



INFORMATION TECHNOLOGY COUNCIL
OF NORTH DAKOTA

State of the
**IT Industry
Guide**

2009
Edition

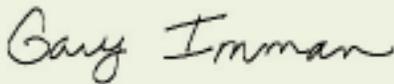
The State of North Dakota's IT Industry

North Dakota's information technology (IT) industry is strong and growing. As one of the state's target industries, IT contributes significantly to the growth and economic development of the state. The success of North Dakota's private, public and nonprofit sectors relies on the efficient and effective use of IT.

The Information Technology Council of North Dakota, along with the other North Dakota IT industry stakeholders listed below, is pleased to provide a compilation of information on the state's IT industry. This *2009 State of the IT Industry Guide* is a unique opportunity to feature an assessment of North Dakota's IT industry by presenting information on infrastructure, workforce, trends and economic impact on the state.

This publication will be a valuable vehicle for informing the community, outside partners in private and public sectors, and potential business prospects about opportunities within North Dakota's IT industry.

We hope that this will be an important resource for you and your organization.



Gary Inman, President
Information Technology Council of North Dakota

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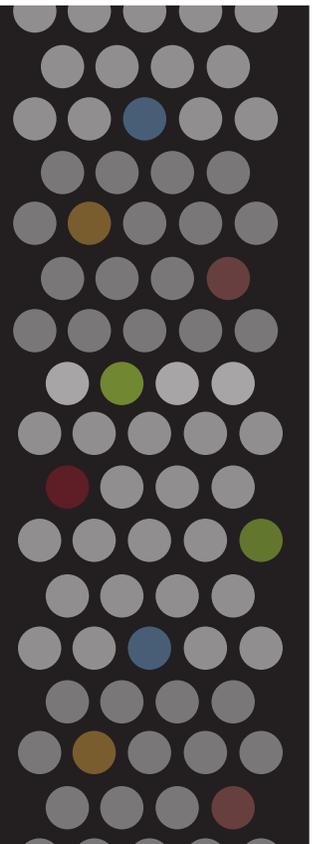


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Introduction

Information technology (IT) is found in virtually every workplace. In fact, only 10 percent of the state's IT employees are found in the three core IT industries: publishing, including software; information and data processing services; and computer systems design and related services. Roughly 90 percent of IT workers are employees in industries ranging from manufacturing and health care to energy and agriculture.

The success of North Dakota's private, public and nonprofit sectors increasingly depends on people who have the skills to use technology efficiently and effectively.

This 2009 edition of the *State of the IT Industry Guide* provides a snapshot of North Dakota's IT industry, including the economic impact to the state; the status of the IT workforce; the competitiveness of the industry at the regional and national level; and the key trends facing the industry.

Because of the diverse nature of the IT industry sector (by occupations or industries), analysis requires an approach that accounts for its numerous applications. A review of the end users of IT products and services was used to help characterize the unique aspects of the industry. In an effort to address the diversity of the IT sector, this report uses the North American Industry Classification System (NAICS) to identify the industries considered part of the IT industry as well as Standard Occupational Classification Code (SOC) for occupations involved in the IT industry.

This assessment reviews the top industries for IT workers in the state, including:

- Computer systems design and related services
- Software publishers
- State government
- Data processing, hosting and related services
- Local government
- Direct life, health and medical insurance carriers and reinsurance carriers
- Management of companies and enterprises

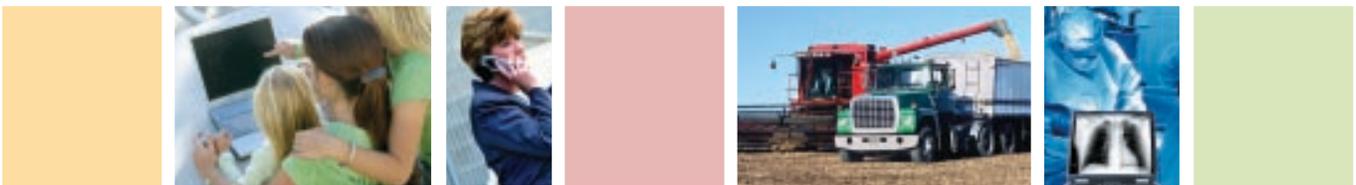
The information enumerated in the following pages focuses primarily on the businesses that are involved in the three core IT industries: publishing, including software; information and data processing services; and computer systems design and related services. However, more than 90 percent of IT workers are employed in other industries. This magnifies the impact of the IT industry and its associated skill sets on the economy of North Dakota.

DATA SOURCES

- American Community Survey, U.S. Department of Education
- County Business Patterns (CBP) and Non-employer Statistics (NES), U.S. Census Bureau
- Interviews with North Dakota IT industry leaders
- Economic Modeling Services Incorporated (EMSI)
- National Center for Education Statistics
- North Dakota Job Service, Labor Market Information Center
- Occupational Employment Statistics Program, U.S. Bureau of Labor Statistics
- Quarterly Census of Employment and Wages (QCEW), U.S. Department of Labor
- Regional Economic Information System (REIS), Bureau of Economic Analysis (BEA)
- Survey of North Dakota IT industry leaders
- U.S. Bureau of Labor Statistics

Executive Summary

North Dakota's IT industry is a growing and vibrant part of the state's economic picture. The numbers in this report are indicative of only three core IT industries: publishing, including software; information and data processing services; and computer systems design and related services. However, more than 90 percent of IT workers are employed outside of these areas in industries such as agriculture, health care, energy, manufacturing and financial services. Although it is difficult to measure, this magnifies the impact the IT industry and its associated skill sets have on the economy of North Dakota.



The skill sets inherent in the IT industry are a strong component in the ongoing health and well-being of the state. The success of North Dakota businesses, schools, colleges, hospitals, government and nonprofit organizations are tied to the efficient and effective use of technology.

The IT industry has a significant impact on the state, including:

- IT businesses are knowledge-based and create a significant number of high-paying jobs in North Dakota.
- The IT industry is a primary sector industry helping to bring outside dollars into the state.
- Technology industries on average generate higher added value per worker than other non-technology related industries.

In addition:

- North Dakota has seen dramatic growth in its IT industry since 2002, doubling the national growth rate.
- North Dakota is committed to technology advancements and to building and maintaining a robust and redundant telecommunications infrastructure.
- The competitive effect within the state's IT industry suggests a strong regional competitive advantage for some of the fastest growing occupations in the industry.

It is projected that 2,500 new and replacement IT employees will be needed in only the three core IT industries over the next 10 years. To meet these needs, North Dakota IT industry stakeholders, including business, education and government, have worked to develop a comprehensive curriculum that includes flexible and personalized training.

With a strong K-12 and higher education system in place, the IT industry can capitalize on local and regional assets to grow business. This also creates an opportunity for industry, government and education to work together to inform potential in- and out-of-state employees of the great job opportunities that exist in North Dakota's thriving IT industry.

As the industry changes and matures, new technologies and applications are being developed that have the potential to fuel economic growth and produce positive impacts for North Dakota businesses and workforce. North Dakota's IT industry is aware of these national and global trends and is positioned to capitalize on competitive advantages in developing and applying new and emerging technologies into the marketplace.

