

# Introducing the Internet of Facility Management Things, the IoFMT

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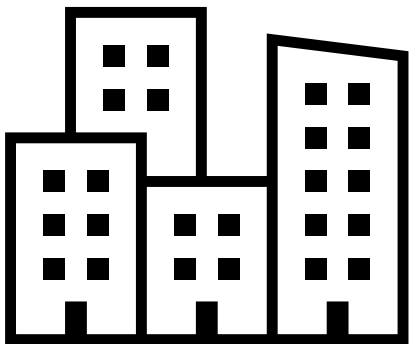
How is the IoFMT enabling drivers for change in real estate as we transition into the Fourth Industrial Revolution?

# What is Facility Management?

## ISO 41011: 2017

### Facility Management:

*“An Organisational function which integrates people, places and processes within the built environment with the purpose of improving the quality of life of people and the productivity of the core business (ISO 41011: 2017)” [90]*



Facility Management services can be generally categorised as Hard Services, Soft Services, and Management

### Hard Services

- Physical Assets that are attached to the building
- Cannot easily be removed
- Includes Mechanical, Electrical, Plumbing, Building Fabric

### Soft Services

- Tasks performed by people to carry out particular services
- These services relate to the building environment and user experience
- Includes Catering, Cleaning and Security

### Management

Responsible for, but not limited to, the delivery of services and resources for the safe and continued running of the facility

The minimum requirement to ensure that the management arrangements for FM balance the need of the organisation, service users and service providers [144]

# Drivers for Change

## Our ability to adapt

- There is a mandate to reduce or offset the use of Greenhouse Gases by 2050
- Fuelled by increases in energy prices
- This means a change for Building Services and the Facility Management Sector
- Which has been exasperated by a transformation with Covid-19 and remote working, making occupancy levels unpredictable
- New and lower cost technologies have opened up to create a more digital environment

This has been producing a cooking pot of necessity for change which is propelling innovation and creating a shaken snow globe of solutions.

## Who Cares Wins

The United Nations Global Compact, Principles for Responsible Investment (PRI) is driving the Environment, Social and Corporate Governance (ESG) which has expanded into the member nations [149]

## Scope 1,2,3 and the Organisational Boundary

Emissions - Direct, indirect and everything else. Identifying demarcations of responsibility will attribute to the cost of services

## Carbon Neutral Net Zero

The Paris Agreement 2015 puts a commitment on all member countries of the United Nations to reduce emissions by 45% by 2030 on a path to Net Zero emissions for 2050

## Environment, Social, Governance, ESG

Factors for consideration set out by the United Nations PRI that 'need to be considered in every deal' and should be understood, interpreted, and integrated into every agenda [146]

## Government Mandate

The UK is laying the foundations of expectation: Fire Safety, Building Regulations, IoT, Cyber Security, Facility Management and Asset Management

## Supply and Market Changes

Occupancy and technology have transformed the built environment with remote working and data driven solutions providing several options for Facility Managers

