

Trial for Pro-Innovation Procurement in Maintenance Term Contracts (MTCs) & Works Contracts (WCs)



Background

- The Government of HKSAR introduced the new procurement policy in April 2019.
- Electrical and Mechanical Services Department (EMSD) will support this policy and initiate the trial of pro-innovation procurement through the maintenance term contracts and works contracts.

Introduction

- The trial of pro-innovation will cover Air-conditioning Installation, Electrical Installation, Fire Service Installation and Burglar Alarm & Security Installation.
- Tenders will be called for Maintenance Term Contracts (MTCs) or Works Contracts (WCs) with estimated contract sum exceeding HK\$7M.
- Selective Tendering (Contractors of DEVB's Specialist List)
- WTO GPA Procurement Procedure (Tendering Period 6 weeks) and will be published in Gazette

Standard Marking Scheme



Tendering Evaluation Method

- Adoption of **Standard Marking Scheme** shall be referred to DEVB Technical Circular (Works) No. 4/2014
 - Two-Envelope Approach (Technical Submission and Tender Price Submission)
 - Tender Evaluation takes into account:
 - 1) **Technical Assessment**; and
 - 2) Tender Price Assessment
 - Weights for price and **technical** score are 60 / 40
- ★ 15 Marks out of 45 Marks will be given in Attribute 4(f) Innovation and Creativity Proposal in the Section 4 of marking

Technical Assessment

- Tender Evaluation Method based on DEVB Technical Circular (Works) No. 4/2014A.
- The Technical Assessment is mainly divided into 2 stages:
 - 1) Stage I Screening
 - 2) Stage II Marking
- Failing of Stage I Screening, the “Tender Price Documents” shall not be processed.
- Failing of Technical Assessment, the “Tender Price Documents” shall not be processed.

Stage I Screening

- Mandatory Part of Standard Marking Scheme
 - Tenderers must comply with the stipulated minimum requirements before their tenders are considered further.

Criteria: ↵

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(1) The tenderer shall have completed ***electrical/fire service/air-conditioning/burglar alarm and security** maintenance and repair contracts in or outside Hong Kong with the accumulated awarded contract sum of not less than **HK\$XX million¹** within the **past** 5-year. **In the case of a joint venture, only the lead participant or major shareholder is required to meet this minimum experience requirement;** and ↵

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(2) The tenderer or the lead participant/major shareholder of the joint venture must be on the List of Approved Suppliers of Materials and Specialist Contractors for Public Works under the category of ***Electrical/Air-Conditioning/Burglar Alarm and Security/Fire Service** Installation. ↵

Stage II Marking

- Same marking distribution for Electrical, Air-conditioning, Fire Services and Security Installation Stage I Screening
 - Section 1 – Tenderer's experience
 - Section 2 – Tenderer's past performance
 - Section 3 – Tenderer's technical resources
 - ★ Section 4 – Tenderer's technical proposal

4(f) Innovative and creativity proposal

Standard Marking Scheme Section (1) and (2)

Attribute	Full Mark	Passing Mark
Section (1) – Tenderer’s experience		
(a) accumulated awarded contract sum of maintenance and repair contracts for *electrical/air-conditioning/burglar alarm and security/fire service installations in or outside Hong Kong within the past five years	5	—
Sub-total	5	—
Section (2) – Tenderer’s past performance		
(a) workmanship	4	—
(b) progress	4	—
(c1) site safety	2	—
(c2) safety rating	7	—
(d) environmental pollution control	2	—
(e) general obligations	1	—
(f) attitude to claims	1	—
(g) record against convictions under the Immigration Ordinance, Employment Ordinance or other site safety, environment related and road opening offences	3	—
(h) resources	2	—
(i) overall performance	4	—
Sub-total	30	15

Section (1): NO passing mark requirement

Section (2):
Based on Contractor’s Performance Reports kept in Contractor Management Information System of DEVB



Standard Marking Scheme Section (3) and (4)