North Dakota's IT Industry

Strong & Growing

North Dakota has seen significant growth in the IT industry since 2002, doubling the national growth rate with a 24 percent increase in job growth (Figure 1). This suggests continued growth potential for this industry sector and associated businesses in the state.

Figure 1. Information Technology Growth (2002 to 2008)



Source: U.S. Bureau of Labor Statistics

ECONOMIC IMPACT

The IT industry contributes significantly to the overall growth and economic prosperity of North Dakota. It plays a key role in enhancing productivity growth in many industries, such as agriculture, health care, energy, manufacturing and financial services. Further, the IT industry generates jobs, income and tax revenues for both local and state governments.

There are other critical elements that speak directly to the impact of the state's IT industry, including:

- IT businesses are knowledge-based and create a significant number of high-paying jobs in North Dakota.
- The IT industry is a primary sector industry helping to bring outside dollars into the state.
- Technology industries on average generate higher added value per worker than other non-technology related industries.

The largest concentrations of IT professionals in the state are found in the following counties: Cass (2,213), Burleigh (944), Ward (385), Grand Forks (295) and Morton (145). These counties have a large concentration of private businesses, government entities and educational institutions that help drive employment and provide a large, skilled labor pool to meet growing workforce needs.

North Dakota's IT industry is diverse with more than 450 businesses employing more than 7,500 individuals, according to Job Service North Dakota. Wages in this industry sector have continued to rise and are ranked fourth (on average \$47,406) compared to other major industries in North Dakota (Table 1).

Table 1. Average Wage of North Dakota Industries (2007)

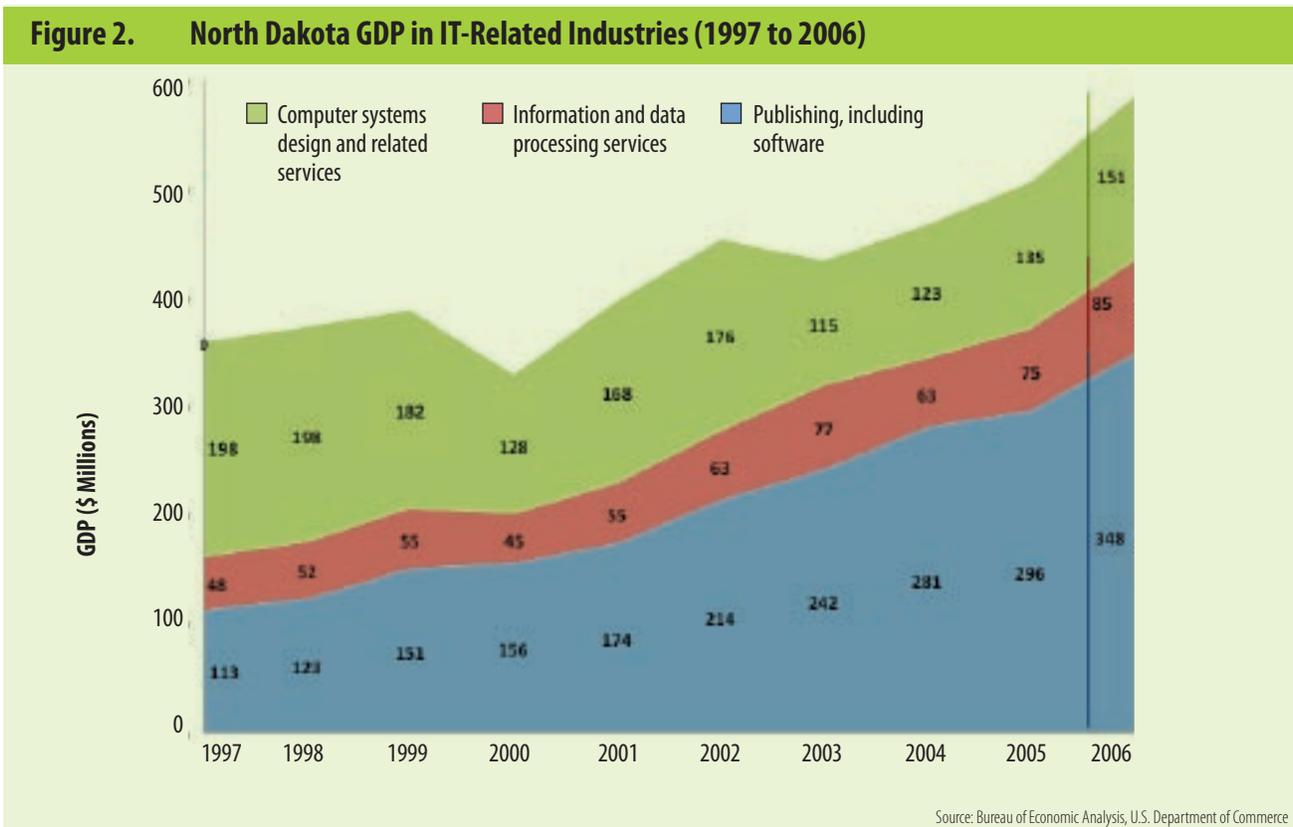
Utilities	\$71,877
Mining, Oil & Gas Extraction	\$70,004
Management of Companies	\$59,591
Information	\$47,406
Professional & Technical Services	\$43,098
Finance & Insurance	\$42,310

Source: Job Service North Dakota, Employment and Wages, 2007 Annual Average

Gross Domestic Product

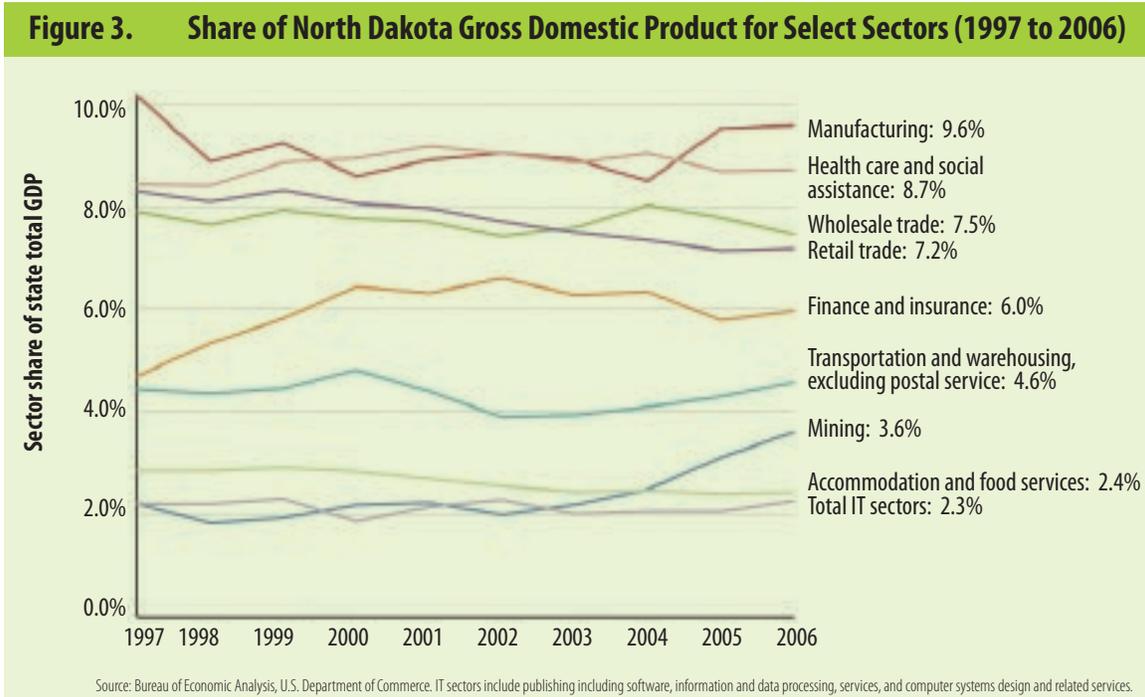
Gross domestic product (GDP) is one of the measures of state income and output for the state's economy. GDP is defined as the total market value of all goods and services produced within the state. It is considered the sum of the value added at every stage of production.

