

Business agility in outage management for energy and utilities



Decision and business process management-based approach to outage management

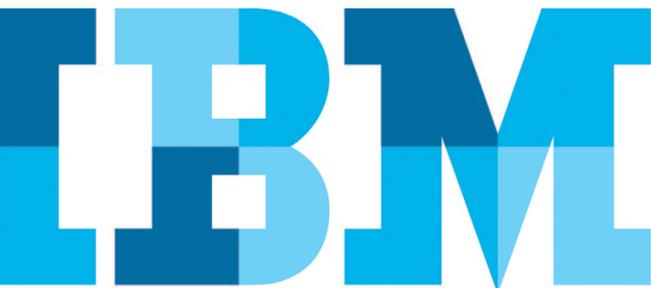
Highlights

- Achieve business agility in outage management through intelligent decision management and automation of business processes
 - Practice pragmatic use and adoption of industry standards such as International Electrical Commission (IEC) and Common Information Model (CIM) standards to seamlessly integrate with distribution applications
 - Monitor, measure and optimize outage management, customer notification and work request-related business processes through state-of-the-art business process automation
 - Reduce outages and outage response times and limit unnecessary truck roll
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Energy and utility companies today are challenged with regulatory requirements, increasing consumer demands and achieving operational efficiency. Power outages and associated power disturbances cost and cause a drain on economies. For utilities, outages mean expensive repairs, lost productivity and reduced customer satisfaction. For example, during outages, 30 percent of customers call more than once because of unsatisfactory answers or because the power was not restored within the estimated time. Utilities must transform their existing business models by streamlining business processes and creating a more agile application infrastructure.

To become more competitive, energy and utilities companies need to not only correlate different kinds of meter events from a business perspective, but also need to have the ability to identify significant events taking place across business systems and invoke appropriate processes to respond to those business events. Utilities need situational awareness during an outage and the ability to automate outage validation and restoration steps as business processes. Utilities need to document, automate, integrate and measure their outage-related business processes and find ways to improve them. They need to communicate proactively with customers during the course of outage restoration. In short, utilities must have an agile platform to detect and correlate meter events and other related events in real time, and automate corresponding business processes and create a more agile application infrastructure.

IBM offers an overall approach based on intelligent decision management and automation, business process automation, measurement and optimization—and IEC CIM industry standards-based SOA integration. IBM offers a state-of-the-art business process management (BPM)



platform that allows for the automation, measurement and optimization of cross-application business processes. These can help utilities maximize their return on investment (ROI) for smart metering initiatives and achieve business agility in outage management.

The IBM approach to realizing an agile outage management solution for utilities is based on IBM Solution Architecture for Energy and Utilities (SAFE) framework and consists of key components, including:

- *Decision Management:* The decisions that matter the most to outage management are operational decisions such as those that determine what actions to invoke for a particular meter event (power outage, unauthorized meter move, meter tampering and others). By automating and correlating these decisions—especially the ones that change frequently, such as work request priority to assign, mode of communicating with a customer and check for existing or open work requests—utilities can significantly and continuously improve process outcomes. These outcomes include work order or work request creation and customer notifications. IBM WebSphere® Operational Decision Manager is used to automate, govern and improve these decisions.
- *Business Process Management:* IBM Business Process Manager allows you to define and automate end-to-end outage management processes and also seamlessly integrates with the utility's distribution applications using IEC CIM standards. It helps automate and externalize the outage management-related business process from underlying distribution applications, reducing errors and improving overall consistency. This means standardized, consistent resolution over many geographies, and standards-based and loosely coupled integration with core distribution applications. This is the consistent, reliable approach that utilities have been looking for! These business processes provide the ability to externalize the decision logic and also allow support for exception handling, automation of manual activities and human tasks management.
- *IEC based Integration:* Using the IBM Enterprise Service Bus and a service oriented architecture (SOA) approach, integrate with the various distribution applications including customer information system (CIS), meter data management system (MDMS), outage management system (OMS) and work management systems(WMS) based on IEC 61970 and IEC 61968 standards.
- *Monitoring and Visibility:* IBM Business Process Manager also provides real-time and continuous business monitoring and optimization of outage management business processes to increase efficiency and agility and reduce operational costs. Through Business Process Manager, utilities will develop a better understanding of key outage metrics, including the system average interruption duration index (SAIDI), which measures the average duration of interruptions; and the customer average interruption duration index (CAIDI), which measures the average repair time experienced by customer during an outage. These statistics are both invaluable to the utility in terms of their restoration processes and providing customer service.
- *Outbound Customer Communication:* Communicate with customers in multiple channels and through their preferred communication channels or medium to notify them of an outage, that outage work is underway with an estimated time of completion, and to notify when the work is finished.
- *Industry Standards-based, ready-to-use assets:* A prime aspect of the solution is the IBM E&U Industry Pack that provides a ready-to-use, prebuilt and extensible set of assets based on the IEC 61970 and 61968 industry standards. It provides IEC 61970-based canonical model, 61968-based service interfaces/WSDLs, IEC 61968-based common messaging mode /XSD. Also available are a business vocabulary model for authoring business rules and event filter, starter business process models based on EPRI/Intelligrid use cases and KPIs. Other available assets are integration adapters to applications such as IBM Tivoli®, IBM Maximo®, IBM Netcool®, OMNIBUS, Itron, Nuance and others.

