

Environmental Campaign Committee (ECC)

Provision of Services for Smart Bins to Facilitate Food
Waste Collection at Private Housing Estates

Tender Briefing

18 Oct 2023

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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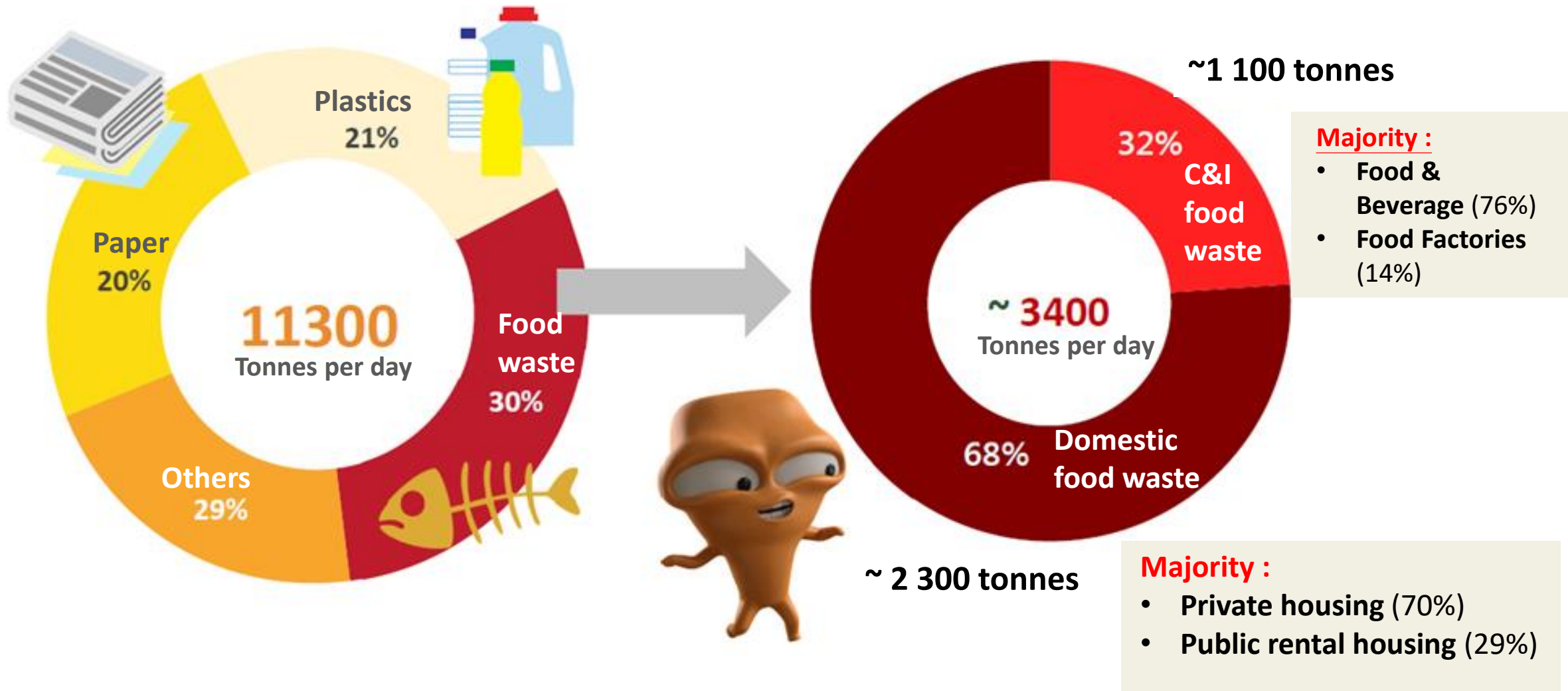
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1.

Background

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

2021 Municipal Solid Waste Statistics



Background



- Municipal Solid Waste Charging (1 April 2024)
- More Food Waste Treatment Facilities (such as O · PARK2 & Sha Tin Sewage Treatment Works)
- Expanding Smart Bin Trial to more public rental housing (PRH) estates and private housing estates
- Setting up more collection points at Refuse Collection Points
- Exploring to set up more Public Collection Points.



