

COHESIVE
solutions

Where are you on your Asset Management
Journey?

Are you Ready for IoT?

April 2, 2020



Agenda

- Introductions
- Asset Management
- Strategies
- Game Plan
- Data
- Assessments
- Roadmaps

Introductions

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Company Highlights

IBM Maximo
One of the largest resellers and implementers of IBM Maximo in North America, with over 200 Asset and Work Management projects

IBM's Highest Accreditation for Maximo
Largest body of certified Maximo consultants compared to any other IBM Partner

Industry Best Practices
Deep industry subject matter expertise in business and work processes

Performance Management
Award winning solutions that enable organizations to continuously improve and Achieve Operational Excellence

Rich Industry Experience
Utilities, Oil & Gas, Manufacturing, Facility Management, Aerospace & Transportation, Nuclear

Take-aways

- How to determine where you are on your asset management journey
- The importance of your asset data and how to utilize the intelligence it contains
- The value of a solid and well-defined roadmap to ensure success, and how to create one

Food for Thought

From a recent article published by the MIT Sloan Management Review, titled “The Nuts and Bolts of Digital Transformation”

- New technologies (such as IoT) have immediate and direct effects on performance may be a myth.
- More likely, New technologies usually have, at best, an indirect effect on organizational performance.
- They change the way employees perform their tasks, which alters people’s roles, which alters the networks of people who work together on tasks.
- Ultimately, these changes in roles and social networks are what drive improvement in key performance metrics.
- Using KPIs and metrics will help monitor the performance and drive improvements

Asset Management

Enterprise Asset Management or World Class Maintenance/Operational Excellence

- EAM is the management of assets across departments, locations, facilities and/or business units.
- The goal of EAM is for organizations to maximize the return on investment from their asset base by managing the asset throughout its life.
 - Acquisition (design, construction, commissioning)
 - Operations
 - Maintenance
 - Decommissioning/Replacement

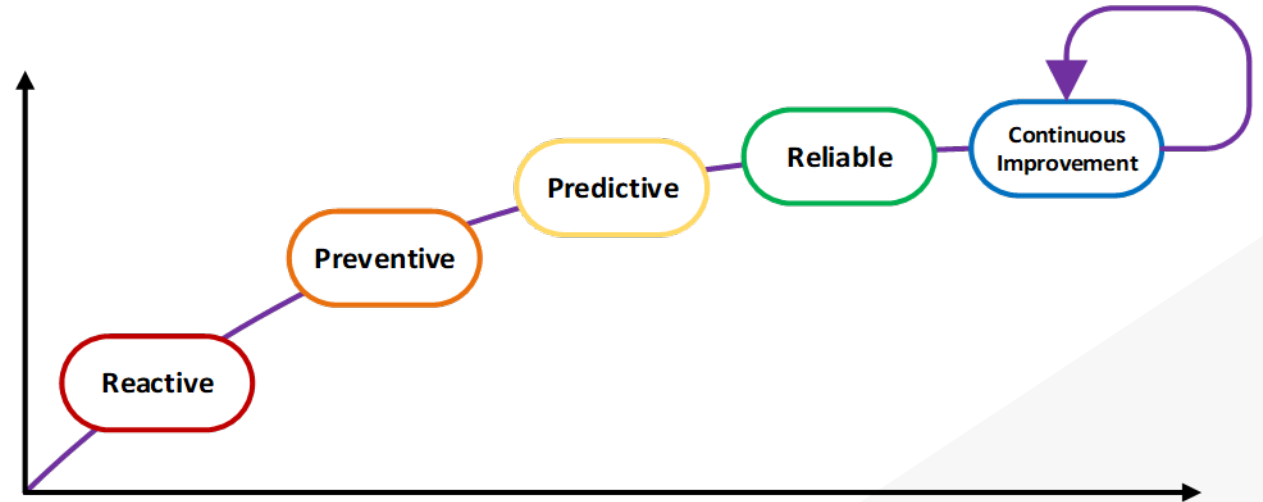
Benefits

- Improve Asset Utilization and Performance
- Reduce Capital Costs
- Reduce Asset-related Operating Costs
- Increase Uptime
- Know whether it is more cost-effective to continue to maintain, overhaul or replace a failing asset.
- Reduce Failures
- Improved Safety
- Extend Asset Life
- Maximize Overall Asset Productivity
- Minimize Total Cost of Ownership

Asset Management

Where are we today?

- Significant changes have occurred since the early 90s
- DCS, SCADA, PLCs (actually late 60's)
- CMMS to EAMS
- Condition Monitoring
- Cloud and SaaS
- Mobility
- Digital Transformation
 - Industry 4.0
 - IIoT
- Digital Twin
- Everything can be monitored with sensors anywhere!
- Thing is, are you ready?



