

Work Execution Management



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Where To Start Your Work Execution Management (WEM)



Preliminary Strides:

- Sponsorship at your executive level for the program to develop the work execution needs should be a primary focus in the creation of your work execution strategies
- Need for Mission and Vision Statement development for the department (example below)
- Without a Mission and Vision how do you know where you want to be when you grow up

Maintenance and Operations (M&O)

To maintain safe, reliable and efficient facilities and to continuously improve asset reliability and service performance through applied innovation, technology and process management.

Key Factors in Work Execution (WEM) Development

- Who are the Stakeholders?
- How will they be affected?
- Will they be provided with notification of work progress?
- What is the time expectation of service?
- What are the resources needed to do this?



ENGAGEMENT

The affects on the Stakeholders (customers/clients/end users) will define some of your processes for the development of SLAs and work practices to support your Work Execution Development.

❖ This is a pivotal part of the synergy within an organization

How to Develop your WEM



5WH Principle

- Who is receiving the request and who is asking for the work?
- What work are they asking for?
- When do they want this work done?
- Where is the work to take place?
- Why is the work needed?
- How do you need to complete the work?

Creation of Locations

Identification of location hierarchy

Where is the location?

How is identified?

- Naming Conventions
- Designation of space
- Use

Priority of Space?



Select Value

Filter > 1 - 1 of 1

Location	Description	Type	Site
<input type="text"/>	<input type="text" value="ACADMEY"/>	<input type="text"/>	<input type="text"/>
<u>NC85-05-0000</u>	<u>SOUTH ACADMEY ST. RES HALL-FIFTH FLOOR</u>	<u>OPERATING</u>	<u>UDEL</u>

Cancel

Job Plan:

Work Type:

Description:

Last Start Date:

Asset Management in Work Execution Development



This procedure is designed to accurately identify, verify, or change information of the assets within the organizational portfolio.



Important to track the asset infrastructure for repair, replacement, or deferred recommendations based on the financial and risk management impacts of the organization.



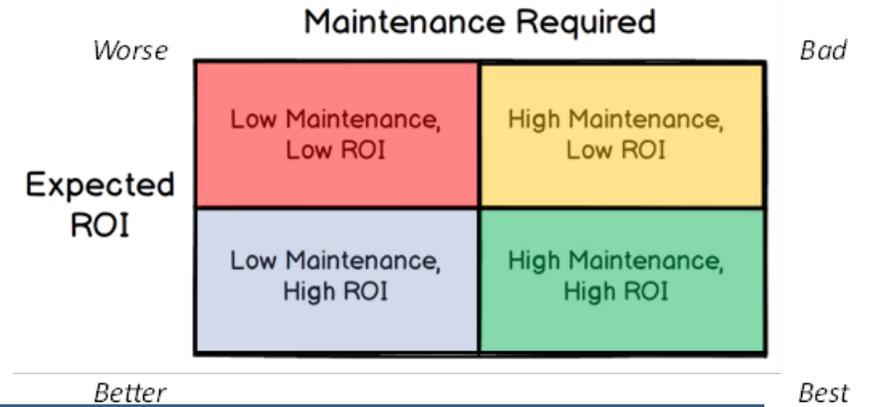
Maintaining the information for proper, efficient operation, gives the executive sponsors the means to identify funding for capital investment.



Proper labeling identifies the assets that will and should be applied to work orders to track the progress lifecycle of the asset.



This practice will identify the future impact of the Capital Planning process along with the need to forecast replacement of assets, buildings, or infrastructure and should also be married into your Strategic Plan.



Asset: 11220 Electrical Control Panel HVDC System Site: BEDFORD

Status: NOT READY Type: _____ Moved?

Asset Template: _____ Returned To Vendor?

