Transportation Connection 2050: North Dakota's Long Range Transportation Plan

Scenario Development

Revised March 27, 2026

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PLANNING FOR UNCERTAINTY

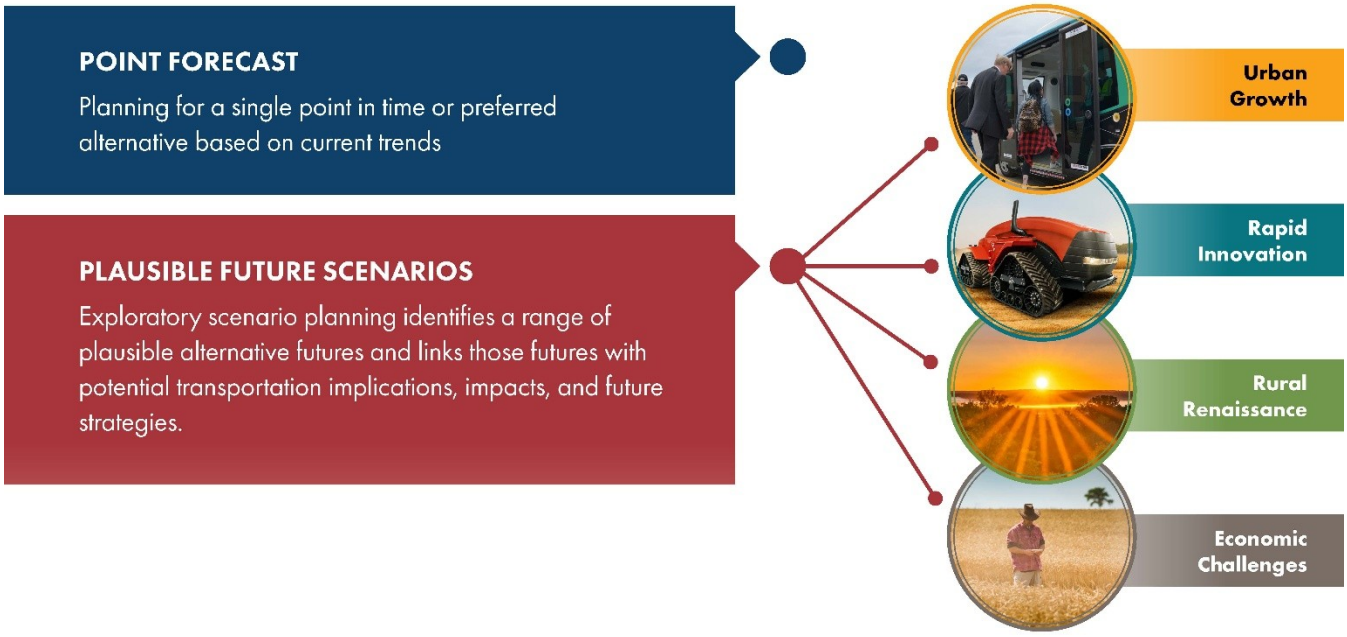
Transportation Connection 2025-2050 is the North Dakota Department of Transportation's (NDDOT's) vision for North Dakota's transportation system in 2050, and the broad goals, policies, and strategies needed over the next 24 years to achieve that vision. Much can change in the next two and a half decades, and these changes generally cannot be known with precision today. To account for these possible changes and make NDDOT's goals, policies, and strategies more robust and responsive to those changes, NDDOT has used a scenario-based planning framework to develop Transportation Connection 2050.

WHAT IS SCENARIO PLANNING, AND WHY IS IT USEFUL?

Any forecast of future conditions for transportation in North Dakota must include:

- Major trends and disruptors already occurring in North Dakota or happening elsewhere and likely to impact North Dakota,
- Major uncertainties or risks in North Dakota and elsewhere, and
- Significant drivers of change that are likely to emerge over different time scales, particularly:
  - Short-term over the next 5 years,
  - Medium-term 6 to15 years, and
  - Long-term over 25 years.

