



**ASSET MANAGEMENT
DIGITAL TRANSFORMATION**

**Asset ISO 55000 Family of Standards:
An Effective Asset-Management Tool
for Succeeding Digital Transformation
to Enterprises**



Asset Management and Digital Transformation Definitions

- **An asset is defined in ISO55000 as**
 - “item, thing or entity that has potential or actual value to an organization”,
 - Building, MEP equipment, Biomedical, IT, Vehicle
- **Asset management is the combination of processes and data required to manage, monitor and maintain an organization’s Assets lifecycle from procurement to disposal, in the most cost-effective manner**
 - “coordinated activity of an organization to realize value from assets”
- **Digital transformation is about transforming your business processes to be aligned or take advantage of the digital technologies of today for providing a more effective and efficient management of Assets**



- **ISO55000**
 - Overview, Principles and terminology
- **ISO550001**
 - Specifies the requirements for those aspects that can be captured and documented in a management system
- **ISO 550002**
 - Management systems — Guidelines for the Application of 55001

Important of ISO55000 to any organization ⁴

- **Financial Implication (Reduction of Cost)**
 - 2nd cost after Human Resources
- **Business Continuity**
- **Responsibility**
- **Increase in Productivity**
- **Extending the life of our assets**
- **Consistency**
- **Customer Satisfaction**
- **Continuous improvement of Quality Management**

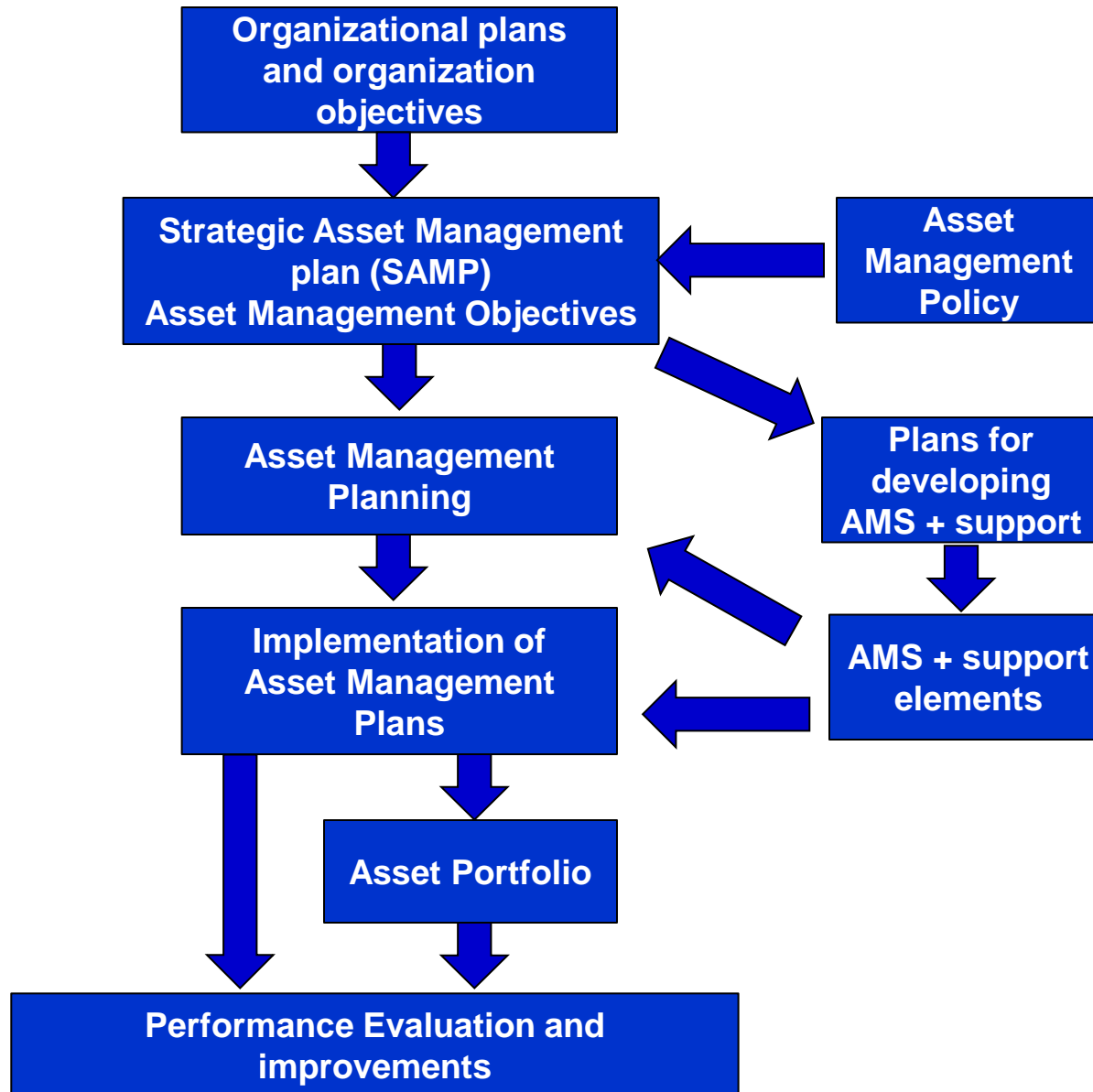


- **Policies Objectives and Strategies**
- **Culture and Values**
- **Structure, roles, accountability and authorities**
- **Size and Complexity**
- **Information Systems**
- **Standards, guidelines and models**
- **Contractual Relationships**
- **Risk Management**
- **AM Practices, plans, processes and procedures**
- **Integrity and Performance**
- **Feedback and Investigation of previous asset failures, incidents, accidents and emergencies and any statics / KPIs**

Clauses of ISO55001:2014

- **Content of the Organization**
- **Leadership**
- **Planning**
- **Support**
- **Operation**
- **Performance Evaluation**
- **Improvement**

