

MEDIA FACTSHEET

JTC Facilities Management Transformation Journey



A. Impetus behind the Journey

JTC embarked on our Facilities Management (FM) transformation journey in 2013 in response to challenges in the existing FM industry and to address changes in the FM landscape. Some impetuses include:

1. **A growing portfolio** of JTC properties from 1.3 mil sqm in 2013 to more than 5 mil sqm in 2017, which increased the expectations on JTC as a building developer to seek more sustainable and productive solutions for better manpower and resource deployment.
2. Evolution of FM **innovations and technologies**.
3. New and ageing **infrastructure** that requires maintenance.
4. Shifting focus from downstream FM operations to **full cycle operations**, from operations to building design and construction.
5. **Manpower constraints** e.g. labour crunch and an ageing workforce.
6. Increased focus on **sustainability for buildings and building management** to minimise excessive consumption of resources, such as water and electricity.
7. **Rising operating and energy costs**.
8. **Increased customer expectations** e.g. faster fault reaction time, zero breakdowns, customer autonomy over room temperature.
9. **Laborious vendor management** due to increasing number of contracts and KPIs, resulting in lack of focus in customer service.

B. Traditional Facilities Management

To overcome these challenges, JTC reviewed traditional FM systems and processes

and their implications before exploring and implementing more sustainable, productive and efficient solutions.

We identified the following areas for potential enhancement:

1. To maximise coordination of operations and knowledge bases from **independently-managed buildings**.
2. Reduce carbon footprints and search costs, and increase efficiency from the pervasive use of **hardcopy documentation**.
3. Potential resource wastage resulting from **suboptimal utilisation of Building Management Systems (BMS)** and **lack of professional expertise**.
4. Reducing potential downtime for building occupants by conducting predictive and pre-emptive maintenance, instead of **reactive and preventive maintenance**.
5. Lower manpower and time costs, resulting from heavy reliance on **manual inspections**.

In terms of manpower and skillsets, the workforce also faced certain limitations:

1. **Trade-specific skillsets and knowledge bases**, where knowledge is limited to specific areas of expertise and non-transferable.
2. FM operators tend to have an **equipment-focused perspective** instead of a customer-focused perspective, which may lead to lower customer satisfaction.
3. Weak knowledge management may lead to limited **technical depth and expertise** to solve persistent or systemic issues, resulting in reactive maintenance and recurring issues.

As a real estate manager, JTC also faced limitations in the areas of contracting and outsourcing, leading to difficulties in managing the different stakeholders involved in FM. These limitations include:

1. **Multiple trade-specific contracts and vendor KPIs** to manage, such as lift technicians, M&E engineers, security officers, cleaners, etc., causing

difficulties with vendor and contract management.

2. Contracts were mainly **headcount-focused** instead of results-focused, which resulted in less efficient manpower resource allocation.

3. Performance management was **punitive**, potentially leading to unpopular working environments for FMC staff and lower customer satisfaction.

C. JTC's FM Transformation

Today, JTC leverages technology and process improvements to enhance management and maintenance of its developments. This has been achieved by upskilling labour, streamlining processes and leveraging new technologies.

a. Upskilling Labour

To ensure smooth upskilling of labour, JTC employs structured training and offers specialisation courses and accreditations to enable professionalisation of its FM executives, developing them from FM technicians to FM supervisors.

CASE EXAMPLE

Muhammed Shaban
Asst Manager, Building Management Division, ITC

Shaban joined ITC in 1995 as an Assistant Technical Executive. His role was to perform routine lift maintenance and operations work. His job role has expanded from being a lift technician when he first joined, to a Mechanical & Electrical Technical Executive looking after M&E systems in ITC buildings, to an Assistant Manager in the Building Management Division today. Shaban now supervises Facilities Management Companies (FMCs), analyses and prioritises faults using our FM systems, and advises engineers on technical solutions.

Despite not possessing a degree, Shaban was provided many on-the-job trainings, learning opportunities and exposure to challenging projects. Today, he is now a key member of the project team stationed in the L-One Command Centre.

We aim to encourage an outcome-based attitude, multi-skilled capability, pre-emptive

approach, collaborative working style, and tech-friendly mindset in our FM supervisors. This is done by providing broad-based learning as a foundation, followed by building deeper skills and knowledge in key focus areas, and lastly by professionalising the FM leaders with domain knowledge needed to push for FM excellence.

