



SAME

Pikes Peak Post

General Membership Meeting

June 9, 2020

Jim Bracket, PE, F.SAME
Pikes Peak Post President

**DISCOVER
YOUR ROLE
IN BUILDING
AMERICA'S
FUTURE.**

- Welcome & Pledge
- Housekeeping
- Upcoming Events
- National Recognition
- Installation of Officers
- Guest Speakers
 - Mark Tomassoni, PE, Chair, SAME National Facility Asset Management COI
 - Bill Naughton, PG, Chair-Elect, SAME National Facility Asset Management COI

- Please mute phones and turn-off webcams
- Submit all questions via chat
- Webinar will be recorded and available following program
- PDH Credit certification can be obtained by emailing Bob Fant
 - robert.fant.1@us.af.mil

Upcoming Post Events

- July Membership Meeting – July 14th (Virtual)
 - Bahama Island Recovery After Cat 5 Hurricane
- August Membership Meeting – August 11th (Virtual)
 - Agency Opportunity Briefings
- Annual Golf Tournament – August 28th
 - Eisenhower Golf Club, US Air Force Academy
 - SurveyMonkey to gauge interest coming soon

Upcoming National Events

- Facilities Management Workshop – July 29, 2020 (Virtual)
- Post Leaders Workshop – August 6, 2020 (Possibly Virtual)
- Small Business Conference – November 4, 2020

- Gibson Veteran Transition Medal
 - Sal Nodjomian, F.SAME
- Tudor Medal
 - Zakary Payne
- Robert B. Flowers Small Business Award
 - Betance Enterprises Inc.
- President's Medal
 - Cindy Lincicome, F.SAME

- Anita Larson, F.SAME – Rocky Mountain Regional Vice President
 - President Jim Brackett, F.SAME
 - 1st Vice President Col Patrick Albritton
 - 2nd Vice President Zakary Payne
 - Treasurer Jared Geissler
 - Secretary Amy Umiamaka
 - Fellows/Senior Members Joe Schwarz, F.SAME