A typical approach to forecasting is the point forecast. Point forecasts are developed based on past demographic, economic, and transportation trends as well as a specific set of future trends, disruptors, uncertainties, and risks that are visible now. By comparison, scenario planning uses past demographic, economic, and transportation trends, yet expands the approach by also considering different plausible combinations of future trends, disruptors, uncertainties, and risks. The diagram on the next page illustrates the difference between a point forecast framework and a scenario planning framework.
The plausible future scenario framework allows for the possibility that trends, disruptors, uncertainties, and risks that are visible now or in the near future may intensify, lessen, or even disappear in the future. Taking this wider perspective of changes helps to ensure NDDOT's transportation planning efforts are responsive and robust to a broader range of future outcomes. As different trends emerge in different parts of the state, NDDOT can adjust its policies and programming to deliver the transportation solutions that most effectively address the needs and priorities associated with the trends.



CONTINUOUS ITERATIVE DEVELOPMENT OF SCENARIOS OVER NDDOT'S FAMILY OF PLANS

The earliest iteration of the scenarios developed for Transportation Connection 2050 was developed for Transportation Connection 2045, which has served as this Plan's predecessor. Since then, these scenarios have undergone further iterative changes to inform NDDOT's Family of Plans, including the State Freight & Rail Plan as well as the Statewide Active and Public Transportation Plan. These updates ensure that the scenarios capture short- and medium-term changes in North Dakota and that they remain responsive to the needs of North Dakotans.

In every iteration, including in Transportation Connection 2050, the broad concepts of the scenarios have been well-received by the general public, regional agency leaders, and government and industry stakeholders alike. Their feedback for scenarios in the context of NDDOT's long-range vision for transportation, expressed in Transportation Connection 2050, has shaped the presentation of scenarios in this appendix.

FUTURE TRENDS AND DISRUPTORS

Key drivers of change include population, the economy, technology, the environment, policy, real estate development, and risk. This section explores various plausible futures in North Dakota in each of those categories, describing outcomes at each pole of a spectrum of innovation and change. One end of this spectrum is characterized by slow growth and moderate to no deviation from the current trends in North Dakota. The other end of this spectrum describes a situation of strong growth and significant change from the conditions we see today.

The fundamental conditions, including a rural population distribution and strong economic dependence on agriculture, energy extraction, and extraction of other natural resources, underlie broader demographic and economic trends in North Dakota which have continued through today. Thus, the broad trends and disruptors described in Transportation Connection 2045 are assumed to hold for Transportation Connection 2050 too. Additionally, recognizing the continuity of these underlying conditions strengthens the justification for continuous iterative improvement of the scenarios presented in recent NDDOT plans, this appendix, and future NDDOT planning efforts.

This section notes changes between 2021 and 2026 for each trend and disruptor as appropriate. However, a lack of change over the most recent five years for a given trend or disruptor **does not necessarily imply a lack of change by 2050**. The following subsections highlight changes in trends or disruptors for people and places; the economy and business; technology; the environment; policy and funding; and transportation.

PEOPLE AND PLACES

People and Places Trend or Disruptor	Changes Between 2021-2026
Urban Development: At one end of the spectrum, North Dakota could see continued population decline in rural communities and the growth of larger farms that employ relatively fewer workers. The other end of the spectrum is characterized by growth concentrated in cities and centers.	Following national trends, farm ownership has become more concentrated, reducing agricultural employment opportunities. The majority of North Dakota's population growth has occurred in its larger cities, including urbanization of smaller rural communities on the outskirts of these areas.

People and Places Trend or Disruptor	Changes Between 2021-2026
Older and Younger Residents: North Dakota's population could continue to grow older and see a Gen Z/Generation Alpha/Generation Beta brain drain in much of the state as young people leave rural areas for urban ones. In a high-change future, communities may become increasingly age-diverse as more flexible telecommuting options, expanded virtual services, and ecommerce enable people of all ages to choose their locations with less concern for proximity to employment, healthcare, or other services.	Older residents have moved out, while younger people have moved in, leading to the state population becoming younger on average.
Western North Dakota Growth: North Dakota could fall into a cycle of boom-and-bust communities or see sustained and consistent community and economic growth.	While Bakken oil and gas production has recovered from the pandemic and remains steady, it is below the peak production levels of the late 2010s. In 2025 and 2026, some oil producers have stopped drilling due to falling prices.
Migration and Immigration: A low-change future is characterized by slowed migration and population outflows, while a strong growth, high-change future is characterized by increased migration and diverse residents.	In recent years, immigration has significantly bolstered North Dakota's population. Changing federal policy towards immigration may reduce in-migration to the state.

