

Environmental Campaign Committee (ECC)

The Supply of Food Waste
Smart Bins to Facilitate Food Waste Collection at Private
Housing Estates

Tender Briefing

18 June 2025

Note: No video taking or voice recording is allowed

Disclaimer

- The contents of the presentation are for information only
- In case of any discrepancies between the presentation and the Tender Documents, the full version of the Tender Documents shall prevail.

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1.

Background

(Only some main points are listed here. Details are shown in the Tender Documents)

Our Vision



Waste Blueprint for Hong Kong 2035

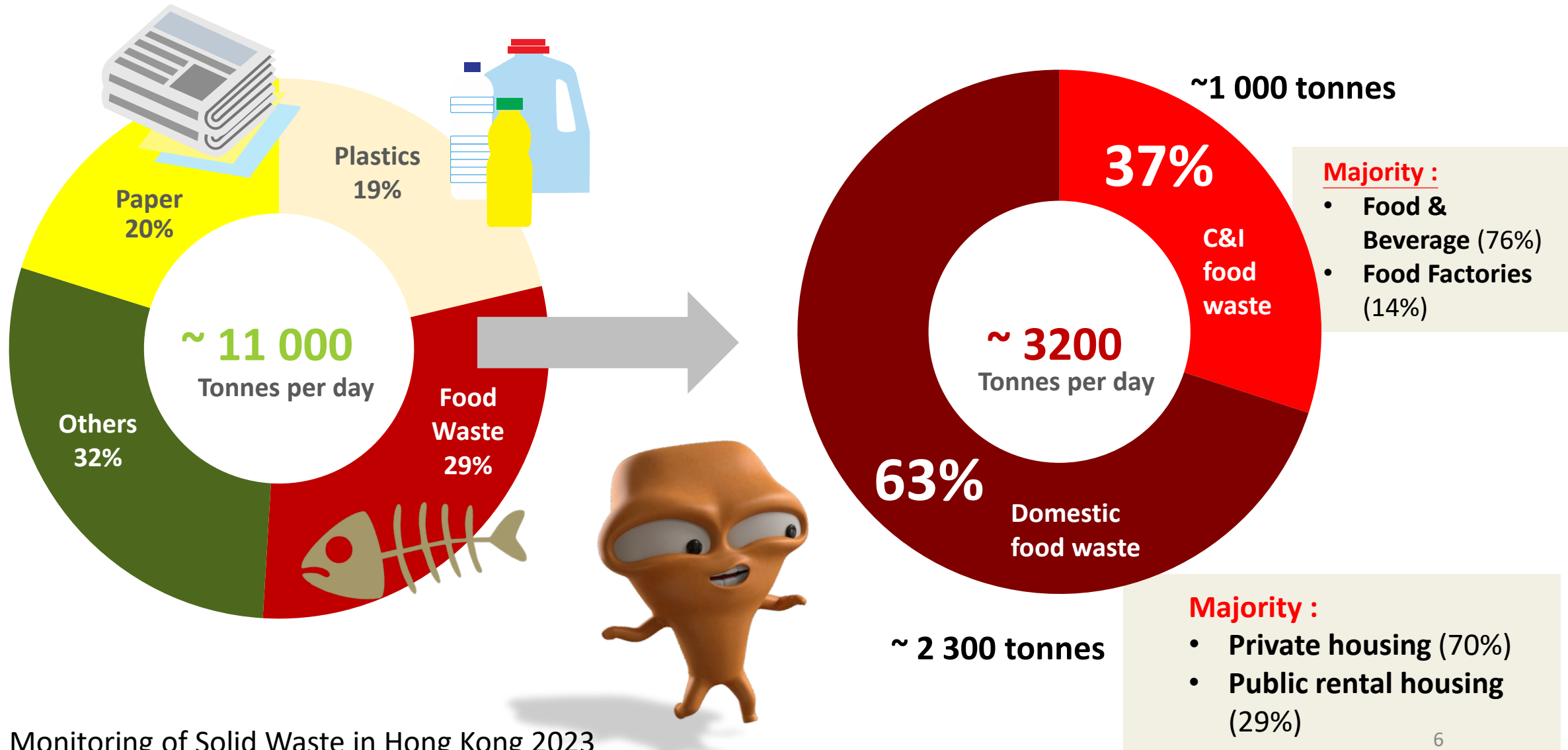


We are confident that we can realise our vision of progressively achieving
Waste Reduction
Resources Circulation
Zero Landfill

With the concerted efforts of all parties, Hong Kong is able to move forward in a sustainable manner and strive for achieving carbon neutrality by 2050.



2023 Municipal Solid Waste Statistics



Major Food Waste Management Strategies



Targets

✓ Expand food waste collection network

✓ Develop more food waste treatment facilities

Domestic Food Waste Recycling

Public Rental Housing (PRH) Estates

- Food Waste Smart Recycling Programme in PRH Estates commenced in Oct 2022
- Progressively expanded to all 213 PRH estates in Jun 2024, covering **one-third of HK population** and installing a total of **740 Food Waste Smart Recycling Bins** (FWSBs)
- Installing additional FWSBs since Sep 2024

Private Housing Estates

- Subsidize private housing estates to install FWSRBs under funding schemes of Recycling Fund and Environmental Campaign Committee
- Installed **~400 FWSBs** at **~120 estates** and will increase to ~640 FWSBs at ~180 estates by this year



ENVIRONMENTAL
CAMPAIGN COMMITTEE
環境運動委員會

Pilot Scheme on Adopting Food Waste Smart Recycling Bins in Private Housing Estates

- Funded by **Environment and Conservation Fund (ECF)**, **Environmental Campaign Committee (ECC)** supports food waste recycling using FWSBs in **large-scale private housing estates** (over 1 000 no. of households)
- EPD appoint smart bin providers to supply **FWSBs** and **food waste buckets** to successful applicants
- EPD to provide **food waste collection service** and **promotion** to successful applicants
- Grantee to bear cost of daily management, cleansing, labour, administrative support and some promotion



2.

