











visioneny

Central New York
Regional Sustainability Plan

Comprehensive Economic Development Strategy June 2020

Central New York Regional Planning & Development Board

CNY CEDS — Economic Development

A comprehensive economic development strategy provides a region with a clear understanding of their current economic situation, identifies potential opportunities as well as challenges for economic growth, and defines the efforts required to achieve specific goals.

A strategy is typically established for a ten to twenty year horizon and addresses the multiple facets of economic development at the local level including organizational structure, resource development and allocation (provision of basic public services, supply of qualified labor, capacity and accessibility of reliable utilities, availability of land and buildings, capital resources, favorable tax and regulatory policy, etc.), and the growth of specific target industries that will produce jobs and new wealth for the community.

An important part of the strategy is to promote a broad range of economic initiatives that not only help strengthen existing businesses, but also help to diversify the employment base through the start-up of new companies and the attraction of businesses to the area. Since the employment levels of any given company never stay constant, it is important to continually support expansion of the local economy with new opportunities. This approach helps ensure jobs for the next generation seeking employment in a community.

To carry out this economic development mission, considerable attention must be paid to forces in the marketplace

that will affect the likely success of any particular economic development initiative. In today's global economy, these forces operate on the international, national, regional, and local levels. Compounding the challenge is the need to pay close attention to the broad range of employers in a community, from the traditional large scale manufacturing firm to the entrepreneurial start-up with plans to introduce a new niche product or service into the marketplace. Attention must also be focused on key industry sectors in a community such as advanced manufacturing, professional and business services, agriculture, and tourism. In addition, the large institutional employers in a community such as colleges and universities, hospitals, and utility providers must be recognized. These institutions serve as major economic engines with their own set of resource needs and associated economic development opportunities.

When preparing an economic development strategy for a region, it is important to start with a common understanding that the public sector has traditionally provided services to support business and commerce at the local level. These services cover a broad range of activities including governance, public safety, roads, sewer and water, educa-

tion, recreation, solid waste management, environmental and public health protection, and the overall advancement of the common welfare. Maintaining the delivery of these vital public services in an affordable and efficient manner must be the starting point for any concerted effort to support the growth of a local economy. Building on these resources, attention can then be focused on the tools available in the public and private sector that can support job retention and creation in a market system based upon the concept of free enterprise. In today's competitive world, the application and use of these tools often requires an entrepreneurial and proactive approach in the business community and at all government levels.

A review of the information presented in this plan shows that the preparation of an economic development strategy must be carefully calibrated to account for developments which are occurring on an international, national, and regional level. As noted in a World Economic Outlook Update issued by the International Monetary Fund (IMF) in October 2020, global growth was expected to contract in 2020 by 4 percent as a result of the Covid-19 pandemic. Global growth in 2021 is projected to increase by 5 percent as a result of a downturn in 2020 being more moderate than initially feared. The IMF notes that developing economies, excluding China, are projected to incur a greater loss over the next year when compared to more advanced economies, likely resulting in a long, uneven, and uncertain global economic comeback.

The IMF projects that growth in the United States will average 4 percent in 2020 and rebound to average 3 percent in 2021. The uncertainty around the current projections is unusually large and relies heavily on public health and economic factors that are inherently difficult to predict. The public health response to the pandemic, including vaccine development and distribution, will have significant impacts on domestic activities and may have spillover effects in other areas of the economy, such as tourism rates. Progress hinges on reducing transmission rates through changes in the workplace and by consumers, but a sizable risk remains if lockdowns must be reinstated due to high levels of infections.

Supplementing this information is an overview of the current condition of the NYS economy as provided by the NYS Comptroller's office in March 2021. This report noted that New York's Gross State

Product (GSP) suffered a greater fall than the national GDP, dropping 5.9 percent compared to 3.5 percent respectively, the fourth steepest decline out of the 50 states. While GSP declined in nearly all industries, the leisure and hospitality sector saw the greatest value decrease of over 44 percent. The information and utilities industries saw gains that helped offset a portion of the overall decline. New York State lost over 955,000 jobs in 2020 as a result of the pandemic induced recession, with the largest share of job losses occurring in New York City and Long Island. In addition to sector Regarding employment, it was noted that job growth has been uneven across that State and the

Pandemic Recession Employment Recovery (February 2020 to July 2021), in Thousands

	Pandemic Job Losses	Recovery (Jobs Gained)	Net Change	Share Recovered
Glens Falls	9.9	12.1	2.2	122.22%
Watertown- Fort Drum	6.4	7.2	0.8	112.50
Buffalo- Niagara Falls	115.4	90.8	-24.6	78.68
Nassau-Suffolk	288.1	209.8	-78.3	72.82%
Utica-Rome	20.6	14.8	-5.8	71.84%
Rochester	89.3	64.1	-25.2	71.78%
Kingston	12	8.4	-3.6	70.00%
Syracuse	52	33.1	-18.9	63.65%
Albany- Schenectady- Troy	68.1	41.6	-26.5	61.09%
Binghamton	17.1	10.4	-6.7	60.82%
New York City	1287.1	779	-508.1	60.52%
Elmira	6.4	3.8	-2.6	59.38%
New York State	1,982.70	1,083.70	-899	54.66%
Dutchess- Putnam	26.1	12.2	-13.9	46.74%
Ithaca	10.5	3	-7.5	28.57%

Notes: Recessionary and recovery periods are determined by peak and trough levels of employment, which vary by region. For the State, employment peaked in February 2020 and reached its low in April 2020. Data have been seasonally adjusted.

Source: US Bureau of Labor Statistics

unemployment rate exceeded the Statewide rate of New York's labor force decline by nearly 218,000 people, bringing the civilian labor force participation rate down to 59.6 percent, its lowest level since 1984. New York State's population increased by over 800,000 residents to 20.2 million between 2010 and 2020, a 4.2 percent increase which was below the national average of 7.6 percent. The population growth experienced by the State was almost entirely seen in the New York City metropolitan area.

Looking more closely at national level data, it is instructive for purposes of this plan to consider a report issued by the Brooking Institution in 2011 titled, Sizing the Clean Economy: A National and Regional Green Jobs Assessment. In this report, Brookings takes a look at a specific sector in the nation's economy called the "green" or "clean" or low carbon economy, defined by Brookings as the sector of the economy that produces goods and services with an environmental benefit, and notes that as a matter of aspiration no swath of the economy has been more widely celebrated in recent years as a source of economic renewal and potential job creation by communities across the nation. Covering the years 2003 to 2010 for every county in the United States, the report (available for download at www.brookings.edu/meto/clean_economy.aspx) represents the first study of the U.S. clean economy to provide timely information that is both comprehensive enough in its scope and detailed enough in its categorization to inform national, state, and regional leaders on the dynamics of the U.S. environmental goods and services "supersector" as they are operating in regions and metropolitan areas. Issues and data highlighted in the report include:

+ The clean economy, which employed some 2.7 million workers in 2010, encompasses a significant number of jobs in establishments spread across a diverse group of industries. These jobs were spread over 57,501 different establishments in 41,185 companies and existed in almost every industry. Encompassing 2% of all positions, the clean economy represents a modest slice of the U.S. economy. By contrast, the healthcare sector—the nation's largest source of private employment—employs 13.8 million workers, and accounts for 10.2% of all jobs.

Segments of the Clean Economy in the U.S.

Category	Segment	Jobs, 2010
Agricultural and	Conservation	314,983
Natural Resources	Organic Food and Farming	129,956
Conservation	Sustainable Forestry Products	61,054
Education and	Regulation and Compliance	141,890
Compliance	Training	266
	350,547	
	Energy-saving Building Materials	161,896
	HVAC and Building Control Systems	73,600
	Green Architecture and Construction Services	56,190
	Professional Energy Services	49,863
Energy and Resource	Appliances	36,608
Efficiency Public Mass	Energy-saving Consumer Products	19,210
Transit	Battery Technologies	16,129
	Smart Grid	15,987
	Electric Vehicle Technologies	15,711
	Lighting	14,298
	Water Efficient Products	13,066
	Fuel Cells	7,0 <i>4</i> 1
	Waste Management and Treatment	386,116
	Professional Environmental Services	141,046
	Recycling and Reuse	129,252
	Green Consumer Products	77,264
Greenhouse	Green Building Materials	76,577
Gas Reduction, Environmental	Nuclear Energy	74,749
Management, and	Recycled-Content Products	59,712
Recycling	Remediation	56,241
	Air and Water Purification Technologies	24,930
	Green Chemical Products	22,622
	Pollution Reduction	9,986
	Carbon Storage and Management	391
	Hydropower	55,467
	Wind	24,294
	Solar Photovoltaic	24,152
	Biofuels/Biomass	20,680
Renewable Energy	Solar Thermal	5,379
	Waste-to-Energy	3,320
	Geothermal	2,720
	Renewable Energy Services	1,981
	Wave/Ocean Power	371

Source: Brookings-Battelle Clean Economy Database

Clean Economy Intensity in the 100 Largest Metro Areas



Source Brookings-Battelle Clean Economy Database and Moody's Analytics

- + The clean economy grew more slowly in aggregate than the national economy between 2003 and 2010, but newer "cleantech" segments produced explosive job gains
- + The clean economy is manufacturing and export intensive
- + The clean economy offers opportunities for low-and middleskilled workers
- + Among regions, the South has the largest number of clean economy jobs though the West has the largest share relative to population
- + Most of the country's clean economy jobs concentrate within the nation's 100 largest metro areas (the Syracuse Metropolitan Area is ranked 80 out of 366, by population).
- + The clean economy permeates all of the nation's metro areas

+ Strong industry cluster boost metros' growth performance in the clean economy

The measurements and trends presented in the report offer a mixed picture of a diverse array of environmentally oriented industry segments growing modestly even as a sub-set of clean energy, energy efficiency, and related segments grow much faster than the nation and in ways that are producing a desirable array of jobs, including in manufacturing and export-oriented fields.

As to what policymakers should do to catalyze faster and broader growth across the U.S. clean economy, Brookings notes that the private sector needs to play the lead role, but governments have a role too. In this connection, the fact that significant policy uncertainties are weakening market demand for clean economy goods and services, chilling finance, and raising questions about the clean innovation pipeline reinforces the need for engagement and reform. Not only are other nations bidding to secure global production and the jobs that come with it, but the United States currently risks failing to exploit growing world demand.

This report concludes that private sector-led growth needs to be promoted through complementary engagements by all levels of the nation's federal system to ensure the existence of well-structured markets, a favorable investment climate, and a rich stock of cutting-edge technology. The report recommends that governments at different and appropriate levels can help by:

- + Scaling up the market by taking steps to catalyze vibrant domestic demand for low-carbon and environmentally oriented goods and services
- + Ensure adequate finance by moving to address the shortage of affordable, risk-tolerant, and larger-scale capital that now impedes the scale-up of numerous clean economy industry segments
- + Drive innovation by investing both more and differently in the clean economy innovation system



+ Focus on regions, meaning that all parties need to place detailed knowledge of local industry dynamics and regional growth strategies near the center of efforts to advance the clean economy.