Attribute	Full Mark	Passing Mark
Section (3) – Tenderer’s technical resources		
(a) Proposed Managerial Staff	5	—
(b) Proposed Technical Staff	10	—
(b) Proposed Essential Plant and Equipment	5	—
Sub-total	20	10
Section (4) – Tenderer’s technical proposal		
(a) Method statement for routine maintenance, &# overhaul (AC only), handling of on-call maintenance and emergency repair of *electrical/air-conditioning/burglar alarm and security/fire service installations	9	—
(b) Programming Logistics and Interface Management	6	—
(c) Quality Assurance Plan	5	—
(d) Site Safety Plan, Health and Welfare Plan	5	—
(e) Environment Management Plan and Use of Environmental Friendly Products and Processes	5	—
(f) Innovation and creativity proposal	15	—
Sub-total	45	15

Attribute 4(f): NO passing mark requirement

Marking Standard

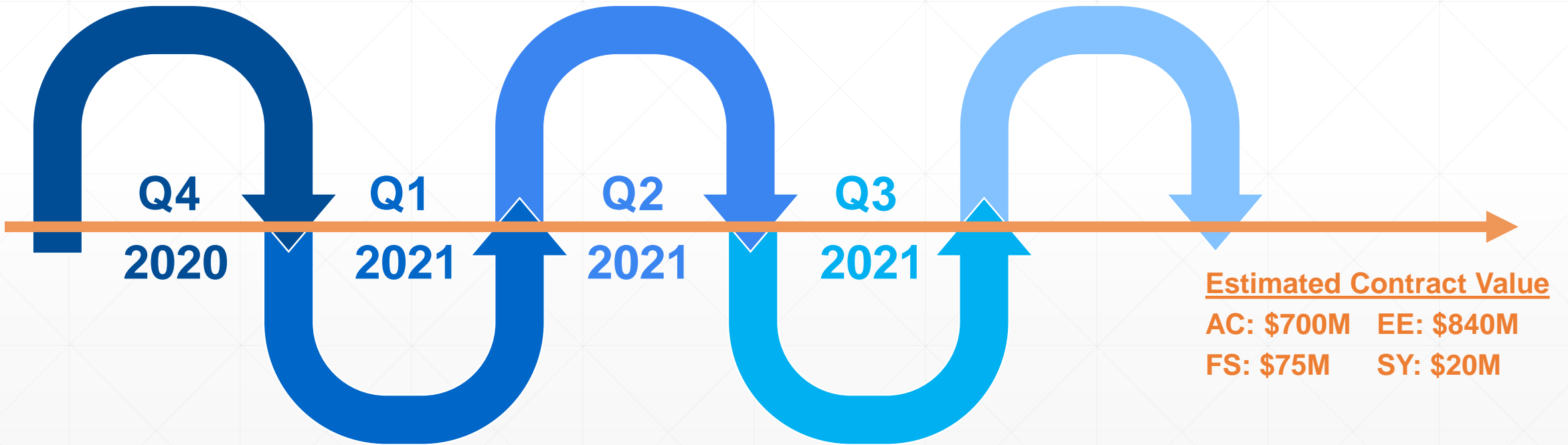
- Attribute 4 Tenderer's Technical Proposal
 - Attribute 4 (a) Method Statement for Routine Maintenance, Handling of on-call Maintenance and Emergency Repair
 - Attribute 4 (b) Programming Logistics and Interface Management
 - Attribute 4 (c) Quality Assurance Plan
 - Attribute 4 (d) Site Safety Plan, Health and Welfare Plan
 - Attribute 4 (e) Environment Management Plan and Use of Environmental Friendly Products and Processes
 - ★ Attribute 4 (f) Innovation and Creativity Proposal

Tentative Tender Programme



Tentative Tender Programming

- For Air-conditioning Installation (AC), Electrical Installation (EE), Fire Service Installation (FS) and Burglar Alarm & Security Installation (SY)
- Proposed trial tenders will be issued from Q4 2020 to Q3 2021.