JTC prioritises talent growth and retention of our good performing FMC staff by recognising them with awards and certifications. Experience in the industry is also valued, and FMC staff with good track records are preferred when awarding new contracts.

b. Streamlining Processes

JTC has developed strategic outsourcing strategies aimed at streamlining FM processes and building close working relationships with the FM service providers, such that the performance of JTC's FM endeavours is reflected in the success of FM service providers in JTC developments. These strategies include:

1. Amalgamated contracts
2. Incentive mechanisms
3. Outcome-based contracts
4. Shared KPIs between JTC and FM service providers

One other way JTC innovated its processes was the decision to look at FM from the design stage of the development to ensure ease of maintainability for its new projects. Since 2016, JTC adopted Design for Maintainability for 18 developments; 7 of them have been completed, while 11 others are still under construction.

c. Leveraging New Technologies

Smart FM technologies have disrupted the playing field in areas such as digitalisation of assets and automation of workflow. This has presented JTC with opportunities to leverage Big Data for systems analyses and diagnoses to improve and streamline

future FM endeavours.

One such example is the Building Optimisation System within the J-Ops Command Centre. The Building Optimisation System is a cloud-based integrated smart estate and building operations system that allows JTC to centrally and remotely monitor, analyse, and optimise our estate and building systems on the FM front. JTC is also using new FM mobile applications, such as the Report-A-Fault app, to work together with the community to create a conducive and comfortable working environment. This free and easy-to-use mobile application allows the public to use their mobile devices to immediately capture photos of the faults and send them directly to our Automated Workflow System.

Other endeavours include:

1. **Digitalisation** of assets, such as generating digital work orders, leading to improved efficiency and a more comprehensive knowledge base.
2. **Automating** workflow systems that allows for smooth and efficient management, as demonstrated by our Automated Workflow System.
3. Embedding physical **sensors** in facilities and estates, such as employing Tree Tagging or Bigbelly Smart Bins to aid our awareness of the physical estate.
4. Gathering **systems diagnostics** and conducting data analytics from data gathered from technologies, such as those gathered from physical sensors embedded in facilities and estates.

d. Supporting the Real Estate Industry Transformation Map

The Real Estate Industry Transformation Map (ITM) is one of 23 ITMs developed under the Industry Transformation Programme, a key strategy highlighted by the Committee on the Future Economy in its February 2017 report. The Real Estate ITM was developed over the last year with inputs from multiple representatives from different industries across the real estate value chain, including developers, facilities managers, property agencies, and valuation and conveyancing firms, among others. The Real Estate ITM has identified the facilities management (FM) and property

transaction services sub-sectors as having the strongest potential for transformation. With our extensive experience and portfolio in the areas of real estate, facilities management and property transaction services, JTC has already implemented some of the initiatives that the REITM seeks for the industry.

[For info:

The REITM focuses on the following areas:

- 1. Design and masterplanning of new buildings and estates for easy maintenance, for including FM considerations in district masterplanning, and implementing these works with Building Information Modelling systems.*
- 2. Integrating new FM solutions and sensors into existing buildings and systems in order to stay relevant in the face of changing technologies and enabling predictive maintenance and repairs.*
- 3. Training and upskilling existing manpower and working with Institutes of Higher Learning (IHL), in order to ensure smooth adoption of Smart FM and ensure synergistic job matching between FM skills and job roles.*
- 4. Leveraging technology to improve marketing processes, increase productivity, and automate administrative tasks.]*

To ensure that aspects of FM and maintainability are being looked at right from the design and masterplanning levels, JTC incorporated Design for Maintainability into our Building Design Requirements. We have also implemented Shared District Cooling Systems and Waste Collection Systems in JTC estates. JTC will also be using Building Information Modelling (BIM) for FM in our buildings.

In terms of our existing buildings and estates, JTC also integrates new FM solutions and sensors to stay relevant in the face of changing technologies, and enable predicted maintenance and repairs. For example, JTC uses the J-Ops suite of FM systems to improve efficiency and productivity, while also piloting FM programmes such as Bosch lift sensors, Bigbelly Smart Bins, and toilet sensors to enable swift responsive action to faults or issues. This helps JTC drive productivity and sustainability, while helping us meet the expectations of our building occupants.

With the use of new technology, JTC also recognises the need to upskill our FM employees and improve the FM work scope. We prioritise the upskilling of employees to ensure they are well equipped with the most relevant FM skillset, such as Shaban's case study above.

Beyond Facilities Management, JTC also looks at other ways to leverage technology and ensure a better experience for our customers, such as in the areas of Property Transaction services. JTC has rolled out 360-degree viewing of some of our developments on our corporate website to allow potential customers a first-person view of the location without having to physically visit. In addition, in our push towards sustainability and a reduced carbon footprint, JTC introduced paperless tenancy agreements in 2017.