SAP Solution Brief
SAP Services

Performance and Insight Optimization Services for Utility Executives

Quick Facts

Summary

Performance and insight optimization services from SAP move decision making from sensing and responding to predicting and acting. They merge deep knowledge of the utility industry (including electric, gas, water, and waste water) with mathematical modeling, forecasting, and optimization strategies to drive business performance. Using SAP® BusinessObjects™ analytic applications, these services place you at the forefront of business analytics to proactively plan and manage your business.

Business Challenges

- Gain visibility into customer behavior
- Reduce risks from energy supply and demand imbalances
- Forecast and optimize technology funding decisions
- Optimize infrastructure by improving asset efficiency

Key Features

- **Industry expertise** – Gain insights and a competitive edge through principals skilled in industry analytics
- **Scientific algorithms** – Handle volumes of data efficiently; use robust supply-and-demand models for reliable forecasting, simulation, interpretation, and decision support; and use optimization algorithms to improve outcomes
- **Performance analytics** – Combine predictive and performance analytics to gain insights, set strategy, and manage the business
- **Innovation** – Leverage scientific and technology-enabled decision support to maximize ROI

Business Benefits

- **Faster time to value** via short deployment cycles focused on key business issues
- **Increased revenue and profitability** by providing bottom-line-oriented insight
- **Measurable financial impact** through predictive insights into the options best suited to meet objectives
- **More proactive business management** via advanced analytics and science-based insight to help predict trends and optimize decisions
- **Improved decision support and performance insight** through utility industry focus and segmentation guidance

For More Information

Call your SAP representative, or visit www.sap.com/PredictiveAnalytics.

In an increasingly complex operating environment, utility executives must make better decisions by assessing different business strategies. Performance and insight optimization services from SAP can help answer this call to action. By combining modeling and optimization science with business intelligence and utility industry expertise, the services transform data into insights and options to drive performance.

OPERATING IN A CHALLENGING ENVIRONMENT

Today's utilities must adapt to evolving technology, meet changing regulatory guidelines, and remain competitive on price and service to ensure customer satisfaction. These challenges are common for all regulated and deregulated utilities, including electric, gas, water, and waste water. As a result, your utility organization must:

- Employ sound cost management strategies that control risk
- Optimize infrastructure by managing assets and allocating resources effectively
- Adapt to changing regulatory, environmental, safety, and security requirements
- Ensure superior service while expanding service offerings
- Gain strategic insight into billing
- Perform load modeling and forecasting more effectively

By providing quantitative decision support and visualization, performance and insight optimization services from SAP enable strategic decision making. They help you make decisions to better manage your physical assets and inventory, understand customers, forecast load demand, build a sustainable portfolio, and enhance compliance practices. Instead of sensing and responding using generalized business rules and ad hoc calculations, you can predict and act. The services improve performance using scientific modeling and optimization methods, combined with the right technology and utility industry expertise.

UTILITY INDUSTRY SERVICES

SAP offers the following performance and insight optimization services designed for utilities. You can engage these services via a flexible delivery model so you can gain insight into your data on your terms – anytime and anywhere.

Load Demand Modeling and Forecasting
Recoup the cost of implementing an advanced metering infrastructure (AMI) while handling the large volumes of data collected as a result of this infrastructure. This service uses a mathematical methodology to enable dynamic forecasting of energy demand at the customer level. It also creates a proprietary demand model to improve decision making through customer-level forecasts and more predictable load usage.

Customer Service
Gain insight into customer loyalty and profitability. You can monitor the impact of complaints, outages, and services on customer satisfaction and track customer service related to orders and inquiries. This insight can help lower your cost to serve and maximize operational efficiencies.

Analytics Enhancement for Utilities Billing
With more insight into customer billing attributes, you can improve current processes, billing accuracy, and collections activities. Dashboards and user-friendly reporting provide quick access to desired information – allowing you to focus on pressing billing issues, like collections and delinquencies.

Peak Load Management
Get insight into the demand forecast for peak hours, forecasted efficiency at the customer level, opt-out probability for each customer in load control, and aggregated inconvenience to customers affected by control measures. This service helps establish policies to reduce load during peak hours, select the most cost-effective choice, and evaluate wholesale energy price options given risk tolerances and service levels.