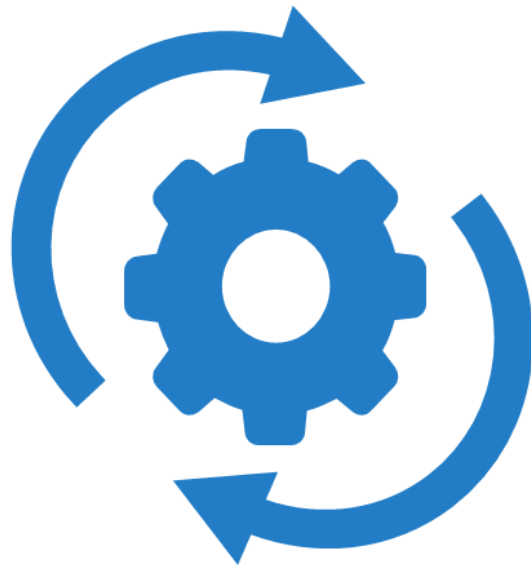
Asset Management System



Approach to Asset Management Digital Transformation based on the ISO55000

KEEP it
SIMPLE

Processes

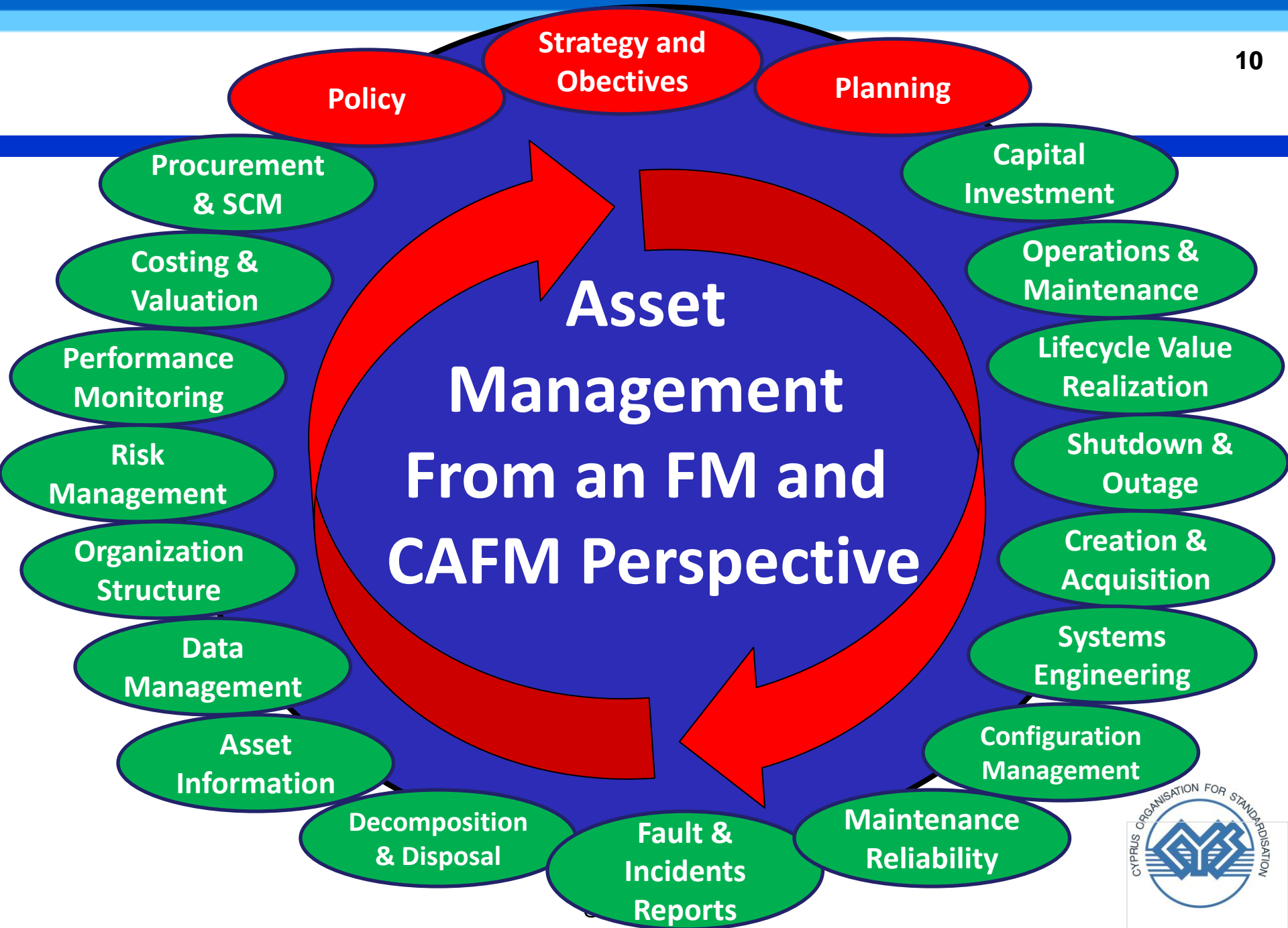


Data



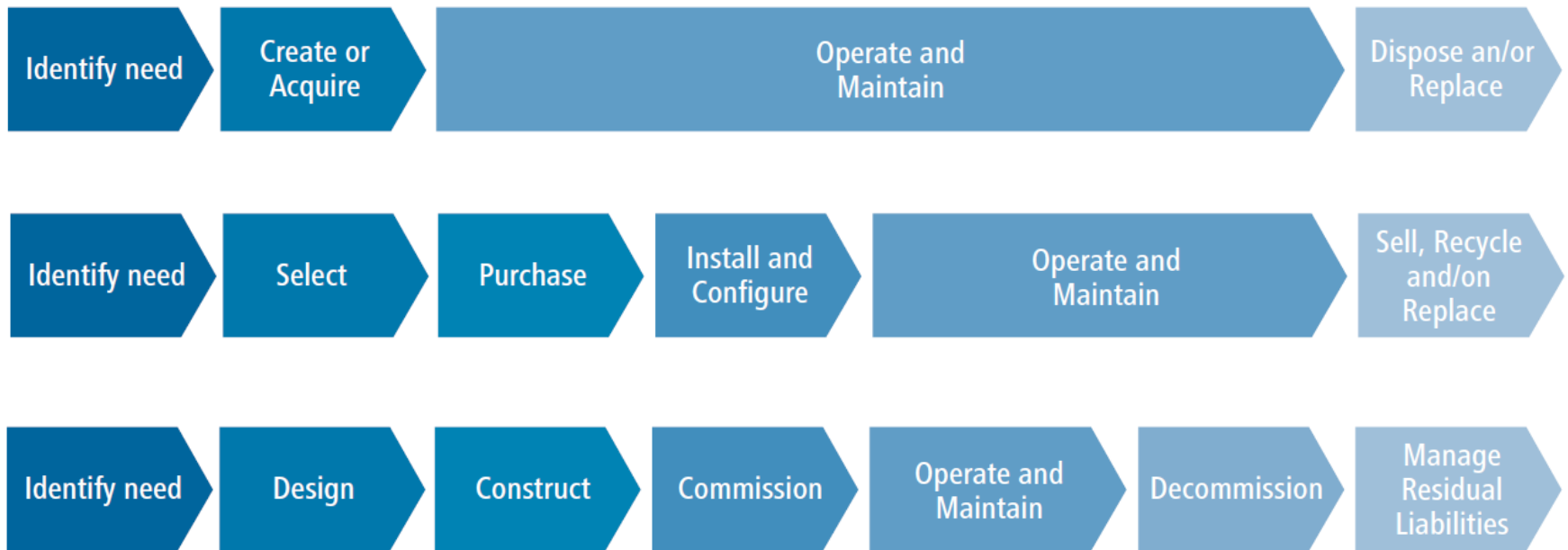
ISO 55001 Asset Management System Processes

