



The Road to Digitalization 1

Siemens Building Digest

January, 2017

Welcome to the first edition of Siemens Building Digest. We hope that you find this new resource useful and informative. Here you'll find the latest company news, product developments, customer experiences and trends in the building technologies industry.

Our first Leadership Spotlight segment, a Q & A with Siemens Building Technologies Division President Dave Hopping, gives us an idea of how close we are to autonomous buildings and his vision to get us there.

News from around the nation reports major improvements in customers' infrastructure via performance contracting, strategic partnerships and insightful technologies that are making an impact resulting in more efficient energy consumption and reduced energy costs.

We'll connect you with our most current whitepapers, reports and case studies, as well as inform you about upcoming webinars, industry news and conferences.

To receive the latest news, sign up for email alerts from [our newsroom](#), and follow Siemens on Facebook and Twitter at www.twitter.com/siemensbt.

Sincerely,

Allison Britt and Amanda Naiman
Siemens USA Media Relations



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■ Leadership Spotlight

Dave Hopping, President, Siemens Building Technologies Division



We sat down with > **Dave Hopping**, President of Siemens' North-American based Building Technologies Division to ask where Siemens – and the industry – are on the path to autonomous buildings.

Q: In recent years, we have seen Siemens shifting its focus more towards Digitalization. Why?

A: Digitalization is actually one of the three pillars identified by our CEO Joe Kaeser in the company's Vision 2020 Project. (Electrification and Automation are the other two.) Each of the nine divisions within Siemens addresses these growth pillars differently, to best address their particular markets and customer needs.

For the division I head in the U.S. - Building Technologies – we bring two of these concepts together – Automation and Digitalization – to create what we refer to as the “digital transformation of buildings.” For instance, various building systems that monitor and control lighting, fire/life safety, security, HVAC, and other applications are connected to an integrated building management station (IBMS) that collects a significant amount of building performance data. This data, as well as occupant usage data, can now be connected to the Internet in a way that increases productivity and efficiency and reduces downtime and labor costs.

A variety of buzzwords are used in the Building Technology industry to describe the latest technological advances such as “intelligent infrastructure,” “Internet of Things,” and “Digitalization.” No matter which term you use, what we're all talking about for buildings is the next generation of automation. In short, it boils down to how best to connect building systems and leverage the data they create to drive more value for the customer.

Q: What is Siemens' digital strategy for building technologies, and how will you impact the buildings of the future?

A: Our digital strategy is designed to meet customers' evolving needs and is based on an ecosystem of connected devices, systems, and buildings that are designed to maximize the potential of the built environment. The goal is to not only connect buildings, but to collect, store, and analyze data to help our customers better run their buildings, reduce downtime, and maximize energy and operational efficiencies.

Last year, we created a strategic partnership with IBM that pairs Siemens' Navigator cloud-based energy and sustainability platform with IBM's Internet of Things (IoT) capabilities, to provide corporate real estate owners access to advanced analytics capabilities and the ability to process more robust data sets from their real estate portfolios.

This year, we'll continue to establish our Intelligent Infrastructure Solutions concept, or “I2S.” This customer-centric approach centers around three core components: IBMS, Advanced Analytics (Navigator), and Digital Services.

To address this last component, Digital Services, we unveiled a new “Americas Digital Service Center” to help deliver digital solutions and services to the market.

Q: How is Siemens identifying technologies and innovations for tomorrow?

A: Siemens may have been founded over 100 years ago, but it is still a cutting-edge company. In fact, some might call us one of the original start-ups!

A few months ago, Siemens created a separate unit, called “next47,” to foster disruptive ideas more vigorously and to accelerate the development of new technologies. This setup will allow the company to combine agility, speed and independence with a global customer base, many years of experience, credibility and financial strength.

We also participate in industry endeavors, such as the open-technology challenge with JUMP, an online crowdsourcing community that focuses on bridging the gap between cutting-edge building technology ideas and the marketplace. The JUMP challenge, which is a joint initiative between the U.S. Department of Energy and five national laboratories, involves defining the concept, use cases, and business models that could support the use of personal smart devices to interact with commercial, public, or corporate spaces.

Q: Where can we see Digitalization in the industry today, and where do we think the trend will lead to in the immediate future?

