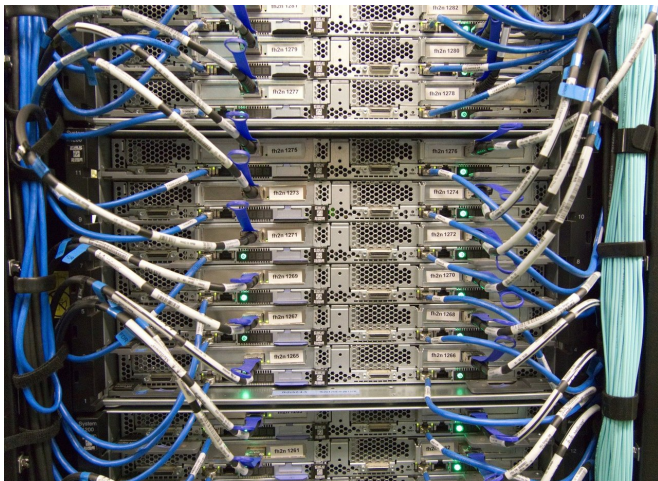


With an insatiable demand for data centers, some are worried Illinois can't keep up

23 July 2018, by Ally Marotti, Chicago Tribune



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Entering the data center that occupies the former Chicago Sun-Times' printing facility is like walking through the set of a James Bond film.

There's a 10-foot-tall steel fence encircling the property on the Lower West Side. There are gates, buzzers, a security desk, cameras and doors that use fingerprints as their key. The final entry into the room full of locked server cages requires an iris scan.

Spurred by society's ever-increasing dependence on the cloud, demand for data centers is insatiable. The Chicago area ranks third in the country for [data center](#) capacity, but an increasing number of states, including neighboring Iowa, are wooing the facilities with tax incentives.

In contrast, there are no incentives available in Illinois specifically for data centers, which can bring economic benefits like improved power grids and telecommunications systems. Those upgrades in turn help attract more companies and more jobs to

Chicago. Some worry the lack of incentives could hinder industry growth in a state that's a hub of internet connectivity.

"Illinois will get left behind if they don't do something about it," said Butch Goldi, an executive vice president of sales for Quality Technology Services, which owns the data center in the old Sun-Times facility.

For several years, Chicago's supply of data center capacity has increased with the demand. Measured in megawatts, capacity grew by more than 60 percent—adding enough to power more than 70,000 homes for a month—between 2015 and 2017, according to information from real estate firm CBRE. The only markets in the country with more data center inventory are Northern Virginia, home to many of Amazon's data centers, and the Dallas-Fort Worth area.

Chicago developed as an attractive market for data centers for the same reason it became a hub for railroads: its central location. Much of the fiber optic cable the internet runs on was laid along railroad tracks, and Chicago acted as the connector between east and west. Plus, the city has reliable electricity and isn't at risk for the hurricanes or earthquakes that threaten the coasts.

Connectivity

Technician Rene Martinez works on connectivity for a customer at the Quality Technology Services data center. (Antonio Perez / Chicago Tribune)

World Business Chicago, the city's economic development arm, touts data centers as one of the perks of locating in Chicago, said Dennis Vicchiarelli, executive vice president of business development for the public-private partnership.

"Today, it's airplanes, it's railroads, and it's transportation via highway, but it's also fiber and

data centers," he said.

The city has worked to accommodate data centers, updating regulations to allow on-site fuel storage for backup generators, for example, Vicchiarelli said. "We're definitely open to finding a way to facilitate their growth," she said.

The state needs to do its part as well, said Benjamin Brockschmidt, vice president of policy for the Illinois Chamber of Commerce. Data centers are economically beneficial to the areas where they locate, adding construction and contracting jobs, plus permanent positions at the facilities, he said. They also produce local infrastructure improvements such as power and telecommunications access, which can benefit other businesses in the area.

The Chicago area is attracting co-location data centers, facilities like the one in the old Sun-Times building, where companies can house their servers. But the tech giants, such as Google and Amazon, have not put their data center facilities in Illinois, Brockschmidt said.

"We're attracting the bare minimum that the market is willing to fill," he said. "We're not attracting the maximum here that we could because we've limited our potential."

Illinois lawmakers have introduced bills to create tax credits for data centers in the past, but they've stalled. The state's Department of Commerce and Economic Opportunity recognizes the potential the facilities hold for Illinois' economy, spokeswoman Jacquelyn Reineke said. The department often helps data centers figure out how established incentive programs can work for them, she said.