Details

Parent: _____ Calendar: COMPANY1

Maintain Hierarchy? Shift: _____

Location: _____ Priority: 4

Bin: _____ Serial #: 24096-2

Rotating Item: _____ Failure Class: _____

Condition Code: _____ Item Type: _____

Meter Group: _____ Tool Rate: _____

Usage: _____

Address Information

Service Address: _____ City: _____

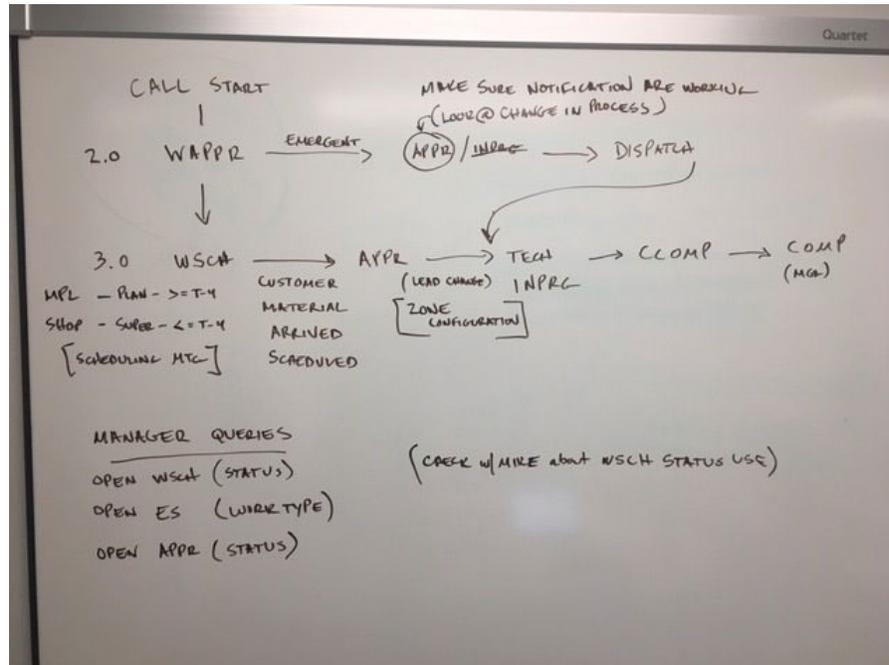
Formatted Address: _____ State/Province: _____