Pilot Scheme on Adopting Food Waste Smart Recycling Bins (FWSB) 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)
- **ECC appoints 2 smart bin suppliers** to provide a total of **120 FWSBs** and **60,000 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	Service Specifications Appendices to Service Specification	<ul style="list-style-type: none">• Specific requirements to the Services to be delivered under the Contract

Service Objectives

(Service Spec 3.1)

- To provide a total of about **120 FWSBs** (60 FWSBs for each Contractor) and their associated **big data platforms**, coupled with the GREEN\$ ePIS for incentivizing residents to participate in food waste recycling.
- To provide **operation and maintenance services** throughout the Contract Period
- To provide a total of **60,000 food waste buckets** (30,000 nos. for each Contractor) to all households of successful applicants

Contract Period

(Service Spec 4.1)

- The Contract is for a period of **fifty-four (54) months**, comprises an **open-application period** of twenty-four (24) months, followed by a **post-application period** of thirty (30) months.



- the EPD would refer successful applications to the Contractor
- the Contractor shall continue to provide services for each successful applicant.

Service Period

(Service Spec 4.2)

- The provision of service for FWSB at each location is for a period of **twenty-eight (28) months**, commencing on the date when successful applicants are referred to the Contractor.



- Scope of services during each period will be elaborated in the following section.

3.

Scope of Services

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

Preparation Period

Food Waste Smart Bin (FWSB) - *(Service Spec 3.2 & 3.4)*

- To provide the exact number of FWSBs to the Designated Locations as requested by the ECC/EPD
- To liaise with the ECC, EPD, venue managers of the Designated Locations for the set up and installation works of the FWSBs
- To design, produce and adopt the **wrapping design** based on the design specification provided by the EPD.

Relevant Submittal - *(Service Spec 5.1.5)*

1. The wrapping design shall be submitted for endorsement by the ECC/EPD within 2 months after the contract commences

Preparation Period

QR Code Scanning Device and User Interface Device - (*Service Spec 3.2 & 3.6*)

- To provide a QR Code Scanning Device to operate each FWSB
- To provide a User Interface Device for each FWSB
- To design, rescale, adopt the design and logic flow of the user interface based on the design specification provided by the EPD

Relevant Submittal - (*Service Spec 5.1.5*)

1. The design of user interface be endorsed by the ECC/EPD within 2 months after the contract commences

Preparation Period

Big Data Platform - (*Service Spec 3.2 & 3.5*)

**Essential Requirement 2*

- *To develop and connect the Big Data Platform to the **EPD's Common Communication Platform** and ensure a successful 2-way data communication from its IoT devices to the Common Communication Platform through a standard 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

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

1. A **passed result for the Full API Tests** within two (2) months 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) months after the contract commences.

Preparation Period

Auto-deodorization - *(Service Spec 3.8)*

- To provide a **ozone** generator for each FWSB
- To provide a deodorizing sprayer for each FWSB, and adopt the **deodorising agent** recommended by O•PARK1, or propose another suitable deodorizing agent

Relevant Submittal - *(Service Spec 3.8.2)*

1. If Contractor decided to propose another deodorizing agent, the proposed agent shall be endorsed by the EPD.

Preparation Period

Testing and Commissioning - *(Service Spec 3.2 & 3.9)*

- To conduct testing and commissioning for all the hardware and software to be used in its provision of the Services before the Operation Period
- To arrange, prepare and provide all necessary materials, equipment and instruments for the testing and commissioning tests at its own cost.

