# Mid-Hudson Region

## ECONOMIC DEVELOPMENT COUNCIL • STRATEGIC PLAN

**Governor Andrew M. Cuomo**

# A Message from the Co-Chairs

**WE ARE PLEASED TO PRESENT THE 5-YEAR STRATEGIC PLAN OF THE MID-HUDSON REGIONAL ECONOMIC DEVELOPMENT COUNCIL.**

It has been an honor for us to co-chair this Council and to work with its talented members in the development of this Plan, which was adopted in November, 2011. Throughout our careers, we have both created thousands of jobs in the Mid-Hudson Valley, and we are confident that this Plan positions our region for future success. It will help keep existing jobs in the region; encourage existing businesses to grow new jobs; create an environment and process to bring new businesses to the region; and through research, innovation, and incubation, help create the businesses of the future that will stay and grow in New York.

We want to acknowledge the good work and expertise of the state officials who helped us prepare this document and the thousands of citizens in the region who contributed to its development. As Governor Cuomo has appropriately said, our work is about "jobs, jobs, jobs" and keeping New York the Empire State.

**Dennis J. Murray**

**Leonard S. Schleifer**

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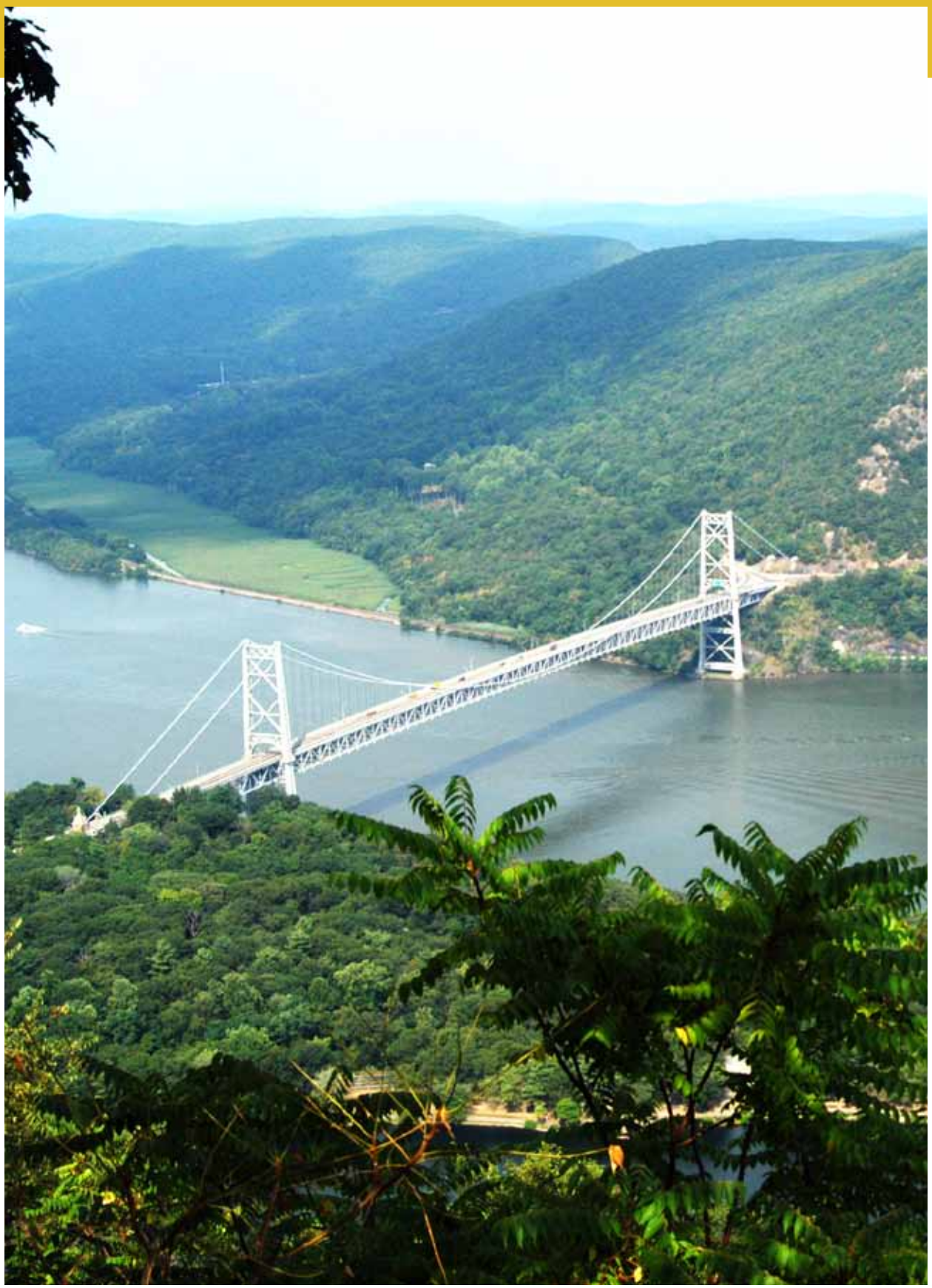

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# Executive Summary

The Mid-Hudson Region is unique among the 10 regions of New York State and offers unique economic potential for the State. With its location north of New York City and south and east of New York's upstate counties, and with the mighty Hudson River itself flowing north to south and forming the region's spine, the Mid-Hudson Region is the physical and economic bridge between downstate and upstate New York.

Arguably no other region of the state has as broad a mix of urban, suburban, and rural areas or as full a spectrum of businesses within its borders: from Fortune 500 corporate headquarters to back offices, from industrial to commercial, from retail to agricultural. The region's proximity to New York City is itself an important asset, as it expands job opportunities for commuting residents and markets for its businesses. This proximity also affords easy access to the city's world-class entertainment and cultural offerings. For these reasons, and due to the presence of many local colleges and universities, the region has a highly diversified and educated workforce, one that has skills needed by the economy of the 21st century and, where these are lacking, a capacity for training to acquire those skills.

This Strategic Plan for the Mid-Hudson region recognizes that the diversity of the region in all its forms, as well as the skills of its citizens and the high quality of life in the region, are all assets for future economic development. More specifically, our Plan embraces the following 15 goals, each of which has its attendant strategies:

- Target job-creation investments in the region's developing technology-based industries such as biotechnology, high-tech manufacturing, and information technology with a "clustering" strategy.
- Undertake initiatives to retain and stimulate more mature industries such as distribution, financial and professional services, food and beverage, and health care.
- Leverage the region's outstanding natural resources, its tourism industry, and agriculture in a "natural infrastructure" strategy that protects agriculture and the environment and recognizes these as important to tourism and as quality of life attributes that are critical to attracting and retaining high-quality jobs for all key industry sectors.
- Improve key regional infrastructure to make the region more business-ready.
- Foster housing investment to attract jobs to the region, create construction jobs, and support the overall health of the regional economy through a vibrant housing market.
- Support the revitalization of our urban centers as engines of regional prosperity.
- Enhance the region's talent pipeline through its colleges and universities, One-Stop Career Centers, BOCES, school systems, public libraries and library systems, and child care system.
- Promote entrepreneurship, start-ups, and small businesses through a variety of measures that will make it easier to access public- and private-sector resources for access to capital, workforce training, and business and technical consulting.
- Make the region and New York State more business friendly by adopting appropriate tax and administrative policies.
- Develop non-mandated programs that encourage, educate, and foster green development projects as part of developing a green Hudson Valley economy.
- Embrace inter-regional partnerships that leverage cross-region resources.

- Make the Mid-Hudson region more attractive to young educated professionals in order to stop "youth flight" and "brain drain" in the region.
- Build on the unique location of the Hudson Valley (situated between the majestic Hudson River, the Delaware River, and Long Island Sound) and promote waterfront development in order to enhance tourism, recreation, and trade.
- Support MWBEs (Minority and Women Business Enterprises).
- Align public-private support to ensure implementation of the regional Plan and consideration of new opportunities.

