Connected Building Operating System: Prescriptive Data

GSA

Technology Overview

A connected building operating system combines multiple sources of siloed building data with external sources like weather into a single integrated platform. The implementation of connected building technology being evaluated by this study, Nantum by Prescriptive Data, has been developed by a real-estate company to manage its portfolio. Nantum is cloud based, powered by machine learning, and predictively ramps the building HVAC systems up and down to optimize efficiency based on occupancy patterns, weather conditions, and real-time electricity consumption. The system also provides energy efficiency recommendations to building operators in real-time. These recommendations can be automated via the BAS.

Why is GSA Interested?

The connected building operating system technology promises to empower facility managers, providing them with an improved way to manage temperature and indoor air quality, thereby improving occupant comfort. The technology also provides facility managers comprehensive analytics including energy, water, and equipment status, including unusual usage patterns and mechanical failures. The vendor estimates installation costs of <$50K per building; the majority of these costs are for third-party Internet of Things (IoT) sensors and integrations with existing building systems.

How Will Success Be Measured?

Key performance indicators will be whole building energy savings between 5% and 9%, and payback under 5 years. Labor required to manage the technology will be tracked against increased operating efficiencies. Assessment will also include exploration of demand response functionality.

GSA'S Proving Ground (GPG) program, in association with the Lawrence Berkeley National Laboratory, is evaluating the real-world performance of the Nantum Connected Building Operating System at a GSA test-bed location. Technology will be provided by Prescriptive Data.

Emerging Technologies' two programs, GSA Proving Ground (GPG) and Pilot to Portfolio, enable GSA to make sound investment decisions in next-generation building technologies based on their real-world performance.