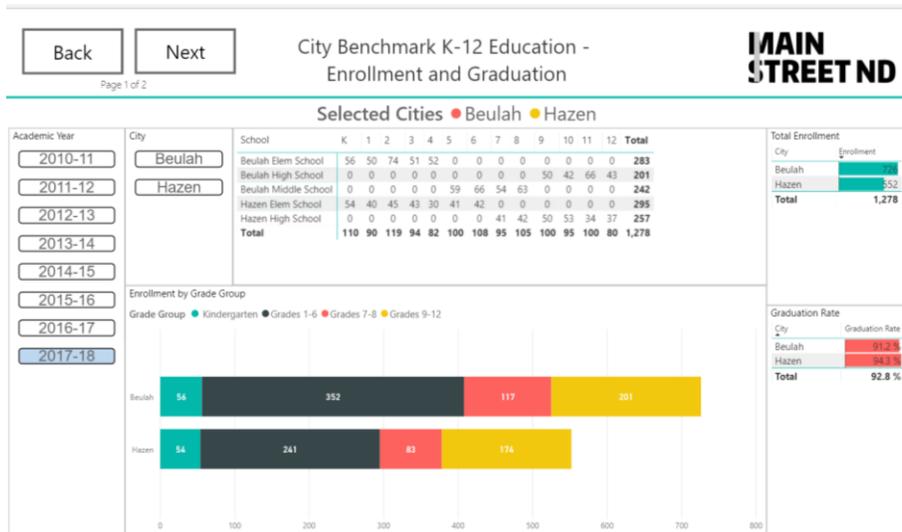


## Main Street Initiative Dashboard

<https://www.mainstreetnd.com/resources/community-dashboard>



Enrollment by Grade Group

Grade Group ● Kindergarten ● Grades 1-6 ● Grades 7-8 ● Grades 9-12

Graduation Rate

City	Graduation Rate
Beulah	91.2%
Hazen	94.3%
<b>Total</b>	<b>92.8%</b>

## Emerging and Innovative Technologies

North Dakota

Shawn Riley, CIO [sriley@nd.gov](mailto:sriley@nd.gov)

Holly Holt

Senior Manager of Strategic Initiatives [hholt@nd.gov](mailto:hholt@nd.gov)

Kelly Ivahnenko

Business Communication Specialist

Information Technology Department [krivahnenko@nd.gov](mailto:krivahnenko@nd.gov)

Project Initiation: Fall 2017

End Dates: June 2018

## Executive Summary

North Dakota is embracing innovation and reinvention across government in order to fulfill our potential as a state. Leveraging technology to support data-driven decision making at all levels of government is key to that. Led by former technology executive Gov. Doug Burgum, Team ND recognizes that harnessing technology is key to serving citizens more effectively, transforming how we deliver services and reinventing government to reflect constantly emerging and innovative solutions.

One example of how North Dakota is leveraging technology to empower decisionmakers and provide transparency for all citizens is the Main Street Initiative Dashboard. The cloud-based [dashboard](#) was released in beta at the Governor's Main Street Initiative Summit in February 2018, and consolidates information from 19 publicly available, but not always easy to find, cross-state data sources. The number of data sources will continue to evolve as citizen feedback is gathered, but is currently planned to include 25 data sources during 2018.

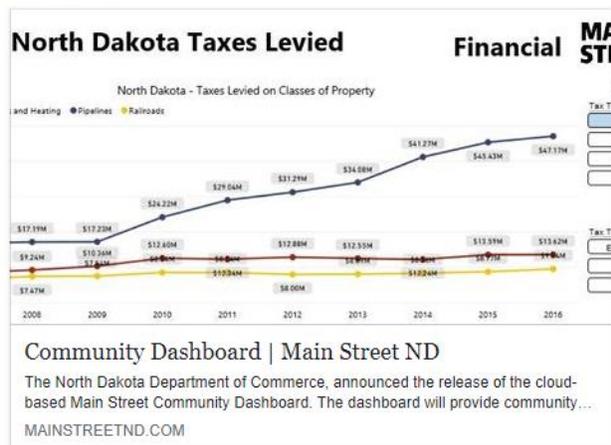
The dashboard provides unprecedented insight for community leaders by integrating disparate data into useable and comparable information. The tool helps paint a more visual picture of everything from education and childcare statistics, to employment and financial data that are the underpinnings of a community's economy.