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

1. A T&C plan for the approval of EPD within four (4) 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

Preparation Period

Food Waste Bucket - *(Service Spec 3.11)*

- To provide the exact number of Food Waste Buckets to the Designated Locations as requested by the ECC/EPD
- To deliver the Food Waste Buckets to the Designated Locations within three (3) months upon request from the ECC/EPD

Relevant Submittal - (Service Spec 5.1.1)

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

Requirements of FWSBs

General Requirements - (*Service Spec 3.4*)

**Essential Requirement 1*

• Sufficient capacity to accommodate a 120 L bin	• Top opening infeed door
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Technical Requirements - (*Service Spec 3.4, 3.6 & 3.7*)

• Automatic weighting function	• Remote monitoring of recycled food waste using photos/videos
• Self-diagnosis function (Fault sensing and notification)	• <i>QR code scanning device for user identification*</i>
• Coloured lighting to indicate the status of operation	• Automatic door with anti-pinch feature
• Fill-level alert system	• User interface device

Health and Hygiene Requirements - (*Service Spec 3.4 & 3.8*)

• Auto-deodorization	• Automatic pest control system
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Requirements of FWSBs

Essential Requirement 1- *(ToT 6 & Service Spec 2.3)*

- It is an Essential Requirement that a 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. Failing of the Tenderer to do so shall render the tender **not to be considered further**.

Big Data Platform

Essential Requirement 2 - *(ToT 6 & Service Spec 2.3)*

- It is an Essential Requirement that 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 Application Programming Interface (API) Tests** or Full API Tests
- A Tenderer shall complete and submit “**Compliance Form of Essential Requirements**” with necessary supporting documents

Operation Period

Maintenance Services - *(Service Spec 3.3 & 3.8)*

- To provide **repair, maintenance or replacement** services of all hardware and software during the Contract Period, with **on-site assessment** within **24 hours** upon receiving requests from the EPD or the venue managers
- To 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 Operation Period for technical support, receipt of the requests from and handling all the enquiries
- 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 Operation Period

Operation Period

Relevant Submittal - (Service Spec 5.1.8 & 5.1.9)

1. A monthly summary within 1 week after end of the preceding month
2. A quarterly report every 3 months after the Contract commence

Post-operation Period

Removal of FWSBs - *(Service Spec 3.3.6)*

- To remove all hardware equipment or works related to the Services from the Designated Locations and reinstate the site to its original condition within 30 days, or at a specific date as agreed by the EPD.

Additional Services

1. Additional FWSBs - *(Service Spec 3.12.1)*

- In addition to the 60 units of FWSBs, the Contractor may be required for the provision, delivery, installation, setting up, testing and commissioning, maintenance and removal of Additional FWSBs at any locations

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

- In addition to the 30,000 nos. of Food Waste Bucket, the Contractor may be requested for the provision and delivery of Additional Food Waste Buckets at any locations

The ECC/EPD 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 Services

(Service Spec 6.3, 6.4, 6.5)

- Payment shall be made to the Contractor on a **quarterly basis**, subject to satisfactory completion of Services in accordance with the Service Specification and acceptance by the ECC/EPD of the Quarterly Report
- in accordance with the following formula:

Services	Formula for Calculating the Quarterly Payment									
Installation of FWSBs	Quantity of FWSBs installed x Unit rate as specified in Item A1 of Price Proposal + Quantity of Additional FWSBs installed (if applicable) x Unit rate as specified in Item B1 of Price Proposal									
Operation of FWSBs	Quantity of operating FWSBs X 3 Months x Unit rate as specified in Item A2 of Price Proposal + Quantity of Additional operating FWSBs (if applicable) x 3 months x Unit rate as specified in Item B2 of Price Proposal									
Provision and Delivery of Food Waste Bucket	Quantity of Food waste buckets delivered x Unit rate as specified in Item A3 of Price Proposal + Quantity of Additional Food waste buckets delivered (if applicable) x Unit rate as specified in Item B3 of Price Proposal									

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 Provision of Services for Smart Bins to Facilitate Food Waste Collection at Private Housing Estates”; and “Tender Closing Date 6 November 2023”

- A duly completed Price Proposal (Annex V)

ENVELOPE B: Marked “Technical Proposal for the Provision of Services for Smart Bins to Facilitate Food Waste Collection at Private Housing Estates”; and “Tender Closing Date 6 November 2023”