Street Address: _____ Address: _____

Purchase Information **Costs**

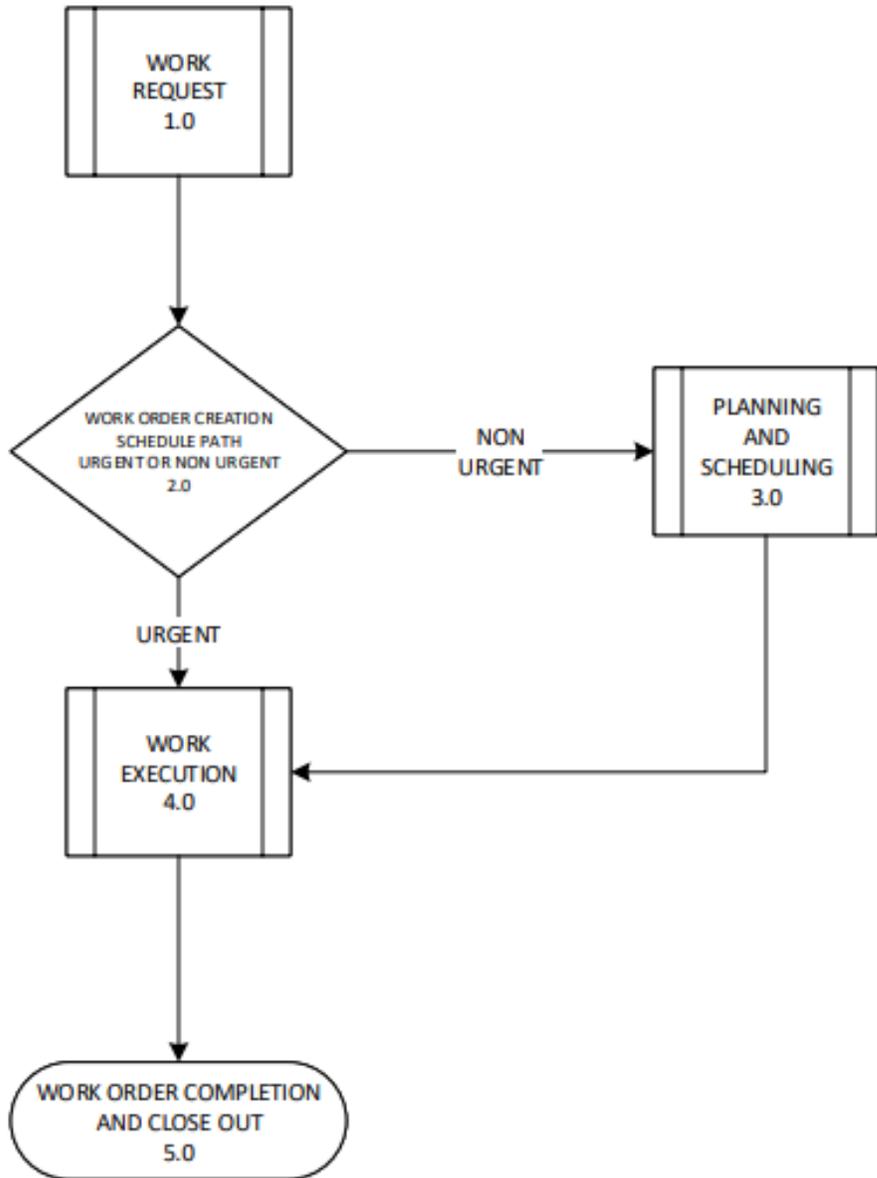
Vendor: WES	Westinghouse Electric Corporation	Total Cost: 0.00
Manufacturer: WES	Westinghouse Electric Corporation	YTD Cost: 0.00
Installation Date: 5/31/94		Budgeted: 0.00
Expected Life: _____		Inventory: 0.00
Estimated EOL: _____		Current Value: _____
•Purchase Price: 37,000.00		
•Replacement Cost: 55,000.00		

How to Develop your WEM



- Whiteboarding sessions approach with key members lead identification of workflow to coordinate the Mission and Vision developed and SLA needs
- Create a workflow based on the prescribed business processes of maintaining the asset infrastructure for maximum uptime
 - ❖ Develop the workflows to be practical and concise to the needs of asset management, inventory control measures and work execution.
- Define roles and responsibilities for “swim lanes” to know who is accountable for what and their paths affect on others
- Socialize with your employees to gain buy-in to the process and get key information

Note: All these steps are the groundwork for future CMMS integrations, procurement needs, possible automation scripting, and potential upgrades.



30,000 ft View

Start your processes with the Highest Level possible to start the discussion

Expand each section and work through the logistics behind why you chose them and then define the next stage

