And On That Farm He Had Some Servers

The Meta Fort Worth Data Center is just one of several warehouses dotting the Tarrant County countryside. BY SALLY VERRANDO

Horses, donkeys and cattle graze in emerald pastures under an azure sky. Chickens peck the ground in staccato rhythms. The view from residents' front porches in this bucolic setting is a white, flat-roofed edifice rising above the treetops just 2,000 feet away—the 2.5-million-square-foot Meta Fort Worth Data Center in north Tarrant County.

North Texas is ranked number eight in global development during this age of digital transformation, according to a 2023 report from Cushman & Wakefield, a commercial real estate broker. Its market research covers established areas like number one-ranked Northern Virginia-Washington, D.C., and regions on every continent except Antarctica.

The pandemic accelerated cloud growth, which stimulated data center demand, says Anne Rosenau, managing director of Cushman & Wakefield's data center advisory team in the Americas. Cloud and media companies, artificial intelligence (AI) and machine learning continue fueling growth.

WHAT'S A DATA CENTER?

"A data center is a mission-critical real estate facility that houses servers," says Bo Bond, Cushman & Wakefield executive managing director in Dallas. The highly secured buildings and campuses power and cool servers that compute for their intended purposes.

It's what makes online bill paying possible. Processing insurance claims. Sending emails. Downloading tunes. Watching cute cat videos. Data centers are the engines that make our world go.

Meta's Fort Worth Data Center began operations in 2017 at AllianceTexas, Ross Perot Jr.'s master-planned development. The multibillion dollar, 150-acre Meta campus is one of five data centers there so far, says Reid Goetz, senior vice president of Hillwood Properties. He leads the industrial development team for AllianceTexas. Goetz expects major announcements this year for more data center activity in Tarrant County.

"We've become a marketplace that is very much in high demand," he says. "Dallas/Fort Worth is the second-largest data center market in the entire country."

THE POWER OF CONNECTIVITY

Factors for prime data center development are accessible, low-cost power; fiber connectivity; water; taxes and land prices, according to Goetz.

"You can't just go put a data center anywhere," he says. "Infrastructure is key."

Data centers are valued in kilowatts or megawatts of power. A megawatt is 1 million watts and can fuel about 200 homes, according to the Electric Reliability Council of Texas' (ERCOT) website.

ERCOT manages 90% of the state's electric power for 26 million customers. Population and economic growth continue to challenge the state's power grid, says Trudi Webster, ERCOT spokesperson.

The Meta Fort Worth Data Center in north Tarrant County

But digitization has its own demands.

ERCOT approved at least 22 projects since January 2022, requesting more than 2,700 megawatts or about five times the city of Lubbock's power needs, according to a 2023 ERCOT report on "Large Loads," operations that apply for at least 75 megawatts. The report also said 55 additional projects requesting 17,000 megawatts want to power up by Dec. 31, 2024.

Crypto mining, not data centers, is the largest of the Large Loads tapping into the state's power grid, Webster says. In response, Bond believes the data center developers and hyperscalers have unfairly been lumped into that projected demand.

Hyperscalers are the giant media companies like Meta, Google and Apple. Third party, multitenant, colocation data centers lease space to smaller companies and their servers, like the QTS Fort Worth/Dallas 54-acre campus at Alliance. QTS announced that it will expand operations to an additional 471,000 square feet. It's expected to be completed in 2026.

Andrew Fray, head of the Cushman & Wakefield advisory team in Europe, the Middle East and Africa, said in a 2023 webinar that every market needs data centers. Hyperscale requirements are moving to megascale levels, pressuring power providers. A common perception, he said, is "data centers, by housing data, are taking power away from housing people." Companies are addressing this challenge.

To alleviate electricity shortages, ERCOT proposed changes in its communication, approval and regulatory processes for all Large Load users. ERCOT also is interconnecting with grids outside of Texas.

"ERCOT continues a reliability-first approach to grid operations and will continue to operate the grid conservatively," Webster says, "bringing generating resources online early to mitigate sudden changes in generation or demand."

According to Meta's webpage, all of its facilities around the world "are supported by 100% renewable energy and have reached net zero emissions."

Data centers also consume millions of gallons of water. Servers generate immense heat and require complicated cooling systems. Meta's goal is to be water positive by 2030, according to its webpage, meaning it will restore more water than it uses.

Instead of using water continuously, the QTS Data Center pulls cold winter air into its system for free cooling, according to its website.

LAND HO!

Rural areas are preferable for constructing hyperscalers' data centers because of the need for large tracts of land. Land value is based on accessible transmission and distribution lines and substation switching, says Bond. "The value of the land is the ability to access power."

Get to Know Your Compliance Program

Jodi Daniels, founder and CEO of Red Clover Advisors and co-author of *Data Reimagined: Building Trust One Byte at a Time*, is a data privacy consultant. She helps businesses develop strategies to run effective compliance programs and build trust with customers.

For users wanting to protect personal information, Daniels says, read each company's privacy notice—an unfortunately tedious process. But the more you review, the easier it gets.

"Focus on the collection, use and sharing sections," she says. "Bigger companies are beginning to make the notices clearer with summaries."

Municipalities and counties often recruit developers and hyperscalers to build data centers in their areas. "It's significant and can create a lot of tax revenue for a community, especially if it's going into a rural area," Bond says. "It's a game changer."

He and Goetz agree that data centers don't generally increase traffic or school enrollments. "They pay for their electricity," Goetz says. "They pay for their water. It's really the highest kind of net margin tax revenue."

Important to the residents in the area, these building projects create jobs. More than 1,200 skilled construction, mechanical and electrical workers were on the Fort Worth site during peak construction, and over 200 employees currently keep the center operational.

Data centers also inject millions of dollars into community schools and nonprofits. Philanthropic contributions also cannot be ignored, evidenced by Meta co-sponsoring the 2024 Fort Worth Stock Show and Rodeo's Junior Ag Robotics competition.

As humans expand their digital transformation, humanity will increasingly rely on data centers. It's something easily taken for granted. Digitized information is right there at the touch of a finger or facial scan. Even sitting on the back of a horse. ●