

Buffalo Niagara's Strategic Plan for Prosperity

JANUARY 2017



Empire State
Development

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**Western New York
Regional Economic
Development Council**

A Message from the Co-Chairs

On behalf of the Western New York Regional Economic Development Council, we thank you for the opportunity to present a comprehensive plan for Buffalo Billion Phase II.

Understanding how we arrived at this important turning point in Buffalo's history is a credit to the people and ideas that drove Buffalo to unite around a shared vision for a dramatic shift in the region's landscape, psyche, and economy. We thank Governor Cuomo for his leadership and his dedication to Buffalo and the region. Governor Cuomo recognized Buffalo's potential and it was that belief that inspired the success of Buffalo Billion Phase I and the transformational activities proposed in Buffalo Billion Phase II. We also thank Lieutenant Governor Kathy Hochul for her vision and for her continued support of our Regional Economic Development Council. Finally, we thank the thousands of people who contributed to the ideas laid forth in this latest plan to reinvigorate Buffalo's economy. It is both New York State's leadership and the community's shared commitment that will continue to shape a prosperous and sustainable economic future.

The Buffalo Billion Phase II plan looks back at the extraordinary strides Buffalo Niagara has made since 2011. It describes the progress and impacts of Buffalo Billion Phase I investments; and using economic indicators, points to areas where we've seen progress and where there are still opportunities for growth. It gives a compelling account of why we need to continue to invest in the economic enablers and core sector strategies that we as a community developed. And, based on this momentum and additional areas of opportunity presents a concrete plan for millions in additional public investment to leverage the private sector and continue to grow Buffalo Niagara's economy.

We thank you for your continued support of Buffalo's comeback and look forward to working together on our next investment strategy.

Sincerely,
Satish K. Tripathi

Jeff Belt

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136 Data Sources and Notes

Welcome to the New Buffalo.

Key indicators tell us Buffalo Niagara is looking up.



Revitalization & Smart Growth

Why It's Important | pages 24-25

The Buffalo Niagara metropolitan area sprawled as its population declined. By building on the region's unique assets—its people, natural resources, and historic commercial corridors and neighborhoods—the revitalization strategy focuses on repairing deteriorated urban fabric, revitalizing neighborhoods and investing in Buffalo's diverse communities.

A Look at Phase I | pages 26-31

The **Better Buffalo Fund** invested more than \$20M in transit oriented development and commercial corridor revitalization. The **Northland Corridor** is re-creating a manufacturing and employment hub on the East Side of Buffalo. The region created the City of Buffalo's first State Park, **Buffalo Harbor State Park**; and improved access and activation in Buffalo's **Outer Harbor**.

What's Next in Phase II | pages 32-59

East Side Revitalization will focus on three strategic pillars: 1) reinforcing core, neighborhood based, historic assets 2) infrastructure and small business improvements through commercial corridor redevelopment, and 3) placemaking around the Northland Corridor, to solidify a strong employment, innovation and workforce training center on the East Side. The new **Scajquada Boulevard** will convert the existing expressway into an urban boulevard consistent with the context of the historic Delaware Park.

Leveraging the \$100M Buffalo River cleanup, the **Buffalo Blueway** will create a network of access and recreation, to re-brand from Rust to Blue. Expansion of recreational opportunities along the **Outer Harbor** will present the opportunity for light, fast affordable activation of the Lake Erie waterfront. The **Erie Street Waterfront Connection** will re-join downtown and the waterfront by consolidating unconnected public spaces into a single linear public space along a shared, multi-use path.

The **DL & W Canalside-Cobblestone** project will activate the river's edge at Canalside by extending rail service and creating a new destination on the waterfront. **Light Rail Extension** expands the NFTA Metro Line greatly enhancing connectivity between population centers and jobs in the City of Buffalo, Tonawanda, Amherst and all three University at Buffalo campuses. A new **Buffalo Train Station** will replace the current Exchange Street Amtrak station. And, The **Better Buffalo Fund** will continue making key revitalization investments throughout Buffalo.

Beyond Buffalo, the redevelopment of the **Bethlehem Steel site** continues to transform the 1,000 acre site in Lackawanna into a modern industrial park. And the region's **Downtown Revitalization Initiative** will transform downtown cores in cities, towns and villages.





Innovation & Entrepreneurship

Why It's Important | pages 60-61

Buffalo Niagara needs to catalyze innovation to spur entrepreneurial activity. The region is beginning to rebound after decades of out-migration, limited venture capital activity, and weak small business growth. In recent years, the region is gaining momentum in a diverse range of Science, Technology, Engineering and Math-intensive industries that drive innovation, employ more workers and pay higher wages.

A Look at Phase I | pages 62-65

In Phase I, the Buffalo Billion invested in three areas to boost innovation and entrepreneurship. **43North**, the biggest business plan competition in the nation, is generating new business ventures and attracting venture capital. The **Visual Effects Program** connected Daemen College with Empire Visual Effects to train students in the post production and film industry. **Buffalo Information Technologies Innovation & Commercialization Hub** is creating a new innovation IT Hub with IBM, bringing cutting edge software jobs to downtown Buffalo.

What's Next in Phase II | pages 66-75

In Phase II, the region will continue the investment in **43North** to attract the best start-ups from around the world and supply a steady stream of eight to 12 new companies annually. The **Innovation HUB** will be a comprehensive network of entrepreneurial support, leveraging the extensive resources of partner organizations, University at Buffalo, 43North, Roswell Park Cancer Institute and the Buffalo Niagara Campus, to accelerate the growth of life sciences and technology start-ups.



Workforce

Why It's Important | pages 76-77

Each year, thousands of job openings will be available to workers at all education levels. Employers need help to rapidly identify pools of skilled workers and training programs that meet their needs. Buffalo Niagara seeks to prepare an appropriately skilled workforce to meet labor needs while addressing the barriers to economic self-sufficiency for the region's unemployed and underemployed populations.

A Look at Phase I | pages 78-81

In Phase I, Buffalo Billion invested in two major initiatives to plan for workforce challenges. The **Western New York Workforce Training Center**, an anchor institution for the **Northland Corridor**, is an industry driven public-private collaborative with a comprehensive model to build the workforce for manufacturers. The **Burgard High School Advanced Manufacturing Program** is creating the pipeline for the future of manufacturing with students taking courses in machining, welding and the automotive trades.

What's Next in Phase II | pages 82-91

A new **Workforce Development Fund** will ensure the pipeline for workforce is keeping up with industry demands. The fund will promote and invest in innovative approaches to workforce training for underserved populations by helping to scale-up organizations doing high-impact, results-oriented workforce training. **Say Yes Buffalo** will continue to strengthen the regional workforce pipeline by offering unprecedented educational opportunities for an entire generation of Buffalo Public School students.





Advanced Manufacturing

Why It's Important | pages 92-93

Manufacturing is a tradable sector with opportunity for growth, reversing the decades-long trend of manufacturing decline. Today the industry accounts for 10% of jobs and over 60% of the region's exports. While many large manufacturing firms are anchored in the region's urban cores, most manufacturing firms are small in size. The strategy proposes accelerating growth in advanced manufacturing segments with the highest potential and overall improving manufacturing competitiveness sector-wide by promoting innovation and new technologies.

A Look at Phase I | pages 94-97

Buffalo Manufacturing Works is a member-based, state of the art facility in downtown Buffalo that is creating an ecosystem to help manufacturers with new technologies, expand into new markets and improve productivity and stimulate innovation and growth in the sector. The **Buffalo High-Tech Innovation Hub at Riverbend** is the investment in the 1.2M square foot home of the Solarcity GigaFactory. The facility will be the largest in the western hemisphere, producing more than one giga-watt of annual solar capacity and approximately 10,000 solar panels when it reaches full production.

What's Next in Phase II | pages 98-103

Strategic Investments & Incentives will create public-private partnerships with companies in advanced manufacturing. Funding will allow the region the opportunity to pursue new transactions that generate significant private investment, and encourage growth of existing large, regional companies. Building on the success of Phase I, **Buffalo Manufacturing Works** will accelerate the growth of small- and medium-sized manufacturers, develop a loan fund, and expand its capacity to deliver a full suite of services tailored to the needs of Buffalo Niagara manufacturers. To facilitate this growth, EWI will move the Buffalo Manufacturing Works operation to the **Northland Corridor** to customize a facility that integrates partnerships and serve as an anchor tenant for the new commerce park. Finally, EWI will expand its program to become the Advanced Manufacturing STEM Learning Lab, helping to grow the region's advanced manufacturing workforce pipeline.



Tourism

Why It's Important | pages 104-105

Despite strong tourism assets, Buffalo Niagara is not fully capturing its tourism opportunity. Niagara Falls attracts more visitors than most national parks, but small proportions of visitors to the Falls stay overnight due to relatively limited programming, accommodations and dining options. Other areas of the region, including asset-rich Buffalo, do not capture the opportunity presented by the millions of Niagara Falls visitors. The strategy encourages investing in the region's major tourism attractions and amenities, and enhancing programming to encourage longer stays and increased spending by visitors.

A Look at Phase I | pages 106-109

Tourism Phase I investments focus on connecting the water and the City of Niagara Falls, and improving the visitor experience with new developments and programming. The **Riverway and Niagara Gorge Corridor**, the most transformative infrastructure project in Niagara Falls in decades, removes the barriers of limited access expressways along the Upper Niagara River and Niagara Gorge. The **Wonder Falls Resort** is the redevelopment of the former Rainbow Centre Mall into a locally themed entertainment complex; and **Hotel Niagara** will see a complete restoration transforming the historic landmark to expand quality lodging and retail opportunities. **Niagara Falls Parks Programming** will create outdoor recreational offerings to increase visitor stays.

What's Next in Phase II | pages 110-123

Strategic Investments & Incentives will create the infrastructure, asset development and products to grow new opportunities for major tourism drivers. Continued **Niagara Falls Redevelopment** will include the acquisition of key underutilized properties and ecological restoration of the Niagara Gorge. Phase II investments will ensure **Frank Lloyd Wright's Buffalo Legacy** through the completion of the full restoration of two masterpieces. The **National Comedy Center** will be a major cultural destination putting Jamestown on the international stage. And, the **Visitor Welcome Center** will serve the growing tourist population, while expanded **marketing initiatives** will ensure Buffalo continues attracting visitors, businesses and workers.





Why It's Important | pages 124-125

Buffalo Niagara has significant health and life sciences assets to generate a commercial impact. These industries are growing specializations for the region that provide the local workforce with high-paying jobs. The region invested heavily in health care and life sciences, especially in the Buffalo Niagara Medical Campus to co-locate clinical with research and development functions to foster collaboration. Buffalo Niagara needs to accelerate commercialization and grow businesses in the region by supporting and enabling innovation, translation and commercialization of research in high impact and growth areas.

A Look at Phase I | pages 126-129

The **Buffalo Institute for Genomics** is combining the research and development strengths of University at Buffalo and the New York Genome Center to make upstate a leader in genomic medicine. **The John R. Oishei Children's Hospital**, the only comprehensive pediatric healthcare facility in Buffalo Niagara, will open in 2017. **Athenex**, a global specialty oncology pharmaceutical company, is now headquartered in Buffalo and will focus on next generation cancer therapies. **Albany Molecular Research Inc.** is helping companies and scientists take drug therapies from lab to the clinical-trial stage.

What's Next in Phase II | pages 130-133

Strategic Investments & Incentives will engage business attraction opportunities to advance the health and life sciences regional agenda targeted at initiatives that increase partnerships between academia and industry, and facilitate the collaboration of research and development to spur commercialization activities. Investment in **University at Buffalo's Jacobs School of Medicine and Biomedical Sciences** will further establish UB's downtown presence and enable interdisciplinary collaboration leading to cutting edge treatments and spin off investment activity.



Investments will continue the successful work of the Western NY **Regional Economic Development Council**, funding projects that align with the region's strategies.

In 2011, WNY was sprawling without growth.

Now we are focusing investments and transforming places.

In 2011, we were not supporting enough entrepreneurs.

Now we are growing them by the dozen.

In 2011, we needed to expand and diversify our workforce.

Now we are building the pipeline for the future.

In 2011, we had a legacy of manufacturing.

Now we are innovating to compete in the future.

In 2011, we were attracting visitors but they didn't stay long.

Now we are investing in destinations where one day isn't enough.

In 2011, we had the foundation for health and life sciences.

Now we are doubling down on the cluster.

We can see the transformation in the people, places and sectors we're investing in.

Buffalo is getting noticed on the national stage like never before.

“Millennials Are Moving To Buffalo & Living Like Kings”

—*gothamist*, January 28, 2015

“Buffalo’s tech scene reboots the city”

—*USA TODAY*, August 23, 2015

“New York’s second largest city has sprung back to life with retro-cool restaurants and watering holes downtown that recall its industrial glory days.”

—*Travel + Leisure*, May 2016

“Buffalo’s development renaissance keeps rolling right along”

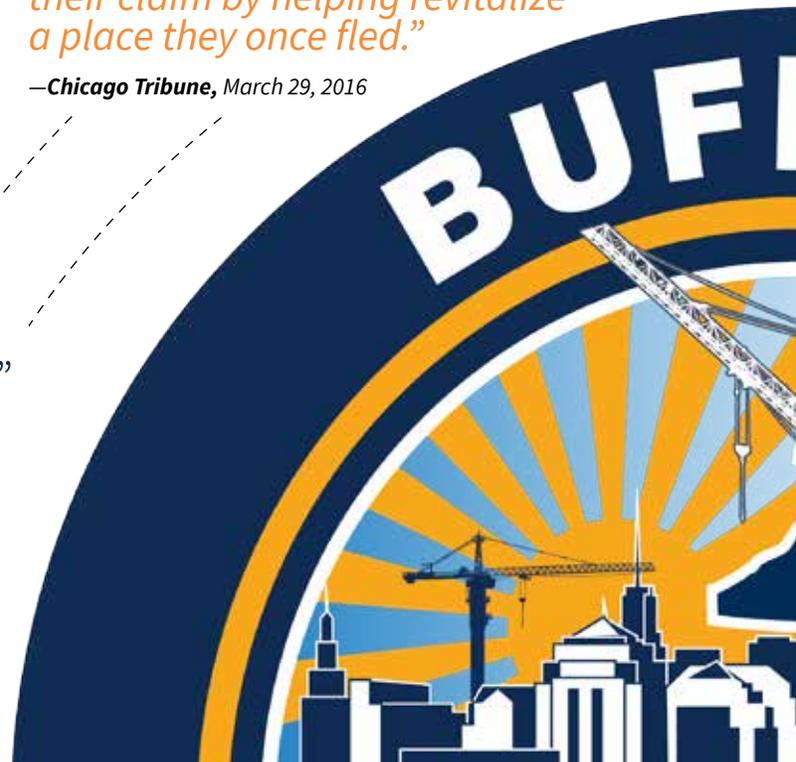
—*The Buffalo News*, January 31, 2016

“Millennials and young entrepreneurs are moving back to Buffalo as ‘re-pats,’ staking their claim by helping revitalize a place they once fled.”

—*Chicago Tribune*, March 29, 2016

“SolarCity gigafactory brightens New York’s manufacturing revival”

—*cnbc.com*, July 19, 2016



“Entrepreneurial Spirit Is Driving Buffalo Forward”

—*The Huffington Post*, June 11, 2015

“Buffalo no longer just shuffling along”

—*The Globe and Mail*, March 21, 2016

“A \$1 billion commitment . . . from Gov. Andrew M. Cuomo and a comprehensive planning process have helped spur the renaissance and reduce the region’s unemployment rate to . . . the lowest since 2007 . . .”

—*The New York Times*, July 20, 2015

“You can find more people on the Buffalo waterfront today than you could in its heyday when it was the grain-handling capital of the world.”

—*The Vancouver Sun*, February 25, 2016

“. . . Buffalo is thriving proof that it takes a team for a city to rise.”

—*Huffington Post*, September 19, 2015

“For anyone who hasn’t been to Buffalo in a few years, it hits you like a sledge hammer.”

—*ESPN.com*, January 22, 2015



The Buffalo Billion and the story of Buffalo Niagara's rebirth.



BILLIONS IN TRANSFORMATIVE INVESTMENTS

Governor Andrew M. Cuomo's billion dollar investment in the Buffalo Niagara economy is working because it reinforces the community-driven strategies to turn the region's economy around and ensure a bright, sustainable future. It is transformative because it bolsters public and private investments which are aligned with the strategies shown to propel Buffalo Niagara's economy forward. \$350M has been invested to redevelop Buffalo's waterfront into a year-round cultural destination with recreational, retail, and hotel assets. \$1.4B has been invested in the Buffalo Niagara Medical Campus to create a world-class health and life sciences innovation district. Downtown Buffalo is experiencing \$1.23B in redevelopment projects, which have been further complemented by over \$100M in infrastructure improvements that are transforming the city into a walkable, bike-friendly, attractive, and sustainable place that connects people with each other, services, amenities, recreation and jobs. \$250M has been invested in the clean-up of the region's fresh water resources to restore and preserve these most treasured assets. The City of Niagara Falls has seen \$400M in investments to Niagara Falls State Park, its downtown, and the infrastructure that connects the city to the waterfront. Billions more have been spent on business attraction, venture capital, and workforce training. Together, these investments are creating the foundation to build a sustainable economic future.



MILLIONS OF PERSISTENT PEOPLE

Buffalo Niagara is 1.1 million people strong. The regional economy boasts over 534,500 jobs, up 3% since 2011. More than 85,800 students attend the region's colleges and universities—gaining the knowledge to fuel the workforce pipeline for jobs in high-growth sectors of the economy. These job opportunities, combined with investments in attractive and affordable quality of life amenities, are helping to retain college students and increase the metro's young adult population by over 8% since 2010—reversing the decades-long trend of young adults leaving the region. Buffalo Niagara is a community of entrepreneurs with start-ups (businesses less than five years old) making up 16% of all businesses. Visitors attracted to Buffalo Niagara by tourism, fueled by the 9M people who visit Niagara Falls State Park, are also pivotal to driving the economy forward. In 2015, visitors spent \$2.3B at the region's restaurants, hotels, and enhanced tourism attractions. Behind every number there's a person, using skills, knowledge and experience to increase productivity and grow innovation.



THOUSANDS OF INNOVATIVE IDEAS

New products. New processes. New breakthroughs. New ideas. In short, innovation fuels a 21st century economy. Through greater collaboration and support for entrepreneurs, Buffalo Niagara is building on the strength of its 21 colleges and universities that generate \$343.6M in research and development dollars to bring new ideas to market. By facilitating the development of 9M square feet of research and clinical space on the Buffalo Niagara Medical Campus, the region is building the infrastructure to encourage knowledge exchange and to grow new ideas into commercially viable products. The region is attracting innovative ideas through policies and programs such as START-UP NY, which attracted 72 new companies, and 43North, which in three competition rounds named 29 winners and awarded \$14.6M. The region developed a strategy for breathing new ideas into existing ventures through Buffalo Manufacturing Works, which grew its membership to 21 companies in just one year. New ideas aren't just about growing new businesses; the region also has new ideas about what it aspires to be—from transforming the region through sustainable infrastructure and transportation, to reconnecting citizens with the waterfront, to putting former industrial land back to productive use.



HUNDREDS OF UNIQUE PLACES

Buffalo Niagara has always been defined by its unique geographic location on the international border with Canada, and at the confluence of two Great Lakes; by its incomparable art and architecture, core urban centers, rich history as a center of manufacturing, prime agricultural land, and natural assets. By building on these strengths, Buffalo Niagara made tremendous investments in the places that attract a skilled workforce, entrepreneurs



and visitors. There are new places for people to explore like Canalside; old places that have been preserved and given new life like the Richardson Olmsted Complex; exciting places that people want to visit like Frank Lloyd Wright's Darwin Martin House; natural places, like the Outer Harbor, where people seek refuge and recreation; and innovative places, like the Larkin District, where people want to work. With 1,700 residential units currently in the pipeline, downtown Buffalo is now a place where people want to live. New hotels, restaurants and breweries are springing up all over the city like never before. Emerging neighborhoods and commercial districts are beginning to provide high-quality housing, services, jobs and amenities. Through investments in sustainable infrastructure and multi-modal transportation on major thoroughfares like Niagara Street, Main Street and Ohio Street, people are better connected to these places. The City of Niagara Falls has become a place where people want to stay for an extended period of time. It added 800 new and upgraded hotel rooms, and hundreds more are on the way. Buffalo Niagara embraces placemaking as an economic driver that is unlocking growth potential unseen in decades.

DOZENS OF DYNAMIC INDUSTRIES



Buffalo Niagara's economy is growing. In fact, it is experiencing the longest sustained private sector job growth in 25 years. This is in part due to public sector investments in targeted industry sectors like Advanced Manufacturing, and Health and Life Sciences and Tourism, that jump started the economy and helped the private sector create jobs. The Buffalo Niagara economy is also more diverse than ever before, boasting a mix of manufacturing and service-based industries, and an industry composition that mirrors the nation. Buffalo Niagara produced \$56.5B in goods and services in 2015, ranking the region in the top 15% of all metros across the U.S. And, with exports from the region valued at \$7.11B, Buffalo Niagara is becoming more global than ever before. Today Buffalo Niagara is home to international companies, which include General Motors, FedEx, Geico, IBM, Delaware North, New Era, Moog, Rich Products, SolarCity, Praxair, Ford, Astronics, General Mills, and Yahoo. These and many others chose to relocate or remain in Buffalo Niagara because of its strategic location, skilled workforce, access to low-cost energy and supply chain network.

21st century infrastructure is transforming downtown Buffalo into a walkable, attractive and sustainable place.



ONE BRIGHT FUTURE



Buffalo Niagara has seen economic growth and community transformation through targeted, strategic public and private investment.

These investments have proven successful because they were based on objective data collection and analysis; they garnered community support through a collaborative and inclusive process; and they were designed around a set of strategies—developed in a holistic way—that built on unique regional strengths while addressing weaknesses.

Buffalo's waterfront is becoming a must-see destination for residents and tourists.

Buffalo Niagara produced \$56.5B in goods and services in 2015.

534,523 jobs in Buffalo Niagara, up by 3% since 2011.



Buffalo Billion

Using these proven strategies and a track record for successful implementation, Buffalo Niagara is ready to continue its momentum with a comprehensive plan for Phase II of the Buffalo Billion. The region brings forward home-grown initiatives with clear, attainable goals and smart implementation plans that will result in the biggest impacts for the region.

Unprecedented investment in Niagara Falls is encouraging visitors to stay longer and spend more.

21 companies joined Buffalo Manufacturing Works in just one year.



Key indicators show Buffalo Niagara is headed in the right direction.

Buffalo Niagara's economic strategies continue to propel a rebound. Key indicators point to a growing and increasingly vibrant regional economy, with more jobs and firms and greater productivity than just a few years ago.

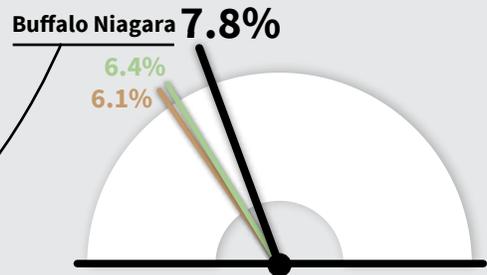


Gross Metropolitan Product

Buffalo Niagara's GMP increased by \$4.2B since 2011. The region's economy is smaller than the metros shown, but growing faster than Cleveland and Pittsburgh.

	2011	2015
Buffalo Niagara	\$52.3B	\$56.5B

% CHANGE SINCE 2011



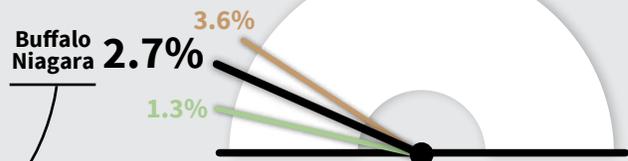
Source: U.S. Bureau of Economic Analysis, 2011 and 2015.

Jobs

Buffalo Niagara has been growing jobs for six consecutive years, including over 14,000 jobs added since 2011.

	2011	2015
Buffalo Niagara	520,336	534,523

% CHANGE SINCE 2011



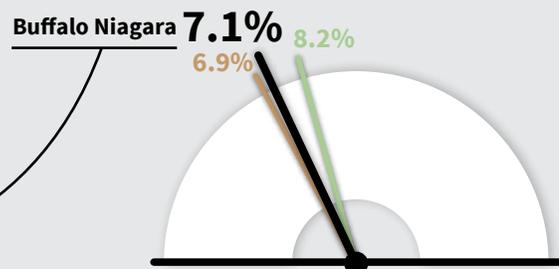
Source: U.S. BLS; NYS DOL, 2011 and 2015.

Total Wages

The total payroll in Buffalo Niagara increased by \$1.6B from 2011 to 2015, after adjusting for inflation.

	2011	2015
Buffalo Niagara	\$22.6B	\$24.2B

% CHANGE SINCE 2011



Source: U.S. BLS; NYS DOL, 2011 and 2015.

Firms

Since 2011, Buffalo Niagara added 945 firms. This equates to a 3.3% increase, which is notably higher than the similar metros shown, some of which have lost firms over recent years.

	2011	2015
Buffalo Niagara	28,244	→ 29,189

Buffalo Niagara **3.3%**

-0.4%
-1.3%

% CHANGE SINCE 2011

Source: U.S. BLS; NYS DOL, 2011 and 2015.

Average Annual Wages

Average annual wages in the region increased by nearly \$2,000 since 2011, after adjusting for inflation. This raise is on par with the U.S. and higher than a similar metro.

	2011	2015
Buffalo Niagara	\$43,406	→ \$45,267

Buffalo Niagara **4.3%**

6.8%
3.2%

% CHANGE SINCE 2011

Source: U.S. BLS; NYS DOL, 2011 and 2015.

*The increase is actually bigger than it looks...
...because entry-level workers are replacing higher paid workers who are retiring — two factors that bring wages down.*

Exports

The value of the region's annual exports increased by over \$270M since 2011. This represents a 3.9% increase, which is lower than the national increase but greater than comparable metros.

	2011	2015
Buffalo Niagara	\$6.84B	→ \$7.11B

Buffalo Niagara **3.9%**

1.3%
-6.0%

% CHANGE SINCE 2011

Source: Brookings Institution, 2015.

Young Adult Population

Despite a small overall population increase, the number of young adults (age 20-34) in Buffalo Niagara increased by more than 8% since 2010—more than any other metro shown.

	2010	2015
Buffalo Niagara	214,838	→ 232,665

Buffalo Niagara **8.3%**

6.3%
5.2%

% CHANGE SINCE 2010

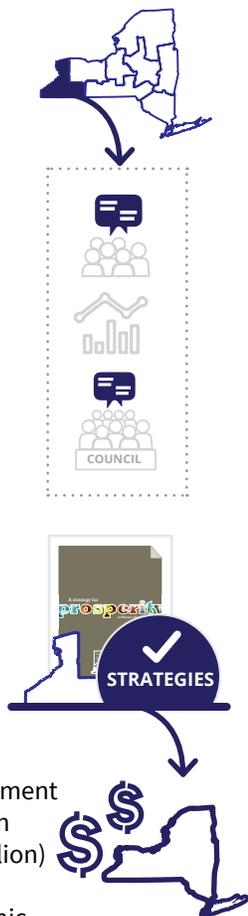
Source: U.S. Census, 2010 and 2015.

A regional plan for a billion dollar investment.

How did Buffalo get to the Billion?

In 2011, in an effort to restructure the state’s top-down approach to economic development and better target state resources, Governor Andrew M. Cuomo formed 10 Regional Economic Development Councils and charged each to develop economic roadmaps for their regions. The Western New York (WNY) Regional Economic Development Council—a governing body of business, community and government leaders—embarked on an extensive public outreach, data collection and planning process, to develop *A Strategy for Prosperity* earning a “Best Plan” award and bringing home the top prize of \$100.3M in state funding in its first year and \$356.4M to date.

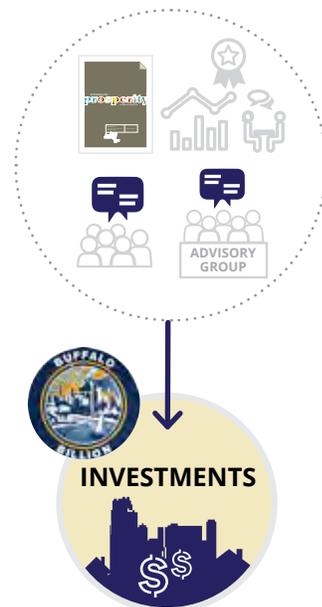
In an extraordinary recognition of the region’s potential and bolstered by his confidence in *A Strategy for Prosperity*, in January 2012, Governor Cuomo made a historic commitment to strategically invest one billion dollars in the Buffalo area economy (the Buffalo Billion) to create new jobs and spur large-scale private investment and increased economic activity. In response, the WNY Regional Economic Development Council developed the *Buffalo Billion Investment Development Plan* (the Plan), a detailed market analysis and investment plan based on the strategic framework laid out in *A Strategy for Prosperity*.



How did Buffalo plan for the Billion?

The WNY Regional Economic Development Council developed the Plan in partnership with McKinsey & Company, the Brookings Institution and the University at Buffalo Regional Institute. These experts were tasked with facilitating the planning process, gathering and analyzing baseline data, engaging stakeholders, and developing strategies based on regional strengths and opportunities. In addition, a Buffalo Billion Advisory Group was created to lead the development and implementation of the Plan. The group was led by the WNY Regional Economic Development Council co-chairs, and several WNY Regional Economic Development Council members served on the committee to ensure consistency with *A Strategy for Prosperity*. Other community stakeholders augmented the Advisory Group, bringing additional expertise to the table. The stakeholder engagement plan included participants from a variety of backgrounds—the private sector, community leaders, philanthropic organizations, academia and government. Engagement reached **over 300 unique stakeholders** while the Plan was in development.

The Plan charts the region’s unique path to a thriving economy that is based on a deep understanding of present conditions and future aspirations. Among the questions it seeks to address is how the region can build on its assets to increase sector competitiveness, efficiency and productivity to set the framework for economic growth. Drilling down deeper into the region’s existing strategies identified in *A Strategy for Prosperity*, the Plan identifies three enablers toward these goals—smart growth and revitalization, workforce development and entrepreneurship, and three sector strengths on which to build—advanced manufacturing, tourism and health and life sciences. The strategies are mutually reinforcing, and in combination provide a framework that encompasses, contextualizes and aligns existing efforts and offers guidance for development of future economic growth initiatives.



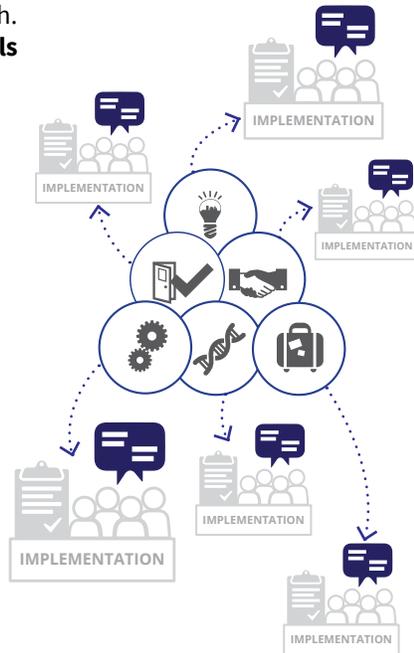
How did Buffalo implement the Billion?

To advance each of the strategies, the Plan conceptualizes transformative **Signature Investments** that include organizational structure, tasks and timelines, budget development, major milestones, anticipated outcomes and performance metrics based on best practices research.

Implementation Councils

were created within each of the strategy areas, bringing additional community stakeholders and their expertise to the table. The extensive stakeholder engagement created local ownership of the Plan and implementation of the investments. Implementation Councils were responsible for assisting and guiding the implementation of investments within each strategy. The **Signature Investments**

each had their own unique Implementation Lead (either an existing organization or the creation of a new one), which provided ownership and governance structure. The Delivery Unit, led by Empire State Development and including University at Buffalo Regional Institute as a core member of the team, provided problem-solving, planning, support and guidance to Implementation Leads across all Signature Investments.



Signature Investments

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How the Billion works for the region and New York State

New York State (NYS) drives economic growth by making investments that enforce four interconnecting strategies.

Placemaking is the notion that where investment occurs matters. In order to attract a talented workforce, our built environment must emphasize creating accessible job centers, sustainable infrastructure and livable communities. **Workforce** is the belief that people drive the economy. Targeted job training and education ensures that jobs in high-paying, in-demand, tradable sectors are filled in an equitable way.

Tradable Sectors describes which industries NYS is targeting to increase export based employment opportunities. They are the industry sectors that are part of a global market like manufacturing, agricultural products, and energy. Investing in tradable sectors (both products and services)—those subject to the demand of a global economy—creates greater output and higher-paying jobs. Finally, **Innovation** is the strategy of investing in creating synergies between research and commercialization to drive the economy forward.

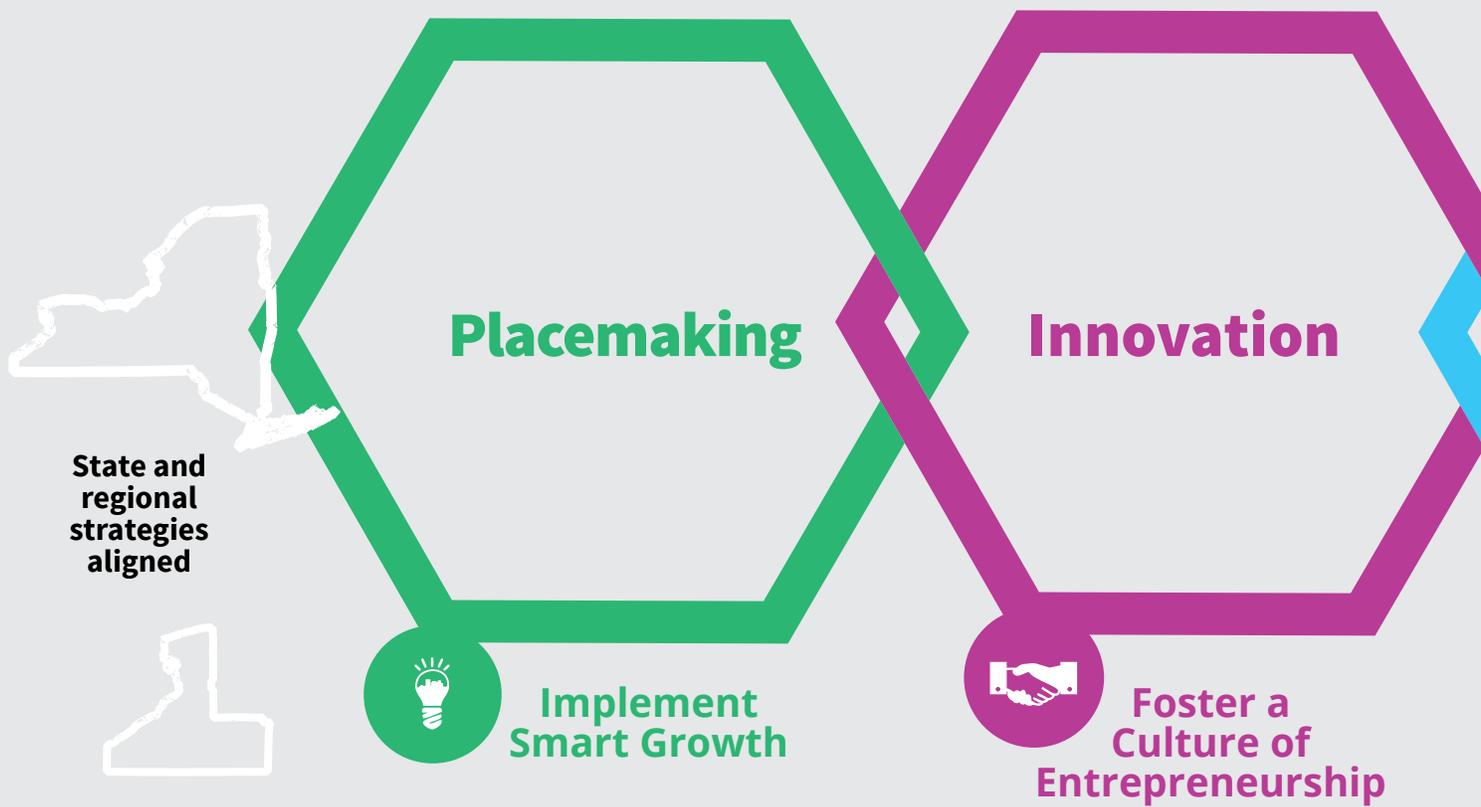


Buffalo Niagara's local strategies directly align with New York State's core strategies for economic development. Buffalo Billion initiatives are transformative because they touch upon all four state priorities. In Buffalo Niagara, the placemaking

strategy is about revitalizing the City of Buffalo by focusing investment near existing infrastructure to better connect people with jobs and create the types of vibrant neighborhoods that attract a talented workforce. The region grows innovation by investing in the support networks that attract entrepreneurs and ensure a healthy and diverse business climate. Buffalo Niagara aspires to create the most flexible, inclusive and industry-driven workforce training environment to prepare workers for success and to allow businesses to thrive. Three tradable sectors—Tourism, Health and Life Sciences, and Advanced Manufacturing—were chosen because of their strong, concentrated presence in the region, growing national trends, and because they exhibit competitive advantage through customization, product quality, or process innovation. Importantly, they also serve large global markets with high growth potential.

