

## District Center: A Downtown D.C. Office Reborn as a Smart Building

A 1990s-era workplace has been reinvented with technology to boost the tenant experience.

■ By Trey Barrineau

According to Dell and Intel's 2016 "Future Workforce Study Global Report," 55% of workers expect to be in a smart and connected office by 2023. The recent transformation of District Center, a 1990s-era building in downtown Washington, D.C., shows what that future might look like — and also how these technological advances can benefit both building owners and occupants.

"We will always manage a building as a cost center, but what if we were also thinking about a building as a strategic asset?" said **Laurent J. Vernerey**, president of Acuity Brands, which supplied the connected-building products used in District Center. "Think of it as an asset that allows the people inside a building to go about their business in a frictionless environment."

MetLife Investment Management and Norges Bank Investment Management purchased the 12-story, 910,000-square-foot property for approximately \$505 million in 2014. Constructed in two phases between 1994 and 1998 and covering an entire city block, the new owners wanted to use technology to make it stand out in a competitive market. To do that,



District Center in Washington, D.C., offers multiple high-tech amenities to tenants, including ample digital signage and a dedicated app that can control lighting, room temperature and other environmental aspects.

# New & Noteworthy

MetLife engaged JLL's Smart Buildings Team to create a cutting-edge connected office.

"There were new buildings going up around the area that had the luxury of starting from scratch, but they wanted this building to be special, and they felt they could do that with technology," said **Yann Palmore**, vice president of JLL's Smart Buildings Program, during an event at District Center in June. "Tenants are changing the way they think about the buildings they want to be in, and our hope is that visualizing it in ways like this really does differentiate District Center and make this a more attractive place."

Because of the technology upgrades that JLL and its partners installed, District Center was recently named a "showcase project" by the Better Buildings Initiative of the U.S. Department of Energy (DOE). (Figures from the agency show that energy usage fell 33% in the building from 2014 to 2018.) Only 66 commercial buildings across the country have received that honor.

"The energy savings in my view are a great benefit and a reason to do it," said **Journey Williams**, vice president with SmartBT, the company that served as the project's system integrator. "But the main reason to do it is for the tenants and the occupants. It can help them integrate their work and personal lives."

## The Platform

District Center's transformation began in 2017. The first step was the selection of a digital platform to oversee the systems in the building.

"To have a smart building, you have to have systems that can talk with one another, and they need to talk a common language so they can start sharing information and enable new sequences and new intelligence," Palmore said.

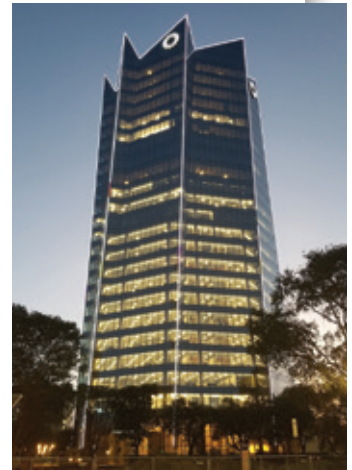
## 719,000 sq. ft.

**Capstone Development and Quadrangle Development Corporation** recently opened **Columbia Place**, a 719,000-square-foot **mixed-use development** in **Washington, D.C.**, adjacent to the Washington Convention Center. The project is comprised of a 504-room dual-branded Courtyard by Marriott and Residence Inn by Marriott, 214 luxury apartments known as The Lurgan and retail on a 1.6-acre urban site. The project incorporates and reactivates eight historic buildings with a ground level-restaurant, retail, meeting spaces and hospitality suites.



## 460,000 sq. ft.

**KDC**, a developer of corporate build-to-suit projects, recently wrapped up construction on **Frost Tower** in downtown **San Antonio**. It covers 460,000 square feet of office space. Construction on the 23-story tower began in March 2017. The **Class AA office tower** is the first to be built in downtown San Antonio in 30 years. Cullen/Frost Bankers will lease approximately 60% of the tower. The building also includes a 400,000-square-foot wrap-around parking facility at its base, 20,000 square feet of ground floor retail and 10,000 square feet of tenant amenity space, including a fitness center.



## 405,420 sq. ft.

**Scannell Properties** recently started construction on two **speculative industrial buildings** in **Elgin, Illinois**. The first, a 36-foot-clear 325,020-square-foot structure, includes four drive-in doors, 367 auto parking spaces and 56 trailer parking stalls. The cross-docked building will accommodate up to 70 loading dock positions and can be subdivided to accommodate multiple tenants. The second building has 32-foot clear heights and spans 80,400 square feet. It includes two drive-in doors and 93 auto parking spaces. The building can accommodate up to 19 loading docks and up to three tenants.



“You need a platform in place that will scale with you and allow this communication to happen.”

This platform, or Supervisory Control Management System (SCMS), can “aggregate the data from each of the systems into a common interface” so that different user groups can interact with the technologies in the building, according to the DOE Better Buildings Initiative. Palmore said the systems in District Center communicate via a secure IP network that is air-gapped, or not connected to outside networks.

Next came upgrades to the building systems. District Center needed new HVAC and lighting controls, new energy metering systems and a new security system. (The security infrastructure includes new systems for access control and video surveillance.) Built into the lighting are more than 1,000 multisensors powered by the internet of things (IoT).

True to their name, these multisensors perform multiple functions. They track occupancy levels for code compliance, check daylighting and artificial light levels, and measure temperature and air quality. Compared to older products, Palmore said their functionality is much more integrated.

“What’s really been interesting through this project is how much of this happens on pretty much the same hardware,” he said. “In the past, a lot of this would be very siloed. Now it’s all happening in very similar hardware. That gives you a lot of flexibility and the ability to do some interesting things.”

