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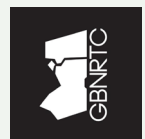


## MOVING FORWARD 2050



A Regional Transportation Plan  
for Buffalo Niagara

Draft for Public Review  
March 2018



Greater Buffalo-Niagara Regional  
Transportation Council



# MOVING FORWARD 2050

PREPARED FOR



Greater Buffalo-Niagara Regional  
Transportation Council

PREPARED BY



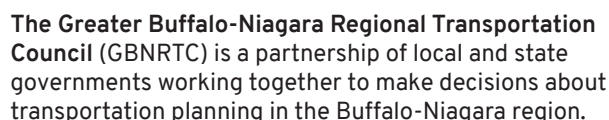
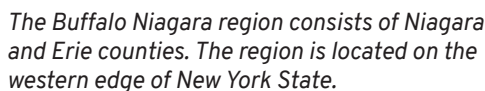
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WITH



**TYLIN** INTERNATIONAL

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- City of Buffalo
- City of Niagara Falls
- Erie County
- Niagara County
- Niagara Frontier Transportation Authority (NFTA)
- New York State Department of Transportation (NYSDOT)
- New York State Thruway Authority (NYSTA)

Working together, GBNRTC members carry out a continuing, cooperative, and comprehensive planning process to develop transportation plans and programs for the Buffalo Niagara region.

From an early age, Seneca and the other Haudenosaunee people recognize the importance of our surrounding environments, noting the delicate balance of every aspect. The Ganō:nýók or Thanksgiving address is recited regularly at any gathering of people as a reminder of all there is to be thankful for and to bring about a Good Mind encouraging responsible actions.

THOSE WHO HAVE PASSED  
GRANDPARENTS  
PARENTS  
YOU  
CHILDREN  
GRANDCHILDREN  
THOSE YET TO BE BORN

## GLOSSARY OF TERMS

### Active transportation

Any form of human-powered, non-motorized transportation.

### Automated vehicles

Human-driven vehicles with automated safety features like parking and braking assist and lane departure correction.

### Autonomous vehicles (AVs)

Completely “driverless” vehicles capable of driving themselves without human intervention.

### AV truck platoons

Lines of autonomous trucks separated by as little as 30 feet, likely with a human driver in the first truck. These can improve fuel efficiency, and may initially run during off-peak hours, possibly in a separate dedicated lane.

### Bi-national Autonomous Green Freight Corridor

Supports autonomous freight vehicles, alternative fuels, green infrastructure, and faster border crossings between the US and Canada.

### Communities of Concern

Areas with significant concentrations of residents with low incomes, people of color, foreign born residents, individuals with disabilities, senior citizens and children, and limited English proficiency (LEP) speakers.

### Connected vehicles

Vehicles that communicate with other vehicles, infrastructure, and occupants via wireless technology.

### Coordinated and priority traffic signals

Signals that are coordinated along corridors and across jurisdictions using real-time traffic information to limit stop-and-go traffic, and give priority to buses and other mass transit vehicles.

### Electric vehicles (EVs)

Vehicles powered by electricity (rather than an internal combustion engine).

### Flexible curb space

Allows curbs to be used differently at different times of the day, including for passenger pick-up/drop-off, deliveries, and special events.

### Green infrastructure

Cost-effective, resilient approach to managing stormwater that uses vegetation, soils, and other elements to minimize water run-off from paved surfaces into sewer systems and waterways.

### Integrated traffic management

Strategically manage traffic in order to ease congestion and alert drivers to traffic incidents through signs and in-vehicle messaging.

### Microtransit

Shared vehicles to transport multiple commuters in one vehicle, limiting the number of cars on the road. These may be on-demand (via a smartphone) or on a set route, and work in conjunction with transit buses and trains.

### Mobility as a service (MaaS)

Provides a platform that treats transportation as a customizable, on-demand service with “à la carte” mobility, real-time travel information and smart payment systems across transportation options.

### Mobility hub

Designated location that offers connections to and from transit buses, transportation network companies, carshare, bikeshare, real-time travel information, and other services and amenities.