People and Places Trend or Disruptor	Changes Between 2021-2026
Rural Revitalization: At one extreme, growth is concentrated in urban areas, and there is little net new population growth statewide. At the other extreme , there is growth in rural communities as new residents move to smaller town centers.	Growth has occurred across North Dakota but even more in urbanized areas. Between 2019 and 2024, total population in North Dakota's ten largest cities increased by 5.9% compared to 3.7% for the This growth has resulted in the creation of a fourth Metropolitan Planning Organization to conduct regional transportation and land use planning: Central Dakota MPO, including Minot, Burlington, and Surrey.

ECONOMY AND BUSINESS

Economy and Business Trend or Disruptor	Changes Between 2021-2026
Industry Diversification: North Dakota could continue its transition into commodity-based regional economies or see diversified regional industries.	The sector-based and regional diversity of industries in North Dakota has remained largely unchanged.
Automation of Production: While the automation of technological industries could proceed at its current rate, the country could also see rapid automation in production industries.	Heavy industries, such as food processing, automotive manufacturing, and aerospace manufacturing, have continued automating at similar rates as previously observed. Advancements in artificial intelligence and robotics signal more rapid automation in both knowledge and manual labor positions.

Economy and Business Trend or Disruptor	Changes Between 2021-2026
Employment Patterns: Local production and gig/remote work rural opportunities could prove to be the main source of employment in North Dakota. In contrast, a high growth future is characterized by more employment opportunities created in urban centers.	Following national trends, employers that previously allowed fully remote work have shifted to hybrid or fully in-person work, although work-from-home shares in North Dakota are still nearly double what they were before the pandemic. North Dakota's urbanized areas have grown in population.
Energy Production: A fracking ban would likely lead to a significant drop in exploration and an uptick in the non-carbon-based fuels of the future. Personal energy production could become the dominant model, along with distributive generation. On the other end of the spectrum, an expansion in production and international markets might be accompanied by new extraction technologies and advances.	Decreasing oil prices have put pressure on oil producers in North Dakota, making more costly methods of extraction less economically viable. However, more recent changes in federal policy promoting domestic energy production, reducing support for alternative energy sources, and imposing tariffs on foreign goods could change the production cost environment for oil producers.
Agricultural Production: With a shift to high-production, large-scale global markets, North Dakota could see a singular, commodity-based agricultural production model. In a high-change future, agriculture could shift to low-volume, specialty, and small producers, leading to local, organic, and diversified markets.	Following national trends, farm ownership has become more concentrated, and pre-existing trends in the mix of agricultural products have continued.

Economy and Business Trend or Disruptor	Changes Between 2021-2026
Retail and Consumer Behavior: At one end of the spectrum, retail and consumer behavior might be characterized by local business, entrepreneurship, and a mix of retail and consumer services, leading to sustainable and diverse local economies. In a high-change future, North Dakota could see accelerating e-commerce, fewer independent stores, and more distribution needs. This would likely result in less local community-based retail activity.	Following national trends, demand for e-commerce has grown in North Dakota, leading to demand for new land uses such as warehouses and other commercial logistics facilities and increasing truck traffic in local communities throughout the day.

TECHNOLOGY

Technology Trend or Disruptor	Changes Between 2021-2026
Connected and Autonomous Vehicles (CAVs): In a low-change future, there continues to be slow market adoption of CAVs and limited deployment. A high-change future is characterized by rapid adoption of these vehicle technologies.	Fleet-based CAVs have been deployed at small scales in large metropolitan areas across the country. However, they have not yet been deployed in North Dakota. Meanwhile, individually owned vehicles from some manufacturers, including vehicles owned and used in North Dakota, have received software updates allowing more automated driving under limited conditions.
Smart Cities and Infrastructure: On one end of the spectrum, North Dakota could see limited development of connected systems. An alternate future is characterized by the development of comprehensive smart networks.	Development of connected urban digital infrastructure tied to physical infrastructure has remained limited in North Dakota.