For IT-related industries, North Dakota's GDP includes publishing, including software (\$348 million); information and data processing services (\$85 million); and computer systems design and related services (\$151 million) for a total of approximately \$584 million (Figure 2).



The IT sector is responsible for roughly 2.3 percent of the total state GDP. However, this number only reflects 10 percent of the state's total IT workforce. It does not take into account the 90 percent of IT workers employed in industries outside of IT, including agriculture, health care, energy, manufacturing and financial services.

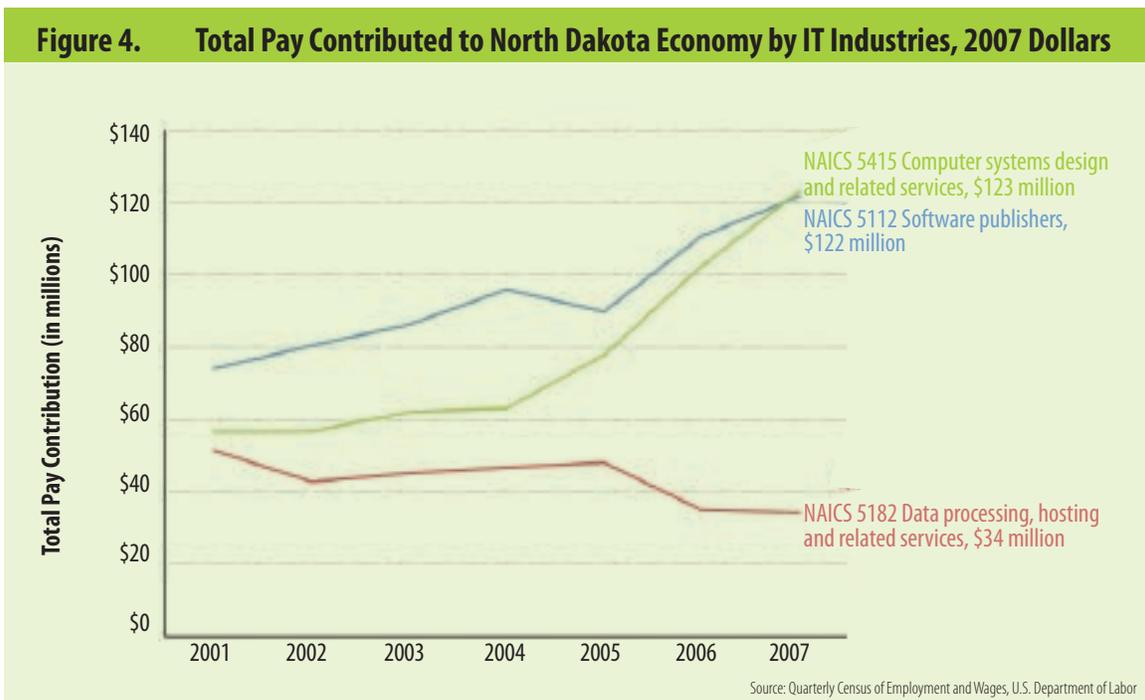
The growth of the IT sector is consistent to other industry sectors (Figure 3).

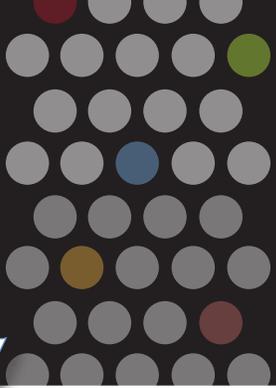


Pay Contributed to Economy

Total (aggregate) pay contributed to the North Dakota economy by IT industries is significant at approximately \$279 million per year. Again, this is only reflective of IT employees hired in the three core IT industries. It does not reflect the pay contributed to the economy from IT workers within other industries.

Since 2004, software publishers have had significant growth to approximately \$122 million in total pay, suggesting growth in employment pushed pay significantly higher (Figure 4).





North Dakota Connectivity

Reliable, Redundant & Robust

North Dakota is committed to technology advancements and to building and maintaining a robust and redundant telecommunications infrastructure. This ensures that technology-based businesses can grow and succeed and North Dakota residents can stay connected. With one of the most powerful fiber optic networks in the nation, North Dakota is well suited to meet the telecommunications demands of residents and business alike.

The state of North Dakota, along with its primary technology partner, Dakota Carrier Network (DCN), serves all governmental wide area network requirements. DCN operates a 1,460-mile-long fiber optic facility as part of the existing independent local telephone company networks. A Dense Wavelength Division Multiplexing Network (DWDM) ring is used for the basic network design. The operation of multiple fiber optic-based rings provides this high-capacity service. The transmission network is entirely high-quality optical fiber. Nortel DWDM equipment operating at 10 Gbps is used on the SONET and Ethernet network.

High-speed internet service is provided to commercial customers and internet service providers (ISPs) alike. The service provider deploys direct fiber connections from Fargo and Bismarck to multiple Tier 1 service providers for added reliability and offers broadband internet service in Bismarck, Fargo, Grand Forks, Jamestown, Valley City, Wahpeton and Williston. The redundant connections to multiple Tier 1 providers ensure that IT centric businesses will have the reliability needed to compete in today's business climate. Services include full T1 service, fractional and DS3 connectivity and Ethernet.

Businesses of all sizes currently use the traditional platform for data networking and file transfer, linking company data networks together throughout North Dakota. The ability to form networks for North Dakota-based businesses with one or more locations throughout the state helps those businesses grow and expand. Companies in every community in the state have the same opportunity as those in major metropolitan areas to network their data systems together—and reach the entire world.

A wide area Ethernet Transport Service (ETS) network has been created statewide. It takes advantage of a major expansion and addition of fiber optic cable infrastructure being installed by the 15 rural telecommunication companies in North Dakota. Computers within a company network can talk to each other over a large geographic area at an even higher rate of speed. The state's extensive fiber optic interconnections with other regional and national carriers mean a business with multiple locations in the United States, not just North Dakota, can network effectively regardless of its location.

Telecommunications cooperatives, cable companies, wireless providers and national cell phone providers add to the growing capacity by providing high-speed broadband to every community in the state. Through ongoing and extensive investments, these companies are providing a competitive advantage to the state and its businesses by participating in the statewide backbone and supplying internet services, direct broadcast satellite and wireless services. This ensures that residents and business alike have access to a telecommunications network that is reliable, redundant and robust.