Buffalo Niagara's regional strategies align with state priorities.

Economic development means investing in **placemaking**, **innovation**, **workforce** and **tradable sectors**.



Workforce

Tradable Sectors



Prepare Our Workforce



Advanced Manufacturing



Tourism



Health | Life Sciences

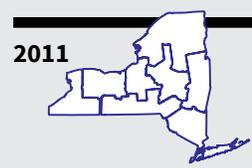
The economic impacts of strategic investments are felt across the community.



Strategies for a New Buffalo.

PROCESS

Informed by community input, detailed research and analysis



2011
NYS Regional Economic Development Councils are formed



Strategy for Prosperity wins \$100M for WNY



Revitalization & Smart Growth

PHASE I

- Better Buffalo Fund
- Northland Corridor
- Buffalo Harbor State Park
- Outer Harbor Access & Activation

PHASE II

- East Side Revitalization
- Scajaquada Boulevard
- The Buffalo Blueway
- Outer Harbor Phase II
- The Erie Street Waterfront Connection
- DL&W Canalside-Cobblestone
- Light Rail Extension
- Buffalo Train Station
- Better Buffalo Fund Phase II
- Bethlehem Steel Site Redevelopment
- Downtown Revitalization Initiative

Innovation & Entrepreneurship

PHASE I

- 43North
- Visual Effects Program
- Buffalo Information Technologies Innovation & Commercialization Hub

PHASE II

- 43North Phase II
- The Innovation HUB

Workforce

PHASE I

- Western New York Workforce Training Center
- Burgard High School Advanced Manufacturing Program

PHASE II

- Workforce Development Fund
- Say Yes Buffalo



2012



2012-2016



2017



Buffalo Billion Phase I announced

Implement Buffalo Billion Phase I

Buffalo Billion Phase II

REDC Awards



TRADABLE SECTOR
Advanced
Manufacturing

PHASE I

Buffalo Manufacturing Works
High-Tech Innovation Hub at
Riverbend

PHASE II

Strategic Investments &
Incentives
Buffalo Manufacturing Works
Phase II



TRADABLE SECTOR
Tourism

PHASE I

Riverway and Niagara Gorge
Corridor
Wonder Falls Resort
Hotel Niagara
Niagara Falls Parks Programming

PHASE II

Strategic Investments &
Incentives
Niagara Falls Redevelopment
Frank Lloyd Wright's Legacy
National Comedy Center
Visitor Welcome Center
Marketing Buffalo Niagara



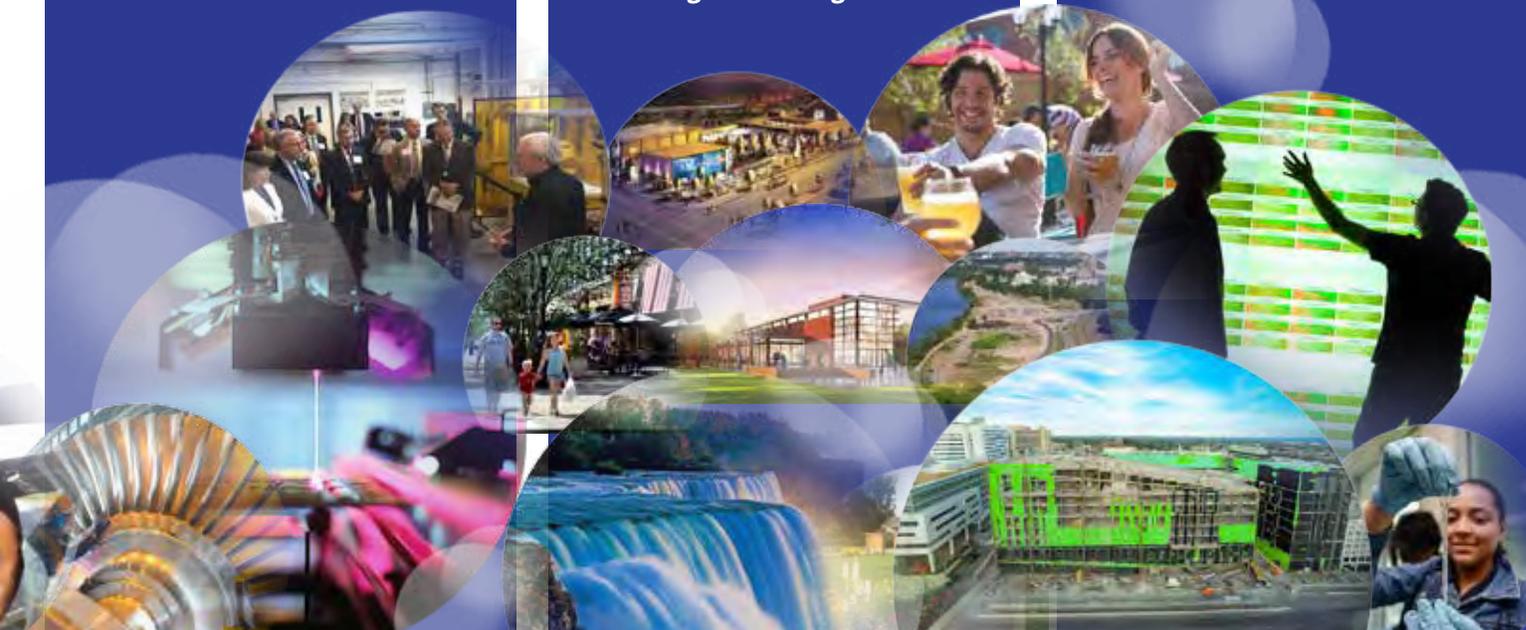
TRADABLE SECTOR
Health | Life
Sciences

PHASE I

Buffalo Institute for Genomics
John R. Oishei Children's Hospital
Athenex
Albany Molecular Research Inc.

PHASE II

Strategic Investments &
Incentives
University at Buffalo Jacobs
School of Medicine and
Biomedical Sciences



Revitalization & Smart Growth

Why the strategy matters

The Buffalo-Niagara metropolitan area sprawled as its population declined. This resulted in a deteriorating urban core, escalating infrastructure costs with a shrinking tax base and a growing imbalance between where people live and traditional centers of employment.

What needed to be done

By building on the region's unique assets—its people, natural resources, strategic location, and historic commercial corridors and neighborhoods—the Plan's revitalization strategy focuses on repairing deteriorated urban fabric, revitalizing neighborhoods and investing in the city's diverse communities to better connect them to each other, employment centers, and a strong regional core through increased walkability and transit connections. The Plan targets investments in building housing and sustainable infrastructure that connects disadvantaged communities with employment clusters; reviving Buffalo's traditional

Sprawling development patterns forced the region to build more infrastructure...

In the past twenty years, **525 miles** of new roads have been built...

...costing us **\$26 million** per year to maintain.

Source: UBRI analysis using data from the U.S. Census Bureau (TIGER/Line Shapefile, 1990 and 2010), and the NYS Office of the State Comptroller, 2011. For full sources and notes, see UBRI, 2014 "One Region Forward: A New Way to Plan for Buffalo Niagara."

main streets and commercial corridors by preserving historic buildings and fostering mixed-use private investment; redeveloping former industrial lands; encouraging walkability and investing in public transit; and increasing access to the waterfront while protecting natural resources and waterways. By transforming Buffalo into a vibrant, thriving city with modern amenities and infrastructure, high-quality services, and well-designed, friendly neighborhoods that connect people with jobs, the city will create an economic climate conducive to attracting private investment, entrepreneurial activity and a robust workforce.

A LOOK AT PHASE I -----> WHAT'S NEXT IN PHASE II

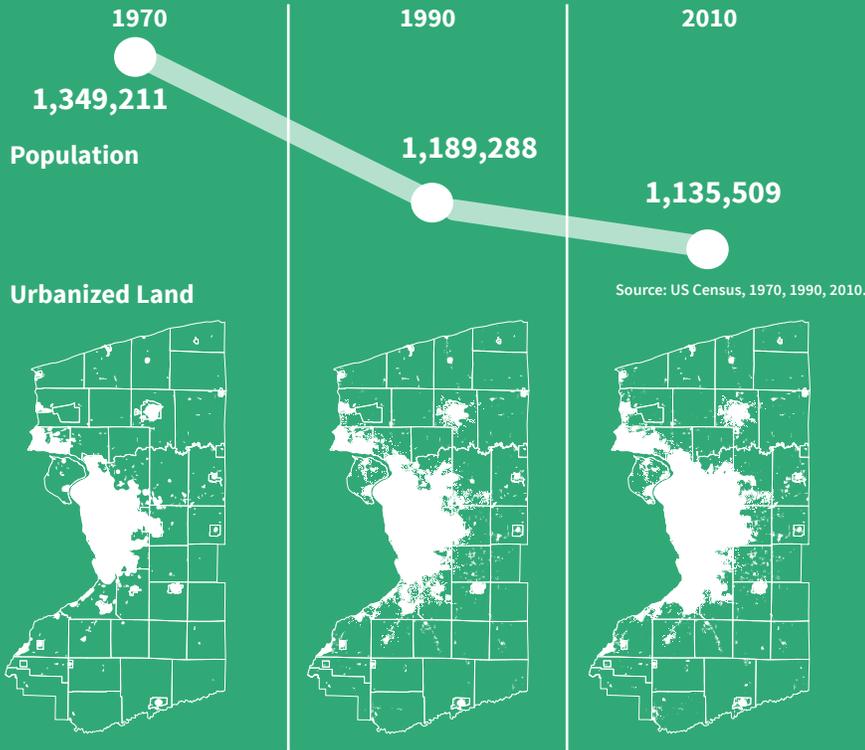


- Better Buffalo Fund
- Northland Corridor
- Outer Harbor State Park
- Outer Harbor Access & Activation



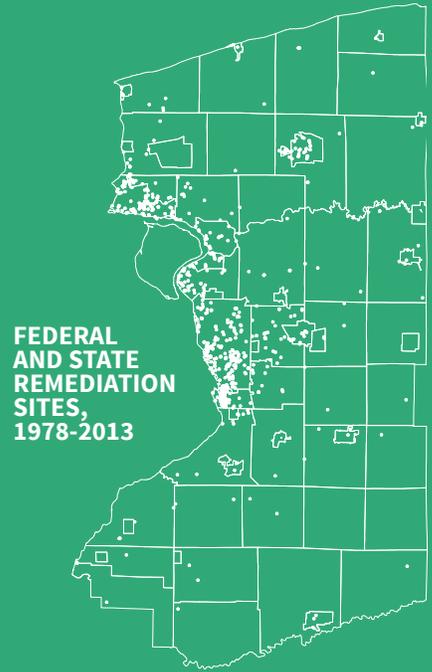
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- Bethlehem Steel Site Redevelopment
- Downtown Revitalization Initiative

From 1970 to 2010 while population fell by 213,702 people, the area of developed land increased by 166 square miles.



Source: UBRI Analysis, 2014. Based on historical parcel data (NYS Dept. of Taxation and Finance, Real Property Services, 2010) and satellite imagery (US Geological Survey, National Land Cover Dataset, 1992, 1997, 2011; and USGS and NASA, Global Land Survey, 1975). For full sources and notes, see UBRI, 2014 "One Region Forward: A New Way to Plan for Buffalo Niagara."

Over 631 remediated sites present opportunities to reactivate the waterfront and urban core.



Source: NYS Dept of Environmental Conservation, 2014; US Environmental Protection Agency, 2011.

The region has a pattern of developing housing and employment in places that are disconnected from public transit.



.....1/2 mile.....



PEOPLE

26%

of Buffalo Niagara's population lives within easy access to public transportation.



.....1/2 mile.....



JOB

31%

of Buffalo Niagara's jobs are located within easy access of public transportation.

Source: UBRI Analysis using data from US Census, 2010, and NFTA, 2012. For full sources and notes, see UBRI, 2014 "One Region Forward: A New Way to Plan for Buffalo Niagara."



Better Buffalo Fund

The Better Buffalo Fund is a grant and revolving loan fund designed to foster transformation of the City of Buffalo's neighborhoods and facilitate economic development and job growth. The Better Buffalo Fund supports redevelopment projects that encourage density and growth along transportation corridors and revitalize neighborhood commercial districts. Better Buffalo Fund is positioned to create vibrant, mixed-use, high-density neighborhoods and stronger transit and transportation access linkages between neighborhoods and employment centers.

Lead Organization

Empire State Development

Phase I Buffalo Billion Investment

\$30M

Major Milestones Accomplished

Connected with nearly 400 representatives from organizations all over the city through email blasts, one-on-one project consultations, meetings with community groups and Better Buffalo Fund information meetings.

Offered extensive technical assistance to four non-profits to help prepare them for future Better Buffalo Fund rounds. Technical assistance included partnership building, outreach, identifying market opportunities, and assessing building conditions to ensure the non-profits have the tools to complete a quality grant application and successfully implement a Main Street program.

Over two funding rounds, Empire State Development received 91 applications and awarded 35 projects a total of \$20,852,542 leveraging \$365,600,752 in matching funds and contributing to the renovation of 550 residential units and 190,000 square feet of commercial space.

Actions Planned

Offer a new round of technical assistance to non-profits.
 Launch a third funding round with extensive public outreach.

Better Buffalo Fund is made up of two complementary initiatives.

BUFFALO MAIN STREETS INITIATIVE



Modeled on the NYS Main Street program and administered by NYS Homes and Community Renewal, assists building owners with the preservation and creation of housing and renovation of commercial properties in established business corridors.

TRANSIT ORIENTED DEVELOPMENT

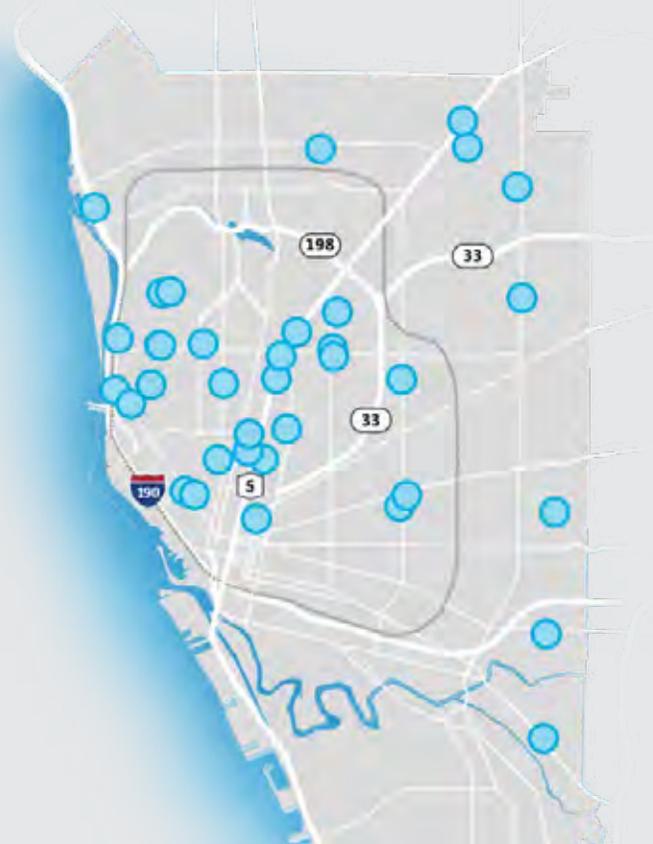


Provides gap financing for adaptive reuse or infill capital projects which promote dense development (housing, employment, and retail) within 1/2 mile walking distance of highly-used transit stops.



**IN TWO ROUNDS
\$20,852,542**

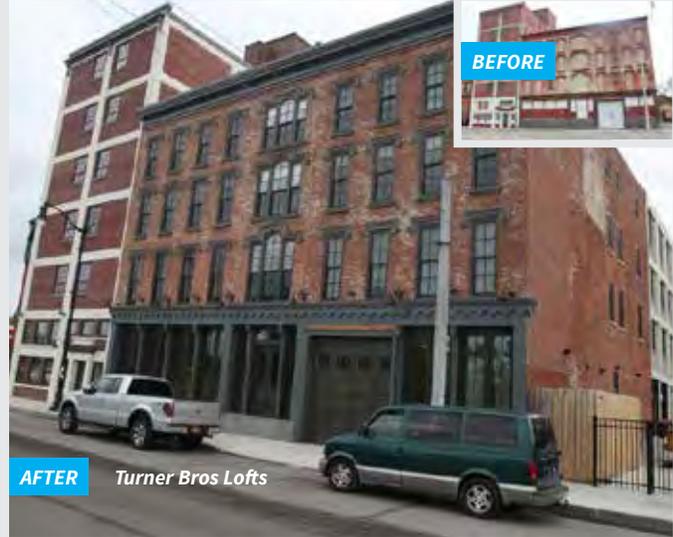
AWARDED TO 35 PROJECTS



WHAT IT LOOKS LIKE IN ACTION
BUFFALO MAIN STREETS INITIATIVE



WHAT IT LOOKS LIKE IN ACTION
TRANSIT ORIENTED DEVELOPMENT



BETTER ON BAILEY

\$300,000 grant

Bringing back Bailey Avenue is seen as one of the key components in stabilizing the Kensington-Bailey neighborhood after decades of disinvestment, depopulation and decline. With input from numerous community, business, and institutional stakeholders, one of the key strategies identified was reinvesting in Bailey Avenue’s historic building stock through a unified approach to new facades, signage, and lighting. The University District Community Development Association will use Better Buffalo Fund support to work with property owners along Bailey Avenue to renovate and rehabilitate their commercial storefronts. The Association already identified seven property owners who are committed to participating in the program. Improvements range from exterior lighting, signage, and new, energy efficient storefront systems, to roofs, windows, and insulation. This work will leverage significant public and private investment made along the street and build on the University District Community Development Association’s efforts to reposition Bailey Avenue as a growing East Side commercial corridor and hub of small business activity.



Bailey Avenue Business Owners Association works together to improve the district.

TURNER BROS LOFTS

\$1.5M loan, 295 Niagara Street

Located at a major gateway into downtown Buffalo, the project adaptively reuses 55,000 square feet of historic inventory for 40, one and two-bedroom market rate apartments and approximately 8,200 square feet for gourmet food manufacturing and retail.

OTHER ADAPTIVE REUSE PROJECTS

960 BUSTI AVENUE

\$800,000 loan



BELLAMY COMMONS

\$100,000 grant





Northland Corridor

The Northland Corridor project includes the acquisition and redevelopment of vacant and underutilized properties to establish an integrated workforce and employment campus, anchored by the Western New York Workforce Training Center. This investment seeks to attract new companies and employment opportunities while sparking revitalization for an economically disadvantaged Buffalo neighborhood.

Lead Organization

Buffalo Urban Development Corporation

Phase I Buffalo Billion Investment

\$9M

(For land acquisition and street/right-of-way infrastructure improvements to support \$35M NYS investment in the Western New York Workforce Training Center and to facilitate future development/redevelopment on other parcels)

Major Milestones Accomplished

- Buffalo Urban Development Corporation purchased 35 acres.
- Extensive ongoing community outreach.
- Hired property management and leasing company.
- Completed environmental assessments, buildings analysis, redevelopment strategy, and began environmental abatement.
- Completed State Environmental Quality Review process for the entire campus.
- Site plan approval from the City Planning Board.
- Hired final design team.
- Designed street and right-of-way infrastructure.
- Architectural and engineering design work and space planning began.
- Hired construction management team.



Actions Planned

- Construction of street and right-of-way infrastructure (roadbed, lighting, gateway features, sidewalks, etc.)
- Selective demolition of dilapidated buildings and hazardous waste sites along the Northland Corridor
- Initial steps for historic interpretation and mitigation of building demolitions

Bringing together area residents, employers, educational institutions, community and faith based organizations and state and local government.



Investing on Buffalo's East Side

Why this place?

Nearby businesses, existing community assets, accessible labor force, close to walkable residential neighborhood.

Northland's important North-South connections to some of the City's focus areas for investment and employment hubs can't be overlooked. Northland is less than 3 miles from the Buffalo Niagara Medical Campus, less than 4 miles from downtown Buffalo and the Larkin District and less than 5 miles from the SolarCity plant at Riverbend.





Photo credit: Joe Cascio

WHAT MAKES NORTHLAND A GOOD INVESTMENT?

Located just south of Erie County Medical Center, the Northland Corridor is one of the most extensive commercial/industrial areas in terms of size and density in the City of Buffalo. Historically, it was developed as a center for manufacturing due to the confluence of several major transportation corridors. Today, much of the residential and commercial fabric of this area remains in close proximity to abandoned industrial plants that plagued the neighborhood for decades.



From airplanes to shock absorbers, this community has a rich manufacturing past including Curtiss-Wright, Buffalo Foundry, Otis Elevator, Houdaille Industries and Niagara Machine & Tool.

Choosing the right location was critical to the success of the Western New York Workforce Training Center and the overall campus, so it will best foster further neighborhood revitalization. The Northland Corridor provides important north-south connections to some of the City's focus areas for investment and employment hubs. It is located near complementary workforce training assets such as Buffalo's Math Science Technology Preparatory School and Burgard High School, which will be pipelines for the effort. It has an accessible labor force, existing employers, and close proximity to walkable residential neighborhoods serviced by community assets such as churches, schools, public transportation, and the Olmsted-designed Fillmore Avenue. The goal is to rebuild and revitalize the Northland Corridor so it benefits all people in Buffalo. So far, \$9M in state funding was used to purchase 35 acres of land/buildings and to improve streetscape on Northland Avenue. An additional \$35M in state funding will be directed to the construction of the new workforce center, to be located at 683 Northland Avenue, and a five-year operating subsidy for the center's initial ramp-up period. The property owner, Buffalo Urban Development Corporation—the City's not-for-profit land reclamation and development agency—is working in collaboration with the community to develop a plan for the redevelopment of the remaining structures and to lease space on the site.



Buffalo Harbor State Park

As part of the 2013 transfer of almost 400 acres of land on the Outer Harbor from the Niagara Frontier Transportation Authority (NFTA) to the State, Buffalo Harbor State Park was designated as the 180th State Park in New York’s system and the first in the City of Buffalo. Buffalo Harbor State Park had \$10M in improvements to transform the area into a new visitor destination that continues the revitalization of the city’s waterfront.

Lead Organization

New York State Office of Parks, Recreation and Historic Preservation

Phase I Buffalo Billion Investment

\$10M

Major Milestones Accomplished

Completed Phase I including two open-air picnic pavilions, a nautically themed destination playground, new park furnishings, improved lighting and walkways, landscaping and general utility upgrades.

Completed Phase II including structural rehabilitation of both the marina break wall and the southern revetment including paving of the break wall and furnishing it with lighting, shade structures and benches.

Buffalo Harbor State Park is fully open to the public.

COMPLETED



DURING



Outer Harbor Access & Activation

To enhance access and facilitate greater public use and enjoyment of Buffalo's Outer Harbor, the Buffalo Billion is funding a series of improvements to facilitate active and passive recreational uses and future recreational programming on the Lake Erie waterfront. The projects consist of several capital improvements including selected locations for visitor and information nodes with pedestrian, bicycle and renewable energy amenities; new multi-purpose trail segments to link the Greenbelt loop to the already-established trail networks along Fuhrmann Boulevard; remediation of appropriate Outer Harbor areas for multi-use flex space that will include outdoor recreational facilities, seasonal gathering, and food and beverage areas; overlook locations to facilitate birding, painting, photography and astronomy; and wayfinding and interpretative sign systems as an expansion of the already-established "Shoreline Trail" system.

Lead Organization

Erie Canal Harbor Development Corporation

Phase I Buffalo Billion Investment

\$5M

Major Milestones Accomplished

Began detailed environmental studies, structural and building surveys, and architectural and engineering design.

Actions Planned

Continue design.

Release a construction bid package.

12-18 month construction period begins.



WHAT'S NEXT IN PHASE II



Revitalization & Smart Growth

Enhancing East Side's assets, anchored by national role-model worker training and manufacturing competitiveness campus.

 **East Side Revitalization**

Making smart growth brownfield industrial sites shovel ready for reuse.

 **Bethlehem Steel Site Redevelopment**

Leveraging the \$100 million Buffalo River cleanup to re-brand from Rust to Blue.

 **The Buffalo Blueway**

Restoring park connections and ensuring public safety.

 **Scajaquada Boulevard**





→ East Side Revitalization

The Buffalo Billion Phase II plan to spark revitalization of the City's East Side centers around three core strategies targeted geographically east of Main Street. The first reinforces core neighborhood-based, historic regional assets. The second targets infrastructure and small business improvements along commercial corridors to create stronger linkages between these assets, connect people and jobs, and enable small business growth and private investment. Finally, investments will be made to expand upon the redevelopment of the Northland Corridor to include additional acquisitions, remediation and redevelopment of land and buildings along the corridor to solidify the establishment of a strong employment, innovation and training hub for the East Side.



WHY IT'S IMPORTANT

Economic decline over the past half century exacerbated by Urban Renewal projects, roadways that divide rather than connect City neighborhoods, and population decline led to disinvestment in Buffalo's urban core. No place is this more pronounced than in Buffalo's East Side which today bears a significant brunt of the burden. 66% of all vacant parcels in the City are on the East Side, many of which are challenged by environmental contamination. Some of the highest business vacancy rates in the City also exist on the East Side, deteriorating the urban fabric along the lengths of business corridors.

Despite these challenges, the East Side has a number of strengths and opportunities on which to build including architectural marvels, community-based assets, walkable, traditional main streets, education and training resources, and accessible public transit. Additionally, the City is combating vacancy on the East Side through its Homesteading Program which promotes redevelopment of vacant properties in blighted neighborhoods. Building on this program and Buffalo Billion Phase I investments such as those made through the Better Buffalo Fund, the WNY Workforce Training Center and the Northland Corridor, Phase II investments in the East Side have the potential to attract new businesses and residents to an area in the process of rebirth and reinvention.

Buffalo's East Side has...

66% (11,197) of all vacant parcels in Buffalo

1,343 acres of vacant land

The 6 census tracts with the highest commercial vacancy rates

25% of all new businesses in 2015

Opportunity

Investing in core neighborhood based assets

The region has seen tremendous success and national recognition by building on its strengths and reinvesting in its historical, architectural and natural assets. Buffalo's East Side is rich with neighborhood based-assets of regional significance, that, if targeted for reinvestment, could act as a catalyst for growth and spur private investment in the community. For example, The Central Terminal—the art deco masterpiece that once provided passenger rail service to Buffalo; the historic Broadway Market—the City of Buffalo's underutilized public market; and Olmsted-designed Martin Luther King, Jr. Park are exemplary jewels of Buffalo's unique history and contribute to the quality of life that gives the region a competitive advantage. A new grant fund will be established to target capital improvements to these types of important assets to secure their preservation and ensure they serve as a solid foundation for the East Side's revitalization and future growth.

Homesteading Program

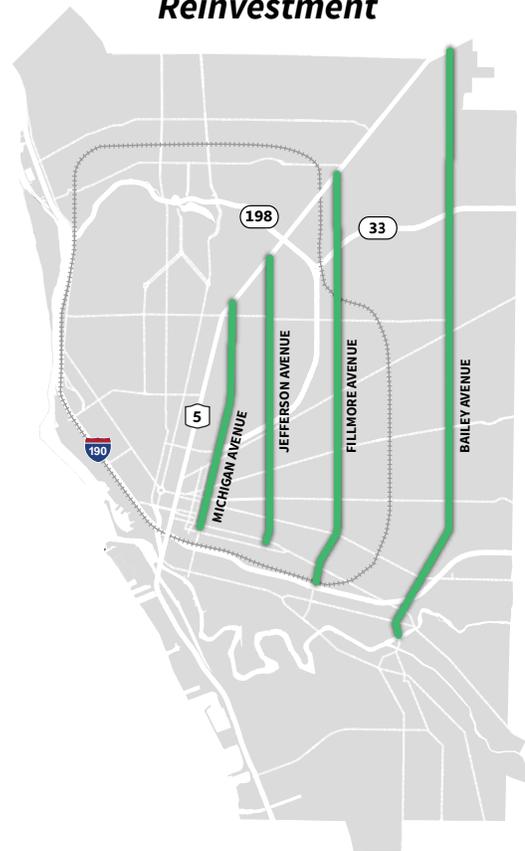
A new homesteading program, focused on Buffalo's East Side and adjoining western portions of Cheektowaga, could provide affordable housing opportunities, including urban homesteading opportunities and affordable rental housing and rehabilitate housing to revitalize communities. Program elements could include: Acquiring title to housing that can be rehabilitated on a cost effective basis; provide housing at little or no cost to eligible homeowners; providing funds to rehabilitate housing with requirement for health and safety, and to bring properties up to local code; and requiring homeowners to commit to residing in home for 5 years. Eligible recipients would be qualified based on income and other criteria. The program may include pre- and post-purchase counseling and training to mentor successful homeownership.



Investing in commercial corridors

Main streets and commercial corridors play a significant role in the vitality, livability and character of a neighborhood. They are the primary economic drivers in communities, embracing unique neighborhood character, providing services and amenities to residents and visitors, providing small business opportunities for entrepreneurs, and establishing crucial connections between anchor assets. Currently, vacant lots, underutilized commercial and industrial parcels and outdated infrastructure are pervasive throughout corridors on the East Side. Investments in four key, north-south, commercial corridors (Michigan, Jefferson, Fillmore and Bailey Avenues) will be implemented through a community driven process that includes engaging in a community visioning process to identify areas for infrastructure improvements, key asset redevelopment and small business development; and providing technical assistance to community leaders to implement projects and to small business owners to build capacity to sustain growth.

Target East Side Corridors for Reinvestment

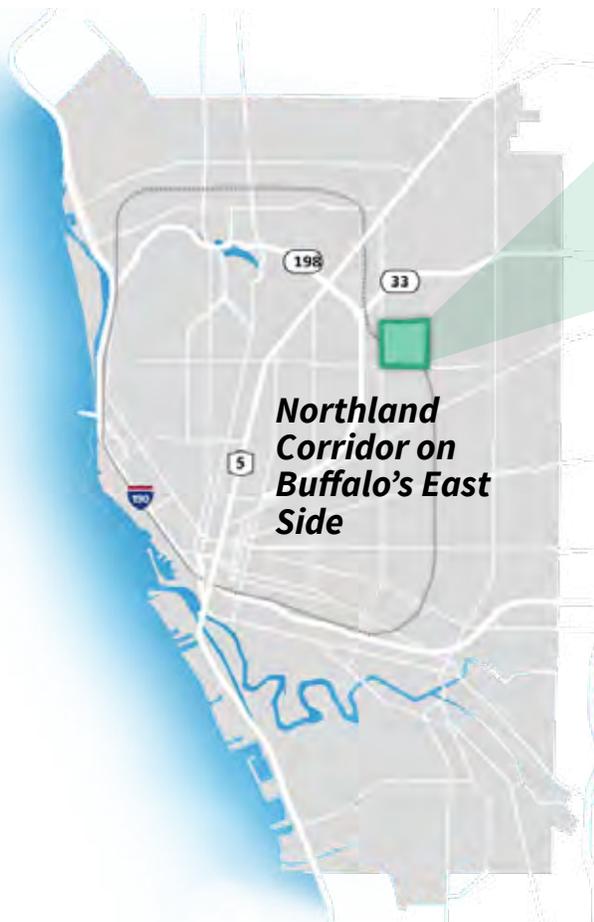
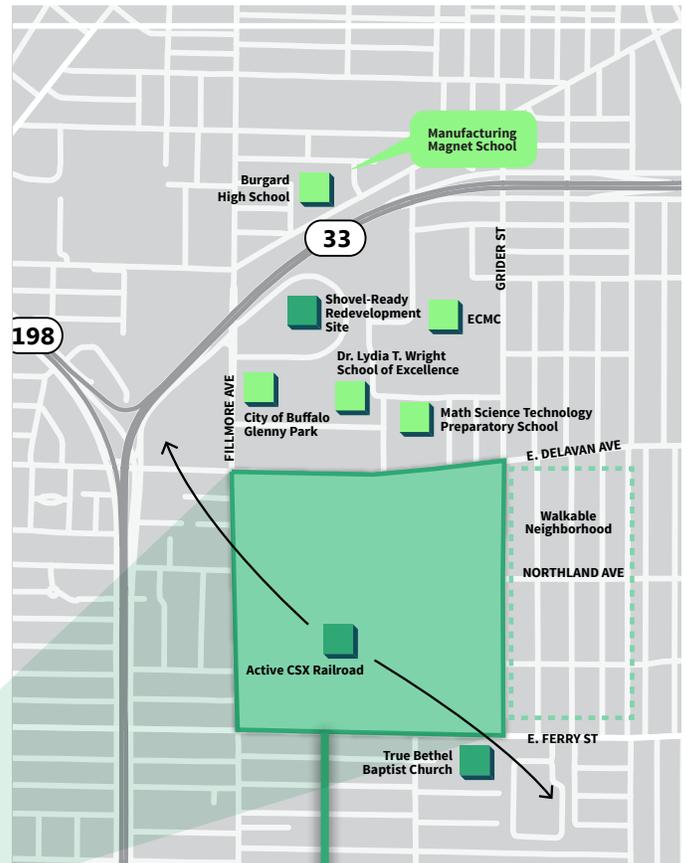


Additional investments in the Northland Corridor

Building on the neighborhood's existing assets and investments made in Buffalo Billion Phase I to create a commerce park along the Northland Corridor, Buffalo Urban Development Corporation will continue to identify properties; acquire land; stabilize, remediate and renovate existing buildings; undergo select demolition and prepare land for redevelopment; build infrastructure; and attract private investment for the purpose of realizing a fully redeveloped Northland Corridor. The project will be anchored through a Buffalo Billion Phase I investment in the Western New York Workforce Training Center and a Phase II investment in the relocation of Buffalo Manufacturing Works, further re-establishing the area as a manufacturing hub attracting private development to the area, creating employment and training opportunities for local residents, and spurring revitalization of the surrounding neighborhood.