The state entered into an agreement with RagingWire Data Centers in December 2016 that could be worth \$1.4 million over a decade. The agreement was part of the EDGE program, short for Economic Development for a Growing Economy, which provides tax breaks for companies that promise to create jobs in Illinois. RagingWire was required to create 51 full-time jobs and invest \$176 million into an Itasca facility.

The state is working on a few other data center projects as well, but Reineke declined to comment

on the pending projects.

These days, businesses need more computing capabilities and therefore more server space, said Todd Bateman, who leads CBRE's data center solutions agency practice. Companies that have housed their servers on their own properties for years are moving them to data centers, seeking out their security, connectivity, a reliable power supply and around-the-clock support.

In response, the firms that build data centers are making them more efficient and offering larger chunks of space for servers. New players have entered the Chicago market to respond to the demand.

The Quality Technology Services data center has about 24 megawatts of power available now and is working with ComEd to build a new substation on-site that's expected to increase capacity to 125 megawatts by the end of 2019. (Antonio Perez / Chicago Tribune)

Quality Technology Services opened the data center in the former Sun-Times printing plant about two years ago, and the Overland Park, Kan.-based company is expanding. It has about 24 megawatts of power available now—enough to fuel more than 19,500 homes for a month—and is working with Commonwealth Edison to build a new substation on-site that's expected to increase capacity to 125 megawatts by the end of 2019.

The data hall that houses cages of servers in Quality Technology Services' facility—the one that requires an iris scan to enter—is filling up. The servers, routers and other equipment, with their blinking lights and erupting wires, are stacked in rows and locked in cages. On a recent morning, two neon-vested workers were building out a cage for a new customer. The company has another data hall ready for customers and has space on the property to construct another building.

Peapod moved some of its servers into the facility in November, said Rick Hanzelin, the online

grocery delivery company's vice president of information technology infrastructure. The Chicago-based company had servers at its facilities around the country, including at its former headquarters in Skokie. As Peapod grew, it would add data centers at its office buildings or warehouses.

Peapod needed to move its systems to a space that would allow it to expand quickly, Hanzelin said. Quality Technology Services' facility provides that, he said, and there's no worrying about the electrical grid or power outages like there was when the company housed its own servers.

"You know how summer storms move through here," Hanzelin said. "There were multiple times when the generator would have to kick on. That's the kind of stuff we want to let the professionals handle as we go forward."

Chicago's position as a hub for connectivity also is demonstrated in the data center at 350 E. Cermak Road. Besides servers that companies have located there, the facility houses major telecommunications carriers, such as Sprint and Verizon, and other networks. Customers that need to connect to those carriers or networks come to the South Loop facility to do so.

It's like the central nervous system of the internet, said John Stewart, senior vice president of investor relations of Digital Realty, the San Francisco-based real estate investment trust that owns the facility. The century-old building has the bones to support all the servers and equipment. It was originally built for printing presses that kicked out phone books and Sears catalogs.

That's a common method among data center developers: Take old buildings or sites that can support massive amounts of equipment and transform them into a hub of power and connectivity. In another example, an investor is planning to convert the site of an old coal-fired power plant in Hammond into a data center. The Indiana Economic Development Corp. approved an incentive of up to \$9 million for that facility, based on an investment of nearly \$36.2 million.

Other facilities are a bit more incognito. Digital

Realty owns nine other data centers in the Chicago area, including three on a campus in Elk Grove Village that from the outside look like warehouses.

Agricultural media company Farm Journal recently relocated its servers to one of those facilities. The company's previous data facility in its former Philadelphia headquarters amounted to a rack of old equipment in a closet.

"It wasn't a proper data center," said John MacMillan, director of applications and information technology at the company, now based in Lenexa, Kan. "There were times when the network in the building would just go down and you'd just have to sit through it and wait."

The added network reliability was a priority for Farm Journal in its server relocation, MacMillan said.

The move was also about reliable electricity and cooling, and "sleeping well at night knowing the lights will be on," he said. "Everything will be running."

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APA citation: With an insatiable demand for data centers, some are worried Illinois can't keep up (2018, July 23) retrieved 21 October 2021 from <https://techxplore.com/news/2018-07-insatiable-demand-centers-illinois.html>

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