Technology Trend or Disruptor	Changes Between 2021-2026
UAS Applications and Markets: There could continue to be limited application and slow deployment of Uncrewed Aircraft System (UAS) applications. Alternatively, a high-change future could see rapid deployment of UAS across markets.	UAS has continued to see limited deployment and application, including in North Dakota. However, NDDOT has been a national leader for integrating UAS into DOT operations for surveying, bridge inspections, and emergency management. Universities, MHA Nation and military installations in North Dakota are studying and promoting further development.
Data and Information Sharing: Futures in this area envision either low adoption of personal connectivity or increased applications for connected devices.	Apps, streaming services, and commercial websites are collecting more data about their users, but there is limited advancement in transportation applications. Further ramifications for transportation in North Dakota remain limited.

ENVIRONMENT

Environment Trend or Disruptor	Changes Between 2021-2026
Recreation and Tourism: In a low-change future, steady visitor growth yields limited recreational demand. In a future with a significant increase in visitor volume, there is also a significant increase in public access demand.	Demand for outdoor recreation opportunities temporarily increased significantly during the COVID pandemic. Since then, demand has continued to increase but at a slower rate than before. Tourism remains North Dakota's third-largest economic sector.

Environment Trend or Disruptor	Changes Between 2021-2026
Shared Land Use: North Dakota could see continued development under existing land use patterns or a shift to increased shared production and land uses.	The increase in construction of warehouses and other commercial logistics facilities accommodating the growth of e-commerce represents a significant shift in statewide land use patterns as agricultural or undeveloped land becomes converted to industrial space. Additionally, population growth has led to expanded residential and commercial developments in previously rural areas on the edge of urban areas.
Natural Resource Markets: On one end of the spectrum, there may be a decline in historical exploration and production. Alternatively, North Dakota could see a significant increase in new markets for wind, solar, water, and rare earth minerals.	While decreasing oil prices have led to reductions in oil production in North Dakota and near-term predictions for flat or slightly declining output, recent changes in federal policy have encouraged more domestic oil production. Additionally, federal policy changes have reduced incentives for alternative energy sources. Despite these federal policy changes, production costs for solar and wind energy have fallen dramatically in recent years, suggesting that baseline economics may be favorable to continue their development. Rare earth materials have become a significant pressure point in international trade policy, as securing supply chains for rare earth materials have become critical to fast-growing and strategically-significant industries such as Artificial Intelligence, advanced manufacturing, and energy.

Environment Trend or Disruptor	Changes Between 2021-2026
Natural Hazard Risks: Natural hazards could continue to pose only periodic threats, while a high-change future could see more frequent and severe storm events.	North Dakota experienced an increase in the severity of droughts and wildfires between 2021-2026 compared to historical levels. In 2025, North Dakota experienced a record-setting number of tornadoes.

POLICY AND FUNDING

Policy and Funding Trend or Disruptor	Changes Between 2021-2026
Funding Sources: Revenues and purchasing power could continue to decline. On the other hand, alternative tax mechanisms (e.g., a VMT fee, Commercial Vehicle Fees, Ride Share Sales Tax) could help hold revenues steady.	Fuel tax revenues have failed to keep up with inflation, especially with falling fuel prices and static tax rates. No new tax mechanisms have been pursued at the state level in North Dakota.
State and Local Funding: With no new transportation funding options, a low-change future could see a decline in sales/severance tax bases. If additional revenue options were to become available, municipalities in North Dakota could introduce new programs and experience local revenue growth.	State and federal fuel taxes have not changed, and total revenues have not kept pace with increases in population and travel demand. NDDOT and local agencies have had to look to other sources of funding to support new or existing programs as construction costs increase, following a national trend.
Federal Involvement: At one end of the spectrum, North Dakota could see continued devolution of responsibilities, the presence of block grant programs more general in nature, and reduced Federal oversight. At the other end, the state could see expansion of Federal oversight, specific grant programs, and increased accountability.	Changes in the federal administration between 2021-2026 have yielded changes in many competitive discretionary grant programs as well as new general funding programs.

Policy and Funding Trend or Disruptor	Changes Between 2021-2026
NDDOT Roles: NDDOT could continue to take increased ownership of roads and the expansion of maintenance responsibilities. In a high-change future, the agency could see the devolution of ownership, take on new roles, and shift its focus to facilitating mobility.	NDDOT's role has largely remained unchanged.