Poll Question 1

Mission

Where is your Organization?

- All organizations should have a stated mission and defined goals/objectives
 - Produce a high-quality product that serves our customers at the lowest cost possible
 - Produce products in the safest manner possible
- Is the mission well known by all?
- Is there alignment within the organization/division?



Strategy

What are some strategies you see?

- Run to Fail/Reactive/Corrective
- Preventive – Time Based, Condition Based, Risk Based
- Predictive – Advanced Condition Based Monitoring with analytics
- Reliability Centered Maintenance – asset specific optimized maintenance
 - Strategy or Methodology?
 - (7 Questions)

Cohesive RCM Blog

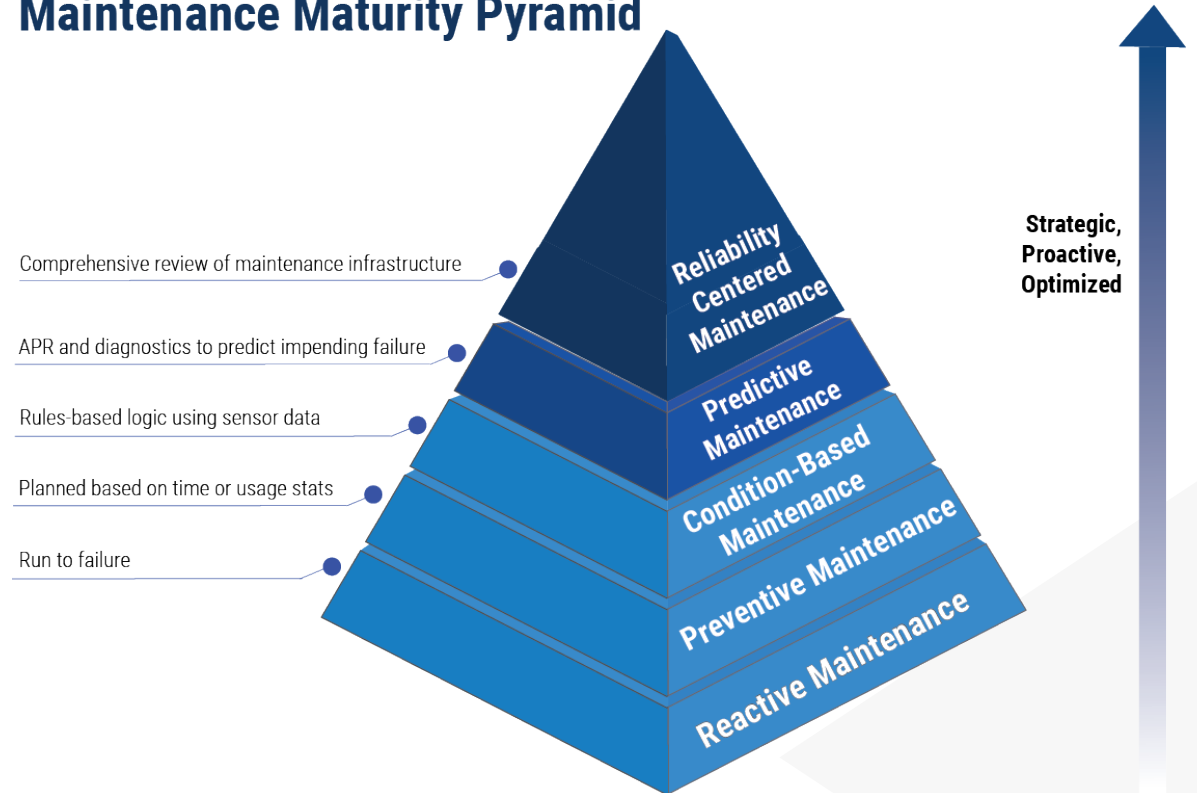
- <https://blog.cohesivesolutions.com/drive-rcm-performance-with-ibm-maximo>

Poll Question 2

Do you have a Game Plan?

- Do you have a plan in place?
- Are your processes defined?
- Are your assets defined?
- Are your processes in line with your objectives and goals?
- Is the information/data clearly visible, or do you spend a considerable amount of time working with data and graphs?
- How do you measure your performance?
- Do you have a multiyear roadmap based on priority?

Maintenance Maturity Pyramid



Source: Plantservices.com

Performance Management

- What is Performance Management?
 - Performance Management is a process of ensuring that a set of activities and outputs meets an organization's goals in an effective and efficient manner.
 - Can focus on the performance of an organization, a department, or the processes in place to manage particular tasks.
 - Driven from the top
- Source: Wikipedia
- Performance Management is not only about measuring and monitoring, but also about taking action and looking for areas to improve.
 - Key element of operational excellence

Data Quality and Confidence

84% of CEOs are concerned about the quality of the data they're basing decisions on, according to KPMG's "2016 Global CEO Outlook."