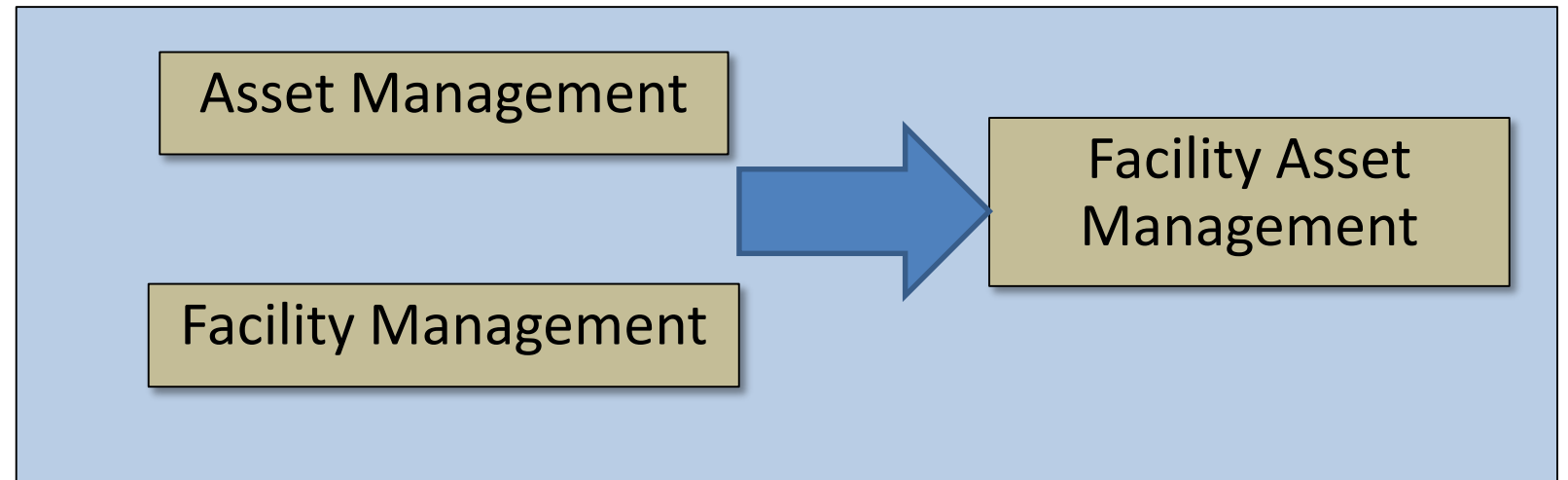


Today's Technical Program



Facility Asset Management Best Practices

Facility Asset Management (FAM) at Department of Defense Bases: What Is It and Where Is It Going?



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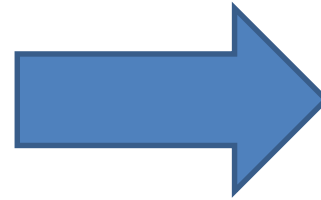
**US Army Corps
of Engineers®**

Agenda

- The Issues, the Need
- The Solution = Asset Management (AM) + Facility Management (FM) = Facility Asset Management (FAM)
- Two Types of Physical Assets
- FAM During A&E
- FAM During Construction
- FAM During Facility Operation and Maintenance
- The Future of FAM

The Issues

- Major facility mistakes in DoD A/E/C/O&M during design, construction, and startup.
- New facilities experience excessive unplanned downtime, resulting in excessive costs and loss of critical production due to quality and quantity issues.
- Losses can be avoided by implementing facility asset management (FAM) prior to facility startup.



The Needs

- Extend asset life, use, availability
- Enhance functionality of assets, even with changing ownership.
- Improve reliability and safety in daily operations.
- Convert perfectly imagined working conditions into reality.
- Help optimize asset retirement age.

The Solution = Asset Management (AM) + Facility Management (FM)



- **AM = STRATEGY.** Applied to primary and support business processes, assets that are used to conduct DoD base mission (real estate, production machinery and equipment, plant facilities, tools, etc.)
