Annex A – FMIC-endorsed criteria for FMCs

Background

As part of the FM industry transformation, the FMIC identified the need to have a clear standard to benchmark FM Companies (FMCs), and to enhance their competency and service quality. One key recommendation from the FMIC was to develop a set of base criteria which could be adopted by the FM Trade Associations and Chambers (TACs) to develop into an Accreditation Scheme and to set an industry standard by evaluating and recognising the more progressive and professional FMCs.

The FMIC has developed and endorsed a set of base criteria, and shared with the FM TACs in October 2020. FM TACs can take the lead to adopt the base criteria and launch their accreditation schemes.

Overview of FMIC-endorsed base criteria of FMC accreditation scheme

The scheme will cover 3 certification tiers:

1. Certified: The FMC would need to meet criteria forming basic FM standards
2. Gold: The FMC would need to achieve a higher standard by attaining most criteria
3. Gold^{Plus}: The FMC would have to meet all criteria, hence demonstrating its leadership in the FM industry

It will also cover 4 broad areas:

i. General: Aligned key criteria of financial status and safety certificates with BCA CRS
ii. People: Identify and upskill employees and leaders of FMCs to improve professionalism of FMCs
iii. Process: Excellence in organisational processes to delight and meet customers' needs
iv. Technology: R&I, and adoption of Smart FM

Annex B – Smart FM Proof-of-Concept (PoC) Grant

Background

To encourage the shift toward stronger partnerships and reduce industry fragmentation, the FMIC, in 2020, proposed a longer term transformation towards integrated and aggregated FM. This would be supported by stronger value chain management, innovations, jobs and skills through:

- Integration by bundling multiple FM services together in a sensible manner;
- Aggregation by awarding FM contracts for multiple buildings or at the district level; and
- Leveraging technology to effect the change.

A Smart FM PoC Grant was called in October last year with the aim to promote the adoption of smart FM solutions and kickstart this next phase of industry transformation. Projects supported under the PoC Grant are to showcase and establish a good business case for integrated and aggregated FM solutions that can demonstrate more than 20% overall improvement in productivity of FM services. These innovative solutions should also have the potential to be scaled up and replicated in other portfolio or cluster of buildings.

Projects Awarded under the Smart FM PoC Grant

BCA has awarded the PoC Grant to two projects. Both projects display a high potential to break the silos of operations and integrate multiple services like FM management, security and cleaning across a portfolio or cluster of buildings. The proposed smart FM technology solutions under the projects will facilitate the redesign of FM processes, leverage data and predictive analytics, and deploy common, open-source semantic data standard for more seamless data integration.

Project 1: Data-Driven Outcome-Based Intelligent Facilities Management Operations, by Certis, in collaboration with SMRT Trains

This project aims to implement an AI-enabled data-driven way in the delivery of facilities management, security and cleaning services at a cluster of SMRT interchange and stations. It will leverage IoT sensors, data and predictive analytics to direct responses and operations by Certis' multi-skilled workforce, with the aim of achieving enhanced service performance and increasing overall productivity.

To support this, an open-source common data environment (CDE) platform will be developed to create an Open Innovation Platform to integrate different applications and solutions. Standards of the open-source CDE platform used in developing the overall solution will also be published. This will greatly aid the industry in overcoming issues faced on system integration.

Project 2: Integrated Ops Centre 2.0, by Ngee Ann Polytechnic, in collaboration with Surbana Jurong

This project focused on the integration of FM operations and security services through a campus-wide implementation of a Digital Twin to enhance situational awareness,

monitor energy consumption, identify issues or faults faster with quick navigation and enable proactive responses to FM operations. In addition, an AI-sensing automated workflow module will be implemented in part of the campus to detect and assess abnormalities in lift usage, card access and time-based water consumption. Non-evasive smart toilet sensors will also be tested for on-demand response and deployment of cleaners.

The project can potentially bring about a paradigm shift in FM service delivery by enabling the cross-training and upskilling of FM and security staff to support both areas of operations. This helps to redesign FM processes and increase overall FM productivity by 20 to 25%.

The project will also be used as a learning lab for students on Smart FM and the integration of FM operations, and potentially attract more young entrants into the FM industry.

Annex C – Initiatives under FMIC

Background

Given the increasing stock of new and ageing physical infrastructure, as well as the labour-intensive nature of FM services, we will need to set standards for maintainable design and Smart FM, create lead demand for integrated FM services and enhance the competencies of firms and practitioners through various accreditation schemes.

Through the tripartite FM Implementation Committee (FMIC), BCA has facilitated the transformation of the FM sector since the launch of the Real Estate Industry Transformation Map (ITM) in February 2018. The FMIC was formed in April 2018, and comprises representatives from building developers and owners from both public and private sectors, FMCs, Trade Associations and Chambers (TACs) and unions.