- A Technical Proposal (Annex III)
- 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)
- The duly signed Offer to be Bound (Annex VIII)
- Information Schedule (Company/Business Organization Status) (Annex VI)
- A copy of a valid Business Registration Certificate or other valid business document
- Schedule of Compliance (Annex IX)
- Confirmation of Compliance with Anti-Collusion Requirement (Annex VII)
- Contact Details (Annex XI)

Tender Submission

(ToT 3.11)

- **Tender Closing Date and time: 12:00 noon (Hong Kong time), 6 Nov 2023**
- **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)

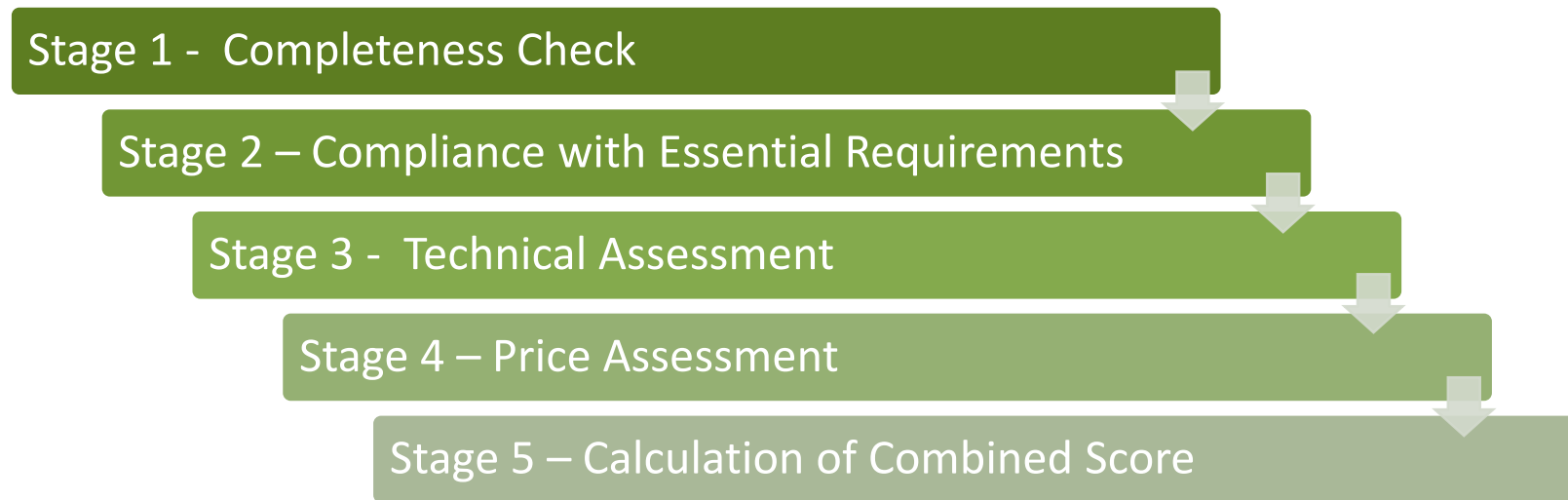
Tender Assessment

(Annex IV)

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

The mark weighting ratio of Technical Score to Price Score is **70% to 30%**. 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. A completed Part A and Part B of the Price Proposal (*Annex V*)
2. A Technical Proposal (*Annex III*)
3. Completed Compliance Form of Essential Requirements, with supporting documents (*Annex I*)
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. Information Schedule (Company/Business Organization Status) (Annex VI)
2. A copy of a valid Business Registration Certificate or other valid business document issued by a governmental or competent authority
3. Schedule of Compliance (*Annex IX*)
4. Confirmation of Compliance with Anti-Collusion Requirement (*Annex VII*)
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**.