**The Council identified and endorses the following as "Priority Projects" that promulgate the core strategies of this Strategic Plan and can have a transformational impact on the region:**

- In Westchester County, a biotechnology incubator at New York Medical College (See Appendix A)
- In Dutchess County, a cloud computing center at Marist College that leverages support from IBM (See Appendix B)
- In Sullivan County, a high-risk assessment clinic at the Center for Discovery (See Appendix C)

**Further, the Council identified the following "Priority Projects in Development" that also support the core strategies of the Plan and will have a transformational impact on the region in the future:**

- In Ulster County, a high-tech manufacturing center for job creation and workforce development
- A medical school affiliated with the Orange County Regional Medical Center
- In Putnam County, the Paladin law enforcement training center

**Additionally, the Council recognizes the transformational potential for the region of the following :**

- The Global 450 Consortium
- The construction of a new Tappan Zee Bridge
- The redevelopment of excess capacity at the Pfizer R&D and Manufacturing site in Pearl River, and IBM facilities in Fishkill and Tech City in Kingston
- The upgrade of Stewart International Airport for passenger and cargo service and potentially for aerospace related industries
- The Linuo Solar Group's relocation to the former IBM campus in East Fishkill

This Council's regional economic development strategy was formed not only by the 32 members of the Council and their supporting teams, but also by invaluable input from nearly 1,000 citizens gathered at eight Public Forums; six public Council Meetings; various meetings with elected officials, members of community-based organizations, and private sector groups; and via inputs to the Council's public website, all components of the Council's Public Participation Strategy. The Council has also established a process to monitor implementation of its plan and specific performance metrics.

# Existing Conditions

The Mid-Hudson region of New York State consists of seven distinct and unique counties (Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester) that have proven to be a prime locations to live, work, and raise families. The region's enviable combination of urban, suburban, and rural lifestyles, unequaled quality of life, and close proximity to New York City has attracted a wide array of businesses and a highly talented and educated workforce to the region, which borders three states (Connecticut, Pennsylvania, and New Jersey).

Early in its process, the Council conducted a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of the region. Table 1 presents findings on Strengths and Weaknesses, and the following paragraphs provide elaboration. Findings on Opportunities and Threats are presented in Section 3.

**Table 1**

## Strengths

- Diversified service-based economy with several technology-based industries and the educational resources (engineering at SUNY and expertise in cloud computing and analytics research at Marist College) to prepare individuals for careers in technology-based industries
- Proximity to the vast market and labor force of New York City
- Transportation infrastructure including six interstate highways, Stewart International Airport, Westchester County Airport, and mass transit in the southern counties
- Highly-skilled and diversified work force
- Many colleges and universities to provide a steady stream of young workers as well as cultural opportunities for residents
- Stable communities with good public schools
- Diverse housing stock, including particularly in Westchester County, higher-density housing near rail lines and other public transit
- High quality of life thanks to many factors, including cultural, historic, and "natural" resources of the region
- The Catskills, Delaware River, and the Hudson River and its watershed, which provides spectacular scenery and abundant water supplies, and the Long Island Sound, which offers boating, swimming, fishing, and commercial activities
- Seven Fortune 500 companies have headquarters in Westchester County, including two Fortune 50 companies, IBM and Pepsico

## Weaknesses

- High business operating costs due to high wages, taxes, and energy costs
- Aging infrastructure and challenge of financing improvements, including replacement of the Tappan Zee Bridge and improvements to Stewart International Airport
- Home rule and business regulation, including lengthy and complex approvals processes both locally (e.g., zoning, permitting) and statewide (State Environmental Quality Review Act or SEQRA)
- Dearth of shovel-ready sites for business expansions or relocations
- High housing costs; need for more affordable housing, including multi-unit housing
- Youth flight to NYC and other areas perceived to offer greater economic and social opportunities
- Lack of lodging availability to further develop the Mid-Hudson region's tourism industry
- Lack of broadband and inconsistent cell phone service in the region's rural northern areas inhibit business formation
- Absence in the region of a state or private research university, which in other U.S. regions have been spurs to technology-related research and development

## Strengths

**Diversified Economy:** The diversity of the Mid-Hudson economy is a core strength of the region. Established industries include financial and professional service firms; a diverse manufacturing sector; wholesale distribution centers; food and beverage producers; health care; tourism; and agriculture. The region has an established and growing number of biotechnology and other life science companies, as well as operations of global pharmaceutical firms Pfizer and Novartis, and an emerging renewable energy cluster that has continued to attract semiconductor fabrication businesses at the Hudson Valley Research Park complex in Dutchess County and elsewhere. Home to IBM for many years, the region has also attracted a variety of other IT businesses. Other notable business-related assets include proximity to major airports in New York City, as well as Stewart International Airport in New Windsor, NY, which is owned by the Port Authority of New York and New Jersey, and Tech City, a former IBM complex in Kingston that is being redeveloped into the Mid-Hudson region's first eco-friendly commercial and light industrial complex.

**Location and Transportation Infrastructure:** Proximity to major markets, including to the vast adjacent New York City market, as well to other major centers of commerce in New England and the Mid-Atlantic due to its fine air, ground, and rail transportation networks.

- Roadways – Six Interstate Highways: I-84, I-87, I-95, I-287, I-684 and I-86 (currently Route 17) intersect the region, providing prime market access. Within a six-hour drive are: 68 million U.S. and Canadian customers, 21 percent of American manufacturers and a $227 billion retail sales market.
- Air Travel – Six international airports service passengers in the Hudson Valley, including two within the region (Stewart International Airport and Westchester County Airport).
- Extensive Passenger Rail Service – Five major rail lines and more than 75 stations serve the region.
- Freight Rail Service – is provided by CSX and Norfolk Southern.

**Skilled Workforce and Education:** The region boasts a highly talented and qualified workforce thanks to its excellent array of public and private colleges. The Mid-Hudson region has eight State University of New York campuses (two-year and four-year institutions) conveniently located throughout the region that have an enrollment of more than 55,000 students, a workforce of 7,135 employees and an annual payroll of $256 million.

There are also 18 independent colleges and universities that offer varied curricula to prepare students for the ever-changing needs of both the public and private sectors in the Mid-Hudson region. They are directly and indirectly responsible for an estimated 25,900 jobs and nearly $1.3 billion in annual payroll, have an enrollment (fall 2009) of 52,156 students and grant 13,842 degrees. It is estimated that these campuses contribute $4.2 billion to the New York State economy each year.

Because of the fine educational choices afforded workers and residents of the region, the Hudson Valley workforce offers businesses 1.2 million highly educated workers. A hefty 85 percent of Hudson Valley residents have graduated high school, and 37 percent of adults of at least 25 years of age in the Mid-Hudson Valley possess at least a Bachelor's Degree, a significantly higher percentage than the statewide average of 32 percent and the national average of 28 percent. A total of 17 percent of adults of at least 25 years of age in the region have earned a graduate degree, higher than the New York State average of 14 percent and significantly better than the national average of just 10 percent.

The region also has many highly ranked school districts, an important factor for highly skilled workers deciding where to raise children.

**Diverse Housing Stock:** The region offers a diverse housing stock of luxury, market rate and affordable housing, including, especially in Westchester County, housing within walking distance of public transit. Affordable units are comprised of mostly co-operative and condominium units in the southern section of the region to more attractively priced homes the further north from New York City one travels.

Although the recession has cut into home values, the cost of housing, including high property taxes, remains a significant impediment, especially to first-time homebuyers who in addition to pricing, must also deal with more stringent loan standards than in the past.