Progress of the FM Implementation Committee (FMIC)

a) Design for Maintainability (DfM) to reduce maintenance workload and sustain building performance

DfM refers to the practice of integrating operations and maintenance considerations into project planning and design to achieve ease, safety, and economy of maintenance tasks throughout the building lifecycle. BCA has adopted the following measures to enhance industry adoption of DfM:

i. In May 2019, the **Enhanced DfM Guides** were launched for residential, non-residential and municipal infrastructure to encourage the industry to include FM considerations in upstream design.

   Link: https://www1.bca.gov.sg/buildsg/facilities-management-fm/design-for-maintainability

ii. BCA is incorporating the **Maintainable Design Appraisal System (MiDAS)** as the **Maintainability Badge** under the revised Green Mark (GM) framework by 4Q 2021.

   Link: https://www1.bca.gov.sg/buildsg/facilities-management-fm/design-for-maintainability/maintainable-design-appraisal-system-midas

b) Promote the use of Smart FM that are scalable and can be integrated to improve productivity

i. In October 2019, the **Guide to Smart FM** was launched to guide building owners and their FM managers on the key steps and considerations in adopting technologies for FM applications. The Guide encompasses a 5-step SMART process to facilitate the implementation of Smart FM, and serves as a framework for building owners and their FM managers to continually review their review their FM processes and Smart FM goals.

Link: https://go.gov.sg/guide-to-smart-fm

ii. In March 2020, the government introduced a $19 million **Productivity Solutions Grant (PSG)**, **that also supports FMCs in adopting Smart FM solutions**. The PSG sponsors firms for 70% of their qualifying costs for the purchase of pre-approved solutions until January 2023, up to a firm cap of $30,000. From April 2020 to March 2022, the co-funding proportion for PSG has been raised from 70% to 80%.

iii. In September 2020, the **Smart FM Challenge** was launched to encourage service buyers (i.e. developers and building owners) and service providers (i.e. FMCs, solution and technology providers) to work together and adopt smart FM solutions in at least one building or a portfolio/cluster of buildings within the next 3 years. In addition, those who have already embarked on smart FM will review the outcomes and explore further areas for improvement. As of January 2021, more than 100 service buyers and service/technology providers have participated in the challenge. Service buyers and service providers can participate in the Challenge and sign up at https://go.gov.sg/smartfmchallenge.

iv. In October 2020, a grant call under the **Smart FM Proof-of-Concept (PoC) Grant** was called. The grant aims to kickstart the next phase of industry transformation with integrated and aggregated FM. The grant supports local public and private projects with up to 70% funding, capped at S$800,000 per project on the condition that the project delivers more than 20% in improvement in productivity. Projects supported under the grant will help establish a business case for integrated and aggregated FM solutions that can be subsequently scaled up and replicated in other portfolios or clusters of buildings.

Link: https://www1.bca.gov.sg/buildsg/facilities-management-fm/smart-facilities-management-fm

c) Strengthen procurement processes for enhance efficiency through greater emphasis on quality/productivity and championing integrated FM

From 1 May 2020, all Government Procuring Entities (GPEs) are required to adopt outcome-based contracting (OBC) for all security and cleaning contracts. The FMIC will continue to strengthen FM procurement practices to encourage OBC and develop procurement models that incentivise innovation and collaboration as follows:

i. The FMIC launched the **Guide on FM Procurement** in January 2021 to provide guidelines on procuring integrated FM services. It also includes a structured tender evaluation framework that emphasises requirements in quality delivery and OBC, and encourages FMCs to propose innovative and efficient solutions to achieve the desired outcomes.

Link: https://www1.bca.gov.sg/docs/default-source/docs-corp-buildsg/facilities-management/guide-on-fm-procurement.pdf

ii. The FMIC is developing the **standard FM Conditions of Contract** for use in FM contracts. This will increase the standardisation and familiarity of contract terms amongst service buyers and providers, and promote greater efficiency in contract administration. More details will be shared with the industry once ready.

d) Capability Development of FM Companies and FM personnel in support of FM transformation

In developing the FM industry and workforce, BCA has worked extensively with the industry to raise the standards of FM personnel and FMCs in providing services via the following measures:

i. In September 2020, the **Built Environment Skills Framework (SFw)** in collaboration with the industry, TACs, unions and academia was launched. The SFw provides key information on the Built Environment sector, including career pathways, occupations and job roles in the FM industry, as well as existing and emerging skills required associated with these roles. To uplift the standing of the FM profession, SIFMA is also looking at an accreditation scheme for FM individuals to support them in their career and wage progression to take on higher value job roles. This **FM Individual (FMI) Accreditation Scheme** will be aligned with the FM SFw as a form of validation for the related skills and competencies, and more details of the scheme will be shared subsequently.

Link: https://www.skillsfuture.gov.sg/-/media/SkillsFuture/Initiatives/Files/SFw-for-Built-Environment/SFw_BE_Guide_to_Occupations_and_Skills_2020.pdf

ii. In October 2020, the FMIC co-created a set of base criteria to benchmark FMCs to raise their capabilities and service quality, and the professionalism of the FM industry. SIFMA is the first industry association to develop a **FM Company (FMC) Accreditation Scheme** based on this set of base criteria.