Neighborhood Assets

- Community Assets
- Industry Assets



Northland Corridor on Buffalo's East Side



Targeted Redevelopment

IMPLEMENTATION MILESTONES

East Side Revitalization

Investing in core neighborhood based, regional assets

- Establish a review committee and application process.
- Develop the funding application including review criteria.
- Initiate outreach in communities to promote the fund and cultivate applications.
- Release the guidelines and applications.
- Committee reviews and recommends funding allocations.
- Review outcomes and progress of successful applicants.
- Communicate the outcomes of the fund.

Investing in commercial corridors

- Embark on a community visioning process for each of the four key corridors that includes identifying key opportunities such as public infrastructure improvements, key anchor buildings ripe for redevelopment, and small business enhancement programs.
- Provide technical assistance around small business development and improvements.
- Develop initial building assessments, renovation budgets and renderings for building redevelopment.
- Work with the City to complete bidding process for design, engineering and construction for public infrastructure improvements.
- Begin construction on key public infrastructure improvements.

Additional investments in the Northland Corridor

- Enter into purchase agreements for the acquisition of additional properties.
- Review environmental information on the properties and complete additional investigations if warranted.
- Complete structural and engineering analysis and due diligence of all properties, including detailed cost estimates for required capital improvements, demolition and/or environmental remediation.
- Reinforce structures.
- Environmental abatement.
- Targeted demolitions and site preparation.
- Architectural, design and construction on select buildings.

BUDGET & IMPACT

Budget Request: \$60M

Empire State Development will work with state agencies, federal funding sources, and local foundations to provide matching funds to leverage these investments, based on programmatic alignment. The City of Buffalo will co-invest on these assets to ensure the ecosystem of investment maximizes the capacity of the East Side. Similar investments in revitalization and placemaking in the Better Buffalo Fund from Buffalo Billion Phase I leveraged a match of more than 10:1.

Scajaquada Boulevard

Budget Request: \$30M

Funding will expedite the initial construction phase of converting the “Scajaquada Expressway” into an urban boulevard. The NYS Department of Transportation, which is administering this project, is evaluating alternatives for transforming the existing expressway into a low-speed, urban boulevard with two lanes in each direction. The new roadway will enhance bicycle and pedestrian amenities and be consistent with the context of the historic Delaware Park. The reconstruction will restore the Park, reconnect neighborhoods, ensure public safety and create an environment more conducive to the needs of business in the City.

Under Governor Cuomo’s direction, NYS Department of Transportation has already implemented a number of short term safety measures on the corridor including lowering the speed limit to 30 miles per hour, narrowing travel lanes, replacing “merge” signs with “stop signs,” installing electronic speed notification signs, and installing guiderail along sections of Delaware Park. NYS Department of Transportation is working with the community to add additional traffic calming measures in the transition zones to Delaware Park.

Working with the community to ensure the roadway fits the natural look and feel of the historic park it traverses through, major work on the project is expected to begin in 2018.

→ The Buffalo Blueway



This project will create a network of public access along the waterways of Buffalo. The “Buffalo Blueway” will enhance and expand waterfront access for all communities and will be strategically connected to existing sites and attractions. Along with constructing new access points, the project will add wayfinding and public art installations to guide and attract visitors. The project will also work to improve water quality, remove physical barriers, enhance the natural environment and improve safety. The Blueway will be promoted through a coordinated marketing program, including the development of a brand, a Blueway Trail guide and smartphone application. By connecting with a green jobs training program, the operations and maintenance of the network will catalyze economic and social impact for the community.

WHY IT'S IMPORTANT

The Buffalo Blueway is envisioned to become a backbone and connector of three of Buffalo Niagara’s most unique and important economic development assets—history, culture and nature. Many of Buffalo’s most prominent tourism destinations, historical sites, cultural institutions, and natural spaces are already along a navigable waterway. By connecting these prized assets, the Buffalo Blueway will spur tourism and revitalization, bring together communities, and improve the social well-being and health of local residents. By enhancing connections between Buffalo’s waterfront and Niagara Falls and combining the marketing power of these destinations with outdoor recreation, the Blueway would promote tourism and extend visitor stays.

Entrepreneurship opportunities for waterfront recreation, such as paddlesport rentals, will spread to sites with enhanced waterfront access. Spin-off impacts like this will benefit community-based business development through public-private-nonprofit partnerships that were effective in Buffalo Niagara Riverkeeper’s Rust to Blue initiative.

Increasing commercial activity along the waterfront will help revitalize surrounding neighborhoods. Meanwhile, the green infrastructure restored or enhanced by the initiative will improve water quality. In order to maintain the Buffalo Blueway, the project will provide workforce development “on-ramps” for under-employed or unemployed residents by connecting with the “Green Jobs” workforce training program. The Buffalo Blueway will provide communities that have been disproportionately affected by physical, social, and economic barriers with enhanced waterfront access and help promote healthy lifestyles.

The 6 interconnected goals of the Buffalo Blueway





PROJECT DETAILS

Buffalo Niagara Riverkeeper identified a number of existing sites that can be integrated into the Blueway. An additional 18 sites were identified as potential future access points to connect communities that are disproportionately cut off from the waterfront. This includes three high priority “anchor sites” that could be established in the short term. Opportunities exist on both public and private properties that lie along the Buffalo River, Scajaquada Creek, Union Ship Canal, Cazenovia Creek, and other connected waterways.

- A** Black Rock Canal Park
- B** Broderick Park
- C** 1660 Niagara Street Paddlesport Launch
- D** Buffalo State College Launch
- E** Delaware Park Launch
- F** LaSalle Park
- G** Times Beach Nature Preserve
- H** Michigan Street Bridge North
- I** Michigan Street Bridge South
- J** City Ship Canal
- K** Red Jacket Riverfront Park
- L** Riverbend
- M** Seneca Bluffs
- N** Harlem Road
- O** Cazenovia Park
- P** Outer Harbor

Blueway Access Points
 ● Proposed ● Existing
 ● Priority





Potential Partners and Leverage Opportunities

Planning, Design & Implementation Marketing & Promotion Workforce Training and Development "Green Jobs" Stewardship & Maintenance Other

LOCAL

AKAG Museum	✓	✓			✓
Buffalo Niagara Riverkeeper	✓	✓	✓	✓	✓
Buffalo Olmsted Parks Conservancy	✓	✓	✓	✓	
Buffalo Urban Development Corporation	✓				✓
City of Buffalo	✓			✓	
Center for Employment Opportunities (CEO) (workforce re-entry with DOL and DOC)			✓	✓	✓
County of Erie	✓			✓	
Erie Canal Harbor Development Corporation (Canalside, Outer Harbor)	✓	✓		✓	✓
Town of Grand Island	✓				✓
PUSH Buffalo			✓	✓	
Town of Tonawanda	✓				✓
Visit Buffalo Niagara		✓			
Town of West Seneca	✓				✓

STATE

Canal Corp	✓				✓
NYSDEC	✓				✓
ESD	✓	✓	✓	✓	
Health Department					✓
Office of Parks, Recreation and Historic Preservation	✓	✓		✓	✓

FEDERAL

US Army Corps of Engineers	✓				✓
US Coast Guard	✓				✓
Erie Canalway National Heritage Corridor	✓	✓			
US Environmental Protection Agency					✓
National Oceanic and Atmospheric Administration	✓	✓			✓
US Dept of the Interior	✓			✓	✓

OTHERS

American Canoe Association	✓				
American Rivers	✓				
Great Lakes Seaway Trail	✓	✓			
Niagara River Greenway	✓	✓		✓	✓
Various philanthropic	✓		✓	✓	✓
Great Lakes Seaway Trail	✓	✓			

IMPLEMENTATION MILESTONES

The Buffalo Blueway

Existing Conditions and Opportunities and Gaps Analysis

Conduct an Existing Conditions Assessment.

Complete an “Opportunity, Constraints & Gaps Analysis” to provide a baseline assessment for the WNY Blueway Guide and identify short and long term action items and projects through public engagement.

Blueway Trail Implementation Plan

Develop a “WNY Blueway Implementation Plan” to produce a waterfront development strategy using anchor sites. Planning process will engage the public and strategic partners to foster opportunities.

Update WNY Blueway Implementation Plan.

Physical Enhancements to Existing Sites

Enhance existing sites (seven currently identified) through capital improvements using partner organizations and leverage. Involves planning, design and construction.

Marketing & Promotion

Develop marketing plan and promotional campaign.

Roll out marketing campaign.

Develop “Blueway App” smartphone application.

Launch “Blueway App” smartphone application.

Expanding Access in Underserved Communities

Plan and design new anchor/priority sites.

Acquire new sites or easements.

Construct new priority sites (up to three).

Identify and enhance community connections to Blueway corridor.

Public Art and Wayfinding

Activation & Programming of sites using leverage from potential partners, and engaging entrepreneurs.

Operations, Maintenance & Stewardship

Commence Stewardship, Operations and Maintenance program and continue it.

BUDGET & IMPACT

Budget Request: \$10M

With significant catalytic investment through the Buffalo Billion program, the Blueway initiative will open the door to multiple local, regional and federal resources that, when leveraged appropriately, will enhance both the experience and multiply the impact of investment in numerous sectors. The list of potential project partners presents a diverse set of significant funding opportunities that a closely coordinated regional effort could secure and leverage to promote public access, public health, tourism, art and culture, social impacts, environmental restoration and job training. Studies throughout the country show the strong economic impacts that Blueways in similar areas have had on visitor spending on entertainment, accommodation, restaurants, and retail. The Blueway Initiative would also expand and develop the local workforce by connecting with a “Green Jobs” training program. In addition to the recreational services and economic benefits generated from a blueway system, clean and healthy waterways provide critically important habitat connectors for fish and wildlife allowing them access to key forage, breeding, and refuge areas.



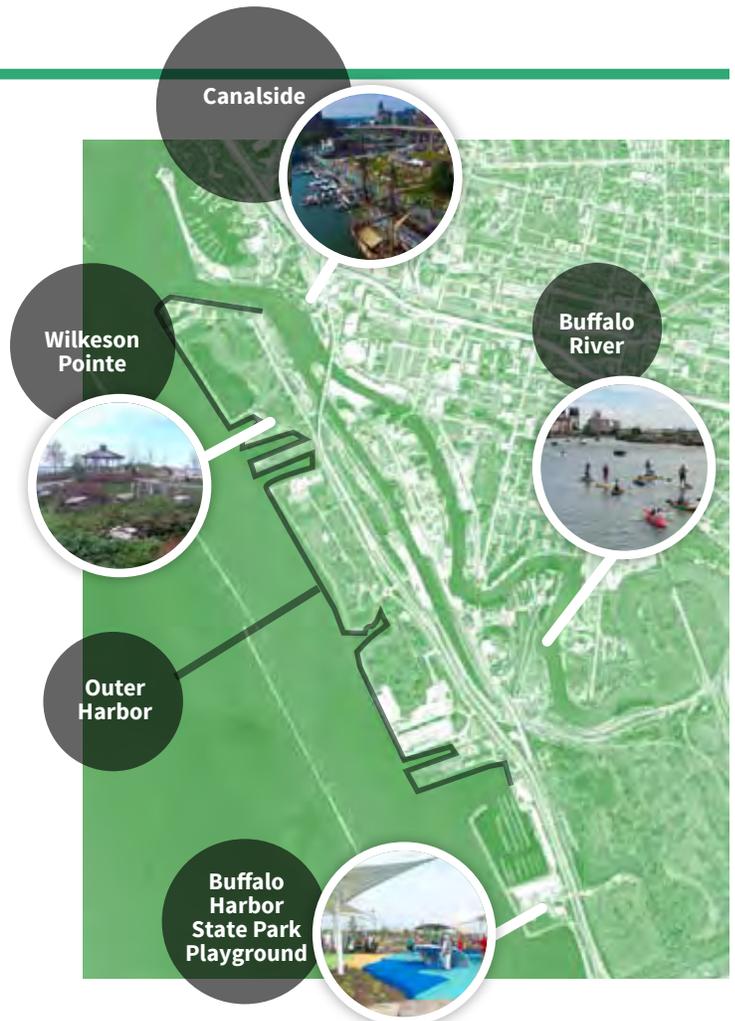
→ Outer Harbor Phase II



Buffalo Billion Phase II investments will provide rapid, visible, and usable improvements to the Buffalo Outer Harbor lands owned by Empire State Development, leveraging and expanding upon environmental remediation, parkland and nature preserve, and streetscape and trail access projects completed over the last decade and planned to be completed under the Buffalo Billion Phase I Outer Harbor Access & Activation Project. This effort—which would involve planning, design, construction, and in some cases site remediation—would look to grow the network of smaller activity nodes and relate these into an integrated chain of places for “shelter, sustenance, and camaraderie.” This evolving network of small places and facilities would be related to various access gateways to the Outer Harbor, such as the recently established ferry node to the north (connecting to Canalside) and the Ohio Street corridor and Buffalo Harbor State Park to the south (connecting to Valley and First Ward neighborhoods and to recreational waterborne access).

WHY IT'S IMPORTANT

Both the Inner Harbor along the Buffalo River and the Outer Harbor on Lake Erie have seen millions in investment—transforming Buffalo’s waterfront from a decaying post-industrial landscape to an attractive new setting for outdoor recreation and future uses. After over \$100M in state-funded infrastructure investments, Canalside is now one of the City’s premier gathering spots, attracting 1.5M patrons in 2016. Remediation of the Buffalo River and reconstruction of the Ohio Street corridor have spawned additional destinations upstream from Canalside—and kayaking the River has become a popular pastime for thousands. \$60M to reconstruct Fuhrmann Boulevard and create a comprehensive trail system, \$10M to establish Buffalo Harbor State Park, \$4M to remediate and create Wilkeson Point, and most recently, the establishment of ferry service to Canalside, attracted nearly 250,000 patrons to programming and events along the Outer Harbor in 2016. Ultimately, the region seeks to establish a seamless, inexpensive, and sustainable network of multiple recreational places with formal and informal connections between the Outer and Inner Harbor areas across the Buffalo River for residents and visitors to enjoy. On the Outer Harbor, the idea is to provide an open-space recreational counterpoint to the urban recreational opportunities of the Inner Harbor extending visits, securing public support for sustainable improvements and enhancing the appeal of the Inner Harbor for intensive residential and commercial development.



PROJECT DETAILS

Selected large portions of the Outer Harbor lands owned by Empire State Development continue to be constrained from full public use because of soil contamination associated with landfilling activities that originally created these lands around the turn of the 20th century. Therefore, funds may be used to facilitate the creation of these new places by capping and remediating these contaminated areas to prevent exposure to users. Similar efforts could also involve environmental engineering measures to improve water quality in Outer Harbor water inlets (e.g., adjacent to the Michigan and Seaway Piers) to support fishery resources and sport fishing.

The initiative would also involve planning, design and construction of a network of activity nodes—on lands owned by Empire State Development and in instances on adjoining public rights-of-way—consisting of places to rest, socialize, take in the view, and obtain food and drink. Built place-making features could involve seasonal improvements such as open-air tent structures to house food and beverage operations and gathering places; smaller, but permanent buildings to house leasable space for restaurants; and interpretive water-viewing structures, such as a possible “Community Porch” or groupings of “Lookout Chairs” or “Lifeguard Towers” to enable views out over the Outer Harbor breakwall.



IMPLEMENTATION MILESTONES

Outer Harbor Phase II

Procure planning and design team.

Engage a public planning process to best identify a possible network of nodes and to scope the nature of design, construction, and environmental remediation necessary to realize these components.

Depending of project scope developed, undertake design and permitting processes to allow release a construction bid package.

Begin construction period.

BUDGET & IMPACT

Budget Request: \$15M

The project would build-upon and complement recent state investments in Buffalo Harbor State Park, Canalside ferry service, and upcoming Buffalo Outer Harbor Access & Activation Project.

The project provides opportunities to possibly leverage state investment with other state, federal, and foundation funding programs for coastal restoration, water quality, and possibly fisheries improvements.

→ The Erie Street Waterfront Connection



This project reconstructs and realigns Erie Street in downtown Buffalo from Main Street to the waterfront, creating a vibrant, unified public space with enhanced waterfront access for residents and visitors. The Erie Street Waterfront Connection will consolidate existing, unconnected public spaces into a single linear public space along a shared, multi-use pathway. This reinforced pedestrian waterfront connection will involve enhancing the existing meandering path, extending and greening the streetscape, improving the underpasses below the Skyway and I-190, and adding safety features and amenities. A feasibility study will be conducted to evaluate the appeal of different design and routing options, and will include a significant public consultation component, asking the community for input on this vital public waterfront connection. The Erie Street Waterfront Connection will become a vital east-west corridor that links the Erie Community College campus and key destinations in this historic district to the waterfront, creates stronger linkages between adjacent parks, introduces new student-oriented park space, improves the public setting surrounding Erie Community College, and encourages private sector investments.

WHY IT'S IMPORTANT

While Erie Street once provided an important historic link to the waterfront, it has long been compromised by poor public realm design, street realignment that eliminated the direct waterfront link, and multiple highway overpasses which constrict important views to the water. Furthermore, the NFTA bus terminal has encroached on the adjacent park space which is often used as bus layover space, compromising what otherwise could be a centrally-located public park. Vehicle congestion and idling here detracts from the setting, and physically separates the Erie Community College city campus from Fireman's Park—the start of the new Erie Street Waterfront Connection. Despite Erie Community College's status as a signature downtown institution, these conditions create an uninviting campus setting for the 13,000 students enrolled at the college. Connecting the fragmented parks and public spaces to a unified and vibrant Erie Street Waterfront Connection will transform the setting in this part of downtown while revitalizing the waterfront and surrounding community.

Establishing a clear linear public space along the Erie Street corridor will help to connect investments and activity in downtown to the waterfront



IMPLEMENTATION MILESTONES

The Erie Street Waterfront Connection

Complete the Erie Street Pedestrian Connection Study

Implement a shared multi-use path for pedestrians and cyclists.

Explore the reconfiguration of Swan Street west of Pearl Street.

Unify the overall Pedestrian Connection design and link existing park spaces.

Incorporate a distinct streetscape treatment along the entire Erie Street corridor.

Introduce new public art installations.

Create the Erie Street Waterfront Connection

Extend the Erie Street Pedestrian Connection to the waterfront.

Provide a pedestrian and cyclist crossing with activated signals across Franklin Street.

Incorporate a consistent streetscape design into the entire Erie Street Pedestrian Connection.

Implement underpass improvements below the Skyway and I-190

Install pedestrian oriented lighting, to be left on at all times of day, with strategically placed mirrors to brighten the space.

Introduce generous sidewalks, dedicated cycling facilities, and public art.

Install a screen or wall to separate pedestrians on the path from foreboding open spaces under the highways.

Construct new park space, restaurants or retail (either permanent or temporary).

Consider improvements to Bingham Street to address pedestrian safety concerns for between Erie Street and West Genesee.

BUDGET & IMPACT

Budget Request: \$10M

Investments made in the infrastructure and public realm in the Erie Street Waterfront Connection will have numerous, far-reaching impacts for downtown Buffalo and the Buffalo Niagara region. Along with providing the funds needed for construction, these investments will also be used to complete the planning, design, public engagement, and review processes to ensure the project is effective, environmentally sound and grounded in community values. These investments will work to improve the connection from Buffalo's downtown to the waterfront to encourage private sector redevelopment that addresses student and residential needs, including restaurants and entertainment.





→ DL&W Canalside-Cobblestone



This project extends the Metro Rail service from Main Street into the existing Delaware, Lackawanna and Western (DL&W) Terminal along the Buffalo River which would be redeveloped as a destination transit station unlike any other in Buffalo. Reactivating the mostly vacant NFTA-owned DL&W Terminal as a transit hub would enhance public access to some of the region's most popular attractions in the Canalside and Cobblestone Districts which have transformed from blighted landscapes into premier waterfront destinations over the last few years. The project will also unlock development opportunities within the DL&W Terminal, as well as other key assets and underutilized properties nearby. Redevelopment plans also include reactivating the public realm along South Park Avenue and the Shoreline Trail and connecting them with the terminal. As part of the project, the current Special Events Station would be decommissioned and the Erie Canal Harbor Station would be rebranded as Canalside Station. The NFTA is ready to complete the environmental reviews and preliminary design for redeveloping and extending Metro Rail service to the DL&W terminal.

WHY IT'S IMPORTANT

Just a few years ago, the land around that is now the Canalside/Cobblestone Districts was underused and blighted. Since then, significant public infrastructure investments resulted in nearly \$200M in private investment in the Canalside/Cobblestone Districts making the area one of the premier waterfront destinations in NYS. Along with the significant investment, there has been a rapid expansion of special events along the waterfront including concerts, sporting events and other recreation activities. Reactivating the DL&W Terminal, which sits mostly vacant amidst this swell of new development and waterfront activity, would build on this momentum while making these destinations more easily accessible to the broader public. The reactivated station will generate public interest in the terminal and surrounding area, encourage Metro Rail ridership, and facilitate continued redevelopment of the Canalside, Cobblestone, and Old First Ward districts. The project also creates direct, weather-protected connections between the DL&W Terminal, the Key Bank Center, HarborCenter, and attached parking ramps to benefit the thousands that use Metro Rail to get to and from downtown events. Opening up the DL&W Terminal ground level to the Shoreline Trail and Buffalo River offers additional recreational opportunities for the million+ people that come to Canalside each year for a truly world-class entertainment experience.

Economic Impact of the Investment



The cost of building out the 85,000 square feet of DL&W second floor terminal space depends on the type of use. Assuming \$150 per square foot, **redevelopment could result in a private sector investment of \$12,750,000 for initial construction**, which would create jobs and spinoff economic impact and tax revenues.

Developing the nearby surface parking controlled by the Buffalo Sabres could have the potential to generate **nearly \$165M in private development by 2025**, which would create jobs, spinoff economic impacts and tax revenues.

A portion of the parking fees generated by a new parking structure could help **finance further transit and/or access enhancements** in the area.

Public transit infrastructure investments **create economic opportunities, save households money, reduce congestion** and provide **environmental benefits**.

Every **\$1 invested in public transportation generates approximately \$4** in economic returns.



A view of the redeveloped DL&W Terminal from the Buffalo River. This shows a public market on the upper level, Shoreline Trail access from the ground level, and floating docks for recreational watercraft.



Improvements along South Park Ave - the pedestrian connection to Key Bank Center, reconfiguration of South Park Ave, access to the Terminal's 2nd floor, daylighting of upper floor windows and security fencing enhancements.



Improvements to the interior ground floor - a new station platform with vertical access to the upper level, added seating, and daylighting of the ground floor with operable windows to allow access to/from the Shoreline Trail.

IMPLEMENTATION MILESTONES

DL&W Canalside-Cobblestone

The Canalside-Cobblestone Planning and Feasibility Study (Complete).

Request proposals and select consultant for environmental reviews and preliminary project design.

Complete the required environmental reviews and preliminary project design.

Apply for U.S. Department of Transportation TIGER funding.

Request proposals and select consultants for detailed project design.

Secure federal and NYS funding and private sector investments.

Request proposals and select consultant for construction.

Start and complete project construction.

BUDGET & IMPACT

Budget Request: \$20M

The environmental review costs are estimated to be \$250,000 to \$500,000. The NFTA drafted a Request for Proposals for environmental reviews and will soon have a firm investment request for this step of the process. The construction of light rail station improvements is estimated to cost \$9.5M. Additional pedestrian corridor costs, road work, and construction contingencies may be added to enhance the project. Total design costs will be contingent upon construction costs.

Federal transportation investment in the project can cover up to 80% of the costs with matching funding from the NFTA, NYS, or local sources. TIGER funding could provide between \$18M and \$22M to support the project with a required 20% or approximately \$3.5M to \$4.5M match. An investment of Buffalo Billion funding to support the required match for this funding would allow the project to pursue private sector investment and other public sector incentives.

Private sector investment is critical for completion of the full project. Private sector investment could come in the form of capital to rehabilitate the second floor space, lease payments to NFTA as part of a joint development project, or naming rights for the station and development. The direct economic impact of the buildout of the 2nd floor DL&W space alone is estimated at \$20M. Station construction will also enhance the value of construction on nearby surface parking lots, which is estimated at approximately \$120M.



→ Light Rail Extension



This project extends the current Niagara Frontier Transit Authority (NFTA) Metro Rail line into Amherst. The light rail extension will connect all three State University of New York at Buffalo campuses and the Buffalo Niagara Medical Campus to the metro rail. It would also connect the Metro Rail to significantly more households, jobs, and retail options while providing a convenient transit connection from downtown destinations, like Canalside and Key Bank Center, to the large concentrations of employment and housing in Amherst and Tonawanda. The extension will provide seamless and efficient connections to NFTA-Metro's extensive bus-based transit network, thereby enhancing transit service to and from the City of Buffalo, Riverbend, Tonawanda neighborhoods, Amherst retail and office spaces, and key points north. The project will increase transportation options for many residents and workers in areas that currently have the region's highest concentrations of transit riders, and are projected to experience the most growth in population and jobs.

WHY IT'S IMPORTANT

The project corridor already boasts the highest transit ridership rates across the region, with over 30,000 weekday riders using NFTA service and 24,000 riders on the University at Buffalo's Stampede each day. Improving the efficiency and frequency of transit along this corridor would further increase ridership. The area within ½ mile to a mile of the proposed corridor contains nearly 20% (107,000) of the region's total jobs, and 25% (63,000) of the region's office, healthcare, education, and government jobs—industries with higher rates of transit ridership and tie into Buffalo Billion investment strategies. Jobs in these employment sectors are forecasted to grow by 16% between 2015 and 2040, with the increase in office employment in the corridor reaching 38% by 2040. In addition, the projected household growth in the project corridor is 6.6%, or 5 times the regional rate of household growth (1.3%).

Why locate light rail extension in this corridor?



Ridership

NFTA Service

Over 30,000 weekday riders



UB Stampede

24,000 student riders each day



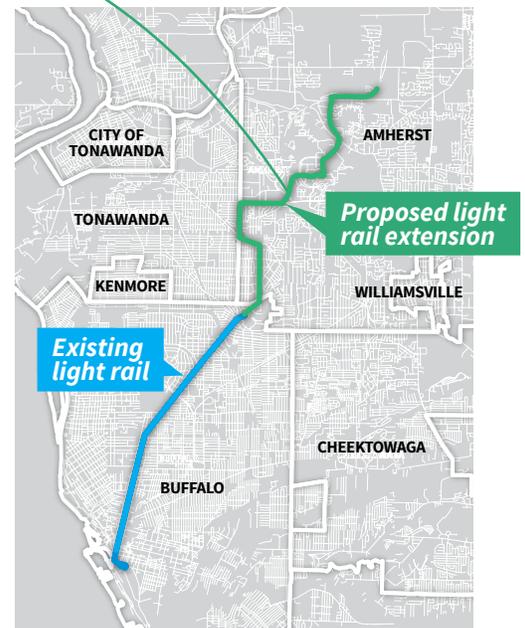
Connecting people and jobs

Corridor is home to nearly 20% of region's total employment

...and 25% of the region's healthcare, office, education, and government employment.

Household growth

6.6% projected growth in the corridor (5 times the regional growth rate)





COMMUNITY SUPPORT

Key findings from recent local surveys

Employers feel a need to improve transit access for employees.

Nearly **40%** of Buffalo Niagara Partnership members feel adequate transportation is the biggest barrier to job access in the region.

The biggest transportation problems the region faces are transit-related.

2016 Survey of residents

Two biggest problems with the region's transportation:
reliability & connectivity

Expanding light rail is one of the most important approaches to solving the region's transportation problems.

2016 Survey of residents

Expanding light rail
ranked the 2nd most important solution to the region's transportation problems.
Residents of the Towns of Amherst and Tonawanda ranked light rail expansion higher than other Erie and Niagara County residents.

Despite the current limitations of public transit, residents had a positive impression of the quality of the existing service.

2016 Survey of residents

NFTA-Metro system
ranked higher in terms of quality than any other transportation amenity including local roads, bicycle lanes, sidewalks, and highways.

Proposed corridor connects the City and its neighboring towns

PROJECT DETAILS

The proposal for the Niagara Falls Boulevard Light Rail Extension is the result of over three years of planning and community engagement that aimed to find a locally preferred option for connecting Amherst and Buffalo by public transportation. Many alternatives were considered along the way, such as bus rapid transit lines and simply enhancing the existing NFTA bus service. Through the process, light rail transit was selected as the preferred mode, and the Niagara Falls Boulevard corridor was chosen as the preferred route, receiving the highest level of public support.



Connecting students and suburban residents to Downtown

This rendering shows the proposed look and feel of a new light rail stop at the University at Buffalo's North Campus in Amherst. These stops would provide college students with convenient access to downtown Buffalo, and points along the way. Conversely, it would also provide quicker access for downtown residents to major retail and employment centers in Amherst.





Projected Economic Impacts

The dollars and sense of investing in the light rail extension



Attracting young adults

66% of millennials say that access to high quality transportation is one of the top three criteria they weigh when deciding where to live.^v



Enhancing walkability

By adding transit stops and spurring development, the light rail extension will make areas along the corridor much more walkable. Homes, retail and office spaces in walkable areas retain higher property values which help increase tax revenues and relieve the need for tax hikes.^{vi}



Increasing property values and tax revenues

The expected **\$310 million increase in property values** in the transit corridor would **raise property tax revenues by 32%** for the City of Buffalo and Town of Amherst, if the light rail extension were built.



Boosting retail sales and tax revenues

The light rail extension could **add 1.3 million square feet of retail** space leading to **over \$19M in new sales tax revenue** each year (~\$8.7M for NYS and \$10.3M for Erie County).



Redeveloping vacant and underused properties

864 acres of vacant or underutilized parcels near the light rail extension **could potentially be developed or redeveloped**. This would easily fill the projected demand of commercial and residential land within the corridor - an expected total of **\$1.7 billion in increased development**.



Connecting homes and jobs

If the light rail extension is constructed, **the total number of workers who both live and work in areas with access to the Metro Rail corridor would nearly double**.



Reducing costs for households in the proposed transit corridor

Individuals who decide to commute via public transportation rather than by car **save an average of over \$9,000 a year**. These **savings could be extended to the 9,942 residents** that would both live and work in the corridor.



Reducing the costs and burdens for vehicle-related transportation needs

The light rail expansion will **limit the need for building new roads** while reducing vehicle miles traveled and the corresponding congestion and wear and tear on regional roadways, which will **curb vehicle-related infrastructure costs**.



KEY PARTNERS & ROLES

Towns of Amherst and Tonawanda

The towns control land use and infrastructure in the project area. The NFTA will ask for the towns' support in construction of these stations, track, and track bed with resources and through easements and other necessary legal agreements.



University at Buffalo

As shown in the map, the recommended Locally Preferred Alternative is anticipated to include at least two and as many as four NFTA Metro Rail stations on the University at Buffalo North Campus (see page 50). The NFTA will ask that University at Buffalo support construction of these stations, as well as related improvements to rights-of-way, street connectivity and signage, by providing financial resources and through easements and other necessary legal agreements. The project was conceived in a way that would replace the need for University at Buffalo's significant annual outlay for its own public transit system—the Stampede. In return, the NFTA will ask that University at Buffalo enter into a college and university pass program that would allow students, faculty, and staff to access the NFTA-Metro system including Metro Bus and Rail at a significantly discounted rate. This funding would support the annual operating costs of the project.



New York State

NYS will be a key stakeholder for project funding, right of way and infrastructure control, and the laws, rules, and regulations that will facilitate private-sector investment and involvement in the project. NYS would provide the initial funding needed to complete the National Environmental Policy Act and State Environmental Quality Act process. Upon completion of these documents, NYS would provide the NFTA support for the initial 30% of non-Capital Investment Program Grant project funding. As NYS also controls right of way and infrastructure that will be impacted by the project, contributions by NYS to infrastructure modifications that are necessary and attributable to the project can count towards this project funding.



Federal Transit Administration

Under the NFTA's investment proposal, the Federal Transit Administration's Capital Investment Grant Program will be a primary investor in the project. The Federal Transit Administration's Capital Investment Grant program can support up to 60% of the capital cost of light rail extension projects. Annual appropriations are subject to a scoring process that ranks projects nationwide. Based on the planning work to date the NFTA's anticipates a score from the Federal Transit Administration Capital Investment Grant program that will justify full investment in the project by the program. Once full program investment has been appropriated, the NFTA can enter into a Full Funding Grant Agreement with Federal Transit Administration and begin construction on the project.



IMPLEMENTATION MILESTONES

Light Rail Extension

Present the Locally Preferred Alternative to NFTA Board of Commissioners.

Vote to approve the Locally Preferred Alternative with the region's Metropolitan Planning Organization—the Greater Buffalo Niagara Regional Transportation Council.

Secure funds from NYS for Environmental Review and Preliminary Design.

Enter into Project Development.

Conduct environmental reviews and complete preliminary design.

Secure 30% of funding for construction.

Enter into final design and engineering.

Complete final design and engineering.

Start Construction.

BUDGET & IMPACT

Budget Request: \$5M

The NFTA requests initial project funding of \$5M for the completion of the National Environmental Policy Act and State Environmental Quality Act documents required before project engineering can progress. Based on the results of these processes and the preliminary design, the project will result in an estimated \$600M federal investment with a corresponding \$600M state and local match. Up to 20% or \$120M of the state and local match can be state or locally controlled federal transportation funds. The Federal Transit Administration's Capital Investment Grant Program will likely support up to 50% of the capital cost of light rail extension project. Additionally, the light rail extension is dedicated to expanding economic opportunity for Buffalo-based companies, along with women-owned, minority-owned and disadvantaged business enterprises who are anticipated to garner at least \$200M in contracts through the project.

This investment of new federal funding into the region would spur millions in direct, indirect, and induced impacts on output over the life of the project. The Metro Rail Extension is expected to result in approximately 8.4M square feet of transit-oriented commercial and residential space worth a total assessed value of approximately \$1.7B. Existing properties are expected to see their cumulative assessed value increase by \$310M. As a result, extension of Metro Rail is expected to result in \$61.5M in additional property tax revenues annually for the City of Buffalo and Town of Amherst, 32% more than without the project. The retail development linked to the project would lead to approximately \$8.7M in sales tax revenues for NYS and \$10.3M in sales tax revenues for Erie County.

→ Buffalo Train Station

Budget Request: \$25M

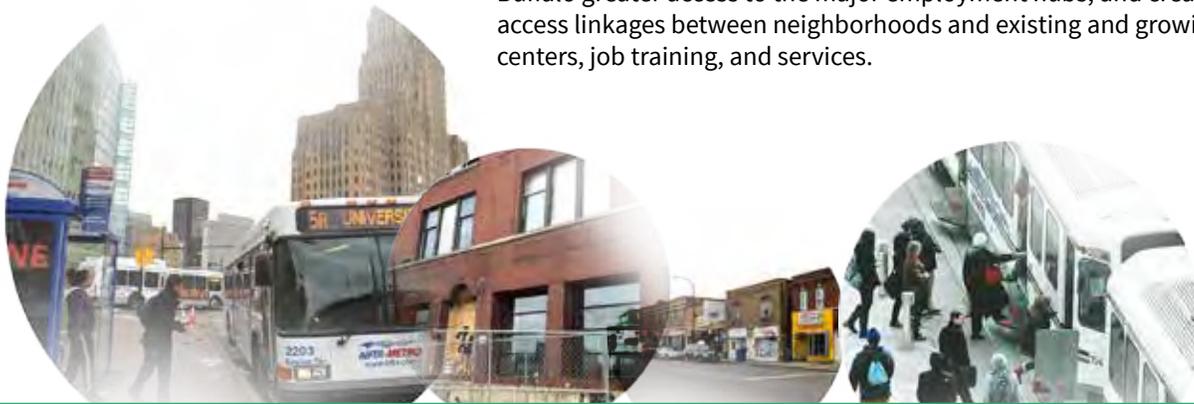
Funds have been allocated for a new and enhanced Buffalo Train Station to serve the Empire Corridor, a state-subsidized Amtrak route connecting Buffalo with New York City, Albany, and Toronto. The first step in the process is to begin a full and formal review of options for a new station that will replace the current Exchange Street Amtrak station including a potential new location that better fits the needs of the city today, reasserting the role of public transportation in Buffalo. A formal analysis of alternatives will jump start the project and allow for stronger applications for follow-on federal transportation funding.