(ToT 6 & Service Spec 2.3)

Essential Requirement 1

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

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Stage 2 – Essential Requirement

(ToT 6 & Service Spec 2.3)

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 Service 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.greenycoins.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	<p>1. Food waste recycling bin sends the request to HKPC server with valid member ID</p> <p>GET request: https://hkpcdev.greenycoins.gov.hk:5000/user/getUserwithcount/{memberID}</p> <p>2. Food waste recycling bin receives the response from HKPC server with message</p> <pre>{ "success": true, "data": { "memberID": "xxxxx", "membership": true, ... }, "recycleCount": { "FOODWASTE": 0, ... } }</pre>	<p>Food waste recycling bin opens the lid to valid member after membership validation check in the condition:</p> <ul style="list-style-type: none">- 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 2 – Essential Requirement

(ToT 4.2)

Tenders to Remain Open

It is an essential requirement of this Invitation to Tender that a Tender shall remain valid and open for a period of **ninety (90) days** after the Tender Closing Date.

If a Tenderer offers in its Tender a period that is shorter than a period of **ninety (90) days**, its Tender **will not be further considered**.

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 **70**.
- ▶ The Technical Proposal with the **highest mark** amongst the conforming tenders will be given the **maximum weighted Technical Score of 70**. The weighted Technical Score for the other conforming tenders will be calculated as follows:

$$\text{Weighted Technical Score} = 70 \times \frac{\text{Mark of the tender being assessed}}{\text{Highest mark amongst the conforming tenders}}$$

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 Maintenance
 - ▶ (A3) Timeline and Resources
 2. Section B - Experiences

Stage 3 – Technical Assessment

Technical Proposal - (*Annex III*)

(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. Name of supplier/ Brand		<input type="checkbox"/> Attached, Attachment file no.: _____
A1.(i).2. Model		<input type="checkbox"/> Attached, Attachment file no.: _____
A1.(i).3. Outlook design		<input type="checkbox"/> Attached, Attachment file no.: _____
A1.(i).4. Dimension with technical drawings		<input type="checkbox"/> Attached, Attachment file no.: _____
A1.(i).5. Capacity of the inner container	Sufficient capacity to accommodate a 120 L mobile waste container? <input type="checkbox"/> Yes, dimension of enclosed compartment: _____ <input type="checkbox"/> No	<input type="checkbox"/> Attached, Attachment file no.: _____
A1.(i).6. Net weight		<input type="checkbox"/> Attached, Attachment file no.: _____
A1.(i).7. Top opening infed door	<input type="checkbox"/> Yes, height of the top opening lid from the ground: _____ <input type="checkbox"/> No	<input type="checkbox"/> Attached, Attachment file no.: _____
Item A1 (ii) Technical Information of FWSBs		
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.: _____

Stage 3 – Technical Assessment

Technical Proposal - (Annex III)

(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).

(iv) Innovative Suggestions

- To make innovative suggestions (with benefits / positive values explained) on aspects related to FWSBs

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.: _____
Item A1 (iv) Innovative Suggestions for FWSBs		
Innovative Suggestion(s)	Details of the Suggestion (How to implement, Benefit/Positive Values, etc.)	Supporting Documents, if any
1.		<input type="checkbox"/> Attached, Attachment file no.: _____
2.		<input type="checkbox"/> Attached, Attachment file no.: _____

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A1) is **40**.

Marking Guidelines	
100%	With detailed information for all of the required items (very good quality and practical)
80%	With detailed information for $\geq \frac{3}{4}$ of the required items and brief information for the remaining required items (good quality and practical)
60%	With detailed information for \geq half of the required items and brief information for the remaining required items (average quality and practical)
40%	With detailed information for $\geq \frac{1}{4}$ of the required items and brief information for the remaining required items (fair quality and practical)
20%	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

Technical Proposal - (Annex III)

(A2) Project Proposal – Big Data Platform and Maintenance

(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.	
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	

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.
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Stage 3 – Technical Assessment

Technical Proposal - (Annex III)

(A2) Project Proposal – Big Data Platform and Maintenance

(iii) Maintenance Service

- To briefly describe and illustrate the details of maintenance service, 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.