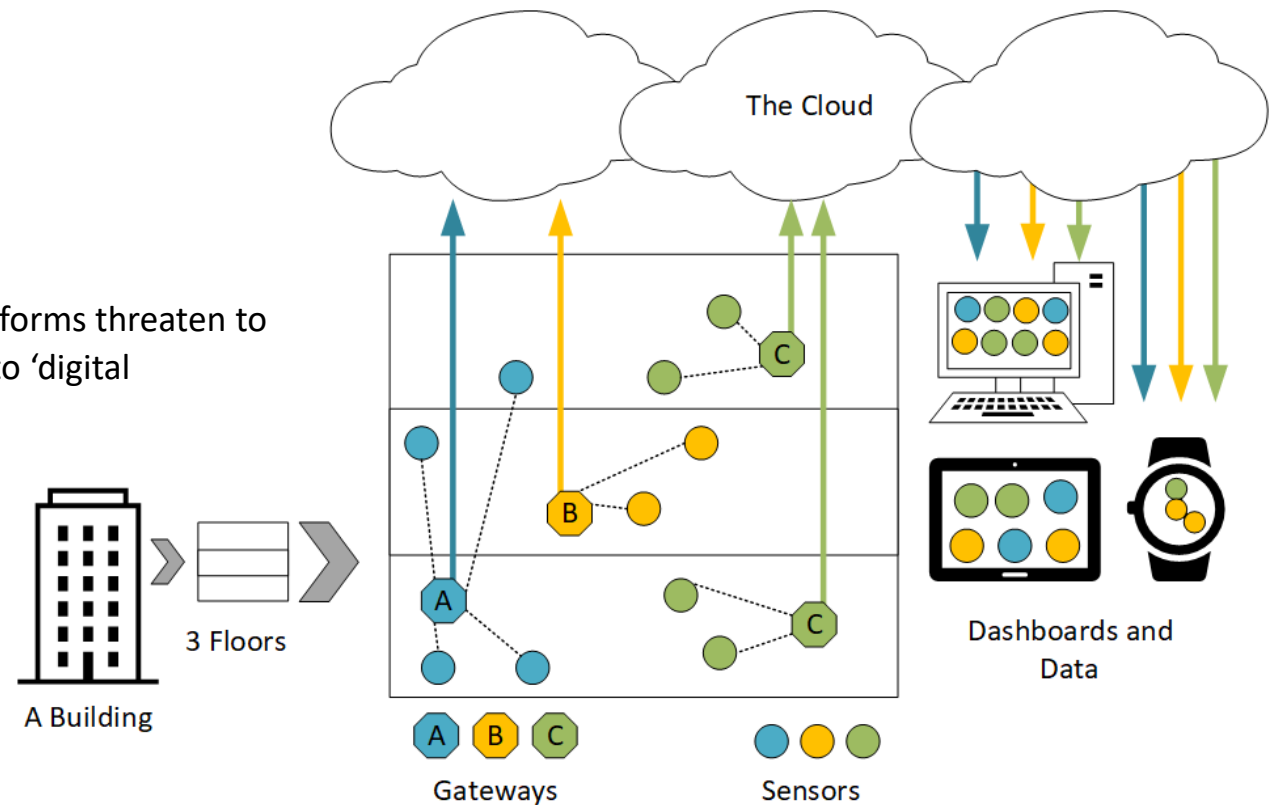
# What is the IoT?

## Brief History of...

- 1990** A toaster that could turn on and off over the internet
- 1999** The 'Internet of Things' is first coined
- 2008** IoT is internationally recognised when the number of connected machines surpasses the number of people on the planet
- 2014** IoT devices begin introducing themselves to the domestic markets to control things like home lighting and thermostats from their phones
- 2020** IoT steps up in response to COVID-19, finding new uses in Facility Management
- 2021** 21.5 Billion devices connected globally
- 2025** 30 Billion+ IoT connections and an economic impact of between \$3.9 and \$11.1 trillion per year [126]

Interconnected computing devices and sensors embedded in everyday objects which enable them to send (and receive) data using the internet, this is known as 'The Internet of Things' or 'IoT' [85]

These devices and platforms threaten to turn the built world into 'digital spaghetti' [107]