Contract Overview

(Only some main points are listed here. Details are shown in the Tender Documents)

Tender Documents

| | | |
|---------------------------------|---|---|
| PART I | Terms of Tender (ToT) | <ul style="list-style-type: none">• Tendering procedure |
| PART II | Conditions of Contract (CoC) | <ul style="list-style-type: none">• General liabilities of the Contractor under the Contract |
| PART III | Annexes | <ul style="list-style-type: none">• Proposals / schedules to be filled in and submitted by tenderer (Price Proposal, Technical Proposal, and other related documents) on or before Tender Closing Time• Marking scheme for the submitted proposals |
| PART IV PART V | Technical Specifications Appendices to Technical Specification | <ul style="list-style-type: none">• Specific requirements to the Goods to be supplied under the Contract |

Objectives

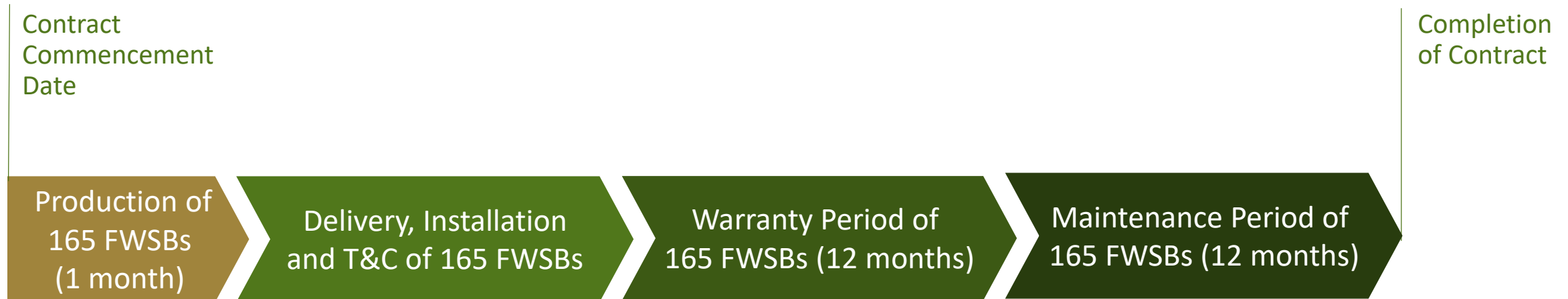
(Technical Spec 3.1, 3.3, 3.8-3.10)

- To supply a total of **330 FWSBs** (165 FWSBs for each Contractor) with **12-month Warranty** and their associated **big data platforms**, coupled with the GREEN\$ ePIS for incentivizing residents to participate in food waste recycling
- To provide **12-month Maintenance Service** for each FWSB after the Warranty Period
- To provide a total of **48,000 food waste buckets** (24,000 nos. for each Contractor) to households of successful applicants

Contract Period

(Technical Spec 4 & App E)

- The Contract shall commence from the date of award of this Contract and end on expiry date of the Maintenance Period for the Goods, both dates inclusive. The tentative timeline is shown as below:



- the EPD would refer successful applications to the Contractor from time to time, starting **1 month** after the contract commencement.
- During the Warranty Period and Maintenance Period, the Contractor shall provide the standard maintenance and repair services for all FWSBs

3.

Supply of Goods

(Only some main points are listed here. Details are shown in the Tender Documents)

Order and Delivery

(Technical Spec 3.2)

- The ECC will refer successful applications under the Scheme to Contractor (A) during the Contract Period, starting **1 month** after the contract commencement.
- After Contractor (A) **has been allocated their full quota of FWSBs**, the ECC will then begin referring subsequent successful applications of the Scheme to Contractor (B) during the Contract Period.
- Both Contractor (A) and Contractor (B) shall then deliver the specified number of FWSBs and food waste buckets to the Designated Location by the Deadline Delivery Date as requested by ECC Representative
- Contractors shall liaise with ECC Representative and venue managers of the Designated Locations for the set up and installation works of the FWSBs

Food Waste Smart Bins (FWSBs)

Hardware - *(Technical Spec 3.3.2 - 3.3.13)*

- To design, produce and adopt the **wrapping design** based on the design specification provided by the EPD.
- Each FWSB shall be equipped with a **level sensor** to automatically send the signal of fill level of food waste of the inner food waste container to the Big Data Platform.
- The FWSBs and the Big Data Platform shall **automatically notify** the venue managers of the **fill level status** of each FWSB (e.g., up to 70% full) for timely collection of food waste.
- Each FWSB shall show **different coloured lighting** to indicate the bin status and fill level of the inner container

Relevant Submittal - (Service Spec 5.1.5)

1. The wrapping design shall be submitted for endorsement by the ECC/EPD within **two (2) weeks** after the contract commences

Food Waste Smart Bins (FWSBs)

Hardware - *(Technical Spec 3.3.2 - 3.3.13)*

**Essential Requirement 1*

- The Contractor shall provide a **QR Code Scanning Device*** to operate each FWSB, by recognising users' GREEN\$ cards or GREEN\$ App, and a **User Interface Device** to display information of usage and bin status to the public.
- Each FWSB shall be equipped with **at least one camera** to record both **the interior of the FWSB** for monitoring collected food waste and fill level, and to capture **users' faces**.
- Each FWSB shall be equipped with an **automatic pest control system** to prevent pest infestation.
- Each FWSB shall be equipped with a functional system to **automatically deodorise** the interior of the FWSB.

Relevant Submittal - (Technical Spec 5.1.5)

1. The **user interface design** shall be prepared within **two (2) weeks** after the contract commencement and endorsed by the ECC before publication.

Food Waste Smart Bins (FWSBs)

Auto-deodorization - *(Technical Spec 3.6)*

- Each FWSB shall be equipped with both **ozone generator** and **deodorizing sprayer** to auto-deodorize regularly.
- The Contractor shall ensure that there is an adequate amount of **back-up deodorizing agent** stored in the Designated Locations for refilling at all times throughout the Warranty Period and Maintenance Period.
- To avoid running out of deodorizing agent inside the FWSBs, the FWSBs and the Big Data Platform shall **automatically notify** the venue managers of the deodorizing agent storage status of each FWSB (e.g., only 10% left) for timely refilling by venue staffs

Relevant Submittal - *(Technical Spec 3.6.2)*

1. The Contractor shall propose a suitable deodorizing agent for the ECC's endorsement, before the operation of FWSBs.

Food Waste Smart Bins (FWSBs)

