Accenture Analytics and Smart Building Solutions are helping Seattle boost energy efficiency downtown

High performance. Delivered.

Summary

The High-Performance Buildings Pilot Project aims at reducing power consumption through analysis of real-time data for buildings in downtown Seattle. Advanced information-technology tools and systems enable building owners to take quick action to boost energy efficiency without costly retrofits. This pilot program is an important step in helping Seattle realize its goal of reducing downtown power usage by up to 25 percent.

Client

The City of Seattle, the largest city in the U.S. state of Washington, is well regarded as a municipal leader in green technology.

Business challenge

The City wanted to take energy conservation to the next level—to implement Smart Building technology, which uses predictive analytics to extend building management systems and optimize equipment for energy reduction.

The city proposed to lead a High-Performance Building Pilot Project, funded in part by a grant from the U.S. Department of Energy and U.S. Economic Development Administration to test next-generation technologies for energy efficiency.

The City partnered with the Seattle 2030 District, a non-profit organization of downtown property owners and managers, along with the city's utility. Seattle also turned to Microsoft for guidance since the software company had successfully implemented energy-saving solutions at its main campus. Microsoft recommended reaching out to Accenture for Smart Building Solutions.

How Accenture helped

The project team is deploying and managing Accenture Smart Building and Energy Solutions, which is a set of assets that applies analytics to building management data to optimize equipment and related processes for energy reduction and comfort requirements.

The software identifies equipment and system inefficiencies, and alerts building managers to areas of wasted energy. The solution uses Windows Azure, the Microsoft cloud services environment, to provide virtually unlimited storage for collecting data in real time.

The project team deployed optimization and fault-detection software that pulls data from disparate building management and control systems. Elements in each room of a building—such as lighting, temperature and the position of window shades—can then be adjusted, depending on data readings, to maximize efficiency.

Correlating large data sets from multiple machines, engineers are now able to link energy-efficiency data with fault-detection analytics, as well as weather information and other data, notes Kreg Schmidt, managing director of Accenture Smart Building Solutions.

High performance delivered

Although in its infancy, the Seattle Smart Building program is expected to save 10 and 25 percent in energy and maintenance expenditures. Advanced algorithms identify actionable items to improve equipment performance, increase reliability and improve comfort requirements for all types of facilities.

Accenture Smart Building Solution is fundamentally a transformation in facility operations. It takes into account not only the appropriate technologies to deploy, but also assesses organizational readiness, given existing processes and staff capabilities, to implement solutions effectively.

The results of the project are likely to enhance economic development, thereby supporting Seattle's efforts to promote technologies for energy efficiency and also encouraging better conservation practices among building managers worldwide.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with approximately 275,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$28.6 billion for the fiscal year ended Aug. 31, 2013. Its home page is www.accenture.com.

Microsoft

Microsoft's cloud platform and services, hosting, and management environment will provide unlimited storage capacity for collecting real-time data for an unlimited number of buildings and HVAC devices. Microsoft SQL Server 2012 database software processes the terabytes of data for real-time analysis. Microsoft SharePoint Server 2013 provides a user-friendly portal where building managers can monitor building energy efficiency, run reports, and drill down for more details on faults and alerts. www.microsoft.com/citynext

About Accenture Analytics

Accenture Analytics delivers insight-driven outcomes at scale to help organizations improve performance. Our extensive capabilities range from accessing and reporting on data to advanced mathematical modeling, forecasting and sophisticated statistical analysis. We draw on over 16,000 analytics professionals with deep functional, business process and technical experience to develop innovative consulting and outsourcing services for our clients in the health, public service and private sectors. For more information about Accenture Analytics and our journey to analytics ROI, visit www.accenture.com/analytics.