The latest median sale prices figures show the spectrum of housing values in the region. The median sale price for a single-family home in Westchester County currently stands at $622,750. In Putnam County, the median sale price is $320,000. The median single-family home price in Rockland County in August 2011 was $445,000, while the median price for a single-family home was $270,000 in Orange County. In Dutchess County, the second quarter median home price was $254,250, Ulster County's median second quarter price stood at $189,500, while in Sullivan, the median price stood at $104,000 at the end of the second quarter. Foreclosures are also a major problem in the region, affecting both values and sales.

**Quality of Life:** Residents of the Mid-Hudson Region enjoy a perhaps unusually high quality of life. All of the regional characteristics mentioned above contribute to this. Other contributors include the region's vibrant arts scene; abundant parks and open spaces; its farmlands and forests; its tourist attractions; its many lakes; the Catskills Mountain Park, which includes 700,000 acres of land over four states; and, of course, the majestic Hudson River ("America's first river") and the Long Island Sound, as well as other popular fishing and recreational rivers, such as the Delaware River, and estuaries popular with residents and tourists.

The Mid-Hudson Region offers 44 state parks and historic sites with a combined annual attendance of more than seven million people. In 2009, the Walkway Over the Hudson in Poughkeepsie opened as the world's longest, elevated pedestrian bridge at 212 feet tall and 1.28 miles long, connecting Poughkeepsie in Dutchess County and Highland in Ulster County.

In 2009, it was estimated that more than 2,000 jobs were created and approximately $200 million in local economic activity was generated by State Parks in the Mid-Hudson Region.

**Other popular tourist venues include:** the U.S. Military Academy at West Point; Woodbury Common Premium Outlets in Central Valley, which is preparing to undergo a $100 million renovation; Lyndhurst in Tarrytown; the FDR Presidential Library in Hyde Park; Storm King Art Center in Mountainville in Orange County; Bethel Woods Center for the Arts in Sullivan County; and many others.

This diverse mix of recreational, shopping, cultural and entertainment offerings fuels a burgeoning tourism industry in the Mid-Hudson Valley, with potential for further retail development in the region to grow this opportunity. In fact, the economic impact of visitor spending in 2009 in the Hudson Valley was calculated at approximately $3.32 billion.

## Weaknesses

The Inhibitors Work Group of the Council was tasked with identifying impediments to job creation and economic growth in the region. It found the region's business competitiveness to be hampered by the following:

**High Costs:** High operating costs due to relatively high costs for land and labor, especially in the more southerly counties, are a deterrent to businesses locating and remaining in the region. Energy costs are often higher than in neighboring and other competing regions and states. High business and property taxes are other negatives for businesses, as these raise costs directly (business taxes) and indirectly (property taxes), forcing companies to pay higher wages to attract workers to a region with a high cost of living. Indeed, according to Forbes Magazine, two of the country's highest taxed counties are in the Mid-Hudson Valley: Westchester County ranks tops in the nation with an average annual property tax bill of $8,404, while Rockland County is close behind with an average annual property tax bill of $7,798. The Metropolitan Transportation Authority (MTA) Payroll tax (1% of payrolls), which affects five Mid-Hudson counties (Westchester, Putnam, Dutchess, Orange, and Rockland), is another major concern; these Mid-Hudson counties assert that the tax is anti-business and that, unlike New York City and Long Island, these counties pay more into the MTA than they receive in mass transit services. Additionally, the MTA Payroll tax provides a significant advantage to competing regions in New Jersey, Pennsylvania, and Connecticut.

**Aging Infrastructure:** While the region has a well-developed infrastructure, much of it is old and in need of repair or, in some cases, replacement. The Mid-Hudson's infrastructure capital needs are significant at a time when there is less funding available from federal and state government sources. In 2008, for example, the Mid-Hudson's clean water and sewer infrastructure needs were estimated to be approximately $2.75 billion. Statewide, $75 million will be needed for such infrastructure, with Westchester, Rockland and Putnam's bill totaling about $1.4 billion alone.

Transportation infrastructure in the Mid-Hudson region is also aging. The Tappan Zee Bridge, critical to moving people and goods in the region and state, has been recommended for outright replacement and is now one of nation's and state's priority infrastructure projects. According to a recent news report, in 2010, 1,100 bridges were listed as "fracture-critical," though safe, in New York State. Similarly, in 2010, 14 percent of New York's bridges were rated as structurally deficient, the 15th highest percentage in the nation. The New York State Department of Transportation, New York State Bridge Authority, and the Metropolitan Transportation Authority continue maintaining these critical infrastructure components.

**Home rule and burdensome regulatory oversight:** As a consequence of New York State's home rule tradition and decades-long buildup of regulatory processes, businesses seeking to locate or expand in the region must obtain permissions from a multiplicity of local governments and state agencies and endure lengthy and complex approvals processes (e.g., zoning, permitting, SEQRA). Review of regulatory reforms will be a matter of the Statewide Committee chaired by Lieutenant Governor Robert Duffy.

**Dearth of shovel-ready sites for business expansions or relocations:** The Impediments Work Group of the Council found several factors that contribute to a dearth of shovel-ready sites in the region, including delays in the permitting process at local levels; home rule provisions that restrict zoning; membership disparities on local planning and zoning boards; inconsistency between municipal and environmental requirements and allowances; restrictive environmental protection requirements; and a reactive rather than a proactive approval processes.

**High housing costs and the need for more diverse income housing options, including multi-unit housing:**

The region is challenged to develop programs that can create more diverse income housing and more housing near public transit, including those available for development under planning options such as transit-oriented development. Impediments that have and will continue to impact income diverse housing development in the Hudson Valley are: limiting water and sewer regulations; a perception that the regulations contained in the SEQRA are too restrictive; New York City watershed issues and land use restrictions; lack of suitable infrastructure or aging infrastructure to support affordable housing; and inconsistencies in the approval process of the various federal, state, and municipal governing bodies.

**Youth flight to NYC and other areas perceived to offer greater economic and social opportunities:** While the Hudson Valley is an attractive home for many families, individuals, and senior citizens, there is a demonstrative loss of people with valuable skill sets to New York City and other areas, particularly young professionals, causing in part the loss of Congressional seats for such a diverse region. The cities of the Hudson Valley are in need of revitalization to create an appealing, vibrant environment to attract young professionals from New York City and surrounding areas. Additionally, housing options must remain diverse and must be considered specifically for the retention of young professionals in the region.

**Inadequate lodging facilities affect the region's tourism industry:** Although the region has many tourist attractions and draws many visitors, many are day trippers from New York City and its environs. Growth in the tourist industry is limited by the paucity of attractive lodging options (hotels, motels, B&Bs) in the region.

**Lack of broadband and cellphone service in rural areas of the region:** Portions of Sullivan, Ulster, and Dutchess Counties lack broadband and cell phone service, both of which are basic business infrastructure in today's economy. These services are also spotty in certain other parts of the region. This lack of service appears to be due to opposition to cell towers and wired networks from certain local communities as well as low population density, which makes it prohibitively expensive for providers to wire the areas.

**Absence in the region of a major public or private research university:** Although the region is near world-class universities and medical centers in New York City, and although the region has many quality colleges, including several campuses of the SUNY system, the region lacks a major public or private research university. The experience of other regions of the U.S. has shown that the presence of outstanding research universities is an important benefit for technology-related industries, through the flow of ideas, people, and technology from academe to the private sector. For this reason, the Council believes the absence of a major research university in the region is a weakness for future economic development.

## Current Population, Labor Force and Unemployment Trends

Population in the Mid-Hudson region is approximately 2.3 million. From 2000 to 2010, the Mid-Hudson's seven counties had the fastest rate of population growth (5.1 percent) of all 10 geographic regions in the state. All seven counties in the region grew faster in population than the state average of 2.1 percent. In fact, three of the top five fastest growing counties in New York State are in the Mid-Hudson: Orange (9.2 percent), Rockland (8.6 percent,) and Dutchess (6.2 percent).