The current small, nondescript Amtrak Exchange Street Station is deteriorating and overwhelmed by the Thruway and its elevated on-and-off ramps. It is unfit as the gateway to New York's second largest city, and demands replacement. Meanwhile, the Thruway viaduct, with its elevation, noise, visual blight, and physical breadth, serves as a barrier to optimizing nearby development. Further, the local transit system does not share any direct connection with regional and intercity transportation. Constructing a new Train Station adjacent to new development projects, local transit and bus routes would further the billions in state funding already spent in the area, and help reoccupy nearby private buildings. America's most successful and sustainable cities are built on superb public transit. It is an essential ingredient to attract a talented workforce allowing many small, supportive businesses to be clustered in a small area.



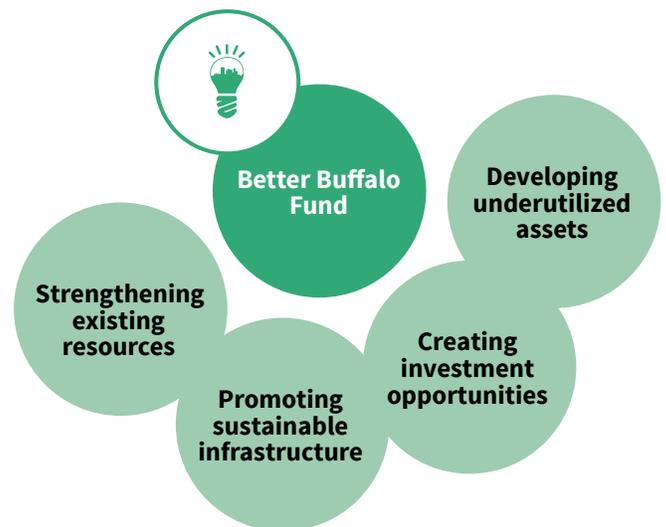
➔ Better Buffalo Fund Phase II

Building on the success of Buffalo Billion Phase I’s signature smart growth initiative, the Better Buffalo Fund (see pages 26-27), an additional investment will continue the transformation of the City’s neighborhoods and facilitate economic development. The Better Buffalo Fund is a grant and revolving loan fund dedicated to projects that encourage density and growth along transportation corridors and revitalize neighborhood commercial districts. The fund is positioned to create vibrant, mixed-use, high-density neighborhoods; is focused on giving all residents of the City of Buffalo greater access to the major employment hubs; and creates stronger transit access linkages between neighborhoods and existing and growing employment centers, job training, and services.



WHY IT’S IMPORTANT

The Better Buffalo Fund was developed based on the region’s smart growth strategy focused on strengthening existing resources like employment hubs and anchor institutions; developing underutilized assets like historic buildings; promoting sustainable infrastructure that reduces municipal spending; and creating reinvestment opportunities in urban centers to reverse decades of neglect and create equity. It was also developed to build connections among jobs, housing and public transit, and create job opportunities close to where people live. Finally, it addresses the need to attract young people who want to live in vibrant places with affordable housing, walkable neighborhoods, transportation options, and a variety of amenities, services and recreational options.



PROJECT DETAILS

The Better Buffalo Fund is made up of two complementary initiatives— **Buffalo Main Streets Initiative** and **Transit Oriented Development**.

A program modeled on the New York State Main Street program and administered by NYS Homes and Community Renewal, the **Buffalo Main Streets Initiative** is focused on the revitalization of neighborhood commercial districts. With oversight from a non-profit program administrator, Buffalo Main Streets Initiative grants assist building owners with the preservation and creation of housing units, and upgrades and restoration of commercial areas in established business corridors that are pedestrian-oriented and comprised of traditional mixed-use buildings. To assist these non-profits, extensive technical assistance is offered to select organizations to prepare them for future funding rounds. Technical assistance includes partnership building, outreach, identifying market opportunities, and building conditions assessments to ensure the non-profits have the tools to successfully implement a Main Street program.

The **Transit Oriented Development** program is administered by Empire State Development and provides gap financing (predominately in the form of low-interest loans) for adaptive reuse or infill capital projects which promote dense development (housing, employment, and retail) within 1/2 mile walking distance of highly-used transit stops; encourage the use of multi-modal transportation, and stimulate pedestrian activity through retail and neighborhood-oriented businesses and services, quality public spaces, and accessible walkways.

Better Buffalo Fund is made up of two complementary initiatives.

BUFFALO MAIN STREETS INITIATIVE



Modeled on the NYS Main Street program and administered by NYS Homes and Community Renewal, assists building owners with the preservation and creation of housing and renovation of commercial properties in established business corridors.

TRANSIT ORIENTED DEVELOPMENT



Provides gap financing for adaptive reuse or infill capital projects which promote dense development (housing, employment, and retail) within 1/2 mile walking distance of highly-used transit stops.

IMPLEMENTATION MILESTONES

Better Buffalo Fund Phase II

- Process continues annually as funding is available.
- Offer technical assistance to non-profits.
- Launch a funding round with extensive public outreach and project guidance.
- Announce awards and hold press event.
- Debrief with applicants; hold kick off meetings with awardees.

BUDGET & IMPACT

Budget Request: \$10M

In the first two Better Buffalo Fund rounds, Empire State Development, through a partnership with the City of Buffalo and NYS Homes and Community Renewal, connected with nearly 400 representatives from organizations all over the city. As a result of this outreach, the program received 91 applications and invested \$20,852,542 in 35 projects leveraging \$365,600,752 in matching funds and contributing to the renovation of 550 residential units and 190,000 square feet of commercial space.



→ Bethlehem Steel Site Redevelopment



This project continues efforts to transform the 1,000 acre former Bethlehem Steel site in Lackawanna into a modern industrial park attracting new and growing companies to this once vibrant property and community. The next phase of the project will remediate the 160 acres of brownfield property already targeted for purchase by Erie County through the NYS Brownfield Cleanup Program allowing developers to reactivate the site. Additionally, Erie County is requesting funding to purchase additional parcels on the Bethlehem Steel site. These added parcels will allow for a more comprehensive Master Plan and Generic Environmental Impact Statement. The project also includes public infrastructure improvements to make the property shovel ready for development and will extend the Erie County Shoreline Trail along NYS Route 5 to connect Buffalo's Harbor with Woodlawn Beach State Park in the Town of Hamburg.

WHY IT'S IMPORTANT

The Bethlehem Steel Site is the largest brownfield in Buffalo Niagara and presents a one-of-a-kind opportunity to push Buffalo's resurgence forward. The site has access to critical transportation assets nearby including: major local roads, interstate, rail, shipping and multi-use trails, making it ideal for revitalization. This site is also located in one of poorest census tracts in Erie County, so job opportunities are critical for nearby residents. Advanced manufacturing, medium and heavy industrial companies are finding it more difficult to locate developable land near urban population areas in the region. Local municipal governments are shying away from development that pushes industrial sprawl into rural areas and are focusing on utilizing and improving existing public infrastructure. Transforming this former industrial brownfield into a modern, well-designed industrial park will foster job creation in key industries for regional growth. This job creation, coupled with a regional commitment to workforce development that engages diverse and vulnerable populations, are the ingredients to an inclusive economic resurgence in the region. The goal of redeveloping this site is not just to improve a challenging brownfield, but to renovate a landmark and simultaneously build an economy with shared opportunity for all.

BETHLEHEM STEEL AT ITS PEAK

20,000+
workers

on site every day



BETHLEHEM STEEL TODAY

Less than

200
workers



Investment impacts

Create new, sustainable jobs in an urban, densely populated area.

Connect nearby residents to high-paying jobs.

Increase tax revenue for City of Lackawanna.

Lower tax rates for residents and industry.



IMPLEMENTATION MILESTONES

Bethlehem Steel Site Redevelopment

Completed Phases

- Completed Phase I and II of rail relocation.
- Completed waterline to serve Welded Tube.
- Phase I of Shoreline Trail design is complete.

Future Projects

- Acquire sites through land purchase Phase I.
- Complete Phase II of rail construction.
- Construct Shoreline Trail.
- Complete design of Dona Street extension.
- Construct Dona Street extension.

Additional Phases

- Soil cover to complete remediation of Phase I purchase.
- Complete Phase II and III - construct access road and utilities.
- Acquire sites through land purchase Phase II.
- Complete Shoreline Trail Phase II.

BUDGET & IMPACT

Budget Request: \$10M

The approval of Buffalo Billion Phase II funding has the potential to unlock millions of dollars in other funding. The Bethlehem Redevelopment Project received \$4.4M from NYS Department of Transportation through the Multi-Modal program for the first phase of the rail relocation project. Erie County also committed nearly \$8M in County Capital Bond funds for additional infrastructure work. However, Erie County cannot fund the balance of this project by itself. With assistance from NYS, Erie County stands prepared to commit \$500,000 in HUD Community Development funds, and seek approval of additional County Capital Budget Bond funds for further infrastructure projects. The County would also apply to National Grid’s Brownfield Redevelopment Program upon purchase of the property from Tecumseh Redevelopment. Funds from this program could garner up to \$300,000 for planning and engineering of all aspects of the industrial park development including all utility service, access infrastructure and required environmental reviews. The Erie County Industrial Development Agency is also considering providing funds for this project.



→ Downtown Revitalization Initiative

Buffalo Niagara’s small cities, suburban towns and quaint villages will rally around a shared vision to transform their communities into vibrant places that align with the region’s economic development strategies. Based on the vision, goals and process of Governor Cuomo’s 2016 Downtown Revitalization Initiative, Empire State Development will award \$10M to two municipalities outside of the cities of Buffalo and Niagara Falls to transform their downtowns into places ripe for economic opportunity and attractive to a dynamic workforce.



WHY IT’S IMPORTANT

Buffalo Niagara has a variety of traditional downtowns in its cities, towns and villages. These downtowns typically follow a pattern of compact, mixed-use, high-density development that can accommodate a variety of uses including housing; are anchored by natural and built community assets; maintain historic building stock; and enjoy pedestrian friendly set-backs, and heights creating a unique environment with historic character and a strong sense of place and walkability. But, decades of sprawling development patterns resulted in disinvestment in these downtowns. Buffalo Niagara realizes the value in reinvesting in these city, town and village centers as a placemaking strategy to combat the effects of inefficient land use, create accessible jobs centers, and attract and retain a talented workforce. Just as the region is strengthening existing assets, focusing on walkability and multi-modal transportation, building sustainable infrastructure, creating job clusters, and investing in housing in its urban core, the same smart growth principles will be employed in the region’s suburbs to ensure sustainable land use patterns that accelerate economic growth.



PROJECT DETAILS

Communities will be given the opportunity to present their priorities to Empire State Development and construct an application that envisions a prosperous downtown grounded in smart growth strategies and unified and endorsed locally. The program will build on communities with recent sustainable investments in their downtowns and demonstrate growth potential. Strategic investment plans will identify key projects and will need to demonstrate readiness to proceed and concrete action steps to ensure swift implementation.

INFORMATION SESSION



Provide information session about the program.

INTERVIEWS



All applicants participate in an interview process where they expand on their written application by presenting on three questions.

Why do you think your community is ready for this opportunity?

What makes your community unique?

What are your big ideas for the \$10 million?

REVIEW COMMITTEE

The review committee ranks applications based on the following criteria:



Project Boundaries and Size, Past Investment and Future Investment Potential, Job Growth, Attractiveness of the Downtown, Policies to Enhance Quality of Life, Local Support, Capacity to Execute and Equity, Alignment with the Western New York Regional Economic Development Council Strategic Plan



MUNICIPALITIES CHOSEN

IMPLEMENTATION MILESTONES

Downtown Revitalization Initiative

Provide extensive outreach and hold information session.

Applications are submitted.

Committee reviews proposals and holds applicant interviews.

Committee recommends and approves two communities for the Downtown Revitalization Initiative awards.

Communities move ahead with additional planning activities as needed.

Communities begin to implement actions plans.

BUDGET & IMPACT

Budget Request: \$20M

State funds will be used to secure additional public and private funds within downtown neighborhoods.

Communities will be chosen that present a plan for maximum job growth within the downtown through the existence of job-creating projects and initiatives and new and expanding employers with diversity in job opportunities.

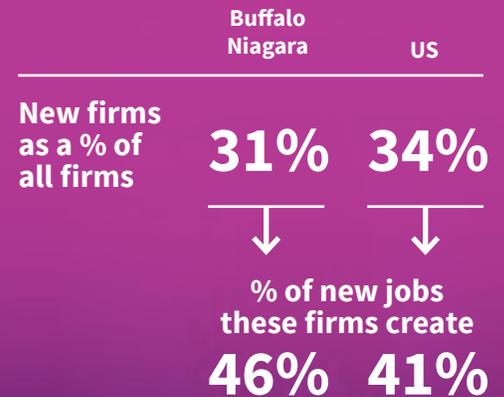
Innovation & Entrepreneurship



Why the strategy matters

Buffalo Niagara needs to catalyze innovation to spur entrepreneurial activity. The region is beginning to rebound after decades of native out-migration (particularly among adults with high levels of education), minimal venture capital activity, and poor net small business growth. In recent years, the region is gaining momentum in a diverse range of Science, Technology, Engineering and Math (STEM)-intensive industries that drive innovation. Firms in these industries tend to employ more workers and pay higher wages. Young firms now account for half of all new jobs created in the region. There is also opportunity in the region's educational institutions that attract substantial resources for research, but struggle to translate that research into commercial activity.

In 2014, almost half of all new jobs were created by young firms.



Source: U.S. Census, Center for Economic Studies, Business Dynamics Statistics, 2014.

What needed to be done

The Plan proposes to improve regional innovation performance and attractiveness to entrepreneurs and investors. It will work to generate more start-up enterprises by facilitating applied R&D and enhance mentoring and other supports for aspiring entrepreneurs; supporting early-stage firm growth by strengthening networks for collaboration;

facilitating increased venture funding through structures and incentives that make it easier for funders to identify, assess and invest in market-viable businesses; and providing inclusive opportunity through minority- and women-owned business entrepreneurship training and tailored support to ensure opportunities extend to all segments of the region's population.

A LOOK AT PHASE I -----> WHAT'S NEXT IN PHASE II

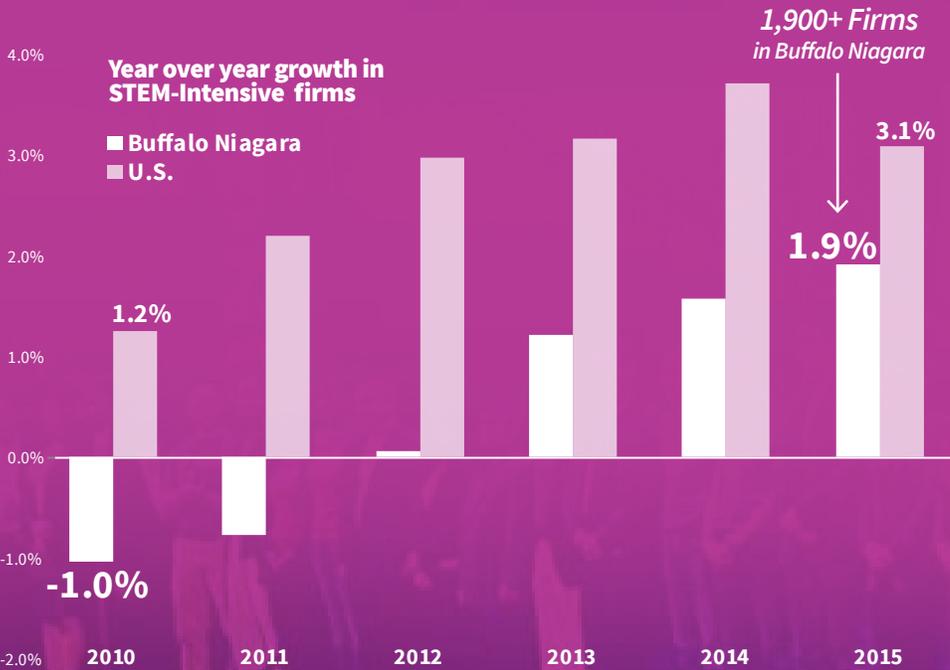


43North
Visual Effects Program
Buffalo Information Technologies Innovation & Commercialization Hub



43North Phase II
The Innovation HUB

The number of STEM-Intensive firms in Buffalo Niagara is growing—catching up with national growth trends.



Source: NYS Department of Labor, Quarterly Census of Employment and Wages, 2000-2015; Brookings Institute.*

Buffalo Niagara outperforms the U.S. in R&D per capita, but lags in patent production.



Source: National Science Foundation, 2014; U.S. Census, 2015; U.S. Patent and Trademark Office, 2015; U.S. Bureau of Labor Statistics, 2015; NYS Department of Labor, 2015.

STEM-Intensive firms pay higher wages on average...

Average Annual Wage (2015 dollars)

\$68,896



STEM-Intensive Industries

\$45,267



All Buffalo Niagara Industries

Source: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; Brookings Institute.*

...and employ more workers.

Average Employment per company

STEM-Intensive



All Industries



U.S.



* "STEM-intensive industries" or "Advanced Industries" are defined by Brookings Institute as industry groups (4-digit NAICS classifications) that are R&D and STEM-worker intensive. More information available at <http://www.brookings.edu/about/programs/metro/advancedindustries>.



43North

43North is the most ambitious start-up competition ever unveiled in the United States. The competition is designed to systematically generate new business ventures in Buffalo Niagara, support early-stage firm growth, and attract additional venture funding to the region. With \$5M in cash prizes available annually, including a top award of \$1M, 43North turns some of the best new business ideas from around the globe into a reality for the region.

Lead Organization

43North

Phase I Buffalo Billion Investment

\$30M

Major Milestones Accomplished

Completed three successful competition rounds and named 29 winners.

Developed sponsorship-based relationships with dozens of local and national organizations.

Secured funding for the next competition round.

As of October 2016, 22 months into interfacing with their portfolio of 21 companies, nearly \$15M of additional capital was invested in 43N companies and the valuation of the portfolio increased by over 300%. These start-ups are collectively responsible for over 60 full-time jobs based in Buffalo Niagara. Eight of the startups transitioned from pre-revenue to revenue-generating companies.

Actions Planned

Plan and execute Round 4 of the competition.

Award an additional \$400,000 to winners as incentivized follow-on funding.

43NORTH

3 competition rounds

29 companies

\$14.6M
invested

43NORTH WINNERS

- ACV AUCTIONS
- ASANA MEDICAL
- ASARASI
- ASI
- BOUNCE IMAGING
- CLEANSLATE
- COACHMEPLUS
- CYTOCYBERNETICS
- DASTRONG CORP.
- DISEASE DIAGNOSTIC GROUP
- EFFERENT LABS
- ENERGY INTELLIGENCE
- FORMARUM
- GENETESIS
- HEMOGENYX
- HIGHERME
- INFONAUT
- KEEPUP
- MEDICAL CONSERVATION DEVICES
- ONCOLINX
- PAINLESS1099
- PLUM
- PROGRAMMABLE EQUIPMENT COMPANY
- PATHOVAX
- QOINTS
- TRIMIRROR
- ULTRACELL INSULATION
- VOICEIT
- WEDIDIT



ATTRACTING ENTREPRENEURS, CAPITAL AND ATTENTION FROM AROUND THE GLOBE

43North attracts entrepreneurs from around the world to compete for prizes that turn startups with high growth potential into funded enterprises in Buffalo Niagara. Through three rounds of the competition process, 43North's board, staff and volunteer committees successfully administered an online application process; performed substantial marketing and outreach activities including several national and international roadshows to reach broad and diverse audiences; and attracted preeminent business leaders to act as volunteer judges. They also staged Finals Week—a series of a high profile events where finalists pitch their ideas in Buffalo culminating with an awards night including the announcement of the \$1M top prize winner. 43North operates through the support of the Buffalo Billion, New York Power Authority and Empire State Development. Additional support comes from National Grid, University at Buffalo and several other sponsors. 43North takes a 5% equity stake in each company awarded funding.

43North winners relocate to Buffalo and receive free incubator space for one year in the newly-renovated space at the Thomas R. Beecher, Jr. Innovation Center on the Buffalo Niagara Medical Campus. Winners also take advantage of mentorships from established business leaders, connections to investors and exposure and marketing support. Finally, winners are eligible for potential participation in START-UP NY allowing them the opportunity to operate tax-free for 10 years. Winners of 43North act as entrepreneurial champions who use their ideas to invigorate the existing business community and attract additional startups to the region.

All in a day's work for 43North entrepreneurs

Developing the next generation of targeted cancer therapies.

Oncolinx

Oncolinx is developing antibody-drug conjugates (ADCs) that carry a patented, immune-activating drug payload called the Azonafide directly and exclusively to cancer cells, thereby avoiding many of the adverse side-effects of chemotherapy. The Oncolinx platform is partnered with more than 14 leading pharmaceutical companies and six academic labs all over the world—concurrently developing ADCs across 30 different cancer indications. Oncolinx aims to enter clinical trials with a partnered program in mid-2017.



Developing new technology to create clean energy.

Energy Intelligence

This emerging cleantech company developed technology to generate clean energy at high-traffic locations from the motion of vehicles. Energy Intelligence unveiled its technology to the general public by rolling out six road-mounted systems in a 10-story facility in Downtown Buffalo. Energy Intelligence was recently recognized by Forbes and took home prizes from Harvard Business School's Launching New Ventures Pitch Contest, the Eastern Foundry's Foundry Cup, and the IET Innovation Awards.



Building a new online marketplace.

ACV Auctions

ACV Auctions created a smartphone application that establishes a marketplace for dealer-only automobile auctions. ACV Auctions continues extending across Northeast states and a newly activated inside sales team has raised the employee total to 29. The company recently announced it raised a \$5M Series A round of venture capital led by a Manhattan based investment firm, Tribeca Venture Partners and others.



Round 3

To attract a smaller set of highly-investable startups, there were several changes in Round 3 of the competition such as targeted outreach, an application fee, a 60 question application including financial information, a revised prize structure and the introduction of incentivized follow-on funding.

24 Roadshow Stops
200+ media hits

542 submissions from 38 states, 6 Canadian provinces, and 33 countries
39% minority & 21% women applicants



Visual Effects Program

Empire Visual Effects (Empire VFX)—a post-production and animation company—partnered with Daemen College to create a visual effects training program for the regional post-production and film industry, as well as provide talent for the growing visual effects industry state-wide. The partnership between Empire VFX and Daemen College, facilitated with Buffalo Billion investments in facilities, state-of-the-art equipment and infrastructure used in the production of visual effects, presents a growth opportunity for this new high-tech industry in Buffalo Niagara.

Lead Organization

Empire Visual Effects & Daemen College

Phase I Buffalo Billion Investment

\$4.5M

Major Milestones Accomplished

Daemen College, with direct input from industry, established a curriculum for a Visual Effects Certificate program, and more recently a Visual Effects track in the Bachelors of Fine Arts in Animation degree program.

Daemen College launched a full-scale career services employment outreach effort to assist students in securing high paying jobs in the visual effects and post production workforce.

Empire VFX recruited a top level Compositing Supervisor to enhance the team and raise the skill level of the artists.

Empire VFX contributed to seven feature films and 19 television shows. In 2016, Empire VFX was awarded its first primary visual effects role on a full episodic television series for Netflix.

Actions Planned

Empire VFX plans to recruit a team of senior level artists with established clientele and are working to find qualified investors to provide the required capital.

Empire VFX is in discussion with larger visual effects entities in NYS, seeking to find partners to synergistically drive work to the Buffalo studio.

Continue to grow awareness of Empire VFX and the growing post-production industry in Buffalo Niagara.



Buffalo Information Technologies Innovation & Commercialization Hub

The Buffalo Information Technologies & Commercialization Hub (IT Hub) will expand Buffalo Niagara’s undersized tech sector—helping to spur innovation across other sectors of the economy—and bring cutting-edge software development jobs to downtown Buffalo. Buffalo Billion capital investments will create the space for the facility on the top floors of 40-50 Fountain Plaza and outfit it with IT equipment and software. The IBM Buffalo Innovation Center is the anchor tenant of the new IT Hub. IBM will work in five high-tech categories—analytics, big data, Watson technology (a cognitive system of computing), cloud computing and mobile computing—offering clients the technology needed to analyze endless streams of data to improve their businesses. This will lead to state-of-the-art discoveries in a variety of industry sectors such as manufacturing, life sciences and renewable energy.

Lead Organization

Empire State Development

Phase I Buffalo Billion Investment

\$55M

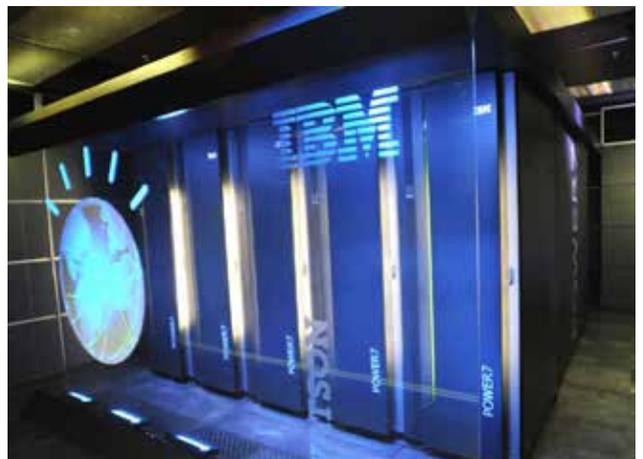
Major Milestones Accomplished

IT Hub opened in temporary space in the north tower of 40-50 Fountain Plaza.

Continues to work with local colleges and universities to establish programs for recruiting, internships, and residencies.

Actions Planned

Build out continues for the IT Hub’s permanent home on the top two floors of 40-50 Fountain Plaza south tower. The remaining four floors will be built out as IBM ramps up its operations over the next several years.



WHAT'S NEXT IN PHASE II



Innovation &
Entrepreneurship

*Building a comprehensive network of
entrepreneurial support.*

 **The Innovation HUB**



*Attracting the best start-ups
from around the world.*

 **43North Phase II**





→ 43North Phase II

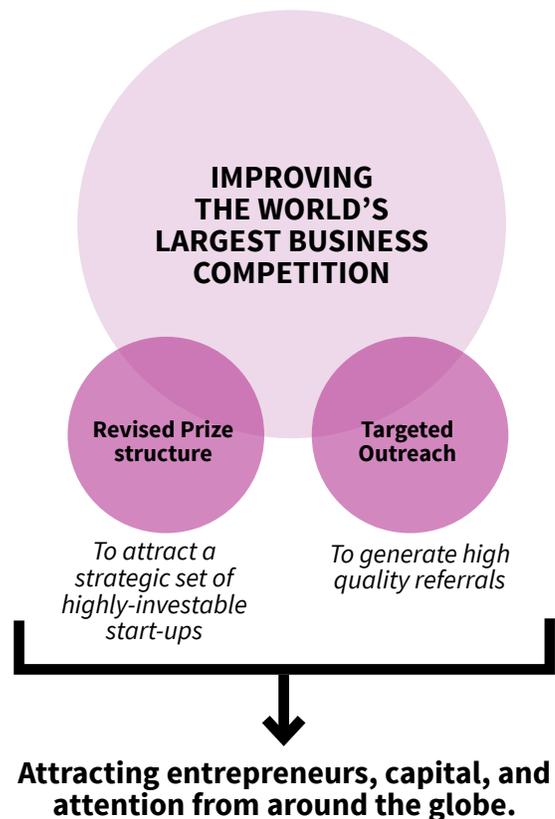


43North is a catalyst in making Buffalo Niagara a leading entrepreneurial region in the U.S. by creating awareness of the region to global resources, attracting and cultivating world-class start-ups, and providing key resources in the local ecosystem. A Buffalo Billion Phase II investment in 43North will continue to generate quality applicants to ensure that the competition continues to supply a steady stream of eight to 12 new companies every year; will leverage the power of the competition to attract additional start-ups; and will provide additional resources to ensure new entrepreneurs remain and grow in Buffalo.

WHY IT'S IMPORTANT

43North is attracting some of the best start-ups from around the world to locate in Buffalo. The first three rounds of the 43North competition were a significant success in building Buffalo's brand on a global scale. But, through the experience of the competition, listening to the needs of new entrepreneurs and learning from other cities and investors, enhancements are needed to better grow and attract higher quality applicants and seed a new cohort of tech start-ups to flourish in the Buffalo market. Already in Round 3 of the competition, changes such as an application fee, a revised prize structure and the introduction of incentivized follow-on funding, were made to focus on attracting a smaller-set of highly-investable start-ups. 43North also engaged in more targeted outreach, and worked closely with venture capitalists, angel investors, accelerators and incubators to generate high-quality referrals. Investments in 43North will boost efforts like these in order to attract a greater number of promising start-ups, optimize the success of the start-ups that come through the program, and boost their presence and growth in Buffalo.

THREE ROUNDS
43NORTH



PROJECT DETAILS

While the fundamentals of the 43North competition will remain intact, increased investments will be made in several areas. First, 43North will work to **attract the highest quality applications**. 43North will identify and attract quality applicants by focusing on a set of industry sectors that the regional ecosystem is most capable of supporting. 43North will make investments in key data to identify quality start-ups and will extend one-to-one outreach to targeted start-ups. 43North will more effectively use the network it has built since its inception, including investors and partner accelerators and ambassador programs in key markets across North America, to gather referrals.

43North will also take full advantage of the power it has in generating leads, and working with partners to create opportunities to attract follow-on start-ups to the region. This includes continuing to engage partners like Invest Buffalo Niagara, University at Buffalo, Buffalo Niagara Medical Campus, Z80, LaunchNY and others to offer their services to 43North semi-finalists and finalists, as well as connecting these entrepreneurial resources to unsuccessful applicants still interested in relocating to Buffalo. Another partnership important to the future of 43North that will expand in future years is The Pitch. **The Pitch** is a new business competition for Buffalo-area minority and women-owned businesses who aspire to innovate and grow their companies.

In addition to attracting companies through the enhanced competition and connecting them with further resources, 43North seeks to increase the retention and growth rate of the winners through a combination of enhanced mentoring and

follow-on funding. 43North will enhance the current incubation program awarded to winners which includes free incubator space for one year, mentorships, connections to investors and exposure and marketing support with the following resources:

Preparation for and access to global investors

Inclusion in Demo Days, a conference of networking and best practices, in various cities in the U.S.

Exposure to customer networks

Online classes and Town Halls with global thought leaders

Carefully selected mentors and advisors

Concierge services for quality of life resources in Buffalo Niagara

Engagement with local community-based initiatives



IMPLEMENTATION MILESTONES

43North Phase II

Run competition annually including application process, semi-finalist and finalist selection processes, and Finals Week events.

Expand and continue supporting The Pitch as part of Finals Week.

Increase marketing and targeted outreach efforts year-round.

Work with partners to market the region and attract follow-on start-ups.

Begin enhanced mentoring and follow-on funding programs.

BUDGET & IMPACT

Budget Request: \$25M

In addition to funding through Buffalo Billion Phase I, 43North leverages funds from New York Power Authority, Empire State Development, National Grid, University at Buffalo and other sponsors. 43North takes a 5% equity stake in each company awarded funding.

As of October 2016, 22 months into interfacing with their portfolio of 21 companies, nearly \$15M of additional capital has been invested in 43North companies and the valuation of the portfolio increased by over 300%.

43North and its partners in the Innovation HUB are expected to generate 40 new start-ups per year and support a total of 150 start-ups projected to raise an additional \$615M in follow-on funding.



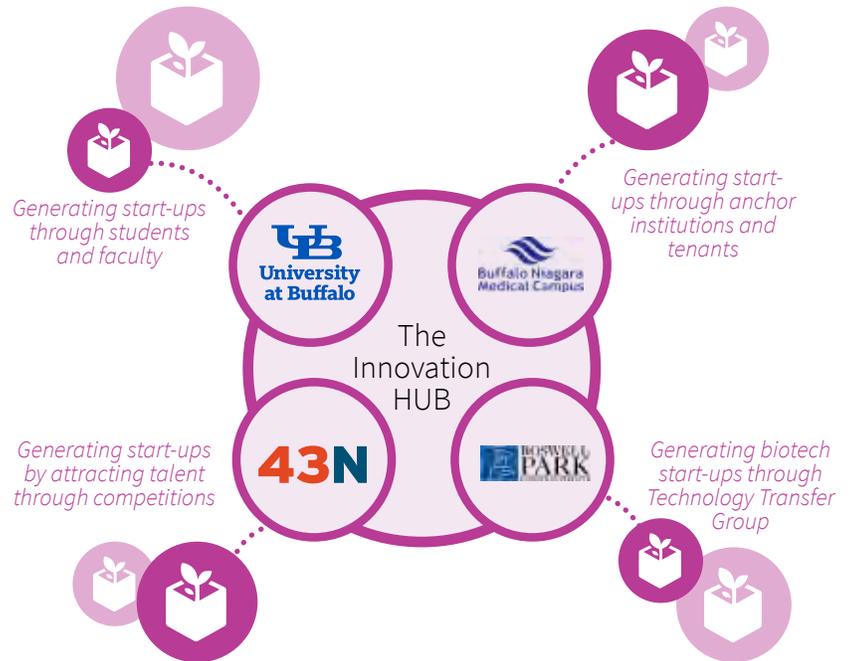
→ The Innovation HUB



Leveraging the extensive resources on the Buffalo Niagara Medical Campus and at partner organizations, the Innovation HUB will provide comprehensive, seamless support to accelerate growth of life science and technology start-ups. Successfully growing start-ups requires several key components including research to generate new innovations, business expertise and support, funding, access to incubators and specialized equipment, and a talented workforce. The HUB will house technology start-ups, provide funding to leverage successful venture capital, and deliver mentoring and expertise to guide them.

WHY IT'S IMPORTANT

In recent years, NYS made targeted and substantial investments to develop an entrepreneurial ecosystem in Buffalo Niagara. Likewise, key partners to the Innovation HUB each made recent investments and implemented new policies that lay the foundation to significantly accelerate the growth of life science and technology start-ups in Buffalo. These commitments yielded job growth, spurred investment, strengthened the capacity of local institutions, and sparked Buffalo's entrepreneurial spirit. But, the region still needs greater access to capital, more support services, more incubator/accelerator space and greater engagement with student entrepreneurs to cultivate future talent. By building a comprehensive network of entrepreneurial support, expertise, funding and facilities, the region will build on its foundation and accelerate the growth of Buffalo's innovation economy.



Generating and supporting start-ups to accelerate Buffalo's innovation economy through...



Buffalo Innovation Fund



Buffalo Niagara continues to be under-capitalized, limiting the ability to turn research into jobs. This gap is most profound in life sciences, which constitutes more than 60% of the early stage companies born from the region's research institutions and in START-UP NY. 43North companies also need access to follow-on investment to maintain their growth in Buffalo. University at Buffalo previously invested \$1.2M in proof of concept funding which supported 14 start-ups that went on to secure \$110M in follow-on federal grants and private investment, including one IPO of \$68M. Building upon existing research undertaken at institutions such as University at Buffalo and Roswell Park Cancer Institute, the Buffalo Innovation Fund will provide funding to support: a) currently unfunded translational research, b) proof of concept and prototype funds, and c) business formation support.