Marking Standard

Innovation and Creativity Proposal



Marking Standard

- Attribute 4 (f) Innovation and Creativity Proposal – **General**

To describe how to make use of I&T applications to enhance the O&M services under the contract in terms of:

- 1) Operational excellence and optimization
- 2) Maintenance excellence with predictive approach
- 3) Service productivity enhancement; and
- 4) Enhanced contract management performance

Marking Standard for Innovation and Creativity Proposal

Air Conditioning Installation



Marking Standard 4(f)

Air-conditioning Installation (1)

- Application of IoT technology with appropriate sensors/micro-controllers, data communication and cloud analytic (Artificial Intelligence) to monitor the equipment performance and fine tune operational performance of the HVAC system on both water and air sides.
- Application of IoT technology to plan, execute and report all the updated information of Preventive Maintenance, Corrective Maintenance, Emergency Call, etc. on an online platform, to facilitate data analysis for predictive maintenance and planning of replacement of aged assets as well as to create a paperless contract execution environment.

Marking Standard 4(f)

Air-conditioning Installation (2)

- Applications of robotics or drones to carry out certain repetitive tasks to enhance safety and productivity.
- Collaboration with local suppliers/agents in adopting their state of art technologies, e.g. high-efficiency motors, to the existing systems to enhance various aspect of asset performance.

Marking Standard 4(f)

Air-conditioning Installation (3)

- Application of IoT technology and others to provide a comprehensive integration of various monitoring systems of HVAC, e.g. CCMS, BMS, PQMS, etc., to solve the interfacing problems and to provide an area-wide online O and M platform of the venues under this contract.
- Application of Facial Recognition Attendance System to enhance the security and accuracy of attendance records as well as to minimize the administration cost and time for checking the attendance records of contractor's site staff.

Marking Standard for Innovation and Creativity Proposal

Electrical Installation



Marking Standard 4(f)

Electrical Installation (1)

- New technologies and innovative approach for conducting electrical healthy check with minimum operational interruption (e.g. minimum / no power suspension)
- IoT, AI, big data and other technologies for carrying predictive maintenance to eliminate electrical breakdown and to enhance system reliability
- Creative methodology for enhancing safety during the maintenance work of the electrical system

Marking Standard 4(f)

Electrical Installation (2)

- Online digital platform or other creative methodologies for paperless and online contract execution, e.g. fault reporting from users / employer to contractor, fault attendance recording, work progress reporting, maintenance record submission, digital maintenance checklist and online inspection, compliance monitoring of statutory requirements (e.g. WR2)
- I&T initiatives for enhancing the efficiency and effectiveness in the delivery of services (e.g. mobilization of maintenance staff).

Marking Standard for Innovation and Creativity Proposal

Fire Service Installation



Marking Standard 4(f)

Fire Service Installation (1)

- IoT, AI, big data and other technologies for carrying predictive maintenance to eliminate breakdown of FS installation
 - e.g. monitoring water pipe leakage, healthiness of battery and charger, running conditions of water pump and etc.
- Online digital platform or other creative methodologies for paperless and on-line contract execution
 - e.g. on-line log book, staff attendance recording, maintenance record/report submission, digital maintenance checklist, calibration records of testing instrument and etc.

Marking Standard 4(f)

Fire Service Installation (2)

- I&T initiatives for enhancing the efficiency and effectiveness in the delivery of services
 - e.g. mobilization of maintenance staff, automatic alert for slow progress works, compliance monitoring of statutory requirements (e.g. FS251 and notification of FSI suspension for repair works) with automatic alert before expiry and etc

Marking Standard for Innovation and Creativity Proposal

Burglar Alarm and Security Installation



Marking Standard 4(f)

Burglar Alarm and Security Installation (1)

- Operational excellence and optimization
 - Application of technology to collect and analyze the performance data including maintenance history of critical equipment, make comparison to outcomes achieved previously or elsewhere and recommend necessary adjustments to maintenance planning and performance
- Maintenance excellence with predictive approach
 - Computerized system for data collection and analysis to facilitate predictive maintenance and equipment replacement

Marking Standard 4(f)

Burglar Alarm and Security Installation (2)

- Service productivity enhancement
 - On-line platform for staff mobilization, automatic alert to tasks approaching or exceeding deadlines, etc.
- Enhanced contract management performance
 - On-line platform for fault reporting, fault attendance progress reporting, performance review, etc. for efficient contract performance monitoring