Software - *(Technical Spec 3.3.14 – 3.3.23)*

- The Contractor shall provide a robust **4G or 5G communication network** for data communication and transmission
- The Contractor shall provide FWSBs with functions including but not limited to:
 - **Automatic weighing function:** automatically weigh food waste (from 0.1kg to 100kg) in each measurement.
 - **Self-diagnostic function:** automatically notify different parties whenever there is abnormal operation conditions/mechanical errors.
 - **Fill level alert system:** an integrated notification system to expedite the process of bin replacement
- The FWSBs shall connect to the **Big Data Platform** to allow remote monitoring of the FWSBs and real-time transmission of all necessary data and information

Big Data Platform

(Technical Spec 3.4)

**Essential Requirement 2*

- To develop and connect the Big Data Platform to the **EPD's Common Communication Platform*** (CCP) and ensure a successful 2-way data communication from its IoT devices to the CCP through a standard Application Programming Interface (API)
- To provide a **Data Management Interface** for the EPD to monitor the real-time condition of the FWSBs, as well as store and modify the data for future use
- The Contractor shall also include the following functions in the Big Data Platform:
 - **Scheduled configuration** of FWSBs if requested by the ECC (e.g. Update GREEN\$ earning scale/arrangement)
 - **Automatic fraud detection system** to identify suspicious GREEN\$ earning patterns

Relevant Submittal - *(Technical Spec 5.1.3 & 5.1.4)*

1. A **passed result for the Full API Tests** within two (2) weeks after the contract commences.
2. The **access and administrative rights** of the Data Management Interface of the Big Data Platform for the EPD, within two (2) weeks after the contract commences.

Testing and Commissioning

(Technical Spec 3.7)

- To conduct **on-site testing and commissioning (T&C)** for the delivered and installed FWSBs, including all hardware and software related to the FWSBs, in accordance with the approved testing and commissioning plan.
- A **Quality Control (QC) report** shall be prepared for each FWSB at factory before delivery and installation at Designated Locations
- To arrange, prepare and provide all necessary materials, equipment and instruments for the testing and commissioning tests at its own cost.
- The ECC will issue **the Acceptance Note** only after all FWSBs have successfully passed the T&C.

Relevant Submittal - *(Technical Spec 5.1.6 & 5.1.7)*

1. A T&C plan for the approval of EPD within two (2) weeks after commencing the Service Period
2. A T&C report within 2 working days upon completion of the testing and commissioning, and within 3 weeks before operation of those FWSBs, with QC report as a supporting document

Warranty Service

(Technical Spec 3.8 & 3.9)

- The Warranty Period of the FWSBs shall be **twelve (12) months** inclusive from the Acceptance Date of the FWSBs.
- To provide **maintenance and repair** services of all hardware and software during the Warranty Period, with **on-site assessment** within **24 hours** upon receiving requests from the ECC Representative or the venue managers .
- The Contractor shall **resume normal operation** of the FWSBs **within 48 hours** from the initial notification time. Otherwise, the Contractor shall arrange the delivery of **spare FWSB(s)** to the designated location(s) as an interim measure to replace malfunctioned FWSB(s).
- To provide and manage a **hotline service from 9:00am to 9:00pm** every day during the Warranty Period
- To provide and deliver the **proposed deodorizing agent** to the Designated Locations where necessary (or upon request by the EPD) at its own cost throughout the Warranty Period.

Relevant Submittal - *(Technical Spec 5.1.8)*

1. A quarterly report every 3 months after the Contract commence

Maintenance Service

(Technical Spec 3.10)

- The Maintenance Period shall be **twelve (12) months**, starting from the date after the expiry of Warranty Period
- To provide **maintenance and repair** services of all hardware and software during the Maintenance Period, with **on-site assessment** within **24 hours** upon receiving requests from the ECC Representative or the venue managers .
- The Contractor shall **resume normal operation** of the FWSBs **within 48 hours** from the initial notification time. Otherwise, the Contractor shall arrange the delivery of **spare FWSB(s)** to the designated location(s) as an interim measure to replace malfunctioned FWSB(s).
- To provide and manage a **hotline service from 9:00am to 9:00pm** every day during the Maintenance Period
- To provide and deliver the **proposed deodorizing agent** to the Designated Locations where necessary (or upon request by the EPD) at its own cost throughout the Maintenance Period.

Relevant Submittal - *(Technical Spec 5.1.8)*

1. A quarterly report every 3 months after the Contract commence

Food Waste Buckets

(Technical Spec 3.11)

- The Contractor shall provide **food waste buckets**, each being a 7-litre container with an inner filtration layer made from polypropylene.
- The Contractor shall deliver the exact number of food waste buckets to the Designated Location(s) by the Deadline Delivery Date, as requested by the ECC Representative.
- The Contractor shall liaise with the venue managers of the Designated Locations for the delivery date, delivery time and drop-off locations.

Relevant Submittal - (Technical Spec 5.1.1)

1. A pre-production sample of the Food Waste Bucket for endorsement by the EPD within two (2) weeks after the Contract commences, before mass production.

Additional Goods

1. Additional FWSBs with Warranty Service and Maintenance Service - *(Technical Spec 3.12.1)*

- In addition to the 165 units of FWSBs, the Contractor may be required to supply additional FWSBs, with the associated Warranty Service and Maintenance Service, to any locations.

2. Additional Food Waste Buckets - *(Technical Spec 3.12.2)*

- In addition to the 24,000 nos. of Food Waste Bucket, the Contractor may be requested to supply additional food waste buckets to any locations.

The ECC shall have absolute discretion to adjust the quantity of the Additional FWSBs / Food Waste Bucket.

4.