The Buffalo Innovation Fund will use the following model:

	FUND STAGE PRE-SEED/Proof of Concept	FUND STAGE SEED
Description	Fund will seek to demonstrate that an innovation is worthy of external investment. Funds used to decrease technical or business risk, protect intellectual property, answer specific industry questions or quantify market potential. It supports proof-of-concept, prototype development, toxicity testing and other technology testing.	Fund will serve as a crucial match to outside investors' funds. Funds used for the transition from discovery to formation of viable business and acceleration support, and 43North follow on investment. Returns on the investments will remain in the fund for future investments.
Range of Funding	\$25,000 - \$50,000 \$50,000 - \$250,000 (provided in tranches based on milestones)	\$150,000 - \$750,000
Match	None required but a plus	1:1 match
Type of Funding	Grant (part of license revenue returns to fund)	Equity investment
Est. #/Year	20	10
Total \$/Year	\$1.5M	\$5M
Total \$/over 5 years	\$7.5M	\$25M
Management	University at Buffalo with Roswell Park Cancer Institute, external advisory and technical review	Experienced life science & tech investment venture firm



Innovation Center on Buffalo Niagara Medical Campus



One of the positive outcomes of the recent increase in start-up activity and in the START-UP NY program is that local incubators are nearly full, with growing demand for flexible and wet lab space. This restricts the ability to support existing start-ups and form new companies. The construction of a new Innovation Center on the Buffalo Niagara Medical Campus, featuring new incubation and accelerator workspace, will be sponsored in University at Buffalo's START-UP NY Campus plan enabling its tenants to receive START-UP NY benefits.

Wet lab to house life science start-ups

Dry lab to house other tech start-ups

Design lab and maker space to integrate design engineering, prototyping, and product development resources into the business modeling process so that new ideas and products are designed and developed quickly and cost effectively

Office space to house start-ups and provide accelerator space for 43North and other incubator tenants as they grow

Common space to provide conference room and facilities to host entrepreneur events and programs



Experts, Mentoring & Programs



In recent years, Buffalo Niagara developed a strong foundation of start-up support programs, networks, and access to mentoring and business expertise. The Innovation HUB will enhance and better coordinate this existing programming, as well as develop new initiatives and supports to provide start-ups with guidance through all phases of development—from idea to growth. First, the HUB will act as a coordinator—serving as the front door and concierge support to guide start-ups to the right assistance and services. The HUB will also employ an Entrepreneurs-in-Residence program where paid experienced entrepreneurs serve as interim Chief Executive Officers to start-ups—filling a much needed gap in the ecosystem. The HUB will also offer Subject Matter Experts, paid on a consulting project basis, who will help with regulatory, IP, and market development. There will also be an outreach program to enhance opportunities for women and minorities to start and grow technology businesses in Buffalo.

A major component of the HUB will be to coordinate existing and offer new resources to engage local students in start-up activities. Currently, there are a growing menu of entrepreneurship offerings at the university level, including the Panasci Technology Competition, Entrepreneurship Lab, NYS Student to Biz Competition and the Blackstone Launchpad. These types of student entrepreneur education experiences, including workshops, mentoring, competitions, internships, start-up weekends, working for start-up companies, are a good foundation; but there needs to be more opportunities for students to gain knowledge through experiential learning, deeper interaction with the local community of start-ups and additional opportunities to launch their own early stage companies. The HUB will provide opportunities for coordinated co-curricular experiential learning with 43North and other technology and life science start-ups through new and existing activities such as 43North Week, Global Entrepreneurship Week, Maker Space, internships and fellowships.

The HUB will also support student start-ups through peer mentoring that consists of cross-disciplinary teams of students assembled to provide services to start-ups that may include legal services, business planning, financial, marketing and commercialization and technology support. For example, engineering students could assist in prototype development, while accounting students could assist with Quickbooks deployment. This model could be integrated into various academic programs.

New and existing resources offer expert support & mentoring to start-ups throughout development phases and connect start-ups to programs and opportunities



IDEA/FORMATION



DEVELOPMENT



ACCELERATION

New resources to be shared across application partners

HUB Coordination & Front Door
Entrepreneur in Residence
Subject Matter Experts
Shared Student Services
Inclusivity & Minority and Women Emerging Enterprise Outreach

Existing Programs

I-Corps/Pre-Seed Workshop

Student Pitch Competitions

Blackstone LaunchPad

Buffalo Niagara Medical Campus "How to Build Your Business"

WNY Innovation Hot Spot

Bright Buffalo Pitch Prep

Student Sandbox

43North START-UP NY

Critical Path Accelerators (by vertical)

VCAMP Health Tech Accelerator

43North

START-UP NY



IMPLEMENTATION MILESTONES

Buffalo Innovation Fund

For Proof of Concept Fund, develop external investment review committee and independent technical assessment, including participation by Roswell Park Cancer Institute.

For Seed Fund, select an outside investment firm to manage deal flow, provide due diligence, establish an investment committee (in cooperation with the partners), prepare term sheets, negotiate and close, manage and administer the fund. The firm will receive an administrative fee (similar to Innovate NY); all returns will go back into the fund.

Launch Proof of Concept Fund, followed by Seed Fund.

Innovation Center on Buffalo Niagara Medical Campus

Develop ownership model including public/private partnership options.

Undergo bidding process for design & construction.

Select site and finalize design.

Begin construction.

Experts, Mentoring & Programs

Develop new HUB Coordination and Front Door system to guide start-ups to the right assistance for their needs; market campus to continue attracting life science companies; and connect tenants and potential tenants with services and capabilities on the Buffalo Niagara Medical Campus.

Launch new Entrepreneurs in Residence and Subject Matter Experts programs.

Launch new Shared Student Services program.

Develop new Minority and Women Emerging Enterprise Outreach strategy.

Enhance existing Pre-seed/I-Corps program.

Enhance existing Student Entrepreneur programs.

BUDGET & IMPACT

Budget Request: \$40M

Each partner plays an important role in building the pipeline of tech start-ups on the Buffalo Niagara Medical Campus. 43North will continue to attract eight–12 start-ups to Buffalo each year; University at Buffalo anticipates that five-10 new start-ups will be generated from University at Buffalo students and faculty. Roswell Park anticipates that four-five new biotechnology start-ups would be initiated on an annual basis. Other Buffalo Niagara Medical Campus anchor institutions and tenants including Kaleida Health, Jacobs Institute, Albany Molecular Research Inc, and Athenex will generate another seven-15 start-ups per year. Collectively this will increase the number of new start-ups from an average of 20 start-ups/year to over 40 per year. If each start with an average of three employees, 50% of start-ups will be retained and survive creating over 2,000 direct jobs and an additional 8,000 indirect jobs.

Over 150 start-ups are expected to be supported through 43North, the HUB programs and Buffalo Innovation Fund. With an estimated 50% retention and survival rate over a five year period, it is expected that the companies will go on to raise an additional \$615M in follow on funding. This is consistent with University at Buffalo and 43North's experience to date.

Workforce

Why the strategy matters

Buffalo Niagara faces challenges in deploying all segments of its labor force, especially those with lower educational attainment who are disproportionately less likely to participate in the region's labor force. An under-supply of young, skilled workers raises concerns about future productivity and growth potential in a number of the region's largest industries, like manufacturing and health care. In recent years, the region experienced overall job growth, but bigger increases can be seen in the numbers of workers who live in poverty or work in secondary jobs. Each year, thousands of job openings will be available to workers at all education levels. Employers need help to rapidly identify pools of skilled workers and training programs that meet their needs.

Those with less education participate less in the workforce.

Labor Force Participation Rates by Educational Attainment, Age 25-64, 2015

	Buffalo Niagara	U.S.
Overall	78%	77%
Population with less than a HS diploma	49%	60%

Source: U.S. Census Bureau, American Community Survey, 1-year estimates (2015).

What needed to be done

Buffalo Niagara seeks to prepare an appropriately skilled workforce to meet labor needs while addressing the barriers to economic self-sufficiency for the region's unemployed and underemployed populations. Both public and private sector leaders in the region believe that targeted, employer-driven

training, improving skills certifications and industry job ladders for new and existing workers; and reducing geographic and socio-economic isolation from jobs are strategies needed to build a strong workforce and address the looming retirement cliff, especially in industries like manufacturing.

A LOOK AT PHASE I -----> WHAT'S NEXT IN PHASE II



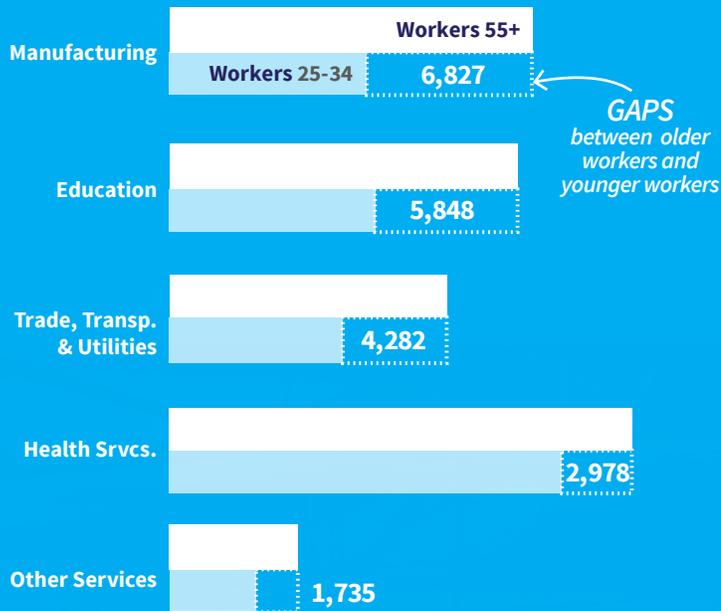
Western New York Workforce Training Center
Burgard High School Advanced Manufacturing Program



Workforce Development Fund
Say Yes Buffalo

Approaching retirement cliffs challenge 5 industries that make up nearly half of all jobs in the region.

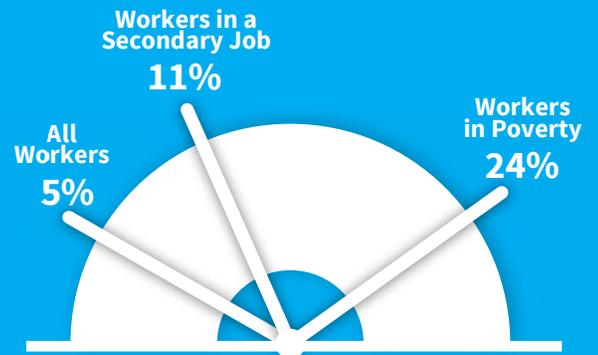
Jobs by Industry and Age of Worker, Buffalo Niagara, 2014



Source: U.S. Census Bureau: Local Employment Dynamics, Quarterly Workforce Indicators, 2014.

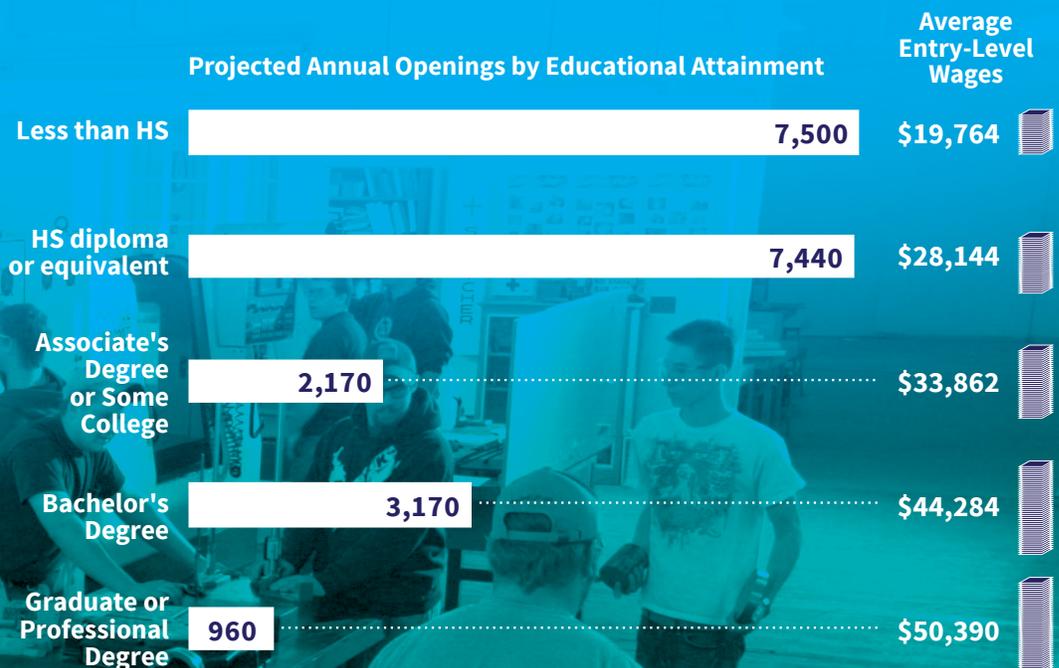
The number of workers living in poverty and those with secondary jobs both increased at a faster pace than the total number of workers.

Since 2009, Buffalo Niagara has seen increases in...



Source: U.S. Census, Longitudinal Employer-Household Dynamics Program, On-The-Map (2009, 2014); U.S. Census, American Community Survey, 1-year estimates (2009, 2014).

Most job openings do not require higher education, but higher wage positions typically require at least some college experience.



Source: NYS Department of Labor, Long-term Occupational Projections, through 2022. NOTE: Job projections are for the 5-county Western New York area (including Allegany, Cattaraugus, and Chautauqua).



Western New York Workforce Training Center

An anchor institution for the Northland Corridor, the Western New York Workforce Training Center is an industry driven public-private collaborative. The center brings together area residents, employers, educational institutions, community and faith based organizations, and state and local government to close the employment skills gap and to create economic on-ramps to training, apprenticeships, and career placement for energy and advanced manufacturing industry careers.

Lead Organization

Empire State Development

Phase I Buffalo Billion Investment

\$35M

Major Milestones Accomplished

- Partners signed Memorandum of Understanding.
- Completed business plan.
- Hired operator and began to operationalize business plan.
- Began to develop curriculum with State University of New York partners.

Actions Planned

- Establish recruitment, placement and wrap-around services structure.
- Establish board and advisory group.
- Finalize curriculum.
- Purchase and install equipment.
- Hire staff.
- Begin student recruitment.
- Begin wrap-around services and pre-manufacturing training.
- Western New York Workforce Training Center scheduled to open 2018.

Connecting people in the community to Buffalo's next economy.

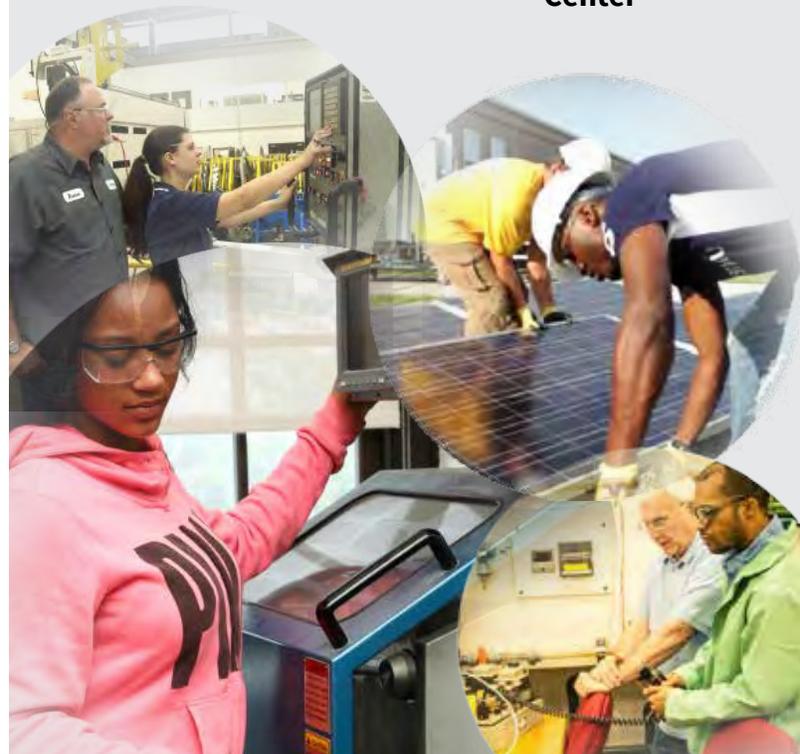
How can we fill these 20,000 jobs in the next 10 years to ensure that manufacturers can prosper here while ensuring that our most vulnerable residents have access to these high-paying jobs?

The Western New York Workforce Training Center will provide the skills, education and supports for all job seekers while meeting the needs of industry and acting as a catalyst to attract and retain businesses to the Northland Corridor and Buffalo Niagara region.

Advanced Manufacturing Training Center



Utility of the Future Clean Energy Training Center





The Western New York Workforce Training Center will be a public/private, educational, training, and workforce development partnership to provide the skills, education and supports for job seekers while meeting the needs of industry and acting as a catalyst to attract and retain businesses in Buffalo Niagara. This will be achieved through a multi-pronged approach that involves recruitment and assessment; advanced manufacturing and energy training; wrap-around services (such as transportation, job-readiness skills-training, and social services); and job placement and retention. The Center will provide for-credit, certificate and degree programs as core offerings through its State University of New York educational partners in six high-demand and hardest to fill manufacturing skills areas, energy skills areas, and pre-manufacturing training. The approach will incorporate diverse learning models from the classroom with internships and apprenticeships. Curricula will be industry driven and flexible as industry needs evolve. Anyone can learn at the Western New York Workforce Training Center—from high school graduates to current workers looking to up-skill. Active recruitment and training of traditionally underrepresented groups such as veterans, refugees and immigrants, the disabled, formerly incarcerated, the unemployed and underemployed, and neighborhood residents will be a focus of the Center. This will be accomplished using an assessment process to identify and design individualized career pathways for students from all backgrounds and experience levels.

The Western New York Workforce Training Center is being developed in partnership with Empire State Development, the City of Buffalo, New York Power Authority and State University of New York. Training will be offered through ongoing State University of New York partnerships at Alfred State College, Erie Community College, Buffalo State College and the University at Buffalo with curriculum informed by industry partners. The Center will be run by an operator in collaboration with a wrap-around service provider and job placement provider. The lead wrap-around services partner will serve in a community “quarterback” role as they will coordinate with local community and faith-based organizations, public agencies, educational and training providers, and other entities to assist students with a wide range of support services. A sustainable financial model for the Western New York Workforce Training Center will ensure that the initial Buffalo Billion investment leverages public and private funds long-term.



The future of workforce training in the U.S.

A comprehensive and inclusive approach that's employment-focused and results-oriented.



FOR INDIVIDUALS

Improves academic, occupational and basic employability skills.

Increases access to college and credential attainment.

Facilitates transitions to the labor market.



FOR PRIVATE SECTOR

Does not compete with existing efforts

Public/private partnership



FOR THE REGION

Collaboration between Manufacturing and Energy sectors for efficiency

A WORKFORCE TRAINING MODEL TO REACH APPLICANTS AT ANY SKILL LEVEL



Applicant enters

Anyone can apply



Assessment

Applicants are assessed for skills and needs



Technical Training

Training, internships, apprenticeships and certificate programs



Placement

Including post-placement retention services



OPPORTUNITIES FOR ALL

Providing greater access to good paying jobs

PUBLIC-PRIVATE COLLABORATIVE



Training offered by SUNY Partners



Burgard High School Advanced Manufacturing Program

The region is working to develop career pathways in the P-12 system, and to promote the connection among education, training, career and college readiness. This laid the groundwork for the Burgard High School Advanced Manufacturing Program to prepare high school students for careers in advanced manufacturing. Led by Alfred State College in partnership with Say Yes Buffalo and Dream It Do It Western New York, the Burgard High School Advanced Manufacturing Program allows students to take college level courses in machining, welding and automotive trades; and obtain an associate's degree from Alfred State College after completion of their 13th year of schooling.

Lead Organization

Alfred State College

Phase I Buffalo Billion Investment

\$3.2M

Major Milestones Accomplished

Built partnerships, designed program, developed curriculum and marketed to students, parents and guardians.

The program launched in fall 2014 with its first freshman class. College level classes began for the sophomore class starting in fall 2015. At the beginning of the 2016 school year, there were 48 students in both the sophomore and junior classes. Burgard High School has seen an increase in their enrollment due to interest in the Burgard High School Advanced Manufacturing Program.

Established relationships with various manufacturers through the Buffalo Niagara Manufacturing Alliance and the Niagara Frontier Automobile Dealers Association.

Ongoing equipment upgrades and installation in the welding and automotive laboratories.

Ongoing student recruitment.

Actions Planned

The first class is graduating from the Burgard High School Advanced Manufacturing Program in 2018.



WHAT'S NEXT IN PHASE II



Workforce

*Promoting innovative approaches
to workforce training.*

 **Workforce Development Fund**



Offering unprecedented educational opportunity for the next generation.



Say Yes Buffalo





→ Workforce Development Fund



A new workforce development fund with a rolling application process will be created to ensure the pipeline for workforce is keeping up with industry demands. The fund is designed to promote and invest in innovative approaches to workforce training for underserved populations. The fund will help scale up organizations doing high-impact, results-oriented workforce training with strong results in training, job placement and retention. The fund will facilitate partnerships with community and neighborhood-based organizations with proven track records, trust and outstanding abilities for outreach and recruitment. It will also support target sectors ripe for growth in jobs and career ladder opportunities for entry-level and mid-skill workers, while funding best practice models that maximize collaboration between industry, employers and workforce trainers.

WHY IT'S IMPORTANT

Workforce development is a critical component of economic development and strategic job growth. Connecting economic development with workforce training will ensure that employers in growing industries have access to the high-quality, high-skilled labor needed to fill job openings and be competitive. Many industry sectors in the region experienced double-digit job growth over the past five years. Over the next five years, many industries can expect to fill thousands of job openings across the region annually. Over the next 10 years, approximately a fifth of all jobs across the region may be impacted by worker retirements. Jobs that are difficult to fill today and skills that are difficult for employers to find will be compounded as industries across the region grow. Recent research on the labor market in the region included an employer survey. It showed the majority of companies in Buffalo Niagara report a number of hard-to-fill jobs or hard-to-find skills, suggesting the supply of labor could be better matched to industry needs.

While the potential labor supply in Buffalo Niagara grew, with a larger number of working age people (16 and up), the region's labor participation rate is down, following statewide and national trends. Among adults of prime working age (16 to 64), workforce participation rates are lowest for adults with the most limited levels of education. Less than three-quarters of those who stopped their education at high school work.

Fewer than half of high school dropouts are in the labor force. Cultivating skill levels and credentials for these working age adults presents one of the region's greatest and most pressing workforce development opportunities.

The region also has over 132,000 workers who are employed under their capacity, with skills, education and/or experiences that do not match what their current job requires or what today's employers seek. Upskilling this population for future jobs offers a high leverage strategy that builds on existing skills and credentials for the benefit of regional industries and employers.

In Phase I of Buffalo Billion, the target for workforce was to address the looming retirement in the manufacturing sector through the investments in the Western New York Workforce Training Center at Northland. There are other sector needs and good work by grassroots organizations happening in the community that can be served in Buffalo Billion II.

Project Details

The ecosystem of workforce development and training opportunities is complex and multi-pronged. Research commissioned by Invest Buffalo Niagara identified over 200 workforce trainers across the eight-county, Western New York region. Approximately 70 are nonprofit and private community-based organizations in Buffalo. Many are doing impressive work with excellent outcomes, but are often constrained by limited funding and restrictions that come with public and private funding sources. The majority are operating at or over capacity, and support services that alleviate barriers to training are often limited.

Selected highlights of the Workforce Development Fund, which aims to promote innovative approaches in workforce training by organizations that have established track records of effective training and trusted relationships within communities resulting in maximum people reached include:



The Workforce Development Fund will have a rolling application with quarterly committee reviews to ensure the funding is timely and well aligned with key strategies throughout the year, including employer hiring needs. The criteria will be based on the goals of the fund which seeks to fund organizations with proven track records, strong community partnerships, innovative approaches, and targeted training for emerging industry needs.



Grants will be typically provided for 12-month periods. This coincides with the typical duration of training programs offered by community-based trainers that commonly lead to a certificate or other non-degree bearing postsecondary credential. Funding could be applied toward curricula development or expansion, instruction, materials, equipment, trainee supports, and capital improvements to expand services.



Funding will be provided for trainees whose needs are not typically served by other sources of federal, state or local funding such as that available through the Workforce Investment Act. Underserved and underrepresented populations in the City of Buffalo who are currently out of the labor force, underemployed or among the region's working poor are the fund's target populations.



Funding will emphasize the specialized skills and knowledge needed for entry and career advancement in high-demand job openings in regional target industries. The fund will be flexible to emerging trends in target industries, where significant need is demonstrated and programs can produce strong positive results.



Funding will emphasize training that equips applicants for entry and advancement in regional target industries through high-demand, living wage jobs with career advancement potential. The fund will strengthen Phase II initiatives in healthcare, tourism, manufacturing, and other target sectors. It will also help to develop and expand innovative approaches to connecting employers and job seekers by leveraging community-based organizations.



Over 32,485 workers in Buffalo Niagara are employed full-time, year-round, but still **earn less than \$20,000 a year**

If half (16,242) of these workers earned the region's median wage for high school grads (\$29,600/year), their individual wages would more than double, increasing by \$14,000 on average and **total annual wages would increase by over \$231.1 million.**

This increase in wages and household purchasing power would have a ripple effect through the regional economy.

The economic impact on Erie and Niagara Counties is estimated to be \$267.1 million.

This assumes that residents spend their additional income on goods and services within the region.

An estimated **2,015 new jobs** would be supported by this higher level of economic activity.

Positive impacts from higher household earnings are projected to be **felt most heavily in the regional real estate market** as well as in retail, restaurants, health and other sectors.

IMPLEMENTATION MILESTONES

Workforce Development Fund

- Establish a review committee and application process.
 - Develop the funding application including review criteria.
 - Initiate outreach in communities to promote the fund and cultivate applications.
 - Release the applications and guidelines.
 - Committee reviews and recommends funding allocations quarterly.
 - Review outcomes and progress of successful applicants quarterly.
 - Communicate the outcomes of the fund annually.
-

BUDGET & IMPACT

Budget Request: \$10M

Empire State Development will work with state, federal, and local foundations to provide matching funds to leverage this investment. In target industries, Empire State Development will work with employers to understand training needs and seek funding from companies to bolster their employee recruitment and retention efforts.



→ Say Yes Buffalo

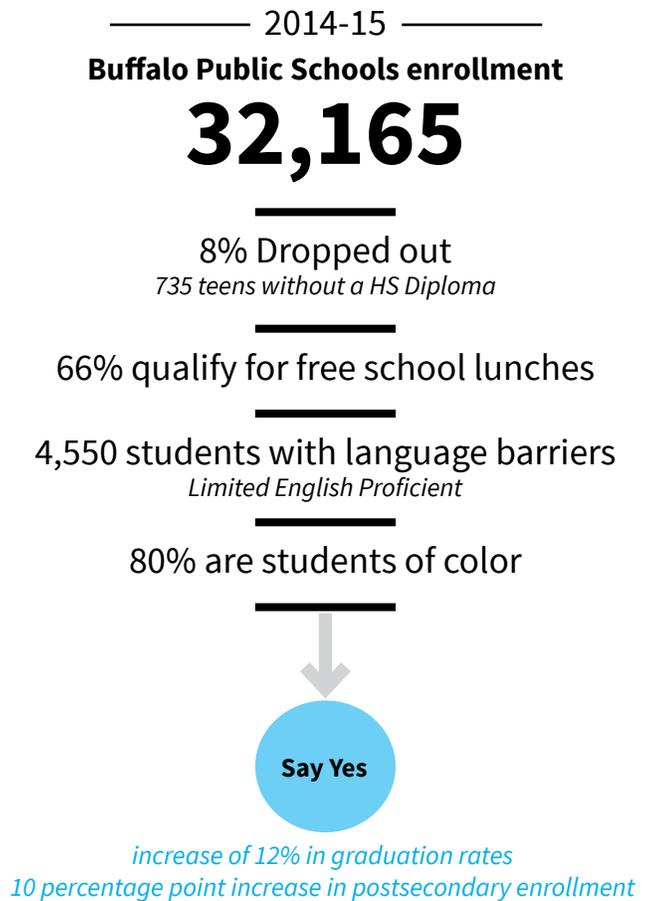


Say Yes Buffalo is an education-based, economic revitalization initiative that will continue to strengthen the regional workforce and offer unprecedented educational opportunity for an entire generation of Buffalo Public School students. Established in 2012, Say Yes incentivizes graduation from the Buffalo Public Schools with a commitment to provide graduates with the tuition they need to attend a partner college and university and earn a degree or certificate. Say Yes also provides student support services that are critical to educational success. With volunteer mentors, local donors and internship providers, Say Yes is a landmark collaborative model. It is based on a successful national initiative that has helped to boost graduation rates and post-secondary attainment rates in cities across the nation.

WHY IT'S IMPORTANT

Buffalo Public Schools enrolled over 32,165 students, as of 2014-15. Enrollment has been growing over the past five years. These students are the region's future workforce and their number accounts for nearly a quarter of all jobs in the City of Buffalo. However, these students experience many barriers to academic and career success. Many drop out. In 2014-15, 8% of students did not complete high school. This number represented 735 teens who did not attain a high school diploma.

Many come from families living in or near poverty. Districtwide, 68% of students qualify for free school lunches. In some schools in the district, the percentage is closer to 100%. The district contains over 4,550 Limited English Proficient students with language barriers. About 80% of students are non-white. In Buffalo Niagara, children of color are significantly more likely to confront stressors that impact their ability to achieve academically. They are more likely to be raised by a teen mother or single parent and less likely to have a parent that holds a college degree. They are also more likely to be raised by a parent who works a second or third shift. These factors diminish students' ability to graduate, go to college, and ultimately secure living wage employment. However, these factors can also be positively impacted by proven initiatives such as Say Yes, which has boosted high school graduation rates by 12 percentage points since it was launched and increased postsecondary enrollment rates by 10 percentage points.



Project Details

Say Yes presents a holistic, year-round approach to student achievement. In addition to the promise of college tuition at any one of nearly 100 colleges and universities, Say Yes offers the following programs that drive student success and the positive outcomes reported since the program's launch:



All Buffalo Public Schools students are enrolled in a Student Management System, aimed at identifying intervention needs early on. Embedded preventive specialists are located in all Buffalo Public Schools where students receiving services increased attendance by 4%.



Buffalo Public Schools students have expanded access to health services after Say Yes coordinated the creation of mobile health clinics for the district.



Mental health services are now available in Buffalo Public Schools, increasing access to services for students.



Free legal advice on issues such as immigration, housing, employment, and foreclosure is available to support families of Buffalo Public Schools students. Services are provided at six locations around the district by local attorneys who volunteer their time through the Erie County Bar Association Volunteer Lawyers Project.



Quality after-school programming focusing on academics, youth development and health/wellness is available to students in all 55 Buffalo Public Schools. Students in grades K-6 also have access to summer programs, through a partnership between Buffalo Public Schools and the City of Buffalo. A Say Yes Mentoring program helps Say Yes Scholars transition from high school. Scholars may also participate in a paid internship program, facilitated through the Buffalo Niagara Partnership.



Income and Economic Impacts

Improving academic achievement across Buffalo Public Schools...

...better prepares hundreds of students every year for academic and economic success.



When graduation rates and postsecondary enrollment rates across Buffalo Public Schools equal or exceed those across Erie County...

...460 additional students would have stayed in school and graduated from high school in 2015.

An estimated 377 of these students would have enrolled in a postsecondary institution, with the majority enrolling in a four-year college.



Greater educational attainment leads to higher earnings....

...with additional students getting a college degree or some postsecondary training, an additional

\$9.8 M *per year in earnings would be generated for their lifetime.*



This additional purchasing power...

...directly benefits households, families and children while supporting economic activity and jobs throughout the region.

87 jobs across Erie and Niagara Counties could be supported, either directly or indirectly, by \$9.8 million in greater purchasing power by individuals and families.



These economic impacts trigger positive and measurable impacts for housing markets, neighborhood retail sales, restaurants, health and many other sectors of the regional economy.



IMPLEMENTATION MILESTONES

Say Yes Buffalo

Continue to expand partnerships with degree-bearing and certificate-granting colleges and universities across NYS and beyond.

Grow the number of Say Yes Scholars through academic readiness, high graduation rates, college entrance preparation, mentorships, internships, and Say Yes Ambassadors at partner colleges.

Continue to expand access to Say Yes programs and services through outreach to families in the Buffalo Public Schools district and the work of in-school preventive specialists.

Continue to increase Buffalo Public Schools high school graduation rates until they meet or exceed the graduation rate across Erie County.

Continue to raise Buffalo Public Schools postsecondary enrollment rates until rates meet or exceed rates across Erie County.

Continue to boost the number of Buffalo Public Schools deemed “In Good Standing” through Say Yes programs and wraparound services for students and families that support academic achievement and reduce barriers to learning starting in kindergarten.

BUDGET & IMPACT

Budget Request: \$10M

A student with an associate’s degree will earn \$442K more than a student with a high school diploma; \$1.05M more with a bachelor’s degree.

24.4% of Buffalo adults have 4-year degrees; increasing this number to the NYS average of 33.2% will bring \$1.7B annually in disposable income into the Buffalo Niagara economy.

Over the next 10 years, 165,000 new jobs will be created in Buffalo and 64% of the positions will require some post-secondary credentials.

Outcomes in other cities with similar scholarship programs:

Pittsburgh, PA: City population growing after 50 year decline.

Pittsburgh, PA: City property values increased 7–12%.

Kalamazoo, MI: Public school enrollment up 24%, leading to construction of new schools.

TRADABLE SECTORS: Advanced Manufacturing



Why the strategy matters

Manufacturing is a tradable sector offering opportunity for growth, reversing the decades-long trend of manufacturing decline. Today the industry accounts for 10% of jobs and over 60% of the region's exports. While many large manufacturing firms are anchored in the region's urban cores, most manufacturing firms are small in size. Growth for these firms and the industry as a whole is challenged by an aging workforce, an undersupply of skilled young talent in the career pipeline, and the need to improve the competitive edge for companies through innovation. There is a need to bolster training programs that connect local workers with industry needs. Buffalo Niagara has unique opportunities to grow the sector, such as strong, but underutilized, materials-sciences R&D resources and a solid manufacturing legacy that left former and existing manufacturing infrastructure located near population centers.

What needed to be done

The Plan proposes accelerating growth in advanced manufacturing segments with the highest potential and overall improve manufacturing competitiveness sector-wide in order for the advanced manufacturing sector to reach its full income-generating potential. The Plan calls for increased innovation through access to applied research and scaled testing facilities for new product

Advanced manufacturing drives innovation and exports in Buffalo Niagara.

Advanced Manufacturing by the numbers, 2015		% OF REGION
# OF JOBS	51,802	10%
# OF FIRMS	1,324	5%
TOTAL WAGES	\$3.2B	13%
AVG. WAGE	\$62,672	
EXPORTS	\$4.4B	62%
# OF PATENTS	254	

Sources: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; Brookings Export Nation, 2015; U.S. Patent and Trademark Office, 2015.



Buffalo Niagara has a higher concentration of employees (LQ 1.10) in Advanced Manufacturing compared to the nation.

