

# CMMS

## The Nervous System of a Facility Management Program

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## Agenda



- Why CMMS?
- Value of a CMMS
- How to Select a CMMS
- Steps to Implementing
- Manage and Improve
- Q&A

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## Alphabet Soup...



- **CMMS** – Computerized Maintenance Management System
- **CAFM** – Computer Aided Facility Management
- **BIM** – Building Information Modeling
- **IWMS** – Integrated Work Management System
- **ERP** – Enterprise Resource Planning
- **EMS** – Energy Management System
- **BMS** – Building Management System

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### Why a CMMS?

*"The Nervous System of a Facility Program"*

- A Necessary Business Tool for Today's FM
  - Drive Business Decisions
  - Manage Operations
  - Develop Budgets
  - Market FM Program



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### Drive Business Decisions



- Documentation
  - System Hierarchy & Impact
  - Asset History
  - Customer Satisfaction
- Data-driven decisions
  - O&M Costs (Time & Material)
  - Failure Analysis
  - Uptime/Downtime
  - System Reliability
- Assess efficiency & effectiveness
  - Staff & Maintenance Practices

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### Manage Operations

- Schedule Maintenance
  - Asset Performance
  - Life Expectancy
- Prioritize Work
  - Criticality
  - PM vs. CM vs. SR
  - Weekly vs. Annual PM
- Direct Resources
  - Right Task / Right Person / Right Time
  - Dispatch & Confirm
  - Closure & Documentation



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### Manage Operations



- Consolidate & Coordinate Tasks
  - Building vs Trade Centric
  - Minimize Windshield Time
  - Mitigate overlap of tasks
  - Minimize downtime
- Pre/Order Material & Parts
  - Parts Bagged & Tagged
  - Parts Runner
  - Auto-Order through Supplier
  - Automate Approval Process

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### Develop Budgets



- Operations Budget
  - Contract labor
  - Internal labor
    - Scheduled (PM/PdM)
    - Unscheduled
  - Parts & Material
- Capital Budget
  - Capital Replacement Program
  - Multi-year forecast (1/3/5/10)
  - Year Installed
  - Life Expectancy
  - Cost of Install/Replace

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### Market FM Program



- Customer Interaction
  - Receive Service Requests
  - Communicate Expectations
  - Provide Status Updates
  - Solicit Feedback
- Marketing with KPIs
  - Customer Satisfaction ("We Care")
  - PM Completion
  - Completion by Priority
  - Highlight Progress
  - Benchmark Performance

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


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### How to Select a CMMS

- Common Reasons for Failure
- Steps to Selecting a Provider
- Key Functions of a CMMS
- Recommended KPIs
- Other Factors to Consider
- Going Mobile

*Before Moving On...  
Questions on "Why?"*



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### CMMS is Not a Four-Letter Word...



#### Common Reasons for Failed CMMS

- Wrong System for the Job
- Old, Slow System
- Homegrown
- Budget to Install but not to implement
- Insufficient planning & Stakeholder buy-in
- Lack of Knowledge & Experience



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### Steps to Selecting a CMMS

- Identify Stakeholders
- Define the Processes
- Develop System Requirements
- Create Assessment Matrix
- Identify & Evaluate Qualifying Vendors
  - Perform Test Fit
- Budget & Schedule for Success
  - Training & Support
- Solicit help



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### Key Functions of a CMMS



- Maintain Asset Information & History
- Exhibit Hierarchy & Relationships
- Store Procedures & Practices
- Submit & Track Service Requests
- Prioritize, Schedule, & Dispatch WOs
- Document Work Performed

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### Key Functions of a CMMS



- Capture Labor & Mat'l Costs, Notes, etc.
- Provide Closure to Requesters
- Solicit Customer Feedback
- Facility Condition Assessments
- Capital Renewal Planning
- Reporting & KPIs

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### Key Performance Indicators (KPIs)

- PM/CM Ratio
- Backlog
- % Utilization
- Discovery Mode
- SRs by Type
- Failure Modes/Causes
- Labor & Mat'l Costs



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### Other Considerations



- Simple Facilities – Simple CMMS vs. Complex Facilities – Complex CMMS
- Online/Cloud vs. In-House
- Mobile Functionality
- Ease of Use
- Reporting Capability
- Stability & Reputation
- Champion – Find One & Be One!

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### Going Mobile...