Payment Methods

(Only some main points are listed here. Details are shown in the Tender Documents)

Payment for Goods

(Technical Spec 6.3, 6.4, 6.5, 6.6)

- Payment shall be made to the Contractor on a **quarterly basis**, subject to acceptance of Goods, satisfactory completion of Warranty Service and satisfactory completion of Maintenance Service in accordance with the Technical Specification, as well as the acceptance by the ECC Representative of the Quarterly Report
- in accordance with the following formula:

| Item | Formula for Calculating the Quarterly Payment | | | | | |
|--|---|-----|---|---|---|-----------|
| Delivery and Installation of FWSB | Quantity of FWSBs installed | x (| Unit rate as specified in Item A1 of Price Proposal | + | Unit rate as specified in Item A2 of Price Proposal |) x 30% + |
| | Quantity of Additional FWSBs installed (if applicable) | x (| Unit rate as specified in Item B1 of Price Proposal | + | Unit rate as specified in Item B2 of Price Proposal |) x 30% |

Payment for Goods

(Technical Spec 6.3, 6.4, 6.5, 6.6)

| Item | Formula for Calculating the Quarterly Payment | | | | | | |
|---|---|-----------------------|---|-------------------|---|----------|--|
| Warranty Service Maintenance Service | <p>Quantity of FWSBs completing their 1st / 2nd / 3rd / 4th 3-month Warranty Period/ Maintenance Service</p> <p>Quantity of Additional FWSBs completing their 1st / 2nd / 3rd / 4th 3-month Warranty Period Maintenance Service (if applicable)</p> | <p>x (</p> <p>x (</p> | <p>Unit rate as specified in Item A1 of Price Proposal</p> <p>Unit rate as specified in Item B1 of Price Proposal</p> | <p>+</p> <p>+</p> | <p>Unit rate as specified in Item A2 of Price Proposal</p> <p>Unit rate as specified in Item B2 of Price Proposal</p> <p>) x 8.75% +</p> <p>) x 8.75%</p> | | |
| Food waste buckets | <p>Quantity of Food waste buckets delivered</p> | <p>x</p> | <p>Unit rate as specified in Item A3 of Price Proposal</p> | <p>+</p> | <p>Quantity of Additional Food waste buckets delivered (if applicable)</p> | <p>x</p> | <p>Unit rate as specified in Item B3 of Price Proposal</p> |

5.

Tender Preparation & Submission

(Only some main points are listed here. Details are shown in the Tender Documents)

Tender Preparation

(ToT 3)

- All tenders shall be completed in ink (ballpoint pen) or typescript (printing), in English or in Chinese and be submitted in **two-envelope system**
- Tenders shall be completed in **duplicate hard copies**
- Any alterations in figures or words shall be effected by striking through the incorrect items and inserting the amendments in ink above. All such amendments shall be initialled by the Tenderer in ink.
- Tenders may NOT be considered if false, incorrect information or incomplete information is given or if any particulars and data asked for in the Schedules are not furnished in full.

Preparation of Tender Document

(ToT 3.1)

ENVELOPE A: Marked “Price Proposal for the Supply of Food Waste Smart Bins to Facilitate Smart Food Waste Collection at Private Housing Estates”; and “Tender Closing Date 3 July 2025”

- A duly completed Price Proposal (Annex V)

ENVELOPE B: Marked “Technical Proposal for the Supply of Food Waste Smart Bins to Facilitate Smart Food Waste Collection at Private Housing Estates”; and “Tender Closing Date 3 July 2025”

- Completed Compliance Form of Essential Requirements, with supporting documents (i.e., a passed result of the Basic API Tests or Full API Tests) (Annex I)
- A Technical Proposal (Annex III)
- Information Schedule (Company/Business Organization Status) (Annex VI)
- Confirmation of Compliance with Anti-Collusion Requirement (Annex VII)
- The duly signed Offer to be Bound (Annex VIII)
- Schedule of Compliance (Annex IX)
- Contact Details (Annex XI)
- A copy of a valid Business Registration Certificate or other valid business document

Tender Submission

(ToT 3.11)

- **Tender Closing Date and time: 12:00 noon (Hong Kong time), 3 Jul 2025**
- **Late tenders will NOT be considered**
- **Location:** All Tenders must be deposited in the Specified Tender Box at Environmental Campaign Committee Secretariat, 5/F, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong.
- Tender Submission **by fax is NOT acceptable.**
- In case Tropical Cyclone Warning Signal No. 8 or above is hoisted, or Black Rainstorm Warning Signal or “extreme conditions after super typhoons” announced by the Government is/are in force, for any duration between 0900 and 1200 hours on the Tender Closing Date, the latest date and time before which Tenders are to be deposited in the Specified Tender Box will be **extended to 1200 hours on the next working day.**

6.

Marking Scheme & Assessment Criteria

(Only some main points are listed here. Details are shown in the Tender Documents)

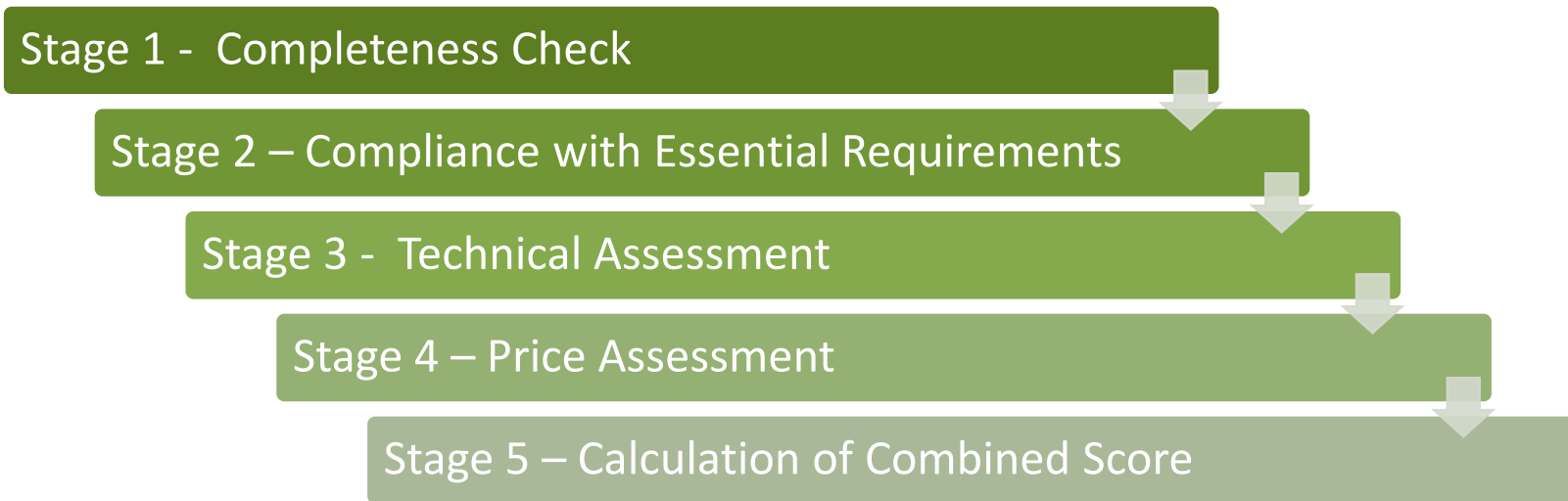
Tender Assessment

(Annex IV)

A **two-envelope system** will be adopted for this tender exercise.