North Dakota

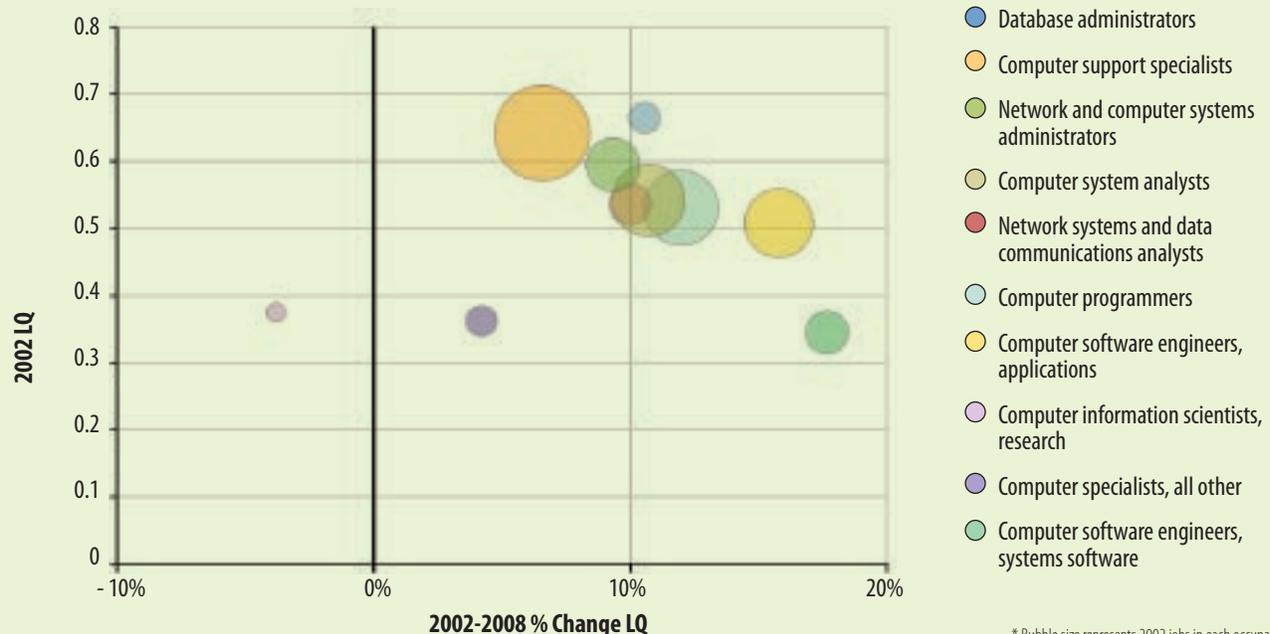
Comparatively Speaking

North Dakota's IT industry has out-performed its counterparts nationwide in job growth (as a percentage), showing the strength and viability of this industry sector. The location quotient and shift share data point to opportunities for job growth based on capacity for growth due to unmet needs within the state or region.

The IT industry is competitively poised to meet this potential demand with quality employers and a skilled workforce, coupled with the high level of training capacity available in the state. Working collaboratively with industry and educational providers, both public and private, suggest opportunities for continued job growth in the IT industry in North Dakota.

Location quotients (LQ) compare an area's business composition to that of a larger area (i.e., nation, state or county). An LQ greater than 1 indicates that an area has proportionately more workers than the larger comparison area employed in a specific industry sector. This implies that an area is producing more of a product or service than is consumed by area residents. The excess is available for export outside the area. An LQ significantly less than 1.0 may indicate an opportunity to develop businesses in the local area to meet area demand. Only Cass County has an LQ of greater than 1, indicating a higher concentration of these IT occupations in the state.

Figure 5. North Dakota IT Occupation Location Quotient Breakdown (2002 to 2008)



* Bubble size represents 2002 jobs in each occupation
Source: Bureau of Labor Statistics

Table 2. North Dakota IT Occupation Location Quotient Breakdown (2002 to 2008)

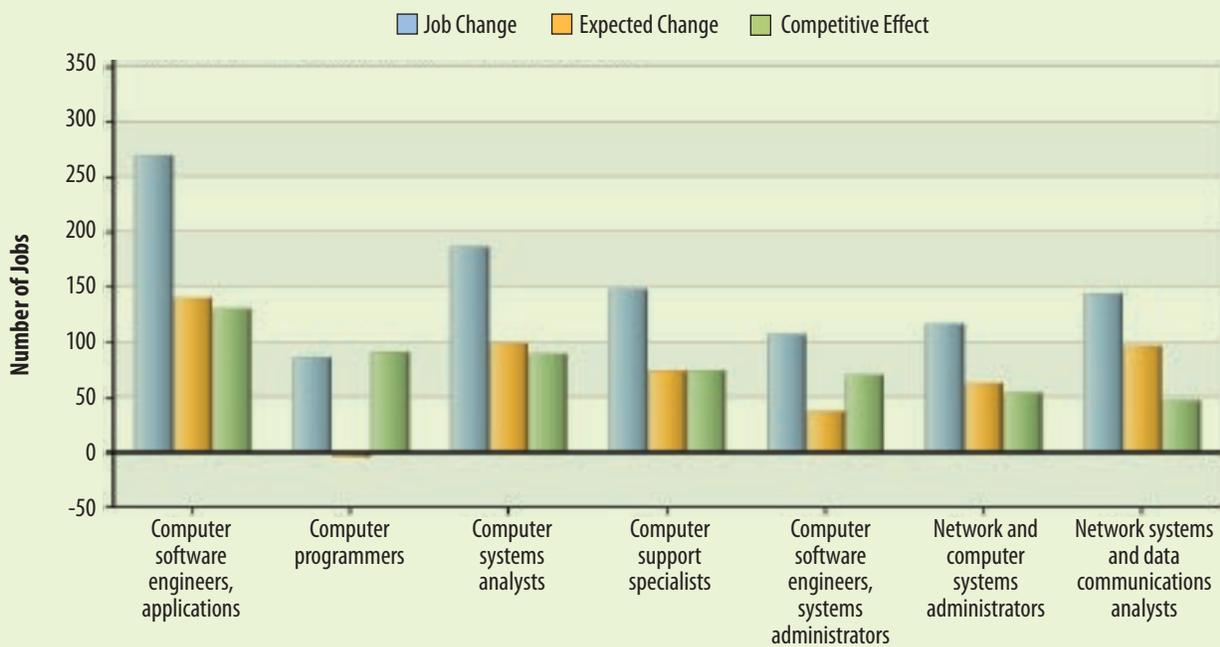
SOC Code	Description	2002 Jobs	2002 LQ	2008 Jobs	2008 LQ
15-1061	Database administrators	204	0.67	1,108	0.74
15-1041	Computer support specialists	960	0.64	812	0.69
15-1071	Network and computer systems administrators	476	0.60	872	0.65
15-1051	Computer systems analysts	685	0.54	920	0.60
15-1081	Network systems and data communications analysts	347	0.54	592	0.59
15-1021	Computer programmers	726	0.53	490	0.59
15-1031	Computer software engineers, applications	650	0.51	449	0.59
15-1011	Computer and information scientists, research	63	0.38	242	0.36
15-1099	Computer specialists, all other	213	0.36	257	0.38
15-1032	Computer software engineers, systems software	342	0.35	66	0.41
	Total	4,666	0.51	5,808	0.56

Source: EMSI Complete Employment - Spring 2008

Shift share analysis involves three basic components. These are job change, which is the actual and/or projected job change in the regional industry over a specified time; expected change, which is the sum of the job growth one would expect in the regional industry if it followed national trends exactly; and competitive effect, which is job change minus expected change.

