and to recommend improvement measures from purchasing perspectives
11. To administer the Asset Management and Maintenance System
12. To provide procurement training to in-house staff

Proposed duty list for Electrical and Mechanical Engineer (Fire Appliances)

1. To assist in developing the long-term replacement/procurement plan for fire appliances and equipment
2. To develop detailed project plans for replacement/procurement of fire appliances and equipment
3. To conduct market and product research on fire appliances and equipment
4. To prepare and set out technical / engineering specifications of fire appliances and equipment
5. To prepare procurement documents for fire appliances and equipment
6. To be responsible for contract management and monitoring the quality of fire appliances and equipment
7. To conduct testing, inspection and assessment for fire appliances and equipment under procurement
8. To liaise with Driving Training School for provision of training on new fire appliances and equipment
9. To examine and study the configuration and other details of the existing as well as new fire appliances and equipment in order to examine the possibility of enhancement measures and acquiring suitable vehicle types and models for the departmental fleet