When there's a lack of trust in **data quality, confidence** in the results it provides is quickly eroded.

Data Quality and Confidence

Data Quality

Data Quality is the condition of a set of values of qualitative or quantitative variables. There are many definitions of data quality, but data is generally considered high quality if it is fit for its intended uses in operations, decision making and planning.

Data Confidence

Data Confidence, on the other hand, is the level of trust an organization can place in data based on characteristics such as System and Process Integrity, Completeness, Currency, and Governance. In other words, I may have the data to measure specific points, but does that data support the decisions I must make against the established objectives.

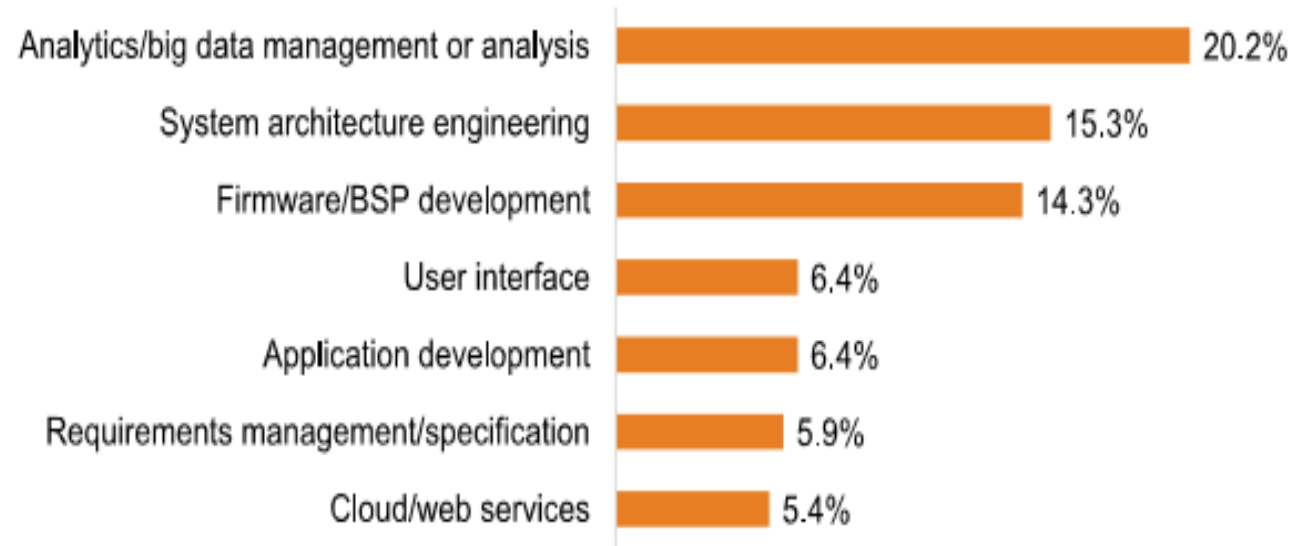
Data Quality and Confidence

- What is the quality of your data?
- Do you have all your assets identified?
- What data should you have to support IoT?
 - Asset data strategy – what data do you have, what are you gathering
 - JobPlans
 - PMs
 - Spare Parts
- Are you confident in your data?
- When was the last time you performed any type of asset data review or cleanup?

Something to Consider

- Data Data Data
- With all the data out there, you will need more powerful tools to display the data such that it is meaningful and actionable
- You will also need to have people who can manage and analyze the data
- Static reports will not provide the insight you will need

*Exhibit 3: Top Tasks to Increase Investments in for IoT Solution Development Needs and Skillsets
(Percentage of Respondents Citing Task First)*