As noted in Figure 6, the competitive effect within the state’s IT industry suggests a strong regional competitive advantage for some of the fastest growing occupations in the industry. This may be due to a number of factors, including quality jobs, quality employers and a high level of training capacity available within the state.

Figure 6. North Dakota Occupational Shift Share (2002 to 2008)



Source: EMSI Complete Employment - Spring 2008

North Dakota IT Workforce

Meeting the Demand

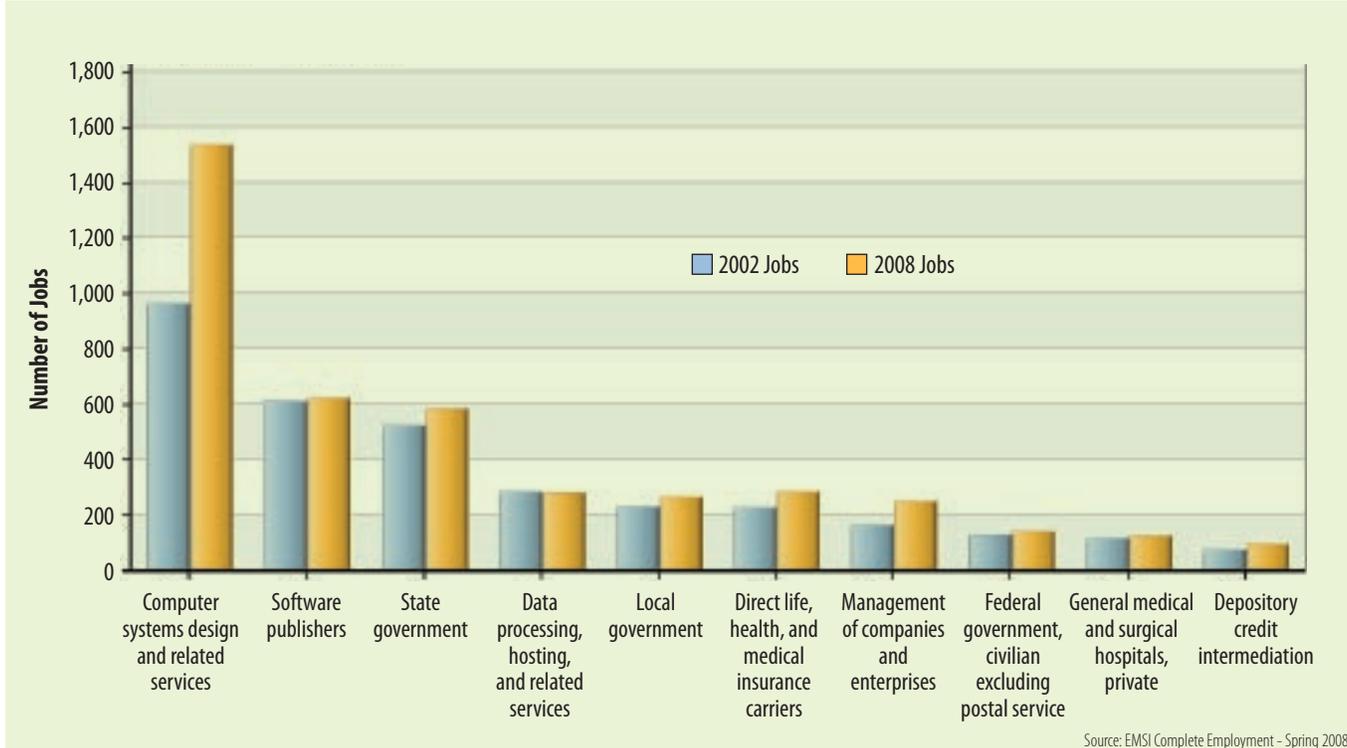
North Dakota's economy is robust, with the start-up and expansion of many businesses, low unemployment and a high labor force participation rate. With this growth comes increased need for a high-quality workforce. This creates an opportunity for industry, government and education to work together to inform potential in- and out-of-state employees of the great job opportunities that exist in North Dakota's thriving IT industry.

Top Industries for IT Workers

The top industries for IT workers in North Dakota are computer systems design and related services (1,534), software publishers (618) and state government (582).

These have been the foundation of the IT industry in the state for more than six years. Current growth shows the greatest expansion in computer systems design and related services (59%); direct life, health and medical insurance carriers and reinsurance carriers (28%); and management of companies and enterprises (52%) (Figure 7).

Figure 7. Leading Industries for North Dakota IT Workers (2002 to 2008)

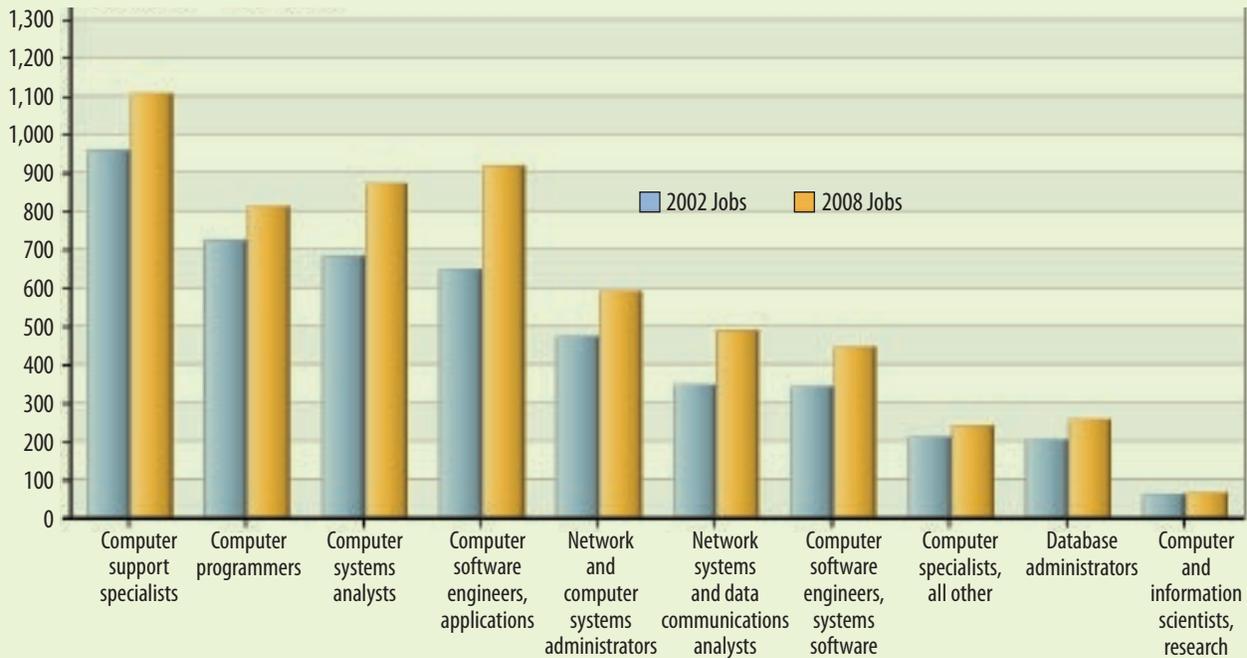


Source: EMSI Complete Employment - Spring 2008

Top IT Occupations

The state's top IT occupations are computer support specialists (1,108), computer software engineers (920) and computer systems analysts (872) (Figure 8 and Table 4). Computer support specialists earn the least of those reported. Computer software engineers earn roughly the national average.