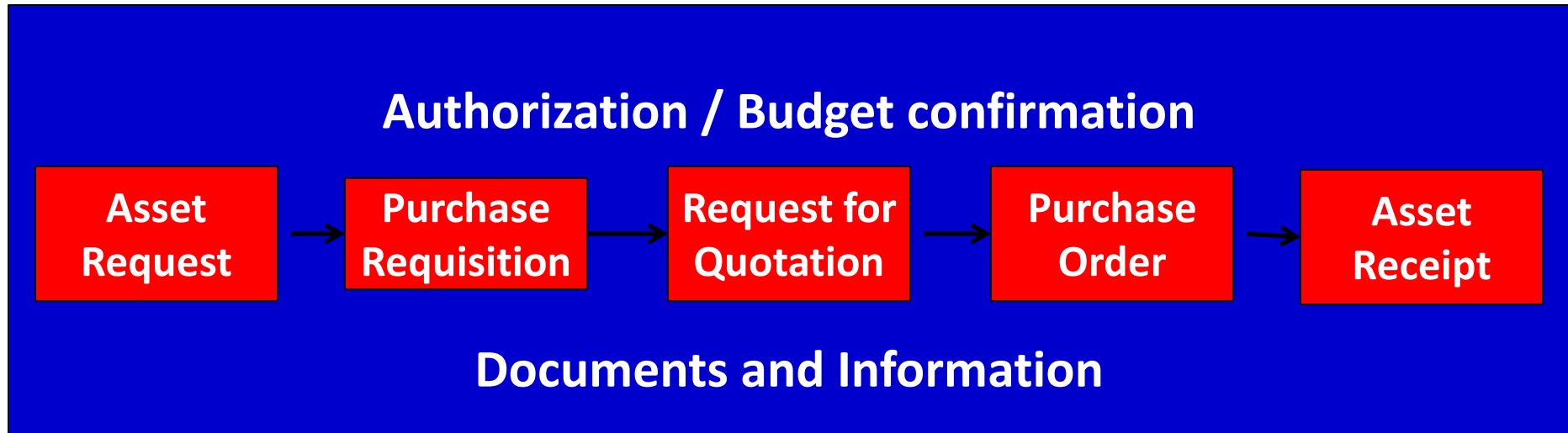




- **Internal**
 - Employees of the organization
 - Groups of people (engineering, finance, maintenance, operations, purchasing, logistics, IT)
 - Management
 - Shareholders, Owners
- **External**
 - Customers, Users
 - Suppliers, service providers and contractors
 - Government Organizations
 - Local Communities
 - Auditors