Asset Efficiency
Optimize your infrastructure by improving asset efficiency. This service provides insight into your inventory management practices – improving parts availability and capital investment decisions.

Reliability Optimization for Outage Management
Visualize load capacity versus forecast and better predict peak load demand. You can avoid reaching capacity limits that cause brownouts and blackouts, assess correlations, and determine connected outages. Management dashboards help you visualize areas affected by outages, assess probable sources, and determine truck-roll destinations.

Sustainable Asset Portfolio
Leverage your investments in new energy assets such as hydroelectric, solar, wind, and nuclear and build a sustainable asset portfolio. This service helps minimize

the cost of energy while controlling risk levels associated with new capital investment to account for aging assets and plan their replacement. It also helps you adhere to regulatory guidelines for emissions and green energy initiatives.

Dynamic Pricing
Optimize the offered price to maximize profit while satisfying business constraints like load limits, wholesale energy cost thresholds, and forecast-based limitations. This service helps minimize costs during peak hours, maximize reliability and profitability, reduce peak load, and decrease the risk of blackouts and forced disconnections.

ADVANCED ANALYTIC SOLUTIONS EXCEED TRADITIONAL APPROACHES

Performance and insight optimization services extend SAP's strength in and emphasis on transaction-based efficiencies. The services exceed the offerings of traditional management consultants by leveraging the following key differentiators.

People
Finding highly trained resources with utility industry experience and advanced analytics training is tough and expensive. Our services bring this extraordinary skill set, gained by working in numerous utility environments and situations, so you don't have to find it on your own.

Scientific Algorithms and Intellectual Property
You gain access to patented leading-edge approaches that bring clarity to your organization. Through SAP expertise, skills, and knowledge, we can offer data cleansing and processing algorithms that allow the efficient handling of large data volumes. In addition, optimization algorithms help you achieve the most valuable outcomes. Supply-and-demand models enable reliable forecasting, simulation, clear interpretations, insight, and decision support.

Performance Analytics
The services leverage dashboards, reports, and decision-support tools found in SAP® BusinessObjects™ solutions to help you gain business insight, set strategy, and manage and monitor your business effectively.

Technology
Flexible deployment options provide access to the software that supports these services. This "analytics as a service" approach lowers the typical barriers to the adoption of new technology.

Innovation
Our services leverage SAP's ongoing commitment to innovation and technology-enabled decision support to provide the greatest ROI. They are adaptable to your changing needs and performance goals.

DIFFERENTIATING SCIENCE

General analytic tools do not adequately address the challenges of efficient data processing and cleansing, model accuracy and robustness, and clear business interpretation of results. Performance and insight optimization services provide a solution. By leveraging leading-edge mathematical models, the services extract insight from volumes of data and transform it into tangible benefits (see figure).

CHALLENGE	DELIVERABLE
Massive amounts of data from IT systems, legacy systems, and ecosystems	Insight
Surprising market changes, new competitors, or global regulations	Opportunity
Strategies and goals based on old rule-of-thumb practices	Decision support
Long-established business rules and ad hoc calculations; shrinking margins despite process efficiencies	Optimization

Figure: Transforming Challenges into Opportunities

The services drive business performance by merging deep knowledge of the utility industry with mathematical modeling, forecasting, and optimization strategies.

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BRINGING CLARITY TO YOUR BUSINESS

These services help utilities optimize business performance and realize the following benefits:

- **Fast time to value and ROI** – These services are designed to provide immediate results and value via short deployment cycles and a clear focus on your most pressing business issues.
- **Tangible results** – Performance and insight optimization services address real business issues. The results are bottom-line oriented and designed to provide benefits such as increased revenue, greater profitability, and improved ability to link strategy to execution.
- **Proactive business management** – The services provide critical insights for decision makers. Advanced analytics enable insight into key performance indicators, while science-based services help you predict business trends and optimize decisions.
- **Improved decision support and performance optimization** – Performance and insight optimization services assist your decision-making process with industry-specific focus and line-of-business guidance. They shed deep insights into the key decisions or opportunities that drive differentiating value for your organization.

For More Information

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