The Mid-Hudson boasts 12 cities as well as quaint villages, towns, and hamlets located in the Catskill Mountains and on the shores of the Delaware River, the Hudson River and Long Island Sound. Some metropolitan centers have fared better than others in recent times. For example in the decade from 2000-2010, seven Mid-Hudson

cities experienced impressive population growth: Middletown (10.9 percent), Poughkeepsie (8.6 percent), White Plains (7.1 percent), New Rochelle (6.8 percent), Rye (5.1 percent), Peekskill (5.1 percent) and Beacon (5.0 percent). Cities such as White Plains and Yonkers for example, attracted billions of dollars in mixed-use development initiatives during that time and have extensive new projects in the pipeline when economic conditions improve. Despite their aging infrastructure and fiscal challenges, many of these cities are investing in revitalization projects to accommodate the growth. For example, Yonkers is undergoing a $3 billion waterfront revitalization project, complete with mixed-use structures to enrich their housing stock and hopefully attract young professionals.

Kingston and Newburgh reported growth of 1.8 percent and 2.1 percent, respectively, while Yonkers and Port Jervis remained relatively flat at 0 percent and -0.4 percent, respectively. The City of Mount Vernon posted a 1.6 percent decline in population during that 10-year period.

**Table 2 : Hudson Valley Region Population by Race/Ethnicity**

| | Population | | | 2000 Population Breakdown | | | | 2010 Population Breakdown | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2010 | % Change | % White* | % Black* | % Asian* | % Hispanic | % White* | % Black* | % Asian* | % Hispanic |
| Hudson Valley Region | 2,179,189 | 2,290,851 | 5.10% | 72.70% | 10.20% | 3.30% | 11.70% | 66.10% | 10.50% | 4.20% | 17.10% |
| Dutchess County | 280,150 | 297,488 | 6.20% | 80.30% | 8.90% | 2.50% | 6.40% | 74.60% | 9.20% | 3.50% | 10.50% |
| Orange County | 341,367 | 372,813 | 9.20% | 77.60% | 7.50% | 1.50% | 11.60% | 68.20% | 9.10% | 2.30% | 18.00% |
| Putnam County | 95,745 | 99,710 | 4.10% | 89.80% | 1.50% | 1.20% | 6.20% | 82.90% | 2.10% | 1.80% | 11.70% |
| Rockland County | 286,753 | 311,687 | 8.70% | 71.70% | 10.50% | 5.50% | 10.20% | 65.30% | 11.10% | 6.10% | 15.70% |
| Sullivan County | 73,966 | 77,547 | 4.80% | 80.10% | 8.00% | 1.10% | 9.20% | 74.50% | 8.20% | 1.30% | 13.60% |
| Ulster County | 177,749 | 182,453 | 2.70% | 85.50% | 5.10% | 1.20% | 6.20% | 81.70% | 5.50% | 1.70% | 8.70% |
| Westchester County | 923,459 | 949,113 | 2.80% | 64.10% | 13.60% | 4.40% | 15.60% | 57.40% | 13.30% | 5.40% | 21.80% |
| New York State | 18,976,457 | 19,378,102 | 2.10% | 62.00% | 14.80% | 5.50% | 15.10% | 58.30% | 14.40% | 7.30% | 17.60% |

Source: New York State Department of Labor

The Hudson Valley's labor market has shown improvement from the worst national economic downturn since the 1930s. According to the New York State Department of Labor, the Hudson Valley Region's private sector job count rose by 9,100, or 1.3 percent in September 2011 and is on track for its first annual employment increase since 2007. The region's rate of job growth lags the state (+1.4 percent) and nation (+1.7 percent).

Meanwhile, the region's unemployment rate declined to 7.0 percent in September 2011 from 7.4 percent last September and is well below the rates for New York State (7.8 percent) and the U.S. (8.8 percent). Nonetheless, jobless rates in the region remain well above where they stood during the second half of 2007 (4.0 percent) -- before the national recession hit New York State.

The lower counties of Westchester, Putnam, and Rockland are recovering at a faster rate than their counterparts to the north in the Mid-Hudson. The Putnam-Rockland-Westchester Labor Market Area (LMA) posted an unemployment rate of 6.5 percent in September 2011, a slight decrease from the 7.1 percent recorded over the same period last year. The Poughkeepsie-Newburgh-Middletown Metropolitan Statistical Area (MSA) registered a 7.5 percent unemployment rate in September 2011, down from 7.9 percent in September 2010. Kingston MSA (Ulster County) was at 7.8 percent in September 2011, unchanged from the same period last year. Sullivan County's unemployment rate was 8.3 percent in September 2011, a slight improvement from the 8.5 percent rate posted in September 2010.

In the 12-month period ending in September 2011, Putnam-Rockland-Westchester enjoyed a spike of 8,000 private sector jobs (1.7 percent), while the Poughkeepsie-Newburgh-Middletown MSA recorded modest gains of just 900 private sector jobs. Both areas experienced a decline in government jobs (Putnam-Rockland-Westchester (-1,000) and Poughkeepsie-Newburgh-Middletown (-400) respectively.)

Despite recent economic improvement, the Workforce Work Group of the Council found that the most significant trends in the region are a reduction in the number of persons overall participating in the workforce from peak periods in July 2008 to January 2011, the growing numbers of long-term unemployed, and the growing body of workers who are structurally unemployed. Since unemployment in the region reached a peak in the third quarter of 2008, labor force participation and employment have fallen approximately 7 percent and 9 percent, respectively. The Work Group concluded that the slight improvement in the unemployment rate in 2011 is due more to a decrease in the number of persons in the labor force, than by a large number of persons returning to work.

The region's workforce is also highly mobile and dependent for employment on other counties in the Mid-Hudson and the region surrounding it, with more than 50 percent of workers in the Mid-Hudson leaving their county of residence to go to work each day. It is also highly dependent on employment opportunities available in small businesses, with a significant percentage of the region's workforce employed in companies with 20 or fewer employees. These facts point to the importance of preparing workers for regional employment opportunities and the need for supporting small business growth and expansion.

Although the region has many highly educated workers, overall the workforce is diversified with respect to education, skills, and job readiness. Of increasing concern are the growing number of workers who lack the soft- and job-specific skills needed for existing regional employment opportunities. Among the unemployed, the longer they remain so, the wider the gap between their skills and those needed for employment. The region is also home to two of the most ethnically diverse counties in the state, Westchester and Rockland, which are the fifth and seventh most diverse, respectively, second only to New York City. Both counties have a rapidly growing population of foreign born residents, including those who are highly skilled, who may have difficulty adjusting to the local labor market. The current education and training system is not well positioned to address these conditions.

**Table 3: Hudson Valley Region Labor Force Data September 2011**

| | Employed (000) | | | Unemployed (000) | | | Unemployment Rate (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | September 2011 | August 2011 | September 2010 | September 2011 | August 2011 | September 2010 | September 2011 | August 2011 | September 2010 |
| **Hudson Valley Region** | **1,041.2** | **1,061.8** | **1,041.2** | **77.8** | **77.7** | **83.7** | **7.0%** | **6.8%** | **7.4%** |
| Dutchess County | 131.0 | 132.5 | 131.4 | 10.2 | 10.1 | 11.0 | 7.2% | 7.1% | 7.7% |
| Orange County | 162.9 | 164.8 | 163.5 | 13.5 | 13.4 | 14.3 | 7.7% | 7.5% | 8.1% |
| Putnam County | 50.4 | 51.5 | 50.2 | 3.5 | 3.5 | 3.7 | 6.5% | 6.3% | 6.8% |
| Rockland County | 140.5 | 143.6 | 140.0 | 9.8 | 9.7 | 10.7 | 6.5% | 6.3% | 7.1% |
| Sullivan County | 31.7 | 34.1 | 31.9 | 2.9 | 2.8 | 3.0 | 8.3% | 8.5% | 7.5% |
| Ulster County | 80.3 | 81.4 | 81.1 | 6.8 | 6.9 | 6.8 | 7.8% | 7.7% | 7.8% |
| Westchester County | 444.5 | 454.3 | 442.8 | 31.2 | 31.5 | 34.2 | 6.6% | 6.5% | 7.2% |
| New York State | 8,786.1 | 8,885.8 | 8,785.0 | 742.7 | 743.3 | 783.7 | 7.8% | 7.7% | 8.2% |
| United States | 140,502 | 140,335 | 139,715 | 13,520 | 14,008 | 14,140 | 8.8% | 9.1% | 9.2% |

From the start of the U.S. recession in December 2007 through December 2009, the region lost 51,300 private sector jobs (-6.6 percent). Over the same period, the state lost 4.6 percent of its private sector employment. Construction lost the most jobs (-15,000) in the region during this time. Several large projects in the region are on hold due to the economic downturn and its impact on the investment markets, including the $400 million Belleayre Resort project at Catskill Park.