The mark weighting ratio of Technical Score to Price Score is **60% to 40%**. Price assessment will be conducted after technical assessment.

The tenders will be evaluated under 5 stages:



Stage 1 – Completeness Check

(ToT 3.3)

The Tenderer must submit all of the following in its Tender **before the Tender Closing Time**, otherwise its Tender **will not be considered further**:

1. Completed Compliance Form of Essential Requirements, with supporting documents (*Annex I*)
2. A Technical Proposal (*Annex III*)
3. A completed Part A and Part B of the Price Proposal (*Annex V*)
4. The duly signed Offer to be Bound (*Annex VIII*)

Stage 1 – Completeness Check

(ToT 3.4)

The Tenderer is also required to provide all other information/supporting documents, duly completed and signed where applicable, requested in this Invitation to Tender or relevant to its offer, including but not limited to the following:

1. A copy of a valid Business Registration Certificate or other valid business document issued by a governmental or competent authority
2. Information Schedule (Company/Business Organization Status) (Annex VI)
3. Confirmation of Compliance with Anti-Collusion Requirement (*Annex VII*)
4. Schedule of Compliance (*Annex IX*)
5. Contact Details (*Annex XI*)

The Tenderer should provide all the above items at the same time when it submits its offer. If any of the above item is missing in an offer and is **not provided upon the ECC's request**, the offer will **not be further considered**.

Stage 2 – Essential Requirement

(ToT 6)

The Tenderer shall comply with all the Essential Requirements, and submit **the Compliance Form of Essential Requirements (Annex I)**.

Essential Requirement 1

- Tenderer shall propose the Food Waste Smart Bins with a type of **wireless scanning device** to recognize the users' **10-digit GREEN\$ membership number** in the form of **QR code**.
- A Tenderer shall complete and submit “**Compliance Form of Essential Requirements**” with necessary supporting documents/drawings
- Tenderer may be requested to arrange **demonstration** on the proposed Food Waste Smart Bins in achieving the standard of function.

| Essential Requirement 1: QR Code Reading Device ^o | |
|--|---|
| 1.1 ^o | Equipped with QR code reading function in the Food Waste Smart Bins to recognize 10-digit GREEN\$ membership numbers? ^o <input type="checkbox"/> Yes <input type="checkbox"/> No (Please tick as appropriate) ^o |
| 1.2 ^o | A drawing / photo is provided below to indicate the position of the QR code scanner in the Food Waste Smart Bin to substantiate its claim in 1.1 above. ^o |

Tender **will not be considered further** if the tenderer **fail to comply with any** of the above essential requirements.

Stage 2 – Essential Requirement

(ToT 6)

The Tenderer shall comply with all the Essential Requirements, and submit **the Compliance Form of Essential Requirements (Annex I)**.

Essential Requirement 2

- A Tenderer shall propose to provide a **Big Data Platform** that must be able to connect to the EPD's Common Communication Platform and transfer data/ information through a standard API and obtain a **passed result of the Basic API Tests or Full API Tests**, as set out in Appendix A to the Technical Specifications.
- Please approach the following contact point of HKPC for performing the test:

Mr. Andrew MOU

Senior Consultant – Smart Electronics

Smart City Division (SCD) 智慧城市部

(Phone) (+852) 2788 5550 (Email) andrewmou@hkpc.org



Food waste recycling bin system and HKPC API test (Connectivity and Basic test)

Testing server IP: <https://hkpcdev.greencoins.gov.hk:5000>
Server port: 5000

Company name: _____
Tender ref: _____

System name: _____

| Test ID | Test description | Test procedure | Acceptance criteria |
|---------|--|---|--|
| 1 | Check the membership and open the lid for valid member with no food waste recycling record today | 1. Food waste recycling bin sends the request to HKPC server with valid member ID GET request: <code>https://hkpcdev.greencoins.gov.hk:5000/user/getUserwithcount/{memberID}</code> 2. Food waste recycling bin receives the response from HKPC server with message <pre>{ "success": true, "data": { "memberID": "xxxxx", "membership": true, ... }, "recycleCount": { "FOODWASTE": 0, } }</pre> | Food waste recycling bin opens the lid to valid member after membership validation check in the condition: - The user is valid member ("membership": true) - No food waste recycling record today ("FOODWASTE": 0) |

Tender **will not be considered further** if the tenderer **fail to comply with any** of the above essential requirements.

Stage 3 – Technical Assessment

Tenders which have passed Stages 1 and 2 assessments will be further evaluated for the technical proposal, in accordance to Marking Scheme for Tender Evaluation (*Annex IV*).

- ▶ The maximum weighted Technical Score is **60**.
- ▶ The Technical Proposal with the **highest mark** amongst the conforming tenders will be given the **maximum weighted Technical Score of 60**. The weighted Technical Score for the other conforming tenders will be calculated as follows:

$$\text{Weighted Technical Score} = 60 \times \frac{\text{Mark of the tender being assessed}}{\text{Highest mark amongst the conforming tenders}}$$

Stage 3 – Technical Assessment

Technical Proposal - (*Annex III*)

- Tenderers are required to fill in appropriate information, either in English or Chinese, in the spaces provided in **Annex III** as their Technical Proposal. The information provided should be essential and kept in a simple and concise manner. The Technical Proposal, Annex III, shall be limited to 20 pages in length (excluding attachments) and should be in A4 size.
- Contains the following parts:
 1. Section A- Execution Plan
 - ▶ (A1) Project Proposal – Food Waste Smart Bins (FWSBs)
 - ▶ (A2) Project Proposal – Big Data Platform and Warranty Services
 - ▶ (A3) Timeline and Resources
 - ▶ (A4) Service Delivery and Management Plan
 - ▶ (A5) Innovative Suggestions
 - ▶ (A6) ESG Proposals
 2. Section B – Experiences

Stage 3 – Technical Assessment

Marking Scheme - (Annex IV)

(A1) Project Proposal – Food Waste Smart Bins (FWSBs)

(i) Basic Information of FWSBs

- To briefly describe and illustrate the basic features of the FWSBs, including but not limited to, brand & model, outlook design, dimension with technical drawings, maximum capacity of the inner container, and net weight.

