Dynamic EAM Implementation and Process Transformation

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Moderator

Dianne DePuy

Senior Business Development

Dianne DePuy has been providing work and asset management services and software to many of the world’s largest utility companies for more than 20 years. As a strong client advocate, Dianne has collaborated with regional, national and global utility companies across the energy value chain to align software and services solutions with utility company asset management strategies and best practices.

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About our Organization

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

**IBM Maximo**
Largest reseller and implementer of IBM Maximo in North America, with over 90+ Asset and Work Management projects

**Rich Industry Experience**
Nuclear, Generation, T&D, Pipeline, Manufacturing, Regulatory Compliance

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

**Performance Management**
Award winning solutions that enable organizations to continuously improve and achieve Operational Excellence
Today’s Discussion: Enterprise Asset Management & Business Transformation

Customer Challenges

• Systems and business processes are fragmented – WAM, SCM, HSE, MOC, ERP, GIS, etc.
• Hampered by a lack of data quality
• Few controls to protect process integrity
• EAM integration with operational technology is unavailable - Connectivity with ‘Things’ is inconsistent
• Transformation is hard to grasp for long term sustainability

Our Focus

• Specialize in process re-engineering and road-mapping using industry leading practices
• Comprehensive care for strategy, implementation, and sustainment
• Bringing together the processes with the technologies (new or existing)
• Execute a refined implementation methodology – Six Phase Approach
EAM for Utilities

This presentation will provide a perspective of the project highlighting how Maximo for Utilities was configured to support the overall business process in Distribution.

Specific focus areas are:
- ARM Scheduler integration
- Configured functionality to support pole inspection and maintenance
- Configured functionality to support storm management and restoration
- The use of WorkFlow
- The configuration and exploitation of prerequisite (with the use of automation scripting) to support the work process
- The innovative use of Schneider Designer, ESRI, Maximo Spatial, utilizing asset templates, and the MALCI (Multi Assets, Location, and Configuration Items table) functionality to provide cradle to grave asset lifecycle management

Attendees will have the opportunity to see how a major utility implemented Maximo for Utilities supporting core distribution processes.
Richard Pike
Utility Practice Leader

Richard has over 32 years of experience working in the Utility industry. He has a broad, multi-faceted experience with utility business processes and supporting technologies such as mobile, GIS, work and asset management.

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About the Client Site
Project Overview

In 2014 the client initiated a transformational EAM project to replace a 25-year-old legacy work management system and asset database with Maximo for Utilities.
Project Overview

The EAM solution makes extensive and innovative use of Maximo for Utilities, Maximo Spatial, and Maximo Anywhere with integrations to CSS (Customer Service System), PowerPlan, PeopleSoft, CGI ARM Scheduler, Schneider Designer, TOA (Transmission Outage Application) and Intergraph OMS.
Project Timeline
Optima EAM Project BEGINS Sept ‘14

2014

Process Design COMPLETE

System Design COMPLETE

System Build/Config COMPLETE

System Testing COMPLETE

Go Live! Apr ‘17

2015

2016

2017

2018

Final Roll Out!
Initiate
Plan/Design
Schedule
Execute
Complete/Close

Process Design
Process Design

1. Initiate
2. Plan
3. Schedule
4. Execute
5. Complete

Common Process based on Complex Work

- Simple Work – Templated Work
- Maintenance Work
- Storm Work

ADDING DELTA’S

COHESIVE solutions
Process Design – Key Areas of Focus

- Initiate
- Plan
- Schedule
- Execute
- Complete

Full Asset Lifecycle

- Prerequisites integrated with Workflow
- Integration with ARM Scheduler
- STORM Management
Asset Lifecycle - Conceptually

Key Points

• Pre-Staging of Assets – from GWD or Template
• Defining the point of initial Data Capture
• Managing the Asset, Asset Model, Installation Data Capture
• Managing the types of Asset Changes
• Asset Retirements
Asset Lifecycle – Overview

1. **Asset Data Records** At Purchase, Stored
2. **ESRI GIS**
3. **Proposed Object**
4. **Maximo WO**
5. **Proposed Asset/Location**
6. **Construction**
7. **Add ’I Data**
8. **In Service**
Asset Lifecycle – GWD Design
## Asset Lifecycle – Work Order

### Work Order Tracking (T&D)

- **List View**: Work Order, Plans, Prerequisites, Asset Details, Assignments, Related Records, Actions
- **CUE Details**: Contacts, Pre-Job Brief, SIO, Billing