Manufacturing also lost a large number of jobs (-8,500) during the downturn. Drug maker Pfizer has cut costs sharply, including laying off hundreds of employees at its R&D and manufacturing site in Pearl River in Rockland County. Pfizer has announced the intention to sell its Pearl River site, while leasing back space to maintain some operations there, and efforts are under way to evaluate how the excess Pfizer space could be repurposed for other uses. Some biotech companies in the area have been expanding, while other biotech firms have moved into the area. Regeneron Pharmaceuticals in Tarrytown (Westchester County) increased its payroll by more than 300 employees in 2010 and more than 300 in 2011 to date. Biotech company ContraFect relocated to Yonkers from Manhattan in a move that, according to the company, will create 40 full-time jobs in year one and about 200 jobs with an average salary of about $90,000 within two years.

The local solar energy industry has experienced some successes and some difficulties of late. For example, SpectraWatt announced earlier this year that it would shed 117 jobs, and it is expected to close its facility in Dutchess County in late November, 2011 about eight months after it opened. Precision Flow in Kingston in Ulster County laid off about 40 workers, roughly 11 percent of its workforce. However, just recently this industry received much needed good news. Linuo Power Group, a China-based manufacturer of solar cells, modules and photovoltaic power generation systems has announced plans to purchase the former IBM (West Campus) building on Route 52 in East Fishkill in Dutchess County and create about 1,000 jobs.

Educational and health care services – the area's largest private sector – gained 4,100 jobs since last September. Demand for health care workers remains high as the population ages. Company relocations and expansions such as the Elizabeth Seton Pediatric Center in Yonkers will create more jobs for health care workers in the area. Additionally, Memorial Sloan-Kettering, the renowned cancer center in Manhattan, is seeking approval from the Department of Health to build a $112 million outpatient treatment center in Harrison (Westchester County). Pending approval, construction would begin in the spring of 2012, with an opening in early 2015. Initially, the center would employ 140 people, including physicians. Additionally, during 2011, Orange Regional Medical Center completed its more than $300-million new hospital on East Main Street in Middletown.

Professional and business services has added 900 jobs over the last 12 months. Two trends have contributed to growth in that sector. First, large companies are moving into the region. PepsiCo, for example, plans to expand the workforce at its headquarters in Purchase in Westchester County by 800 over the next 10 years. And yogurt company Dannon (the U.S. unit of French food giant Danone S.A.) relocated its R&D staff to Greenburgh in Westchester County from Texas. Second, temporary help agencies are hiring. This usually happens before companies start to add permanent workers.

## Major Industries of the Region

The Council, through its work groups and the public participation process, identified and defined 10 relevant industries. These industries are those that in the view of the Council collectively drive the regional economy, even though they are not the sum total of economic activity in the region. (For example, industries such as

construction and retail sales were excluded because they rise and fall based on the health of the industries that are included in the analysis.) These are sectors of the region's economy where a significant number of jobs currently exist and where to a lesser or greater degree more jobs can be created. They are, in alphabetical order:

**Agriculture**

**Biotech and Other Life Sciences**

**Distribution**

**Financial and Professional Services**

**Food and Beverage**

**Health Care**

**High-Tech Manufacturing**

**Information Technology**

**Natural Resources**

**Tourism, Arts, and Culture**

The number of jobs in each of these industry sectors and the change in employment for the period 2000 to 2010 are shown in tables 4 and 5 at the end of this section. These data were generated by the New York State Department of Labor at the request of the Council and are based on industry definitions provided by the Council. For a list of the U.S. government North American Industry Classification System (NAICS) codes that the Council used to define each industry sector, see Appendix D.

### Agriculture

The region's agricultural sector is both an important component of the economy of the more rural counties in the region and a contributor to the entire region's quality of life: According Glynwood in Putnam County, the percentage of land in each county that is farmed is: Dutchess – 20 percent; Orange – 16 percent; Ulster – 11 percent; Putnam – 4 percent; Westchester – 3 percent; Rockland – negligible. Figures for rural Sullivan County were not available at the time this report went to press. Manufacturing and distribution activities are spread throughout the region. According to the New York State Department of Labor, average annual employment in this seasonal industry was approximately 5,000 in 2010, little changed from 2000. These figures capture farming, livestock, and other cultivation activities and wholesalers; they exclude food processing.

In a comprehensive 2010 report, "The State of Agriculture in the Hudson Valley," Glynwood measured agricultural activity in 13 counties, the seven that comprise the Mid-Hudson Region as well as six counties to the north through Saratoga and Washington. In the broader Hudson Valley region:

- 5,326 farms operate 1,325 square miles of farmland
- Nearly $4 billion is invested by these farm businesses
- The farm sector has a gross economic impact of $810 million
- Nearly all of the region's farms are owned by families and individuals
- There are more farmers, especially more women and younger farmers, and more small farms than in 2002
- Average direct sales per farm are 52 percent higher than the statewide average; the total value of direct sales has increased 36 percent since 2002
- Farm-related income has increased 62 percent since 2002 with the greatest increase in revenues from agri-tourism

Farming adds to the region's quality of life through preservation of an agricultural landscape that is a hallmark of the Mid-Hudson Valley. It provides fresh local foods to the restaurants, farmers markets, and fruit and vegetable stands of the region and to restaurants and greenmarkets in New York City.

According to Glynwood, the 13 county agricultural sector is large and vibrant with nearly 8,000 businesses and employs more than 67,000 employees, generating just over $115 billion in revenue. The industry has shown its recent importance by providing a solid platform for economic growth and job creation over the last five years by posting an 18 percent growth in firm numbers and two percent growth in employment – all during a period in which the balance of the economy contracted. The sector is driven by small, entrepreneurial firms, and with the "locavore" and organic trends in the food industry and the emergence in the region of new, entrepreneurial firms such as Farm to Table Co-packers in Kingston, there is opportunity to support continued growth in the sector.

Given the diversity of the sector, the average educational level of employees varies greatly from the low skill requirements of warehousing to the high skill and education requirements of research and development. With that caveat, the majority of the jobs in the agricultural sector are low- to moderate-skilled jobs that require a secondary school or associate's degree level of education. These elements of the sector offer job opportunities that are often well matched to the skills and educational attainment levels of some of the region's cities, such as Middletown, Kingston, Ellenville, Poughkeepsie, and Monticello as well as many rural communities. The abundance of highly-educated and highly-skilled workers to support executive, marketing, product development, and research and development functions has been attractive to PepsiCo, which has its global headquarters in Purchase (Westchester County), as well as to several other nationally- and internationally-known food and liquor companies that maintain headquarters or U.S. offices in Westchester County.