Figure 8. North Dakota IT Occupational Breakdown (2002 to 2008)



Source: Bureau of Labor Statistics

Table 4. North Dakota IT Occupation Breakdown (2002 to 2008)

SOC Code	Description	2002 Jobs	2008 Jobs	2007 Median Hourly Earnings
15-1041	Computer support specialists	960	1,108	\$14.52
15-1021	Computer programmers	726	812	\$21.10
15-1051	Computer systems analysts	685	872	\$24.01
15-1031	Computer software engineers, applications	650	920	\$30.17
15-1071	Network and computer systems administrators	476	592	\$22.56
15-1081	Network systems and data communications analysts	347	490	\$22.70
15-1032	Computer software engineers, systems software	342	449	\$37.15
15-1099	Computer specialists, all other	213	242	\$25.96
15-1061	Database administrators	204	257	\$22.83
15-1011	Computer and information scientists, research	63	66	\$26.84
	Total	4,666	5,808	\$24.78

Source: EMSI Complete Employment - Spring 2008

Fastest Growing IT Occupations

Growth in higher-skill, higher-wage jobs is evident in Job Service North Dakota's projected "fastest-growing" IT occupations (Table 5). Significant growth is expected in computer software engineering in both applications and systems software, which are the IT occupations with the highest median hourly earnings.

Table 5. Seven "Fastest-Growing" IT Occupations in North Dakota through 2014 (projected)

Occupation/Job Title	% Growth 2004-2014
Computer Software Engineers, Applications	41.1
Computer Software Engineers, Systems Software	41.1
Management Analysts	31.6
Database Administrators	30.6
Computer-Controlled Machine Tool Operators	30.2
Network and Computer Systems Administrators	27.7
Computer Systems Analysts	26.1

Source: Job Service North Dakota

Fastest Changing Industries for IT Workers

The fastest changing industry for North Dakota IT workers is computer systems design and related services, which significantly leads all other industries in the state (Table 6). The largest percentage change is in computer and peripheral equipment manufacturing, followed by IT-related research and development in the physical, engineering and life science disciplines (Table 7).

Table 6. Fastest Changing Industries for IT Workers in North Dakota (2000 to 2008)

NAICS Code	Description	Change in # of Jobs
541500	Computer systems design and related services	571
334100	Computer and peripheral equipment manufacturing	87
551100	Management of companies and enterprises	85
5241XX	Direct life, health, and medical insurance carriers and reinsurance carriers	62
920000	State government	60
541600	Management, scientific, and technical consulting services	36
930000	Local government	34
541710	Research and development in the physical, engineering, and life sciences	28
517100	Wired telecommunications carriers	22
522100	Depository credit intermediation	19

Source: EMSI Complete Employment - Spring 2008

Table 7. Percentage Change by Industry in North Dakota (2000 to 2008)

NAICS Code	Description	% Change
334100	Computer and peripheral equipment manufacturing	304%
541710	Research and development in the physical, engineering, and life sciences	122%
541600	Management, scientific, and technical consulting services	81%
541500	Computer systems design and related services	59%
551100	Management of companies and enterprises	52%
334600	Manufacturing and reproducing magnetic and optical media	-60%

Source: EMSI Complete Employment - Spring 2008

Projected IT Workforce Needs

It is estimated that an additional 1,200 new IT professionals in the three core IT industries will be needed in North Dakota over the next 10 years (Figure 9). According to the U.S. Bureau of Labor, the annual job openings due to net replacement needs vary by IT occupation, ranging from a high of 26.5 percent for computer support specialists to a low of 10.7 percent for database administrators. The total number of job replacements over the next 10 years is estimated at 1,300. These jobs are in addition to new hires.

The majority of the workers needed are for higher-skill, higher-wage occupations, including computer software engineers, applications; computer support specialists; and computer systems analysts (Table 8). Training and education partners in the state are working to meet these needs through new curriculum and personalized and flexible training opportunities.

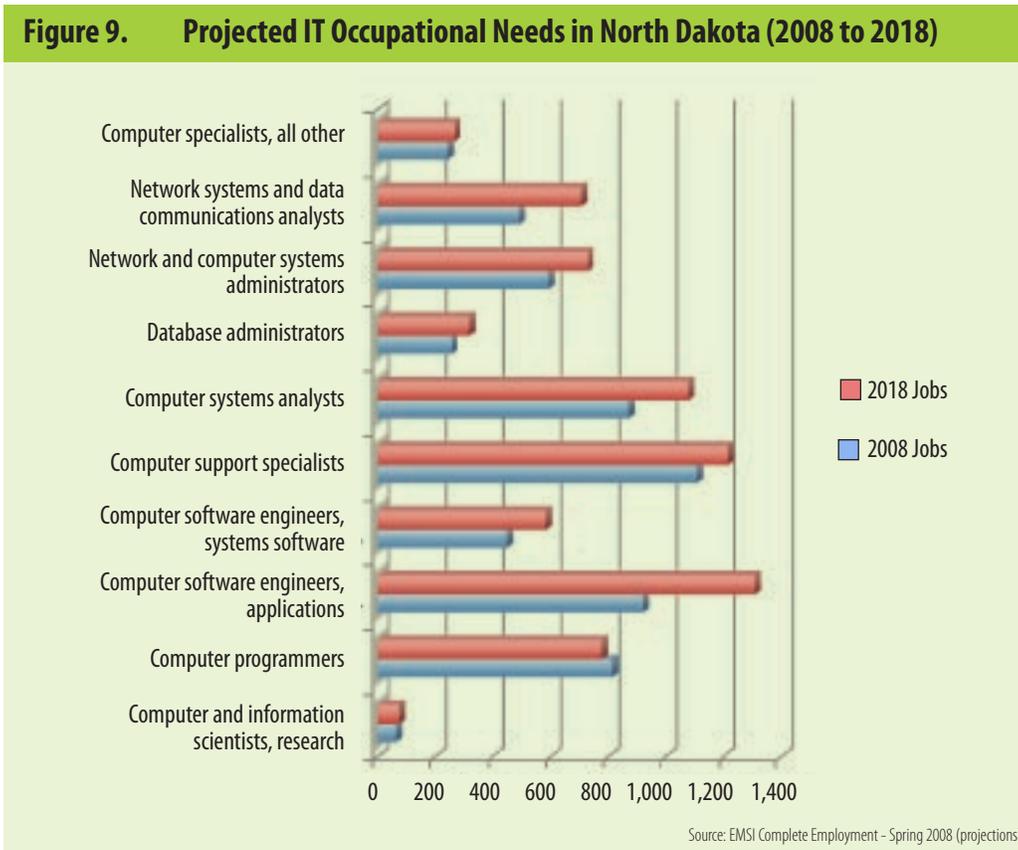


Table 8. Projected IT Occupational Needs in North Dakota (2008 to 2018)

Description	2008 Jobs	2018 Jobs	Change
Computer and information scientists, research	66	76	10
Computer programmers	812	778	-34
Computer software engineers, applications	920	1,307	387
Computer software engineers, systems software	449	583	134
Computer support specialists	1,108	1,216	108
Computer systems analysts	872	1,076	204
Database administrators	257	319	62
Network and computer systems administrators	592	729	137
Network systems and data communications analysts	490	705	215
Computer specialists, all other	242	267	25

Source: EMSI Complete Employment - Spring 2008

Opportunity for Growth

Building the IT Knowledge Base

IT and its associated skill sets are major drivers in the creation of higher-wage, higher-skill jobs and a catalyst for regional economic and business growth. Businesses use these skills to track and better serve clients, increase productivity and better manage inventories, nurture and maintain more effective communications with clients and vendors, and develop new products and services.