A: Today, a building operator can use a cloud-based application to prioritize, based on predictive information, when things need to be changed or serviced within various building automation systems. The operator can also remotely access a building system application to get a real-time view of the same system in operation. These insights can prove to be huge money and time savers.

I believe connectivity will become even more important in our industry in the years ahead, which is intimately connected with customer expectations for instant, round-the-clock access to application-based, easy-to-use information, and sophisticated mobile computing. Industry experts are tracking how integrating building systems with advanced analytics software is helping customers progress through their journey of building performance analytics.

Q: How close are we to achieving autonomous buildings?

A: The ultimate goal is for customers to eventually reach a systems balanced approach that will result in autonomous buildings, but we're still a few years away. Performance analytics are allowing customers to move towards a predictive and proactive approach to building management, rather than the historical reactive and preventative approach. By pairing technology and analytics with building experts and service, and by continuing to meet customers' expectations, we'll get there. With autonomous buildings, customers will be able to not only reduce energy consumption, downtime, and staff levels, but also provide service on demand and rules-based performance management.

➤ [Article: Data: The Key to Making Buildings More Efficient](#)

Dave Hopping is the President of Siemens' North American-based Building Technologies Division, headquartered in Buffalo Grove, Ill. In addition to his business leadership responsibilities, Hopping is presently a board member of the Siemens Foundation and Chicago's Museum of Science and Industry, and formerly served on the board for the Alliance to Save Energy and UI LABS' City Digital project. He has a B.S. degree in Electrical Engineering from Purdue University. Follow Dave on Twitter @dave_hop123



■ **Newsreel**

Brookhaven National Laboratory Project Recognized by U.S. DOE for Sustainability Progress

Brookhaven National Laboratory, one of ten national laboratories overseen by the Office of Science of the U.S. Department of Energy (DOE), won the *2016 DOE Sustainability Award for Performance Contracting*. The project was performed under a Utility Energy Service Contract (UESC) with Siemens and National Grid, and helped the DOE exceed targets for greenhouse gas emissions, renewable energy, energy and water intensity, and alternative fuel and petroleum use.

"Through this contract, we're reducing emissions, saving money, and fostering public/private partnership," said DOE-Brookhaven Site Office Manager Frank Crescenzo. "The UESC at Brookhaven National Lab is a formula for success and the DOE Sustainability Award recognizes that."

Upgrades to Brookhaven National Laboratory were designed to substantially reduce its annual energy intensity by approximately 11 percent, and reduce greenhouse gas emissions by more than 7,000 metric tons.

"We are honored to receive a DOE Sustainability Award for our UESC with Siemens and National Grid," said Brookhaven Lab Director Doon Gibbs. "The project has advanced Brookhaven Lab's sustainability efforts while facilitating substantial improvements to our infrastructure in support of our science mission. It is a great example of the kinds of success that these public-private partnerships can enable."

Under the UESC, the Laboratory worked with Siemens to upgrade lighting systems in 18 buildings, replaced and enhanced energy management controls in nine buildings, and installed a new high efficiency 1,250-ton water chiller and related components at the Laboratory's Central Chilled Water Facility, which provides cooling water for lab processes and buildings. The lighting upgrades included installing new fixtures and retrofitting existing fixtures, replacing existing lamps and ballasts with more efficient ones, and installing occupancy sensors and timers. To complete the project and monitor its ongoing success, the Laboratory and Siemens focused on clear communication of scope, expectations, requirements and changing circumstances so the project remained on schedule and on budget.

"Recognition for Brookhaven National Laboratory's project truly underscores the viability of UESCs like this as a working model of successful public/private collaboration," said Dave Hopping, president of Siemens' North American-based Building Technologies Division. "We are proud to be a part of this exciting project and hope that other organizations use it as a model to support their efforts to achieve energy efficiency goals."

UESCs are one of DOE's contract vehicles for implementing energy conservation and cost-savings projects at government facilities. Under a UESC, the local utility—in this case National Grid—facilitates the design, finance, and construction of the project. Brookhaven National Laboratory's is the first DOE UESC in more than 15 years, and is a departure from traditional contracts typically used at other DOE labs with private contractors for energy-saving projects. The project is expected to serve as a model for other laboratories throughout the DOE complex.