(ii) Technical Information of FWSBs

- To briefly describe and illustrate the technical aspects of the FWSBs, including but not limited to, weighing range and accuracy, waterproof standard, self-diagnostic functions (e.g. auto-notification during abnormal operation conditions and mechanical errors), remote monitoring of recycled food waste using photos/videos, QR code scanning device, user interface device and operation procedures.

| Item A1 (i) Basic Information of FWSBs | | |
|---|---|---|
| Sub-Item | Description | Supporting Documents, if any |
| A1.(i).1. Place of Origin | | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(i).2. Name of Manufacturer/ Brand | | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(i).3. Address of the Manufacturer's factory or plant | | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(i).4. Product Name / Model | | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(i).5. Outlook design | | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(i).6. Dimension with technical drawings | | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| Item A1 (ii) Technical Information of FWSBs | | |
| <i>*Essential Requirement</i> | | |
| Sub-Item | Description | Supporting Documents, if any |
| A1.(ii).1. Automatic weighing function | <input type="checkbox"/> Yes, resolution and detection range of weight sensor: _____ <input type="checkbox"/> No | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(ii).2. Waterproof design | <input type="checkbox"/> Yes, waterproof standard: _____ <input type="checkbox"/> No | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(ii).3. Self-diagnosis function (Fault sensing and notification) | <input type="checkbox"/> Yes, please elaborate: _____ <input type="checkbox"/> No | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(ii).4. Coloured lighting to indicate the status of operation | <input type="checkbox"/> Yes, please elaborate: _____ <input type="checkbox"/> No | <input type="checkbox"/> Attached, Attachment file no.: _____ |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

(A1) Project Proposal – Food Waste Smart Bins (FWSBs)

(iii) Health and Hygiene Features

- To briefly describe and illustrate the features related to health and hygiene, including but not limited to, auto-deodorization (e.g. frequency, proposed deodorizing agent, auto-notification when running out of deodorizing agent), and automatic pest control system (e.g. technology adopted for pest control, frequency of pest control, possible enhancement measures).

| Item A1 (iii) Health and Hygiene Features | | |
|---|--|---|
| Sub-Item | Description | Supporting Documents, if any |
| A1.(iii).1. Auto-deodorization | <input type="checkbox"/> Yes, please provide information on the following: (a) proposed deodorizing agent: _____ (b) frequency of deodorization: _____ (c) amount of deodorizing agent (ml) used per deodorization: _____ (d) mean(s) of notification when running out of deodorizing agent: _____ (e) allow adjustment on item (a), (b) & (c) upon request: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| A1.(iii).2. Automatic pest control system | <input type="checkbox"/> Yes, please provide information on the following: (a) frequency of pest control: _____ (b) proposed means of pest control: _____ <input type="checkbox"/> No | <input type="checkbox"/> Attached, Attachment file no.: _____ |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A1) is **30**.

| Marking Guidelines | |
|--------------------|---|
| 100% | With detailed information for all of the required items (very good quality and practical) |
| 75% | With detailed information for $\geq \frac{2}{3}$ of the required items and brief information for the remaining required items (good quality and practical) |
| 50% | With detailed information for $\geq \frac{1}{3}$ of the required items and brief information for the remaining required items (average quality and practical) |
| 25% | With brief information covering all of the required items (adequate quality and practical) |
| 0% | Without information on any of the required items (poor quality and impractical) |

Stage 3 – Technical Assessment

Marking Scheme - (Annex IV)

(A2) Project Proposal – Big Data Platform and Warranty Services

(i) Big Data Platform

- To briefly describe and illustrate the details and working mechanisms of the Big Data Platform, including but not limited to, accessibility/login method of the Data Management Interface, information of hardware and software, the types of real-time data and information to be displayed on the Data Management Interface, the types of statistics and analysis of information in the Big Data Platform, and the mechanism for data/ information logging and transfer of transactions from the Big Data Platform to the EPD’s Common Communication Platform.

(ii) Data Quality Management

- To briefly describe and illustrate the tests and mechanisms for the monthly data quality check for the Big Data Platform to ensure that the data transmitted to the EPD’s Common Communication Platform is accurate, reliable, complete and consistent.

| Item A2 (i) Big Data Platform | |
|---|---|
| Sub-Items | Description |
| A2.(i).1. Real-time communication | <input type="checkbox"/> Yes, mode of data communication: _____ <input type="checkbox"/> No |
| A2.(i).2. Connection to EPD’s common communication platform* | <input type="checkbox"/> Yes, please refer to “Annex I - Compliance Form of Essential Requirements”. <input type="checkbox"/> No |
| A2.(i).3. Big Data Platform with Data Management Interface | |
| Please briefly describe and illustrate the details and working mechanisms of the Big Data Platform, including but not limited to, accessibility/login method of the Data Management Interface, information of hardware and software, the types and format of real-time transaction data and information to be displayed on the Data Management Interface, the types of statistics and analysis of information in the Big Data Platform, and the mechanism for data/ information logging and transfer of transactions from the Big Data Platform to the EPD’s Common Communication Platform. | |
| _____ _____ _____ _____ | |
| Item A2 (ii) Data Quality Management | |
| Please briefly describe and illustrate the tests and mechanisms for the monthly data quality check for the Big Data Platform to ensure that the data transmitted to the EPD’s Common Communication Platform is accurate, reliable, complete and consistent. | |
| _____ _____ _____ _____ _____ | |

Stage 3 – Technical Assessment

Marking Scheme - (Annex IV)

(A2) Project Proposal – Big Data Platform and Warranty Services

(iii) Warranty Services

- To briefly describe and illustrate the details of warranty services, including but not limited to, the items to be covered under the regular and ad-hoc maintenance services for this Contract and the maintenance schedule.

| Item A2 (iii) Warranty Services | |
|--|---|
| <p>Please briefly describe and illustrate the details of maintenance service, including but not limited to, the items to be covered under the regular and <i>ad-hoc</i> maintenance services for this Contract and the maintenance schedule.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | <p>Supporting Documents, if any</p> <p><input type="checkbox"/> Attached, Attachment file no.:</p> <hr/> |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A2) is **20**.