A. EXISTING CONDITIONS

1. Regional Economy

Central New York is geographically centered in Upstate New York and includes the counties of Cayuga, Cortland, Madison, Onondaga, and Oswego. The region covers an area of 3,622 square miles, comprising a balance of an urban center the City of Syracuse, suburban areas, small cities and towns, and rural farming communities. The region is located in close proximity to the cities of Rochester, Ithaca, Utica, Buffalo, Albany, and Binghamton and is within a 4 to 5-hour drive to several major metropolitan areas in the northeast including New York, Toronto, Boston, Montreal, and Philadelphia. Over 136 million people live within a 750 radius of Syracuse including over 50% of the population of Canada and the United States. Central New York

Employment by Industry, Syracuse MSA 1992–2020, in Thousands

	1990	1995	2000	2005	Dec 2010	Aug 2020
Total Non-Farm	317.8	307.8	325.4	320.8	320.1	289.9
Total Private	264.2	252.9	269.0	263.5	262.7	237.5
Goods Producing	61.2	53.0	57.3	45.5	40.0	38.7
Service Producing	256.6	254.8	268.1	275.4	280.1	251.2
Nat. Resources, Mining, Construction	15.6	11.7	12.9	12.3	12.0	14.0
Manufacturing	45.6	41.3	44.5	33.2	28.0	24.7
Wholesale Trade	20.1	15.8	15.8	15.6	14.1	11.7
Retail Trade	38.3	37.3	38.1	36.9	36.1	31.4
Utilities	6.4	4.8	4.8	4.0	3.4	4.1
Transportation/ Warehousing	9.5	9.4	9.2	9.4	9.2	9.2
Information	7.7	6.3	7.7	6.6	4.8	3.5
Financial Activities	20.6	18.0	17.7	17.6	17.0	14.3
Professional/Business Services	27.8	29.0	30.2	34.3	34.6	34.8
Educational Services	11.8	13.7	15.2	16.7	21.4	16.7
Health Care and Social Assistance	26.9	31.9	34.4	38.0	42.2	41.3
Hospitals	8.9	9.3	9.1	8.9	9.4	7.7
Leisure/Hospitality	24.1	22.8	25.2	26.6	27.5	21.8
Accommodation and Food Services	21.6	20.1	22.0	22.6	22.7	19.2
Other Services	9.8	11.1	13.3	12.5	12.4	10.0
Government	53.7	54.9	56.4	57.4	57.4	52.4
Federal	4.6	4.6	5.1	4.4	4.4	7.0
State	13.0	13.5	13.8	13.9	13.7	16.6
Education	6.0	6.6	7.4	8.2	8.3	9.5
Local	36.1	36.8	37.5	39.1	39.3	28.8
Education	20.3	21.9	23.0	23.6	25.8	17.1

Source: NYSDOL and BLS

has a population base of approximately 790,000 residents. Historical population statistics show that the region's population has remained relatively stable over the past 20 years since reaching a peak in 1990. As of 2019 the per capita income for the Syracuse MSA is \$33,615, about 80 percent of New York State's per capita income (\$41,857) and just below the national rate (\$35,672).

Central New York's labor force currently numbers more than 391,000 workers and has remained stable over the past ten years. The median annual wage cost in the five-county area is estimated to equal \$43,820 which is competitive with national levels and significantly below major metropolitan areas in the northeast. Over 39.8% of the region's population has attained a college associate degree or higher. The skills of the Central New York labor force support a wide range of economic sectors including agriculture, manufacturing, health care, education, professional business services, warehouse and distribution, wholesale and retail trade, construction trades, utilities, and public employment.

Current statistics for the Central New York show a total of 317,510 jobs, including over 256,600 in the private sector, with an annual payroll in excess of \$17.5 billion. Over 29,000 jobs are based in the manufacturing sector with a total payroll of approximately \$2.0 billion. In 2017, the total value of agricultural products sold in the region is estimated at more than \$690 million. Annual tourism spending in Central New York exceeds \$1.3 billion. A metropolitan statistical area's economic strength ranking provided by the Policom Corporation shows that the Syracuse MSA ranks 146 out of 384 metropolitan areas in the nation.

Businesses in Central New York are served by an extensive transportation network, which includes Syracuse Hancock International Airport, the deep-water Port of Oswego, several rail freight carriers, a CSX intermodal rail center, Amtrak passenger rail service, Interstate Routes 81 and 90, and a public transportation bus service maintained by the CNY Regional Transportation Authority. Companies are also served by an extensive network of public sewer and water facilities, which includes a major water supply transmission line from Lake Ontario that is provided by the Onondaga County Water Authority. Ample supplies of electric and gas service are provided by the New York Power Authority and several private utility companies including National Grid, New York State Electric and Gas, and Rochester Gas and Electric.

The region is also served by an advanced telecommunications system that is provided by such major service providers as Verizon, Charter-Spectrum, and AT&T.

In evaluating the region's resources, it is important to note that businesses have access to a wide range of real estate opportunities that are very affordable and diverse—from sophisticated urban space and high-tech research centers to office and industrial parks, and efficient warehouse and distribution facilities. This real estate inventory is well distributed throughout the five-county region and includes several major business parks and Build Now-NY "shovel ready" sites including: the Aurelius Business Park in Cayuga County; the Finger Lakes East Business Park in Cortland County; the Canastota and Lakeport Business Parks in Madison County; the White Pine Commerce Park, Syracuse University Research Park, Hancock Airpark, Collamer Crossing Business Park, Radisson Industrial Park in Onondaga County; and the Oswego County Industrial Park, Lake Ontario Industrial Park, and the Riverview Business Park in Oswego County. Together these real estate holdings represent over 1,000 acres of land that is ready for development at very affordable prices that range from \$10,000-\$100,000 per acre.

When seeking to build an educated workforce, companies across the region are well served by 44 institutions of higher education located in Upstate New York, with a combined enrollment of 215,000 students, and several for-profit education centers. Top area schools include Cazenovia College, Clarkson University, Colgate University, Cornell University, Le Moyne College, Rensselaer Polytechnic Institute, Rochester Institute of Technology, Syracuse University, University of Rochester, Wells College and members of the SUNY system including Albany, Binghamton, Buffalo, Cortland, Morrisville, Oswego, the College of Environmental Science and Forestry, the Institute of Technology, Cayuga Community College, Onondaga Community College, and Tompkins-Cortland Community College. Many of these colleges and universities have made the U.S. News and World Reports annual survey of the nation's best institutions of higher learning.

Advanced education and research facilities in the region include the Syracuse Center of Excellence and the Computer Applications and Software Engineering Center, the Human Performance Center at SUNY Upstate Medical University, Onondaga Community College's Applied

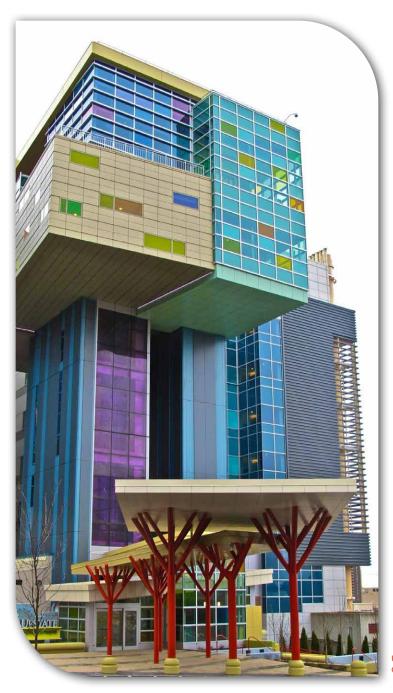
Technology Center, Rome's U.S. Air Force Research Laboratory, and four national research centers at Cornell University.

Residents in Central New York enjoy very affordable housing, excellent health care, a strong K-12 public education system, several vibrant entertainment and shopping districts, cultural amenities that include a professional theatre, professional and college level sports, and numerous outdoor recreation opportunities. Quality of life rankings for the region are consistently very high—Forbes.com has ranked Syracuse #4 in the American Best Places to Raise a Family List and the ACCRA cost of living index maintained by the Council for Community and Economic Research shows the region is very competitive with other metropolitan areas across the nation.

Businesses in Central New York are supported by a strong professional business service community and a network of county and regionally-based economic development organizations. These organizations offer a range of services that include financial assistance, tax abatement programs, workforce training, entrepreneurial development, marketing, and site location assistance. Building upon these resources, companies and various development organizations across the region are engaged in efforts to capitalize on developments in the marketplace that could prove beneficial to CNY such as initiatives in biotechnology, alternative energy, information management, health care, national defense, and deployment of advanced infrastructure systems and smart grid technology.

In addition to the information that can be gleaned from the data are the opportunities presented by trying to capitalize on the business operations of major employers in CNY which include such prominent names as Cornell University, Syracuse University, SUNY Upstate Medical University, Wegmans, Lockheed Martin, Constellation Energy Group, the Hartford Financial Group, Welch Allyn, Verizon, Syracuse Research Corporation, Bank of America, Excellus BC/BS, Anheuser Bush, Air Force Research Lab, Cooper Crouse Hinds, Nucor Steel, Bristol-Myers Squibb, Novelis, Pall Trinity Micro, MONY Group, and Marietta Industries.

In addition to the efforts noted above, support is being given to innovative initiatives being led by major area companies and those associated with the Syracuse Technology Garden, the Syracuse Center



Upstate Golisano Children's Hospital

of Excellence, and the Central New York Biotechnology Center. Attention is also being directed to work done by the NYS Energy Research and Development Authority and by the NYS Foundation for Science, Technology and Innovation, and to the economic opportunities associated with several major developments in Upstate New York. These developments include the ongoing growth of the U.S. Army Fort Drum military installation in the north country, the AMD/ Global Foundries semiconductor manufacturing center at the Luther Forest Technology Park in Saratoga County, the activities associated with the SEMATECH industry research consortium and the College of Nanoscale Science & Engineering at the University of Albany.

Also noteworthy for its potential impact on CNY are the GE Global Research Center in Schenectady, the Cornell Agriculture and Food Technology Park in Geneva, the NYS Yogurt Summit, the NYS Beer, Wine and Spirits Summit, the Roswell Park Cancer Institute in Buffalo, the New York Power Authority's offshore wind power and solar initiative, Destiny USA and Turning Stone Resort, and high speed rail. These initiatives, when combined with the region's strong economic foundation, are expected to help generate the growth of a significant

number of new jobs in the years ahead. 2. Employment Clusters

Industries can group within an area as a result of several factors including geography, availability of natural resources, presence of intellectual assets, presence of a workforce with a high concentration of

a particular skill, and the unique historical development of a region. Areas with such concentrations tend to attract similar industries or supporting industries; this provides a competitive advantage from the local pooling of talent and expertise.