### Biotech and Other Life Sciences

Biotechnology and the broader category of life sciences is the fastest growing industry sector in the Mid-Hudson Region, growing 86 percent in employment in the period 2000-2010. Average annual wages of $107,280 in 2010 were the second highest in the region. Some 200 life science companies employing approximately 10,000 people are located within the region, the highest employment concentration within New York State. Most Mid-Hudson life science companies are focused on the discovery and development of human pharmaceuticals (e.g., Regeneron Pharmaceuticals, Acorda Therapeutics, and ContraFect, all in Westchester County), but the full gamut of the life sciences are represented here, including pharmaceutical manufacturing (Pfizer and Novartis, both in Rockland County) and bioinformatics and automated diagnostic systems (IBM Watson Research Center in Westchester).

The life sciences are an attractive industry due to generally high salaries in the sector and the variety of jobs they create beyond research positions, including clerical, facilities, accounting, regulatory, customer relations, and other financial administration positions.

While today the life sciences sector in the Mid-Hudson Region is centered in western Westchester County, there is opportunity to leverage Pfizer and Novartis facilities in Rockland County and to develop bio-pharmaceutical manufacturing jobs in the more northerly counties within the region that have more available land and lower labor costs than Westchester or Rockland Counties. A prime example of this opportunity, though outside the Mid-Hudson Region, is the production facilities and approximately 400 jobs Regeneron has created in Rensselaer, New York.

The Mid-Hudson Region offers many assets to support the continued growth of the life sciences sector:

These include (1) proximity to more than 200 academic research organizations, medical centers, and laboratories that are located within the broader New York metropolitan area; (2) an excellent transportation system (highways, commuter rail, and airports in Westchester and Orange County), which makes it possible for companies to recruit skilled workers who live in New York City, New Jersey, and Connecticut; (3) high-quality public schools for the education-minded employees of these firms; (4) local cultural and educational assets (more than 30 colleges and universities), as well as the world-class arts, entertainment, shopping, and sports available in New York City; and (5) other "quality of life" attributes such as the Hudson River itself, the region's many parks, open spaces, and rich history and good housing stock.

However, competition among U.S. states to attract and retain life sciences companies is intense. The Mid-Hudson Valley is just starting to be recognized as a biotech cluster. California, Massachusetts, Maryland, New Jersey and Pennsylvania are among the states that have offered more financial and tax incentives to new businesses than New York. Recognizing the need for more promotion and a better public policy environment for the life sciences, the NY BIOHUD VALLEY was founded in October 2010 as a public-private partnership dedicated to recognizing and promoting the growing biotech cluster in the region.

### Distribution

The Mid-Hudson Region is home to more than 800 firms that operate 4,100 distribution facilities. Employment in the sector in 2010 was approximately 9,600, little changed from 2000. Average annual wages were $56,981 in 2010.

Seasonal fluctuations exist; employment numbers tend to increase throughout the year. Most distribution facilities operate two and three shifts, jobs that are often convenient for parents with young children who, by working different shifts can earn two incomes and avoid costly child care.

Distribution companies have selected the Mid-Hudson Region because of its proximity to six major international airports (within a 100-mile radius) and a major rail system consisting of 152 miles of tracks and six major highways (I-87/I-84/I-86/I-95/I-287/I-684). In addition to the roadways, rail and air transport capabilities the Mid-Hudson Region is home to a deep sea water port with access to the Hudson River, as well as being home to both UPS and FedEx hubs.

Distribution facilities naturally seek to occupy or build space in proximity to major highways, which accounts for the cluster of facilities along Route 84 and I-87. The majority of distribution facilities in the Mid-Hudson Region are located in Orange County. A major reason for this occurrence is the availability of land and shovel-ready sites. Orange County alone has approximately three million square feet of shovel-ready space available for sale. Distribution facilities located in Orange County have the ability to reach approximately 52 million people within a one-day ground footprint, allowing fast access to market.

A high school diploma or GED equivalent is required for employment in this industry. Local Boards of Cooperative Education Services (BOCES) have developed training programs for high school students and adults to prepare them for employment. Eighty-five percent of Hudson Valley residents have graduated from high school, with more than 35 percent over the age of 25 possessing a bachelor's degree.

### Financial and Professional Services

The financial and professional services industry is the second largest by employment of the 10 industries identified by the Council. Jobs in this sector declined a modest 3 percent from 2000 to 2010 to approximately 83,000. Average annual wages in 2010 were $97,460, the third highest among the 10 industries. The New York State Department of Labor Report identifies two sub sectors: Front office & Producer Services, which concentrates its employment in Business Services and Headquarters, and Financial Services, which includes Bank Holding Companies, Banking & Credit, Funds & Trusts, Insurance, and Securities, Commodities & Investments. Both sub-sectors have benefitted from the region's proximity to New York City and relocations of Manhattan-based firms to the southern counties of the region, especially to Westchester County.

### Food and Beverage

The Mid-Hudson region has a diverse and dynamic food and beverage sector. Employment in 2010 was more than 53,000, a 23 percent increase over 2000 and the fourth highest among the 10 industries the Council measured. These numbers include employees of retail establishments including restaurants, which drives down average annual wages to $21,745, the lowest of the 10 industries. Other parts of the industry pay substantially higher wages. The region is home to many food and beverage corporate headquarters including PepsiCo, Heineken USA, Dannon (U.S.), Kraft, Pernod Ricard (U.S.), and most recently Sabra Hummus. The region also is home to the leading culinary school in the nation, the Culinary Institute of America in Hyde Park (Dutchess County), next to which Hyatt is building a hotel to accommodate visitors, including to the Institute's several student-run restaurants. This sector represents opportunity for growth at many levels. PepsiCo, for example, plans to expand the workforce at its headquarters in Purchase in Westchester County by 800 over the next 10 years. As stated above, the U.S. unit of Dannon, the French food giant, will relocate its R&D staff to Greenburgh (Westchester County) from Texas.

### Health Care

The health care industry is the largest in the region by employment, with more than 130,000 jobs in 2010, a 14 percent increase over 2000. This category includes hospitals, out-patient clinics, private medical practices, rehabilitation facilities, nursing homes, and other providers of goods and services in order to treat patients. The region is home to 35 hospitals, with the largest concentration of them (16) located in Westchester County. Average annual wages are $51,477, fifth highest of the 10 industries the Council measured. (Note: Health care is the only industry among the 10 evaluated by the Council for which public-sector workers were included. Public-sector employment was included because of the important role of the public sector in the health care system.)

### High-Tech Manufacturing

High-tech manufacturing is a broad category that includes electronics, semi-conductors, solar and green energy products, chemical and pharmaceutical processing, medical devices, lighting, other higher value-added products, and the immediate supply chain associated with such products. According to the New York State Department of Labor, using the industry definition supplied by the Council there were 572 firms engaged in high-tech manufacturing in the Mid-Hudson region in 2010, and these employed approximately 13,500 workers. Employment in this category decreased 39 percent from 2000, and the number of firms declined 16 percent, reflecting the toll of offshore competition and the global recession. Average annual wages were $63,075 in 2010,

the fourth highest among the 10 industries. It should be noted that it would be possible to define this category more or less expansively, and different definitions would result in different employment and wage statistics. For example, the Council's definition of the industry excludes computer hardware manufacturers, as these are counted in the Information Technology industry. Regardless, manufacturing is an important category in the Mid-Hudson region employment mix, as wages are high relative to those in other sectors, particularly for factory-floor workers, and manufacturing has the largest economic multiplier of all economic sectors, that is, it creates many indirect jobs in other sectors.

An array of environmental technologies, material sciences, computer-related and just-in-time production infrastructures, as well as the growing world of nanotechnology, are among those advances that have expanded product and process innovation and have kept U.S. manufacturing globally competitive. The Mid-Hudson region is home to many firms that have led these advances. Examples of locally manufactured products include automated equipment to produce LED technology mostly shipped to China, robotic bearings used in Asian and European semiconductor chip manufacturing facilities, and mainframe computers used by customers all over the globe. Other products range from high efficiency gas boilers, food encapsulation products, medical devices, solar panels, solar cells, lighting, and advanced solid waste to energy processing facilities.

