GEM Case Study
Minnesota Power

Development of Integration Strategy for Distribution Systems

Situation

The electric distribution business is characterized by increasing customer service expectation at the same time that pressure to reduce operating costs is mounting. To address these needs at Minnesota Power, The Allette Information Technology and Services (ITS) department developed a Five Year Plan to address new computer system requirements and the level of integration among these and existing systems to improve work process efficiency. Minnesota Power realized that implementing new systems would require an unprecedented level of data and process integration in order to realize full business benefits.

Minnesota Power engaged Global Enterprise Managers, Inc. (GEM) to develop a Distribution Systems Integration Strategy that would provide a roadmap for integrating new systems into Minnesota Power's existing information technology environment while improving key work processes.

Solution

First GEM performed a review of major applications and interfaces that currently support the distribution business. Using questionnaires and interviews with ITS personnel and selected users, the technology distribution business modeling, interfacing approaches, current interfaces, opportunities and future directions were examined.

Using this technology background, GEM examined four key work processes identified by Minnesota Power for: New Service, Contract Line Inspections and Restoration, Major Capital Project and Outage Restoration.

The general approach was:

Application and Interface Assessment

GEM conducted highly focused interviews with subject matter experts from the Distribution and other groups, as well as ITS personnel responsible for system maintenance, support, and integration. Each of these interviews was structured by means of a questionnaire covering current technical infrastructure, applications, interfaces, associated business processes, and anticipated future needs.

Work Process Analysis

Processes were analyzed to document: inputs with source, outputs with recipient, process triggers, business rules, work procedures, and technology utilized. Using this business process activity task information, process diagrams were constructed in GEMWorX FlowModeler®. Process diagrams were used to document detailed tasks of an activity. Technology used by

each work task was recorded and tracked. Technology opportunities were analyzed to determine process revisions and new processes required.

Integration Architecture Options

GEM worked with Minneapolis Power to assess the alternatives for integrating existing systems, upgrading existing systems, and procuring new systems.

GEM's Role

GEM developed a Distribution Systems Integration Strategy that will provide a roadmap for integrating new system options into Minnesota Power's existing information technology environment while improving key work processes. The results of the Distribution System Integration Strategy included the following:

- Application and Interface Assessment addressed:
  - Complete review of existing applications and interfaces
  - Interface summary diagram and assessment of current state
- Work Process Analysis addressed:
  - Development of high-level functions and primary points of cross-functional interaction by conducting Initial kick-off meetings with key business personnel.
  - Identification of current processes within each business function, business process owners and business process roles.
  - Document the As-Is and To-Be process flows and narratives, highlighting the interactions with other functions and the technology and tools, if any, used to perform each process. The GEMWorX Flow Modeler® was used to document process work steps.
  - Capture any issues identified as a result of this analysis.
  - Distribute and review of all process flows and narratives for review with Subject Matter Experts (SMEs). Update processes as necessary based upon team reviews or approval process.
  - Jointly review all process flows and opportunities identified for technology enhancement.
  - Provide process recommendations and As-Is and To-Be process maps.

- Integration Architecture Option analysis addressed:
  - Integration framework analysis
  - Integration point analysis
  - Technical architecture alternatives and diagrams of system interface options
  - Cost and benefit identification
  - Phased implementation plan options
- Full Integration Strategy Plan addressed:
  - Business case costs and benefits
  - Integration team recommendations
  - Change management ad training recommendations
  - Implementation activities and interim step recommendations

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