# The Fourth Industrial Revolution

**18<sup>th</sup> Century**

**The First  
Industrial Revolution**



Steam  
Water  
Mechanical production  
equipment

**19<sup>th</sup> Century**

**The Second  
Industrial Revolution**



Division of labour  
Electricity  
Mass production

**20<sup>th</sup> Century**

**The Third  
Industrial Revolution**



Electronics  
Information  
Telecommunication  
Automated Production

**21<sup>st</sup> Century**

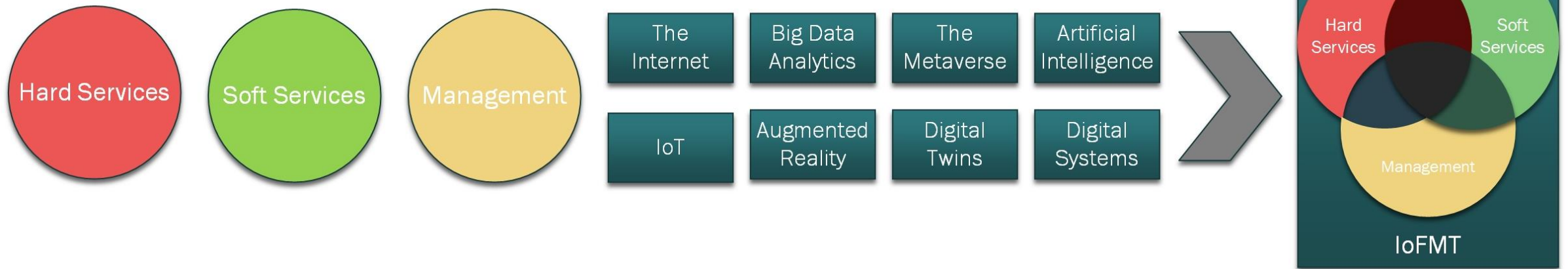
**The Fourth  
Industrial Revolution**



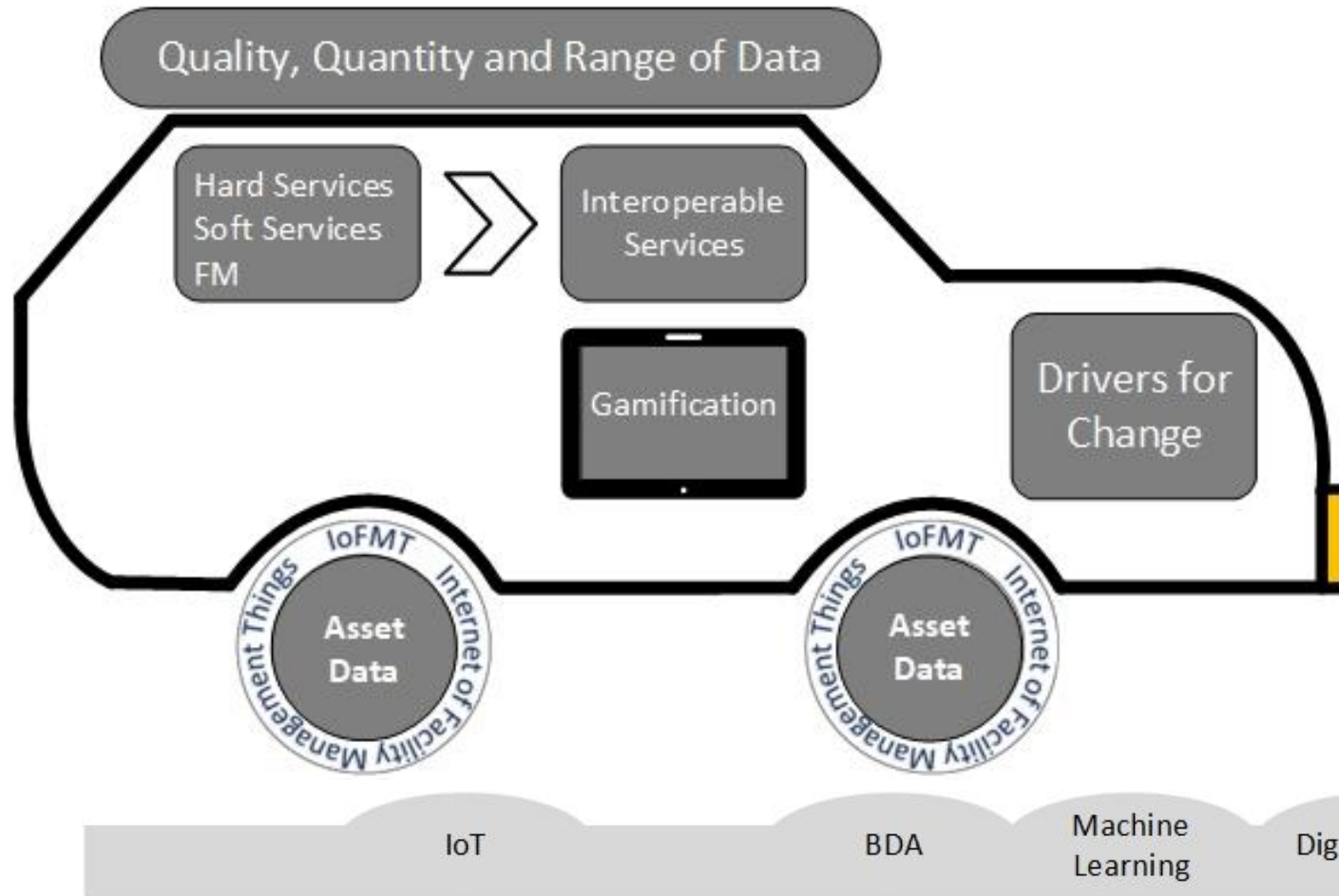
The Internet of Things  
Big Data Analytics  
Machine Learning  
Digital Twins  
Augmented/Virtual Reality  
The Metaverse  
Artificial Intelligence

# What is the IoFMT?

- The IoT is becoming more commonly adopted across the FM sector
- The Internet of Facility Management Things, (the) IoFMT, introduces a way for Facility Management to enable digital drivers for change
- It is a hybrid of different IoT technologies, such as the Industrial Internet of Things (IIoT) and is underpinned by the interoperability of online systems
- Its reach extends across Hard Services and Soft Services alike, encompassing the entire management of the facility or, facilities



# How is the IoFMT enabling Drivers for Change?



The Internet of Facility Management Things, IoFMT enables Facility Management Organisations to transition into the digital landscape of the Fourth Industrial Revolution and meet the drivers for change in Real Estate

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Thank you

[IoFMT.com](http://IoFMT.com)

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