#### Advantages

- Capture data on the fly
- Incorporate pictures
- Quicker response
- Utilize GPS/GIS
- More accurate data
- Keep trades in the field



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### Going Mobile...

#### Challenges (How to Overcome)

- Costs
  - Offset by Increased Productivity
- Ruggedness
  - Lower cost equipment
  - Rugged cases
- Chicken-pecking
  - Incorporate dropdowns
  - Talk to Text
- Change
  - "Makes their life better"
  - Not Big Brother



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### Steps to Implementing/Improving

- Collect & Enter Data
- Setup Maintenance
- Schedule Maintenance
- Roll-out
- Generate & Dispatch WO's
- Manage Execution
- Monitor Performance



Before moving on, any questions?

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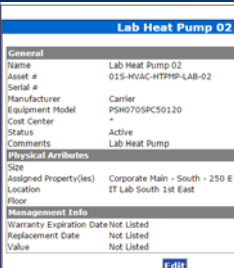
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### Gather & Enter Data

- Building & Equipment Data
  - Establish Nomenclature
  - Location Hierarchy
    - Corporate/Campus/Building
  - System/Equipment Hierarchy
  - Documents
    - Drawings/O&M Manuals/Reports
- User Information
  - Departments/Users
- Import



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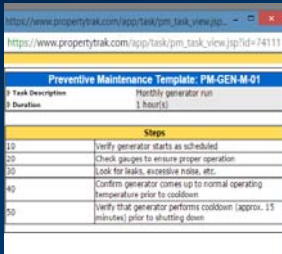
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### Setup Maintenance Tasks



- Establish Nomenclature
- Build Job Plans
  - Job Hazard Analysis
  - Tools Parts
  - In-house vs. Out-source
  - Skills/Trades
- Identify Frequency
  - D/W/M/O/SA/A
- Associate to Equip. Type

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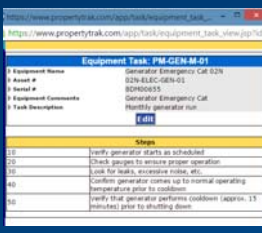
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### Schedule Maintenance

- Assign to Equipment
- Setup Schedule by Equipment
  - Run-Time vs. Calendar
  - Condition Based Maintenance
  - Level-Load vs. Heavy Load
  - Seasonal (shoulder seasons)
  - Working Hours vs. After-Hours
  - Approval process, if applicable
  - Lead-time for parts



The screenshot shows a web-based interface for equipment tasks. The title is 'Equipment Task: PM-GEN-M-01'. It lists details such as Equipment Name (Generator Emergency Call Run), Asset # (02N-ELC-GEN-01), Asset # (8200055), Equipment Comments (Generator Emergency Call Monthly generator run), and Task Description (Gen). Below this, there is a 'Steps' section with a list of tasks: 10 Verify generator starts as scheduled, 15 Check gauges to ensure proper operation, 20 Look for leaks, excessive noise, etc., 40 Confirm generator returns to normal operating temperature prior to cooldown, 50 Verify that generator performs cooldown approx. 15 minutes prior to shutting down.

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### Roll-Out...



- Train Staff
  - Train the Trainer
  - Online Training
  - Contractor Training
- Phased Roll-Out
  - By Location/Department/Trade
  - PM/SR/CM
  - Mobile

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### Generate & Dispatch Work Orders

- Auto-generate vs. Manual
- Weekly vs. Monthly
- Paper vs. Electronic
- Auto-Assign or Supervisor
- Dispatch to Service Provider
  - Confirm receipt
  - Set On-site date



The image shows a close-up of a yellow keyboard key with the text 'Business Processes' and two gear icons. The key is positioned over a grey 'Shift' key.

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

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### Manage Execution of Work

- Response Time
- Time to Close
- Completeness of WO Data
  - Labor & Parts
  - Failure Codes
  - Notes



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### Monitor Performance - KPIs



- PM/CM Ratio (80/20)
- PM Completion
  - By Priority
  - On-Time/As-Scheduled
- CMs By
  - System/Equipment Type
  - Priority
  - Failure Codes
- Discovery Mode
- Mean Time to Repair (MTTR)

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### Monitor Performance - KPIs



- Backlog (Days)
- Actual vs. Planned Hours
- % Utilization
  - % Time against WOs (90+%)
- WO Completion by Engineer
- Labor & Mat'l Costs
- Downtime/Uptime
- SRs by Type
  - Avg. Response Time
  - Customer Satisfaction

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*Questions?*

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