Information presented in the following tables represents data assembled by the NYSDOL regarding industry concentrations in Central New York (Cayuga, Cortland, Madison, Onondaga and Oswego Counties). The table lists the industry concentration within the region, the jobs and wages produced by each, their regional ranking and their Location Quotient (LQ), which are measures of employment concentration in a regional economy. More specifically, they compare the concentration of industry employment locally to that of the U.S. If an industry's LQ is greater than 1.0, the region's labor market contains a higher concentration of jobs in that industry relative to the U.S. In

Central New York Employment Clusters, 2013

Industry Cluster	sdoL	Rank in Region	Total Wages (\$ mns)	Total Wages (\$ mns) Rank in Region		Rank in Region	Location Quotients	Rank in Region
		Cen	tral New Yo	rk				
Back Office & Outsourcing	\$29,500	15	0.57	13				
Biomedical	4,100	9	\$294.0	6	\$71,300	1	1.85	1
Communications, Software & Media Services	5,000	8	\$274.5	7	\$54,400	8	0.81	9
Distribution	14,200	2	\$733.7	4	\$51,600	9	0.96	6
Electronics & Imaging	1,500	13	\$95.9	13	\$62,100	5	0.77	10
Fashion, Apparel & Textiles	400	16	\$14.6	16	\$40,300	14	0.32	16
Financial Services	13,000	3	\$805.9	2	\$61,800	6	1.10	5
Food Processing	3,700	10	\$164.3	12	\$44,900	12	0.67	12
Forest Products	3,400	11	\$169.8	10	\$49,700	10	1.37	3
Front Office & Producer Services	15,900	1	\$1,056.8	1	\$66,400	4	0.88	8
Industrial Machinery & Services	11,600	5	\$772.8	3	\$66,600	3	1.57	2
Information Technology Services	2,600	12	\$179.6	9	\$69,800	2	0.51	14
Materials Processing	6,100	6	\$340.0	5	\$55,800	7	1.15	4
Miscellaneous Manufacturing	600	15	\$28.0	15	\$44,900	12	0.74	11
Transportation Equipment	1,000	14	\$48.3	14	\$48,100	11	0.34	15
Travel & Tourism	13,000	3	\$267.1	8	\$20,500	16	0.92	7
		Toto	ıl All Cluster	rs				
Central New York	102,000		\$5,414.5		\$53,100			

Source: NYSDOL

Number of Companies by Select Industry Sectors, Syracuse MSA

		Syracuse MSA			United States		
	Α	В	С	D	E	F	
Industry	Number of Companies			Number of Companies	% of companies in an Industry Segment as a % of Total Companies in USA	Paid Employees	Ratio (B/E)
Estimated Total Number of Companies in MSA (includes Market Segments not shown below)	13,568	100.00%		6,417,035	100.00%		
Manufacturing	787	5.8%	28,202	363,753	5.7%	16,888,016	1.02
Food	67	0.5%	2,240	26,361	0.4%	1,471,050	1.19
Apparel	4	0.0%	500	17,065	0.3%	719,269	0.11
Wood & Paper	62	0.5%	2,848	23,307	0.4%	1,151,346	1.25
Chemical	28	0.2%	1,278	13,513	0.2%	884,321	0.97
Plastics/Rubber	38	0.3%	2,414	16,876	0.3%	1,029,976	1.06
Fabricated Metals	150	1.1%	4,467	62,501	1.0%	1,774,874	1.13
Machinery	74	0.5%	4,403	30,665	0.5%	1,421,820	1.13
Computer & electronic products	53	0.4%	5,771	17,465	0.3%	1,698,529	1.43
Electrical equipment & appliances	26	0.2%	3,030	6,946	0.1%	594,914	1.76
Furniture	21	0.2%	1,255	20,758	0.3%	604,845	0.48
Misc	67	0.2%	1	31,554	0.5%	735,337	1
Wholesale Trade	1,206	8.8%	15,611	453,470	7.1%	5,796,557	1.25
Retail Trade	2,895	21.2%	40,997	1,118,447	17.7%	13,991,103	1.22
Transportation & Warehousing	353	2.6%	10,954	178,025	2.8%	2,920,777	0.93
Truck Transportation	200	1.5%	3,967	103,978	1.6%	1,293,790	0.9
Warehousing & Storage	22	0.2%	394	6,497	0.1%	109,760	1.59
Finance & Insurance	941	6.9%	15,679	395,203	6.2%	5,835,214	1.12
Credit Intermediation & Related Services	334	2.4%	5,007	166,882	2.6%	2,744,910	0.94
Securities Intermediation & Related Services	88	0.6%	764	54,491	0.8%	706,053	0.76
Insurance Carriers & Related Activities	519	3.8%	9,908	172,299	2.7%	2,327,306	1.42
Professional, Scientific & Technical Services	1,362	10.0%	13,000	621,129	9.7%	5,361,210	1.03
Administrative & Support Services	528	3.9%	16,548	260,025	4.1%	7,066,658	0.95
Art, Entertainment and Recreation	289	2.1%	1,964	99,099	1.5%	1,587,660	1.37

Source: Bureau of Labor Statistics and DeLoitte & Touche

the next table, information is presented regarding the region's economic clusters by industry sector.

In reviewing the data, it is important to note that Central New York has several industries with a positive location quotient including biomedical, distribution, electronics and imaging, forest products, industrial machinery, and services and materials processing. Several other industries have high employment concentrations that suggest the area has a critical mass of skills that could be leveraged to expand activity in that sector through local growth or outside investment.

Regarding the "clean economy" the Brookings report underscores the importance of this cluster in the region's economy by noting that the Syracuse metropolitan are ranks 55th among the 100 largest metro areas with 9,648 clean economy jobs or 3.0% of all jobs in the region. On this measure of concentration, Brookings indicates that the region ranks 11th in the nation and that between 2003 and 2010 the Syracuse metro added 1,376 clean economy jobs for a 2.2% growth annually during this period, placing the region 64th and 80th respectively for those categories. It was also noted in the report, that on average each clean economy job in Central New York generated \$10,317 in exports per job.

Another major focus area for the region involves the 1,200-acre White Pine Commerce Park and plans to establish a major semi-conductor manufacturing cluster in the region. Complementing this effort is the growth of a uniquely identified "Smart System – IoT cluster in the region with links to the unmanned aerial system and 5G technologies that are being deployed in CNY and across the nation.

3. Regional Benchmarks

To assess the relative strengths and weaknesses of the economy in CNY, the region can be benchmarked against data from other parts of the country. The most efficient vehicle for comparison is federally Census designated Metropolitan Statistical Areas (MSAs). An MSA is defined as a geographical region with a relatively high population density at its core and close economic ties throughout the area. There are currently 366 MSAs in the United States; the Syracuse MSA consist of Madison, Onondaga, and Oswego Counties.

To evaluate the relative state of the region's economy, two ranking services were found to be particularly informative: the Policom Corporation's Economic Strength Rankings and the Milken Institute's Best Performing Cities. The Policom approach emphasizes the condition of local economies. Weight in its rankings is given to areas that have demonstrated rapid and consistent growth for an extended period of time. Areas with volatile growth typically rank lower. Three groups of data are considered:

- + Earnings, jobs, and wages for the whole area and on a per capita basis reflect overall growth in the size and quality of a local economy.
- + The same data, but specifically for small businesses (proprietors), the construction industry, and the retail industry, are measured because it is highly reactive to changes in the flow of money into or out of an area.
- + Welfare and Medicare income are tracked as negative indicators of local economic performance.

The most recent release of Policom's rankings (2021) provides 10 years of rankings dating to 2012. The Syracuse MSA saw its highest ranking in 2014-2015 at 78 before reaching its low point of 185 in 2017. Since then, the Syracuse MSA has climbed back up the ranking to its current position at 146. Similar to Syracuse, other Upstate NY MSAs saw their highest peaks around 2015 and have since recovered from significant drops, with Albany and Buffalo ranking higher than the Syracuse MSA, 51 and 117 respectively.

The Milken ranking system focuses on job and wage growth to pinpoint areas that are thriving. Additionally, the system incorporates a measurement of high technology GDP growth and high technology location quotients to weight for a metro area's participation in the knowledge economy. The Syracuse MSA has seen its ranking drop over the last ten years falling to 143 from a high of 80 in 2010. The Syracuse MSA saw its highest ranking in high-tech GDP (36), high-tech concentration (49), the number of high-tech industries with a location quotient (LQ) above the U.S. average of 1.0 (37), and housing affordability (46).

Policom Economic Strength Rankings

Metropolitan Area	2021	2020	2019	2018	2017	2016	2015	2014
Seattle-Tacoma-Bellevue, WA (MSA)	1	2	2	3	13	1	2	4
Austin-Round Rock-San Marcos, TX (MSA)	2	3	3	1	1	2	3	2
Salt Lake City, UT (MSA)	5	5	6	8	29	3	9	17
Raleigh-Cary, NC (MSA)	7	11	9	9	42	21	14	37
San Diego-Carlsbad-San Marcos, CA (MSA)	18	8	7	14	5	13	27	31
Madison, WI (MSA)	27	10	12	13	12	16	16	16
Phoenix-Mesa-Glendale, AZ (MSA)	31	53	64	78	85	80	77	77
Cincinnati-Middletown, OH-KY-IN (MSA)	47	41	60	38	35	44	48	21
Albany-Schenectady-Troy, NY (MSA)	51	46	57	22	27	17	34	25
Washington-Arlington-Alexandria, DC-VA-MD-WV (MSA)	57	18	16	20	18	9	1	3
Knoxville, TN (MSA)	64	33	46	73	129	113	94	70
Louisville/Jefferson County, KY-IN (MSA)	76	104	109	80	84	134	124	97
Colorado Springs, CO (MSA)	77	84	79	52	54	99	83	67
Houston-Sugar Land-Baytown, TX (MSA)	80	48	38	24	11	6	10	11
Ann Arbor, MI (MSA)	99	110	133	122	150	157	172	169
Omaha-Council Bluffs, NE-IA (MSA)	104	88	81	47	58	12	5	8
New Haven-Milford, CT (MSA)	114	117	98	94	51	85	70	75
Milwaukee-Waukesha-West Allis, WI (MSA)	115	96	89	71	50	93	82	53
Buffalo-Niagara Falls, NY (MSA)	117	127	111	95	91	78	71	93
Chattanooga, TN-GA (MSA)	123	120	117	143	136	156	143	118
Worcester, MA (MSA)	128	116	114	123	106	129	90	152
Palm Bay-Melbourne-Titusville, FL (MSA)	131	175	199	252	297	313	286	294
Akron, OH (MSA)	137	140	120	137	107	111	128	131
Syracuse, NY (MSA)	146	152	152	145	185	102	78	78
Oklahoma City, OK (MSA)	155	129	101	68	26	30	68	76
Dayton, OH (MSA)	163	182	191	180	207	207	205	217
Toledo, OH (MSA)	170	165	151	121	193	151	168	178
Rochester, NY (MSA)	188	194	195	150	119	60	69	60
Scranton-Wilkes-Barre, PA (MSA)	241	221	216	195	127	144	134	134
Albuquerque, NM (MSA)	245	283	288	316	249	200	144	130
Utica-Rome, NY (MSA)	269	304	305	313	296	208	169	172