Asset Life Cycle Stages

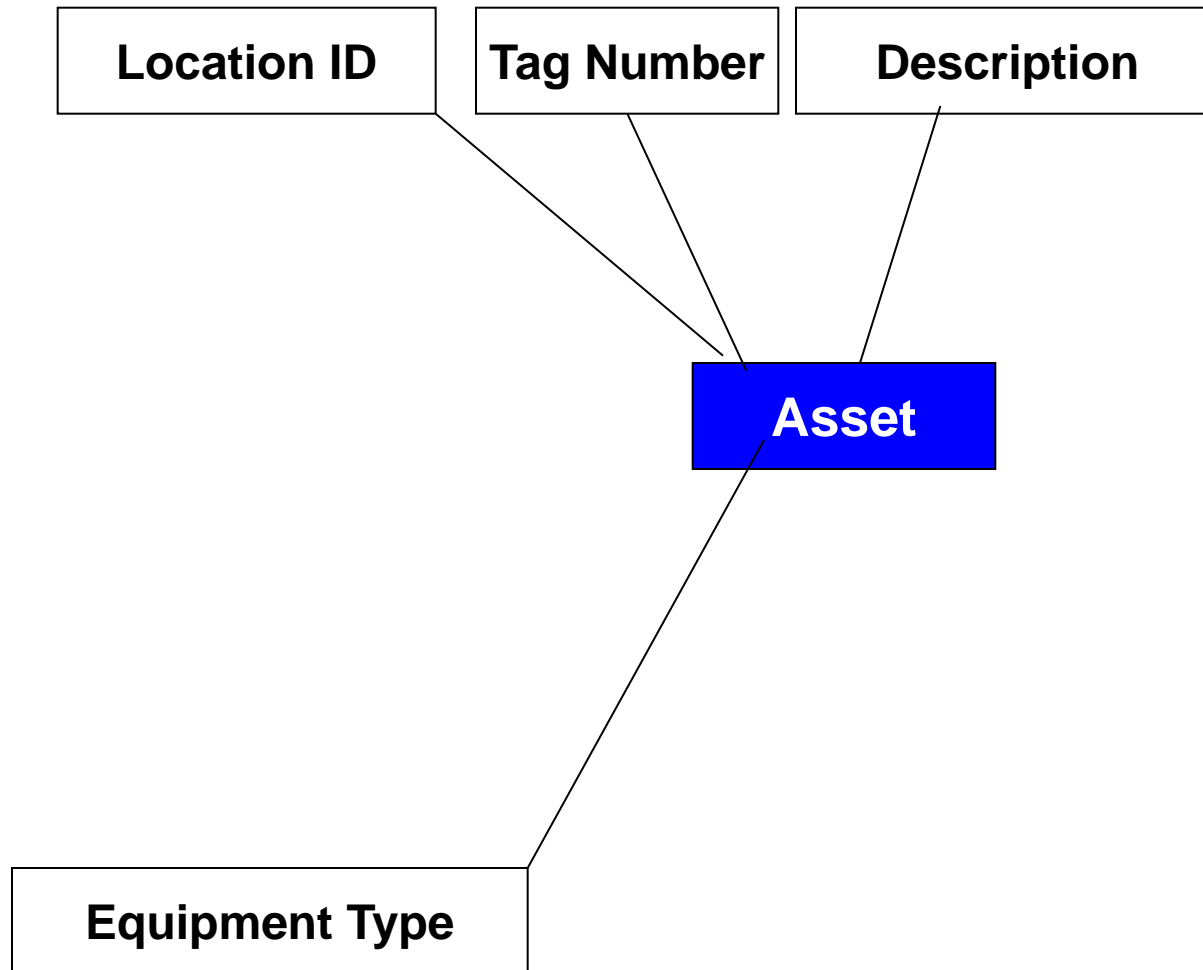




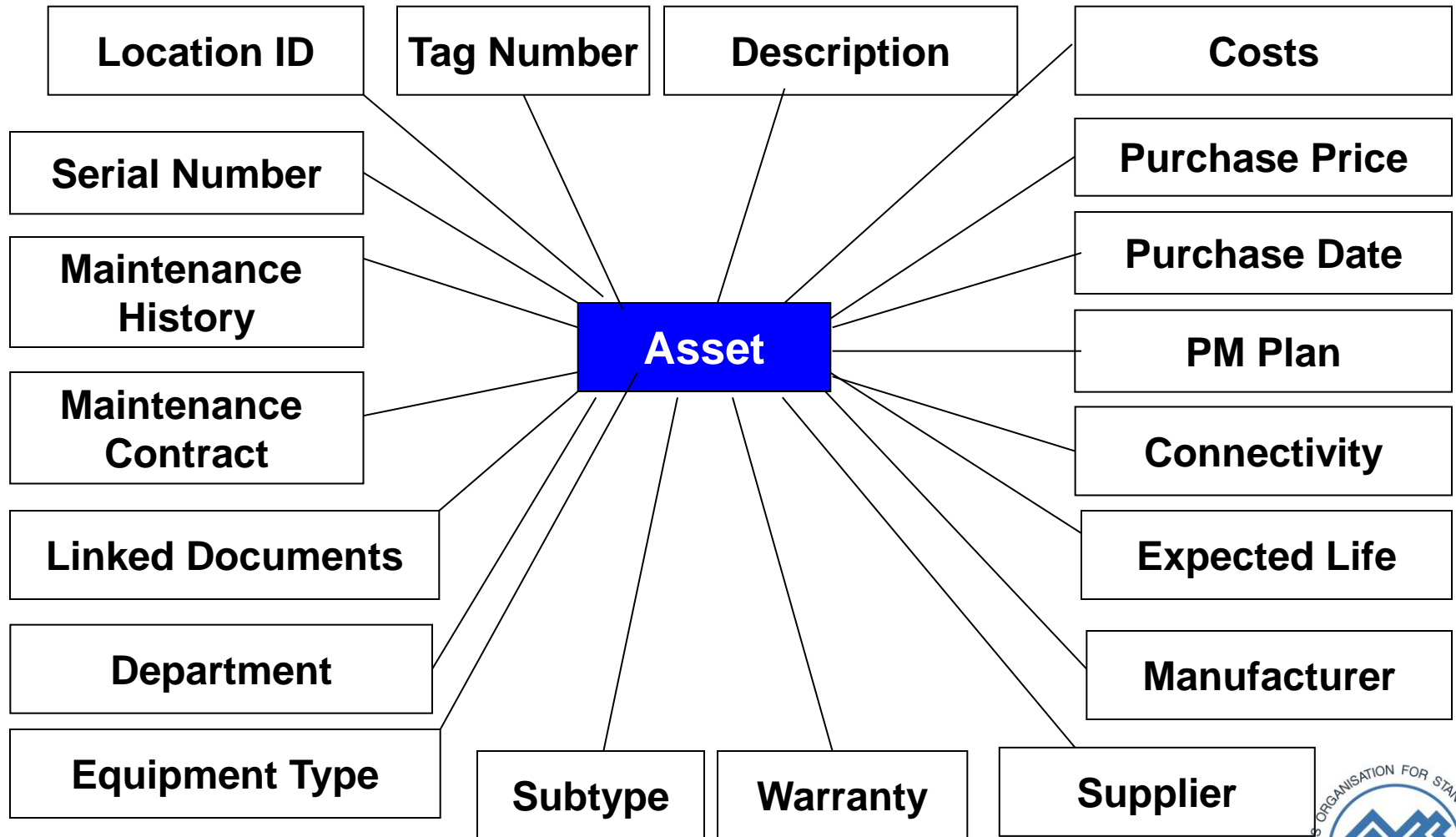
Asset Management Information – Data Perspective ¹⁴

- Coding / Bar-coding
- Detail Asset information
- Asset Type and Subtype
- System / Connectivity
- Total view / location
- Purchase and Disposal Cost
- Depreciation Calculation
- Leasing info
- Maintenance Costs
- Allocation Cost to Departments
- Ownership and Usage costs
- Evaluation of Asset performance according to specifications
- Maintenance Contract
- Input of Invoice with Work Orders
- Integration to Finance System
- Document Attachments
- Capital Planning
- Transfer History
- Down time cost analysis
- Procurement Management
 - Requisition
 - Quotation
 - Purchase Order
 - Receipt
- Budget