- **FM = TACTICS.** Focused on support business processes. **Garrison Commanders, Public Works. Civil Engineers** develop and implement daily operations for buildings, HVAC, electrical, transportation vehicles, workplace facilities, mobile devices, IT equipment, etc. Most DoD FAM contracts involved unions workforce.

Overview (con't) - AM + FM



Asset Management (Physical Assets, Primary Business Processes) STRATEGIC

- Primary Work Objective. Maximum Return on Assets and Asset Utilization (rate)
- Scope of Work. Assets used by DoD base primary and support business functions
- Priority. Improve maintenance productivity and optimize equipment reliability per DoD's production/primary mission
- Focus. Achieving DoD mission objectives while minimizing assets' capital expenditures (CAPEX)

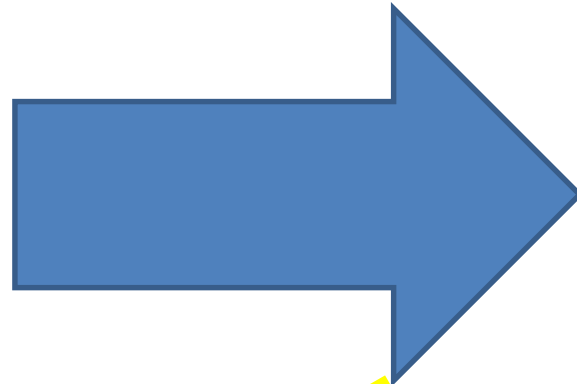
Facility Manager. (Physical Assets, Supporting Business Processes). TACTICAL

- Primary Work Objective. Optimal work environment
- Scope of Work. Asset management which support DoD base mission
- Priority. Improve User's primary business productivity and effectiveness
- Focus. End User/Occupier needs and demands while optimizing operational (OPEX) and capital expenditures (CAPEX).
- Corporate Social Responsibility. 90+% are managed by FM

Merger of AM and FM

Asset Management
(Strategic)

Facility
Management
(Tactics)



Voila!