Sources: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; US Bureau of Labor Statistics, Census of Employment and Wages, 2015.

and process development; improved productivity through the adoption of more effective operational processes to drive greater resource efficiency; market expansion for Buffalo Niagara products through increased export assistance to small-medium sized manufacturers; and preparing an appropriately skilled workforce to meet manufacturer labor needs.

A LOOK AT PHASE I -----> WHAT'S NEXT IN PHASE II

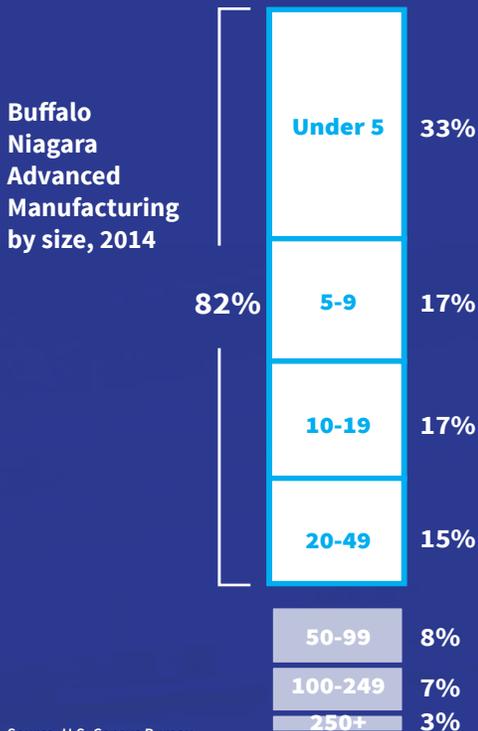


Buffalo Manufacturing Works
High-Tech Innovation Hub at Riverbend



Strategic Investments & Incentives
Buffalo Manufacturing Works Phase II

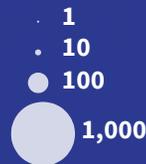
Of the 1,324 Advanced Manufacturing firms in Buffalo Niagara, 82% have less than 50 employees.



Source: U.S. Census Bureau, County Business Patterns, 2014.

Many of the region's manufacturing firms are concentrated along the waterfront and near population centers.

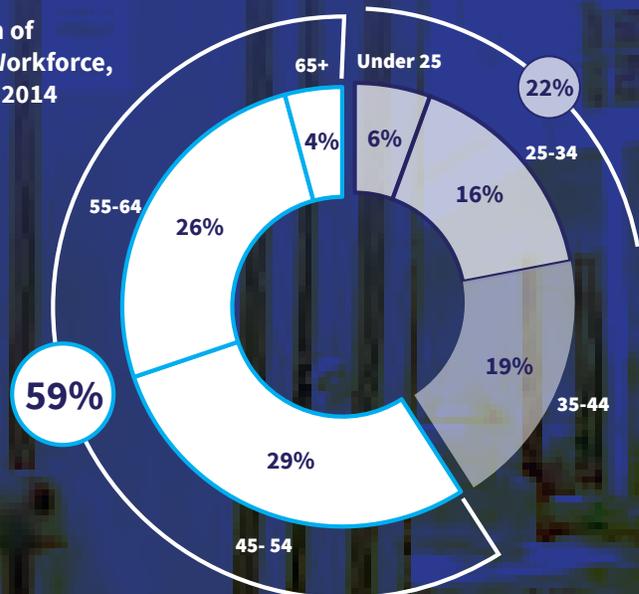
Advanced Manufacturing Firms by # of employees, 2016



Source: ReferenceUSA Business Database, 2016.

Almost 60% of Advanced Manufacturing workers are age 45 or older, while just 22% are younger than 35.

Age Composition of Manufacturing Workforce, Buffalo Niagara, 2014



Source: U.S. Census Bureau, Local Employment Dynamics, Quarterly Workforce Indicators, 2014.



Buffalo Manufacturing Works operated by EWI

Buffalo Manufacturing Works is a member-based, state-of-the-art facility in downtown Buffalo that creates an ecosystem to help local manufacturers identify, test, and implement technologies to create a competitive advantage for their products, expand into new markets and boost productivity, and stimulate innovation and growth for the region's manufacturing sector.

Lead Organization

EWI

Phase I Buffalo Billion Investment

\$45.3M

Major Milestones Accomplished

Facility opened in April 2015.

Installed and commissioned more than \$13M in capital equipment.

Engaged with 50 companies and delivered or is in progress with 32 funded projects totaling \$1.1M. There are 38 additional potential projects in various stages of development representing approximately \$2.3M.

Attracted 21 new local members across various industries (aerospace, heavy manufacturing, automotive, medical device, consumer and industrial products, advanced energy) and company sizes to become EWI members.

Opened the Additive Manufacturing Learning Lab to advance STEM education.

Hosted 25 events and public tours that brought 2500+ visitors from industry, academia and government into the facility.

Employs 15 people at the Buffalo operation, 11 of which have been hired since the inception of the operation.

Actions Planned

Launch \$6M in unique, best-in-class metal additive manufacturing capabilities.

Pilot a new technology roadmapping offering with Insyte Consulting for small and medium sized manufacturers.

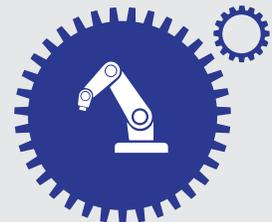
Continue to recruit top engineering talent to Buffalo.

Replicate the Buffalo Manufacturing Works model in Colorado to grow portfolio of EWI technical capabilities available to Buffalo Niagara manufacturers.

Expand the Additive Manufacturing Learning Lab by adding new curriculum and more STEM-related events.

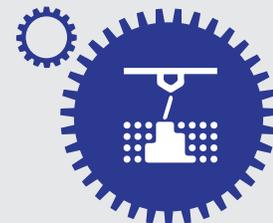
\$13M

IN CAPITAL EQUIPMENT ACROSS THREE CORE TECHNICAL FOCUS AREAS



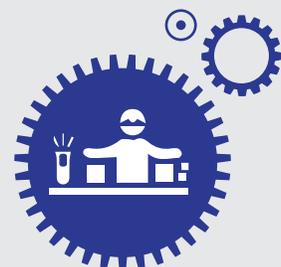
ADVANCED AUTOMATION

INDUSTRIAL ROBOTICS, HUMAN-COLLABORATIVE ROBOTICS, VISION SYSTEMS, CONTROLS, SENSORS



ADDITIVE MANUFACTURING

METALS ADDITIVE MANUFACTURING EQUIPMENT, PLASTICS 3D PRINTERS



MATERIALS & TESTING

VARIOUS OPTICAL INSPECTION TECHNOLOGIES, X-RAY COMPUTED TOMOGRAPHY INSPECTION EQUIPMENT, SEVERAL OTHER MEASUREMENT AND ANALYSES TOOLS



Offering a wide-range of member services that lead to long-term sustainability for the organization

EWI met with over 150 local manufacturers to identify the region’s technical needs and existing regional assets to build a sustainable and complementary advanced manufacturing offering. The operation is designed to have local impact and increase the competitiveness of regional manufacturers, while still being relevant and competitive on a national stage. This is a cornerstone of the operation’s long-term sustainability plan, as providing competitively differentiated technology solutions to customers across the country will allow the operation to continue to fund itself and provide extensive value locally.

EWI provides manufacturers individual fee-for-service projects that help a company along the pathway of identifying, maturing and implementing innovative manufacturing technologies to improve product performance, quality, reliability and cost competitiveness in creating unique competitive advantages. These projects represent a wide range of technical needs by various manufacturers including automated inspection and assembly, robotic cell integration, additive manufacturing process selection and development, laser welding process development, non-destructive evaluation to inspect internal components and critical features, resistance brazing, ultrasonic-assisted machining product development, new material technology development, training, and on-site assessment. In addition, EWI provides its member companies with services such as technical inquiries, design review, and literature searches.



Buffalo Manufacturing Works is designed to connect companies with best-in-class partners who have the expertise to help drive growth.

APPLIED R&D



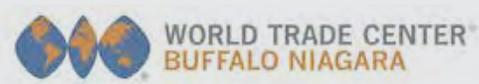
FUNDAMENTAL RESEARCH

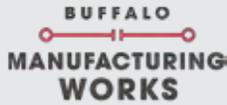


PROCESS EXCELLENCE



MARKET EXPANSION





Through Buffalo Manufacturing Works, EWI connects companies to resources for testing and developing new technologies, and improving existing products and processes.



→ HOW SOME EWI MEMBERS ARE SOLVING CHALLENGES

EWI connects members with technical experts and cutting edge equipment to help companies innovate and compete on the world stage.

Local EWI Members

- Cobham
- Dresser Rand
- Eastman Machine Company
- EverFab
- Graphic Controls**
- Harmac Medical Products
- Harper International
- Jiffy-tite Company, Inc.
- MacLean Curtis
- Moog, Inc.**
- North American Carbide
- P&G Steel Products
- Pfannenberg
- Power Drives, Inc.
- Praxair, Inc.
- Rem-tronics, Inc.
- Sherex Fastening Solutions
- SolEpoxy
- Staub**
- TAM Ceramics
- The Inventures Group
- Whiting Door

**Staub
Hamburg, NY**

CHALLENGE The need to select and deploy the company’s first multi-purpose human collaborative robot (cobot).



SOLUTION An on-site “design review” with EWI’s advanced automation experts at Buffalo Manufacturing Works designed to help Staub ensure successful automation of certain production tasks in the machining environment. EWI continues to support the company’s engineers as they explore ways to boost the cobot’s utilization and flexibility to achieve increased capacity and production.

**Graphic Controls
Buffalo, NY**

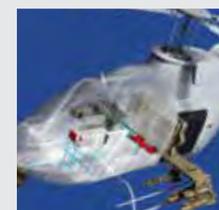
CHALLENGE The need for precision, non-destruction evaluation of internal dimensions and features of single-use medical device components.



SOLUTION EWI’s metrology team at Buffalo Manufacturing Works combined cutting-edge inspection technologies and in-house engineering expertise to help inform the company’s efforts to increase first pass yield. EWI continues to support the company’s engineers through technical inquiries and on-site visits.

**Moog Inc.
East Aurora, NY**

CHALLENGE The need for a non-contact, extremely accurate, and fast solution for in process inspection of critical surfaces on a family of aerospace components.



SOLUTION Working with Moog, EWI’s advanced automation team at Buffalo Manufacturing Works developed a human-collaborative, robotic multi-sensor metrology tool to demonstrate the automated inspection of 50+ different parts with over 200 unique critical surfaces. The company is currently in the process of procuring and integrating this unique system to implement the solution in their production environment to achieve both increased inspection speed and 100% part inspection.

Buffalo High-Tech Innovation Hub at Riverbend

NYS is investing in a 1.2M square foot, high tech solar panel manufacturing facility which will house the SolarCity GigaFactory. SolarCity is the number one producer of solar panels in the country in one of the fastest growing industries in the world. The SolarCity facility will be the largest of its kind in the Western Hemisphere, producing more than one-gigawatt of annual solar capacity and approximately 10,000 solar panels daily when it reaches full production. SolarCity will operate the facility and will spend \$5B in NYS over the next decade in connection with the creation and operation of the facility.

Lead Organization

Empire State Development

Phase I Buffalo Billion Investment

\$350M

Major Milestones Accomplished

In 2014, SolarCity acquired Silevo, which had a previous deal with NYS to locate a solar manufacturing facility in Buffalo, and committed to keeping the facility in Buffalo.

NYS acquired the 88-acre RiverBend site and an additional 96 acres of land from the City of Buffalo as the size and scope of the project increased by four-fold.

Buffalo High-Tech Manufacturing Innovation Hub broke ground in September 2014 and the facility was completed in 24 months. SolarCity took control of the plant in September 2016.

Tesla announced partnership with Panasonic. Tesla acquired SolarCity in November 2016 for \$2.6B.

Actions Planned

Work focuses on the interior fit out process, including installation of specialized solar panel manufacturing equipment.

Production begins in summer 2017.



FROM STEEL TO SOLAR

The facility is located at Riverbend, the former Republic Steel and Donner-Hanna Coke site and part of the South Buffalo Brownfield Opportunity Area.



WHAT'S NEXT IN PHASE II



Advanced Manufacturing

Accelerating innovation for a broad range of manufacturers.

 **Buffalo Manufacturing Works Phase II**



Public investments to jump-start the economy.



Strategic Investments & Incentives

WHY IT'S IMPORTANT

Tradable sectors are defined as those which produce goods and services to be moved out of state for consumption around the world. They are important to growing an economy because they report higher sales, employment and wages than other firms. Understanding the importance of tradable sectors, Buffalo Niagara has been pursuing an aggressive, shared advanced manufacturing agenda targeted at initiatives that strengthen our workforce and boost R&D and commercialization activities to support growth of existing firms and attraction of new ones. Another important tool in growing the manufacturing sector is direct strategic investments and incentives to attract profitable, high-impact companies to the region. In addition to adding large numbers of higher-paying jobs, other benefits of employing such incentives include spin-off attraction of interrelated and supply chain companies to strengthen the manufacturing cluster, growing worker talent pools, and investing in underutilized former industrial land in the urban core.



Strategic Investment Fund

STRATEGIC INVESTMENT FUND

Empire State Development will oversee a strategic investment allocation and create public-private partnerships with companies primarily focused on advanced manufacturing. This fund will allow the region the opportunity to pursue and negotiate transactions that generate significant private investment and encourage existing large, regional companies that are poised for growth to do so in Buffalo Niagara. The fund is also envisioned to play a role in attracting large, publicly-traded companies to Buffalo Niagara that currently have little or no presence here. Combined with Buffalo Billion Phase I and II investments in innovation and workforce, a strategic investment fund will allow for catalytic investment and job creation.

BUDGET & IMPACT

Budget Request: \$15M

The fund anticipates investing over one to two years with projects coming online in 2019 and 2020 and would expect to leverage at least a five-to-one ratio of private to public investment or \$500M + of total private investment.



→ Buffalo Manufacturing Works Phase II

Buffalo Manufacturing Works, a successful initiative of Buffalo Billion Phase I, is poised for growth through the delivery of a comprehensive portfolio of enhancements that will broaden and deepen its long-term impact on Buffalo Niagara’s manufacturing competitiveness. EWI will identify and accelerate the growth of small- and medium-sized manufacturers, as well as develop a loan fund to create access to capital. EWI will expand its staff and grow existing partner relationships to deliver a full suite of services tailored to the needs of Buffalo Niagara manufacturers. To facilitate this growth, EWI will move the Buffalo Manufacturing Works operation to the Northland Corridor to customize a facility that fully integrates its wide range of partnerships, as well as serve as an anchor tenant for the new commerce park. Finally, EWI will expand its existing educational pilot program to become the Advanced Manufacturing STEM Learning Lab, helping to grow the region’s advanced manufacturing workforce pipeline.

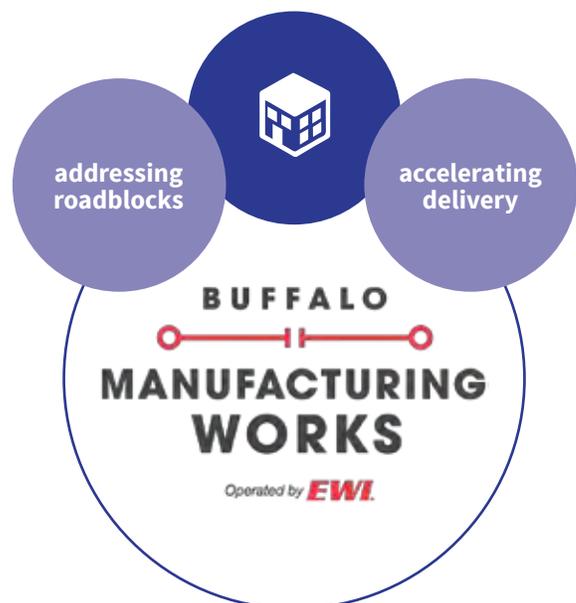


WHY IT’S IMPORTANT

Buffalo Manufacturing Works was established to leverage the region’s existing manufacturing infrastructure while addressing the need for innovation resources. As a complement to the core focus on innovation, EWI works effectively with key partners to help manufacturers improve productivity, grow market expansion, and support workforce readiness. Despite progress toward these goals, surmountable challenges remain in the region’s manufacturing ecosystem. For example, while the region’s 1,500 small- and medium-sized manufacturers play a critical role in the economy, many under-invest in innovation and growth due to a variety of constraints including a lack of internal staff expertise, a focus on cost management in lieu of investment, and an inability to assess the value of external resource providers. Another challenge is maintaining and increasing manufacturing jobs in Buffalo Niagara as interest in manufacturing jobs declines across the U.S. and STEM education enrollment plateaus. By building on existing momentum and focusing activity on the industry-validated needs of innovation and workforce, EWI laid the groundwork for a series of initiatives to directly address roadblocks and accelerate delivery to a broader range of manufacturers. Together with its partners, Buffalo Manufacturing Works will be positioned as the cornerstone of a growing ecosystem that enables manufacturers to become more competitive through innovation; enhances existing workforce development initiatives; attracts advanced manufacturers to NYS, and serves as an asset for regional venture and commercialization activities.

Supporting the growth of Buffalo’s small and mid-size manufacturing companies

Buffalo Manufacturing Works as the cornerstone of a growing ecosystem.



Accelerate Growth of Small- and Medium-Sized Manufacturers

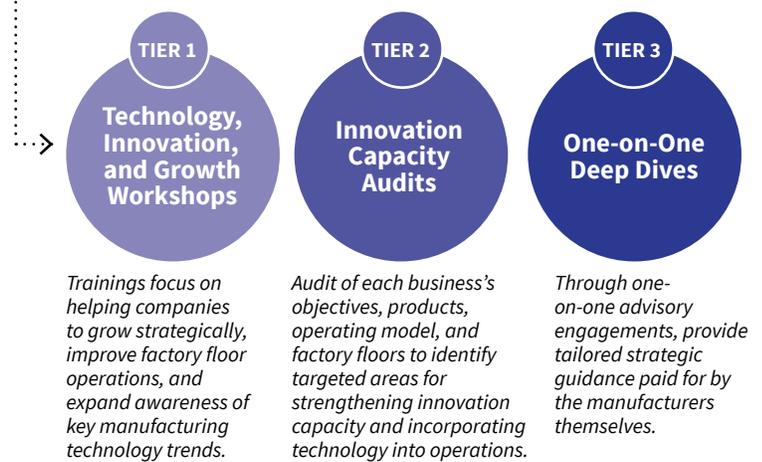
EWI will target investment to identify and accelerate the growth of high impact small-and medium-sized manufacturers through the **Innovation Capacity Building Program**. The program will first provide a rigorous assessment of a small- and medium-sized manufacturers' capacity to innovate and grow among a broad base of Buffalo Niagara manufacturers, and second, identify a subset of high impact small- and medium-sized manufacturers that have the greatest potential for substantial innovation and employment growth. The program will reach approximately 250 small- and medium-sized manufacturers over a three-year period and, once successfully delivered in Buffalo Niagara, will have the opportunity to serve additional manufacturers in upstate New York.

At the outset of the program, each small- and medium-sized manufacturer will take a business assessment which will produce a report card benchmarking their performance against industry standards and a short list of local service providers tailored to their needs. Based on the results of each assessment, manufacturers will be directed to at least one of three additional offerings, delivered in partnership with Insyte Consulting and Next Street. With each tier, the level of support increases, dependent on each company's capacity to sustain, scale, and innovate. In addition, an innovative technology-based platform will be incorporated to benchmark and track manufacturers' performance and innovation capacity relative to industry standards and regional peers, allowing companies to measure and manage their business while also collecting critical economic development and business data.

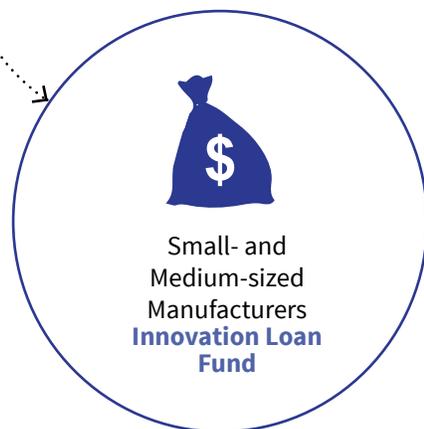
A clear need and desire to innovate, without access to capital to do so, is a lost economic opportunity. Compared to other small businesses, small- and medium-sized manufacturers have particularly strong needs for capital-intensive fixed assets, such as machining equipment, and a long cash conversion cycle, which creates a need for short-term working capital options and equipment financing with flexible terms. EWI will establish the **Innovation Loan Fund** with more favorable terms than currently available through traditional sources to implement innovation recommendations resulting from the Innovation Capacity Building Program. An investment of \$3M will provide equity or credit enhancement for a pooled vehicle and will be leveraged three-to-six times through conventional debt, which would capitalize a full fund of \$9-18M.



How the program works for small and mid-sized business enterprises



Ensuring small- and mid-sized manufacturers have access to the capital they need to be successful

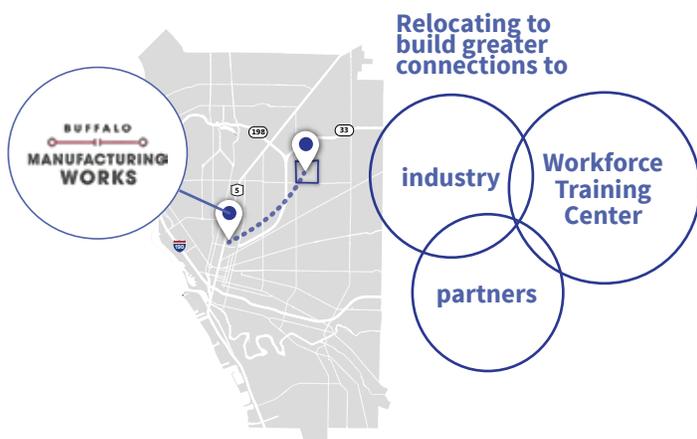




Increase capacity of Buffalo Manufacturing Works

EWI will increase the number of staff and grow existing partner relationships in order to deliver a full suite of services tailored to the needs of Buffalo Niagara manufacturers. EWI will increase the size of technical teams (adding technical innovation experts with a focus on advanced automation and additive manufacturing), enable collaboration with small- and medium-sized manufacturers- focused partners, increase community engagement and business development, and build a robust project and program management infrastructure to manage a rapidly increasing throughput of projects. New programmatic functions will be established to oversee the design, delivery, and scaling of the proposed suite of initiatives to achieve a sustainable operational model.

As Buffalo Manufacturing Works grows, EWI will move its current temporary operation from the Buffalo Niagara Medical Campus to the Northland Corridor to serve as an anchor tenant leading to increased economic development in the area. EWI's direct staff (approximately 60 at full capacity) will be delivering over 100 projects a year, leading to numerous opportunities for companies from Buffalo Niagara and beyond to visit Buffalo's East Side and experience the revitalization occurring in both advanced manufacturing and in the City of Buffalo. The proposed relocation to Northland will include a professionally designed, customized facility that fully integrates the wide range of partnerships that EWI envisions for Buffalo Manufacturing Works. In addition to the parallel establishment of the Western New York Workforce Training Center at Northland, EWI will co-locate with Insyte Consulting, Next Street, and other potential partners to create a holistic suite of service providers for the benefit of the local manufacturing community to bring complementary strengths to the neighborhood and build a foundation for growth, innovation, and prosperity.



Advanced Manufacturing STEM Learning Lab

EWI has established a STEM education Additive Manufacturing Learning Lab as an innovative model to attract, build, and improve the STEM-career pipeline in Buffalo Niagara. Through an expansion of the current activities, EWI will significantly extend the reach of the student population being served, attract additional funding from federal and foundation grants, and deploy the program to a broader range of technologies and/or grade levels. The Advanced Manufacturing STEM Learning Lab will build a STEM pipeline through early engagement with students from primarily underserved populations within Buffalo Niagara; increase STEM learning by creating an engaging after-school program for students to learn advanced manufacturing technologies; and improve postsecondary job skills through structured mentoring, internship and extra-curricular manufacturing challenge programs working with the Buffalo Public Schools, local community colleges and state universities. At scale, the Advanced Manufacturing STEM Learning Lab will train 200-300 students and teachers per year.

This programming will serve as a complement to the upskilling of the incumbent workforce training that will occur at the Western New York Workforce Training Center. Together, these two separate, but aligned, initiatives located on Buffalo's East Side will produce a pool of skilled talent to drive the manufacturing economy forward into a future which will serve as an important asset for attracting new, innovation-economy employers and employees to the region.



IMPLEMENTATION MILESTONES

Accelerate Growth of Small- and Medium-Sized Manufacturers

Plan and develop tools for Small- and Medium Sized Manufacturers Innovation Capacity Building Program.

Hire full team for Innovation Capacity Building Program.

Roll out Wave 1 Workshops for Innovation Capacity Building Program.

Continue workshops for Innovation Capacity Building Program and roll out Innovation Capacity Audits and One-on-One Deep Dives.

Partner with a reputable financial intermediary, such as a national or regional community development financial institution, to manage the Small- and Medium Sized Manufacturers Innovation Loan fund. Coordinate activities and seek approval from Empire State Development on the fund manager.

Conduct comprehensive market analysis to determine appropriate small- and medium sized manufacturers' capital needs, types and flexibility of capital needed, and fund terms.

Leverage the State's investment to attract additional funds and bring the Innovation Loan fund to market.

Generate deal flow and launch Innovation Loan fund.

Disburse initial investments and continue Innovation Loan fund.

Increase capacity of Buffalo Manufacturing Works

Build out management infrastructure and new program offerings.

Hire world-class technical leads to enhance the technical team.

Plan and design for relocation to Northland Corridor

Construction and move-in to Northland Corridor location.

Key partners co-locate to Northland Corridor

Host national conference on advanced manufacturing competitiveness.

Advanced Manufacturing STEM Learning Lab

Continue to deliver existing Additive Manufacturing Learning Lab.

Continue to partner with Praxair's Global Giving Foundation.

Plan, outreach and create education program for new Advanced Manufacturing STEM Learning Lab.

Consult with leading national workforce development expert to ensure an impactful program design and delivery.

Launch Middle School Program

Open new Advanced Manufacturing STEM Learning Lab at Northland Corridor.

Partner with the Western New York Workforce Training Center to complement their curriculum development activities and align strategies to build the foundations of a human capital ecosystem that stretches from school age to community colleges and universities through to the end employers.

BUDGET & IMPACT

Budget Request: \$35M

The projected plan anticipates annual fee-for-service projects to grow to \$11.5M by year three and total \$26M in leveraged direct investment over the three year period, plus an additional \$108M in leveraged private re-investment in capital and operating expenditures. This project work is expected to lead to GDP impact of \$134M. This translates to 972 jobs retained or created by assuming one job per \$138,000 of GDP impact retained or increased.

Other impacts include, but are not limited to: \$6-15M in additional equity or debt capital to fully capitalize the Innovation Loan Fund; \$3M in federal grant funding (application pending) to further expand and diversify the impact of the Advanced Manufacturing STEM Learning Lab initiative; a leadership role in the Department of Defense's

\$80M investment in AGILE, a national robotics NNMI institute proposed by EWI and a team of nationwide partners; and, as a unique and differentiated asset anchor tenant at Northland, the potential to attract additional investment to the East Side of Buffalo.

It is projected that this investment will directly create 30 jobs, in addition to 30 jobs already created or projected. To date, EWI has created 19 high-quality, high multiplier effect jobs with an average full-time salary of \$98,000, more than double the average annual wage in the region. To date two-thirds of those jobs have been sourced from the local community and one-third have been regional or national-level talent attracted by EWI. The region has the opportunity to attract world-class talent to implement and sustain upon the proposed plan.

TRADABLE SECTORS:

Tourism

Tourism-related industries are significant employers powered by a strong array of natural and cultural tourism assets (including Niagara Falls) and hospitality services.

Tourism by the numbers		% OF REGION
# OF JOBS	58,229	11%
# OF FIRMS	3,166	11%
TOTAL WAGES	\$1.3B	5%
AVG. WAGE	\$22,626	
EXPORTS	\$190M	3%

Source: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; Brookings Export Nation, 2015; U.S. Patent and Trademark Office, 2015. Note: Tourism exports are measured using Brookings' "Accommodation", "Food & Drink", "Entertainment", and "Sports & Performing Arts" service sectors.

Why the strategy matters

Despite a variety of tourism assets, Buffalo Niagara is not fully capturing its tourism opportunity. Niagara Falls attracts more visitors annually than most national parks sites, but small proportions of visitors to the Falls stay overnight due to relatively limited programming, accommodations and dining options. Other areas of the region, including asset-rich Buffalo, do not capture Niagara Falls' visitors due to a lack of a strong, consistent brand, inefficient connectivity between sites, and the region's historic inability to maximize the potential in the global tourism market.

What needed to be done

The Plan encourages investing in the region's major tourism attractions and amenities and enhancing programming to encourage longer stays and increased spending by visitors. The Plan emphasizes improving the visitor experience at Niagara Falls State Park by upgrading tourist programming that is authentic to the strengths and heritage of the

region; investing in the tourist experience in the City of Niagara Falls by redeveloping the three-block radius adjacent to the State Park; and investing in a cohesive regional strategy that consists of market research and a regional marketing program to enhance awareness of the entire region's tourist sites and improve connectivity.

A LOOK AT PHASE I -----> WHAT'S NEXT IN PHASE II



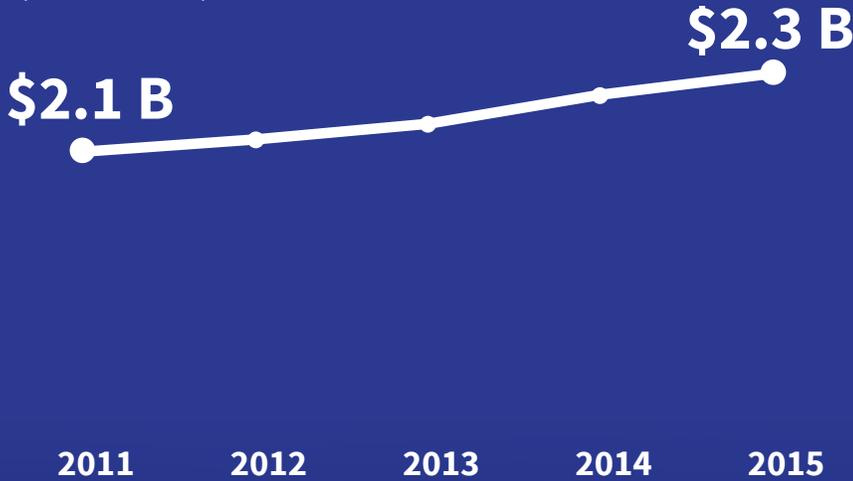
- Riverway and Niagara Gorge Corridor
- Wonder Falls Resort
- Hotel Niagara
- Niagara Falls Parks Programming



- Strategic Investments & Incentives
- Niagara Falls Redevelopment
- Frank Lloyd Wright's Legacy
- National Comedy Center
- Visitor Welcome Center
- Marketing Buffalo Niagara

Visitor spending in Buffalo Niagara is on the rise increasing 9% between 2011 and 2015.

Visitor spending Erie and Niagara Counties, 2011-2015
(in 2015 dollars)



Source: UBRI analysis of data from Tourism Economics, provided by Empire State Development. U.S. Department of Labor Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, 2011-2015.

What if the region increases visitor spending?

A 5% increase in annual visitor spending means additional impacts each year:

\$114.2 M in visitor spending

2,368 new jobs*

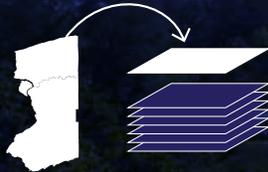
\$69.9 M in labor income*

\$170.9 M in industry output*

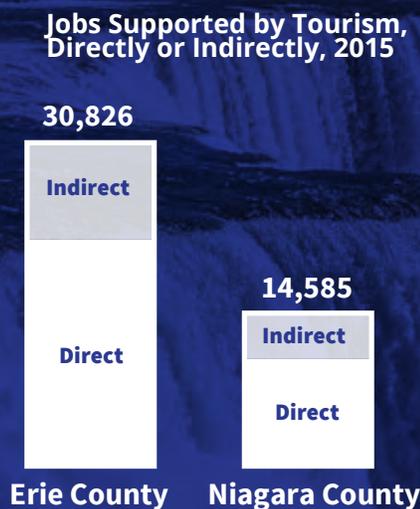
* These figures include direct and secondary impacts, calculated using IMPLAN.

Source: UBRI analysis of 2015 tourism spending data from Tourism Economics, provided by Empire State Development, using IMPLAN. The analysis assumes that future proportions of visitor spending on lodging, recreation, food & beverage, transportation, retail and second homes is the same as what it was in 2015. Visitor spending, labor income and industry output are in 2015 dollars.

Erie and Niagara Counties generated one out of every seven visitor dollars spent in Upstate New York in 2015.



In 2015, tourism supported a total of 45,411 jobs across the region.



Source: UBRI analysis of data from Tourism Economics, provided by Empire State Development. NYSDOL, Quarterly Census of Employment, 2015(p).

Niagara Falls' visitation numbers exceed nearly all of the nation's top-visited national parks.



Source: Empire State Development, Western Regional Office/USA Niagara; National Park Service, U.S. Department of the Interior, NPS Stats, Visitor Use Statistics, 2015.



Riverway and Niagara Gorge Corridor

The removal of key segments of limited-access expressways along the Upper Niagara River and the Niagara Gorge corridor—comprising underutilized portions of the Niagara Scenic (formerly Robert Moses) Parkway—is the largest and most transformative infrastructure project Niagara Falls has seen in decades. These efforts—while preserving reasonable vehicular access—will greatly enhance the resident and visitor experience by increasing access to and better uniting all water features (Niagara Falls, River and Gorge) with adjoining neighborhoods to create a single magnificent destination. It will significantly bolster sustainability by reducing unnecessary pavement and expanding green space to facilitate a host of outdoor recreation activities to boost the visitor experience and attract private development.

Lead Organization

USA Niagara Development Corporation

Phase I Buffalo Billion Investment

\$11.5M

Major Milestones Accomplished

Riverway project construction began fall 2014 and opened to traffic in 2015.

Niagara Gorge Corridor project announced. Preparation of final Design Report/Environmental Assessment in anticipation of federal Finding of No Significant Impact issued in early 2017.

