Lessons Learned from Xcel Energy QIM/MOC Implementation

Thomas Justin and Manju Venkataseshan, Managing Consultants, IBM
Ashwinichandra Saodekar, SAP Project Executive, IBM/Xcel Energy
Edward Malarkey, Senior QIM/MOC Functional Lead, Xcel Energy
Session ID # 83713
About the Speakers

Thomas Justin
- Managing Consultant, IBM
- 38 years in industry, 22 years of SAP
- **Fun Fact:** Masters Degree in Aerospace Engineering

Edward Malarkey
- Sr. QIM/MOC Functional Lead, Xcel Energy
- 38 years at Xcel, 22 years in Nuclear
- **Fun Fact:** Started with Xcel as a Blacksmith Welder

Manju Venkataseshan
- Managing Consultant, IBM
- 22 years in industry, 21 years of SAP
- **Fun Fact:** Implementation on a project with IBM and traveled to 6 countries

Ashwinichandra Saodekar
- SAP Project Executive, IBM/Xcel Energy
- 17 years in IT, 14 years of Utilities
- **Fun Fact:** Grew up in a house with library of about 10K books
Key Outcomes/Objectives

1. QIM/MOC implementation and post implementation experience
2. Benefits realized
3. Lessons learned
Agenda

• Company Profile - Xcel Energy
• Solution Background
• The Business drivers
• The Implementation
• Benefits and lessons learned
Company Profile – Xcel Energy

Xcel Energy is an electric and natural gas company, with annual revenues of $11.4 billion. Based in Minneapolis, MN, we have regulated operations in eight Midwestern and Western states and provide a comprehensive portfolio of energy-related products through four operating companies.

• **Employees**: 11,865
• **Natural gas operations**
  • Customers: 2.0 million
  • Transmission: 2,209 miles
  • Distribution: 35,112 miles
• **Electricity operations**
  • Customers: 3.6 million
  • Transmission and Distribution: 219,841 miles
  • Nuclear Generation: 3 units at 2 sites in MN
  • Industry leading carbon reductions: 35% in 2017, carbon free 2050
Solution Background

1. Roll-out
2. Sustainment History
3. Key Business Process Enhancements
### What is Quality Issue Management (QIM)

**Quality Issue Management**

QIM is a Web Based User Interface solution that allow a client to track Issues and Activities for resolution. Xcel Energy use this system for their Corrective Action Program (CAP)

<table>
<thead>
<tr>
<th>QIM Capabilities</th>
<th>QIM Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Integration with Asset Management, Work Management, and Supply Chain Processes</td>
<td></td>
</tr>
<tr>
<td>- Integrated analytics beyond applications and system borders (SAP &amp; non-SAP)</td>
<td></td>
</tr>
<tr>
<td>- Global and integrated solution supporting all kinds of quality issues and activities for better analysis and high visibility of information</td>
<td></td>
</tr>
<tr>
<td>- Single system with easy access and simple user interface which meets regulatory requirements</td>
<td></td>
</tr>
<tr>
<td>- Standardized and efficient processes using business rules for automatic determination of responsible persons, mandatory activities, etc.</td>
<td></td>
</tr>
</tbody>
</table>
Why QIM?

• QIM – Quality Issue Management
  – Program Management
    • Corrective Action Program (CAP)
  – Integrate with SAP ECC, SAP BW, DMS
    • Accomplished using workflows and process automation
  – Ensure quality reporting, data integrity and regulatory compliance
QIM Workflow

IssueSubmitter → SRO Reviewer → Issue Coordinator → Issue Owner → Activity Driver → Records Management

Capture the issue → Optional Review of the Issue → Prioritize and Approve the Issue Trigger activities → Assign activities. Close Issue → Perform activities → Generate Records

Lifecycle status:
- New
- In Process
- Completed
- Extension

User Status:
- SRO Review
- Screening
- Department
- Working
- Completed

Approval Status:
- Approved
QIM Implementation

• Achieving our objectives
  – Corrective Action Program (CAP) Management
  – QIM automated workflow notifications
  – Document Management System (DMS)
  – Accurate record generation
  – Reporting
# What is Management Of Change (MOC)?