Facility Asset
Management

Two Types of Physical Assets

1. **Immovable assets (buildings)**. Base offices, training, PX, warehouses, housing, schools, health care, recreational, power, water, sewer, transport, communication, roads/walkways, grounds
2. **Movable Assets**. Not permanently attached to immovable assets – HVAC, equipment, tools & instruments, vehicles, furnishings, electronics, IT devices, etc.

FAM During Architecture & Engineering (A&E)

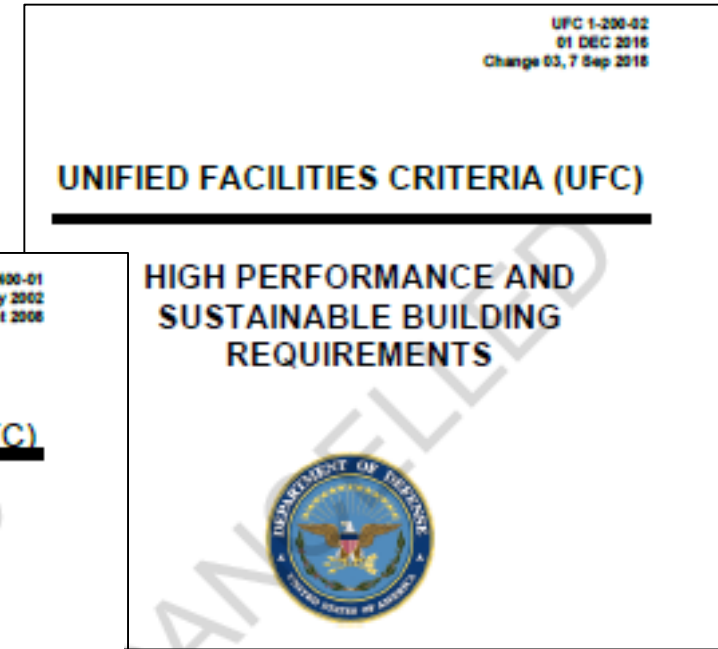
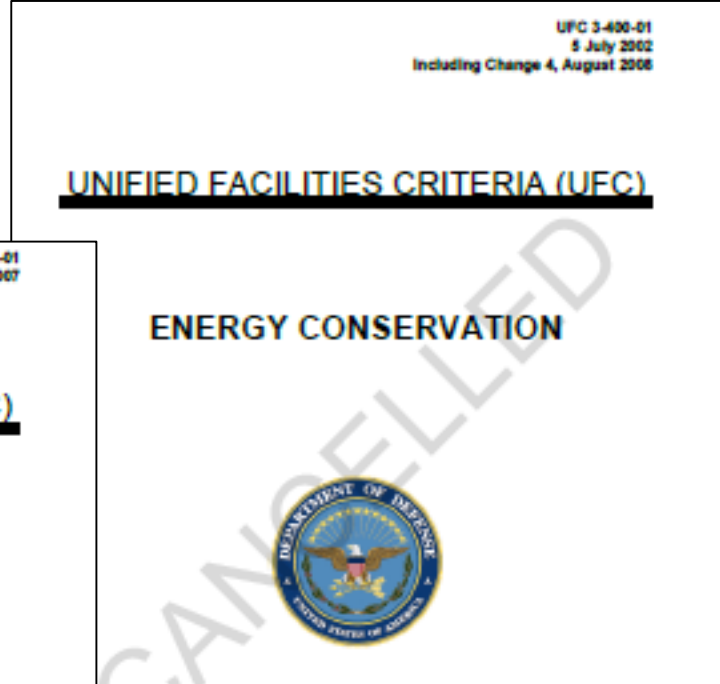
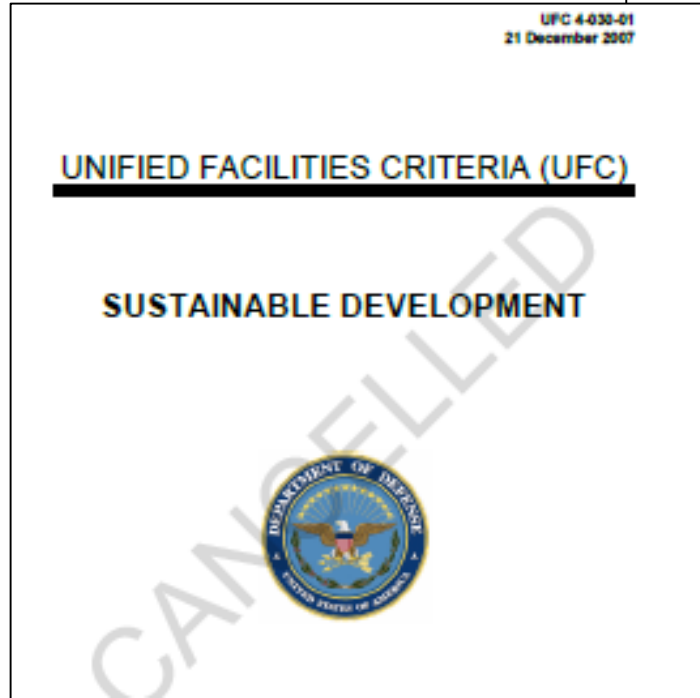