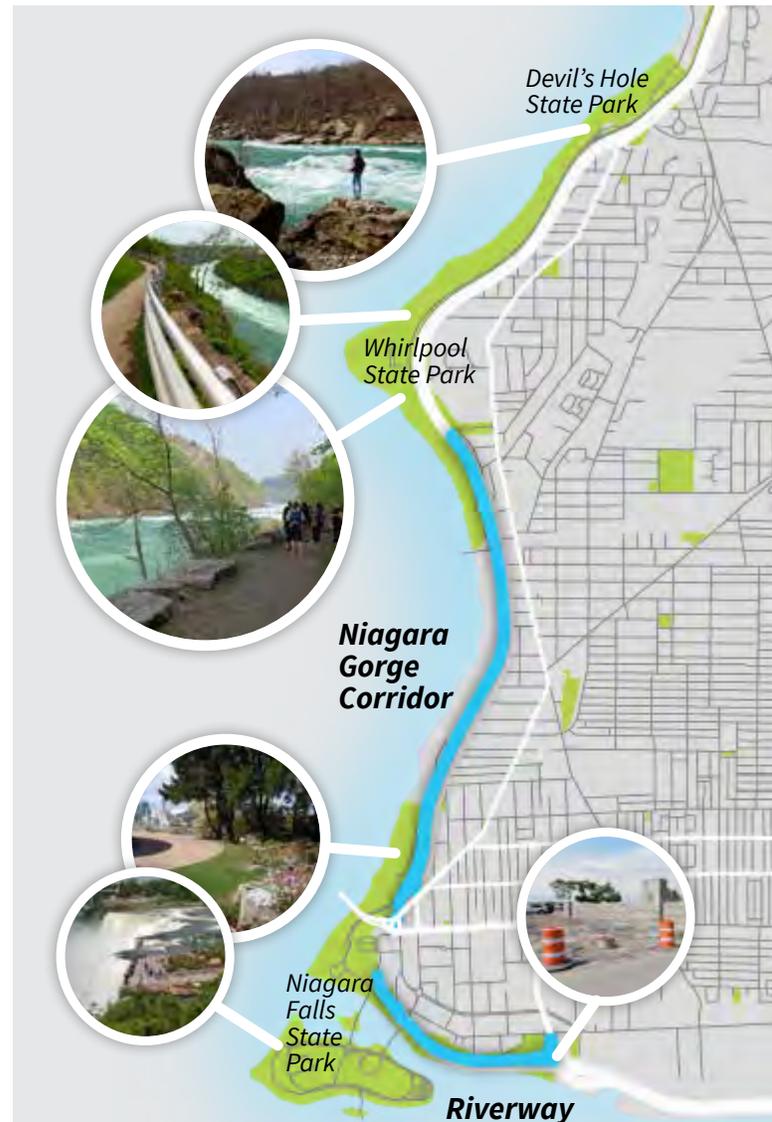
Governor Cuomo announced Robert Moses Parkway to be renamed Niagara Scenic Parkway.

Projects helped spur \$50M in private investment with four new hotel projects along the Upper Niagara River.

Actions Planned

Riverway Project is fully completed.

Final design and contract letting of Niagara Gorge Corridor project complete early 2018; construction begins and is expected to take two years.



9 million visitors
to Niagara Falls State Park annually

Investments that are turning a top tourist attraction into a top tourist destination

It is the combination of the \$62M dedicated to the removal of these underused expressway segments, \$70M in recent renovations to Niagara Falls State Park, and \$240M in public and private development in downtown Niagara Falls that is helping the City realize its true potential as a world-class tourist destination.



RIVERWAY

This \$18.8M investment facilitated the removal of all elevated expressway features (e.g., embankment, interchanges, etc.) on a one-mile segment of the former parkway that passed through Niagara Falls State Park, cutting off access to downtown Niagara Falls. It is being replaced with the “Riverway,” an at-grade, low-speed park road that emulates the Frederick Law Olmsted-designed road that once existed there. The project aims to increase access to the Upper Niagara River and the American Rapids—where generations of residents and visitors had to cross four lanes of concrete expressway to access the water’s edge. The project is reuniting downtown Niagara Falls with its most valuable and famous asset, the water.

As part of the project, an elevated interchange at John B. Daly Boulevard was removed at the entrance to the State Park—along with the earthen berm on which it sits—and replaced with a modern roundabout and signature entry feature. Other enhancements currently under construction include a full path system and nature areas, as well as a new water feature evoking the former Port Day Pond, a favorite local fishing and gathering spot for residents until it was filled in 1960 to make way for the Parkway. The restored setting will facilitate hiking, biking, fishing, cross-country skiing, all accessible from city streets for the first time in more than 50 years.



NIAGARA GORGE CORRIDOR

Parkway Removal Project: Main Street to Findlay Drive

An underutilized two-mile stretch of the parkway in Niagara Falls will be removed and replaced with open space, scenic overlooks and recreational trails to make the waterfront more accessible to residents, tourists and visitors. The project is intended to balance future transportation needs with improvements to the State Park and Niagara Gorge rim environment; provide direct access to the Niagara Gorge from the adjacent neighborhoods; and enhance opportunities for sustainable economic development. The project marks the largest expansion of green space since the Niagara Reservation was designed in 1885, and will link the Niagara River Gorge and Falls into a single destination to allow easier access to the water’s edge.

The \$42M project, funded by the New York Power Authority and NYS Office of Parks, Recreation, & Historic Preservation, calls for the removal of all expressway features from Niagara Falls State Park at Main Street in downtown Niagara Falls to Findlay Drive, near Whirlpool and DeVeaux Woods State Parks. It will also include reconstruction of Whirlpool Street and a portion of Third Street— immediately next to the parkway—to provide north-south access to this portion of the Niagara Gorge corridor. This would realize an approximately 140-acre unbroken green ribbon of open space along the Gorge rim—linking three State Parks and fully accessible to adjoining City neighborhoods—that will enable new outdoor recreational opportunities. Moreover, it will remove a psychological wall that impeded the Niagara Gorge and its adjoining neighborhoods from being perceived as a single place. It will allow them to fully benefit from their proximity while creating a waterfront Main Street in the north end of Niagara Falls.

Investing in a world-class tourist destination

Wonder Falls Resort



Niagara Falls State Park Programming



Hotel Niagara



Niagara Falls State Park

Wonder Falls Resort

The redevelopment of the remaining two-thirds of the former Rainbow Centre Mall (vacant for more than a decade) into the 200,000 square-foot Wonder Falls Resort is a key element in the transformation of downtown Niagara Falls. Wonder Falls Resort will be a locally-themed entertainment complex involving a major indoor water element highlighting natural features in the region; a new hotel tower with rooftop dining; an indoor family amusement facility; and various other retail, food and beverage venues. Wonder Falls Resort will share the former mall with the Niagara Falls Culinary Institute, which opened in 2013, and provides training in culinary arts and hospitality management, small business development and associated retail.



Lead Organization

USA Niagara Development Corporation

Phase I Buffalo Billion Investment
TBD

Major Milestones Accomplished

Uniland Development Company was chosen as the preferred developer for the project.

USA Niagara Development Corporation is negotiating primary terms of the agreement with Uniland Development Company. Concurrently, USA Niagara Development Corporation and Uniland are initiating a number of due diligence efforts including traffic analyses and SEQRA documents, a Phase I site assessment, site property/topographic survey, and geotechnical borings.

Actions Planned

Finalize project scope and enter into formal development agreement.

Complete final design and secure site plan approval from the City of Niagara Falls.

Begin construction.

Hotel Niagara

After acquisition by USA Niagara Development Corporation and competitive solicitation of a private developer, the historic Hotel Niagara will undergo a complete restoration, in line with state and federal historic rehabilitation standards; and will be redeveloped for mixed-use to expand quality lodging and street-level retail offerings enhancing the pedestrian character of downtown Niagara Falls and contributing to the City’s visitor experience. Built in 1924 and listed on the National Register of Historic Places, the Hotel Niagara will be returned to productive use after a decade of being closed and multiple changes in ownership. The 12-story landmark property provides unparalleled views of the Niagara River rapids and its strategic location builds off recent investments in the Conference & Events Center Niagara Falls, Old Falls Street, and Niagara Falls State Park.



Lead Organization

USA Niagara Development Corporation

Phase I Buffalo Billion Investment

\$5M

Major Milestones Accomplished

Site acquired by USA Niagara Development Corporation. Issued request for proposals for a developer.

Actions Planned

- Selection of a preferred developer.
- Development agreement signed by USA Niagara Development Corporation and preferred developer.
- Renovation work begins.
- Re-opening of hotel – late 2018.

Niagara Falls Parks Programming

The City of Niagara Falls has 11 miles of waterfront on the Upper and Lower Niagara River comprised of four State Parks and including underutilized historic structures. The project will expand the amount and types of public outdoor recreational offerings—and facilities to support such activities—along the Niagara River to entice visitors to extend their stays in the region. This could include a reuse of underutilized historic structures for venues like outdoor gear rental and food and beverage facilities; redefinition of the Niagara Gorge Discovery Center from a small museum to a true gateway facility to facilitate hiking, birding, rock climbing, rappelling, zip-lining, and fishing in the Gorge and at other State Parks along the Gorge rim; new and enhanced trail heads; as well as facilities to support winter activities like cross country skiing and snow shoeing. Empire State Development will partner with an operator to establish, operate and maintain a program of these outdoor recreation activities and associated facilities.

Lead Organization

Empire State Development/ USA Niagara Development Corporation

Phase I Buffalo Billion Investment

TBD

Major Milestones Accomplished

- Completion of \$75M in State Park improvements that will facilitate outdoor activities.
- Completion of the \$35M improvement to create winter storage and maintenance facilities for the Maid of the Mist, which created new summer public elevator access to the base of the Niagara Gorge.

Actions Planned

- Issuance of request for proposals for master operator of outdoor recreational program.
- Selection of preferred operator.
- Entering into lease and concession agreement for outdoor recreation and associated real estate development with preferred operator.
- Planning and environmental review and five-year phase-in of recreation components and facilities.

WHAT'S NEXT IN PHASE II



Tourism

Investing in strategic sites to revitalize Niagara Falls.

 **Niagara Falls Redevelopment**

Restoring architectural gems to attract visitors.

 **Frank Lloyd Wright's Legacy**

Promoting NYS attractions and products.

 **Visitor Welcome Center**

Letting the world know what the region has to offer.

 **Marketing Buffalo Niagara**

A major year-round destination in Jamestown.

 **National Comedy Center**



Tourism as a service export presents unique opportunities for the region.

 **Strategic Investments & Incentives**

WHY IT'S IMPORTANT

Niagara Falls, a major destination for international visitors, creates a competitive advantage for Tourism as a tradable sector in Buffalo Niagara. International visitors are an important segment of visitors overall because they tend to stay longer and spend more than those traveling shorter distances. Tourism is a significant service export in Buffalo Niagara, but additional strategic investments in tourism-based companies, amenities and attractions will boost international appeal, generating additional jobs and revenue for the region.



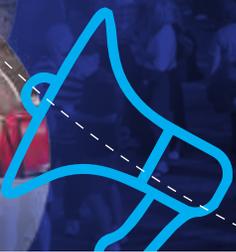
STRATEGIC INVESTMENT FUND

Empire State Development will oversee a strategic investment allocation and create public-private partnerships with developers to attract retail, hotel and attraction opportunities. The fund is also envisioned to play a role in attracting large, publicly-traded tourism-related companies to Buffalo Niagara that currently have little or no presence here. Combined with Buffalo Billion Phase I and II investments in infrastructure and tourism product development, a strategic investment fund will allow for catalytic investment and job creation.

BUDGET & IMPACT

Budget Request: \$10M

The fund anticipates investing over one to two years with projects coming online in 2019 and 2020 and would expect to leverage at least a five-to-one ratio of private to public investment or \$500M + of total private investment.



➔ Niagara Falls Redevelopment



The project involves the **acquisition of a number of key underutilized properties** within a city block of Niagara Falls State Park to secure new significant downtown mixed-use development that is compatible with adjoining waterfront park and open space resources, while expanding the number of activities available to extend visitor stay. It also involves the ecological restoration of 125 acres of parkland along the **Niagara River Gorge** to protect important plant species and wildlife, and preserve this natural wonder for the enjoyment of residents and visitors.

WHY IT'S IMPORTANT

Ongoing infrastructure improvements, such as the removal and reconfiguration of waterfront expressways and upgrades to Niagara Falls State Park, are improving the resident and tourist experience by restoring connections between visitors and the waterfront; meanwhile a growing inventory of suitable hotel rooms, retail and restaurant space, and coordinated marketing efforts have begun to create a solid foundation of tourism infrastructure—the base of resources necessary to facilitate an expansion of visitor stay and spending. The acquisition and redevelopment of major properties adjacent to Niagara Falls State Park will continue this momentum—reconstructing the urban fabric that surrounds the Park and creating a seamless connection between downtown and the waterfront, while expanding market opportunities for other hospitality uses and facilitating future entrepreneurship activity. Likewise, investments in Niagara Falls Parks Programming and in the restoration of the Niagara River Gorge will address the community's need for outdoor active and passive recreational options and protect natural habitat vital to the environment and economy; while the WonderFalls resort will add much needed family-friendly entertainment.

Key elements for building visitor attractions



Strategic Land Acquisition Program

The land market in downtown Niagara Falls has historically languished as a result of a conundrum: while the City's economy was stagnant as it restructured away from its heavy industrial base, parcels near Niagara Falls State Park continued to have high valuation given its proximity to the globally-recognized attraction. Thus, entities that secured property near Niagara Falls State Park often elected to hold it as a land speculation rather than work to develop it for new uses. There are a number of key properties within a city block from Niagara Falls State Park that have been largely vacant, partially vacant, or underutilized for as long as 30 years. These properties—many dating to the City's ill-fated urban renewal program in the 1970s and 80s—continue to serve as blighting influences to significant state investments to upgrade Niagara Falls State Park and to open access to the City's waterfront. The Strategic Land Acquisition Program would support new significant downtown mixed-use development.



Restore the Gorge Project

The Niagara River Gorge is one of the most biologically diverse places in the Great Lakes region and a treasure to tourists who appreciate its natural splendor. It is a globally significant Important Bird Area with more than 300 species putting it on par with places like the Galapagos, the Everglades, and Yellowstone. The lower Niagara River rapids are designated as a Significant Coastal Fish and Wildlife Habitat with more than 100 species drawing recreational and sport fishermen from around the country.

The Western New York Land Conservancy, a regional, not-for-profit land trust that helps conserve the region's most cherished natural areas is leading efforts to restore and enhance wildlife habitat on 43 acres of park land in the gorge. With additional funding, it will be able to remove invasive species and restore an additional 125 acres along the gorge rim from Whirlpool State Park to Devil's Hole State Park. This includes riparian, grassland, and forest habitats critical to rare and declining plants and wildlife. The project site includes 12,000 feet of shoreline along the Niagara River. The goals of this work are to increase the ecological health of the Niagara River Gorge and Rim, provide conditions to allow native flora and fauna to flourish, and increase biological diversity of native flora and fauna, especially rare and declining species.



IMPLEMENTATION MILESTONES

Strategic Land Acquisition Program

Appoint legal counsel to administer land acquisition activities.

Competitively procure site prep and redevelopment of additional mixed-use downtown Niagara Falls development site.

Depending on nature of future land use, prepare development agreement and construction of other downtown land parcel.

Restore the Gorge Project

Begin planning and design work.

Begin invasive species removal and native plant restoration.

Install interpretive signage and provide educational programming.

BUDGET & IMPACT

Budget Request: \$25M

The projected impact of both projects would be transformative, in terms of community revitalization, environmental conservation, and enhancement of the visitors' experience at Niagara Falls.

→ Frank Lloyd Wright's Legacy

Buffalo Niagara has some of the best examples of master architect Frank Lloyd Wright that draw visitors from around the world. The Darwin D. Martin House Complex and Graycliff Estate, his two most important works in the region, are nearing completion after two decades of restoration. Buffalo Billion Phase II investments will ensure the final pieces of these two masterpieces are completed, bringing them to full restoration of Wright's vision, so that the region can benefit from their economic impact as major tourism drivers.



WHY IT'S IMPORTANT

Buffalo Niagara is beginning to fully realize its place as a world class destination for architecture enthusiasts. The completion of the restoration of both the Martin family's city dwelling (the Martin House) and lake front dwelling (Graycliff) as well as the synergies that result from increasing collaboration and marketing with other Wright buildings, Arts & Crafts movement sites, and architectural gems by H.H. Richardson, Louis Sullivan and many others offer a unique visitor proposition that will draw more tourists to the region.

The full restoration of two of Wright's important works will open a chapter of full inclusion in the "Wright in Buffalo" tourism movement, a movement that will gather strength with the celebration of Wright's 150th birthday in 2017. The two fully evolved attractions can combine more easily into larger, multi-day itineraries in the Buffalo region, vastly expanding the spread of tourism dollars through overnight stays, meals, and additional sites and attractions generating increased economic outcomes for the region.

DARWIN MARTIN HOUSE

Nearly
30,000
visitors annually

About 75% from outside WNY, including international visitors of 15%

→ PROJECTED IMPACTS OF INVESTMENTS

Up to **84,000**
visitors annually
when restoration is complete

Total annual impact
\$17.6M in economic output

GRAYCLIFF ESTATE

10,000
visitors annually

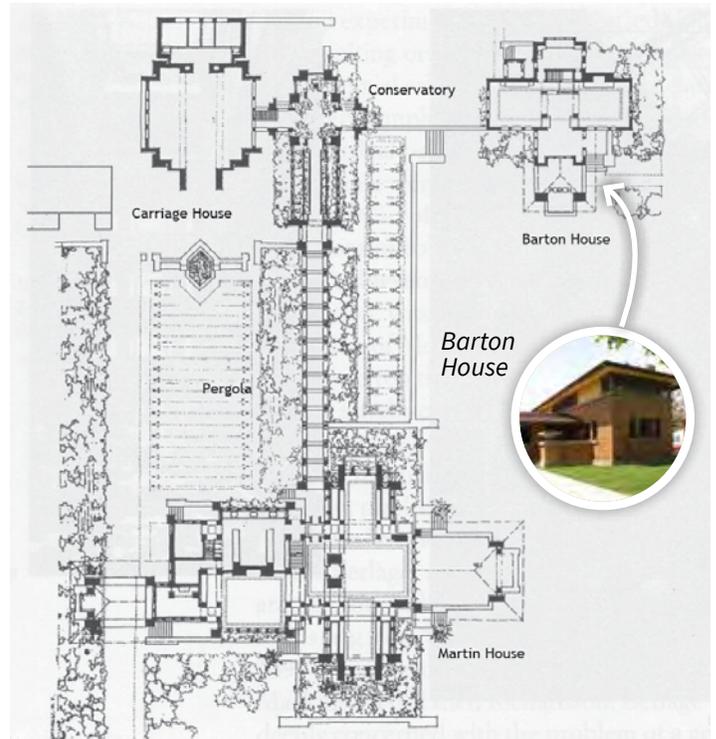
→ PROJECTED IMPACTS OF INVESTMENTS

Up to **20,000**
visitors annually
by 2019

Darwin Martin House

The Darwin D. Martin House Complex exemplifies Frank Lloyd Wright's Prairie House ideal and ranks as one of his finest residential works. Ravaged by time and neglected for decades, a comprehensive, multi-year restoration of the Martin House Complex beginning in 1996 has seen the expansion of the project from a single structure (the main Martin House) to the re-creation of the entire historic site to include the smaller Barton House, a carriage house with chauffeur's quarters and stables, a glass-roofed conservatory linked to the main house by a 100-foot pergola, and a gardener's cottage. As a complement to the historic structures, a visitor center, designed by Toshiko Mori Architect of New York was completed in 2009.

Buffalo Billion Phase II will fund two distinct remaining components of site restoration work: rehabilitation of Wright's extensive designs for the historic landscape; and restoration of the Barton House, the secondary residence on the site designed by Wright for Darwin D. Martin's sister and her family.



Graycliff Estate

The Graycliff Conservancy, Inc. is a nonprofit organization that is dedicated to the restoration of the Graycliff Estate, the summer home of Darwin and Isabelle Martin, designed by Wright and built between 1927 and 1931. Listed on the National Register of Historic Places and designated as a NYS landmark, Graycliff has been undergoing continuous restoration since it was acquired by the Conservancy in 1997. During these two decades, restoration efforts have included the removal of non-historic structures and the complete restoration of the exteriors of the three Wright-designed structures on the 8.5 acre estate.

This investment sets the stage for the final elements of site restoration: 1) the interior restoration of the Isabelle Martin House, the main house on the estate, 2) the interior restoration of the Foster House, inclusive of the garage and a second floor apartment, 3) the full restoration of the 3.5 acres that define the “home grounds” landscape, or the lawns and gardens adjacent to the homes, and 4) the restoration of beach access to the shore of Lake Erie, accessible via a 60 foot stair tower connected to the property by a pedestrian bridge.



IMPLEMENTATION MILESTONES

Darwin Martin House

Barton House: Phase 1 - Exterior Restoration /Mechanical Upgrades

Bids, Contracting & Permitting.

Exterior restoration work to repair concrete, masonry and stucco, exterior wood trim, doors and windows, HVAC, electric & plumbing upgrades.

Barton House: Phase 2 - Interior Restoration

Bids, Contracting & Permitting.

Interior restoration work to repair plaster, windows, wood trim, cabinetry, doors, flooring and paint.

Landscape Rehabilitation

Bids, Contracting & Permitting.

Construction north end of Campus and followed by historic core.

Graycliff Estate

Interior Restoration of Isabelle Martin House

Bids, Contracting, and Permitting.

Targeting kitchen, pantry, and servant's sunporch: Complete installation of interior systems: electric, plumbing, heating, fire suppression; refinish all surfaces: walls, ceilings, and floors.

Interior Restoration of Foster House

Site Specifications.

Bids, Contracting, and Permitting.

Targeting second floor apartment and garage: Complete installation of interior systems: electric, plumbing, heating, fire suppression. Install and finish all surfaces: walls, ceilings, and floors.

Landscaping of Home Grounds

Bids and Contracting.

Site preparation and planting of West Front Lawn, Maid's Croquet Lawn, Croquet Lawn, and Tennis Court.

Cliff Stabilization and Beach Access

Site Engineering, Permitting and State Environmental Quality Review .

Bids and Contracting.

Site preparation and staging.

80' to 260' cliff stabilization as estimated by Army Corps of Engineers.

Restoration of stone seat and esplanade wall structure.

Rehabilitation of stair tower and bridge.

Esplanade planting as per Shipman design (1931).

BUDGET & IMPACT

Budget Request: \$10M

\$40M for restoration of the entire Darwin Martin House Complex has been raised to date. Of the remaining projects, \$200,000 for the Barton House restoration has already been secured through a competitive NYS Environmental Protection Fund grant award. Through ongoing campaign initiatives, funds in support of the landscape restoration have been secured from the City of Buffalo (\$60,000), WNY Foundation (\$20,000), NYS Environmental Protection Fund grant (\$200,000) and smaller gifts totaling approximately \$20,000. Other outreaches have also been made to private individuals and national foundations, with decisions pending.

Annual visitation at the Martin House has increased steadily to nearly 30,000 tourists in recent years, with approximately 75% of the guests traveling from outside the region, including an international component of 15%. The Martin House Complex will attract up to 84,000 visitors annually when restoration is complete and the site is appropriately marketed. At mid-range of anticipated visitation, the Martin House's activities will generate a total annual impact of \$17.6M in economic output, of which \$8.34M will be earnings and wages of 198 workers. The investment in the Martin House will pay for itself in 3 to 5 years.

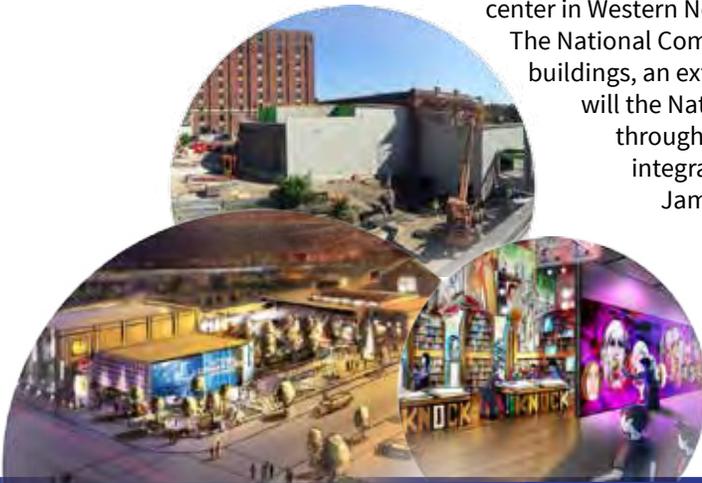
\$5M for the restoration of Graycliff has been raised to date. For the remaining projects, The Graycliff Conservancy, Inc. will leverage 1:1 matching funding in the following ways: \$1M capital campaign; historic tax credit investments up to a total of \$200,000; federal investment of \$750,000 - \$1M for cliff stabilization; and Institute for Museums and Library Services grant of \$250,000.

When complete, Graycliff is in position to increase annual tourist visitation from the current 10,000 to 20,000 by 2019. This will increase internal revenues by at least \$100,000 and allow for the addition of two additional jobs at Graycliff. Projections indicate that at least 6,000 of its annual visitors will be spending multiple days in the region, up from approximately 1,500 currently.

➔ National Comedy Center

The National Comedy Center is designed to be a national attraction dedicated to the celebration and promotion of the art of comedy. The center will be a major nonprofit cultural institution offering year-round experiential and interactive exhibits and programming. The center will also support aspiring artists through educational programming in comedic arts. The National Comedy Center embodies Lucille Ball’s vision for her hometown of Jamestown. With a population of 31,000 people, the City of Jamestown, located in Chautauqua County, is the largest urban center in Western New York outside of the Buffalo-Niagara Falls metropolitan area.

The National Comedy Center campus will consist of two physically connected buildings, an exterior screening area, and an adjacent Comedy Park. Not only will the National Comedy Center greatly impact the regional economy through visitor attraction, job creation, and economic impacts, but it integrates with existing tourism assets and infrastructure in downtown Jamestown. These include the Lucille Ball Desi Arnaz Museum and the Reg Lenna Center for The Arts. Buffalo Billion Phase II investments will help ensure the National Comedy Center is completed and begins operations on schedule in 2018, with economic impacts realized across the region.



WHY IT'S IMPORTANT

The National Comedy Center will place Jamestown, NY on the national and worldwide map in the comedy industry by leveraging the area’s history and legacy as the birthplace and childhood hometown of comedian and actress Lucille Ball. It will be the first complex in the U.S. dedicated to the art of comedy. When it opens, the National Comedy Center is expected to draw 114,000 visitors annually. Currently, visitors from nearly every state in the nation attend the annual Lucille Ball Comedy Festival held in Jamestown. The National Comedy Center fits well with local, regional and statewide strategies to advance economic development through tourism and visitor attraction.

Economic Impacts of the National Comedy Center

114,000 visitors annually

\$17M spending on goods and services

184 jobs in the tri-county area
(Chautauqua, Cattaraugus and Erie)

\$6M wages

IMPLEMENTATION MILESTONES

National Comedy Center

Continued Construction

Construction began in 2016 and will continue through 2018. Development of the National Comedy Center involves construction of a new 6,000 square-foot building and the renovation of two historic buildings, all of which will comprise the National Comedy Center campus. Renovation involves the restoration of the historic Jamestown Gateway train station.

Fabrication and Installation

Key components include 288+ monitors, touch screens/walls and 30 racks of servers to manage the 50+ hours of digital content, a state-of-the-art hologram projection system and two large outdoor digital screens. These will be installed, as possible, while construction is underway.

Program Development

During 2017, the National Comedy Center will develop a schedule of events and programming for the 2017 Lucille Ball Comedy Festival taking place during the first week of August. The event is anticipated to draw visitors from nearly 50 states.

Grand Opening

2018 is the anticipated grand opening of the National Comedy Center.

BUDGET & IMPACT

Budget Request: \$5M

The total cost of the project is \$20.4M. The project has generated foundation and corporate funding, totaling a projected \$13.5M in private dollars. Buffalo Billion Phase II investments will fund building construction and renovation, attraction production, fabrication and installation, and new market tax credit fees and expenses. Funding needs continue through the development stage, but projected outcomes are substantial. These include 114,000 visitors annually. Visitor spending is projected to generate \$17M in spending on goods and services per year. It will also support \$6M in wages and 184 jobs in the tri-county area covering Chautauqua, Cattaraugus and Erie Counties.



→ Visitor Welcome Center

In order to serve Buffalo Niagara's millions of visitors and promote NYS attractions and products, a Phase II Buffalo Billion investment will create a state-of-the-art Welcome Center. The Welcome Center will include an interactive **I LOVE NEW YORK** exhibit for visitors to learn about the region's history and tourism destinations. Regional artifacts and videos will immerse travelers in regional heritage. State-of-the-art touchscreen information kiosks will provide travelers with the opportunity to learn more about the region. An interactive map will provide suggested destinations based on the user's interests, allowing them to browse regional attractions, from historical sites to local wineries, and create an itinerary, which they can take with them via email. Visitors can also utilize the award-winning I LOVE NEW YORK app, with various services and information about the region's attractions.



WHY IT'S IMPORTANT

Buffalo Niagara is located 500 miles (1 day's drive) from 41% of the U.S. population and 59% of Canada's population, creating an opportunity to capture potential visitors through increased marketing and promotion of the region's products and attractions. Visitors who stop at the Welcome Center for information are more likely to explore alternative attractions and destinations, and therefore spend more, stay in the region longer, and use the information for future trips. Providing interactive visitor information provides a full spectrum of Buffalo Niagara offerings and entices visitors to further explore the rich offerings of the region.

IMPLEMENTATION MILESTONES

Visitor Welcome Center

- Undergo bidding process for design and construction.
- Select site and finalize design.
- Begin construction.
- Welcome Center opens.

BUDGET & IMPACT

Budget Request: \$20M

234 million travelers visited NYS in 2015, bringing \$102B in total economic impact—a nearly 26% increase from 2010 when Governor Cuomo took office. Traveler spending in Western NY was \$2.3B in 2015, up 9% since 2011.

➔ Marketing Buffalo Niagara

The region has only just begun to spread the word about all it has to offer. Building upon recent national and local media coverage about Buffalo's unprecedented investment and transformation, a Phase II Buffalo Billion investment will build a large-scale, comprehensive marketing campaign to attract statewide, national and international audiences; increase overnight stays and dollars spent; cultivate customers and businesses; and continue to improve the region's image in the global tourism and talent attraction market.



WHY IT'S IMPORTANT

For decades the region has suffered from both low self-esteem and a negative national image. Image is not only central to development of the tourism industry, but is an issue that cuts across all sectors of the economy—from attracting companies and skilled workers, to university faculty and students, to tourists. In a place where in recent history one was hard-pressed to find positive press, the region has turned around its image, garnering gushing press—both national and locally. A modern and effective marketing campaign will further promote Buffalo Niagara's unique assets and opportunities to live, work and play including Niagara Falls (undoubtedly the region's anchor attraction), incomparable art and architectural treasures, a rich history as a center of manufacturing, a burgeoning agritourism and local food movement, natural assets ideal for active and passive outdoor recreation, and billions in public and private investment sparking new construction from restaurants to galleries to technology centers opening at the fastest pace in more than 50 years. At the same time, Buffalo Niagara still boasts one of the lowest costs of living and easiest commutes of any similarly sized metropolitan areas in the U.S., adding to its appeal.

IMPLEMENTATION MILESTONES

Marketing Buffalo Niagara

Develop partnership with local stakeholders involved in tourism, business and talent attraction.

Develop a comprehensive, multi-media marketing campaign based on the latest visitor and business attraction data.

Launch marketing campaign.

BUDGET & IMPACT

Budget Request: \$5M

Dollars spent on marketing provide a significant return on investment. For example, in 2013 Visit Buffalo Niagara's marketing initiatives produced an estimated \$181M in new visitor expenditures, including \$105M from attendees at meetings, conventions, amateur athletic events and group tours, for the community—a return on marketing investment of approximately 40-to- 1—one of the Destination Marketing Organization industry's highest economic impact performance results.

TRADABLE SECTORS:

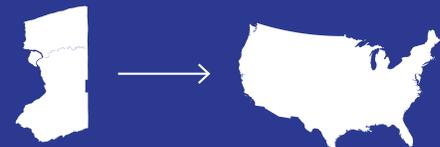
Health | Life Sciences



Life Sciences is an emerging specialization in the region, fueled in part by a strong health industry.

	HEALTH		LIFE SCIENCES	
		% OF REGION		% OF REGION
# OF JOBS	69,787	13%	12,093	2%
# OF FIRMS	2,395	8%	235	1%
TOTAL WAGES	\$3.2B	14%	\$704.7M	3%
AVG. WAGE	\$49,416		\$58,269	
EXPORTS	\$10.1M	0.1%	\$983.0M	14%
# OF PATENTS	n/a		46	

Source: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; Brookings Export Nation, 2015; U.S. Patent and Trademark Office, 2015. Note: Health exports are measured using Brookings' "Medical Services" sector which includes NAICS codes 622; 6211; 6214; 6215; 6219.



Buffalo Niagara has a higher concentration of employees in both Health (LQ 1.10) and Life Sciences (LQ 1.42) compared to the nation.

Source: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; US Bureau of Labor Statistics, Census of Employment and Wages, 2015.

Why the strategy matters

Buffalo Niagara has significant health and life sciences assets to generate a commercial impact. These industries are growing specializations for the region that provide the local workforce with high-paying jobs. The region invested heavily in both health care and life sciences, especially in the Buffalo Niagara Medical Campus in an effort to co-locate clinical and research & development functions that will foster greater knowledge exchange and collaboration among organizations and professionals. The region's Life Sciences industry is largely comprised of small firms that benefit from close proximity to clinical hospitals and research universities when innovating and commercializing products.

What needed to be done

Buffalo Niagara needs to accelerate health and life sciences commercialization and grow businesses in the region by leveraging its unique areas of excellence. It will do this by supporting and enabling innovation, translation and commercialization of research in high impact and growth areas. It will

create a positive ecosystem and platform to attract and retain medium and large health and life sciences companies. And it will continue to develop the physical infrastructure and human capital needed to accelerate innovation and a thriving sector.

A LOOK AT PHASE I ----->



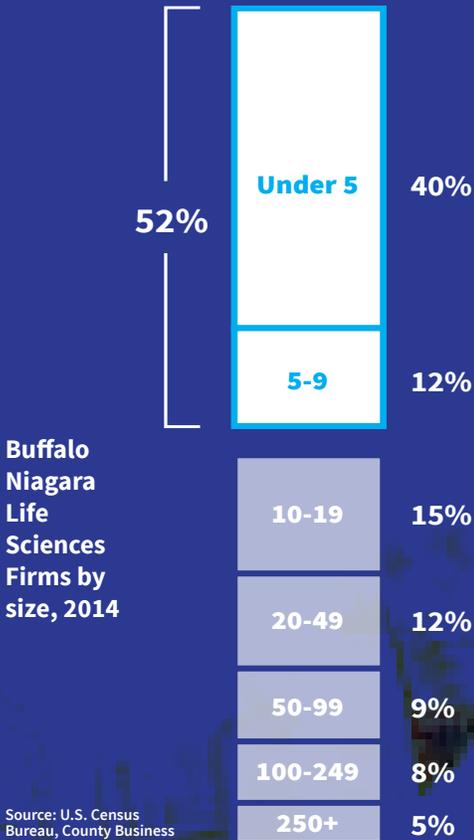
Buffalo Institute for Genomics
John R. Oishei Children's Hospital
Athenex
Albany Molecular Research Inc.

WHAT'S NEXT IN PHASE II



Strategic Investments & Incentives
University at Buffalo Jacobs School of Medicine and Biomedical Sciences

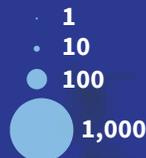
Of the region's 235 Life Science firms, over half (52%) have fewer than 10 employees.