Asset Management **Minimum** information



Asset Management **Ideal** information

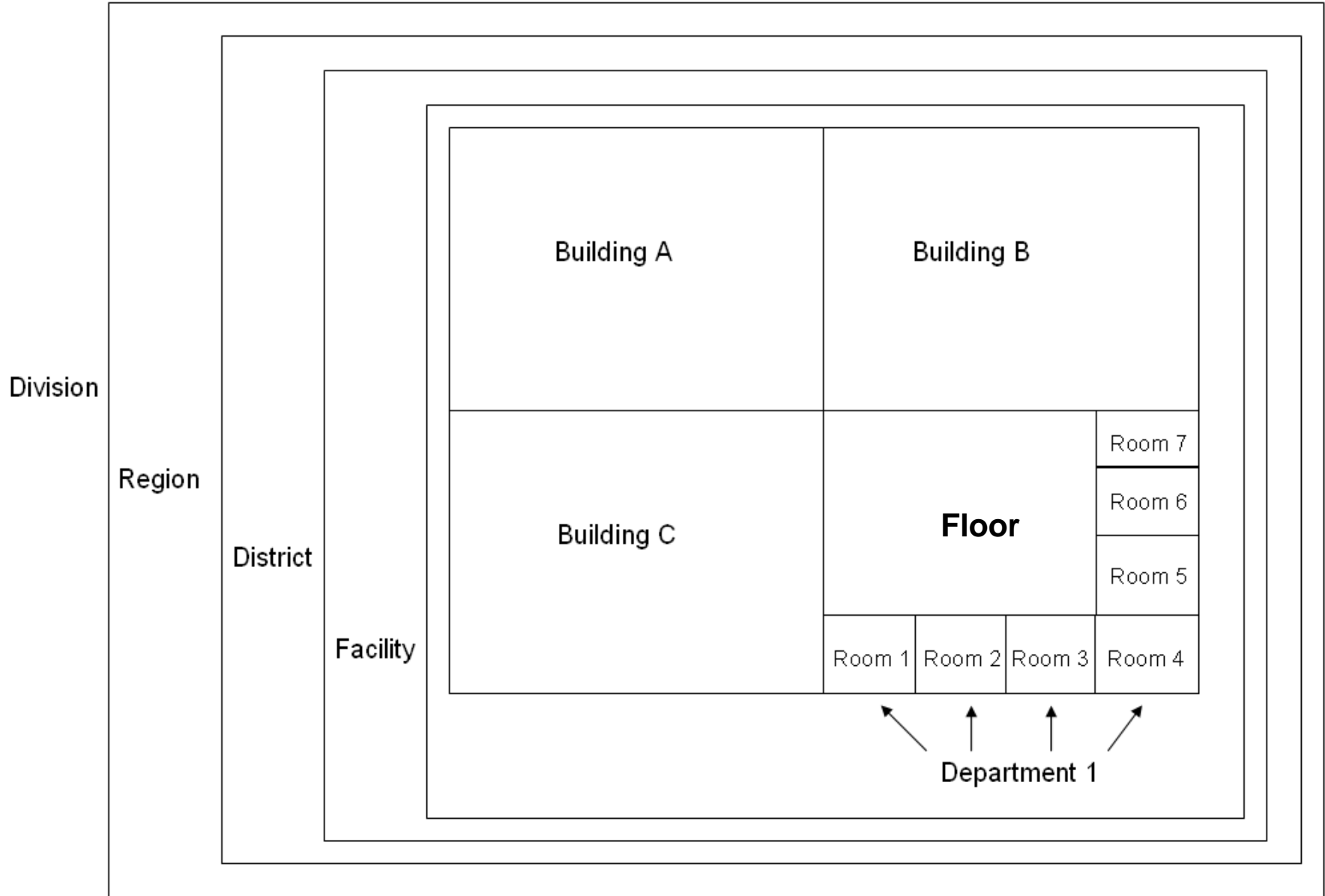


Asset Tagging

- Define the minimum information you can collect possible
- Setup Coding and coding masks
- Consolidate Current available equipment information
 - Hierarchy
 - Inspection Reports (Fire protection equipment, contractor maintenance reports)
 - Walk Through
 - Financial Systems
 - CAD drawings
- Asset validation and data collection
- Asset condition assessment
- Upload the information to a CAFM / Asset Management System
- Print and inspect to evaluate information uploaded
- Upload tasks, processes and PM schedules by equipment type
- Take Asset Register live
- Confirm information during Corrective and Preventive Work
- Put in place a process so that any new Equipment is registered before use



TAXONOMY / HIERARCHY



Asset Management Digital Technologies

Asset Management System (AMS)

Computerized Maintenance Management Systems (CMMS)

Computer Aided Facilities Management Systems (CAFM)

Home Logout

Add Edit Copy Delete First Prev Next Last Search Print Help Save

Currency Code: AED

Identity Motor Connection Sub Assemblies Contractor Repair Centers Meter PMs Depreciation

Home Logout

Add Edit Copy Delete First Prev Next Last Search Print Help Save

Currency Code: AED

Identity Motor Connection Sub Assemblies Contractor Repair Centers Meter PMs Depreciation

Tag #:

Description:

Make:

Model #:

Serial #:

Location ID:

Facility Name:

Building Name:

Floor Code:

Area #:

Department:

Regulatory Category:

Building Asset:

Leased:

Service Contract:

Risk Level:

Type Desc:

Subtype Desc:

Vendor Name:

Manufacturer:

Account #:

System:

Subsystem:

SOP:

Active:

Out of Service:

BMP:

Tag #:

Description:

Make:

Model #:

Serial #:

Location ID:

Facility Name:

Building Name:

Floor Code:

Area #:

Department:

Regulatory Category:

Building Asset:

Leased:

Service Contract:

Risk Level:

Type Desc:

Subtype Desc:

Vendor Name:

Manufacturer:

Account #:

System:

Subsystem:

SOP:

Active:

Out of Service:

BMP:

Owner's Department:

Parent Tag #:

Alternate Tag #:


Device #:

Attached to Vehicle:

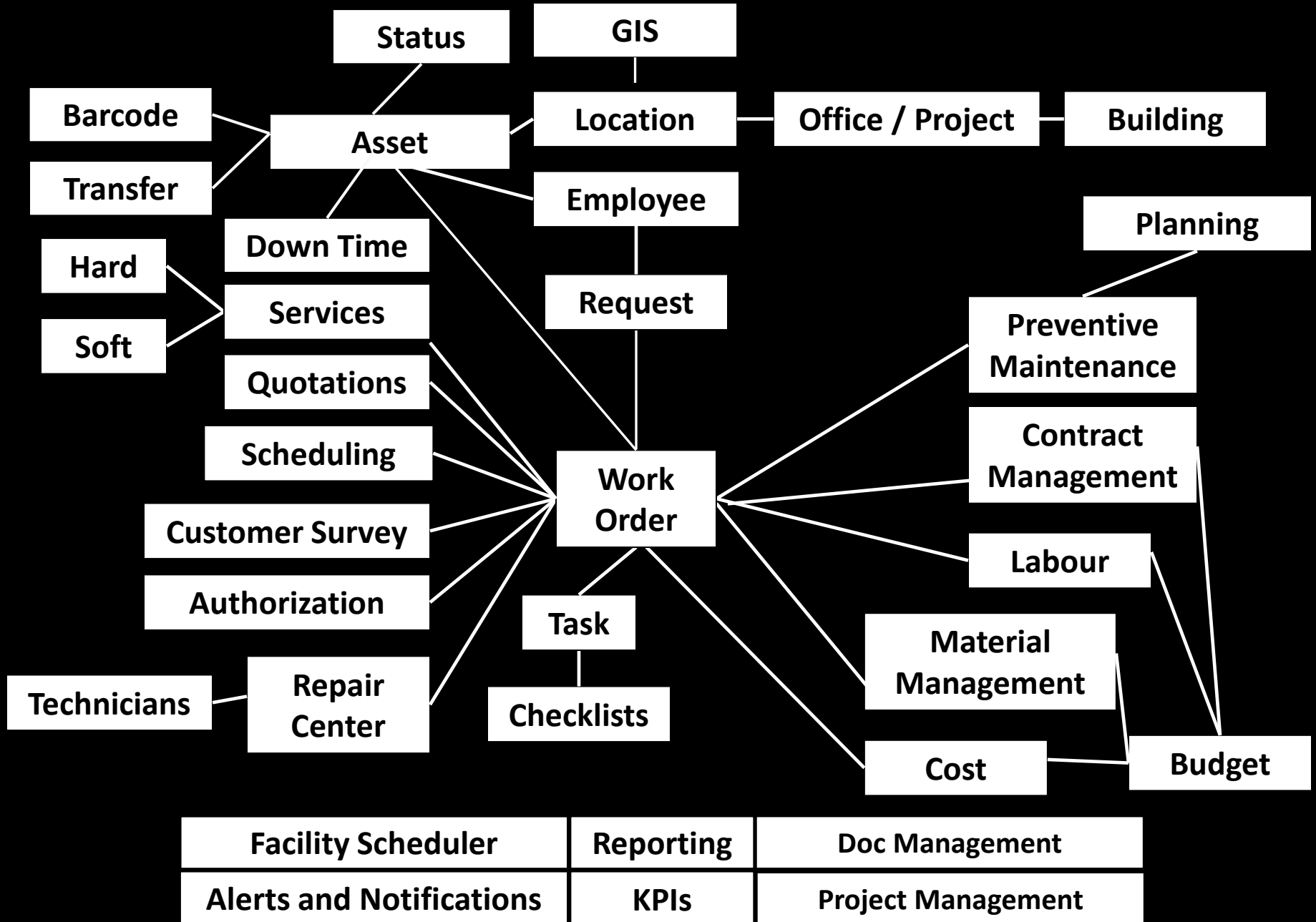
Longitude:

Prevent Archival:

Details Dates Energy Popup Message

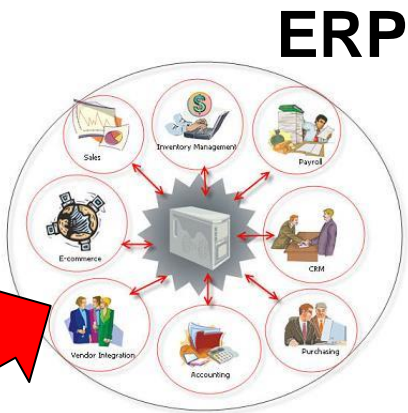
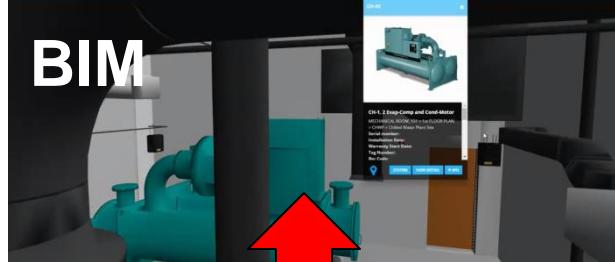
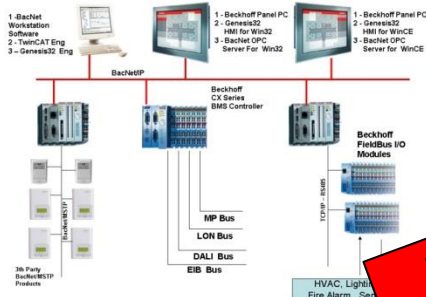


Asset Management - CAFM related functions and data

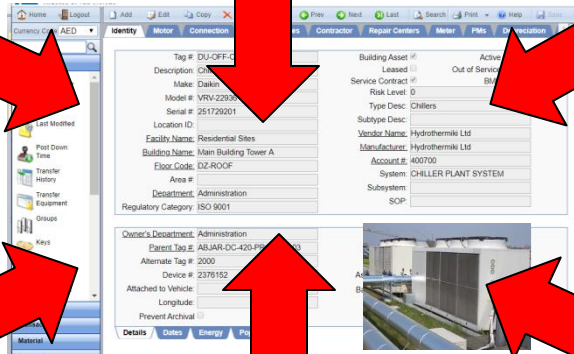
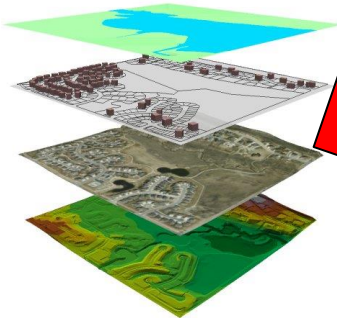