TRANSPORTATION

Transportation Trend or Disruptor	Changes Between 2021-2026
Freight and Goods Movement: Freight and goods could continue their trend towards smaller, faster, more frequent movements. Conversely, this sector could see a shift towards longer, larger, and heavier trucks and trains.	Following national trends, freight trains have become longer and fewer in number, and freight trains as well as trucks have become heavier.
Commute Patterns: A low-change future is characterized by commuters experiencing slower and longer travel patterns and durations, while the opposite scenario would see shorter, faster and different commuter choices.	Commute patterns have not significantly changed for North Dakotans. Average commute times have declined slightly since the pandemic despite continued population and economic growth.
Public and Private Transport Roles: While public and private transportation could continue to be seen as public goods, a high-change future is characterized by the proliferation of Public-Private Partnerships (PPPs), privatization of transportation services, and the leasing of public assets and infrastructure.	The provision of public and private transportation has not significantly changed for North Dakotans.

Transportation Trend or Disruptor	Changes Between 2021-2026
Micromobility and Active Transport: In a low-change future, North Dakotans might continue to rely on personal vehicles, single-occupancy vehicles, and surface transportation for their mobility needs. In a different future, they could encounter significantly increased demand for micromobility and more localized travel choices.	Usage rates of micromobility and active transportation have not significantly changed for North Dakotan. North Dakotans still largely commute using personal vehicles. However, North Dakotans have expressed more interest in using alternative transportation and having access to more facilities that support walking, biking, and public transit.
Shared Mobility and Economy: New vehicles and equipment could continue to be used for personal use. An alternative future could encompass shared markets and equipment, drones/CAVs, and greater growth in Transportation Network Company (TNC) and other forms of shared mobility.	Usage rates of shared mobility have not significantly changed for North Dakotan.
Air Travel and Freight: At one end of the spectrum, air travel might continue to trend towards closure of regional airports, no public use of UAS spaces, and limited air freight. A high-change future might be characterized by changes such as UAS, personalized air transport, shared or auto drones, in-state hop options, and new international markets for air freight.	While air travel patterns remain relatively consistent, air travel demand in North Dakota has increased. North Dakota exceeded 1.3 million departing passengers in 2025 for the first time in its history, representing year-over-year growth greater than the growth rates for both population and economic activity.
Infrastructure and Right of Way (ROW): While traditional trends in this area could continue, an alternate future might envision air and space, elevated, maximized and shared use infrastructure, elevated modes, denser travel, and new right-of-way management and maintenance.	NDDOT has invested in more active transportation infrastructure around the state, but ROW development and usage patterns have remained largely unchanged since 2021.

TRANSPORTATION CONNECTION 2050: ALTERNATIVE FUTURES

Transportation Connection 2050 explores four possible futures and the significant changes they could bring to North Dakota – where people live, what they do, how they get around, and what people can expect from their transportation system. The following scenarios explore how people might travel, work, shop, and communicate in the future, highlighting what has changed and what has remained the same.

These scenarios were further shaped by in-person formal public meetings and informal "pop-up" events across North Dakota, hybrid meetings of the NDDOT Director's Advisory Council (made of elected officials, industry leaders, labor leaders, state and regional public agency representatives, and other community leaders) to shape the direction of Transportation Connection 2050, and virtual meetings with MPO representatives. All participants provided substantial feedback on the scenarios and their impacts and implications for their areas or for North Dakota as a whole. This section describes each scenario and presents common themes from feedback by the general public and stakeholders.

These scenarios do not suggest any of these futures will occur or that one is preferred over another. Rather, they describe big-picture possibilities and ask, "what if?" in order to generate flexible thinking. Some elements are present in multiple scenarios; for example, remote work can be seen in both Rural Renaissance as well as Smart and Connected scenarios. Moreover, the general public and stakeholders in North Dakota repeatedly emphasized how overlapping as well as non-overlapping elements of multiple scenarios can come to pass at the same time, so these scenarios are not mutually exclusive. These nuances will inform NDDOT's approach to planning in a way that is robust to different possible futures.

What if our rural areas become communities of choice in the future?