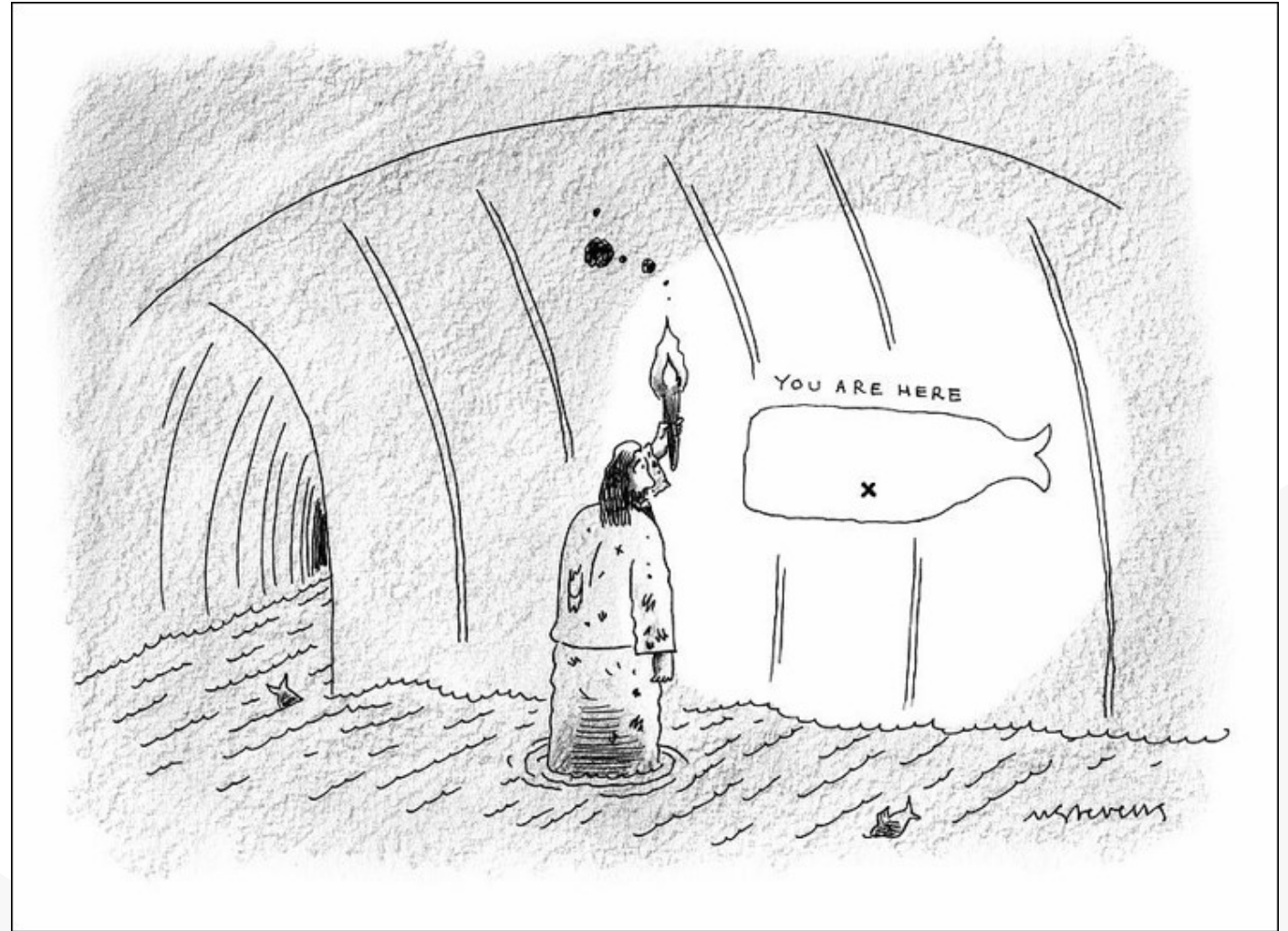


Do we need a roadmap?

- “If you don't know where you are going, you'll end up someplace else.” – Yogi Berra
- “If you do not know where you are going, every road will get you nowhere” - Henry A. Kissinger
- “If you don't know where you're going any road will do” - Lewis Carroll
- “You can't really know where you are going until you know where you have been” - Maya Angelou
- “...to find where you are going, you must know where you are” - John Steinbeck
- “If you don't know where you are going, how will you know when you arrive? You can't stumble upon your destination.” - Jack White
- If one does not know to which port one is sailing, no wind is favorable. -Lucius Annaeus Seneca

The Assessment

- The Assessment is the exercise of determining where you are currently relative to where you could, or want, to be
 - What do we do well?
 - What can we improve?
 - What should we start doing that we currently do not do?
 - What should we stop doing that we currently do?



Poll Question 3

Common Current State Challenges/Opportunities

Challenges may be *confirmed* or *identified* by assessment

- Time and Resource Constraints / Need for Efficiency
 - Inability to do more with less; firefighting; unable to focus on improvement
- Business Process Immaturity
 - No defined standards; inconsistencies; low adoption; poor data quality
- EAM System Opportunities
 - Integration; usability; timeliness; automation; cost of ownership; agility
 - Leveraging “State of the Art”
- Objective Driven
 - Misalignment between Strategy, Goals, Process and Data – No “Line of Sight”
- Next Level Asset Management
 - **Reactive** to **Preventive** to **Predictive** to **Reliable** to **Continuous Improvement**

What is in an Assessment?

