## INDUSTRY FACTS

**$938 MILLION**
BROADBAND INVESTMENTS PAST 5 YEARS

**75%**
NORTH DAKOTANS WITH GIGABIT INTERNET ACCESS

**21,744**
JOBS IN TECHNOLOGY SUBSECTORS

**6%**
OF THE STATE'S GDP

## NORTH DAKOTA'S TECHNOLOGICAL PROWESS

Information Technology, as well as technology subsectors, have rapidly become one of North Dakota's largest industries and continue to be a driver for all sectors of the state's economy. In addition, IT is a major center for innovation that stimulates job growth in areas like agriculture, healthcare, energy production and autonomous systems. Job growth in IT has increased by 11% over the past decade where start-up activities have become plentiful. The state's technology subsectors employ approximately 22,000 people across 3,000 businesses, including the nation's second-largest Microsoft campus. In addition, IT and technology contribute approximately $3 billion per year to the state's Gross Domestic Product with annual wages averaging $62,000 per employee. Over the last decade, North Dakota has enjoyed a 27-percent increase in technological applications and is projected to realize 20-30 percent more growth over the next 10 years. This is due to significant cluster development and growth in areas such as mobility (autonomous systems), computer and cyber sciences, and cybersecurity. Also, the state's energy and agriculture industries have become highly integrated with North Dakota based technological firms offering operational efficiencies via sophisticated advanced manufacturing capacity.

## CONTRIBUTING GROWTH FACTORS

North Dakota has achieved and sustained growth in the IT sector for several reasons. In 2018, two new data centers were constructed, significantly expanding storage capacity. North Dakota is a national leader in broadband activity with almost $1 billion invested in infrastructure coupled with the state likely becoming the first to achieve one-gigabit connectivity for all school districts. In addition, North Dakota is the first state to adopt the Cyber Sciences Initiative where students will be provided with the technological skills needed to meet future workforce needs. Within higher education, Bismarck State College teamed up with Palo Alto Networks, a global cybersecurity leader, to educate students for high in-demand jobs. At both UND and NDSU, undergraduate and graduate programs are offered within the Research Institute for Autonomous Systems and Computer Sciences College to further machine learning, artificial intelligence, cybersecurity and autonomous systems development. In addition, in December 2018, Governor Burgum announced a $30 million request to create the nation's first Beyond Visual Line of Sight (BVLOS) network in the United States for unmanned systems. As such, North Dakota has the progressive approach, infrastructure, educational institutions and workforce requirements to lead the nation in various IT and technical disciplines.

Technology subsectors in North Dakota **employ 22,000 people** across 3,000 businesses, including the nation's second-largest Microsoft campus.

North Dakota is a **national leader in broadband** activity with almost $1 billion invested in infrastructure

IT and technology contribute approximately **$3 billion per year** to the state's Gross Domestic Product

Annual wages in IT average **$62,000**

# SMALL COMPANIES WITH AN IMMENSE IMPACT

IT and technologically oriented firms have not only led to job creation but have supported statewide economic diversification while contributing to national and international Intellectual Property commercialization. Emerging technologies in sectors such as energy production, biomedical, UAS/Precision Ag, software development and defense tech are being developed and commercialized in North Dakota as a direct result of North Dakota's unique clusters.

**Myriad Mobile (IT Development)** — On May 15, 2018, Myriad Mobile received $7 million in individual funding. Myriad Mobile is an enterprise software development company specializing in agtech with a focus on design, development and strategy. The firm creates custom mobile-first software applications and technology platforms and has worked on over 600 projects since 2011. It employees almost 100 people.

**Packet Digital (IT and Military Tech Development)** — On April 26, 2018, Packet Digital received $9.69 million in individual funding. Packet Digital is a manufacturing company that specifically manufactures and markets circuits for power management in portable devices and embedded systems. The company works with customers in multiple industries including medical devices, consumer, and defense.

**Steffes Corporation (Energy Tech)** — Developed an Electric Thermal Storage (ETS) system that gains efficiency by taking advantage of off-peak electricity, which is charged at a lower rate since it is consumed during times when demand on the electrical grid is low. With Steffes ETS system's ability to store vast amounts of heat for long periods of time, customers enjoy on-peak performance for an off-peak price.

**Baker Boy (Advanced Manufacturing Tech)** — Baker Boy is bringing well-paying and highly skilled manufacturing jobs to North Dakota through innovative manufacturing practices driven by new technologies. Production capacity will increase from 5,000 donuts per hour to 22,000, adding approximately $15 million in sales per year.

**Harris Corporation (UAS and Precision Ag)** — Developed aviation-grade network services specifically for UAS operations which included a risk and safety assessment of UAS detect-and-avoid technology. The UAS BVLOS network will be developed within the Grand Forks-to-Fargo corridor. This technology is the proof-of-concept for a statewide network.

# WHAT'S NEXT FOR IT AND TECH

North Dakota is making the requisite investments in infrastructure, K-12 education and in its university system to provide a solid foundation for industry to continue to grow; with projected increases of 20-30 percent in IT and technical positions, North Dakota will be positioned to have the necessary workforce in place to meet demand. To further growth prospects in IT and emerging technologies, the North Dakota Department of Commerce is leading an IP commercialization initiative with the Bank of North Dakota and University System to enable job creation, spinoffs into private industry and clustering of new companies that leverage research in emerging sectors. This will be accomplished through refining current IP commercialization efforts within the University System as well as bringing entrepreneurs, venture capital firms, researchers and industry together to grow this sector.