Milken Best Performing Cities Rankings

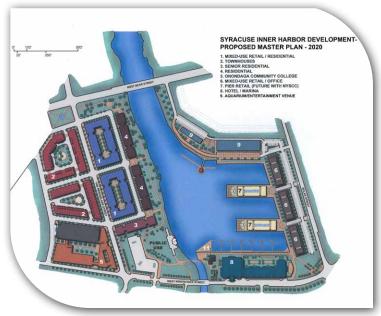
2021	2020	Population 2019 (thousands)	Metropolitan area	2009 Value*	Rank 5-yr job growth 2014-2019	2009	Value* Rank 1-yr job growth, 2018-2019	2008	Value* Rank 5-yr wages/ salaries growth, 2014-2019	2008	Value* Rank 1-yr wages/ salaries growth 2018-2019	Growth	12-Month Job growth (Oct 2019 - October 2020)	2009	Value* Rank 5-yr rela- tive HT GDP growth, 2014-2019	2009
3	3	2,227.1	Austin-Round Rock, TX MSA		4		1		4		2		16		9	
5	11	1,390.8	Raleigh-Cary, NC MSA		25		20		6		17		109		18	
10	49	471.8	Huntsville, AL MSA		54		21		63		10		23		125	
15	37	534.9	Fayetteville-Springdale-Rogers, AR-MO MSA		15		47		21		16		7		49	
18	4	475.6	Reno-Sparks, NV MSA		2		45		7		38		106		5	
19	69	299.6	Kennewick-Richland-Pasco, WA MSA		32		18		49		69		8		152	
22	5	1,990.7	San Jose-Sunnyvale-Santa Clara, CA MSA		41		59		2		72		105		7	
39	33	1,559.5	Jacksonville, FL MSA		24		38		59		109		61		54	
62	85	565.2	Chattanooga, TN-GA MSA		61		64		84		104		9		89	
75	71	446.5	Santa Barbara-Santa Maria-Goleta, CA MSA		125		51		87		37		148		68	
96	142	315.1	Evansville, IN-KY MSA		158		163		124		46		10		200	
102	127	949.4	Omaha-Council Bluffs, NE-IA MSA		152		120		101		90		44		113	
103	63	868.7	McAllen-Edinburg-Mission, TX MSA		60		29		108		96		101		8	
111	141	844.1	El Paso, TX MSA		77		57		113		68		73		161	
114	116	1,409.0	Oklahoma City, OK MSA		128		84		170		133		46		47	
116	143	460.3	Killeen-Temple-Fort Hood, TX MSA		89		91		131		51		37		196	
117	120	1,291.9	Richmond, VA MSA		92		109		94		77		65		154	
122	82	676.0	Winston-Salem, NC MSA		109		80		132		111		104		135	
135	119	880.4	Albany-Schenectady-Troy, NY MSA		145		176		123		123		174		40	
140	173	1,768.9	Virginia Beach-Norfolk-Newport News, VA-NC MSA		146		156		148		87		30		153	
143	123	648.6	Syracuse, NY MSA		171		143		139		140		195		36	
158	146	1,128.0	Buffalo-Niagara Falls, NY MSA		172		175		138		146		135		82	
162	160	1,575.2	Milwaukee-Waukesha-West Allis, WI MSA		164		184		156		167		124		88	
169	193	641.8	Toledo, OH MSA		159		171		161		182		136		102	
186	182	553.8	Scranton-Wilkes-Barre, PA MSA		181		197		166		186		173		189	
190	156	679.2	Poughkeepsie-Newburgh-Middletown, NY MSA		162		157		179		192		161		175	
192	171	397.5	Canton-Massillon, OH MSA		189		195		189		185		118		157	

Source: Milken Institute

4. Regional Economic Development Plans

The Central New York community has a very diverse economy that is supported by a growing workforce, a well-developed infrastructure base, and strong academic resources. To capitalize on these assets, the region has completed studies and developed a number of strategic economic development plans in recent years which together represent a short-term economic development strategy and a long-term comprehensive approach to economic growth. These documents include a report issued in 2007 by Battelle regarding the opportunities and prospects for Upstate New York's "green" industry sector. Other important reports include the CNY Comprehensive Economic Development Strategy (CNY CEDS), Vision 2010: A Regional Economic Development Strategy for Syracuse and Central New York, and the Essential New York Initiative. The CNY CEDS is a document updated each year by the CNY Regional Planning and Development Board and focuses on a short-term project priority list of public capital improvement projects for the region. Vision 2010 is a document that was prepared in 1996 by the Stanford Research Institute under contract with the Metropolitan Development Association of Syracuse and Central New York. The revisions to Vision 2010, titled the Essential New York Initiative, were prepared in 2004 by the Battelle Institute and Catalytix (a Richard Florida Company), two nationally-recognized consultants retained by MDA.

In 2011, these planning efforts received additional support from New York State through the implementation of a regional economic development council program initiative. As part of this initiative, each regional council was tasked with the challenge of preparing a regional economic development plan for their respective region. The Central New York Regional Economic Development Council (CNY REDC) completed work on their Five-Year Strategic Plan: 2012–2016 in November 201. This plan was chosen by the Governor's office in December 2011 as the "Best Plan Awardee" in NYS and received \$103.7 million in capital grants and tax credit financing to support a range of economic and community development projects in the five-county Central New York region. Complementing this work, was an updated plan issued by the CNY REDC in 2015 titled, CNY Rising from the Ground Up. This plan was the basis for a \$350 million award to the region through the NYS Upstate Revitalization Initiative.



QPK DESIGN, October 2021

The CNY REDC's strategic plans are built around three priority goals to guide the region's collective actions:

- A. Strengthen Targeted Industry Concentrations that Leverage Unique Economic Assets
- B. Improve Competitiveness in, and Connections to, the Regional, National, and Global Economies
- C. Revitalize the Region's Urban Cores, Main Streets, and Neighborhoods
- A. Strengthen Targeted Industry Concentrations that Leverage Unique Economic Assets In planning for future prosperity, the CNY REDC identified several critical industry concentrations that are at the heart of its economic strategy. These sectors represent a cross-section of both traditional and new economy industries and share five common criteria: (1) they have critical mass of existing firms and a large base of existing employment in the region; (2) employment in these sectors is highly concentrated in Central New York; (3) there is significant growth in regional, national, and global demand for the products and services they generate; (4) Central New York possesses resources

to support these clusters and, therefore, this region has a competitive advantage to attract similar firms; and (5) they are deeply connected to our anchor institutions. Priority industry concentrations identified in the plan include:

a. Clean Energy and Environmental Systems—Central New York has the eighth highest concentration of private sector "green jobs" of any region in the country and is home to New York State's Syracuse Center of Excellence in Environmental and Energy Systems (SyracuseCoE), a consortium of more than 200 research institutions and private sector companies.

b. Health, Biomedical Services, and Biosciences— The region's hospitals directly employ more than 23,000 people and another 3,500 are employed in private, high-tech biomedical companies with average wages approaching \$70,000, nearly double the region's median wage. The region's extensive research and development (R&D) in the biosciences cluster not only fuels health and biomedical, but also drives the area's clean technology, agribusiness, and other core industries.

c. Financial Services—This industry employs more than 24,000 in the region. Recent research demonstrates that Central New York offers significant advantages to firms in this sector, such as a lower cost of operation and a highly skilled and experienced labor force that provides opportunities for employment growth.

d. Agribusiness and Food Processing—New York State is the nation's third-largest producer of fluid milk and commodity crops representing more than \$1 billion in sales alone. Central New York is a significant contributor and increasingly focused on value-added opportunities for agribusiness, including food processing.

e. Advanced Manufacturing—Manufacturing represents 10% of the region's total employment and subsectors, such as digital electronics and radar and sensor systems, serve expanding global markets in security, information technology, and defense.

f. Tourism—Tourism is a \$1 billion industry in Central New York, and current global economic conditions, including the weak dollar, create opportunities for the region to draw additional international visitors across our shared boundary with Canada and from entry points downstate.



Syracuse Center of Excellence

B. Improve Competitiveness in, and Connections to, the Regional, National, and Global Economies -The CNY REDC's economic development strategy acknowledges and embraces the global nature of today's economy and encourages businesses, large and small, to compete in an increasingly competitive marketplace. As noted in the plan, Central New York's highly educated workforce forms the foundation for those investments, as does its unique concentration of leading higher-education and research and development institutions. In order to improve global competitiveness, the plan recommends making significant investments in several critical mechanisms that fuel economic growth:

a. Encourage New Venture and Product Development—The region has a strong foundation in entrepreneurship with collaborative programs between higher education and business. Further investments in this area are recommended to support successful venture development, including student venture development, as part of a transformational strategy to re-energize the regional economy.

b. Prioritize Investments in Innovation, Commercialization, and Process Improvement—Continuous improvement and the development of new products and services is critical to the success of businesses in a rapidly evolving global economy. The CNY REDC recommends private investment in research and development; improve technology commercialization among its educational and research institutions; and the creation of a complete ecosystem of mentors, business services, and risk-capital to enable innovation.

c. Capture a Greater Share of the Global Marketplace—Ninety-five percent of the world's consumers currently reside outside of the United States. Improving export performance is critical to the long-term competitiveness of the region. Export-driven jobs also provide higher wages for the region's residents. In addition to promoting

Central New York's products and services across the world, the region is well positioned to attract new foreign investment from global companies looking to serve domestic markets.

d. Build a 21st Century Infrastructure—Global competitiveness requires global connectivity. The region must improve its physical infrastructure, including its air service, port access, road and rail infrastructure, and broadband connectivity, in order to get regional goods and services to national and global markets.

e. Maximize Human Capital—While the region possesses a highly skilled and well-educated workforce, the region must expand the participation of the workforce in the new economy, particularly in key industry sectors, such as advanced manufacturing and health care.



CONCEPTUAL SITE PLAN & PROPOSED DEVELOPMENT SCENARIO

WHITE PINE COMMERCE PARK

SCALE: 1"=250'

C. Revitalize the Region's Urban Cores, Main Streets, and Neighborhoods - As part of the plan, the CNY REDC recognized that strong regions are built around strong municipal cores and neighborhoods that develop, attract, and retain the human and social capital required for industry to grow and remain competitive—the convergence of ideas and people. Many leading businesses and key industry sector hubs are located within these city and town centers, and the region's anchor institutions—educational, health care, and cultural—have been at the forefront of the national movement to leverage their assets for community revitalization. Building upon the strengths of these existing opportunities, the CNY REDC recommends that efforts be directed to recreate the social, physical, and cultural fabric of its neighborhoods, urban cores, and main streets. In pursuing the goal to invest in and strengthen the region's cores, the CNY REDC recommended:

a. Rethink—Reinvigorate the region's neighborhoods and main streets through mutually beneficial partnerships with diverse businesses and the region's anchor institutions, and invest resources that leverage the national movement of anchor institutions to restore neighborhoods, train new workers, retain young talent, and create small business and social enterprises.

Oswego Harbor



b. Repurpose—Municipal centers represent significant investments in physical infrastructure that must be preserved and enhanced for future growth. Pursue a strategy that repurposes existing physical assets through adaptive re-use and brownfield remediation, links planned transportation investment with surrounding private development through transit-oriented strategies, uses green technologies to improve the efficiency of existing assets from individual buildings to entire neighborhoods, promotes density in development, and encourages quality communities.

c. Retrain—Human and social capital is the most important asset for a globally competitive economy, and the region must rise to the challenge to improve Pre-K-12 educational attainment; provide greater access to education; prepare students for high-demand careers; retrain workers for new careers; support minority, women, and veteran owned businesses; and create quality employment opportunities that will allow individuals and families to prosper.

D. Next Steps in Building the Foundation for Transformative Prosperity - Although the region's strategic plans are largely developed to address immediate economic development opportunities, these plans also identify "transformational" projects, programs, and other opportunities that are critical for the region's future. Transformational initiatives identified include:

a. Regional Industrial Clusters: New York Energy Regional Innovation Cluster (NYE-RIC)—NYE-RIC is a statewide alliance focused on accelerating the development and deployment of innovations to dramatically improve energy efficiency in buildings, addressing a global demand in a market that is expected to grow dramatically over the coming decades. The proposed investment of \$225 million includes \$150 million from private and federal sources, which can be used to leverage \$75 million from various state and federal sources.

Food-to-Market and Agricultural Programming—Central New York is uniquely poised to be the agribusiness "hub" of New York if it can coordinate its use of agricultural and natural resources to create more robust systems for local food to market initiatives and regional energy production.

Tourism in the Arts and Culture—The region has an abundance of arts and cultural opportunities, with world-class offerings by individual artist studios to large-scale performance venues. Access must be pro-

vided to broader audiences while finding ways to leverage community support and funding for the arts to reach national and international markets.

b. Connecting People, Jobs, and Housing: Municipal Core Mixed-Use Investment Program— The Restore New York program successfully provided needed gap financing to mixed-use projects of all sizes throughout the State. The program proved critical to getting new commercial and residential construction moving in Central New York's municipal cores and the State must consider the creation of similar mixed-use investment programs in the future.