In this future, sustained economic growth and technological advances across the state provide opportunities for remote work and local and specialty agricultural production. North Dakota's small towns and rural areas become communities of choice, attracting new residents and building sustainable, vibrant local centers. Investments in broadband yield returns with all communities, industries, and infrastructure increasingly connected. Recreation and tourism transform into drivers of local economies. Resiliency planning largely mitigates natural hazard risk, encouraging new development.

This future is built around several key features:

- Rural communities become drivers of new population growth
- Gig work and home-based advanced manufacturing take off
- Local energy and agricultural production
- Technology that is within reach today becomes widespread
- Local economies diversify and small town centers expand
- Recreation and tourism increase
- Mitigation reduces natural hazard risks

What did the general public and stakeholders think of this?

The general public and stakeholders identified the following opportunities and challenges with the Rural Renaissance scenario.

Opportunities	Challenges
• Outdoor recreation possibilities • New infrastructure to connect communities with each other and with recreation • New microtransit or taxi services connecting to urban centers • Support of technology jobs in rural areas so that residents who like where they grew up do not need to move • Promotion of peaceful, idyllic lifestyle • Lower cost of living in rural areas • Abundant rural land for residential development	• Inadequate municipal resources, including land securement, to support new and existing infrastructure needs, especially with large ratio of roadway miles to tax base • Seasonal dependence of outdoor recreation to sustain a significant economic base • Transportation needed to healthcare in urban centers • Maintaining reliable first-mile access to critical freight corridors for goods movement • Risk of residential overdevelopment of rural land negating low cost of living in rural areas and idyllic lifestyle of rural living

What does this mean for NDDOT?

If the Rural Renaissance scenario comes to pass, then NDDOT would consider the following actions:

- Invest in freight infrastructure to connect rural energy and agriculture producers to larger markets
- Invest in multimodal infrastructure to connect rural communities with each other
- Invest in multimodal infrastructure to connect communities with outdoor recreation sites
- Invest in traffic management and bicycle/pedestrian safety infrastructure in rural areas to maintain safety of rural areas while accommodating additional traffic

- Coordinate with public transit agencies to support microtransit in areas of sufficient demand
- Coordinate with local agencies and taxi companies to connect rural areas to urban areas, especially for healthcare and other essential services
- Promote the Flexible Transportation Fund program to local communities and provide additional technical support to maintain existing infrastructure, especially in rural areas

What if our cities grow quickly and become the centers of the state?

In this alternative, new job growth is concentrated in existing urban cities and centers as North Dakota's economy becomes more services oriented. Migration into urban places and community centers drives growth into urban hubs around the state and rural communities experience accelerated declines. Connected devices, micromobility, and smart infrastructure make it easier, safer, and more convenient to move around urban areas with a less personal vehicle reliance. Urban growth spurs need for resiliency and mitigation planning. Increased traffic and emissions in urban areas may facilitate EV adoption and expansion of alternative energy markets.

This future is built around several key features:

- Mass migration to cities occurs
- New growth is concentrated in urban areas
- Economy diversifies into professional and technical services
- Energy and agriculture remain important, but their share of economic growth slows
- Energy production becomes more distributed and diversified
- Connected devices and smart infrastructure make it easier, safer, and more convenient to travel
- Urban growth spurs need for natural hazard mitigation around centers

What did the general public and stakeholders think of this?

The general public and stakeholders identified the following opportunities and challenges with the Cities and Centers scenario.

Opportunities	Challenges
• New interstate interchanges and flood risk mitigation infrastructure encourage new development in urban areas • Promotion of more public transit, ride hailing, and other shared mobility • Promotion of denser mixed-use development and active transportation • Connectivity to trails and other outdoor recreation sites • Diversified economies attracting many new residents and businesses	• NDDOT being responsive enough to new infrastructure needs from fast urban growth • Balance urban versus long-distance needs for highway interchanges • Financial sustainability of public transit • Local Zoning restrictions hampering further development

What does this mean for NDDOT?

