FACILITY MANAGEMENT: YESTERDAY, TODAY, TOMORROW
The Expanding Spectrum of Accountability & Responsibilities of FM’s

IFMA Jacksonville
Rich Early, CBRE
April 27, 2018
WHAT IS FACILITY MANAGEMENT?

A professional management discipline focused upon the efficient and effective delivery of support services for facilities and organizations. FM includes the integration of people, systems, places, process, and technology for effective utilization of a Corporation’s Facilities and Real Estate.

Facility Management creates the environment that improves the quality of life of people in the facility and the productivity and performance of the business.
COMMITMENT TO SAFETY
Reducing TRIR (Total Recordable Incident Rate) and LTIR (Lost Time Incident Rate)

Safety as a core value of FM service delivery, not just a performance statistic. Provide employees, occupants and clients consistency and dedication to zero safety incidents. A strong Safety Focus provides employee satisfaction, customer satisfaction, and profitability.

It is our intention to return people home safely….every person, every day.

“Our commitment is to maintain safe and inspiring workplaces that engage our clients’ employees, and their customers.”

-William Concannon, Chief Executive Officer, Global Workplace Solutions, CBRE
The Expanding Spectrum of Accountability & Responsibilities of FM’s
The phrase ‘Facilities Management’ is said to have been coined by Ross Perot of Electronic Data Systems (EDS), tied to the energy crisis of the early 1970s; organizations discovered the need to be concerned with the cost of operating their facilities, and began to analyze the cost of building operations.
## FM YESTERDAY
Prior to the 1980’s

### FACILITY MANAGEMENT CONSISTED OF:

<table>
<thead>
<tr>
<th>Building Maintenance Staff</th>
<th>Basic Technology</th>
<th>Paper Work Order System (if one existed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Maintained the power, heating, cooling, water</td>
<td>Technology was basic and tied to the specific equipment</td>
<td>Maintenance was typically completed “as needed”</td>
</tr>
<tr>
<td>• Provided “firefighting” during emergencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Heavy reliance on vendors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FM YESTERDAY
Progression through the 1980’s

Very basic spreadsheet tracking of work orders, progressing to excel spreadsheets or an access database

Capital planning was very basic

Early versions of Computerized Maintenance Management Systems began to appear

Benchmark data was not available; intuitive decision-making with some data-driven decisions

Early outsourcing of non-core services such as janitorial and food to manage costs
Progression through the 1990’s into the 2000’s

By the 1990’s, the FM services category included building hard-services, property management and soft services such as janitorial and food services.

Computerized Maintenance Management Systems (CMMS) were becoming prevalent.

In the 2000’s, FM entered the world of ‘integrated facility services’, gradually increasing to a very broad sector encompassing building, staff and business services.
The Expanding Spectrum of Accountability & Responsibilities of FM’s
Integrate energy management (utilities) into the base building maintenance.
FACILITIES MANAGEMENT
Technical Services + FM Management + Soft Services

ADDITIONAL SCOPE

**FM MANAGEMENT**
- Management Staff*
- Governance Staff*
- Accounting*
- Technology*
- Call Center*
- Art Management*
- Warehouse Management* (Furniture)
- Decorations
- Plant Care

**SOFT SERVICES**
- Janitorial / Custodial
- Carpet Cleaning
- Hard Floor Buffering & Polishing
- Exterior window washing
- Day Porters
- Landscaping
- Pest Control
- Municipal Solid Waste
- Recycling
- Bio Hazardous
- Confidential Document Disposal
- Sweeping
- Snow Removal
INTEGRATED FACILITIES MANAGEMENT
Technical Services + FM Management + Soft Services + Experience Services + Occupancy Services

OCCUPANT and EMPLOYEE SERVICES / EXPERIENCE SERVICES

HOSPITALITY
- Concierge
- Reception / Switchboard
- Room Management
- A/V Support
- Meeting Management
- Event Support
- Community Programs
- Executive/Client Centers
- Workplace Coaching

FOOD SERVICES
- Catering
- Cafeteria & Cafes
- Executive Dining
- Vending & Micro Markets
- Coffee/Beverage Services
- Snacks

SPECIALTY PROGRAMS
- Child Care
- Fitness & Recreation
- Personal Services
- Parking & Commute
- Bicycle & Local Shuttle
- Art Management
- Company Store
- Pet programs