### Next Generation Freeways

The traditional “ring” of freeways circling the City of Buffalo and the first-ring suburbs with technology upgrades to make travel safe, timely and efficient.

### On-demand trip planning

The ability to schedule travel as needed, usually via a smartphone app. May be through a private transportation provider or public transit agency.

### Ramp metering

Signals control the frequency of cars entering highways to help balance the flow of traffic and minimize congestion.

### Shared vehicles and shared mobility

Transportation services that are shared among users, including public transit, taxis, bikesharing, carsharing, carpooling, and shuttle services.

### Smart cities and smart region

Electronic data collection sensors supply information to efficiently manage assets and resources, and ultimately improve the quality of life for residents. Includes traffic sensors, public wi-fi, energy grids, and gas leak detection.

### Smart corridors

Select roads that use new technologies like sensors, coordinated signals, smart lighting, upgraded street features and emerging transportation services.

### Smart ecosystem of data

The ability to securely acquire and share data among public agencies, residents, and trusted private sector entities.

### Smart lighting

Energy efficient, cost-effective lighting that improves visibility.

### Smart pavement

May be embedded with fiber-optic cable for high-speed Internet, sensors to count vehicles, technology to support connected and autonomous vehicles, or electromagnetic coils to charge electric vehicles as they drive.

### Smartly Enhance Multimodal Arterials (SEMAAs)

Select radial roads and other corridors designed to efficiently move people and goods using new technologies, upgraded street features and emerging transportation services.

### Traffic incident management

The coordination of resources to detect, respond to, and clear vehicle collisions, disabled vehicles, and other incidents.

### Transportation network companies (TNCs)

Typically use smartphone apps to quickly connect drivers with people who need a ride. TNCs can include shuttle vans and carpools, and could eventually use autonomous vehicles.

### Variable speed limits

Speed limits are adjusted based on traffic and weather conditions to improve traffic flow and safety, and are displayed on digital signs.

### Vehicle-to-Infrastructure (V2I) communications

Exchange of information between vehicles and road infrastructure.

### Vehicle-to-vehicle (V2V) communications

Exchange of information between vehicles.

# The Background

Metropolitan Transportation Plans (MTPs) are a region's primary tool for laying out significant, long term improvements in their transportation system. Metropolitan Planning Organizations (MPOs) like the Greater Buffalo Niagara Regional Transportation Council (GBNRTC) are required to develop MTPs to allocate federal, state and local dollars to transportation projects across the region. By grounding the process in shared community values and consulting with local decision makers and national experts, the plan will serve our communities while making us more globally competitive.

# The Process

## More than just a transportation plan

Metropolitan transportation plans do much more than improve transportation, they give regions an opportunity to leverage transportation investments to achieve goals for their economy, environment and quality of life.

Moving Forward 2050 will take a holistic look at where we are and where we are headed to get us to our shared vision for the region's future. This understanding gives us a framework to identify the big moves we need to accomplish the goals we set for our economy, communities and environment. As we implement these strategies, we will continually reassess our progress and adjust our approach through an adaptive planning process that manages future risk.

So this is more than just a plan, and it's about more than just transportation – it is a regional vision for Buffalo Niagara, a better way for us to be Moving Forward to 2050.

## Congress and U.S. Department of Transportation



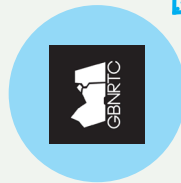
### Establish federal policies via laws and regulations

The U.S. Congress drafts and enacts surface transportation “authorization bills,” which is how Congress revises existing laws, establishes new federal transportation policies, and **“authorizes” the level of funding that will be available** over a period of several years.



State Departments of Transportation, **MPOs**, and Transit Agencies

*GBNRTC is our region's MPO*



### Update Buffalo Niagara's Metropolitan Transportation Plan every four years.

## Coordinating with local planning efforts



Build off of *One Region Forward* which translated the shared values of over 160 existing local plans into a vision for our region's collective future. Look to other important regional strategies expressed in the **WNY Sustainability Plan and Regional Economic Development Council**, as well as local plans, for recommendations and implications that shape the ways in which we will improve our region's transportation system.