The Mid-Hudson region has also recently been recognized as one of the few solar manufacturing and technology development regions in the U.S. The establishment of The Solar Energy Consortium (TSEC) and its collaborative work with both upstate and downstate regions of New York to create and grow a solar manufacturing industry makes this region unique. The strong presence of the Council of Industry and its collaboration with businesses and TSEC has been very positive. A recent win by the Mid-Hudson region was the recruitment of Linuo Power Group, a Chinese manufacturer of solar cells, modules and photovoltaic power generation systems, which in October, 2011 announced plans to purchase the former IBM (West Campus) building on Route 52 in East Fishkill in Dutchess County and create about 1,000 jobs.

### Information Technology

Information technology (IT) is a diverse category that includes internet services; data management and storage; custom computer programming; software and hardware applications; hosting services; facilities management; and other computer related services. As stated above, for the purposes of this Strategic Plan, the IT category also includes computer hardware manufacturing. IT impacts a variety of enterprises across many different industry classifications including, but not limited to: healthcare, retail, manufacturing, tourism, telecommunications, and advertising. In fact, most small and medium-sized businesses require IT to grow and compete regardless of their industry classification but these services are often difficult or expensive to access.

In 2010, there were 1,498 information technology businesses and more than 19,000 jobs in related occupations within the region. Sector employment declined 15 percent from 2000 to 2010. The highest concentration of IT professionals is in Westchester and Dutchess Counties, and the highest concentration of data centers are in Rockland County. IT is the sixth largest industry sector in the region by employment, however, average annual wages are the highest of any sector, nearly $129,745 in 2010. There is a high concentration of enterprise computing (large systems) skills in this region, contrasted with a national shortfall in the same area. The SUNY network offers engineering, computer science, and IT education throughout the Mid-Hudson region.

The Mid-Hudson's information technology cluster is anchored by the presence of IBM, the world's leading

computer company in hardware, software, research, and services. There are five major IBM sites within the region: Poughkeepsie, Fishkill, Somers, Armonk, and Yorktown Heights (Watson Research). Earlier this year, the Watson Research Center showcased their break-out achievement in analytics software in the Watson/Jeopardy Challenge. This established the Mid-Hudson region as the world center for analytics research and positions the region to attract and grow jobs in the IT industry here. IBM is also a leader in providing hardware, software, and services to support cloud computing. Their new zEnterprise system is a major hardware platform supporting cloud computing. The participation of IBM in the Global 450mm Consortium in the Hudson Valley and other regions of New York State announced in September by Governor Andrew M. Cuomo is an additional sign of the IBM commitment to the region and the state.

Marist College (Dutchess County) has been a leader in the area of cloud computing and predictive analytics, with faculty research in this area being recognized at conferences, in major research publications, and through the receipt of major research grants. The Institute for Data Center Professionals (IDCP), funded by the National Science Foundation in 2004 and housed at Marist, offers online training and certificates to IT professionals across the globe. The IDCP offerings include training in the area of analytics, using an innovative analytics cloud that allows students to access cutting-edge analytics tools such as SPSS and Cognos via the cloud. The college has also been a leader in the area of virtualization and cloud computing, currently providing a number of offerings through the cloud in areas such as course management systems, ERP systems, and collaboration tools. These projects are funded by several competitive grants from the National Science Foundation (NSF), the Bill and Melinda Gates foundation, IBM, Cisco, Juniper, Brocade, and others.

### Natural Resources

The Council has defined the Natural Resources industry less in the traditional sense of a collection of related economic activities, businesses, and jobs and more as a collection of natural assets – our lands and waterways – that directly support some industries, such as tourism and agriculture, and in addition contribute fundamentally to the region's high quality of life. Key natural resources include the region's farms, forests, mountains (Catskills), parklands, including, but not limited to, the Mohonk Preserve, Minnewaska State Park Preserve, Hudson Highlands State Park, and Sam's Point Preserve, and major bodies of water (the Hudson River, Delaware River, and Long Island Sound) and the broader watershed. The need to preserve and protect these natural assets is a widely shared value of the residents of the Mid-Hudson Region.

### Tourism, Arts, and Culture

One in twelve Americans lives within a short drive of the Hudson River, and the abundance of attractive sites brings many tourists to the region. Tourism employed nearly 28,000 in 2010, 4 percent more people than in 2000. Annual wages are low, averaging just $32,462 in 2010, likely due to many part-time and seasonal workers. According to Council members who studied the regional tourist industry for this Plan, in 2009, visitors spent nearly $3 billion in the Hudson River Valley/Sullivan County/Catskill region, and generated some $400 million in state and local taxes. Using a broader industry definition, Council members estimate the regional tourist industry creates nearly 55,000 direct jobs.

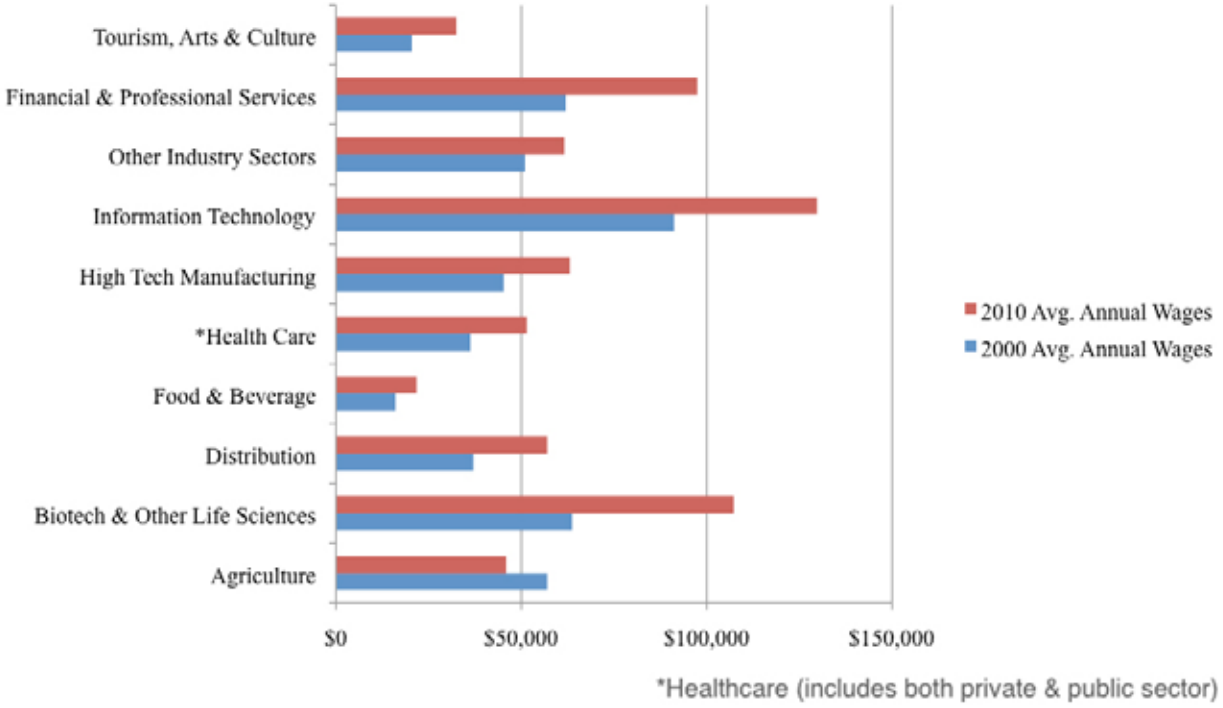
Additionally, the region is home to a number of world-class arts venues, including Dia Beacon (Dutchess County), White Plains Performing Arts Center (Westchester County), Bethel Woods Center for the Arts (Sullivan County), Storm King Art Center (Orange County), and the Fisher Center for the Performing Arts (Dutchess County).