Broadband/Connectivity Infrastructure—In an increasingly interconnected marketplace, ubiquitous high-speed, affordable broadband Internet access is a key component to thriving economies in both urban and rural communities. Rural areas need a strategy to support investment in broadband to connect its citizens with each other and the broader economy.

Region-Wide Waterfront Revitalization Strategy— To unlock the full economic potential of the region's abundant waterfronts, New York State must help create focused waterfront programs that leverage lo-

cal investments in municipal revitalization, marketing, business recruitment, and shipping.

c. Workforce Alignment: Say Yes to Education—The nation's first-ever, district-wide implementation of Say Yes in the City of Syracuse is a visionary, turnaround model for education and economic development in urban centers across the United States. New York State must help expand the Say Yes Summer Academies throughout the five-county region, and further advance scholarship opportunities for aspiring youth. Complementing this initiative is the City's Smart City Surge and plans for a new STEAM regional high school.

d. Innovation Infrastructure: Innovate Upstate Fund—Central New York has a robust innovation ecosystem through R&D at major area employers and its academic institutions, and at strong early-stage companies; however, the State does not have a complete continuum of funding programs and tax breaks to assist in various emerging technology sectors. The region's private and institutional partners must work to capitalize a regional venture fund to provide critical risk capital to accelerate the launch and growth of more start-up companies.



SUNY ESF Willow Crop Initiative

B. SUSTAINABLE FUTURE IN CENTRAL NEW YORK

A review of the information presented in this plan shows that the preparation of an economic development strategy must be carefully calibrated to account for developments which are occurring on an international, national, and regional level. As noted in recent years by the International Monetary Fund, the world economic recovery is proceeding broadly with most advanced and emerging economies still facing major adjustments, including the need to strengthen household balance sheets, stabilize and subsequently reduce high public debt, and repair and reform their financial sectors. Supplementing this information is a comprehensive overview on the current condition of the NYS economy as provided by the NYS Comptroller's office. These reports underscore the fact that New York recovered from the worst recession since the Great Depression, but now faces significant challenges and risk with unemployment rates high and many upstate regions struggling due to the COVID-19 pandemic of 2020-2021.

On a regional level, data was presented which documented that the population base in Central New York has stabilized in recent years following a sharp decline that took place from 1985–1995. In looking at these figures, it is important to note that the area's population is now at the highest level it has ever been in the history of this region. Other demographic factors show that the region's per capita income is comparable with similar sized metropolitan areas and has increased in recent years in a manner that is consistent with general trends across the State and nation. Education data clearly suggests the region is in a strong position to provide the educated workforce needed by employers today.

On the economic front information was presented that documents the diversity of the region's economy, which has proven to be a real benefit to the area as residents struggle with the nation's COVID-19 pandemic. In reviewing this data, it is important to note that this economic diversity is consistent with similar patterns taking place in many parts of the country and is a reflection of a natural shift in the nation's economy and not the result of some major public policy initiatives which have been implemented at the federal, state, or local level. With regard to the CNY labor force, the region's labor force has re-

mained very stable in recent years. Data shows that wage rates in the region are very competitive with labor cost across the country.

In addition to the economic development opportunities that can be gleaned from the data are the possibilities presented to communities who can capitalize on the presence of several major employers in CNY. Complementing these companies are the opportunities presented by the fact that there are several major employment clusters in Central New York. These clusters include biomedical, logistics and distribution, electronics, industrial machinery, materials processing, food processing, education, health care service, and advanced manufacturing smart systems.

Supporting the economic base of the area is a large network of transportation assets, public water and sanitary sewer systems, electric and natural gas supplies, telecommunication systems, public safety services, public education, and various recreational assets. Complementing these resources is an extensive professional business service and banking network that exists in Central New York. This network provides a very robust and competitive array of services and financial resources to support economic growth in the region. Regarding governance, it is important to note the challenges facing government today to provide vitally needed public services and infrastructure while at the same time controlling costs.

Putting all the data in perspective, regional benchmarking analysis shows that Central New York is in a fairly competitive position ranking 146 out of 384 metropolitan areas in the nation in one study and 143 out of 200 in another study. Each of these rankings demonstrates that the region's economy improved fairly dramatically by 2019 when compared to other communities across the nation. In addition, information presented in the CNY Regional Economic Development Council's Strategic Economic Development Council plans noted the opportunities associated with efforts focused on three priority goals including strengthening and growing new target industries, improved competitiveness in the world marketplace, and revitalizing the region's urban cores and main streets.

1. Goal and Targets

Based upon public input and the information presented above, the CNY RPDB has established the following economic development goal for Central New York:

GOAL: Support the growth of a diverse economic base that will provide employment opportunities for a broad cross section of citizens across the five-county region.

To achieve this goal, the following targets have been established for Central New York:

1) Increase the region's current population of 785,100 to 1 million residents by 2050.

The population of CNY has remained relatively steady over the past twenty year and currently equals approximately 785,100 residents, and a little over half of the region's population (over 400,000) lives in the Syracuse Urbanized Area. Given the aging base of the region's population, additional population growth is needed in Central New York to support the existing economic base and to serve as a resource to attract new employers to the five-county area. To meet this anticipated demand, it is projected that the target population for Central New York needs to increase to one million people over the next 30 years. This represents a population increase of 214,900 or 7,410 people per year, which is less than a 1% change in population each year.

2) Increase the regions' current number of jobs from 317,000 to 405,000 by 2030.

There are currently 317,000 jobs in CNY including 256,000 in the private service sector and 40,000 jobs in the private goods producing sector. This number has remained fairly steady over the past thirty years. Major industry sectors in the region include health care, education, professional business services, trade, and advanced manufacturing. In order to sustain the region's population base, additional jobs are needed across a broad cross-section of the economy. The target is to increase the number of jobs in CNY to 405,000 by 2030.

3) Increase the region's per capita income to equal or exceed the national average by 2030.

The average per capita income in CNY is currently \$30,350, while the national average is \$35,672. Per capita income is measured in the American Community Survey, and has been increasing in each county in Central New York since 2009. To ensure that residents in CNY have sufficient income to meet their daily needs, the number of good paying jobs must be increased so the per capital income in CNY is equal to or exceeds the national average by 2030.

4) Improve the region's national economic strength index rating to a "Top 50" score.

One method of evaluating the strength and growth of the CNY economy is looking at economic indexes that rank Metropolitan Statistical Areas (MSA). The Policom Corporation publishes the Economic Strength Rankings, which emphasizes the condition of local economies, and the Milken Institute publishes the Best Performing Cities, which focuses on job and wage growth. Currently, the Syracuse MSA ranks 146 (out of 384) on the Economic Strength Rankings, and 143rd on the Best Performing Cities. The target is to improve the Syracuse MSA ranking to top 50 standing in both indexes by 2030.

5) Increase the number of clean-energy jobs in Central New York as measured by the Brookings Institute by 25% over the next 20 years.

According to the Brookings Institute, there are 9,648 clean economy jobs in the Syracuse MSA, making up 3% of total jobs. Clean economy jobs are defined as those that produce goods and services with an environmental benefit. This concentration of clean jobs ranks the Syracuse MSA 11th in the nation. The target is to increase the number of clean-economy jobs by 25% to 12,060 jobs by 2030.

Support the ongoing development of the advanced manufacturing smart system industry cluster in Central New York.

2. Strategies

Through group discussions with stakeholders, the planning team identified areas of key opportunities and challenges to achieving sustainable economic development in the region. After reviewing the goal, indicators and targets, and the key opportunities and challenges, a set of economic development strategies were identified for future implementation. Strategies were selected based on the contribution of each to advance the plan's overall economic development goal and targets. In addition, strategies were evaluated for their overall benefits to the region, as well as the costs and feasibility for implementation.

In establishing an action plan for the region, these strategies were prioritized according to their readiness for implementation in the short-term opportunities or long-term initiatives, with short-term defined as 1-5 years and long-term defined as 5-10 years, as these opportunities may require additional time and effort to develop and implement.

Key strategies that have been identified to achieve sustainable economic development include:

Short-Term Opportunities

- a) Maintain a strong foundation for the management and efficient delivery of government services at the federal, state, and local level.
- b) Support the development and maintenance of a modern infrastructure network in Central New York that is focused on roads, sewer and water facilities, transit services, telecommunication resources, air and rail services, shovel ready development sites, and port facilities that will serve the region's advanced manufacturing cluster for semiconductor, unmanned aerial systems, and smart cities 5G companies.

Long-Term Initiatives

c) Develop a coordinated regional program that will improve the quality of life in Central New York through targeted investments in the region's recreation, cultural, arts, and historic resources.

- d) Maintain a strong network of county and regionally-based organizations with the capacity to coordinate the delivery of a range of economic development services, tax abatement, and financial assistance in Central New York.
- e) Support the operation of a coordinated and robust business retention and expansion program in Central New York
- f) Maximize the region's human capital by improving the alignment of workforce supply and employment demand in the region.
- g) Encourage the growth of a strong entrepreneurial culture in Central New York that will strengthen the region's economy through new venture formation and product development activities.
- h) Support the region's industry concentrations and clusters through investment of resources in targeted research initiatives, capital funding, infrastructure resources, supply-chain shovel-ready site assets, and workforce training programs.
- Coordinate implementation of a comprehensive regional marketing and business recruitment program.
- j) Support the development of the "Fourth Industrial Revolution" IoT industry cluster in Central New York.

a) Maintain a strong foundation for the management and efficient delivery of government services at the federal, state, and local level.

In developing an economic development strategy, it is important to acknowledge that the region is competing for jobs on a regional, national, and international level. This competition underscores the importance of providing traditional public services to business and residents in an efficient, cost effective, and professional manner. In Central New York these services are provided through a formal legislative structure and public administrative offices. Through these offices, communities have been able to maintain a complex infrastructure network, a strong public school system, an effective public safety system and emergency communication ser-

vice, a comprehensive solid waste system, records management, a range of public health and social welfare services, and an efficient tax collection system. In most cases these services are delivered efficiently with per capita tax expenditure being among the lowest in the State.

To build on this record of accomplishment in CNY, communities are continuing efforts to further consolidate the delivery of services in the region. Examples of this actions include work by the CNY Regional Transportation Authority, the Onondaga County Water Authority, and an integrated county-based 911 Emergency Communication System being implemented in the region. Other steps being taken include efforts to reduce the cost of mandated services and public pensions for local communities. Beyond these macro-level initiatives, consideration must be given to actions that can facilitate sustainable development in the region. These actions include efforts to implement a comprehensive storm water management program in the region along with efforts to broaden the reach of green infrastructure and smart growth policies in Central New York. Complementing these activities is work that can be done on an inter-municipal basis to standardize municipal forms and application for permitting, zoning, and building code applications in the region. In addition, work can be done to better inventory the region's public infrastructure and use this information to development a coordinated asset management and capital improvement program for major resources in CNY. Complementing these activities is the ongoing work which must be continued through various leadership organizations in CNY that provide a forum to coordinate public policy and community development initiatives in the five-county area.

b) Support the development and maintenance of a modern infrastructure network that is focused on roads, transit services, sewer and water facilities, telecommunication resources, commercial air service, a navigable water harbor port facility, rail services, and shovel ready development sites.