## Engaging the public and local stakeholders



Ensure the plan is grounded in community values. Through *One Region Forward*, citizens shaped the regional vision. This plan forms strategies to achieve our vision by engaging a diverse group of stakeholders and representatives from local municipalities in in-depth discussions on the challenges facing our transportation system and how to address them.



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See [www.gbnrtc.org/movingforward2050](http://www.gbnrtc.org/movingforward2050)

Demographic Forecasts

GBNRTC Regional Travel Model

Environmental Justice/Equity Analysis

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## CHAPTER 1

**Where we  
want to be in  
2050**

**Where we  
are today**

**A framework  
for moving  
forward**

**Big moves to  
get us there**

**Taking action  
and measuring  
progress**

**Today marks a turning point for our region,** and the future looks brighter now than it has in decades for the things we value - our economy, our communities and our environment.

**Transportation is what connects our economy, our communities and our environment.** What we choose for our region's transportation system, and how we make those decisions, will determine whether or not we make the most of a seemingly bright but uncertain future.


OUR ECONOMY

OUR COMMUNITIES

OUR ENVIRONMENT

TRANS

# A NEW WAY OF PLANNING FOR TRANSPORTATION



We share a vision for the region's future, and our transportation system will need to pave the way to get us there.

We need new, *innovative ways of planning, building and financing our transportation system* that can adapt to change and get us to a future where our economy, communities and environment all thrive.

**INNOVATION**

**TRANSPORTATION**



# Why do we need a new way of planning for transportation in Buffalo Niagara?

Our old ways of planning for transportation won't get us to where we want to go.

Today, our region's future looks brighter than it has in decades.

## Our Economy

Our economy became stagnant as public services grew more costly.

We are growing our economy.

## Our Communities

We sprawled while population declined, and divested ourselves from existing communities.

We are reinvesting in our existing communities.

## Our Environment

We consumed more energy and natural land.

We are restoring our environment.

## What does it mean for our transportation system?

*If transportation investments are not coordinated across jurisdictions and aligned with land use decisions, sprawling development patterns will continue to consume natural land and hollow out neighborhoods. This adds infrastructure, which in turn increases maintenance costs and drives up the bill for local governments and tax payers.*

*Our transportation system is driving this momentum by connecting more people to more places with more ways of getting around and moving goods to market.*

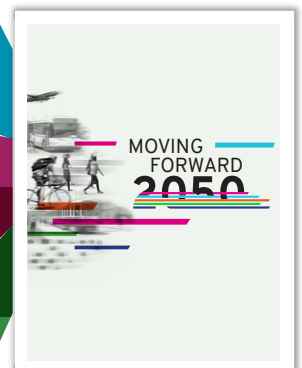
**But we need to plan for future uncertainties.**

**So, we will plan, finance and implement our transportation system in innovative ways.**

**We need to keep pace with an increasingly global and high-tech 21st century economy, making strategic investments that capitalize on the changing economic landscape and ensure shared prosperity for residents.**

**We will form flexible, creative and diverse governance arrangements and financing mechanisms while ensuring a competitive business climate that keeps our economy growing.**

## A New Way of Planning for Transportation



**We need to adapt to changing lifestyle preferences and a diversifying population.**

**We will improve coordination between urban, suburban and rural communities through collaborative planning efforts that tie transportation investments to land use decisions.**

**We need to adapt to a changing climate and prepare for extreme weather to keep our region resilient.**

**We will improve our capacity to anticipate, withstand and adapt to the impacts of climate change and adverse weather by embracing technology and coordination.**

***We need to make forward-looking decisions for our transportation system that let us make the most of these changes.***

***We will adapt to future uncertainties and harness technological advances as we use our transportation system to shape our region's future.***

**INNOVATION**

## Where we want to be in 2050

### Our Economy

In 2050, our economy will be globally competitive with shared prosperity that spreads economic opportunities and benefits to all residents in the region.

### Our Communities

In 2050, our communities will be brimming with opportunities, providing residents with various lifestyle choices and attracting new, diverse residents, businesses and investments from all over the world.

### Our Environment

In 2050, our environment will be ecologically healthy and easily accessible so that all residents and visitors have abundant opportunities to enjoy our region's world class waterways and open spaces.