The need to develop, maintain, upgrade and utilize these skills effectively is increasingly important to meet the rapidly evolving demands in today's IT-intensive environment. To address these demands, North Dakota's IT industry stakeholders, including education, government and business, have developed a comprehensive offering of formal education programs, as well as flexible and personalized training and instruction.

IT-Specific and Related Degrees

IT-specific and related degrees offered in the state and the associated graduation levels for 2007 are outlined in Table 9. The top four programs include computer and information sciences, management information systems, computer science and computer systems analysis/analyst.

Table 9. 2007 Degrees Awarded in North Dakota Region for IT and Related Occupations

Title	2007 Completions
Computer and Information Sciences, General	84
Management Information Systems, General	67
Computer Science	49
Computer Systems Analysis/Analyst	24
Computer Systems Networking and Telecommunications	13
Computer Engineering, General	12
Web Page, Digital/Multimedia and Information Resources Design	8
Information Science/Studies	8
Data Processing and Data Processing Technology/Technician	3
Information Technology	2
System, Networking, and LAN/WAN Management/Manager	2
Computer and Information Sciences and Support Services, Other	1
Web/Multimedia Management and Webmaster	1
Computer Programming/Programmer, General	0
Computer Programming, Specific Applications	0

Source: National Center for Education Statistics

Bridging the Skills Gap – Meeting Industry Needs of Tomorrow

IT is seen as a major catalyst in regional economic growth through the creation of higher-skill, higher-wage jobs. Business and industry are using IT to increase productivity, develop stronger relationships with clients and vendors, and reduce the time required to develop and deliver quality products and services.

The ability to develop and use advanced skill sets is increasingly important in today's rapidly changing IT-intensive economy. Today, roughly 50 percent of all employees' technical skills become outdated within three to five years, creating the need to update skills and acquire advanced training. The state and its educational partners are working to meet these needs through the delivery of innovative curriculum, flexible and specialized training, and ongoing interaction with IT industry and business.

Developing advanced skill sets, certification and training is a key component of the state's public and private educational partners. Valley City State University's Institute for Customized Business Solutions (ICBS) is working with business and industry to develop and deliver customized, hands-on training in leading edge enterprise technologies, including industry-specific technologies, soft-skills and customized business skills.

The North Dakota Department of Career and Technical Education provides advanced training and coursework that supports the growing IT industry, including Cisco Certified Networking, advanced JAVA programming, Linux and Visual Basic, and .NET training. This flexible training and certification programming provides opportunities for North Dakota residents to continue honing their existing skills as they work to meet the needs of IT businesses within the state.

These programs, and the myriad of programs offered by public and private educational partners, in conjunction with training programs offered by the state, illustrate the importance the state and its partners place on real-time, relevant training to meet the needs of industry.

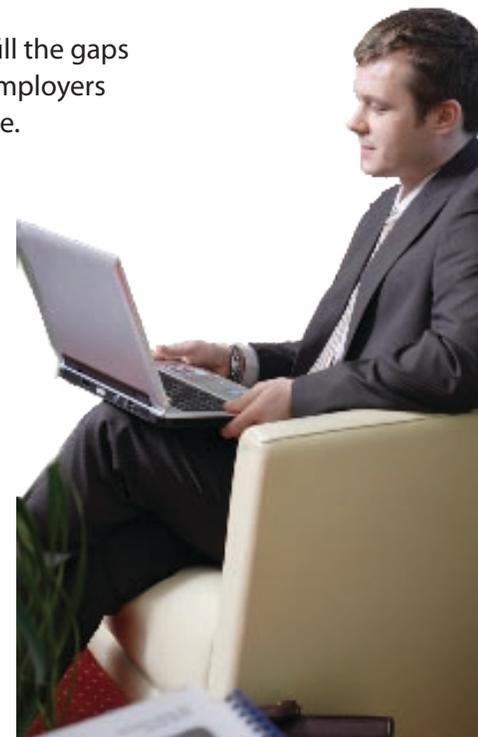
State Training Programs

State government is working to meet the needs of employers throughout North Dakota by providing programs that help implement new workforce training methods.

Job Service North Dakota has implemented two key programs to meet the needs and fill the gaps of existing and incumbent workers. These programs provide matching funds to help employers upgrade existing skill sets and train new employees for today's competitive marketplace.

Workforce 20/20 is a program to assist North Dakota businesses in retraining and upgrading worker's skills to meet demands of new technologies and work methods. This state-funded, cost-sharing training program was designed to fill needs unmet by federally funded training programs that generally target long-term unemployed, dislocated workers and other disadvantaged groups.

The *North Dakota New Jobs Training Program* provides incentives to businesses and industries that are creating new employment opportunities through business expansion or relocation to the state. The program provides a mechanism for companies to secure funding to help offset the cost of training new employees for business expansion and/or startup. Under this program, the business obtains funds in the form of a loan or repayable grant or under a self-financing option. The loan or grant, plus interest, is repaid through the capture of the state income tax withholding generated from the new job positions that are created.



Emerging IT Trends

Impacting North Dakota

The IT industry is a diverse field that impacts virtually every business – from the service industry and trucking companies to manufacturing specialists and health care professionals and from large companies to small sole-proprietor businesses. As the industry changes and matures, new technologies and applications are being developed that have the potential to fuel economic growth and produce positive impacts for North Dakota businesses and workforce.

Because of the diverse nature of the IT industry, the high level of competition and the rapidly evolving technological changes that characterize the industry, it is increasingly important to identify national and global trends to capitalize on competitive advantages in developing and applying new and emerging technologies into the marketplace. IT businesses within the state identified emerging trends both state and nationwide that may impact the businesses and clients they serve. These include:

- On-shoring and near-shoring
- Pervasive connectivity
- Convergence of technologies and services
- Accessing qualified workforce



The growth of key business operations outsourcing to cut costs has traditionally been focused on off-shore business concerns that have been able to undercut costs through lower overhead and personnel costs. Recent trends suggest that on-shoring (accessing U.S.-based talent) and near-shoring (utilizing Mexican or Canadian services) is growing. Due in part to a heightened concern regarding data security, language and access, an increasing amount of IT work previously outsourced is returning back to North America and the United States. North Dakota businesses are working to tap into this trend.