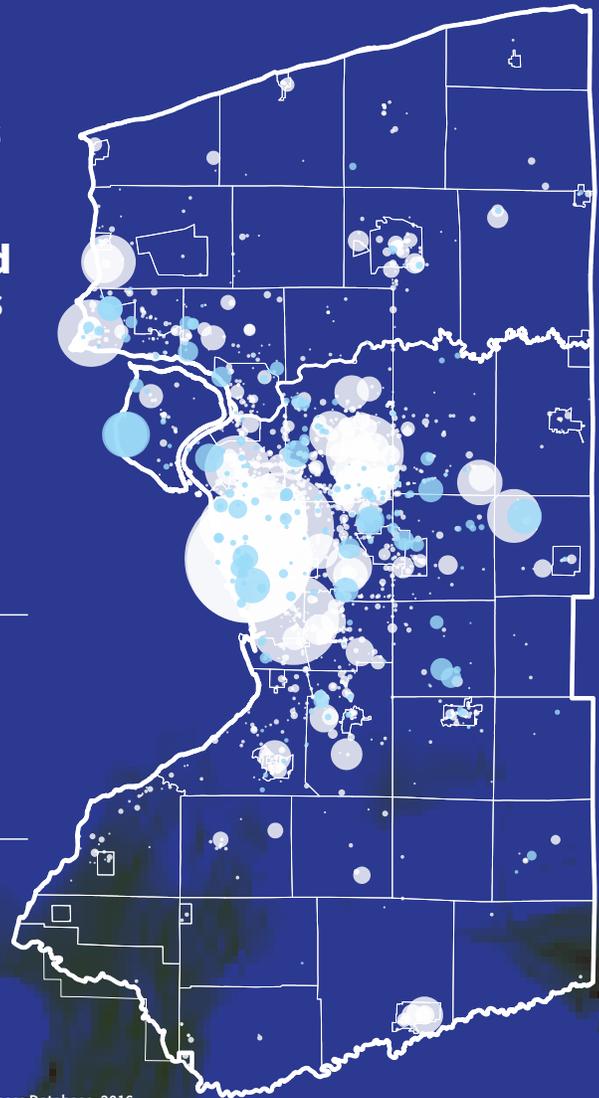
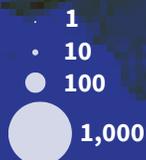
The region's largest health care providers are located in proximity to each other and to life sciences businesses.

Firms by # of employees...

for Life Sciences

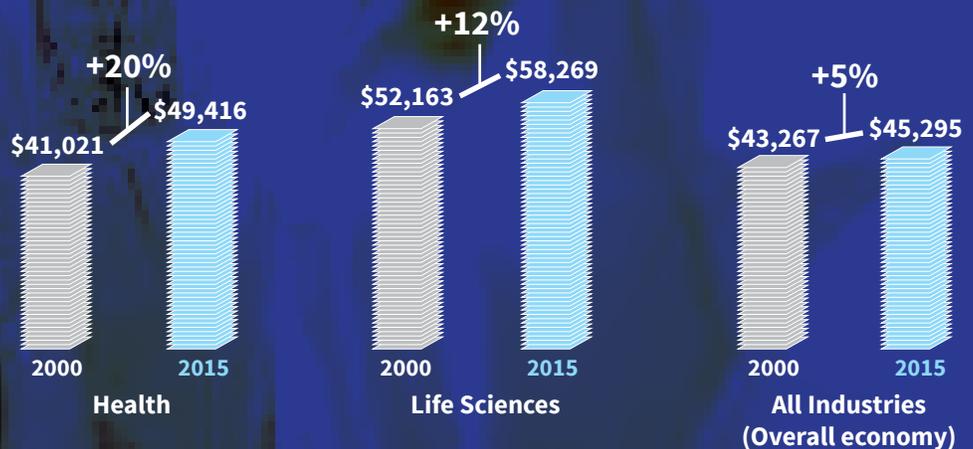


for Health Care



Average Annual Wages in Health, Life Sciences and All Industries, Buffalo Niagara, 2000 vs. 2015

Average wages for workers in health and life sciences grew more than twice as much as overall wages since 2000.



Sources: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; US Bureau of Labor Statistics, Census of Employment and Wages, 2015. All figures are adjusted for inflation to 2015 dollars.



Buffalo Institute for Genomics

Combining the research & development strengths of University at Buffalo and the New York Genome Center, the New York State Genomic Medicine Initiative continues to cultivate upstate New York as a leading hub for genomic medicine. University at Buffalo's component of this initiative, known as the Buffalo Institute for Genomics & Data Analytics, is supported by a Buffalo Billion investment to build out existing computational infrastructure at the Center for Computational Research and expand their current biomedical research capacity in order to accelerate recent advances in genomic medicine into clinical care.

Lead Organization

University at Buffalo

Phase I Buffalo Billion Investment

\$50M

Major Milestones Accomplished

Leveraging University at Buffalo expertise and technologies to build a critical team and deliver novel products, Buffalo Institute for Genomics & Data Analytics engaged multiple companies and is on track to meet its job commitments.

Buffalo Institute for Genomics & Data Analytics continued to develop disease-specific pilot projects with research and industrial partners.

Currently developing a plan to build out a Buffalo-centric biobank to leverage the genomic infrastructure and demographics unique to Buffalo.

Hired a seasoned life sciences professional as Executive Director.

Made investments in key equipment to enable University at Buffalo's Proteomics & Bioanalysis Service Core to which multiple large pharma partners are already requesting access.

Announced a contract with Garwood Medical Devices.

Developed the Genomics Data Warehouse.

Developed five-year strategic partnership with Circuit Clinical.

Actions Planned

Expand utility of the Genomic Data Warehouse enabling analytics to be developed on core disease datasets.

Continue to develop key value proposition for University at Buffalo and Buffalo Institute for Genomics & Data Analytics and attract key industrial partners.

Finalize agreements with new industry partners.



Buffalo Institute for Genomics & Data Analytics developed a robust platform—leveraging an expansion in capabilities of class-leading genomic research, compute capacity, and healthcare data analytics—to empower economic development throughout the Buffalo Niagara life sciences ecosystem and across the state. Buffalo Institute for Genomics & Data Analytics made substantial progress over the last 12 months developing critical relationships and collaborations across the local health sciences and discovery sector, supporting entrepreneurs, mentoring and building key business plans. Leveraging University at Buffalo expertise and technologies to build a critical team and deliver novel products, Buffalo Institute for Genomics & Data Analytics engaged multiple companies and University at Buffalo is on track to meet its job commitment to the State.

An agreement with Garwood Medical Devices, LLC will create 40 new jobs over the next five years. Garwood Medical Devices, a medical device company participating in the START-UP NY program, is developing a new class of programmable electrical stimulation



devices to enable unprecedented treatment for chronic wound healing, bone growth and peri-prosthetic (implant) infections, while enabling enhanced patient mobility and decreasing the need for clinician intervention. As part of the collaboration, Buffalo Institute for Genomics & Data Analytics will provide \$1.48M in technology and resource support.

Buffalo Institute for Genomics & Data Analytics announced a strategic partnership with Buffalo-based Circuit Clinical. It will invest \$1.1M over five years to support Circuit Clinical's growth in Buffalo. The company works to bring new patients and physicians into clinical trials through a process that significantly enhances outreach to doctors and their patients and simplifies enrollment and clinical patient participation. As part of its engagement, Circuit Clinical will expand its technology platform and bring 104 software development jobs to Buffalo.

Buffalo Institute for Genomics & Data Analytics developed a Genomics Data Warehouse, which enables researchers and companies to sift through, query, and analyze enormous amounts of digital information. The tool was built to accelerate genomics-based research and is available for use by University at Buffalo researchers and industry users.



The Buffalo Niagara Medical Campus is a private sector magnet

2005-2008
 8,000 Employees
 \$200M Total Investment

- 1 Cleveland Biolabs
- 2 Hauptman-Woodward Medical Research Institute
- 3 University at Buffalo-NYS Center of Excellence in Bioinformatics and Life Sciences
- 4 Roswell Park-Center for Genetics and Pharmacology

2009-2013
 12,000 Employees
 \$500M Total Investment

- 5 Kaleida Gates Vascular Institute, UB Clinical and Translational Research Center, and The Jacobs Institute
- 6 Kaleida Health
- 7 Multi-modal Transportation Structure
- 8 University at Buffalo Institute for Healthcare Informatics
- 9 Buffalo Niagara Medical Campus Innovation Center
- 10 University at Buffalo Downtown Gateway
- 11 University at Buffalo Educational Opportunity Center

2014-PRESENT
 17,000 Employees
 \$500+M Total Investment

- 12 Conventus
- 13 John R. Oishei Children's Hospital
- 14 University at Buffalo Jacobs School of Medicine and Biomedical Sciences
- 15 Roswell Park- Clinical Science Center
- 16 Buffalo Manufacturing Works-EWI

John R. Oishei Children's Hospital

Replacing and relocating the current Women & Children's Hospital of Buffalo, the new John R. Oishei Children's Hospital, located on the Buffalo Niagara Medical Campus, will right-size and consolidate services in a 12-floor, 185-bed, free-standing, modern facility becoming the only comprehensive pediatric healthcare facility for Buffalo Niagara. This will ensure pediatric and maternal services remain available for patients in the region, making patient care more effective and efficient. The Hospital will also be an integral part of the Buffalo Niagara Medical Campus, with connections to Buffalo General Hospital, Gates Vascular Institute, Roswell Park Cancer Institute, the new University at Buffalo Jacobs School of Medicine and others bringing together clinical services, education and research.

Lead Organization
 Kaleida Health

Phase I Buffalo Billion Investment
 \$15M

Major Milestones Accomplished
 The Hospital broke ground and marked its 70% completion milestone. Work is ongoing on the enclosure of the building. Forged major collaborations including the opening of a connection bridge to Buffalo General and joint hematology-oncology floor with Roswell Park Cancer Institute. Garnered significant community support raising \$50M publicly for the project.

Actions Planned
 The Hospital will be completed late 2017.



Athenex

Formerly a University at Buffalo start-up, Athenex is a global specialty oncology pharmaceutical company focused on the development and commercialization of next generation cancer therapies whose headquarters will become the second anchor at the Buffalo Medical Innovation and Commercialization Hub (see Albany Molecular Research Inc). A Buffalo Billion investment will expand and improve the sixth floor of the Conventus Building on the Buffalo Niagara Medical Campus for Athenex's formulation product development center and pilot plant. Oncology products are perfected and refined before the technology is transferred for large scale production at the 300,000 square foot Dunkirk High Pharmacy Oncology Manufacturing Facility, used to manufacture sterile high potency oncology drugs in a specialized, controlled environment for shipment around the world. The state will invest a total of \$225M on the combined projects and are expected to yield a \$1.62B investment over ten years from Athenex. Athenex's partnership with NYS will accelerate the goal of converting investments made in medical research into long-term sustainable manufacturing jobs.

Lead Organization

Empire State Development

Phase I Buffalo Billion Investment

\$25M

Major Milestones Accomplished

The ribbon was cut on Athenex's office space in Buffalo in February 2016.

Actions Planned

Lab in Buffalo complete.

The Dunkirk manufacturing facility will begin construction in second quarter 2017, with production commencing in late 2018.

Albany Molecular Research Inc.

Albany Molecular Research Inc., a publicly traded company headquartered in Albany, conducts research in early-stage drug discovery—working on a contract basis to help companies and scientists take promising drug therapies from the lab to the clinical-trial stage. Albany Molecular Research Inc.'s move to the Conventus Building on the Buffalo Niagara Medical Campus helped launch the Buffalo Medical Innovation and Commercialization Hub, an innovative center of excellence with the goal of accelerating knowledge and information to drive better decisions in drug discovery on behalf of pharmaceutical and biotechnology customers. Albany Molecular Research Inc. is not only leveraging the expertise and infrastructure of academic and industrial partners; but its Buffalo facility makes it the only North American drug discovery contract research organization with one building housing its biology, pharmacology, high-throughput screening and chemistry operations.

Lead Organization

Empire State Development

Phase I Buffalo Billion Investment

\$50M

Major Milestones Accomplished

Moved into the seventh-story of the Conventus Building and began operations in Buffalo in 2015.

Announced collaborative agreements with Buffalo-based start-up companies HarkerBIO and the New York Center for Nanomedicine Research to jointly market their services to international pharmaceutical and biotech firms.

Announced strategic collaboration with PerkinElmer Inc. The Massachusetts-based maker of equipment used in the drug-development process will provide and manage equipment for Albany Molecular Research Inc. and future partners in the Hub.

Announced that its Buffalo site has been selected to participate as a Dedicated Chemical Biology Consortium Center for the Experimental Therapeutics Program, centered at the Frederick National Laboratory for Cancer Research.

Announced a collaboration agreement with Buffalo-based CUBRC to enable drug discovery against multi-drug resistant pathogens and pursue large government-funded R&D programs.

Announced a non-exclusive commercial license agreement with the Broad Institute of the Massachusetts Institute of Technology and Harvard for the use of CRISPR-Cas9 gene editing technology.

Actions Planned

Continue hiring to meet hiring goals

WHAT'S NEXT IN PHASE II



Health | Life Sciences

*Creating a state-of-the-art center for
teaching, research and clinical care in
Downtown Buffalo*



**University at Buffalo Jacobs School
of Medicine and Biomedical Sciences**



Public investments help the private sector create jobs.

➔ Strategic Investments & Incentives

WHY IT'S IMPORTANT

Tradable sectors are those with the capacity for global exports and are important to growing an economy because they report higher sales, employment and wages than other firms. Due to its education and clinical strengths, Buffalo Niagara sees an opportunity to grow life sciences companies that are pursuing life-saving discoveries and commercializing pharmaceuticals and medical devices that can be traded on a global scale. To do this, the region is engaged in an aggressive, health and life sciences agenda targeted at initiatives that increase partnerships between academia and industry and facilitate the co-location of clinical and research & development functions on the Buffalo Niagara Medical Campus to spur commercialization activities. Another important tool in growing the Health and Life Sciences sector is strategic investments and incentives to attract profitable, high-impact companies to the region. In addition to adding large numbers of higher-paying jobs, other benefits of employing such incentives include spin-off attraction of interrelated and supply chain companies to strengthen the health and life sciences cluster, growing human capital and creating employment hubs in the urban core.



STRATEGIC INVESTMENT FUND

Empire State Development will oversee a strategic investment allocation and create public-private partnerships with companies primarily focused on health and life sciences. This fund will allow the region the opportunity to pursue and negotiate transactions that generate significant private investment and encourage existing large, regional companies that are poised for growth to do so in Buffalo Niagara. The fund is also envisioned to play a role in attracting large, publicly-traded companies to Buffalo Niagara that currently have little or no presence here. Combined with Buffalo Billion Phase I and II investments in innovation and workforce, a strategic investment fund will allow for catalytic investment and job creation.

BUDGET & IMPACT

Budget Request: \$10M

The fund anticipates investing over one to two years with projects coming online in 2019 and 2020 and would expect to leverage at least a five-to-one ratio of private to public investment or \$500M+ of total private investment.





→ University at Buffalo Jacobs School of Medicine and Biomedical Sciences

UB 2020 is a long-range strategic plan that guides the University at Buffalo (UB) in aligning resources and making strategic investments to support its academic enterprise. The plan is focused on bolstering impactful research, providing a robust education experience, building a 21st century campus environment and catalyzing economic development. Much of the plan has been implemented resulting in significant impact, including the establishment of UB's presence on the Buffalo Niagara Medical Campus. Collectively, these investments and the next wave of development on the Campus aim to facilitate interdisciplinary collaboration by integrating medical education, research and clinical care across various health science disciplines and institutions. The cornerstone of UB's presence on the campus will be the **Jacobs School of Medicine and Biomedical Sciences** building, the new home of UB's medical school.



WHY IT'S IMPORTANT

Investment in UB 2020 and further development of UB's presence in the City of Buffalo will leverage existing public and private sector investments on the Buffalo Niagara Medical Campus to give local institutions a competitive edge in recruiting patients, talented employees and innovative companies. Additionally, concentrating life science education, research and treatment facilities on one campus will allow for increased collaboration between institutions leading to new cutting-edge treatments, better patient care and spin off investment activity on the campus and in surrounding communities.

UB's presence on the Buffalo Niagara Medical Campus



PROJECT DETAILS

The new building for the Jacobs School of Medicine and Biomedical Sciences is the largest medical school under construction in the U.S. The eight-story, 624,000 gross square foot building will include state-of-the-art laboratory space; an expanded patient care simulation center for clinical, surgical and robotic surgery training; and administrative offices. The Niagara Frontier Transportation Authority Metro Allen/Hospital station will be integrated into the building, providing a direct connection to public transportation and easy access to downtown Buffalo and UB's South Campus.

Moving UB's medical school to the heart of Buffalo will:

- **Create** state-of-the-art learning and research facilities that will encourage prospective students to study—and eventually practice—in Buffalo
- **Attract** world-class faculty to teach tomorrow's practitioners, and to pioneer new medical treatments and technologies
- **Improve** patient care in the region through the availability of much-needed clinical services as well as innovative treatments
- **Increase** the school's enrollment, thus training more physicians, especially in high-demand specialties such as cardiology, endocrinology and biomedical informatics
- **Grow** the university's presence in downtown Buffalo and promote more collaboration with partner institutions on the Buffalo Niagara Medical Campus

IMPLEMENTATION MILESTONES

University at Buffalo Jacobs School of Medicine and Biomedical Sciences

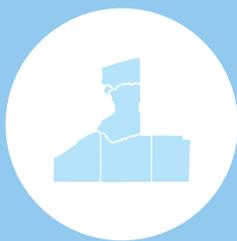
Jacobs School of Medicine and Biomedical Sciences Building opens Fall 2017.

BUDGET & IMPACT

Budget Request: \$20M

The new building will allow the university to expand its medical school class size from 144 to 180 students and add 100 new physician-scientists to the UB faculty, further building on collaborations with partners including Kaleida Health and Roswell Park Cancer Institute. Once open, the Jacobs School of Medicine and Biomedical Sciences will bring 2,000 UB faculty, staff and students to downtown Buffalo daily, increasing population density in the heart of the city and providing opportunities for retail and housing development, incubators, research parks, and other economic development opportunities.

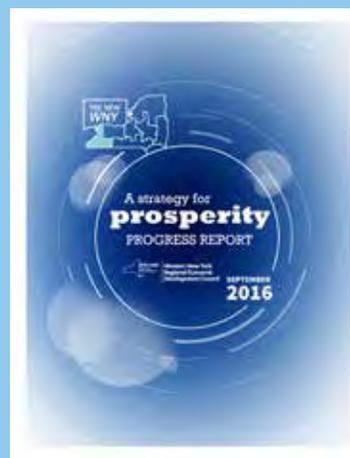
➔ Regional Economic Development Council Award



Budget: ~\$70M

Investments will continue the successful work of the Western NY Regional Economic Development Council, funding projects throughout Western New York that align with the region's economic development strategies and leveraging an average 6:1 cost to award ratio.

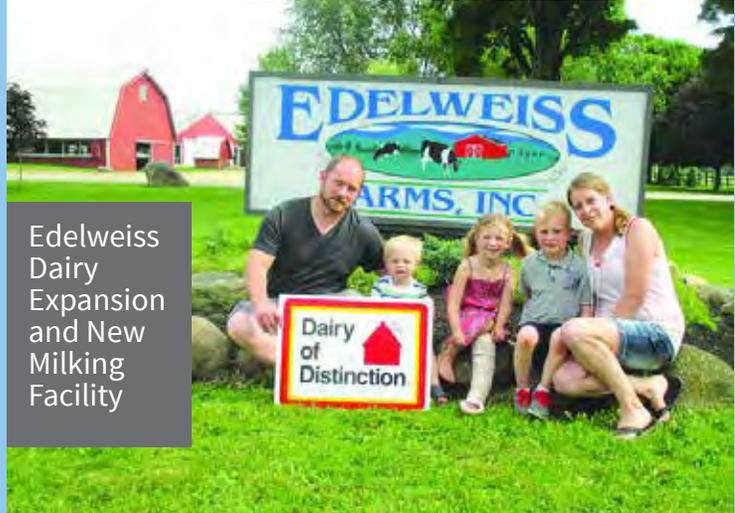
The Regional Economic Development Council initiative is a key component of Governor Cuomo's approach to State investment and economic development. In 2011, Governor Cuomo established 10 Regional Councils to develop long-term strategic plans for economic growth for their regions. The Councils are public-private partnerships made up of local experts and stakeholders from business, academia, local government, and non-governmental organizations. The Regional Councils have redefined the way New York invests in jobs and economic growth by putting in place a community-based, bottom up approach and establishing a competitive process for State resources. In the first six rounds of the Regional Council initiative, the Western New York region was awarded \$418.4M in state support for 551 projects across the region. The Western New York region's 2011 strategic plan, "A Strategy for Prosperity," leverages the region's strategic advantages in key industry sectors including advanced manufacturing, agriculture, energy, health & life sciences, professional services and tourism. The plan focuses on economic enablers that promote smart growth, prepare the workforce and foster a culture of entrepreneurship.



EXAMPLES OF PRIORITY PROJECTS SUPPORTED BY THE WESTERN NY REGIONAL ECONOMIC DEVELOPMENT COUNCIL IN 2016



Allen Street Streetscape



Edelweiss Dairy Expansion and New Milking Facility



Fredonia Barker Commons Project



Ellicottville Brewing Company - Little Valley Expansion



Broadway-Michigan Mixed Use



Westfield Commercial Demonstration



Burrous Building Stabilization and Redevelopment

Strategies for a New Buffalo.

BUFFALO BILLION PHASE II



Revitalization & Smart Growth

East Side Revitalization	\$60M
Scajaquada Boulevard	\$30M
The Buffalo Blueway	\$10M
Outer Harbor Phase II	\$15M
The Erie Street Waterfront Connection	\$10M
DL&W Canalside-Cobblestone	\$20M
Light Rail Extension	\$5M
Buffalo Train Station	\$25M
Better Buffalo Fund Phase II	\$10M
Bethlehem Steel Site Redevelopment	\$10M
Downtown Revitalization Initiative	\$20M



Innovation & Entrepreneurship

43North Phase II	\$25M
The Innovation Hub	\$40M



Workforce

Workforce Development Fund	\$10M
Say Yes Buffalo	\$10M





TRADABLE SECTOR
Advanced
Manufacturing

**Strategic Investments
& Incentives Advanced
Manufacturing** \$15M

**Buffalo Manufacturing Works
Phase II** \$35M



TRADABLE SECTOR
Tourism

**Strategic Investments &
Incentives Tourism** \$10M

Niagara Falls Redevelopment \$25M

Frank Lloyd Wright's Legacy \$10M

National Comedy Center \$5M

Visitor Welcome Center \$20M

Marketing Buffalo Niagara \$5M



TRADABLE SECTOR
Health | Life
Sciences

**Strategic Investments &
Incentives Health | Life
Sciences** \$10M

**University at Buffalo Jacobs
School of Medicine and
Biomedical Sciences** \$20M



Regional
Economic
Development
Council Award

\$70M



Data Sources and Notes

The Buffalo Billion and the story of Buffalo Niagara's rebirth.

Billions in Transformative Investment

“\$350M has been invested to redevelop Buffalo’s waterfront...”
Erie Canal Harbor Development Corporation, October 2016.

“\$1.4B has been invested in the Buffalo Niagara Medical Campus...”

Buffalo Business First, “Core Strength: A comprehensive look at the transformation of Western New York.” Fall 2016.

“\$1.23B in redevelopment projects complemented by over \$100M in infrastructure...”

Buffalo Business First, “Core Strength: A comprehensive look at the transformation of Western New York,” 2016; Buffalo Urban Development Corporation, November 2016.

”\$250M has been invested in the clean-up of the region’s fresh water...”

Buffalo Niagara Riverkeeper, “Blue Economy Initiative, From Rust to Blue: Buffalo Niagara’s NEW Economy.” Accessed November, 2016 at <http://bnriverkeeper.org/blue-economy-initiative/>

“The City of Niagara Falls has seen \$400M in investments...”
Western New York Regional Economic Development Council, “A Strategy for Prosperity Progress Report.” September 2016.

Millions of Persistent People

“1.1 million people...”

U.S. Census Bureau, American Community Survey, 1-year estimates, 2015.

“534,500 jobs up 3% since 2011...”

NYS Department of Labor, Quarterly Census of Employment and Wages, 2011 and 2015.

“...increasing the region’s young adult population by over 8% since 2010...”

U.S. Census Bureau, American Community Survey, 1-year estimates, 2010 and 2015.

“...start-ups (businesses less than five years old) making up 16% of all businesses...”

U.S. Census Bureau, Quarterly Workforce Indicators, 2014.

“...9M people who visit Niagara Falls State Park...”

NYS Office for Parks, Recreation and Historic Preservation, “State Park Annual Attendance Figures by Facility,” 2014.

“In 2015, visitors spent \$2.3B at the region’s restaurants and hotels...”

UBRI analysis of traveler spending data by county and region from Tourism Economics, provided by Empire State Development.

Thousands of Innovative Ideas

“...21 colleges and universities that generate \$343.6M in research and development dollars...”

National Science Foundation, “Survey of Research and Development Expenditures at Universities and Colleges,” 2014. NOTE: There are 32 higher education institutions in Erie and Niagara counties at all degree granting levels. Three of the 21 engage in R&D expenditures: The University at Buffalo, Buffalo State College and Niagara University.

“With 1,700 residential units currently in the pipeline . . .”

Buffalo Business First, “Core Strength: A comprehensive look at the transformation of Western New York.” Fall 2016.

Dozens of Dynamic Industries

“Buffalo Niagara produced \$56.5B in goods and services in 2015...”

U.S. Bureau of Economic Analysis, Gross Metropolitan Product, 2015.

“... exports from the region valued at \$7.11B...”

Brookings Institution, Export Nation, 2015.

Key Indicators show Buffalo Niagara is headed in the right direction.

Jobs, Total Wages, Firms, Annual Average Wages

U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2011 and 2015; NYS Department of Labor, QCEW, 2011 and 2015. NOTE: 2011 wages are adjusted for inflation to their 2015 dollar value before calculating the percentage change from 2011-2015.

Gross Metropolitan Product

U.S. Bureau of Economic Analysis, Gross Metropolitan Product, 2011 and 2015.

Exports

Brookings Institution, Export Nation, 2015. NOTE: Uses Real export value which adjusts for inflation to 2015 dollars. NOTE: 2011 figures are adjusted for inflation to their 2015 dollar value before calculating the percentage change from 2011-2015.

Young Population

U.S. Census Bureau, American Community Survey, 1-year estimates, 2010 and 2015.

Smart Growth and Revitalization

New Roads and Maintenance Costs

University at Buffalo Regional Institute, Independent analysis using U.S. Census Bureau TIGER\Line Roads Data, 1990 and 2010. Cost estimate from NYS Office of the State Comptroller, 2011, Local Government Snapshot: Local Government Spending on Highways. Accessed January, 2013 from www.osc.state.ny.us/localgov/pubs/research/snapshot/highwayspending.pdf

NOTES: Spatial roads data for the years 1990 and 2010 was retrieved from the U.S. Census Bureau in geographic information systems (GIS) format for the Buffalo-Niagara region. All line segments from the 2010 roads file that fell outside 100 feet of 1990 roads were selected. These road segments were compared with the 1990 roads layer, on a segment by segment basis, ensuring that all previously existing roads were excluded from the estimate of new roads. The aggregate length of roads constructed since 1990 within the two-county region was then calculated using ArcGIS software.

Change in Population vs. Urbanized Land Area, 1970-2010

U.S. Census Bureau, Decennial Census, 1970, 1990, 2010.

Remediated Sites

NYS Department of Environmental Conservation, 2014; US Environmental Protection Agency, 2011.

Homes and Jobs with Access to Transit

UBRI Analysis using data from US Census, 2010, and NFTA, 2012. The Network Analyst extension of ArcGIS Software was used to delineate areas within one half mile of a NFTA Bus or Metro stops along a road. The percentage of the region's residents and employment within these areas was estimated using spatial data on population (US Census Bureau, TIGER\Line Shapefiles, 2010) and jobs (US Census Bureau, Location Employment Dynamics, 2011) both given at the census block-level. The population density and employment density were calculated for each census block. The percentage of each block that fell within one-half mile of NFTA stops was multiplied by the calculated density to estimate the number of people and jobs within access to transit.

East Side Revitalization

Vacant parcels and vacant land: Erie County Parcel Data, December 2015. NOTE: Vacant Parcels are those classified by the NYS Office of Real Property Services Assessors Manual as "Vacant Land" (parcel codes 300-399)

Commercial vacancy rates: U.S. Department of Housing and Urban Development Aggregated U.S. Postal Service Data on Address Vacancies, June 2016.

New businesses: Infogroup, Reference USA New Businesses Database, 2015. NOTE: New Businesses include DBA's, Corporations and Business Licenses registered at a valid postal address; this does not include new businesses registered to post office boxes.

DL&W Canalside-Cobblestone

Economic Impact of the Investment

Niagara Frontier Transportation Authority [NFTA], "NFTA Access Enhancement Study for Canalside & Cobblestone Districts" 2016. Buffalo Niagara Partnership, "Business Advocacy Survey" (2016); The Siena Research Institute, Survey of 1,619 residents from Erie and Niagara Counties between March 9 and April 7, 2016.

Light Rail Extension

Why it's important?

US Census, Longitudinal Employment Household Dynamics Data, 2014; Strategic Economics, 2016.

Community Support

The Buffalo Niagara Partnership, "Business Advocacy Survey" (2016); The Siena Research Institute, Survey of 1,619 residents from Erie and Niagara Counties between March 9 and April 7, 2016.

Projected Economic Impacts

"Attracting young adults": "Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows." Accessed October, 2016 at <https://www.rockefellerfoundation.org/about-us/news-media/access-public-transportation-top>.

"Enhancing walkability": Smart Growth America. Accessed October, 2016 from <https://smartgrowthamerica.org>

"Reducing costs...": American Public Transportation Association. "March Transit Savings Report" (2016). Accessed November, 2016 at http://www.apta.com/mediacenter/pressreleases/2016/Pages/160324_Transit-Savings.aspx

All Other Projected Economic Impacts: Strategic Economics, "NFTA Metro Rail Economic Benefits Study, DRAFT Memorandum," 2016.

Foster a Culture of Entrepreneurship

New Firms

U.S. Census, Center for Economic Studies, Business Dynamics Statistics, 2014.

STEM-Intensive Firms, Wages, and Employment

NYS Department of Labor, Quarterly Census of Employment and Wages, 2000-2015; Brookings Institution. NOTE: "STEM-intensive industries" or "Advanced Industries" are defined by Brookings Institute as industry groups (4-digit NAICS classifications) that are R&D and STEM-worker intensive. More information available at <http://www.brookings.edu/about/programs/metro/advancedindustries>.

R&D per Capita

National Science Foundation, "Survey of Research and Development Expenditures at Universities and Colleges," 2014 (research and development spending at higher education institutions); U.S. Census, American Community Survey, 1-year estimates, 2015 (population).

NOTE: R&D is collected by an annual NSF survey of academic institutions with over \$150,000 in budgeted R&D spending in the fiscal year.

Patents per 10,000 Workers

U.S. Patent and Trademark Office, 2015; U.S. Bureau of Labor Statistics, 2015 (patents); NYS Department of Labor, 2015 (workers). NOTE: The US patent database only includes Utility patents, or 'patents for inventions'. This excludes plant, design and reissue patents. As all Utility patents are classified under manufacturing industries (NAICS 31-33), all patents in the data fall under Advanced Manufacturing.

Prepare Our Workforce

Labor Force Participation Rates

U.S. Census Bureau, American Community Survey, 1-year estimates, 2015.

Jobs by Industry and Age of Worker

U.S. Census Bureau: Local Employment Dynamics, Quarterly Workforce Indicators, 2014.

Percentage change in workers, workers in poverty, and workers with secondary jobs

U.S. Census, Longitudinal Employer-Household Dynamics Program, OnTheMap (2009, 2014); U.S. Census, American Community Survey, 1-year estimates (2009, 2014).

Projected Annual Openings by Educational Attainment

NYS Department of Labor, Long-term Occupational Projections, through 2022. NOTE: Job projections are for the 5-county Western New York area (including Allegany, Cattaraugus, and Chautauqua).

Advanced Manufacturing

By the numbers...

NOTE: Advanced Manufacturing includes industries in NAICS codes 31, 32 and 33.

Jobs, Firms and Wages: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015.

Exports: Brookings Institution, Export Nation, 2015.

Patents: U.S. Patent and Trademark Office, 2015. NOTE: The US patent database only includes Utility patents, or 'patents for inventions'. This excludes plant, design and reissue patents. As all Utility patents are classified under manufacturing industries (NAICS 31-33), all patents in the data fall under Advanced Manufacturing.

Location Quotient: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; US Bureau of Labor Statistics, Census of Employment and Wages, 2015.

Firms by Size

U.S. Census Bureau, County Business Patterns, 2014.

Location of Firms by Size

ReferenceUSA Business Database, 2016.

Age Composition of Manufacturing Workforce

U.S. Census Bureau, Local Employment Dynamics, Quarterly Workforce Indicators, 2014.

Health/Life Sciences

By the numbers...

NOTE: Health includes industries in NAICS codes 621, 622 and 623. Life Sciences includes NAICS codes 3254, 3261, 3345, 3391, 5417.

Jobs, Firms and Wages: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015.

Exports: Brookings Institution, Export Nation, 2015. NOTE: Health exports are measured using Brookings "Medical Services" sector (03SV) which includes NAICS codes 622; 6211; 6214; 6215; 6219. This excludes Nursing and Residential Care Facilities (NAICS 623), Dentists (6212), Other (not physicians) Health Practitioners (6213); Home Health Care Services (6216).

Patents: U.S. Patent and Trademark Office, 2015. NOTE: The US patent database only includes Utility patents, or 'patents for inventions'. This excludes plant, design and reissue patents. As all Utility patents are classified under manufacturing industries (NAICS 31-33), none are recorded for the Health industry (NAICS 621-623).

Location Quotient: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; US Bureau of Labor Statistics, Census of Employment and Wages, 2015.

Firms by Size

U.S. Census Bureau, County Business Patterns, 2014.

Location of Firms by Size

ReferenceUSA Business Database, 2016.

Average annual wages

NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; US Bureau of Labor Statistics, Census of Employment and Wages, 2015. NOTE: All wage figures from year 2000 are adjusted for inflation to 2015 dollars.

Tourism

By the numbers...

NOTE: Tourism includes industries in NAICS codes 71 ("Arts, Entertainment, and Recreation") and 72 ("Accommodation and Food Services").

Jobs, Firms and Wages: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015.

Exports: Brookings Institution, Export Nation, 2015. NOTE: Note: Tourism exports are measured using Brookings' "Accommodation Services", "Food & Drink Services", "Entertainment Services", and "Sports & Performing Arts" sectors. These Brookings-defined industry groups include the following 3- and 4-digit NAICS codes (5121, 5615, 711, 7121, 713, 721, and 722).

Patents: U.S. Patent and Trademark Office, 2015. NOTE: The US patent database only includes Utility patents, or 'patents for inventions'. This excludes plant, design and reissue patents. As all Utility patents are classified under manufacturing industries (NAICS 31-33), none are recorded for the Tourism industry.

Location Quotient: NYS Department of Labor, Quarterly Census of Employment and Wages, 2015; US Bureau of Labor Statistics, Census of Employment and Wages, 2015.

Visitor Spending, 2011-2015

UBRI analysis of traveler spending data by county and region from Tourism Economics, provided by Empire State Development. U.S. Department of Labor Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, 2011-2015. Visitor spending for 2011 through 2014 was adjusted for inflation and are in 2015 dollars.

What if region increases visitor spending?

UBRI analysis of 2015 traveler spending data by category and county from Tourism Economics, provided by Empire State Development, using IMPLAN. The analysis assumes that future proportions of visitor spending on lodging, recreation, food & beverage, transportation, retail and second homes is the same as what it was in 2015. Spending in these categories was distributed across related IMPLAN sectors to calculate total impacts (direct, indirect and induced). Visitor spending, labor income and industry output are in 2015 dollars.

Jobs Supported by Tourism

UBRI analysis of employment impact data for tourism from Tourism Economics, provided by Empire State Development. NYSDOL, Quarterly Census of Employment, 2015(p).

Niagara Falls' visitation numbers vs national parks

Empire State Development, Western Regional Office/USA Niagara, 2015; National Park Service, U.S. Department of the Interior, NPS Stats, Visitor Use Statistics, 2015.



**Empire State
Development**

Buffalo Niagara's Strategic Plan for Prosperity

JANUARY 2017