If the Cities and Centers scenario comes to pass, then NDDOT would consider the following actions:

- Promote public transit, ride hailing, and other forms of shared mobility in urban areas and expand technical assistance to urban areas for transit planning, grant management, etc.
- Invest in active transportation infrastructure, including safety infrastructure, in urban areas
- Invest in trails and other infrastructure to connect to outdoor recreation sites
- Assess and update design guidelines for interstate highway access and traffic management systems to balance the travel patterns of local residents and long-distance travelers, including commuters, visitors, and freight operators
- Coordinate with economic development organizations and local government agencies on proposed and progressing developments and land use changes to ensure that existing transportation infrastructure can accommodate additional traffic volumes and wear-and-tear
- Work with public transit agencies to support their financial sustainability

What if innovations accelerate and we live in a technology-driven future?

In this alternative, accelerated innovation in all sectors leads to growth in tech centers around the state. Cross-sector technological advancements are deployed in the North Dakota agriculture and energy sectors due to the identified opportunities among technology providers for market access in the state. Growth brings new opportunities and new industries to North Dakota. New residents and new job opportunities drive rapid population increases and creates diverse communities with new mobility needs. Rapid advances lead to entirely new uses of airspace and ground transport as drones and shuttles become commonplace. Data and connectivity expand dramatically to connect North Dakota to the world. Shared land use, new natural resource markets, distributed energy grids, and new infrastructure demand expands development pressure and heightens natural hazard mitigation needs.

This future is built around several key features:

- New residents move in and spur growth in diverse communities around the state
- Technology and innovation spur job opportunities in new industries
- Online work and remote jobs grow significantly
- Energy and agricultural industries rapidly automate and become tech-driven
- Big data and smart infrastructure connect North Dakota to the world
- New technologies are rapidly adopted
- Natural hazard risks and shared land uses increase as the state is rapidly developed

What did the general public and stakeholders think of this?

The general public and stakeholders identified the following opportunities and challenges with the Smart and Connected scenario.

Opportunities	Challenges
• Airport expansions can improve connectivity between larger hubs and rural residential or recreational areas • UAS can reduce costs and improve efficiencies of land surveying, construction, and asset management • Cost-effective & timely UAS delivery of small items (e.g., medicines) in rural areas to mitigate first-/last-mile freight challenges • Further developments in UAS spurred by local university and military partnerships in North Dakota • Automated trucking to mitigate first-/last-mile freight challenges • Potential for more efficient vehicle movements and routing/scheduling	• Cities may lag in adopting new technologies that can promote efficient movement of people and goods • Some ambivalence about autonomous vehicles • Some ambivalence in pursuit of electric vehicle (EV) charging infrastructure • Funding and infrastructure challenges in expanding passenger rail in North Dakota

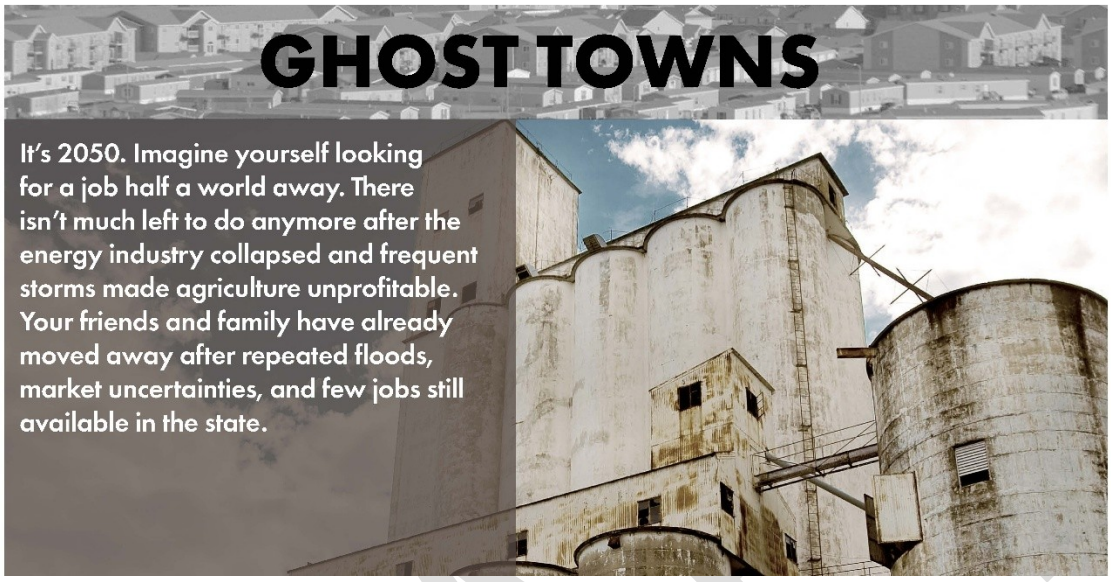
What does this mean for NDDOT?