The provision of public infrastructure is one of the most vital services that can be provided to the business community in Central New York. The principal issues of concern to businesses in this field

are reliability and cost of service, convenient access and proximity to markets and supplies, speed of communication, capacity and redundancy of vital services, and affordable real estate assets. In reviewing these issues, it is important to note that CNY has a very robust infrastructure network and real estate market that is capable of meeting most of the present day demands in the marketplace and future needs as the economic base of the region grows. To capitalize on these resources, communities need to consider the merits of developing a coordinated asset management and capital improvement program for the major infrastructure resources in the region. As part of this effort, attention must be focused on actions which can be taken to properly address the I-81 Challenge regarding the replacement of the highway viaduct in downtown Syracuse. Consideration should also be directed toward improvements to the waste-water treatment plants in Auburn, Cortland, Fulton, Oneida, Phoenix, and Clay to support pending business expansion projects in these communities.

Opportunities are also available to capitalize on plans to improve rail freight service in the region through the implementation of projects such as the intermodal rail freight-inland port initiative in the Towns of DeWitt and Manlius. Ideas have also been advanced to the planning and conceptual design stage for expansion of the Port of Oswego and to complete a major water transmission and distribution line across the north shore of Oneida Lake which will bring vitally needed service to this part of the region and areas in northern Madison County, while at the same time significantly improving the overall redundant capacity of the region's major water distribution network. Other high priority initiatives include the provision of public sewer and water service to the Clay White Pines Commerce Park, the Madison County Agriculture and Renewable Energy Park, and the Syracuse Inner Harbor in support of a large urban waterfront revitalization commercial mixed-use development that has been proposed for the area.

c) Develop a coordinated regional program that will improve the quality of life in Central New York through targeted in-

vestments in the region's anchor institutions, recreation assets, cultural and historic resources, and gateway centers.

One of the primary goals of the CNY Regional Economic Development Council Strategic Plan is to support the revitalization of the region's urban cores, main streets, and neighborhoods. In advancing this goal, it is recognized that strong regions are built around vibrant communities with the capacity to attract, retain, and nurture the human and social capital needed to compete in the world marketplace for ideas and talent. To help facilitate an improvement in the quality of life experienced by local residents, communities across Central New York are encouraged to pursue opportunities associated with key resources that are located in their community centers. In many instances these assets include certain location advantages, education institutions, recreation centers, along with various cultural, arts and historic resources. By capitalizing on these assets, communities can help make the region more attractive to the existing workforce and new employers that are considering locating in the area.

To realize the potential of the region's community assets, a strong recommendation is made to focus resources on reinvigorating the region's community centers and main streets through mutually beneficial partnerships with key institutions, repurposing existing physical assets through adaptive reuse and investing in historic buildings, brownfield redevelopment, carefully planned transportation improvements, and targeted infrastructure investments. As part of the effort to develop and retain the workforce of tomorrow, federal, state, and local officials across Central New York must also recognize the importance of improving the region's physical appearance and immediately implement a comprehensive beautification campaign focused on certain gateways into the region, key interstate highway's locations and road intersections, waterfront areas, and public parks. Furthermore, a commitment must be made to providing an ongoing financial base that is needed to maintain and grow a robust cultural arts and entertainment community in Central New York.

d) Maintain a strong network of county and regionally-based organizations with the capacity to coordinate the delivery of

a range of economic development services, tax abatement, and financial assistance in Central New York.

It is important to note in today's economic climate that many regions across the nation have formed dedicated economic development functions with full-time professional staff with responsibility for providing a range of services to support economic growth. In NYS, a cornerstone of this economic development structure are county and city based public benefit corporations established under the provisions of State law with the authority to issue taxable and tax-exempt bond financing, elimination of sales tax on materials and equipment used for manufacturing, and the establishment of payment-in-lieu-of-tax agreements for the management of real property taxes and the elimination of mortgage recording taxes. In addition to these statutory powers, these organizations and related legal partners provide a range of other economic development services including performing liaison functions with the local business community, providing access to financial incentives and job training resources at the federal, state, and local level, and assisting businesses with the identification and development of real estate assets.

In Central New York, these organizations include the Auburn Industrial Development Agency, Cayuga County Industrial Development Agency, Cortland County Industrial Development Agency, Madison County Industrial Development Agency, the City of Syracuse and the Onondaga County Industrial Development Agencies, and the County of Oswego Industrial Development Agency. Complimenting these county-based organizations is a network of organizations that operate on a regional basis in Central New York. These organizations include the NYS Department of Economic Development/Empire State Development, NYS Department of Labor, U.S. Small Business Administration, National Grid, CenterState Corporation for Economic Opportunity, Manufacturers Association of Central New York, CNY Technology Development Organization, and the CNY Regional Planning and Development Board.

As noted above, Central New York is well-served by the current economic development structure in the region. To further capitalize on these assets, resources should be directed toward using

the Central New York Regional Economic Development Council, CenterState CEO, and the CNY RPDB as forums to help coordinate local development efforts and inform municipal officials across the region. In addition, these organizations can serve as vehicles for coordinating efforts to maintain a comprehensive economic development strategy for the region. As part of this effort, consideration should be given to periodically convening meetings of industry representatives and a local "economic expert" roundtable to review economic data, resources, and opportunities for economic development in CNY. In addition, current state and local regulatory policy must be maintained to ensure that local development agencies have a sufficient revenue stream to maintain existing staff resources to perform the level of business outreach needed to properly inform and assist the local business community with support job creation and retention and general economic growth. Furthermore, additional federal, state, and local financial resources must be provided to local and regional development organizations so that certain discretionary programs can be implemented across the region. These programs include entrepreneurial development, export marketing, venture capital assistance, workforce training, business recruitment, and real estate development. Attention should also be directed to regularly evaluating utility rate structures and local incentive programs to ensure they align with evolving economic development objectives, community needs, and competition in the marketplace.

Major organizations with a capacity to implement this strategy include the NYS Empire State Development, CenterState CEO, CNY RPDB, and county- and city-based industrial development agencies.

e) Support the operation of a coordinated and robust business retention and expansion program in Central New York.

Beyond organizational initiatives, a great deal of attention is paid today to work that can be done at the federal, state, regional, and local level to support economic growth through an organized business retention and expansion program. While often undervalued as a strategy for economic development, business retention and expansion (BR&E) is nevertheless among the most common elements of a comprehensive economic development program.

According to the International Economic Development Council (IEDC), two-thirds of all economic development organizations in the nation have BR&E programs, while less than half have business attraction programs.

There is a common adage in economic development that it is far easier to retain an existing employer than to recruit a new one. In fact, research has shown that most new jobs are created by existing businesses in a community rather than those relocating from elsewhere. In today's global marketplace, with industries rapidly consolidating and economic developers competing to lure new companies to their communities, business retention is even more important as part of an economic development strategy. Business retention and expansion programs typically include a wide variety of activities undertaken to retain and facilitate the growth of local businesses. The "tools" used in BR&E are many of the same items found in the recruitment toolbox: financial assistance, workforce training, information on available sites or buildings, assistance with permitting and licensing, export, marketing and procurement assistance, and so on. In some cases, the economic development organization (EDO) can provide services directly; in other instances, the EDO serves as a broker between the company and the source(s) of the assistance.

Because the services provided are based on the needs of the customer, BR&E depends heavily on a customer service orientation. Successful BR&E must begin with an effective outreach program to assess the needs, priorities, and concerns of individual businesses in cooperation with company owners and managers. Based upon an analysis of numerous BR&E programs across the country and a review of the available resources and work that is being done in Central New York, specific attention must be given to the following actions:

- + Convene workshops of local "economic experts" to review issues, resources, and opportunities for economic development in the region
- + Maintain a formal business outreach program at the county level that coordinates the delivery of services provided by various agencies to the small business community

- + Conduct formal outreach to various business service providers such as bankers, lawyers, and accountants to identify business development opportunities and needs in the region
- Complete a detailed inventory and contact list for major development projects/business opportunities in Upstate New York—Fort Drum, Albany Nanotech, Global Foundries, Turning Stone that may represent business development opportunities for local companies
- + Support entrepreneurial initiatives and business networking forums at area colleges
- + Support regional and statewide efforts to foster formal relationships with venture capital providers and angel investors to support entrepreneurial development in the region
- + Maintain a competitive business incentive and small business loan program across the five-county region
- + Build on the region's selection to participate in Brookings Institute Metropolitan Export Initiative and broadly promote access to federal and state export assistance programs through a one-stop export assistance center in CNY. Resources available to support this effort include those available at the federal level through the U.S. Department of Commerce International Trade Administration, U.S. Small Business Administration, and CenterState CEO.

f) Maximize the region's human capital by improving the alignment of workforce supply and employment demand in the region.

The availability of a trained or trainable workforce may be one of the most crucial ingredients in any decision by today's business community to expand or relocate. The development of specialized skills is an expensive undertaking for any company and the availability of a pool of workers ready to be productive is a major attraction for local and relocating firms alike. Having such a workforce is a key to the region's ability to participate in the dynamic and highly competitive regional, national, and international

economies of today. There are two essential challenges in this area including keeping a viable local labor pool available as the population ages, and providing the right type of training at the right time for this workforce.

In evaluating its workforce training resources, it is important to note that Central New York is well-served by a strong K-12 public school system, three community colleges, and several four-year colleges and universities. These institutions include Syracuse University, SUNY Upstate Medical University, the SUNY College of Environmental Science and Forestry, Colgate University, Cazenovia College, Wells College, Le Moyne College, and SUNY Colleges at Cortland, Morrisville, and Oswego. Complementing these resources is a network of county-based job training and local workforce investment agencies formed across the region under the provisions of the federal Workforce Investment Act (WIA). These organizations provide a single point of entry for bringing together businesses, job seekers, and training providers with the goal of providing skilled workers for every business and employment for every job seeker in the community.

In accordance with the WIA, counties are required to form local Workforce Investment Boards to facilitate a partnership approach to meeting the needs of business, providing career opportunities for workers, and assuring meaningful education and employment experiences for youth. Board composition must align with the structure of the region's economy and include representation from business, education, organized labor, government, employment & training, economic development and community-based organizations. Workforce Investment Boards are required to develop plans that evaluate their community's economic conditions, workforce needs, and systems for the delivery of employment and training services. These plans are designed to help direct resources to key career counseling programs, workforce training needs, and job placement services in a community. Utilizing the information that is drawn from these plans, it is apparent that several ideas should be advanced in Central New York to help ensure that the region has sufficient labor resources to support economic growth across a range of industrial sectors. These recommendations include:

- + The development of a web-based information portal that has a comprehensive inventory of the vocation and technology education programs currently being offered by the education institutions in Central New York. As part of this outreach effort, as series of case studies can be prepared to demonstrate how certain training programs in CNY have been used by area employers to meet their workforce needs.
- + One of the greatest challenges confronting companies today is to generate the capital resources needed to train existing and new employees on new equipment and advances in production processes which must be brought into the workplace to meet the competition in the marketplace. In most cases, these training costs cannot be financed through traditional lending institutions and must be addressed through internal cash flow resources. However, in today's economic environment, many companies are unable to generate these resources and, therefore, a regional training grant program must be capitalized in Central New York. Such a program should be targeted to small businesses that are net wealth generators for their community with the capacity for employment growth.
- + In addition to addressing current employment needs, local academic institutions should be challenged to help finance a study that would focus on identifying local training needs based on anticipated changes in the marketplace and future employment opportunities. Such initiatives have been successfully undertaken in communities to address workforce needs such as those related to semi-conductor manufacturing and nanotechnology, operation of nuclear power facilities, health care, and developments related to alternative energy supplies such as the installation of solar photovoltaic systems and wind towers. To be useful, this study would need to evaluate marketplace activities and identify business opportunities and training needs that might be applicable in CNY
- + According to local business representatives, one of the greatest challenges they are confronted with in recruiting new employees is a general lack of knowledge of existing career opportunities and current business practices in the workplace. This issue is often highlighted by local manufacturing companies where

public perception has not kept abreast of the job opportunities and modern working conditions which exists at many facilities in CNY. To address this issue, a public education and outreach program needs to be implemented in CNY. This program could include public service announcements, a formal career-awareness campaign in area K-12 schools and colleges and universities, and a coordinated internship program for high school graduates and college level students.