Experience North Dakota

Published by Kim Schmidt [?] · April 7 at 3:02pm ·

Have you had a chance to check out the new community dashboards? It includes community profile information, state, county and city financial information as well as education highlights. Take a look at your Main Street! #MainStreetND



### Community Dashboard | Main Street ND

The North Dakota Department of Commerce, announced the release of the cloud-based Main Street Community Dashboard. The dashboard will provide community...  
MAINSTREETND.COM

1,763 people reached

Boost Post

... The Governor and Lt. Governor are promoting the MSI through more than 17 town halls held in communities throughout the state, during regular keynote addresses, and are leveraging multiple social media channels to support this ongoing outreach and highlight the features and capabilities.

Using data to make more informed decisions is part of smart governance and an important aspect to building healthy, vibrant and fiscally sound communities.

## Concept, Significance, Impact

The Main Street Initiative (MSI) is one of five key initiatives for North Dakota and is designed to help the state and its communities fulfill their potential and attract the capital and talent to compete in a 21<sup>st</sup> century economy. The MSI focuses on community driven (grassroots) growth, and is founded on three pillars: healthy, vibrant communities; 21<sup>st</sup> century workforce; smart, efficient infrastructure.

MSI guiding principles include:

- Ensuring communities have access to good data and diversity of community members engaged in planning and decision making
- Empowering local control; provide transparency of government
- Building sustainable programs and tools streamlined for citizen and community experience
- Continuing engagement with communities based on their unique requirements

To support busy community leaders - who often work on a voluntary basis – a cross-cutting team comprised of three agencies and a private sector partner has delivered a cloud-based community dashboard.

The [dashboard](#) was released in beta at the Governor’s Main Street Initiative Summit in February, and consolidates information from 19 publicly available, but not always easy to find, cross-state data sources. The number of data sources will continue to evolve as citizen feedback is gathered, but is currently planned to include 25 data sources during 2018. Most of the data sources are real-time APIs or URLs. We will work through ways to automate those that are static over time. Data sources include:

1. US Census
2. AE2S Nexus
3. Childcare Aware of North Dakota
4. Dun & Bradstreet
5. Job Service North Dakota
6. ND Department of Commerce
7. ND Department of Public Instruction
8. ND Department of Transportation
9. ND Office of Tax Commissioner
10. North Dakota Council on the Arts
11. North Dakota Department of Agriculture
12. North Dakota Department of Career and Technical Education
13. North Dakota Department of Health
14. North Dakota Tourism
15. Office of the Attorney General
16. Office of the State Treasurer
17. Utility Companies
18. Vital Records
19. Walk Score

In June the dashboard will also allow security updates and local data additions to the data by community leaders. Reports will be available for download to PDF, and data will also be downloadable to spreadsheet for further community leader planning. The data provides deeper evaluation and discussion that may also drive ways in which the state can prioritize projects to support community growth based on today's environment.

The state's Departments of Commerce and Information Technology are driving the effort collaboratively with a statewide, cross-agency team. The dashboard, which will continue to be enhanced based on user feedback, is available to anyone but targeted to elected, paid and volunteer community leaders including city administrators, auditors, chamber leaders, young professionals, economic developers, students and community members at large.

The Dashboard team is embracing every piece of new functionality being released by Microsoft Power BI to increase the impact and benefit of the data. The team is also leveraging Microsoft Azure Platform as a Service (PaaS) data, machine learning and artificial intelligence components. The team recently [won a hackfest sponsored by Microsoft](#) where seven state and local government teams from four states self-identified challenges and worked to develop technology solutions.