- Interviews
 - Executive Leadership
 - Operational Managers
 - Field Supervisors
 - Field Personnel
 - Cross Functional Subject Matter Experts
- Gauge Maturity & Think Big Picture
 - Leadership Support
 - Business Processes
 - Systems/Tools Landscape
 - Effective Practices
 - Goals & Drivers / KPIs & Measures
- Data Collection
 - Organizational Documents
 - Business Processes
 - System Configuration
 - System Data
 - Utilization
 - Standards
 - Data Quality/Confidence

Assessment Framework – What to Consider

19 Logical Assessment Areas:

- Strategy and Structure
- Asset Management
- Work Management
- Reliability
- Integrity
- Operations
- Health, Safety, and Environmental (HSE)
- STO (Outage)
- MOC
- Engineering
- Warehouse Management
- Procurement
- Training / Skills Management
- Document Management
- Capital Projects
- Finance
- IT / IS Management
- Continuous Improvement
- Organizational Change Management

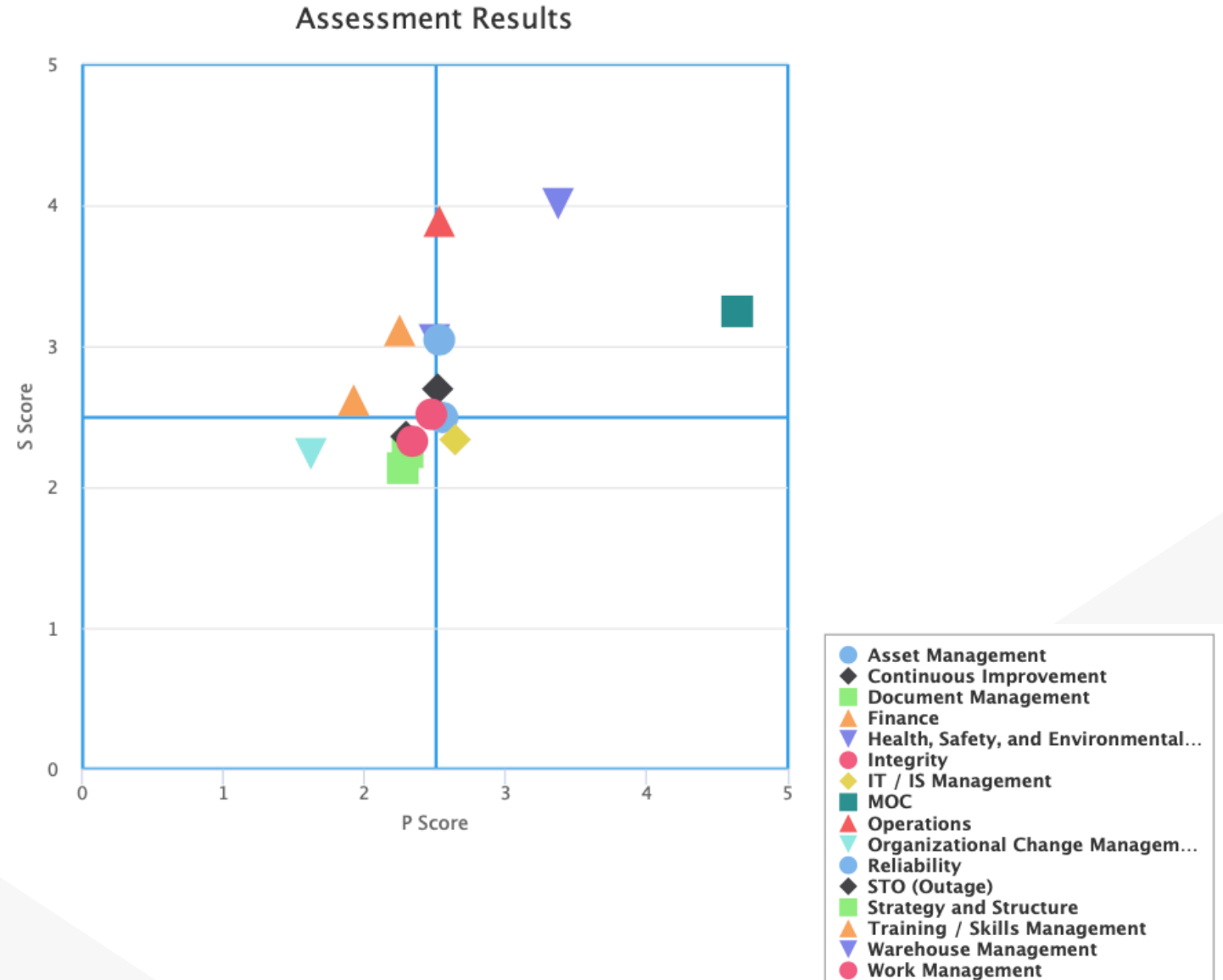
- Each Area is evaluated based on Processes and Systems
- Value Drivers are evaluated across areas