- BEFORE. Few A&E concerned with structural “durability.” A&E safely carry loads. Calculations used for new buildings in pristine condition. Assumption that degraded structures would be replaced.
- NOW.
 - Aging DoD/federal facilities.
 - Can’t replace everything built. Structures need repairs.
 - Goal to design new structures not only to be safe, but also to be durable.
 - Durability depends on base operations.
 - Commercial structures being designed to last 75, 100 years, even 120 years.

- Key manuals for unified DoD structures



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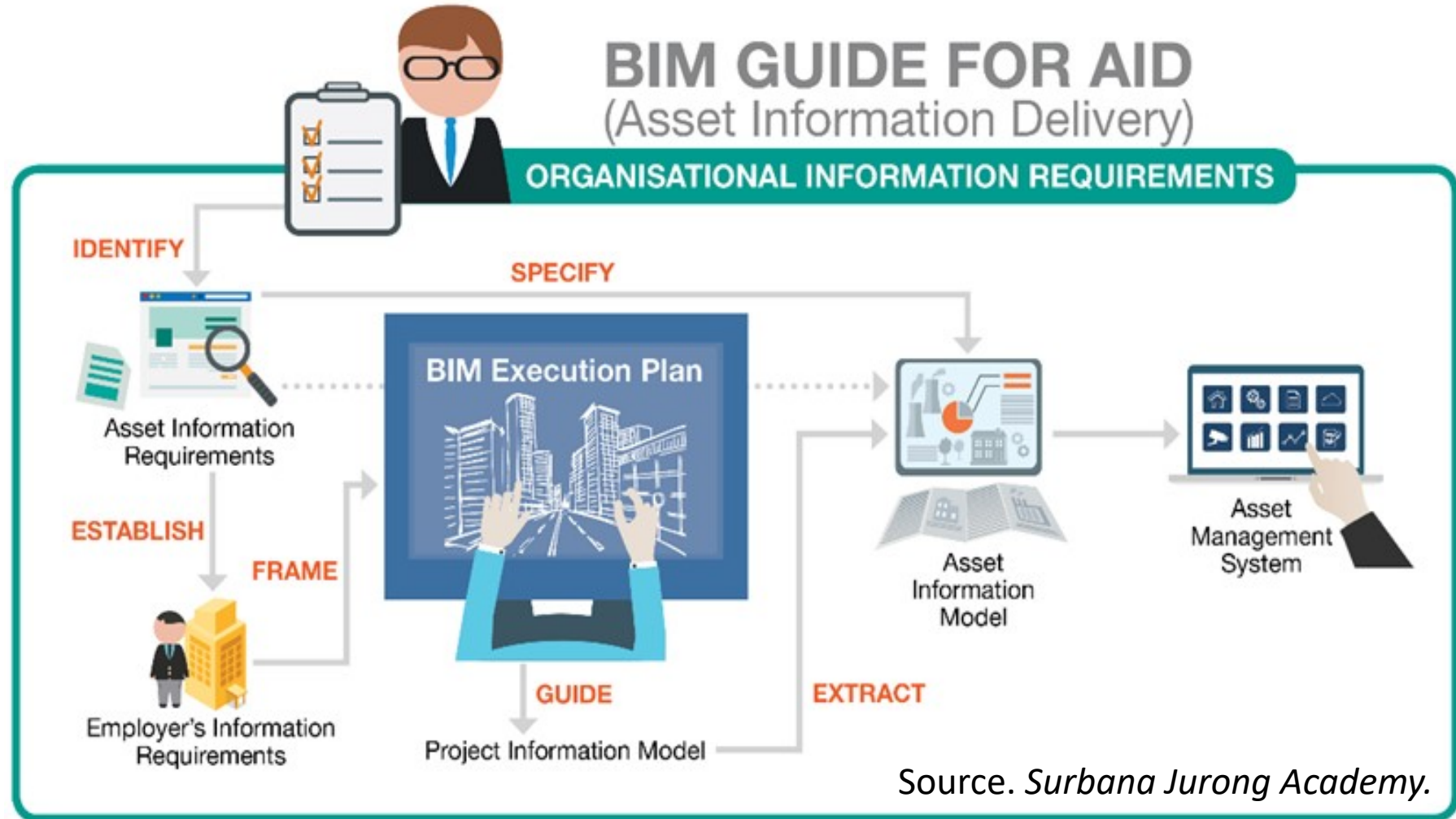


FAM During Construction

- Asset management often overlooked during construction.
- New facilities experience excessive unplanned downtime. Lead to excessive costs and loss of critical availability.
- Designing for RAM (reliability, availability, maintainability) in Stage 1 of Capacity Planning returns benefit during early operation.
- “Reliability” = probability that an asset functions as intended
- “Availability” = % time asset functions as intended.
- “Maintainability” = effort required to keep/return equipment to perform intended function.
- “Reliability” and “maintainability” work together to determine “availability” → enhanced asset utilization (AU).