The North Dakota team focused on three key scenarios to further develop the dashboard. These scenarios included:

- Smart, secure updating and maintenance of city-driven data;
- Long-term-viable solution for acquisition, storage and modeling of data from federal, state, county, and city sources;
- Meaningful data delivery to primary users including on-screen visualization, print and download.

North Dakota CIO Shawn Riley said of the win: "Our team came prepared. We had the right people in the room and that elevated our ability to make meaningful progress on our initiative. This is a great example of working as one across Team ND and empowering leadership everywhere, as well as harnessing technology to reinvent government and better serve our citizens and communities."

In addition to enhancements already made as a result of user feedback received through a survey directly embedded in the Dashboard URL, Gov. Burgum, Lt. Gov. Sanford and numerous Cabinet officials have conducted 17 town hall meetings across North Dakota to promote MSI, the dashboard and gather feedback on challenges and opportunities unique to each community. They are also sharing best practices in urban planning and 'smart growth' strategies that focus on infill rather than edge development, helping communities understand the benefit of adding mixed use housing, retail and other amenities in areas with existing infrastructure.

The Dashboard creates an opportunity to focus conversations around specific data points, providing decision makers greater insight into metrics to help inform community planning efforts. By comparing towns of similar sizes and demographics, communities can also benchmark their efforts and have a more detailed picture of a range of factors. For instance, livability metrics include amenities like parks and recreation, farmers markets, historic sites,

walkability, retail, entertainment and health services; and key economic and financial data includes unemployment, job openings by sector, graduation rates and education trends, poverty, crime, tax and utilities information and Renaissance Zones (a program designed to revitalize communities through tax incentives).

The livability information is valuable because of the importance of these factors in creating healthy, vibrant communities. For instance, an insight gained from the Bakken Oil Boom, which began in 2006 and peaked in 2012 in the western part of the state, was the lack of childcare facilities, particularly in Watford City in the heart of the boom.

In order for oil field workers to want to move – and stay – in North Dakota, and bring their families, spouses also needed job opportunities and childcare facilities. The Dashboard includes the number of childcare providers, capacity and costs by age group. When combined with the variety of other data points, this helps provide a more comprehensive picture of amenities that add to communities' livability and attractiveness to prospective employers and employees.

With 70,000 square miles and 750,000 residents including 200,000 students, making informed decisions about growth, economic development and infrastructure investments can be the difference between a community thriving vs. dying. As a rural state where 85% of the communities have fewer than 1,000 residents, having access to useable data to make informed decisions may make the difference in ensuring financial solvency. Empowering residents, elected officials, community leaders and young people to engage on these important decisions will ultimately benefit the entire community.

While the dashboard is still in development and has primarily been marketed to community officials to solicit feedback on improvements, to date there have been more than 2,000 page views of the dashboard, with an average of 203 visits per month. Coordination and collaboration with the ND Association of Counties and city officials is yielding positive and actionable feedback. As the breadth of data available increases we anticipate the comments will increase, which will drive our roadmap and updates ensuring the dashboard dynamically evolves to serve the needs of our community leaders.

**The Dashboard is aligned to the following NASCIO State CIO Top Ten Priorities:**

#2 Cloud services – the Dashboard is part of the state's cloud-first strategy that provides a scalable, responsive capability.

#3 Consolidation/Optimization – the state's IT workforce is currently undergoing unification to enable efficiencies and align toward common enterprise goals and priorities. The Dashboard is an example of making an impact through cross-agency collaboration and optimizing existing resources toward a common goal that benefits numerous stakeholders (also relates to #4).

#4 Digital Government – the Dashboard improves the citizen experience by providing transparent data in a user-friendly format, enhancing accessibility and engaging citizens in policy and community planning decisions.