(iv) Innovative Suggestions

- To make innovative suggestions (with benefits / positive values explained) on any of the following aspects OR other aspects related to Big Data Platform and Maintenance.

Item A2 (iii) Maintenance Service		Supporting Documents, if any
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.		<input type="checkbox"/> Attached, Attachment file no.: _____
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>		
Item A2 (iv) Innovative Suggestions for Big Data Platform and Maintenance		Supporting Documents, if any
Suggestion No.	Suggestion (with benefit/Positive Values, etc.)	<input type="checkbox"/> Attached, Attachment file no.: _____
1.		
2.		<input type="checkbox"/> Attached, Attachment file no.: _____

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A2) is **30**.

Marking Guidelines	
100%	With detailed information for all of the required items (very good quality and practical)
80%	With detailed information for $\geq \frac{3}{4}$ of the required items and brief information for the remaining required items (good quality and practical)
60%	With detailed information for \geq half of the required items and brief information for the remaining required items (average quality and practical)
40%	With detailed information for $\geq \frac{1}{4}$ of the required items and brief information for the remaining required items (fair quality and practical)
20%	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

Technical Proposal - *(Annex III)*

(A3) Timeline and Resources

- (i) To provide an organisation chart showing proposed manpower for executing the Services
- (ii) To provide qualifications and relevant project experience of the key project team members
- (iii) To provide project timeline of the Services and demonstrate the capability to deliver the Services in meeting the timeline

Item A3 (i) Organisation Chart				
Please provide an organisation chart showing proposed manpower for executing the Services.				
Supporting Documents, if any <input type="checkbox"/> Attached, Attachment file no.: _____				
Item A3 (ii) Qualifications and relevant project experience				
Please provide qualifications and relevant project experience of the key project team members in the table below. Please supplement CVs of the key project team members for supporting.				
Name	Position/Role	Duties	Education level and Qualifications	Skills and experience
Item A3 (iii) Project Timeline				
Please provide project timeline of the Services and demonstrate the capability to deliver the Services in meeting the timeline.				
Supporting Documents, if any <input type="checkbox"/> Attached, Attachment file no.: _____				

Stage 3 – Technical Assessment

Marking Scheme - *(Annex IV)*

- The maximum mark for Section A – (A3) 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

Technical Proposal - (*Annex III*)

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)	
Example	Provision of smart recycling bins for ABC company	Apr 2018 to Mar 2019	Chan Tai-man	Provided 5 sets of smart recycling bins for setting up at G/F lobby of ABC company in 12 months	Management of the big data platform related to the operation of the 5 sets of smart bins	Nil	File 1
1							

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 30** 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:

$$\text{Weighted Price Score} = 30 \times \frac{\text{Lowest price amongst the conforming tenders}}{\text{Price of the tender being assessed}}$$

Part A – Price Information of the Services

Item	Description	Unit Price (HK\$) (a)	Estimated Quantity (b) [See Note 1]	Estimated Period (c) [See Note 1]	Amount (HK\$) (a) x (b) x (c)
A1	Provision of Services for the preparation and installation of one Food Waste Smart Bin (FWSB) as specified in Clauses 3.2 and 3.9 of Service Specification	(per FWSB)	60 units	/	(a) x (b)
A2	Provision of Services for the operation of one Food Waste Smart Bin (FWSB) for one month as specified in Clauses 3.3 to 3.8 and 3.10 of Service Specification	(per FWSB + per month)	60 units	24 months	(a) x (b) x (c)
A3	Production and delivery of one Food Waste Bucket as specified in Clause 3.11 of Service Specification	(per Food Waste Bucket)	30,000 nos.	/	(a) x (b)
		Total Amount: (Items A1 + A2 + A3)	HK\$ _____		

Stage 5 – Calculation of Combined Score *(ToT 17, 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.

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 :	

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)

8.

Other Points to Note

Other Points to Note

- Any enquiries concerning the **Service 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 Cheng Tsz-fung, Leo

Title: Executive Officer

Tel No.: 2835 1020

Email: leotfcheng@eeb.gov.hk

Q & A Session