Management of Change (MOC) is a Web Based User Interface solution that allows a client to track Change Requests and Activities for resolution. Xcel Energy uses this system for 16 different business processes: Engineering Change Request, Procedure Change Request, Procurement Change Request, Training Change Request...

## MOC Capabilities
- Integration with Asset Management, Work Management, and Supply Chain Processes
- Integrated analytics beyond applications and system borders (SAP & non-SAP)
- Capability to trigger Change Requests out of other processes or applications

## MOC Benefits
- Continuously improve processes and equipment without introducing risks
- Consistent risk assessment and approval processing
Why MOC?

• MOC – Management of Change
  – Program Management
    • Procedural Change Requests (PCRs)
    • Engineering Change Requests (ECRs)
  – Integrate with SAP ECC, SAP BW, DMS
    • Accomplished using workflows and process automation
  – Ensure quality reporting, data integrity and regulatory compliance
MOC Workflow

CR originator → CR Screener → Department Supervisor → CR Owner → Activity Assignee → Records Management

Capture the CR → Prioritize and approve the CR → Approved Assigned the CR and trigger the activities → Assign activities. Close CR → Perform activities → Generate Records

Lifecycle status:
- In Preparation
- Submitted
- Awaiting Approval
- Approved
- In Process
- Completed
MOC Implementation

- Achieving our objectives
  - Procedure Change Requests (PCRs)
  - Engineering Change Requests (ECRs)
  - MOC automated workflow notifications
  - Document Management System (DMS)
  - Accurate record generation
  - Reporting
Overall Implementation Strategy

• Plan
  – Define and gather requirements
  – Technical design and analysis
  – Application build and development
  – Data migration
  – Integration testing
  – Implementation release

• Team
  – IT Project Team (Project Management (QIM/MOC), Functional, Technical, BW, DRMS)
  – Business Team (Business SMEs, Super Users)
  – Technical Legacy SMEs

• Execution
  – QIM/MOC implementation
  – Collect user feedback for post-implementation activities
Post Implementation

Based on user’s feedback

• Streamlined the processes
  – Improved workflows for efficiency
  – Fine tuned activity templates and determination rules

• Enhanced reporting capability
  – Extended BW capability/BOBJ presentation

• Fine tuned record generation process
  – Standardize use of record forms
  – Streamlined PDF generation

• Efficient and powerful data analysis
  – Improved analysis through newly developed tools
Benefits Realized

- Effective and efficient management of CAP
- Integration with other SAP and non-SAP systems
- Timely record generation
- Timely and accurate reporting
- Ease of use with QIM and MOC
- Enhanced process monitoring
- Avoid possible Nuclear Regulatory Commission (NRC) findings
- Automated extract of data for Institute of Nuclear Power Operation (INPO) inspections
- Tools and processes streamlined
Lessons Learned

• Involve SMEs from legacy system and business processes during all phases of design, build, and implementation

• Design, develop and validate more comprehensive UAT scenarios/scripts with business SMEs and legacy system experts

• Develop and implement solid data strategy for migrating QIM/MOC data

• Enhance end user training
Useful Resources

• SAP QIM
  – https://help.sap.com/doc/saphelp_qim100/1.0/en-US/26/d50f49b6a54a37839e4326987edeb1/frameset.htm

• SAP MOC

• SAP BRF+
  – https://help.sap.com/viewer/90c77b45fd0f42febd69eea239037688/1.0%20SP04/en-US

• SAP DMS
  – https://help.sap.com/erp_hcm_ias_2012_03/helpdata/en/7a/973035624811d1949000a0c92f024a/frameset.htm
Take the Session Survey.

We want to hear from you! Be sure to complete the session evaluation on the SAPPHIRE NOW and ASUG Annual Conference mobile app.
Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

http://info.asug.com/2019-ac-slides
Q&A

For questions after this session, contact us at
Thomas Justin, thomas.justin@us.ibm.com
Edward H Malarkey, edward.malarkey@xenuclear.com
Manjunatha K Venkataseshan, MKVenkat@us.ibm.com
Let’s Be Social.

Stay connected. Share your SAP experiences anytime, anywhere.
Join the ASUG conversation on social media: @ASUG365 #ASUG