#5 Budget, Cost Control, Fiscal Management – during the Bakken Oil Boom in Western North Dakota, the state saw a \$1 billion revenue surplus. As a result of sharply declining oil prices and reliance on other energy and agricultural commodity price fluctuations, North Dakota’s \$6 billion general fund was cut by a record \$1.7 billion in the last biennium (2017-2019). Tools like the Dashboard are imperative for residents, elected officials and community planners to understand challenges and opportunities unique to their cities, while prioritizing limited dollars. As CIO Shawn Riley recently told his team: “Thinking differently can be hard. As we consider how we will be reinventing ourselves in the future we need to stop thinking about ‘decreasing FTEs’ and start thinking about ‘reinventing workflow.’ We cannot simply decrease FTE resource and expect to be fine. We must redesign process and the way in which we deliver services to decrease and offset the overall workload to make ourselves more effective with our new resource pool... We will not be dragging our heads ‘due to budget cuts.’ Instead, we will be looking for opportunities to manage process and ask ourselves – constantly and repetitively – how can we be more effective?”

#6 Shared Services – the Dashboard reflects a shared service business model that is the future of state government. Overcoming siloed thinking and longstanding processes ‘just because we’ve always done it that way’ is key to Team ND’s shared vision of “Working as One” and “Leadership Everywhere.” The corporate communications and marketing strategy embraces a proactive approach emphasizing a growth mindset to elevate our collective ability to serve our citizens more effectively and efficiently.

#8 Data Management and Analytics – the ability to access, analyze and use data to make better decisions is a clear policy goal of Gov. Burgum. As a former tech executive, Gov. Burgum is leading Team ND during a time of rapid technological change that is disrupting virtually every industry. Our focus is on harnessing technology – from data visualization, to AI, ML and predictive analytics – to transform government service delivery.

The Dashboard offers fresh and dynamic insights into community planning principles that are the cornerstone of the Main Street Initiative. For example, the strategy of infilling existing spaces with diverse and appealing retail, commercial, hospitality and housing opportunities reduces infrastructure costs for taxpayers. It also benefits tourism and business and fosters the kinds of creative spaces, arts and culture that attract people to a community.

Development strategies that promote walkable, healthier communities lessen the burden of health care costs on society and taxpayers. It is a sound and necessary strategy for communities of all sizes as North Dakota competes directly for the talent that will drive the economy.

By providing easily accessible online dashboards encompassing a range of data, with the analytical capabilities available in Power BI, North Dakota can better position itself for the future and help communities pursue healthy, vibrant and fiscally sound growth strategies.

#9 Enterprise IT Governance – CIO Riley is helping lead a mindset shift from individual mission and agency goals, to an enterprise approach. Only by partnering with public and private sector organizations, engaging collaboratively with the Legislature and embracing a growth mindset will we fulfill our potential as a state.

#10 Agile and Incremental Software Delivery – The Dashboard was created in the spirit of “Think big, start small and move fast.” Using Agile development helped launch the beta version in about one month with commitment to enhancements based on user feedback as well as meeting the State’s roadmap. The iterative approach allows rapid expansion of dynamic data from a growing number of state agencies and community focused partners.

## Closing

The Main Street Initiative is designed to help communities of all sizes make informed decisions about where and how they make investments. The breadth and depth of livability data helps differentiate communities to attract a 21<sup>st</sup> century workforce; and the comparative data to benchmark financial, educational and other economic data based on similar demographic characteristics is critical to planning now and for generations to come.

Transforming government starts with transparency and access to timely, relevant data. Citizens benefit from the dashboard because they have access to the same information as community leaders and can take a more active role in decision making. They have a better understanding of where tax dollars go, as well as a better understanding of actual costs for infrastructure maintenance and improvements. (i.e. one mile of road costs \$1 million to pave).

Regardless of the fiscal climate in North Dakota, citizens and community officials can better prioritize dollars based on a more holistic picture of their town’s infrastructure, while planning strategically for the future to help continue to grow local economies.