#### Work Order:
- M100101202
- SEG-GWD PRACTICE-1

#### E&I Creation Error:

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<th>Point #</th>
<th>Action</th>
<th>GIS Facility ID</th>
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Asset Lifecycle – MALCI Row
Asset Lifecycle – Asset Specification
Asset Lifecycle – Mobile Completion

MALCI Rows

COHESIVE solutions
Asset Lifecycle – Mobile Completion

Existing Asset
Asset Lifecycle – Mobile Completion

New Asset
Asset Lifecycle – Mobile Completion

New Asset
Asset Lifecycle – Completion/In Service
Prerequisites

JOB SITE READY

ONE CALL NOTIFIED

CUSTOMER CONTRIBUTION PAID

Prerequisites
Prerequisites

Key Configurations:

- Use of process “Milestone Status” with Workflow
- Numeric Sequencing “Prerequisite ID”
- Mandatory versus Optional
- Prerequisite Type/Sub Type Automation Scripts
Prerequisites – “Milestones”

- Approval
- Ready to Schedule
- Freeze from Dispatch
- Ready to Close

MAXIMO WORKFLOW

- 30 – CUSTOMER CHECKLIST
- 270 – EASEMENT ACQUIRED
- 370 – STAKE SITE
- 400 – CUSTOMER READY
- 430 – JOB SITE READY

WORKFLOW

- 500 – AS-BUILT REVIEW
- 590 – COMPLETION OF BILL
ARM Scheduler

ARM Scheduler Integration

Maximo WO
ARM Scheduler Integration

Key Configurations:

- Integration with Assignment Tab with minimal configuration
- 2-way assignments
- Maximo in the middle
ARM Scheduler Integration
Key Configurations:

- Damage Assessment w/Link to OMS
- Template/Simple Storm Design
- Major Storm Management
- Consolidated As-Built
Key Configurations:

There are 3 levels in the resumption of service process:

- **Non-Storm Outages** (emergent work/unplanned) – These events can occur day, night, or weekend and are normally managed by the Distribution Service Operations group. They are assigned to the local Troubleshooter who acts as a “first responder”, goes to the location of the event, assesses the situation, and resolves the issue if possible.

- **Storm Event (Blanket/’MINORSTORM’/Emergent work)** – A blanket Storm work order is used to capture costs for weather-related outage events. The event is generally localized and utilizes local crews and contractors for restoration.

- **Storm Event (Specific/’MAJOREVENT’/’MJREVENT12’)** – A Major Storm event occurs when a significant amount of damage, that has widespread impact across the system, requires extended restoration time.
Key Objective:

Track work activities consistent, to the extent possible, with standard work management processes...

- While ensuring faster execution in key areas such as WO initiation and material management
- Providing greater accuracy for the completion process. A major source of extra work in the past
Key Objective:

The following steps will be followed in the work management process:

- Create individual WOs to capture asset related outage work
- Associate the PowerPlan project number to WOs
  - Non-storm outage, default by type
  - Storm outages refer to either a blanket WO or specific WO
- Create high level material list/reservations for each WO
Key Objective:

The following steps will be followed in the work management process:

- Assign WOs
- Issue material to WOs
- Capture as-built information
- Report labor at WO level
STORM Management

Hotels, Meals, Bulk Material, Time Reporting, etc.

Chargeable for Logistics
STORM Management
Pole Inspections & Maintenance
Pole Inspections

Key Configurations:

- Maximo “Shell” Routes
- GIS Data Extraction by Feeder for Pole assets
- Use of Job Plans with Specifications
- Use of Task Work Orders per Pole
- Import/Export of data to contractor
Pole Inspections – PM w/Shell Route

Populated from GIS
Pole Inspections – WO w/Tasks
Pole Inspections Using Outside Vendors

- When the PM is generated into a WO, it now contains specific Asset #’s and Task WO #’s
- A formatted csv file that now contains the 2 key data elements above, plus the Spec/Attributes for each pole asset is sent to Osmose
- Osmose uploads this information into their proprietary inspection system and performs inspections on mobile devices
- Required inspection information is collected for each individual pole inspection
Pole Inspections Using Outside Vendors

- The Osmose mobile device then “feeds” their system, which in turn populates the csv file sent.
- The returned csv file is uploaded using the OOTB Maximo WO Application Import functionality.
- Each unique Asset/Task# uploaded drives the Task Status to COMP.
- Certain data elements (Problem Code, Reject Reason, Reject Status, etc.) in the returned data automatically trigger SRs for Distribution Maintenance Management to then review and turn in WOs as appropriate for the action needed at hand.
Key Considerations

- Leverage core functionality
- Use configuration not customization
- Think holistically
Thank you for joining us today 

Questions?
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