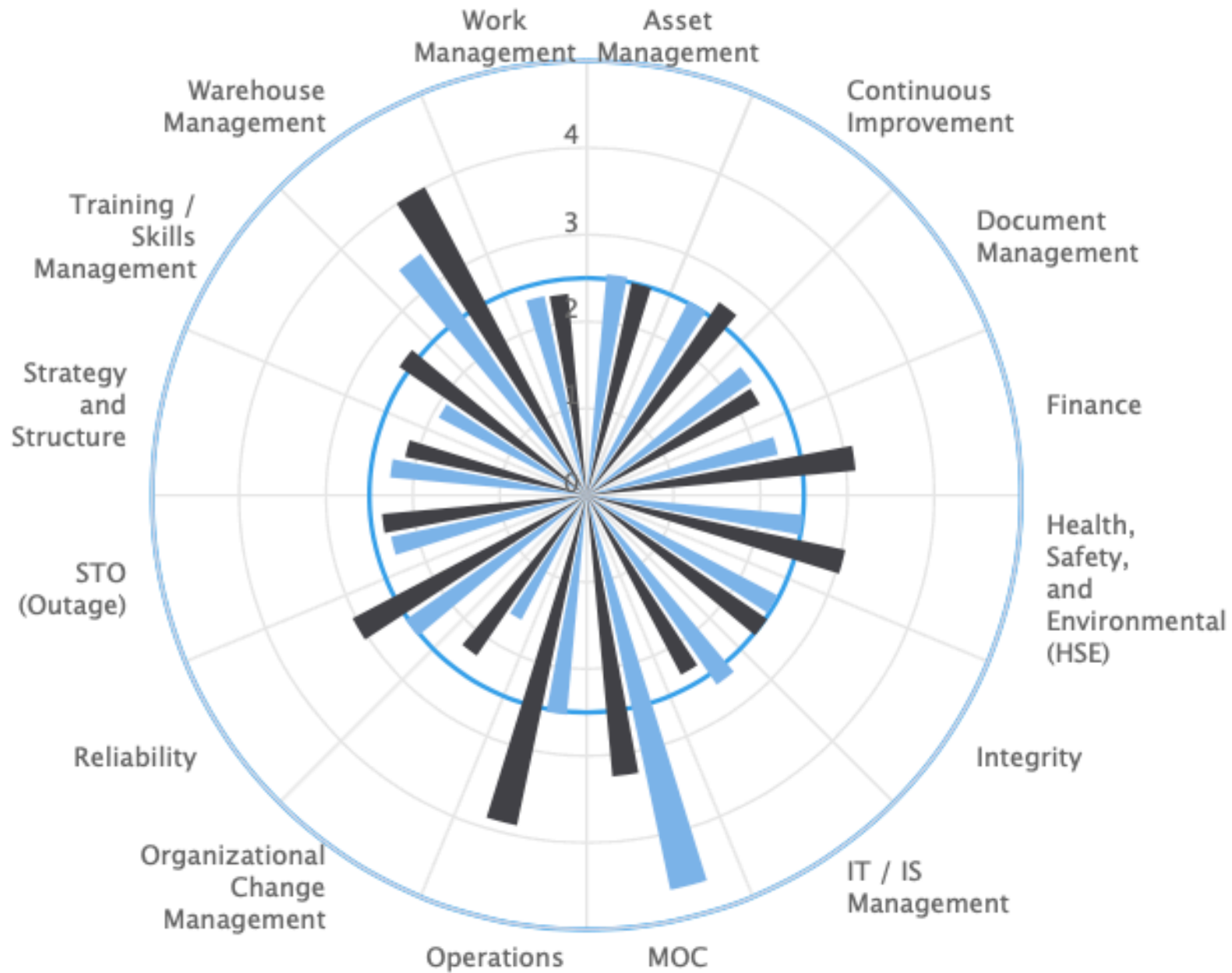
Area	Process	Value Driver
Work Management	Planning	Organization Plans Work.
Work Management	Planning	Organization has dedicated planners.
Work Management	Planning	Planners maintain predefined workplans.
Work Management	Planning	Planners plan task / steps.
Work Management	Planning	Planners plan / estimate duration.
Work Management	Planning	Planners plan inventoried materials.