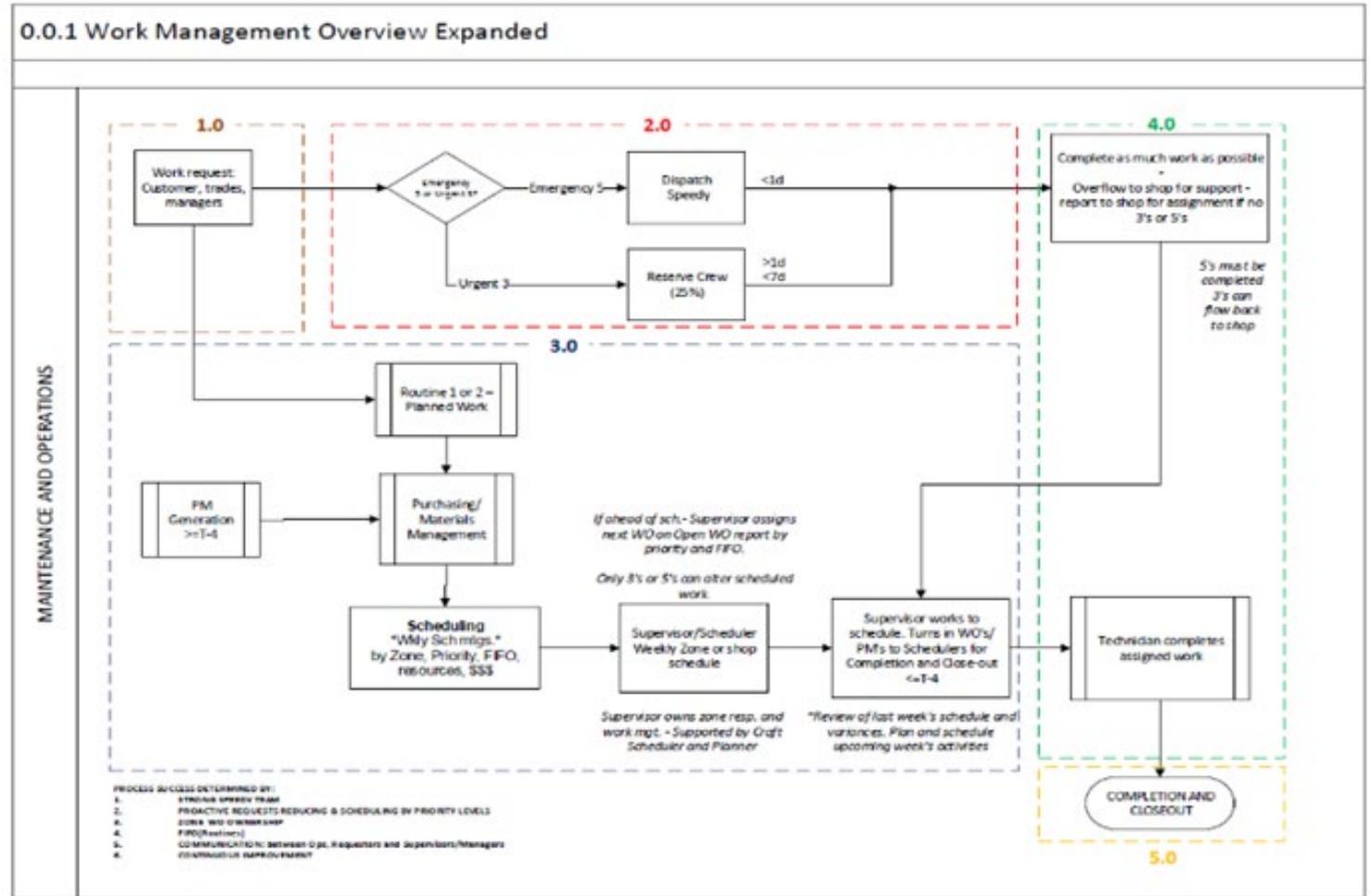
The mapping idea requires understanding of your business processes which will tailor the flow to the right places.

This mapping will then need to be broken down into separate workflows (depicted by the numbering in each of the dotted line boxes). They are then tailored, in detail, for execution by different units and methods.

The flow enables collaboration and continuous learning opportunities between stakeholders, management, technicians and executives; it also creates accountability within units to execute more effectively.

❖ This process development and mapping should be the backbone of the MMS.

5,000 ft View



3.0 PLANNING AND SCHEDULING OVERVIEW

← List View Job Plan Work Assets Specifications

Job Plan: JP11430 Centrifugal Pump Service- 12 Month Organization: EAGLENA Site: BEDFORD Attachments

Revision: 0

Details Responsibility

Status: ACTIVE Default WO Class: Supervisor: MILLER Work Group: Template Type: Maintenance WO Priority: 8 Crew: Owner: Duration: 3:00 Interruptible? Interruptible shift: Lead: Owner Group: Classification: Flow Controlled? Crew Work Group: Class Description: Suspend Flow Control? Flow Action: Launch Entry Name: Flow Action Assist? Include Tasks in Schedule? Start Constraint Offset: Finish Constraint Offset: Inspection Form:

Job Plan Tasks Filter 1 - 4 of 8

Sequence	Task	Description	Nested Job Plan	Duration	Meter
>	10	Check pump operation.		0:20	>
>	20	Check pump float switch.		0:30	>
>	30	Check housing for leaks.		0:10	>
>	40	Replace mechanical seal.		1:00	>

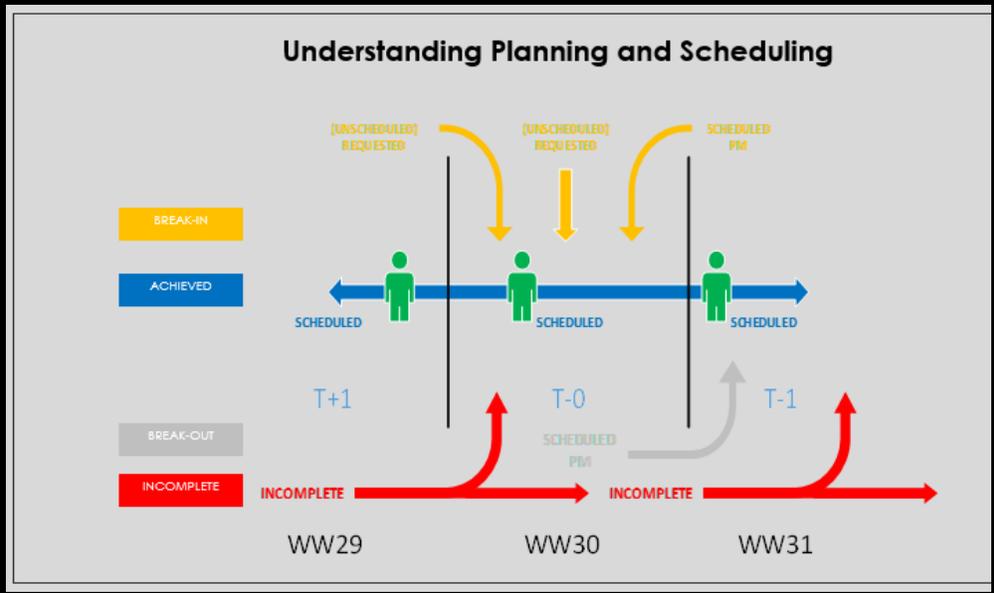
New Row

Labor Materials Services Tools

Planned Labor Filter 1 - 2 of 2

Task	Crew Type	Craft	Skill Level	Labor	Crew	Quantity	Hours	Rate	Line Cost	Type	Calculation
>		MECH	FIRSTCLASS			1	2:00	25.00	50.00		
>		ELECT	FIRSTCLASS			1	2:00	22.00	44.00		

New Row



Planning & Scheduling Factors in Work Execution (WEM) Development

<p>Planning</p> <p>reduces delays during jobs</p>	<p>Scheduling</p> <p>reduces delays between jobs</p>
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Documentation and Change Control

- What changes are being made within your CMMS program
- Processes to align your work execution against the Service Level Agreements or other scope identifications
- Governance over your strategies to achieve continuous improvement
- Engagement of your workforce to harness the buy-in of your Mission and Vision
- Create a feedback loop