### Innovation

By 2050, we will be making transformative changes to the way we plan, fund and implement the region's transportation investments through harnessing technological advances, making data-driven decisions and utilizing creative and diverse partnerships and funding sources.



# HOW **TRANSPORTATION** GETS US THERE

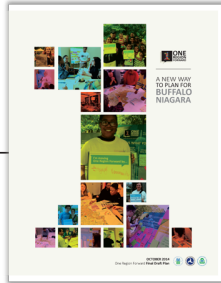
To get there, we will need transportation that connects our region with a variety of convenient options to promote opportunity, health and safety for all. At the same time, the system will bolster a globally competitive economy with shared prosperity by encouraging efficient use of our resources and collaborating to make smart, forward-looking decisions that harness changes in the future.

MOVING  
FORWARD  
**2050**

# Where we are starting from.

## ONE REGION FORWARD

A New Way to Plan for Buffalo Niagara  
2010-2015



One Region Forward, a federally-recognized Regional Plan for Sustainable Development, creates a new story for our region's future rooted in shared community values.

In the process of engaging more than 700 organizations and thousands of citizens through One Region Forward, we learned what we as a region want out of our transportation system in broad terms. **This vision for regional transportation is evident in the plan's big ideas, common priorities, and recommended strategies.** One Region Forward also formed a strong, dedicated and collaborative group of organizations to carry forward this vision and implement the plan.

Moving Forward 2050 built upon One Region Forward, identifying specific transportation policies, strategies, and investments that will help us achieve the region's goals. This work is the foundation that will guide how we implement the future we want to see.

### 5 BIG IDEAS

**Connect our places by expanding and diversifying our transportation options**

**Create great places and a thriving economy through efficient land use**

**Provide housing choices in neighborhoods that are great places to live**

**Conserve our energy, promote renewables and prepare for the impacts of climate change**

**Strengthen our food systems for a healthier population and economy**



### 115 MAPS

**Through One Region Forward, citizens mapped a shared vision of the region's future.**

In a series of public workshops, citizens mapped a future approach to land use and transportation for our region – what types of places to invest in and what strategies to pursue to get us closer to a shared vision for the region's future. The common themes and approaches that citizens used in these maps were combined to produce a vision for our region's future.

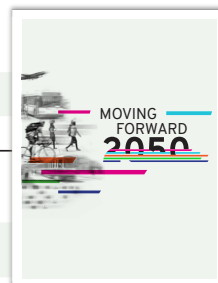


For more information visit One Region Forward online at [oneregionforward.org](http://oneregionforward.org)

# MOVING FORWARD 2050

## A New Way to Plan for Transportation

2016-2018



MOVING  
FORWARD  
**2050**

**This input guides our transportation investments, today and into the future.**

***Our transportation system ties our region together and keeps our economy moving.***

Focusing transportation investments in strategic areas can spur additional development and reinvigorate the places we live and work today, while deterring development on open spaces and reducing infrastructure maintenance costs.

***We must align our transportation investments with land use decisions so that our communities can be better connected, our environment can be better protected and our economy can grow.***

One Region Forward and the Western New York Regional Economic Development Council laid the groundwork for collaboration between municipalities, and between land use and transportation decisions.

***We must also improve equity in our communities, so that residents of all diverse neighborhoods across the region have equal access to opportunities.***

Individuals living in poverty, with disabilities or without a car, face challenges accessing basic needs and services. Residents with these challenges are often concentrated in certain neighborhoods across the region. We need to target alternative approaches to transportation that improve access to, from and within communities of concern.

***The future of our region hinges on the success of key places - our region's current and emerging centers of employment, population, education and activity, and the transportation corridors that connect these places.***

Investing in these areas will grow our economy, strengthen our communities, and also conserve natural open spaces.

# A new way of planning for transportation in Buffalo Niagara is grounded in values and based on performance.





# MOVING FORWARD 2050

## Big moves to get us there

Future transportation strategies are identified by engaging stakeholders and consulting subject matter experts.

## Taking action and measuring progress

As we carry out the work of the plan, we will track our progress and adapt our approach to move us closer to our goals.