Marking Guidelines

| | |
|-------------|---|
| 100% | With detailed information for all of the required items (very good quality and practical) |
| 75% | With detailed information for $\geq \frac{2}{3}$ of the required items and brief information for the remaining required items (good quality and practical) |
| 50% | With detailed information for $\geq \frac{1}{3}$ of the required items and brief information for the remaining required items (average quality and practical) |
| 25% | With brief information covering all of the required items (adequate quality and practical) |
| 0% | Without information on any of the required items (poor quality and impractical) |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A3) is **10**.

Marking Guidelines

| | |
|-------------|---|
| 100% | With detailed information for all of the required items (very good quality and practical) |
| 75% | With detailed information for $\geq \frac{2}{3}$ of the required items and brief information for the remaining required items (good quality and practical) |
| 50% | With detailed information for $\geq \frac{1}{3}$ of the required items and brief information for the remaining required items (average quality and practical) |
| 25% | With brief information covering all of the required items (adequate quality and practical) |
| 0% | Without information on any of the required items (poor quality and impractical) |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

(A4) Service Delivery and Management Plan

- (i) To provide a **supervision plan** describing the approach of and the mechanism for staff supervision, including but not limited to, expertise/qualifications of the supervisory staff, mechanism for monitoring of staff performance, staff briefings and training programmes.

- (ii) To provide a **quality assurance plan** describing the approach of and the mechanism to ensure Goods quality and remedy defects in supplying the Goods.

| | |
|--|--|
| Item A4 (i) Supervision Plan | |
| Provide a description of the approach of and the mechanism for staff supervision, including but not limited to, expertise/qualifications of the supervisory staff, mechanism for monitoring of staff performance, staff briefings and training programmes. | Supporting Documents, if any <input type="checkbox"/> Attached, Attachment file no.: |
| <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | |
| Item A4 (ii) Quality Assurance Plan | |
| Provide a description of the approach of and the mechanism to ensure Goods quality and remedy defects in supplying the Goods. | Supporting Documents, if any <input type="checkbox"/> Attached, Attachment file no.: |
| <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

(A4) Service Delivery and Management Plan

- (iii) To provide a **complaint handling plan** describing the approach of and the mechanism for managing customer feedback and complaints, including but not limited to, response procedures, resolution timeframes, and record keeping systems.

| Item A4 (iii) Complaint Handling Plan | Supporting Documents, if any |
|--|--|
| To provide a complaint handling plan describing the approach of and the mechanism for managing customer feedback and complaints, including but not limited to, response procedures, resolution timeframes, and record keeping systems. | <input type="checkbox"/> Attached, Attachment file no.: _____ |
| | |
| | |
| | |
| | |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A4) is **10**.

| Marking Guidelines | |
|--------------------|---|
| 100% | With detailed information for all of the required items (very good quality and practical) |
| 75% | With detailed information for $\geq \frac{2}{3}$ of the required items and brief information for the remaining required items (good quality and practical) |
| 50% | With detailed information for $\geq \frac{1}{3}$ of the required items and brief information for the remaining required items (average quality and practical) |
| 25% | With brief information covering all of the required items (adequate quality and practical) |
| 0% | Without information on any of the required items (poor quality and impractical) |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

(A5) Innovative Suggestions

To make innovative suggestions (with benefits / positive values explained) on any of the following aspects OR other relevant aspects suggested for the Goods:

Non-exhaustive examples:

- (a) Shortening production time for the FWSBs;
- (b) Enhancing deodorization performance to improve user experience;
- (c) Enhancing durability and reliability of the FWSBs and the associated systems;
- (d) Enhancing ability for pest control;
- (e) Increasing operational efficiency and cost effectiveness;
- (f) Allowing flexibility to adapt operational changes;
- (g) Boosting user satisfaction or experience; or
- (h) Preventing the improper use of FWSBs.

(A5) Innovative Suggestions

| Item A5 Innovative Suggestions | |
|--------------------------------|---|
| Innovative Suggestion(s) | Details of the Suggestion (How to implement, Benefit/Positive Values, etc.) |
| 1. | |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A5) is **15**.

Marking Guidelines

| | |
|-------------|--|
| 100% | Contains three (3) or more quality and practicable innovative suggestions |
| 66% | Contains two (2) quality and practicable innovative suggestions |
| 33% | Contains one (1) quality and practicable innovative suggestion |
| 0% | Does not contain any quality and innovative suggestion |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

(A6) ESG Proposals

To propose measures or arrangement to improve environmental protection, sustainability or governance or social responsibility (“ESG”):

Non-exhaustive examples:

- (a) Environmental protection/ Sustainability (E): use of green materials/products, reduction in energy consumption or promotes waste reduction in the execution of the contract
- (b) Social responsibility (S): employment of people with disabilities and/or rehabilitated persons for the contract
- (c) Governance (G): cybersecurity, privacy practices, and management structure of the contract

The ESG measures/arrangements may but **need not be directly relevant to the supply of Goods** but would bring about positive values/benefits to the Government, or the public at large.

(A6) ESG Proposals

| Item A6 ESG Proposals | |
|-----------------------|--|
| ESG Proposal (s) | Details of the Suggestion (How to implement, the aspect of ESG to which the proposals are relevant, Benefit/Positive Values, etc.) |
| 1. | |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A6) is **5**.

Marking Guidelines

| | |
|-------------|---|
| 100% | Contains three (3) or more practicable and effective ESG proposals |
| 66% | Contains two (2) practicable and effective ESG proposals |
| 33% | Contains one (1) practicable and effective ESG proposal |
| 0% | Does not contain any effective and practicable ESG proposal |

Stage 3 – Technical Assessment

Marking Scheme - (Annex IV)

Section B – Experiences

- (i) Aggregate experience of the key project team member (the one with the most relevant experience) or the Tenderer involving operation of smart recycling bins or management of big data platform
- (ii) Experience of the key project team members OR the Tenderer’s proven record and experience in smart device projects (e.g. smart recycling bins, smart balances, gift redemption machines, big data platform management)

Section B - Experiences

Please insert more rows if the space provided is not sufficient.