Visualizing the Result

At a Glance

- Summary of Assessment Results across both Process and System Dimensions
- Upper right quadrant represents Best in Class Processes implemented with a single integrated source of truth EAM system
- Other quadrants represent opportunities for improvement





Recommendations – Our Approach

Recommendations are categorized in two dimensions: Size and Potential Value

- Size is identified as one of the following:
 - Short Range – Can be implemented in a short amount of time (< 2 months) without significant cost or effort (explicit allocation of resources not usually required)
 - Medium Range – Longer to execute than Short Range (2 to 12 months) and requires investment of resources (internal as well as possibly external consulting / augmentation).
 - Long Range – Longer than 12 months to execute and requires significant investment of resources (internal as well as possibly external consulting / augmentation).
- Potential Value is identified as one of the following:
 - Small – Value comes from incremental improvements in process, utilization of automation, education of personnel, etc.
 - Medium – Value is considerate resulting from an improvement in efficiency, standardization of process, etc.
 - Large – Value is significant resulting from a major improvement in reliability, availability, effectiveness, quality, etc. or a reduction in risk

Creating Your Roadmap...

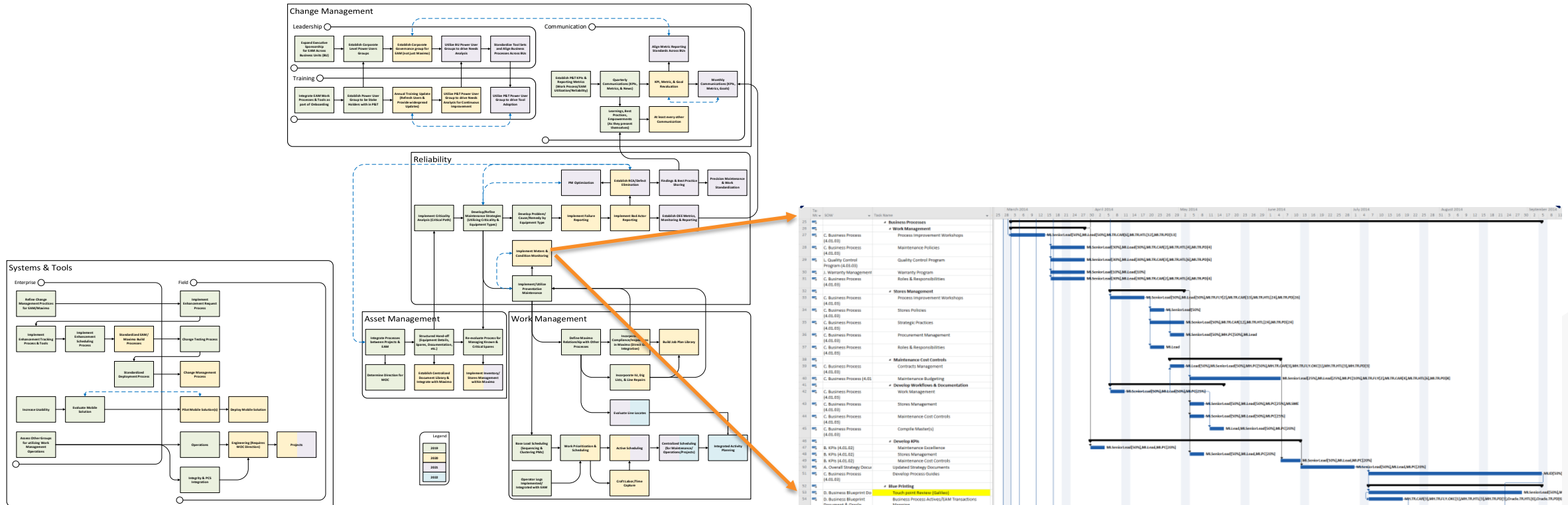
What you need:

- A definition of success - Vision
- A commitment to make change
 - Support from management & leaders
 - Motivation for the organization
- And an execution plan
 - Time phased goals & initiatives
 - Includes quick wins & long-term activities
 - With interdependencies mapped

Creating Your Roadmap... Common Pitfalls

- Thinking you need to do a 'deep dive' or 'boil the ocean' before you can start
 - Set a direction & keep focus!
 - Continuously improve over time – nothing is ever perfect and you're never 'done'
- Focusing only one or two areas for improvement
 - Execution may focus on one or two at a time, but strategic planning **must** consider the larger picture
 - A Roadmap should Include elements which complement each other – Intermix Effectiveness & Efficiency improvements & Monitor/Measure it
- Using project plans as roadmaps
 - Project plans are short-term – and used to manage tactical activities
 - Roadmaps are long-term – and are flexible to support strategic planning