Continued growth in mobile computing technologies – including laptops, cell phones, data-capable cell phones, texting and expanded secure wireless networks – and the demand for pervasive connectivity to data and information, regardless of location, point to the continued demand and growth of real-time communications and data integration. With the expansion of secure wireless technologies and related wireless devices, there is rapid growth in accessing information rapidly and easily.

The state has an extensive fixed infrastructure and private vendors – including local, regional and national ISPs and service providers – that are helping deliver the wireless connectivity that business and industry is demanding. The state and regional partners have shown their willingness to invest in the infrastructure, and private business has participated in building out the reliable and redundant telecommunications infrastructure to meet the growing demand for this heightened level of connectivity.



The convergence of different types of applications and data, including streaming video, voice, data, GPS and web application, is a growing trend in private use, business and education. With the development of more available broadband bandwidth and faster image transmission and retrieval, users throughout the state are capable of conducting real-time business meetings. This can be done via different types of applications that are growing in use throughout the country and state, including text, video and voice technologies.



IT continues to be a critical element of business and industry. Because of this, the need and demand for a qualified workforce with flexible and portable skills who can readily adapt and respond to the rapidly evolving demands of the IT marketplace is high nationally and within the state. State government and its educational partners have been aggressive in developing flexible and focused training, certification and education targeted toward virtually all industry sectors. Through workforce training programs and support from state government, state colleges and universities, a concerted effort is being established to increase the number and quality of the workforce in IT and related industries.

ITCND Award Winners 2007-2008

Outstanding Achievement in Business

2007 - Laducer & Associates Inc., Mandan
2008 - Dakota Carrier Network, Bismarck and Fargo

Innovative Business User of Technology

2007 - Verety LLC, Fargo, Grand Forks and rural North Dakota
2008 - AgriData Inc., Grand Forks

Entrepreneur Award

2007 - Kevin Leier, Tao Interactive, Bismarck
2008 - Brian Wolf, National Information Solutions Cooperative, Mandan

Outstanding Achievement in Education

2007 - Jeffrey Stamp, Ph.D., University of North Dakota, Grand Forks
2008 - Eric Ripley, Red River High School, Grand Forks

Outstanding Achievement in Digital Government

2007 - Maren Daley, Job Service North Dakota, Bismarck
2008 - North Dakota Parks and Recreation Department, Bismarck

Legislative Award

2007 - Senator Randel Christmann, District 33, Hazen
2008 - Senator Tom Seymour, District 5, Minot

ITCND

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Vision Technology
Volt Workforce Design
Walsh County Job Development Authority



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As Seen In... U.S. News & World Report, June 16, 2008

Dakota Carrier Network *High Speed. High Capacity. High Reliability.*

It's a high-tech world. And it's getting more so every day. Even in rural areas, businesses are adding more and more services and requiring more and more from their telecommunications companies. According to Evan Hass, general manager of Dakota Carrier Network, his customers require more than they ever did in the past. "It doesn't matter whether it's a bank or an insurance company, whatever kind of business, they're adding new services and requiring more bandwidth on their networks," he says.

To accommodate those requirements, DCN recently invested in what Hass calls the "infrastructure of the future." The company added equipment to its existing network that provides more than 300 times the bandwidth than had been available in the past, resulting in a capacity that rivals that of any metropolitan carrier. "We're not using technology that nobody else has. But it's technology nobody else is making available to the rural areas of North Dakota," he says.

In addition to these high-capacity capabilities, DCN also offers reliability not usually found outside high-density population areas, says Hass. "Our network is built in rings," he explains. "If a cable happens to get cut, service is automatically switched to a secondary path. And that kind of reliability is just as important to the customer in North Dakota as it is to a customer in Atlanta. But, again, DCN is the only carrier offering it here."

Local Company. Local Commitment.

Dakota Carrier Network is owned by 15 local communications companies, all based in North Dakota and all of which know

and understand the unique challenges that brings to businesses. "We're working to bring big-city communications to rural North Dakota," says Hass. "We can connect our customers anywhere in the state and provide connections regionally and nationally as well."

In fact, DCN goes a step further than most companies when it comes to regional and national connections. "When a customer's circuit connections go from point A to point B, say, from Fargo to Phoenix, it generally takes multiple carriers to get the connection. Figuring out who to talk to in making the arrangements can be very frustrating for customers," says Hass. "But we take care of those details for them. They tell us where they want the circuit and we do the rest, all the coordination, all the maintenance. It gives them a single point of contact, with local people they know and trust, for a two- or three-carrier connection."

The 15 companies that make up DCN have laid more than 12,000 combined miles of fiber-optic cable across the state, says Hass. "They're taking our state-of-the-art fiber optic network right to customers' businesses," he says. "Business customers can buy our capacity anywhere in the state."



Evan Hass
General Manager



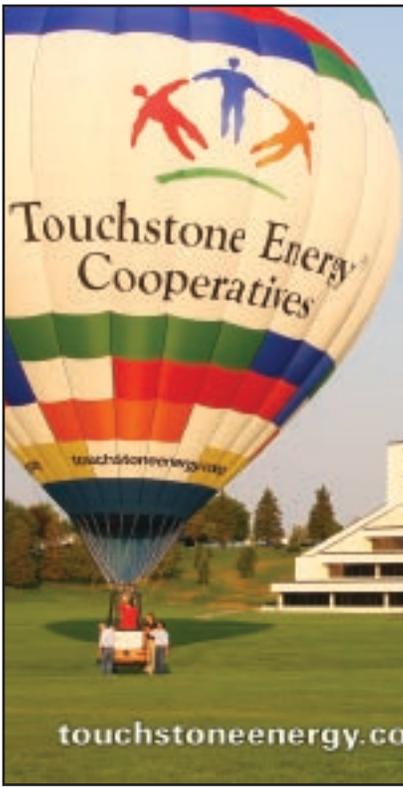
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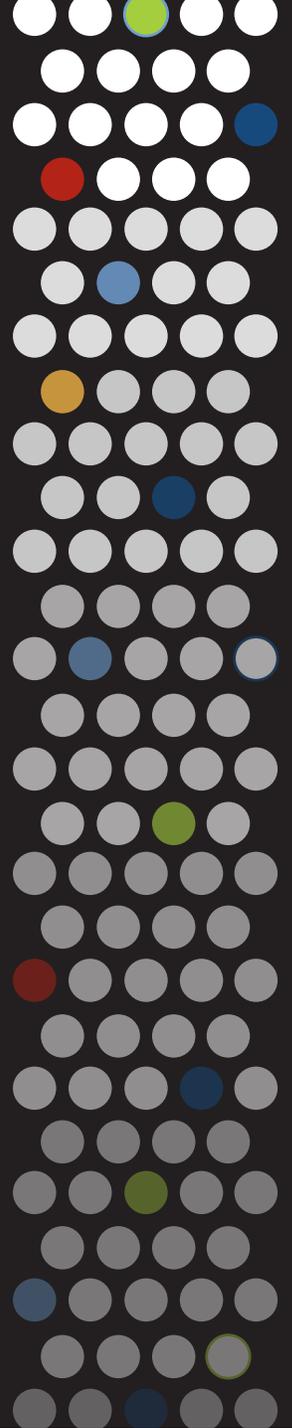
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