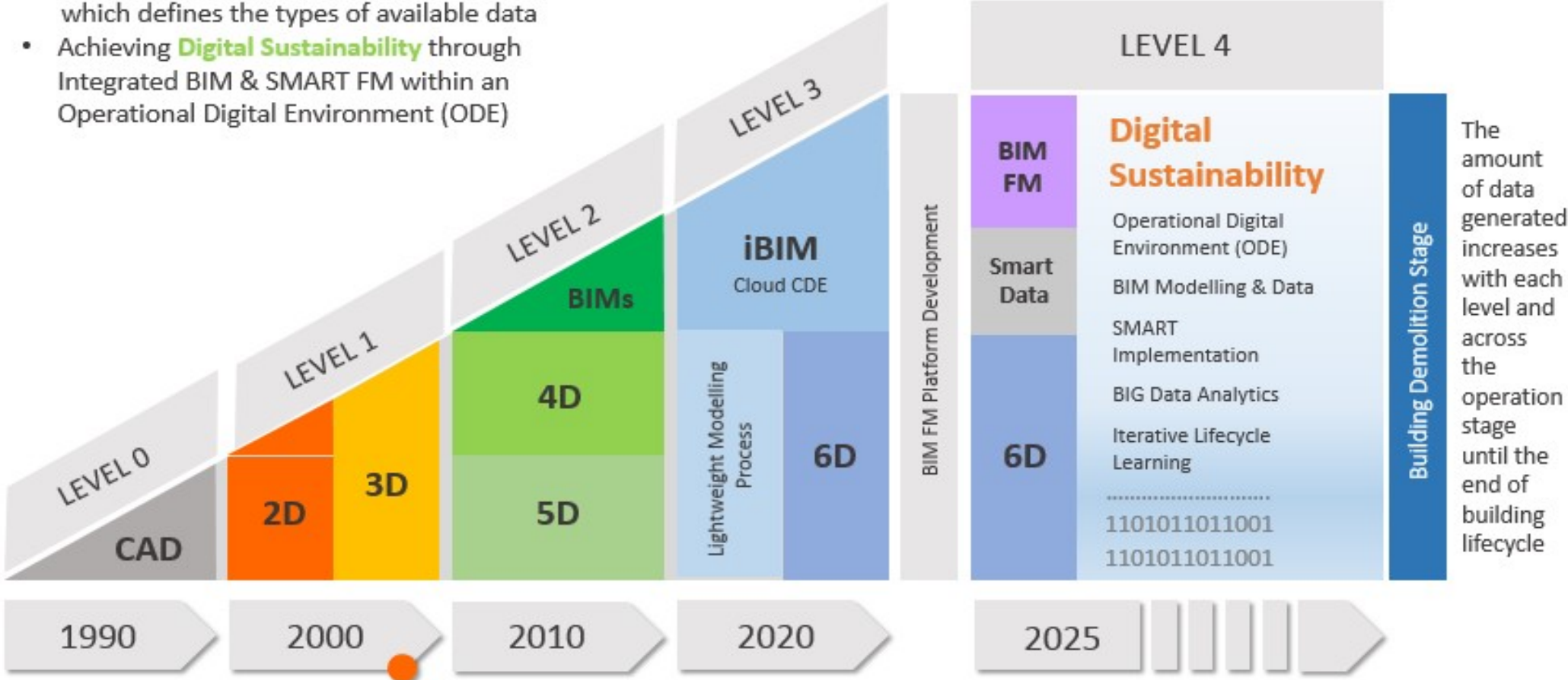


How Building Information Management(BIM) Fits In D – Towards Digital Sustainability



BIM Maturity towards Digital Sustainability

- Progress through Level 0-4
- Each level represents the **BIM Maturity**
- Each level contains **Dimensions** which defines the types of available data
- Achieving **Digital Sustainability** through Integrated BIM & SMART FM within an Operational Digital Environment (ODE)