> [Click here for more information on the project.](#)

> [Click here for more information on the DOE Sustainability Awards.](#)

Major Energy Efficiency Projects in Downtown Harrisburg Receive \$1.2 Million Rebate



Energy efficiency investments in two well-known Harrisburg buildings are paying off for Harristown Development Corporation (Harristown). PPL Electric Utilities (PPL) representatives recently presented Harristown with a check for more than \$1.2 million, representing rebates for a variety of energy efficiency projects at the Strawberry Square and 333 Market Street properties in downtown Harrisburg. The upgrades modernized the 1970s buildings with state-of-the-art technologies.

The projects were managed by Siemens and include chiller modernization, LED lighting, installation of occupancy sensors, advanced building automation, energy management technology, and more. Siemens collaborated with local companies, including small and diverse businesses to complete the implementation. Harristown estimates it will save \$1.5 million in energy and operations costs per year.

"Thanks to the energy efficiency programs made available by PPL, we are able to make significant upgrades to these major commercial properties in an affordable fashion," said Bradley Jones, president and CEO, Harristown Enterprises Inc. "These improvements will reduce operating costs and make these properties even more attractive to potential tenants, supporting the strength of our downtown."

The upgrades also allowed Harristown to reduce CO2 emissions by 43 percent, which is the equivalent of removing 20,184 vehicles from the road or preserving 777 acres of trees.

"This is one of the biggest rebates PPL Electric Utilities has ever presented to a customer," said John Davis, PPL's manager of business services, who presented the check. "We congratulate Harristown for making forward-looking investments in energy efficiency that will have positive financial and environmental impacts."

Strawberry Square and 333 Market Street consist of more than 1.8 million square feet of commercial, office and retail complex, including a 22-story high-rise and public atrium for community and nonprofit events.

“We are proud to work with Harristown Development Corporation to implement a program that supports the community’s operational and sustainability goals,” said Rick Rodriguez, head of performance contracting for Siemens’ North American-based Building Technologies Division. “Leveraging current infrastructure allowed us to help Harristown drive positive outcomes for the community, including a reduction in carbon emissions.”

About Harristown Development Corporation

Harristown Development Corporation is a private nonprofit organization formed in 1974 to revive Harrisburg’s downtown and re-establish the Harrisburg core area as the heart of the city, the economic and cultural center of the metropolitan area, and as a thriving capital city.

About PPL Electric Utilities

PPL Electric Utilities, a subsidiary of PPL Corporation (NYSE: PPL), provides electric delivery services to about 1.4 million customers in Pennsylvania and consistently ranks among the best companies for customer service in the United States. More information is available at

> www.pplelectric.com.



Siemens Opens Submissions for Fourth Annual Engineering Innovation Award



Siemens recently opened submissions for its fourth annual Siemens Engineering Innovation Award, which recognizes innovative thinking and problem solving in fire and life safety system design. All consulting specifying engineering firms that have incorporated Siemens fire and life safety technologies into an innovative design are eligible for nomination. Submit nominations by March 31, 2017 at www.usa.siemens.com/eiaward.

> [Media Advisory](#)



Delaware National Guard is Projected to Save \$6 Million in Energy Costs via Performance Contracting

The Delaware Sustainable Energy Utility (DESEU) and the Delaware Army National Guard (DEARNG) unveiled a state-of-the-art plan to reduce the National Guard’s energy consumption and energy costs.

The DEARNG’s Guaranteed Energy Savings Agreement, implemented by Siemens and funded through a loan from the Energize Delaware’s Revolving Loan Fund program, will reduce net energy requirements by integrating energy efficiency upgrades at 11 National Guard facilities throughout the state. These upgrades will reduce fossil fuel consumption by 38 percent and will save the Delaware National Guard \$6 million in energy costs over the life of the 20-year agreement.

> [Press Release](#)



Siemens and Vigilent Work Together for Data Center Energy Efficiency

Siemens and Vigilent join forces in a reseller partnership to provide customers with a comprehensive and unique thermal optimization solution that addresses data center cooling challenges across a facility’s white space and chilled water plant.