DOCUMENT SERVICES
- Mail Services
- Shipping & Receiving
- Repographics
- Record Archiving
- Office Supply Management

SECURITY
- Badging & Reception
- Manned Guarding
- Building Patrol
- Operations Center

MAC SERVICES
- Moves, Adds, Changes
- Furniture, Fixtures & Equipment
- Rapid/Space Configuration
- Space Reset
- Workplace Onboarding

IFM
ENGINEERING, FM, EMPLOYEE EXPERIENCE & OCCUPANCY SERVICES
FM TODAY
Real Estate as a critical part of the overall Organization

FM continues transforming from a focus on assets and buildings to a focus on end-users and outcomes; managing costs remains a priority while increasing the quality and sustainability of the experience (Improve the quality of life of the people and the productivity and performance of the business).

Ever-increasing and broader focus on Safety

Ever-increasing focus on Wellness and Well Buildings

Shifting Demographic and Social Changes contribute to how the workplace is viewed and what people expect (Gen X, Gen Y, Gen Z)
FM TODAY
Efficiencies/Productivity/Lower total cost of service

Analytics to measure performance of the operation, property, people and processes
• Data defines the performance of the operation, providing smart decision making
• Data provides understanding of what you need to manage, leading to learning of what you need to measure
• Data develops improved benchmarks to drive efficiencies, productivity, and improvements
• Data assists development of means and methods to enhance technician time-on-tools

Selective use of data leads to better analytics, providing insight and the ability to drive improvements

Supply Chain - Supplier Partnerships drive cost efficiencies and quality
ISO 41001 Facilities Management System Standards achieved global consensus with 27 participating countries with approval in March 2018, providing a global definition of FM. ISO 41001 Standards will debut this spring, creating global standardization and recognition of FM; certification achieved through compliance to quality standards.

Components:

• ISO 41011 – Vocabulary
• ISO 41012 – Guidance on Strategic Sourcing and Development of Agreements
• ISO 41013 – FM Scope, Key Concepts and Benefits
FM TODAY/TOMORROW

The Expanding Spectrum of Accountability & Responsibilities of FM’s

Navigating continual change
FM TODAY/TOMORROW
Navigating continual change

Continued Focus on Safety, Analytics, Expense Management/Lowering Costs, Streamlined Operation and Improved Occupant Experience

Multi-generational workplace:
• Boomers (born 1946 – 1964) are retiring
• By 2020, Generation Y (born 1981 – 2000) will make up 50% of the workforce

Connected – Internet of Things (IoT)

Wikipedia definition of IoT: “The interconnection of uniquely identifiable embedded computing devices within the existing Internet infrastructure. The interconnection of these embedded devices (including smart objects), will usher in automation in most fields, while also enabling advanced applications like a Smart Grid.”
Smart Buildings and the Internet of Things (IoT)
**FM TODAY/TOMORROW**

Navigating continual change

Yesterday and Today Solutions are “Point” (on-demand) solutions such as:
- BAS monitored remotely off hours with ability to trouble-shoot/re-set
- Fire extinguisher point monitoring pressure tied to BAS for monthly inspection

Today and Tomorrow Solutions are/will be “Systems” solutions using *Smart* technology
- Building systems tied through BAS – HVAC, control panels, lighting, cameras, etc.

**Smart Buildings: “Operationally Smart” and “Experientially Smart”**
- Operationally Smart = FM has control; optimize costs through focused savings initiatives; optimize operation of the facility
- Experientially Smart = Curated service to Occupant control/ desires/ requests
THE INTERNET OF THINGS
AN EXPLOSION OF CONNECTED POSSIBILITY

2020
50.1 BILLION
Taking 2015's 17.5 Billion devices, this will be about 3 times devices per person on the planet.

2018
42.1 BILLION

2017
26.4 BILLION

2016
18.2 BILLION

2015
11.2 BILLION

2014
8.7 BILLION
One billion of connected thermostats, cordless phones, and entertainment devices via Wi-Fi.

2010
22.9 BILLION
Smartphones and tablet merging will become more popular—single big cell, look like a phone, entertainment platform.