For example, each multisensor has a Bluetooth beacon for wayfinding and location-based services through a smartphone app. Target stores use the same technology to help customers find their way around.

## Serving Up the Information

District Center’s multisensors gather vast amounts of data, but not all of it is relevant to the different groups that use the building. For example, tenants need information that helps with their work, while operators and owners need analytics about building operations and maintenance.

“We boiled it down to two major interfaces for the tenants,” Palmore said. “Digital screens via a dedicated smartphone app and digital signage throughout the building.”

Palmore said the screens — both handheld and wall-mounted — convey personalized information that improves the occupant experience.

“For people who like to work and move around, there is a thermal map that shows the temperature gradient across a floor,” he said. “So a warm-bodied person might choose to work in a colder area. The platform can expose all sorts of data that can be visualized on a screen.”

Occupants can control lighting and temperature, reserve rooms and prepare them for presentations, raise and lower blinds, order food, track transportation options and much more through the smartphone app or wall-mounted screens throughout the building. The app even grants employees access.

“The days of carrying your badge around are gone in this building,” Palmore said. “You use your mobile phone as your badge. That’s one less thing you have to keep up with.”

## Challenges and Costs

As expected, putting a high-tech amenities package into an existing building presented unique challenges.

“Technical coordination and alignment between the various subcontractors and vendors can be challenging on

## About District Center

**NOTABLE:** District Center was originally known as the Thurman Arnold Building when it opened in the 1990s. It is listed in the American Institute of Architects’ “AIA Guide to the Architecture of Washington,” which spotlights more than 400 notable properties in D.C.

**LOCATION:** The LEED Gold building is at 555 12<sup>th</sup> Street Northwest, less than a mile from the White House in the heart of Washington’s business district. It is steps away from a major stop on D.C.’s Metro system.

**AMENITIES:** Fitness center, rooftop terrace, underground parking garage, secure bike storage, restaurants, spa services and shopping.

**AWARD:** District Center won the Unified Project of the Year for 2019 from Distech, a company focused on energy-management solutions in the built environment. Presented every two years, the award “singles out the commercial building project that best leverages connected lighting technology and intelligent building solutions,” according to a release. ■

projects with a high degree of systems integration,” Palmore said. “It is important to have a technology representative on the project who understands the holistic view of the various systems and applications and can help the team work through issues as they arise.”

The project also generated higher costs. While JLL didn’t provide exact figures, DOE noted that the smart-building upgrades at District Center increased project costs by 15%. However, Palmore said costs for similar projects of this scope can be highly variable.

“With the right technical advisor and some initial time invested in developing a technology strategy, there exists numerous opportunities to modify project specifications in a way that have no impact to costs,” he said, adding that other presentations from the MetLife team noted that the incremental costs to build “smart” were about 10% higher.

## New & Noteworthy

### Looking Ahead

According to Williams, the new digital infrastructure “backbone” at District Center has the flexibility to adapt to the next generation of technology.

“It’s very easy and cost-effective now to bring in new systems, and as new tenants and occupants come in, add new features and capabilities and leverage new data,” he said. “This system pre-positions each tenant to add their existing systems and reduce the cost of adding all the futurist features without the normal cost of entrance into the experience.”

Williams believes that is one of District Center’s biggest selling points.

“Each floor already has a lighting system in place,” he said. “A new tenant or an existing tenant doesn’t have to invest in that base hardware and that base programming to extend it into their space. They can plug in to the existing network that MetLife already funded and at a lot less cost to them. That’s really what I applaud this team for.”

District Center’s ability to adapt to new technologies and provide a pleasant work environment should help tenants attract and retain younger workers. That, in turn, should continue to make it an attractive property for the owners.

“If we look at the next generation coming onto the market and their expectations, and if you look at the mobile apps that are popping up on a daily basis, those are redefining our expectations as individuals,” said **Scott Hamilton**, executive vice president of sales with Distech. “We’re really able to allow our clients to change their buildings from ordinary spaces to something that’s really more strategic, and that allows them to optimize their business.” ■

**Trey Barrineau** is the managing editor of Development magazine.

### 367,808 sq. ft.

**Meridian Design Build** recently broke ground on a 367,808-square-foot multitenant **speculative industrial building** for **Exeter Property Group** in **Indianapolis**.

The new facility is located on a 31.6-acre redevelopment site. The 36-foot clear height building is designed to accommodate up to 80 dock positions, four drive-in doors, 304 auto parking stalls and 41 exterior trailer stalls. Architectural services are being provided by JRA Architecture. Banning Engineering is overseeing the civil engineering work.



### 337,856 sq. ft.

**Transwestern Development Co.** will develop a two-building **industrial project** encompassing approximately 337,856 square feet of Class A warehouse space in **Eastvale, California**. The project is expected to be completed by late summer 2020.

Both structures will provide fenced and secure truck courts, ESFR fire suppression and extra yard trailer storage. Building 1 will total 267,652 square feet and have 36-foot ceiling clearance, with Building 2 encompassing 70,704 square feet and a 32-foot ceiling clearance. The site is in the Inland Empire West submarket, which is home to the busiest rail corridor in the U.S., served by Union Pacific and BNSF.



### 176,000 sq. ft.

**RAL Development Services** (RAL) has announced **Zero Irving**, a new mixed-use development that will bring 176,000 square feet of amenitized, newly constructed Class A **office space** across 14 floors to **New York’s Union Square**. The project also includes a technology training center and incubator, coworking spaces, state-of-the-art event space and a street-level food hall on the seven floors beneath. Zero Irving is fully financed and currently under construction, with delivery expected in late 2020.