+ Supporting the City of Syracuse and Onondaga County's proposal to establish the STEAM at Syracuse Central High School, as a regional resource to support the training in the arts, unmanned aerial systems, robotics and automation controls, advanced manufacturing processes, construction management, and business entrepreneurship.

To assist with this effort communities must look to their major economic development organizations based at the regional and county level. In addition, resources are available from the NYS Department of Labor, local workforce investment boards and job training agencies, and career training centers at area colleges and universities.

g) Encourage the growth of a strong entrepreneurial culture in Central New York that will strengthen the region's economy through new venture formation and product development activities.

In recent years, many communities across the country have undertaken efforts to expand their traditional economic development programs beyond business retention and recruitment to include initiatives that support the development of an entrepreneurial culture in their communities.

Entrepreneurship is the act and art of bringing new products and services things into the marketplace. This action may lead to the formation new companies or may be part of revitalizing mature organizations in response to a perceived opportunity. According to Paul Reynolds, entrepreneurship scholar and creator of the Global Entrepreneurship Monitor, by the time they reach their retirement years, half of all working men in the United States prob-

ably have a period of self-employment of one or more years; one in four may have engaged in self-employment for six or more years. Participating in a new business creation is a common activity among U.S. workers over the course of their careers. And in recent years it has been documented by scholars to be a major driver of economic growth in both the United States and Western Europe. Entrepreneurial activities are substantially different depending on the type of organization and creativity involved. Entrepreneurship ranges in scale from solo projects (even involving the entrepreneur only part-time) to major undertakings creating many job opportunities. Many kinds of organizations now exist to support would-be entrepreneurs including specialized government agencies, business incubators, science parks, and some NGOs. Many "high value" entrepreneurial ventures seek venture capital or angel funding (seed money) in order to raise capital to build the business.

In Central New York, communities have come to recognize that small business growth, entrepreneurship, and innovation are key elements to transitioning the local economy to a sustainable future. To encourage this transition, organizations have been working to develop certain community-based assets to support entrepreneurship in the region. These initiatives include the establishment of a network of business incubator facilities and small business financing programs across the region. In addition, funding has been secured from the Kauffman Foundation to establish a formal entrepreneurship program at Syracuse University resulting in 165 campus-community projects that infuse entrepreneurship at the grass roots level throughout CNY. The program includes partnerships with Cayuga Community College, Le Moyne College, Morrisville State College, Onondaga Community College, and the SUNY College of Environmental Science and Forestry. Other initiatives being advanced in Central New York include formation of the Clean Tech Center and the Innovation and Disruptive Entrepreneurship Accelerator Student Sandbox program at the Syracuse Technology Garden, streamlining small business services through the NYS Small Business Development Center, and construction of the Syracuse Center of Excellence, and the Central New York Biotechnology Accelerator Center, a partnership between Upstate Medical University and the SUNY ESF.

The region is also home to SU Falcone Center for Entrepreneurship, the Southside Innovation Center, and the Entrepreneurship Bootcamp for Veterans with Disabilities. The region has also gained national recognition for programs like Start-Up NY, a partnership between the Whitman School of Management and the Burton Blatt Institute at SU, pioneering work through SU's acclaimed Near Westside Initiative, the Stardust Entrepreneurial Institute in Auburn, SUNY Morrisville's Nelson Farms food incubator, the CNY Technology Development Organization's Small Business Innovation Research Outreach Program, and the U.S. Small Business Administration's comprehensive training programs.

Building a robust innovation ecosystem is a key component to driving ideas, new technologies, products, and services to the marketplace. To capitalize on these opportunities for job creation, the region must build on its current work and ensure that all of the necessary resources are in place to help ensure that new ventures grow into viable enterprises in CNY. To build a truly world-class entrepreneurial ecosystem existing programs must be supplemented by several actions including:

- + Building a pipeline of new and emerging ventures through aggressive business attraction efforts and by facilitating the transition of research activities into product development and commercialization
- + Foster student entrepreneurship through ongoing mentorship programs at area academic institutions and the Syracuse Student Sandbox program
- + Develop additional physical and virtual incubation space that fosters the interaction of ideas and new partnerships in a setting that is supportive and affordable to new venture companies
- + Develop formal programs and networks that improve local access to early stage seed capital and venture capital resources
- + Expand new product commercialization assistance through specialized funding programs such as the NYS supported Grantsfor-Growth program administered by CenterState CEO and the SU COE Commercialization Assistance Program

- + Build mentor networks consisting of subject matter experts and entrepreneurs-in- residence that can provide guidance regarding business plan development, venture formation, pathto-market, technology roadmap, business modeling and funding strategies, procurement, contracting, and market access assistance
- + Connect entrepreneurs with market leaders to beta-test new products and technologies through programs like Tech Meet-Up, special events, and workshops and conferences
- + Establish a Bridge NY program to build a pipeline of deal-ready companies that can be introduced to investors in financial centers in NYC and Boston

Resources are available to assist with the implementation of this strategy through CenterState CEO, the CNY Technology Development Organization, Syracuse Center of Excellence, and the Syracuse Technology Garden.

h) Support the region's industry concentrations through investment of resources in targeted research initiatives, capital funding, infrastructure, and workforce training programs.

In planning for a sustainable future, development representatives in Central New York have identified several critical industry concentrations that can help form the basis for economic growth in the region. These sectors represent a cross-section of traditional and new economy companies and share five common criteria including (1) these industries have a critical mass of companies and a large employment base in the region, (2) employment in these sectors is highly concentrated in CNY, (3) there is significant growth in the demand for the products and services provided by these companies on a regional, national, and global basis, (4) the region has the necessary infrastructure and human capital to support these industry clusters, and (5) certain companies in these industry clusters are closely aligned with the region's major anchor institutions. Major industrial cluster in Central New York include advanced manufacturing, the clean energy and environmental systems, education and health care, biomedical services and biosciences, financial services, agribusiness and food processing, and tourism.

To capitalize on these industry concentrations, recommendations have been advanced to target resources in certain industry clusters with significant growth potential in CNY. In addition, proposals have been made to encourage cross industry collaborations through joint research and training initiatives. Suggestions have also been for business recruitment efforts that are focused on companies that can benefit from the industry concentration resources that currently exist in CNY. As part of this recruitment effort, it is recommended that attention be focused on the opportunities associated with plans by the Federal Aviation Administration to develop an unmanned vehicle training center in Central New York. Detailed ideas have also been advanced for specific industry clusters by utilizing the Syracuse Center of Excellence to showcase new products that are being brought to the marketplace by area companies. As part of this effort, new research and development labs are needed at the COE to demonstrate fuel-cell, combined heat and power systems, smart grid applications, photovoltaic and wind power generation equipment, and battery and energy power storage systems. In health care, proposals have been made to advance research initiatives at the new CNY Biotechnology

Accelerator and the proposed St. Joseph's Hospital –Welch Allyn Floor of the Future project. It is also recommended that the region ensure a better alignment of medical and bioscience services through several initiatives including programs such as a replication of iSciWNY program and the National Science Center, along with a formal health care education credentialing process.

In the area of financial services, data processing, and back-office operations, the region is well positioned to capitalize on a critical mass of companies, a competitive labor supply, and affordable real estate and operating cost. To realize these opportunities, it is recommended that the region continue a focused business outreach and marketing program in major metropolitan areas in the northeast. In addition, efforts should also be directed to ensure the proper alignment of education programming to keep pace with the latest developments in the industry. Also, it is recommended that investments be made in cyber-security research through cross-industry and university collaborations.

Regarding advanced manufacturing, it is strongly recommended that efforts be continued to complete development in Syracuse of a Nanotechnology Innovation and Commercialization Center to support the region's advanced manufacturing, defense, radar, and sensor industries. In addition, it is recommended that efforts be directed to an industry sector supply chain usage and integration program along with an infrastructure investment initiative targeted to enhancing certain business parks and manufacturing sites in the region. Proposals have also been made for focused learning and training through new manufacturing certification programs and career ladder initiatives that address science, technology, engineering, and math education and training. In the area of agribusiness, targeted investments are recommended for food processors and the production of certain value-added agriculture products.

To advance the business development opportunities in the tourism sector, plans continue to be advanced for development of a tourism, entertainment, and recreation district in the Syracuse Lakefront Area, development of athletic team sports complexes in Cortland, Onondaga, and Oneida, The Rev Theatre Co. in Auburn, Harriet Tubman National Historic Park, Emerson Park festival center, Onondaga Lake Loop-the-lake trail, Empire State Trail, Greek Peak resort, NOAA Eastern Lake Ontario National Marine Sanctuary, and Oswego/Salmon River Corridor sportfishing industry. More broadly, ideas include implementation of a comprehensive tourism marketing plan, coordinated packaging, signage, event planning, and gateway beautification program. Recommendations were also made for engaging local businesses and business groups in a regional convention center attraction campaign and in efforts to promote a regional brand identity for Central New York.

i) Coordinate implementation of a comprehensive regional marketing and business recruitment program.

While a comprehensive business retention and expansion program must be a cornerstone to a region's economic development program, data provided by various site location experts suggest that resources should also be directed to a targeted business recruitment program. In trying to recruit a company to a community, officials must have some understanding of the global stress factors that are impacting companies today and how these factors



Luther Forest Technology Campus, Saratoga County

may influence a company's decision to expand or relocate their operations to a new community. In reviewing these factors, considerable attention must be focused on high-growth industries and the potential to capitalize on certain industry clusters which exist in Central New York. In addition, communities must recognize that the site selection process typically begins on an international or national level today, transitions into a regional and state search, before finally focusing on a set of recommendations regarding potential host communities. While surprising to many, the site selection process is often characterized as a process of elimination that places a premium on communities being "ready-for-development" long before prospect interest is ever known to a community.

Given its strategic location, strong population and labor force base, and the availability of a well-developed infrastructure system, site location consultants and corporate real estate executives have indicated that the region could benefit from a business recruitment program that is carefully targeted to certain industry sectors including advanced manufacturing, food processing, information and financial back-office services, data processing centers, pharmaceuticals, and warehouse and distribution centers. In making this recommendation, emphasis was placed on the number of major food processing companies with corporate headquarters in

New York City and existing processing facilities in the State. Also noted were the opportunities associated with recruiting business from companies looking to move back-office operations out of high-cost metropolitan areas in the northeast. An example of this opportunity is the Bank of New York Mellon Corporation operations that are currently located in the Syracuse and Utica areas. Another example is the 184,000 sf Yahoo data center established in the Buffalo region.