Asset Management - Data Integration

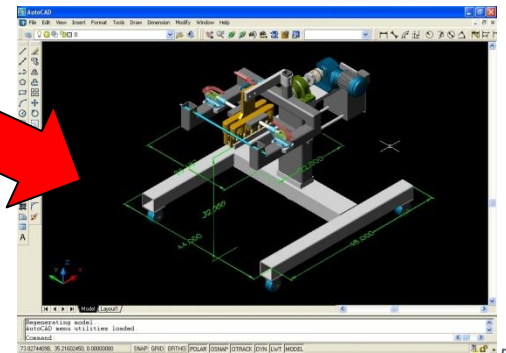
BMS IoT devices



GIS



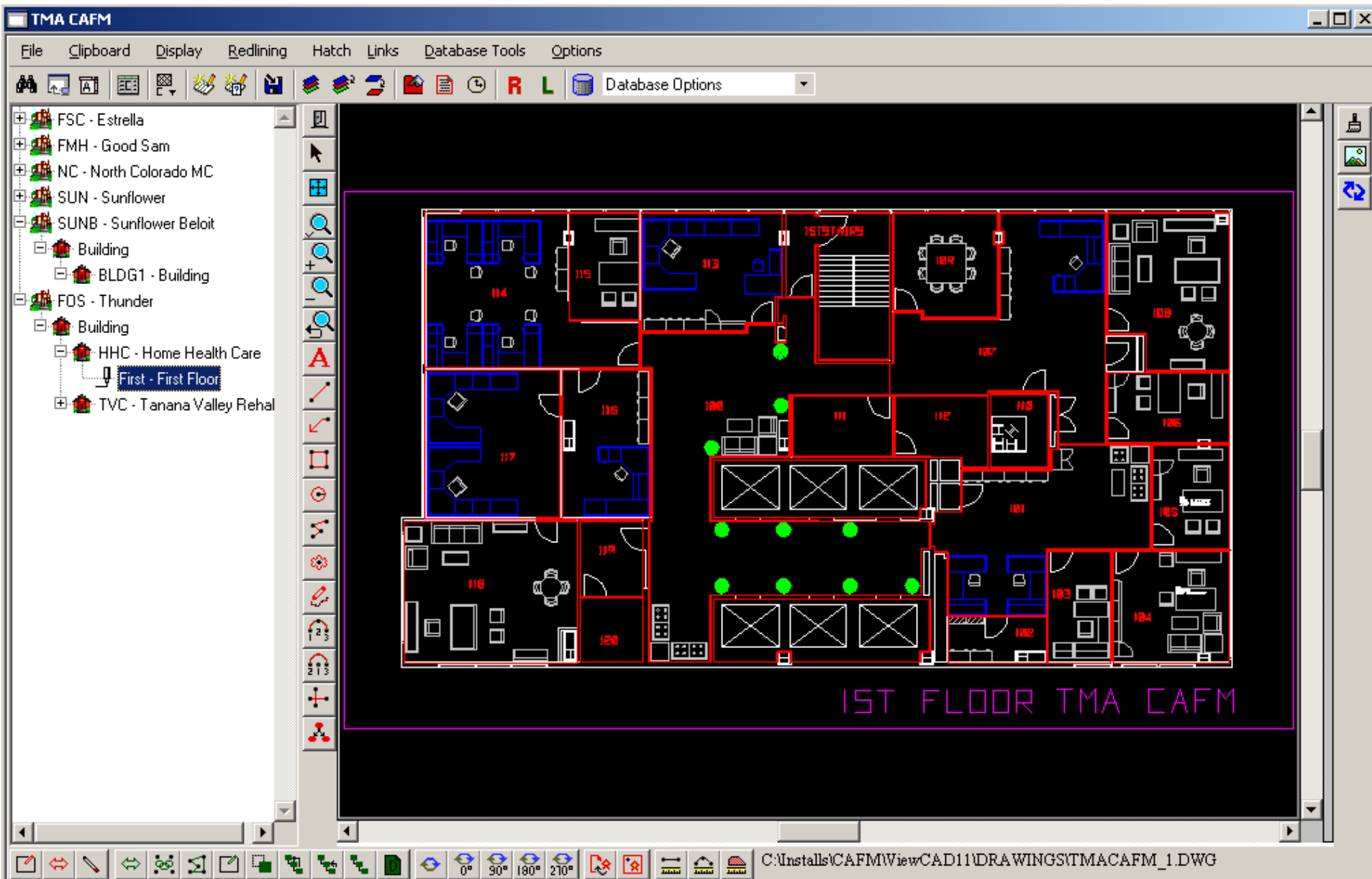
AutoCAD



Mobile / Pad

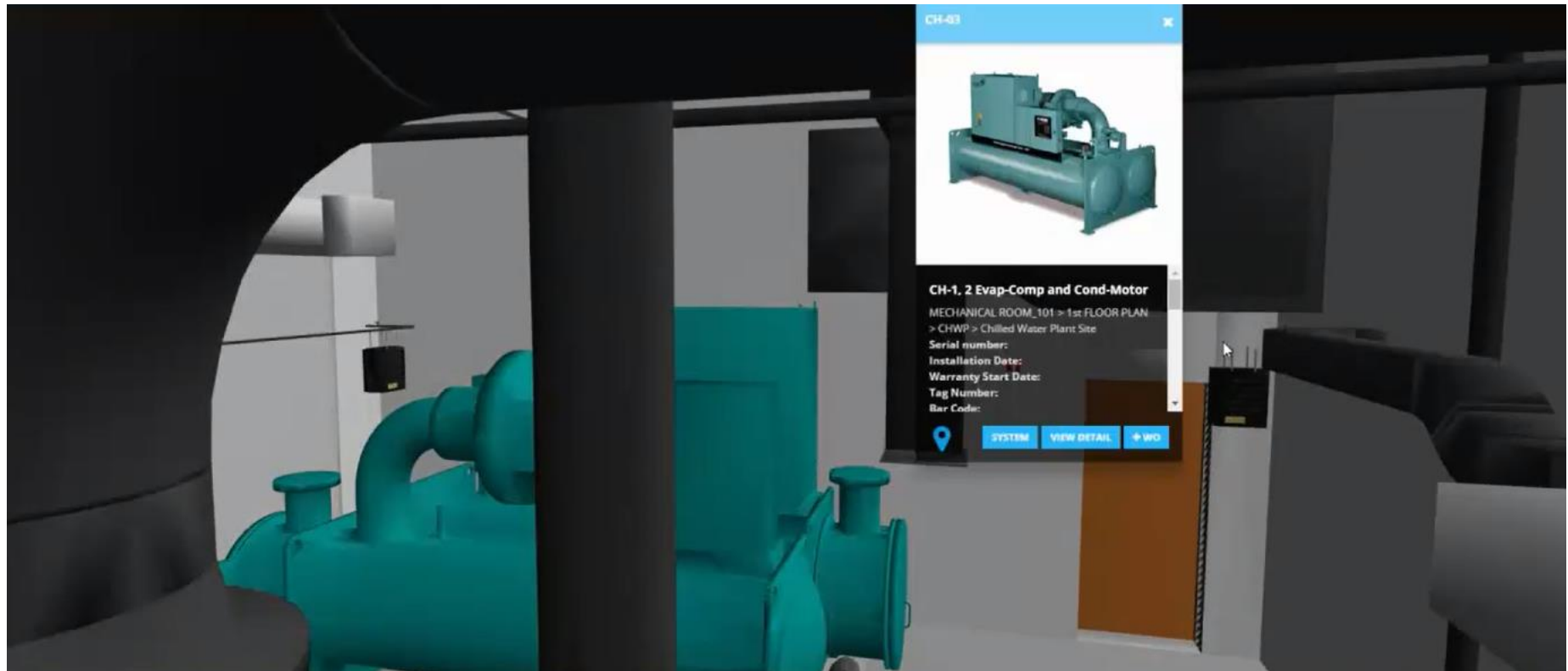


AutoCAD Integration



Building Information Modelling (BIM)

24



Device Alerts

Identity

Start Date: 

