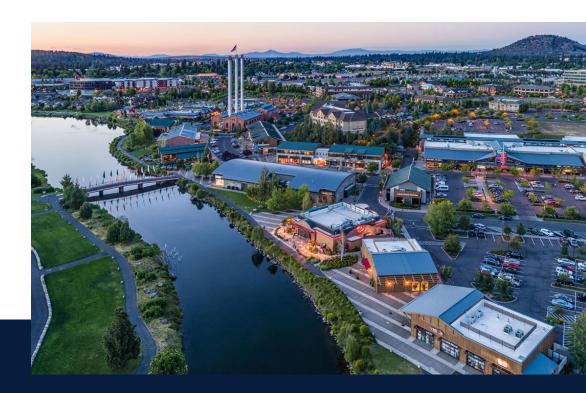## US SIGNAL

Customer Case Study

Reliably Connecting the City

City of Bend, Oregon

The city of Bend lies at the hub of Central Oregon, on the eastern edge of the Cascade Range along the Deschutes River. It's the region's center of commerce, culture and technology. More than 80,000 people live within the city limits and use city services. To manage all those services, the city has simplified its complex IT infrastructure thanks to its partnership with US Signal® IT Solutions.

Highlights

Challenges

- Rapid population growth (54% from 2000–2009) stressed IT infrastructure.
- Makeshift server rooms led to power and cooling outages, disrupting critical city services.
- Significant capital investment required to build a reliable data center.

Challenges

Find reliable, affordable colocation for critical city IT systems

From 2000 to 2009, the population in Bend, Oregon grew from nearly 52,000 residents to more than 80,000, an astounding increase of over 54 percent. To keep up, the city's staff grew, as did the underlying IT infrastructure. The number of city servers multiplied and by 2011 had spilled out of their existing space. "When we ran out of room in the IT closet, we expanded into the office. We eventually converted two offices into server rooms and used the building's power and HVAC systems. It was not ideal," said Aric Ptomey, IT operations supervisor with the city. The makeshift rooms weren't designed to house high-powered servers and computer equipment. "We had three outages that were directly related to power and cooling, and when there's an outage, the city effectively shuts down" said Ptomey.

"Technology is so ubiquitous within our organization that even the street crews are impacted when the network goes down. Work tracking, scheduling and dispatching are all done through systems that are connected to the main data center," said Randy James, IT manager with the city. In fact, nearly all city services—police, fire, street repairs, permits, finance and more—rely on city servers in some way.

Solution

- Partnered with US Signal's Tier III-certified data center in Bend for colocation.
- Leveraged high-speed TDS fiber network for seamless connectivity between locations.
- Implemented server virtualization, reducing hardware needs by nearly 50%.

Results

- Zero outages since moving to the US Signal facility.
- Improved reliability and stability for critical services (e.g., police, fire, street repairs).
- Enhanced network redundancy—facility-specific outages no longer affect the whole system.
- Avoided significant capital and connectivity costs.
- Accelerated data transfer with minimum 1 Gbps speeds and reduced latency.

To build a rock-solid server room, the city had to make a significant capital investment. "We had an outside firm evaluate the space," said James. "It would have taken several hundred thousand dollars to make our facility secure and reliable enough to meet municipal standards. The city is so reliant on technology that there's not a lot that anybody can do for any extended period of time if we were to lose access to our data center, the concepts of high availability and disaster recovery are key to the city being able to function." To develop a secure, robust and fail-proof data center without investing hundreds of thousands of dollars the city of Bend turned to US Signal.

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Solution

James and his team evaluated many colocation facilities in Oregon. "We did several studies and looked around at our options," said James. "There really weren't any other data centers that offered the same level of security and reliability as the US Signal data center in Bend. No one else could touch the capacity and redundancy built into the US Signal facility.

"The data center in Bend features fully redundant power and data connections, along with on-site backup generators. It's a Tier III certified data center, which means it's guaranteed to deliver 99.9% availability. It also features 24/7 security and IT staff, biometric access at all entrances and tracking of visitors and staff. "Going with US Signal really was a no- brainer," said James.

The city IT team of Robert Bussabarger and Stephen Aldrich moved their IT equipment to the US Signal data center, consolidating the number of servers in their pool. "We were able to reduce the number of servers in our pool by almost half using virtualization," said James.

The team also connected the city's main offices to the TDS (US Signal's parent company) high-speed fiber network, providing minimum 1 Gbps data transfer rates between all city buildings and the data center. The blazing-fast network also reduced latency among city buildings to almost nothing. "That connectivity is a big reason we decided to go with US Signal and TDS" said Ptomey. "There simply isn't a faster network in Central Oregon and that gives us a tremendous amount of freedom."

Results

The city hasn't experienced a single IT outage since moving to the data center. "The system just works," said Ptomey. "I don't have to worry about power, cooling, security or anything. Now I can focus on serving our customers: the city employees and the citizens of Bend. I can make sure applications are available and responsive. I can focus on improving the system, making it more efficient and capable."

"The new system is inherently more stable," said Ptomey. Previously, an outage at city hall, or even an interruption in the data connection at city hall, could disrupt the entire city network. "If we lost the connection to city hall, many critical services for other city facilities went dead," said Ptomey. "Now the US Signal data center is at the center of our network. If we lose connection to one of our facilities for some reason, we won't lose access to services at the others."

The move to US Signal has also saved the city money. "We avoided a substantial amount of capital costs and connectivity costs," said James. "Because US Signal provides the connection and colocation, there's a substantial cost savings for us."

"The greatest advantage in the city's partnership with US Signal, we needed to take our Achilles heel—our data center—away," said James. "I'm confident that with our move to US Signal we've significantly reduced the risk of a failure."

Digital Infrastructure Solutions Built for Your Business

US Signal, established in 2001, is a premier national digital infrastructure company that operates a fully owned fiber network to deliver a wide range of advanced digital solutions. Our offerings include robust cloud services, secure colocation facilities, high-performance connectivity, comprehensive hardware resale, and managed IT services, empowering businesses to enhance their operational efficiency through tailored network, data center, data protection, and cybersecurity solutions.