Recommendations have also been provided which suggest the region has an opportunity to capitalize on the growth of the advanced manufacturing semiconductor industry cluster that is developing along the NYS Thruway corridor in the Albany region with the location of a major GlobalFoundries center in Saratoga County that consists of 1.7 million square feet of manufacturing and research space, and plans are underway by Wolfspeed/Cree to construct a major new semiconductor manufacturing facility in the Utica- Rome area. Complementing these projects are plans to host a major semiconductor manufacturer in Onondaga County at the 1,200-acre White Pine Commerce Park in the Town of Clay. Further complementing the State's semiconductor industry cluster initiative are plans for a fourth major development site along the NYS Thruway corridor with a location in Genesee County in western New York

It is suggested that such a business recruitment program consist of several elements including direct coordination and consultation with the NYS Empire State Development – Strategic Business Division. In addition, the region should maintain a close working relationship with selected site location consultants across the nation, particularly those individuals and companies that have a focus area that is related to industry cluster strengths in CNY. To complement this outreach effort, staff operating on a regional basis should afford themselves of the opportunity to participate in selected national forums and trade association meeting sponsored by the site location consultant community and selected industry sectors. As part of this effort, an accurate data base must be maintained for the region so that information can be made available to business prospects in a timely manner. This effort should include the preparation and maintenance of a comprehensive real estate site profile database for the region.

j) Support development of the Advanced Manufacturing Smart Systems Cluster in Central New York – "Fourth Industrial Revolution"

Over the past five years, Central New York has advanced several initiatives that have the potential to lay the foundation for the growth of a major economic cluster in the region. These initiatives include work to development the 1,200-acre White Pine Commerce Park in the Onondaga County Town of Clay. This site is desiged to be the host site for a major semiconductor manufacturing company that will be recruited to the region. This company is projected to invest \$15-\$20 billion in a new facility and create 5,000 jobs. Complementing this project has been the region's success in developing an FAA approved unmanned aerial system testing site in CNY. This testing site will provide the basis to the development of the Center City Innovation Hub, Southside Campus for a new economy, and the New York Center for Smart Cities-5G Systems.



Green Empire Farms

Alignment of Economic Development Strategies and Targets.

			TARGETS		
	1	2	3	4	5
Strategies	INCREASE THE REGION'S CURRENT POPULATION OF 791,500 TO 1 MILLION RESIDENTS BY 2050	INCREASE THE REGION'S CURRENT NUMBER OF JOBS FROM 320,000 TO 405,000 BY 2050	INCREASE THE REGION'S PER CAPITA INCOME BY 10% OVER THE NEXT 40 YEARS TO EQUAL OR EXCEED THE NATIONAL AVERAGE BY 2050	IMPROVE THE REGION'S NATIONAL ECONOMIC INDEX RATING TO A "TOP 50" SCORE	INCREASE THE NUMBER OF CLEAN- ECONOMY JOBS IN CENTRAL NEW YORK BY 25% BY 2030
	Short-Term	Opportunities			
a. Maintain a strong foundation for the management and efficient delivery of government services at the federal, state, and local level.	•	•			
b. Support the development and maintenance of a modern infrastructure network in Central New York	•	•	•		•
	Long-Terr	m Initiatives			
c. Develop a coordinated regional program that will improve the quality of life in Central New York through targeted investments in the region's recreation, cultural, arts, and historic resources.	•	•			
d. Maintain a strong network of economic development organiza- tions to deliver financial and technical assistance to the business community		•	•	•	•
e. Support the operation of a coordinated and robust business retention and expansion program in Central New York		•	•	•	•
f. Maximize the region's human capital by improving the alignment of workforce supply and employment demand in the region.		•	•	•	•
g. Encourage the growth of a strong entrepreneurial culture in Central New York that will strengthen the region's economy through new venture formation and product development activities.		•	•	•	•
h. Support the region's industry concentrations through investment of resources in targeted research initiatives, capital funding, and workforce training programs.		•	•	•	•
i. Coordinate implementation of a comprehensive regional marketing and business recruitment program.		•	•	•	•
j. Implement a comprehensive regional export marketing campaign and technical assistance program.		•	•	•	•

Economic Development—Summary of Goal, Targets, Strategies, and Recommendations

Goal

SUPPORT THE GROWTH OF A DIVERSE ECONOMIC BASE THAT WILL PROVIDE EMPLOYMENT OPPORTUNITIES FOR A BROAD CROSS SECTION OF CITIZENS ACROSS THE FIVE-COUNTY REGION.

Targets

INCREASE THE REGION'S CURRENT POPULATION OF 791,500 TO 1 MILLION RESIDENTS BY 2050.

INCREASE THE REGIONS' CURRENT NUMBER OF JOBS FROM 320,000 TO 405,000 BY 2030.

INCREASE THE REGION'S PER CAPITA INCOME TO EQUAL OR EXCEED THE NATIONAL AVERAGE BY 2030.

IMPROVE THE REGION'S NATIONAL ECONOMIC STRENGTH INDEX RATING TO A "TOP 50" SCORE.

INCREASE THE NUMBER OF ADVANCED MANUFACTURING-SMART SYSTEMS AND CLEAN-ENERGY JOBS IN CENTRAL NEW YORK BY 25% OVER THE NEXT 10 YEARS.

Strategies

Short-Term Opportunities

Maintain a strong foundation for the management and efficient delivery of government services at the federal, state, and local level.

Support the development and maintenance of a modern infrastructure network in Central New York that is focused on roads, sewer and water facilities, transit services, telecommunication resources, air and rail services, shovel ready development sites, and port facilities.

Long-Term Initiatives

Develop a coordinated regional program that will improve the quality of life in Central New York through targeted investments in the region's recreation, cultural, arts, and historic resources.

Maintain a strong network of county and regionally based organizations with the capacity to coordinate the delivery of a range of economic development services, tax abatement, and financial assistance in Central New York.

Support the operation of a coordinated and robust business retention and expansion program in Central New York

Maximize the region's human capital by improving the alignment of workforce supply and employment demand in the region.

Encourage the growth of a strong entrepreneurial culture in Central New York that will strengthen the region's economy through new venture formation and product development activities.

Support the region's industry concentrations/clusters through investment of resources in targeted infrastructure investment, research initiatives, capital funding, and workforce training programs.

Coordinate implementation of a comprehensive regional marketing and business recruitment program.

Implement a coordinated program to support the growth of an advanced manufacturing smart industry cluster in Central New York.

Economic Development—Proposed Projects

	Project Recommendations					Project Impacts							
Title	Description	Sponsor Identified	Cost	Status	Barriers	Population Growth	Per Capita Income Growth	Job Growth	Energy Management	GHG Reduction	Community Resiliency	Environmental Stewardship	Improved Quality of Life
Emerson Park and Auburn Finger Lakes Musical Theatre Festival	Development of venues and facilities to serve the tourist potential of this summer musical festival and resources at Emerson Park	Y	Med	Ongoing	Funding, Market	Med	Med	Med	-	-	Med	Low	High
Syracuse CNY Nanotechnology Innovation Center	Development of facilities to serve as manufacturing and research center for a nanotechnology industrial cluster in Upstate New York	Y	Med	Concept	Market	Med	Med	Med	-	-	Med	Low	Low
Regional Sports Tourism Recreation Complex	Support the development of sport recreation fields and complexes to serve as a major resource to attract athletic team travel tourism to the region	N	High	Concept	Funding, Market	Low	Low	Med	-	-	Low	Low	High
Community College Advanced Manufacturing Training Centers	Support the development of an network of advanced manufacturing training centers at community colleges across the region to support growth of this industry cluster.	Y	Med	Concept	Funding	Med	Med	Med	-	-	-	-	Med
SUNY-ESF Willow Biomass Energy Production Program	Expand the SUNY ESF Willow demonstration planting program to more landowners and farmers in CNY to provide supply for a robust CHP network	Y	Med	Underway	Funding, Market	Low	Med	Med	High	Direct	Med	Med	Med
Syracuse Technology Garden	Support major expansion of the Syracuse Technology Garden incubator and business accelerator facility in down- town Syracuse as part of the region's strategy to establish a CNY Smart Systems Innovation Hub in Central New York	Y	Med	Concept	Funding	Med	Med	Med	Low	Indirect	Med	Med	Low
Port of Oswego	Support of infrastructure resources, rail facilities, and on-site operating equipment that will allow for expansion of the Port of Oswego	Y	Med	Design	Market	Low	Med	Med	Low	Low	Low	Low	Low
SUNY Morrisville Aquaculture/Indoor Agriculture Program Expansion	Development of expanded facilities and equipment that will allow for improved research and student training in the field of commercial on-site aquaculture and indoor agriculture	Y	Med	Concept	Funding, Market	Low	Med	Med	Low	-	Low	Low	Low
White Pine Commerce Park Infrastructure	Complete the construction of a major sewer and water line to serve the 1,200-acre business park along with related public road improvements	Y	High	Design	Funding	High	High	High	Low	Indirect	High	Med	High
Aurelius Business Park Infrastructure Improvements	Expand road network and complete improvements to public sewer and water service, and a CHP facility to support a dairy business location in the park and other related companies	Υ	Med	Concept	Funding, Market	Med	Med	Med	Med	Indirect	Low	Low	Med

	Project Recommendations					Project Impacts								
Title	Description	Sponsor Identified	Cost	Status	Barriers	Population Growth	Per Capita Income Growth	Job Growth	Energy Management	GHG Reduction	Community Resiliency	Environmental Stewardship	Improved Quality of Life	
Auburn Tech Park Infrastructure Improvements	Upgrade infrastructure in the business park to allow the City to retain existing tenants and development new sites for industrial growth	Y	Med	concept	Funding	Low	Med	Med	Low	Indirect	Low	Low	Low	
Oneida Elm Street/Curtin Agriculture Business Park	Support expansion of business park area and infrastructure on the western edge of the City of Onedia	Y	Med	Concept	Funding, Siting, Market	Med	Med	Med	Low	Indirect	Med	Low	Med	
Syracuse Hancock Airpark Phase V Expansion	Complete the demolition of vacant buildings on the eastern edge of the park and construction of new utilities to allow for the marketing of additional sites in the park	Y	Med	Design	Market	Low	Med	Med	Low	Indirect	Med	Low	Med	
Madison Culinary Institute and Hotel Conference Center	Capitalize on interest in the marketplace by developing a specialized hops and culinary institute and hotel conference center	N	High	Concept	Funding, Siting, Market	Med	Med	Med	Low	Indirect	Med	Med	Med	
Fulton Nestle Site Redevelopment	Capitalize on the robust infrastructure network in the area by supporting the environmental remediation and reuse of the former manufacturing facility and site	Y	Med	Concept	Funding,	Low	Low	Low	Low	Indirect	Med	High	High	
Oswego County Industrial Park Expansion	Develop public infrastructure including road access improvements to support 200- acre expansion of this publicly sponsored industrial park	Y	Med	Design	Funding, Market	Med	Med	Med	-	-	Med	Low	Low	
Cortland Buckbee Meers Brownfield Site Redevelopment	Capitalize on the robust infrastructure network in the area by supporting the environmental remediation and reuse of the former manufacturing facility and site	Y	Med	Concept	Funding, regulatory, Market	Low	Low	Low	Low	Indirect	Med	High	High	
Auburn Bombardier Brownfield Site Redevelopment	Capitalize on the robust infrastructure network in the area by supporting the environmental remediation and reuse of the former manufacturing facility and site	Y	Med	Concept	Funding, regulatory, Market	Low	Low	Low	-	-	-	High	Med	
Madison County ARE Park Infrastructure Development	Construct a public sewer and water line along with public access road to allow for the development of this agriculture and renewable energy park adjacent to the County's landfill.	Y	Med	Underway	Funding, regulatory, Market	Med	Med	Med	Med	Indirect	Med	Med	Low	
Syracuse Lakefront Inner Harbor Development	Construct public road, sewer, and water improvements to support a \$350 million commercial mixed- use development proposed for the Inner Harbor	Y	Med	Underway	Market	Med	Med	Med	Med	Indirect	Med	High	High	

David Bottar, Executive Director Central New York Regional Planning and Development Board 126 North Salina Street, Suite 200 Syracuse, New York 13202 (315) 422-8276 x207 dbottar@cnyrpdb.org www.cnyrpdb.org