Roadmaps vs. Project Plans

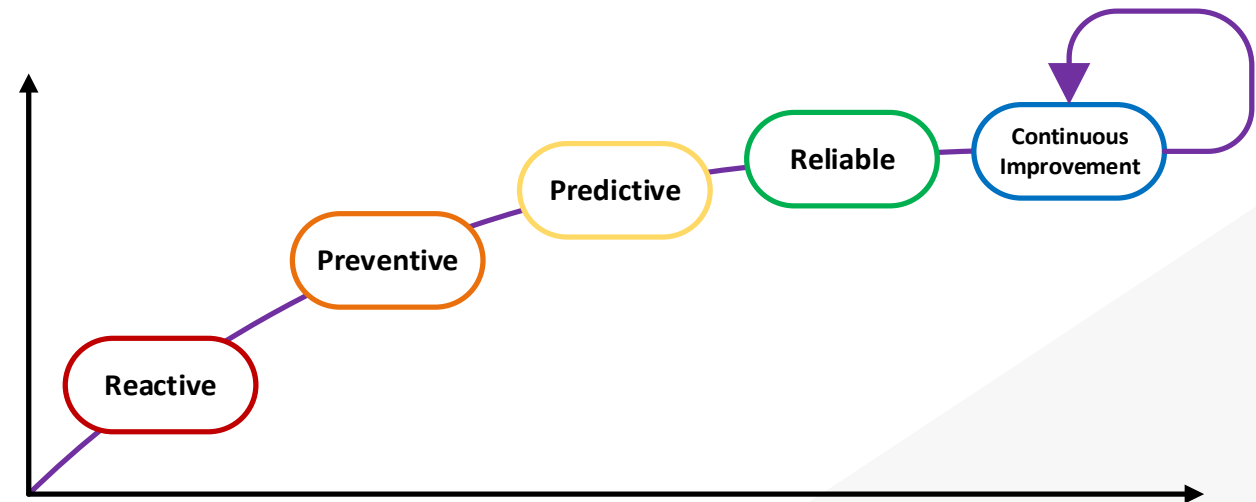


Long-term – strategic management tool

Short-term – used to manage tactical activities

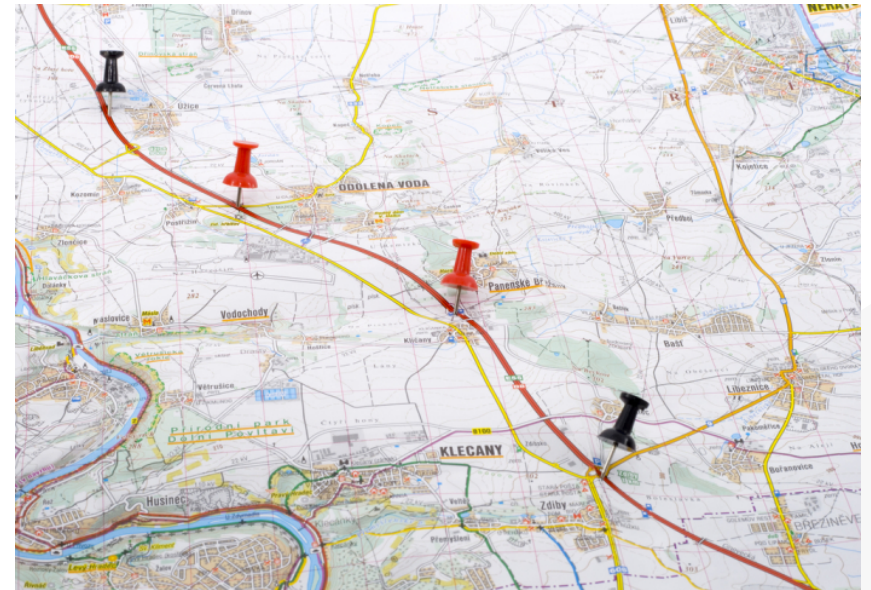
Roadmaps are Living Documents

- Roadmaps are meant to be continuously updated
- Show Progress
- Highlight Current Focus
- Indicate New Goals & Paths
- Evolves with the Organization
 - Competitive Landscape
 - Organizational Growth
 - Systems & Tools Maturity
- Continuously Evolving
- Don't expect to finish, expect a journey



Conclusion

- It's a *journey* & every journey needs a map – not just a destination
- Your Data should be used to help you navigate the journey
 - Quality and Confidence
 - Continuous improvement
 - Measure and Monitor
- Think strategic – execute tactically
 - Well planned projects support the big picture
 - When efforts are aligned they are more likely to get buy-in & support = success
- To build a Roadmap:
 - Know where you want to go – Learn from others
 - Know where you are currently – *Get an Assessment*
 - Know how to effect change in your organization



Questions

Networking



Find us at these upcoming events:

- MaximoWorld - Orlando, FL August 3 - 6
- SMRP Annual Conference - Columbus OH October 19 – 22

Contact Us:

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