2009
34.8 BILLION

2008
0.5 BILLION

2003
1,000,000

2002
About 1/10th of the population

0

YEAR
BILLIONS OF DEVICES

SOURCE | THEIOTMAGAZINE.COM
TWO CATEGORIES OF ‘SMART BUILDING’

OPERATIONAL

- Facility Manager Empowerment
- Equipment Control
- Expense Reduction

EFFICIENT OPS

EXPERIENTIAL

- Occupant Empowerment
- Time Control
- Distraction Reduction

CURATED DAY

REDEFINING CRE

- Multi-directional controls
- Machine Learning & AI
- Technician + Technology
WHAT DO WE MEAN BY SMART BUILDINGS?

Smart buildings entail system integration and continuous services that drive value for the business

**ATTRIBUTES:**

- Implements data sharing between disparate building systems

- Automates activities and processes:
  - Reducing human error and risk
  - Increasing asset reliability and performance
  - Providing energy and operational efficiency
  - Improving occupant experience and productivity
  - Providing insight on the facility for CAPEX and OPEX planning
BUILDING AUTOMATION & SYSTEM INTEGRATION

**Vertical Integration – systems within a building**
- BAS, lighting, security, life safety, production, etc.
- Seamless interoperability, unified building platform
- Achieves energy and operational savings
- Improved safety and occupant experience
- Reduces business risk

**Horizontal Integration – BAS across a portfolio**
- Consistent user interface, alarming, control, scheduling
- Improved remote operations, trouble shooting, resolution

<table>
<thead>
<tr>
<th>Vertical Integration – systems within a building</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BAS, lighting, security, life safety, production, etc.</strong></td>
</tr>
<tr>
<td><strong>Seamless interoperability, unified building platform</strong></td>
</tr>
<tr>
<td><strong>Achieves energy and operational savings</strong></td>
</tr>
<tr>
<td><strong>Improved safety and occupant experience</strong></td>
</tr>
<tr>
<td><strong>Reduces business risk</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horizontal Integration – BAS across a portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consistent user interface, alarming, control, scheduling</strong></td>
</tr>
<tr>
<td><strong>Improved remote operations, trouble shooting, resolution</strong></td>
</tr>
</tbody>
</table>

**BUILDING AUTOMATION & SYSTEM INTEGRATION**

<table>
<thead>
<tr>
<th>JCI (Metasys)</th>
<th>Siemens (Apogee)</th>
<th>Trane (Tracer)</th>
<th>Alerton (Ascent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A/V</strong></td>
<td><strong>Lighting</strong></td>
<td><strong>HVAC</strong></td>
<td><strong>Intrusion Detection</strong></td>
</tr>
<tr>
<td><strong>Meters</strong></td>
<td><strong>Extinguishers</strong></td>
<td><strong>Fire Alarm</strong></td>
<td><strong>Etc...</strong></td>
</tr>
</tbody>
</table>
SERVICE OPTIMIZATION: DATA-DRIVEN INTELLIGENCE FUELING SMARTER OPERATIONS

Conduct condition-based maintenance strategies

Replace assets on actual usage, not age

Provide evidence of uptime and reliability for stakeholders

Respond to validated, adverse conditions, not perceived issues

Reduce truck rolls with grouped responses to verified needs

Maintain a comfortable work environment, predictably and reliably

**Drives**
- maintenance schedules based on asset performance, not a calendar

**Extends**
- asset lifecycle with confidence - OEMs may have incentive to trigger early replacement

**Reduces**
- contract monitoring costs and hedging behavior aimed at demonstrating value

**Avoids**
- wasted resources by focusing on verified needs

**Triages**
- facility issues and addresses root cause analysis

**Satisfies**
- occupants with consistently effective work environments

E0052A0317

SERVICE OPTIMIZATION: DATA-DRIVEN INTELLIGENCE FUELING SMARTER OPERATIONS

Conduct condition-based maintenance strategies

Replace assets on actual usage, not age

Provide evidence of uptime and reliability for stakeholders

Respond to validated, adverse conditions, not perceived issues

Reduce truck rolls with grouped responses to verified needs

Maintain a comfortable work environment, predictably and reliably

**Drives**
- maintenance schedules based on asset performance, not a calendar

**Extends**
- asset lifecycle with confidence - OEMs may have incentive to trigger early replacement

**Reduces**
- contract monitoring costs and hedging behavior aimed at demonstrating value

**Avoids**
- wasted resources by focusing on verified needs

**Triages**
- facility issues and addresses root cause analysis

**Satisfies**
- occupants with consistently effective work environments

E0052A0317
Experientially Smart
REIMAGINING THE DELIVERY OF FM SERVICES

Integrating and e-engineering traditional “employee services” functions, often creating cost savings while introducing a people-centered, productivity-enhancing experience.