Other I&T Facilitative Measures



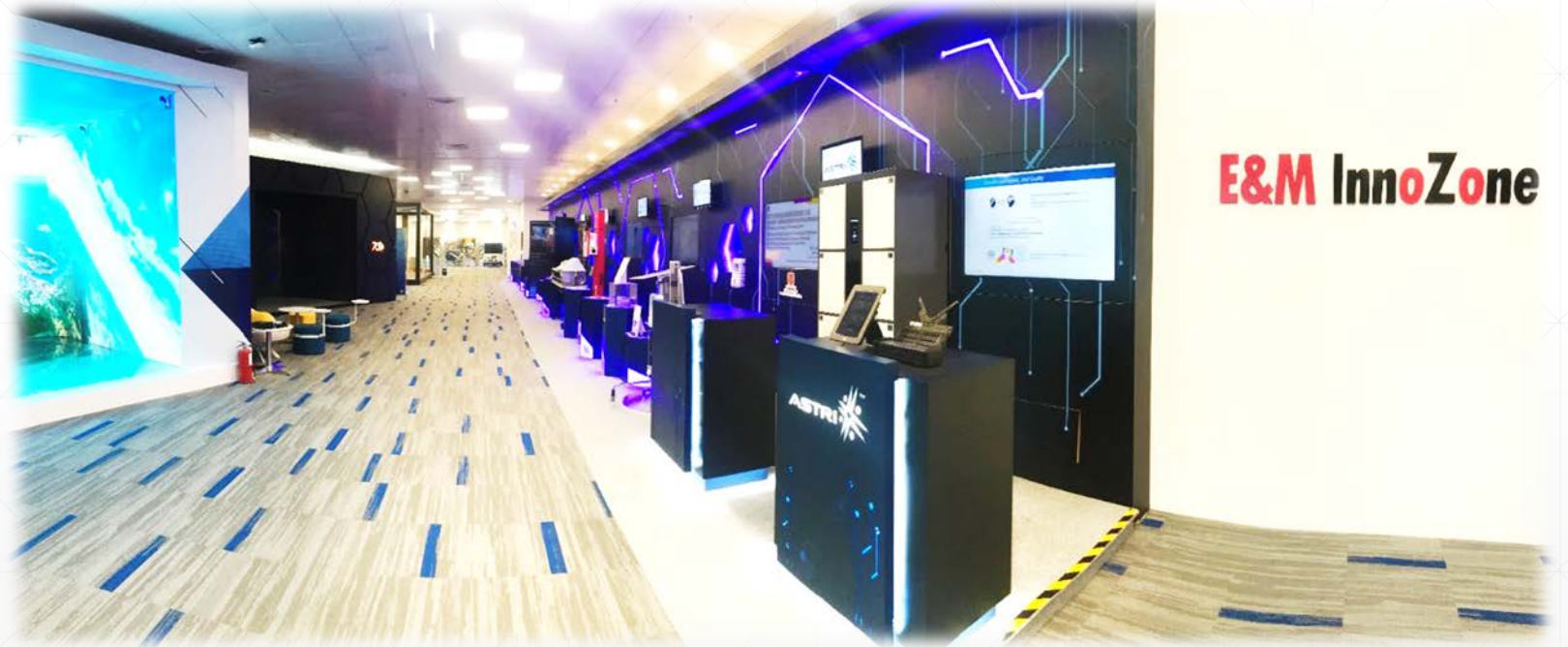
Support Pro-innovation Procurement

E&M InnoPortal



Showcasing of I&T solutions

E&M InnoZone



Co-create I&T solutions

- EMSD's local I&T Strategic Partners



Connecting with I&T strategic partners

Facilitative events to connect E&M trades with I&T strategic partners

- Format : I&T webinars (e.g. pitching)
- Time: **August 2020 (tentative)**
- Audience: E&M tenderers (AC, FS, EE, SY)
- Objectives:
 - facilitate networking
 - Identify I&T solutions for application
- Details to be announced



E&M Trades



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Q&A Session



Thank you!