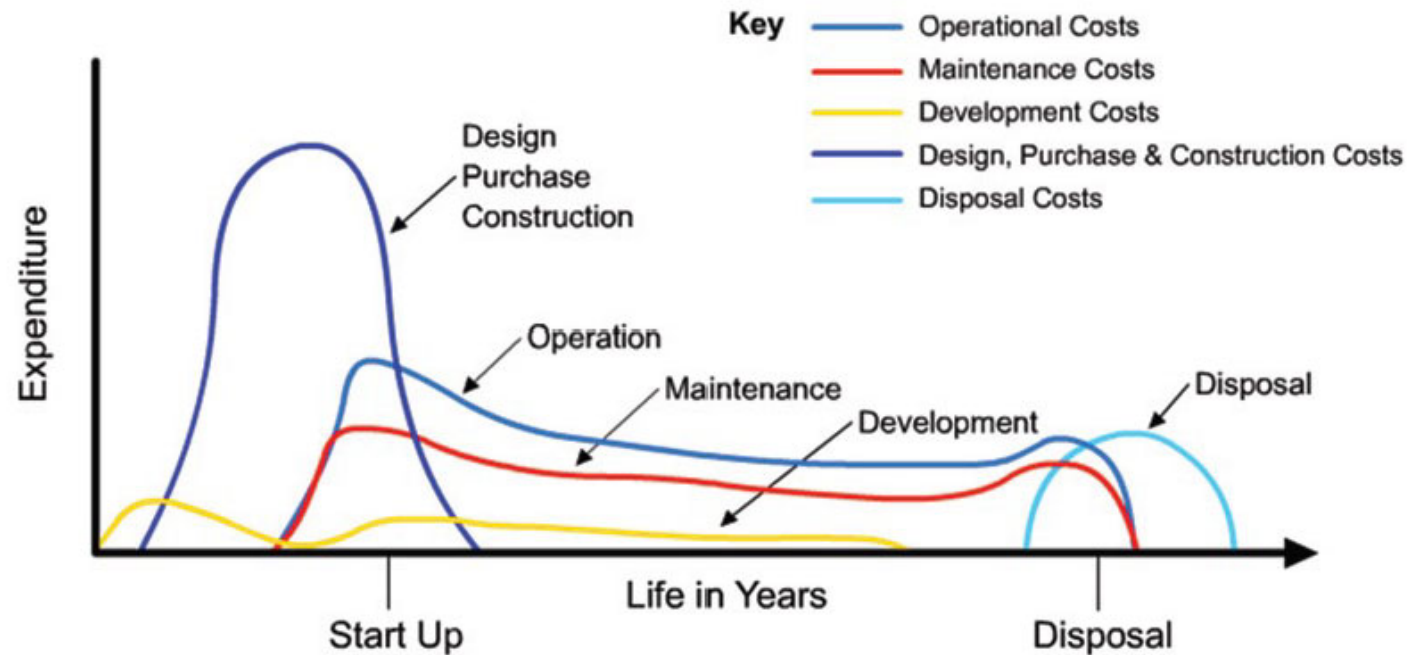


Current Level
Most company operates here

Source. *Surbana Jurong Academy.*

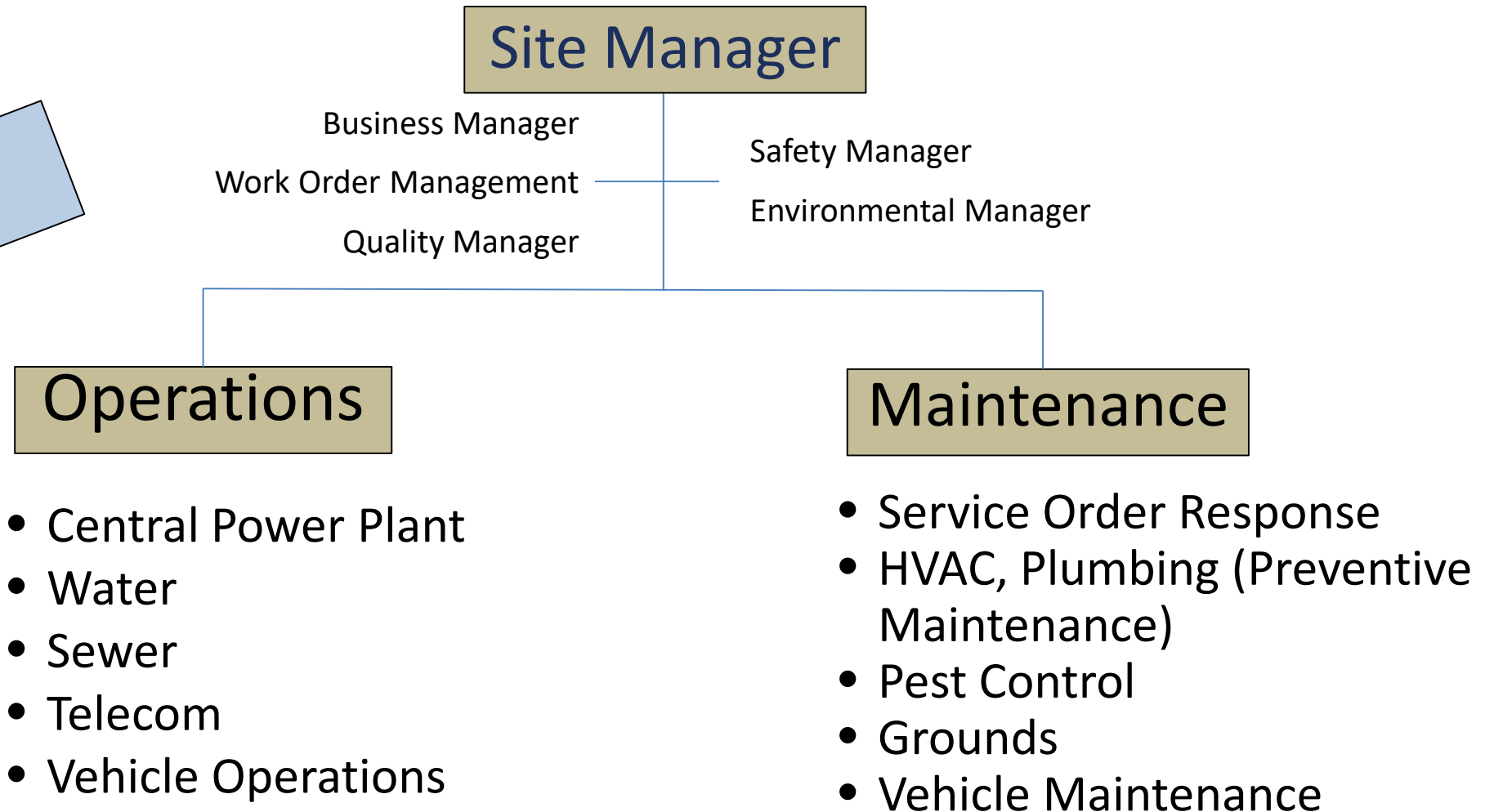
FAM During Operation and Maintenance (O&M) at DoD/Federal Facilities

- FAM reduces facility risk when acquiring the asset
- FAM leads to robust building processes to maintain assets
- Need FAM data collection system, i.e., BIM and GIS (municipal maintenance, road-maps, buildings, bridges, parks, parking lots, street lights, pipelines for sewage and drinking water)
- Benefits:
 - Extend asset life, availability of usage.
 - Enhances functionality of assets, even with changing ownership.
 - Improves reliability and safety in the daily operations.
 - Converts perfectly imagined working conditions into reality.
 - Helps optimize asset retirement age.



FAM Staffing During O&M at DoD/Federal Facilities – Wide Range of Crafts/Trades

Numerous staffing
metrics/best practices



The Future of FAM

- Internet of Things (IoT). Internet-connected machinery and the advanced analytics
- Monitors and control operations of sustainable infrastructures
- Monitor events or changes in structural conditions that can compromise safety and increase risk
- Benefits A/E/C/O&M by cost saving, time reduction, better quality workday, paperless workflow and increase in productivity
- Makes faster decisions and saves money with Real-Time Data Analytics
- Used for scheduling repair and maintenance by coordinating tasks between different service providers and users of these facilities
- Improve incident management and emergency response coordination, up-times and reduce costs of operation in all infrastructure



References

- Kavrakov, Deyan, “Asset vs. Facility Management – Spot the Difference Comparative Analysis of Professional Identity and Functions.” Fellow Royal Institution of Chartered Surveyors (FRICS), Certified International Property Specialist (CIPS).
- Surbana Jurong Academy,
<https://webqa.surbanajurong.com/about-sj-academy/>



Questions?



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