> [Press Release](#)



Siemens’ City Performance Helps San Francisco Develop Roadmap for Sustainability



Siemens’ virtual planning tool, City Performance, helps San Francisco develop a technology roadmap for sustainability goals using an analysis of San Francisco’s transport, energy, and buildings data to help outline the plan for reaching its 80x50 goal.

> [Report](#)



Innovative Building Technology App Concept Takes Top Award in Siemens JUMP Challenge



Siemens announced the winner of its open-technology challenge with **JUMP**, a joint initiative between the U.S. Department of Energy (DOE) and five national laboratories that has established an online crowdsourcing community to focus on bridging the gap between cutting-edge building technology ideas and the marketplace. Payam Yeganeh, an entrepreneur and digital strategist based in Los Angeles, will receive a \$5,000 cash award for his technology submission, "BuildingBot." The "BuildingBot" concept leverages established chat applications like Facebook, WhatsApp, Telegram, or SMS text messages to enable building occupants to interact with the building facility and systems for safety, comfort, and way-finding.

[> Press Release](#)



Research, White Papers, Customer Highlights

Special Report: The Sustainable Research Lab

This guide to the sustainable research lab is based on a reader survey performed in mid-2016 by the editors of *R & D* and *Laboratory Design*, which was deployed to scientists and engineers working in academic, industrial and government research labs.

[> Report](#)



Case Study: Crystal Clear on all Channels: How Information Can Save Lives

Innovative safety technology helps a Connecticut prep school ensure emergency communications reach students and faculty wherever they are.

[> Case Study](#)



Article: Chains with Brains



Supermarket chains, department stores, and fast food restaurants are examples of retail businesses that can have hundreds or even thousands of outlets. Since all of the outlets in such a chain generally have the same energy needs, they can benefit significantly from chain-wide automated energy management systems (EMS). A case in point is a Siemens EMS system that harvests data and continuously refines operations in some 1,500 ALDI supermarkets in the U.S. – with impressive results.

[> Article](#)



Video Case Study: San Bernardino

California's County of San Bernardino is the nation's largest, and for their Facilities Management staff, responding to a building service call meant spending several hours, and using many gallons of fuel, driving to each location. With Siemens automation and the latest digital technologies, the county was able to streamline their process by working remotely. Taking this proactive approach, they have been able to empower their staff to better serve their citizens, save tax dollars, and become more sustainable and energy efficient.

[> Video](#)



Upcoming Industry Tradeshows

AHR Expo, January 30 – February 1, 2017; Las Vegas

Siemens will be showcasing Desigo CC, total room automation, and OEM solutions, among other offerings in booth # C4720 at the 2017 AHR Expo.

The AHR Expo is one of the largest conferences for heating, ventilation, air conditioning, and refrigeration in the world. It is co-sponsored by ASHRAE and AHRI, and is held concurrently with ASHRAE's Winter Conference.



GreenBiz Forum, February 14 – 16, 2017; Phoenix

Siemens will be a contributing sponsor for the GreenBiz 17 Forum. On Wednesday, Feb. 15, we will run an hour-long educational session that will focus on maximizing sustainability performance through the intersection of energy supply and demand.

The GreenBiz Forum is where sustainability leaders from the world's largest companies gather each year to explore pressing challenges and emerging opportunities in sustainable business.

ASHE PDC, March 12 – 15, 2017; Orlando

Siemens will be a gold sponsor and exhibitor at the 2017 ASHE PDC Summit. Our new patient experience booth (# 843) will feature Commissioning Advantage, Demand Flow, and room pressurization. On Tuesday, March 14, Siemens subject matter experts will discuss the challenges of designing, prototyping, and delivering the patient room for the next generation of healthcare facilities in the "Designing and Implementing Advanced Patient Rooms" educational session.

The PDC Summit is a dynamic industry event coordinated by a trusted network of not-for-profit organizations with expertise in healthcare planning, design, and construction.

ISC West, April 5 - 7, 2017; Las Vegas

Siemens will be at the 2017 ISC West conference. Our new Siveillance Viewpoint Command and Control Station will be displayed in the New Product Showcase on the show floor.

The ISC West is the largest event in the U.S. for the physical security industry, covering Access Control, Alarms & Monitoring, Biometrics, IP Security, Video Surveillance / CCTV, Networked Security Products and more.