Number	Date	Priority	Headline
A14287	14.07.2010	High	Technidata—TD-Synergy Software: Non-Consolidated Microbiology Results May Be Overwritten by Blank Results
A14258	14.07.2010	High	Brainlab—Kolibri Navigation Station Mobile Camera Stands: Camera Unit May Loosen and Detach from Camera Interface
A14278	14.07.2010	High	Roma—Scooters and Power Chairs: Faulty Batteries or Battery Packs May Produce Hydrogen Gas, Potentially Leading to Ignition
A13881 02	14.07.2010	Normal	Welch Allyn—Model CP 200 Electrocardiograph Systems: Manufacturer Issues Clarification Regarding Patient Identification Information on Electrocardiograph Reports
A13881 01	14.07.2010	Normal	Welch Allyn—Model CP 200 Electrocardiograph Systems: Manufacturer Issues Clarification Regarding Patient Identification Information on Electrocardiograph Reports
A14279	14.07.2010	High	Philips—1.5T Edge Eclipse Systems: Slice Grids May Be Shown In Incorrect Position
A14214	14.07.2010	High	ArjoHuntleigh—Series 800 Contoura Beds: Manual Cardiopulmonary Resuscitation Mechanism May Fail
A14216	13.07.2010	High	Roche—AMPLILINK Software: Controls with "Failed" Result May Not Invalidate Patient Samples
A14211	13.07.2010	High	TomoTherapy—Hi·Art Treatment Systems: Plan Reports May Provide Incorrect Dose Statistics
A14265	13.07.2010	High	CMS—Focal 4D Radiation Treatment Planning Software: May Not Align Imported Image Sets

◀ ◁ 1 2 3 4 5 6 7 8 9 10 ... ▶ ▷

460 items in 46 pages

New**Active**

Key Performance Indicators (KPIs)

Classification	Indicator Groups		
	Economical	Technical	Organizational
Requests / Complaints			Total pending complaints within a period
Work Orders	Cost of total work order for specific service	Failure analysis	Total pending work orders within a period
Contract	Budgeted vs Actual cost of contract		SLAs
Equipment	Total value of equipment	Asset performance	Inactive equipment per location
Material	Total material spent for specific service	Material failure	Unavailability of materials

Performance Benchmarking



Enterprise Sustainability Platform

EDGE
DEVICES &
DATA



101
011



101
011



101
011



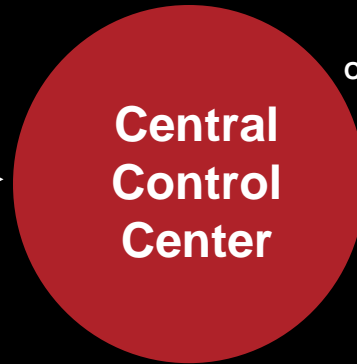
101
011



101
011



IoT
GATEWAY



Central
Control
Center



BIG DATA
ANALYSI
S



NETWORK
OPTIMIZATION



DATA
SECURITY



REALTIME
DASHBOAR
D S



HYBRID
CLOUD



PRIVATE
DATACENTE
R



WEB/ MOBILE

Mobility



Predictive Analysis

View Modeling Help

2018

54.7%
Availability

419
MDT (hrs)

507
MTBF (hrs)

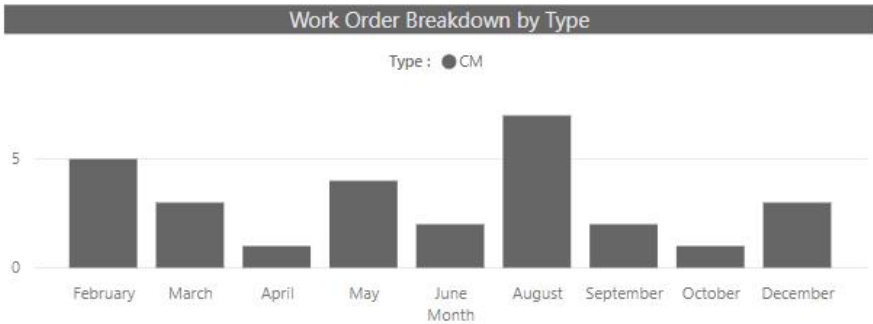
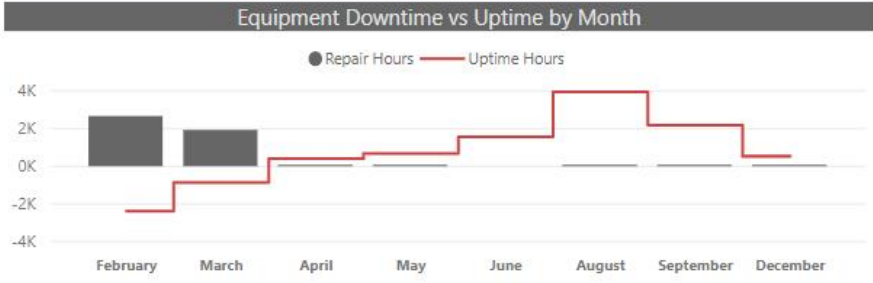
28
Work Orders Count

EQUIPMENT SPECIFIC ANALYSIS

1/10/2019 6:56:39 AM

Next Expected Failure

8888-FASTLANE-02



Priority

All ▼

Type

Multiple selections ▼

Season Breakdown

● Autumn ● Spring ● Summer ● Winter

Public Holiday Breakdown

26 2

Request Log

wo_number	First wo_actionRequested
LFT-63	FAST LANE machine #02 is out of service. _x000D_ Preventing the total operation of the Workstation
LFT-65	Express lane pay machine #2 inside, the screen has crashed. _x000D_ Preventing the total operation of the Workstation
LFT-67	Fast lane machine #2 is inoperative. _x000D_ Preventing the total operation of the Workstation
LFT-68	Fotoulla from PTS reported that express lane pay machine #2, inside, is offline. _x000D_ Preventing the total operation of the Workstation
LFT-72	Fast lane machine #2 is inoperative. _x000D_ Preventing the total operation of the Workstation
LFT-74	Fast lane machine #2 is inoperative. _x000D_ Preventing the total operation of the Workstation
LFT-76	PTS reported that the fast lane pay machine #2 inside is out of order. _x000D_ Preventing the total operation of the Workstation

Asset Management Digital Transformation ROAD MAP based on ISO 55000 AM standard

- **Phase I – Project Initiation and Organization**
- **Phase II – Awareness Training**
- **Phase III – Gap Analysis with Current Processes and Data**
- **Phase IV – ISO Asset and Facility Management Systems**
- **Phase V – Data Requirements and Reference Tables**
- **Phase VI – Redefine AM and FM processes based on Gap**
- **Phase VII – Mapping data and processes to Digital Technologies**
- **Phase VIII – Formulate Digital Transformation Road Map Plan**
- **Phase IX – Implementation**
- **Phase X – ISO55000 Audit**



Thank you for your attention

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