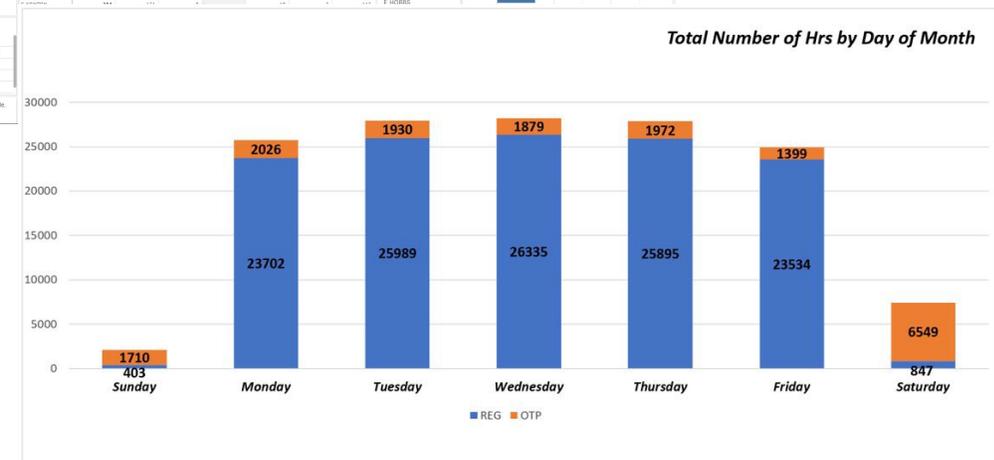
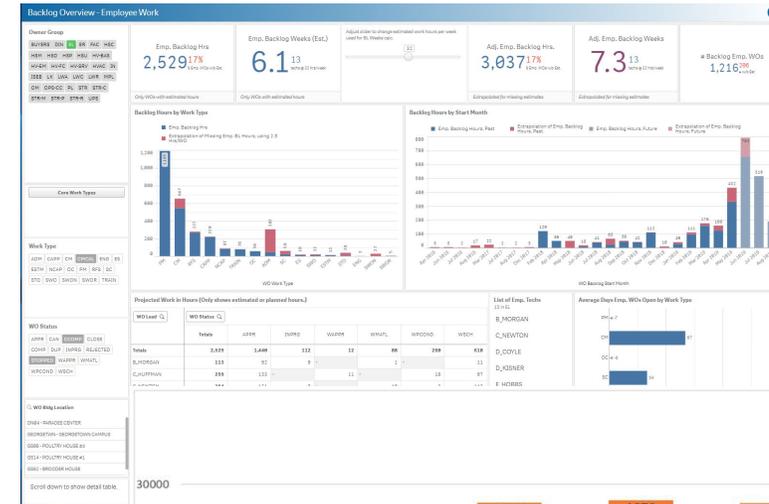
Documentation in Work Execution (WEM) Development

The screenshot displays a web-based interface for configuring a work order. The top navigation bar includes tabs for 'List View', 'PM', 'Frequency', 'Seasonal Dates', 'Job Plan Sequence', 'PM Hierarchy', 'Forecast', and 'Forecast Cost'. The main content area is titled 'Work Order Generation Information' and contains several configuration fields:

- Master PM:** 1030
- PM:** PM Motor- 10hp/1750rpm/TEFC/254T Frame/440v/3ph/60hz
- Site:** BEDFORD
- Status:** ACTIVE
- Forecast Exists?**
- Asset:** Use Last Work Order's Start Date to Calculate Next Due Date? Generate Work Order Based on Meter Readings (Do Not Estimate)?
- Route:** Generate Work Order When Meter Frequency is Reached?
- Work Order Info:** Time Based Frequency | Meter Based Frequency
- Job:** Frequency: 1 Alert Lead (Days): 0 Extended Date: Target Start Time: 12:00 A
- Work:** Frequency Units: DAYS Estimated Next Due Date: 3/23/22 Adjust Next Due Date?
- Work Order Status:** WSCH Last Completion Date: Work Group: >
- Priority:** Earliest Next Due Date: 3/23/22 Owner: >
- Interruptible?** Start Constraint Offset: Owner Group: >
- Finish Constraint Offset:** Crew Work Group: >
- Resource Information:** GL Account: Use this PM to Trigger PM Hierarchy? Child Work Orders and Tasks Will Inherit Status Changes?
- Storeroom:** Storeroom Site: BEDFORD

Reporting Structures

- The success of your program will require substantial data to be collected and collated into actionable report structures.
- This can then be fed to the appropriate levels of management for affirmation of need.
- The information flow and analytics will provide the ability to develop effective cost measures to renovate, repair or construct.
- To gain a measure of control the reporting structure must start with benchmarking.
- Manage your Risk Profile and start seeing real return on your assets



Data Analytics in Work Execution (WEM) Development



Accurate appraisal of work performed, asset uptime, cost, and productivity are critical to effectively maintaining building equipment along with justification of the ROI.