Feature	Benefits
Faster identification	<ul style="list-style-type: none"> • Faster and more accurate identification of outages
Enforcement of best practices	<ul style="list-style-type: none"> • The ability to capture knowledge from the skilled and aging workforce, and automate documented business processes, enforcing best practices
Better decision making	<ul style="list-style-type: none"> • Better decision making, which can improve outage restoration and lower restoration cost
Improved customer communication	<ul style="list-style-type: none"> • Improved internal and external communication with customers
Improved customer satisfaction	<ul style="list-style-type: none"> • Improved customer satisfaction and perception of the utility
Measurability	<ul style="list-style-type: none"> • The ability to measure and understand outage processes based on KPIs
Better workforce efficiency	<ul style="list-style-type: none"> • Improved workforce efficiency through better workforce management.
Improved reliability	<ul style="list-style-type: none"> • Improved system reliability and lower SAIDI, CAIDI and momentary average interruption frequency index
Fewer outages, better response	<ul style="list-style-type: none"> • Reduced outages and outage response times • Increased restoration efficiency and fewer unnecessary truck rolls

Conclusion

The IBM approach to outage management can help utilities maximize ROI for smart metering initiatives and achieve business agility in outage management solutions by supporting new business process and decision management across the meter-to-cash functional areas, providing management and support of the metering infrastructure, and deploying intelligent decision management and communication capabilities through multiple channels. Drawing on our vast experience in the energy and utilities industry, IBM can help deliver your roadmap to greater agility and better response to outages through a proven approach for providing the business process automation, intelligent decision management and adoption of industry standards such as IEC 61970/61968 needed for today's dynamic business climate.

Why IBM?

IBM differentiation spans across software, expertise, and ecosystems. IBM has consistently excelled in delivering unrivaled customer value, and this continues to be the case for BPM.

IBM is a market leader in BPM, and has been consistently recognized for market-leading products in several BPM categories by analysts such as Gartner and Forrester.

IBM has over 5000 BPM customers in over 30 countries and growing. These customers are innovating and achieving new business breakthroughs building upon a SMART SOA® foundation with process integrity, and using IBM's market leading BPM products and capabilities for some of the most mission critical, transaction intensive processes imaginable.

IBM is also unique in providing an unrivaled combination of market leading capabilities for BPM spanning services, partner and best practices:

- Market-leading products for both BPM and SOA
- Broadest and most differentiated software capabilities
- Simplicity for fast deployment and full business user participation
- Centralized governance for repeatability and consistency
- Visibility and control to continuously improve business operations
- Power through high scalability, integrity and quality of service
- Market-leading decision and rules capabilities
- Best-in-class exceptions handling and case management

For more information

To learn more about IBM products for energy and utilities, please contact your IBM representative or IBM Business Partner, or visit:

<http://www.ibm.com/software/websphere/industry/energy-utilities>

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Produced in the United States of America
January 2012

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