| No. of Projects | Project Name | Month AND Year (in chronological order) | Name of key project team member in this Proposal (if involved in the following project) | Description of area(s) covered by the project | | | Supporting document proof ^{note 1} (Attachment file no.) |
|-----------------|--|--|--|--|---|--------------------------------------|--|
| | | | | Smart recycling bins | Big data platform | Other smart devices (please specify) | |
| <i>Example</i> | <i>Provision of smart recycling bins for ABC company</i> | <i>Apr 2018 to Mar 2019</i> | <i>Chan Tai-man</i> | <i>Provided 5 sets of smart recycling bins for setting up at G/F lobby of ABC company in 12 months</i> | <i>Management of the big data platform related to the operation of the 5 sets of smart bins</i> | <i>Nil</i> | <i>File 1</i> |
| <i>1</i> | | | | | | | |

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

Section B – Experiences

- The maximum mark for B (i) is 5.

| Marking Guideline | |
|-------------------|--|
| 100% | The Tenderer has an aggregate of ≥ 7 years' relevant experience |
| 75% | The Tenderer has an aggregate of ≥ 5 years' and < 7 years' relevant experience |
| 50% | The Tenderer has an aggregate of ≥ 3 years' and < 5 years' relevant experience |
| 25% | The Tenderer has an aggregate of ≥ 1 years' and < 3 years' relevant experience |
| 0% | The Tenderer has an aggregate of < 1 years' relevant experience |

- The maximum mark for B (ii) is 5.

| Marking Guideline | |
|-------------------|---|
| 100% | The Tenderer holds relevant experience for ≥ 6 projects related to smart recycling |
| 50% | The Tenderer holds relevant experience for 3-5 projects related to smart recycling |
| 0% | The Tenderer holds relevant experience for <3 projects related to smart recycling |

Stage 4 – Price Assessment

(Annex V)

Tenders will be further evaluated for the **Price Proposal (Annex V)**

- A **maximum weighted price score of 40** will be allocated to the conforming tender with **the lowest** Total Estimated Contract Value (*Part A of the Price Proposal*)
- The weighted price score for other conforming tenders will be calculated by the following formula:

$$\text{Weighted Price Score} = 40 \times \frac{\text{Lowest price amongst the conforming tenders}}{\text{Price of the tender being assessed}}$$

Part A – Price Information of Goods [See Note 1]

| Item | Description | Unit Price (HK\$) (a) | Estimated Quantity (b) | Amount (HK\$) |
|------|---|---|------------------------|---------------|
| A1 | Supply, delivery, installation, and testing and commissioning of one Food Waste Smart Bin (FWSB) (as specified in Clauses 3.2 to 3.7 of Technical Specification), with 12-month Warranty Service (as specified in Clauses 3.8 and 3.9 of Technical Specification) | (per FWSB, 12-month Warranty Service) | 165 units | (a) x (b) |
| A2 | Provision of 12-month Maintenance Service for one FWSB after the 12-month Warranty Period (as specified in Clause 3.10 of Technical Specification) | (per FWSB, 12-month Maintenance Service) | 165 units | (a) x (b) |
| A3 | Supply and delivery of one food waste bucket (as specified in Clause 3.11 of Technical Specification) | (per food waste bucket) | 24,000 nos. | (a) x (b) |
| | | Total Contract Value: (Items A1 + A2 + A3) | HK\$ _____ | |

Stage 5 – Calculation of Combined Score *(ToT 19, Annex IV)*

After the weighted score for Technical Proposal and the weighted score for the Price Proposal have been obtained, a Combined Score for each tender that passes Stages 1 to 4 will be calculated using the following formula:

$$\text{Combined Score} = \text{Weighted Technical Score} + \text{Weighted Price Score}$$

Two Tenderers whose tenders with **the highest / 2nd highest** combined score will normally be recommended for acceptance.

If there is only one conforming tender, it is permissible that the same Tenderer may be awarded with all two Contracts.

7.

Common Mistakes

Common Mistakes in Tender Submission

Offer to be Bound

- Submission by the Tender Closing Date is compulsory
- Must be **signed by an authorised person** (such as the Director) for and on behalf of the Tenderer
- All information required must be provided (including Tenderer name, post of signatory, contracts preference etc.)
- The **name of the Tenderer** must be the same as the name shown on the **Certificate of Registration** or the latest **Certificate of Change of Name** (if any) or the **Business Registration Certificate** or other valid registration documents issued by the relevant government authority
- The Offer to be Bound shall be originally signed. This originally signed Offer to be Bound to be submitted **must not be a photocopy**, otherwise, the Tender will not be considered further

Supporting Documents

- Please provide **proofs of previous experiences** and **valid certificates** along with your Tender submission
- Proof of the **practicability of Innovative Suggestions** shall also be submitted along with your Tender submission

OFFER TO BE BOUND

[*** Please delete below where inappropriate]

I/We for myself/ourselves and ***the firm and partners / limited company herein mentioned do hereby agree to provide all or any portion of the Services mentioned in the Contract Schedule, as amended by me/us, which may be ordered by the ECC Representative, at the prices quoted in the Price Proposal, subject to and in accordance with the Terms of Tender, Conditions of Contract, Services Specifications, Appendices, Annexes and addendum (if any) to these terms and conditions. I/We for myself/ourselves and ***the firm and partners / limited company herein mentioned hereby warrant that my/our Business Registration Certificate and Employee's Compensation Insurance Policy are currently in force.

1. The Offer to be Bound shall be originally signed, must not be a photocopy
2. All information required must be provided
3. Signed by an **authorised person** (such as the Director), and shall tally with information provided such as latest annual return
4. The **name of the Tenderer** must be the same as the name shown on the valid registration documents issued by the relevant government authority (such as BRC)

| | | | |
|---|--|---|--------|
| Name of Person Authorized to Sign Tender (in Block Letter): | | Signature of Person Authorized to Sign Tender : | |
| Name of Tenderer (in Block Letter) : (See Note 2 below) | | Company Chop (where applicable): | |
| Address of Tenderer : | | | |
| Telephone No.: | | Fax No.: | Date : |

8.

Other Points to Note

Other Points to Note

- Any enquiries concerning the **Technical Specification/Tender Proposal** should be made prior to the Tender Closing Date to -

Name: Mr Cheung Long Hei, Felix

Title: Waste Reduction Officer

Tel No.: 3690 7839

Email: longheicheung@epd.gov.hk

- Any enquiries concerning the **tender submission procedure** should be made prior to the Tender Closing Date to-

Name: Mr Chan Tsz Fai, Harris

Title: Executive Officer

Tel No.: 2835 1020

Email: harristfchan@eeb.gov.hk

Q & A Session