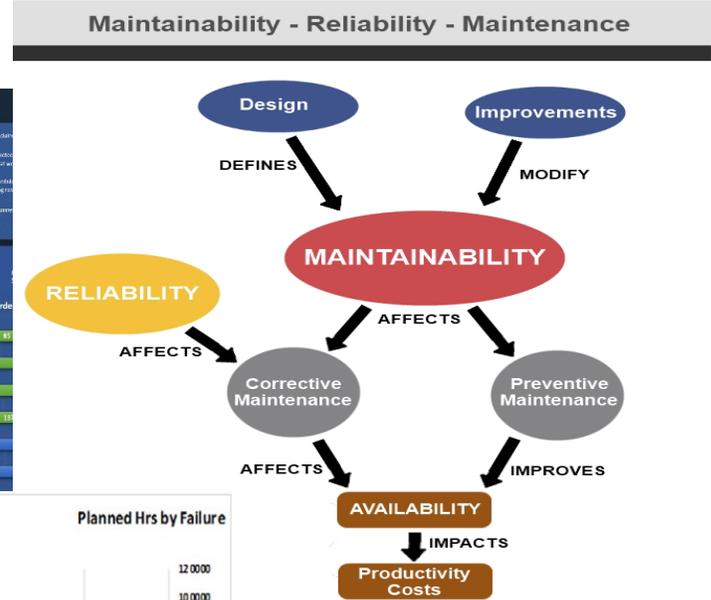
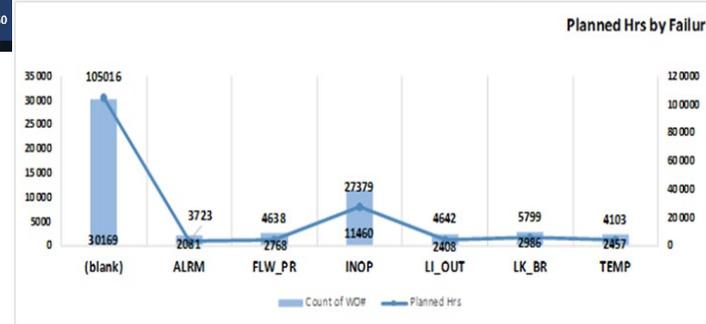
Prompt identification of issues within the work being completed will have a dramatic impact on the overall capacity of your MMS.



Feedback loops from your mechanics will be needed to compete with the ongoing task of maintaining assets. Educate and re-socialize the workforce with the tools needed to be successful.



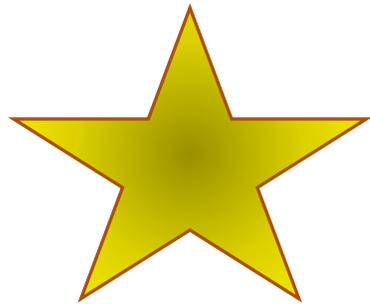
The best test for measurements is performance over time.



Feedback LOOP in (WEM) Development Continuous Improvement Model

Results from WEM Development at University of Delaware

- Upgrade of Work Execution Management to create efficiency and effectiveness for work completions
- Redefined and improved planning workflows and change management.
- Efficiency gains from planning/scheduling work have greatly increased from using Prometheus Planning and Scheduling for Maximo
- Reduction in the number of work orders moving into preventive maintenance backlog by prioritizing schedules and resources to complete scheduled PM work orders on time.
- The planning and scheduling of work greater aligns with facilities management best practices making it more identifiable and reportable.
- Enhanced training and communication between management and planners to properly plan and schedule work.
- Enhanced data integrity that drives the right business decision-based reporting.
- Ability to robustly re-allocate manpower for the proper execution of end user needs



Maximo World 2021 Awards
Best Work Execution Management Implementation
University of Delaware & Prometheus Group



THANK YOU FOR YOUR TIME!

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