If the Smart and Connected scenario comes to pass, then NDDOT would consider the following actions.

- Establish internal working groups for evaluating, testing, and deploying customer-facing transportation technologies
- Coordinate with airport authorities, local governments, and rural agencies to improve connectivity of rural areas to airports
- Expand UAS deployments for land surveying, traffic management, other phases of design and construction, and asset management

- Develop policies, plans, and investment programs to support safe automated trucking
- Work with local and national agencies to sustain and potentially expand funding for passenger rail services in North Dakota
- Work with local agencies, national regulators, and companies to ensure that automated vehicles serve the needs of North Dakotans safely and reliably

What if North Dakota's economy collapses and quality of life changes dramatically?



In this alternative, prolonged depression in energy and agricultural commodity markets leads to job losses and the collapse of local industries across the state. North Dakota ages more quickly as younger generations move away to look for work, and communities are unable to make quality of life investments. With limited business investment, North Dakota falls behind in adopting new industry, transportation, and communications technologies. Increasingly severe and frequent storm events decimate vulnerable communities and infrastructure.

This future is built around several key features:

- Population declines across the state as residents move away
- Communities age more quickly as younger residents seek job opportunities elsewhere
- Energy and agricultural industries decline due to policy changes and international trade disruption
- Limited business investment slows the adoption of new technology and innovations
- Increasingly severe and frequent storm events decimate infrastructure

What did the general public and stakeholders think of this?

The general public and stakeholders identified the following opportunities and challenges with the Ghost Towns scenario.

Opportunities	Challenges
• Urban and rural areas in North Dakota have recovered from previous catastrophes, providing communities with necessary experience to rebuild more efficiently • Insurance rates could become more competitive in North Dakota to respond to coastal pressures in other states • North Dakota's abundant water sources could help alleviate drought conditions more effectively with appropriate water management policies • Possibilities for new investments in state parks and other outdoor recreation sites	• Urban and rural areas in North Dakota have a history of catastrophes that have led to community depopulation • Low tax bases in smaller communities to support municipal infrastructure, even for maintaining a state of good repair • Lack of economic base to support schools or hospitals • Greater need for federal support • Difficult to attract young workers to find new opportunities, diversify economy • Insufficiently diversified urban economies remain vulnerable to future disruptions • MPOs have a limited role in disaster management despite being positioned to support broader coordination among local and state agencies

What does this mean for NDDOT?

If the Ghost Towns scenario comes to pass, then NDDOT would consider the following actions.

- Establish project prioritization frameworks to identify critical infrastructure to maintain or modernize in order to maintain market access for remaining industries

- Establish policies and procedures for coordinating more closely with state, regional, and local economic development agencies to make targeted investments for economic recovery
- Invest infrastructure to connect rural and urban communities with outdoor recreation sites, which can be readily rebuilt following natural disasters.
- Invest in infrastructure where more immigrants may settle, in coordination with national and state-level agencies that manage aspects of immigrant or refugee settlement
- Work more closely with MPOs and disaster management agencies to coordinate with local agencies when responding to natural disasters
- Seek more funding at the national level to support a state of good repair for infrastructure across North Dakota

SCENARIO PLANNING BEYOND TRANSPORTATION CONNECTION 2050

In the context of Transportation Connection 2050, NDDOT used the findings of the scenario planning exercise to develop strategies that respond to the needs and priorities that stakeholders identified. These strategies are written to guide statewide planning efforts, while structured to allow for more regional application in response to regional and local travel behavior or asset needs reflecting conditions or emerging patterns associated with the different scenarios.

NDDOT will continuously monitor new trends, new disruptors, and the impacts of those trends and disruptors on transportation patterns. As data that captures these trends and demonstrates their impact becomes available, NDDOT will incorporate that data into analysis tools, policies, plans, and programs. This will help NDDOT design and deliver transportation solutions consistent with the needs and priorities of NDDOT's stakeholders, while remaining robust to possible changes as identified in these scenarios.