YESTERDAY

- Hospitality Services
- Document Services
- Specialty Programs
- Food Programs
- MAC Services
- Security

TODAY

- On-Site Staffing
- Vendors & Landlords
- Building Technologies
- CRE Technologies
- Corporate Support Functions
- Training & Development

TOMORROW

- Entry/Exit
- Working Solo (“I Work”)
- Meetings (“Teamwork”)
- Connecting (“Network”)
- Dining
- Well-being
- Work-Life Integration
WHAT ARE EXPERIENCE SERVICES?

**HOSPITALITY**
- Concierge
- Reception / Switchboard
- Room Management
- A/V Support
- Meeting Management
- Event Support
- Community Programs
- Executive/Client Centers
- Workplace Coaching

**FOOD SERVICES**
- Catering
- Cafeteria & Cafes
- Executive Dining
- Vending & Micro Markets
- Coffee/Beverage Services
- Snacks

**SPECIALTY PROGRAMS**
- Child Care
- Fitness & Recreation
- Personal Services
- Parking & Commute
- Bicycle & Local Shuttle
- Art Management
- Company Store
- Pet programs

**SECURITY**
- Badging & Reception
- Manned Guarding
- Building Patrol
- Operations Center

**MAC SERVICES**
- Moves, Adds, Changes
- Furniture, Fixtures & Equipment
- Rapid/Space Configuration
- Space Reset
- Workplace Onboarding

**DOCUMENT SERVICES**
- Mail Services
- Shipping & Receiving
- Repographics
- Record Archiving
- Office Supply Management

© 2018 CBRE | CONFIDENTIAL & PROPRIETARY
CBRE 360 | PLATFORM

A people-led, technology-enhanced platform that connects the complete work experience and measures engagement.

Our Experience professionals & employee mobile app connects:

- **Community:**
  Culture, satisfaction & retention

- **Services:**
  Access to amenities & services

- **Workspace:**
  Utilization of space & building systems
WHAT ARE EXPERIENCE SERVICES?

A recent CBRE Americas Occupier survey found that 59% of real estate executives are planning to incorporate mobile apps in order to enhance the employee experience.

“Employee-centric apps, centered on improving workplace experiences, hold the promise of connecting owners and employees with more positive sentiment activities, like food ordering and wellness activities. That’s a win for both sides.”

- CBRE 360’s chief product officer, Brian Harrington, quote from BIZNOW National Newsletter, April 12, 2018.
TECHNOLOGY AND IOT

Paradigm Shift for all industries

tech | experience | talent
IoT Slam Live 2018 - “Care and Find New Cures for Diseases”

“We are personally and professionally committed to leveraging IoT in Healthcare and are passionate about its potential use in global (and growing number) diseases such as Cancer - particularly as it relates to early detection, so not to be in a losing battle once a tumor has been clinically diagnosed”

-David Hill
PARADIGM SHIFT – RECRUITING AND TRAINING
TALENT - TECHNICIAN + TECHNOLOGY - Navigating continual change

- IoT and technology will continue to impact the skills required in FM
- Enable techs with the right tools, technology and data to do their jobs effectively
- FM workforce is aging – recruit young talent to IoT high tech environment
- IoT connected technology will attract new leaders and technicians to an FM career
- Technical school training will expand beyond base building equipment and systems to include IoT and related technology
- Develop partnerships with third-party Schools providing specifically-focused technical training
PARADIGM SHIFT – RECRUITING AND TRAINING
TALENT - TECHNICIAN + TECHNOLOGY - Navigating continual change

“Sustainable Tech” – provide apprenticeships for on-the-job learning and career advancement

Continual Change Management – Leadership alert and aware of the need for ongoing Continuing Education with every new technology or business process

“Experience Services” requires exceptional customer skills with related training

Recognition of the technical workforce and the impact they have on our service delivery
THANK YOU.

Gracias. 謝謝. Salamat. धन्यवाद. Obrigado. شكرا
Спасибо. 감사합니다. ขอบคุณ. Danke.
ありがとうございます. Merci.