## Table 4 : Mid-Hudson Employment Trends 2000-2010

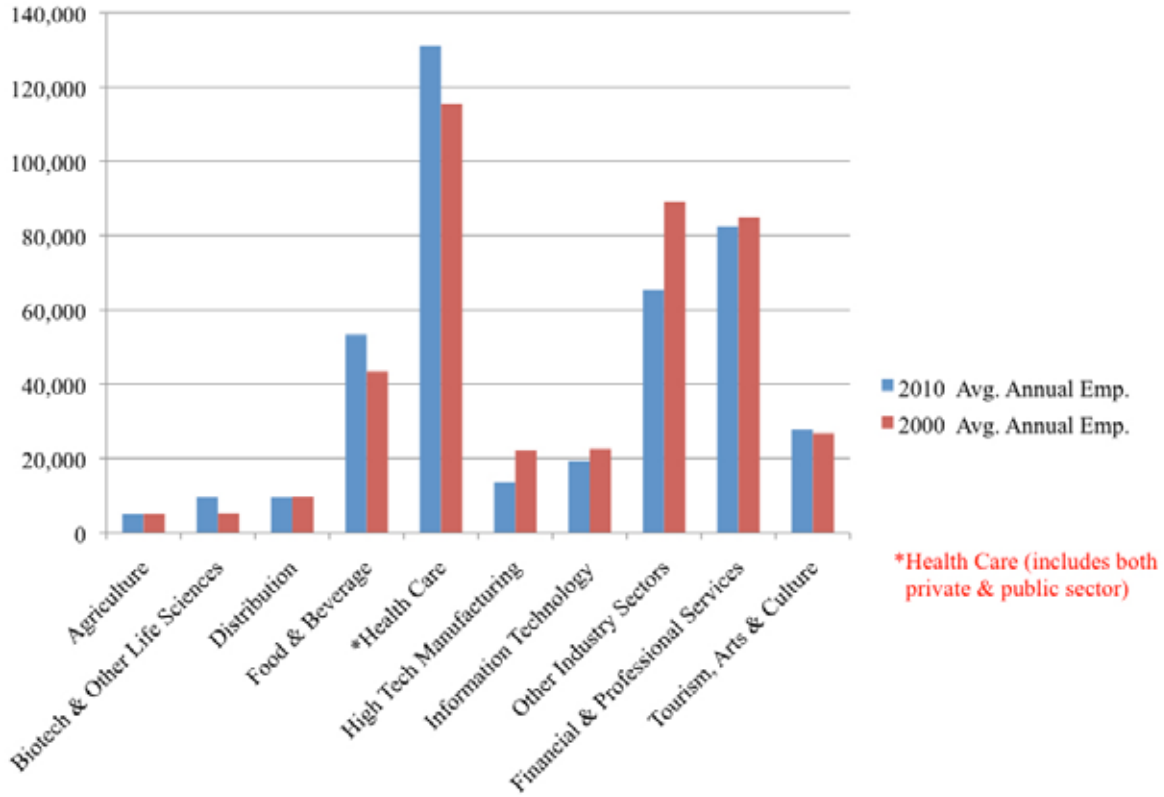
| Clusters | 2010 # of Entities | 2000 # of Entities | 2000 - 2010 Change in # | 2010 Avg. Annual Emp. | 2000 Avg. Annual Emp. | 2000 - 2010 Change | 2000 - 2010 Percent Change | 2010 Avg. Annual Wages | 2000 Avg. Annual Wages | 2000 - 2010 Change |
|---|---|---|---|---|---|---|---|---|---|---|
| Agriculture | 504 | 482 | 22 | 4,991 | 5,026 | -34 | -0.7% | $45,903 | $56,987 | $(11,083) |
| Biotech & Other Life Sciences | 197 | 78 | 119 | 9,607 | 5,170 | 4,437 | 85.8% | $107,280 | $63,682 | $43,599 |
| Distribution | 829 | 785 | 44 | 9,584 | 9,747 | -163 | -1.7% | $56,981 | $37,059 | $19,922 |
| Food & Beverage | 4,935 | 4,224 | 711 | 53,287 | 43,358 | 9,929 | 22.9% | $21,745 | $16,056 | $5,689 |
| *Health Care | 5,963 | 5,227 | 736 | 131,126 | 115,441 | 15,685 | 13.6% | $51,477 | $36,258 | $15,219 |
| High Tech Manufacturing | 572 | 682 | -110 | 13,564 | 22,189 | -8,625 | -38.9% | $63,075 | $45,252 | $17,823 |
| Information Technology | 1,498 | 1,628 | -130 | 19,284 | 22,593 | -3,310 | -14.6% | $129,745 | $91,217 | $38,528 |
| Other Industry Sectors | 6,471 | 7,244 | -773 | 65,391 | 89,124 | -23,733 | -26.6% | $61,597 | $50,985 | $10,611 |
| Financial & Professional Services | 11,594 | 10,527 | 1,067 | 82,526 | 84,932 | -2,406 | -2.8% | $97,460 | $61,977 | $35,483 |
| Tourism, Arts & Culture | 2,022 | 1,840 | 182 | 27,809 | 26,760 | 1,049 | 3.9% | $32,462 | $20,478 | $11,984 |

* Grey shaded area represents the aggregate public and private sector employment in the health care industry.

## Table 5 : Mid-Hudson Average Annual Wages 2000-2010




## Table 6 : Mid-Hudson Employment Trends 2000-2010



# Economic Development Vision

## VISION STATEMENT

**From our historic urban centers and scenic waterfronts to rich rural farmland, we will preserve an unparalleled quality of life for all Mid-Hudson Valley residents by creating a competitive, pro-business climate that cultivates a highly skilled, diverse workforce; encourages investment; nurtures entrepreneurism; promotes academic excellence and scientific discovery; fosters cluster development; fortifies infrastructure; advocates environmental stewardship; expands existing companies of all sizes, while attracting others from out-of-state – resulting in unprecedented employment and economic opportunities that reach beyond our region to benefit all New Yorkers.**

## LOOKING AHEAD

In the second part of its SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, the Council identified many opportunities to move the region closer to attaining its aspirational vision, as well as several threats.

### Opportunities

- The region's technology-based industries: biotechnology and other biomedical; high-tech manufacturing; and information technology
- Growth potential of more mature industries including distribution, food and beverage, health care, and professional services
- Leverage the region's impressive natural resources and high quality-of-life and develop tourism (agricultural, historic, cultural, food, and eco tourism)
- Replace Tappan Zee Bridge
- Improvements to existing infrastructure, including Stewart Airport in Orange County, and facilities spaces available for future development, (including the Pfizer campus in Pearl River and , IBM facilities in Fishkill and Kingston, etc.)
- Revitalize urban centers and invest in waterfront development
- Enhance the talent pipeline by expanding workforce training
- Reform tax and regulatory policies that inhibit business formation and expansion
- Encourage green development projects as part of developing a green Hudson Valley economy
- Embrace inter-regional partnerships that leverage cross-region resources, including the research universities in other regions of the state
- Retain more young people in the region

### Threats

- More aggressive and organized economic development programs of other U.S. states, particularly neighboring states
- Aggressive economic development recruitment by foreign nations
- Large numbers of unskilled and semi-skilled workers unqualified for available jobs that have higher skill requirements
- The deterioration of the Tappan Zee Bridge

## Opportunities

Detail on certain of these opportunities is provided below. The Council believes the remaining opportunities are self-explanatory, as are the Threats. Goals and Supporting Strategies corresponding to each opportunity are covered later in the Plan.

### Developing Technology-based Industries

The success of many technology-based clusters in various parts of the U.S. including Silicon Valley, San Diego, the Route 128 area around Boston, the Research Triangle in North Carolina, and many others is a model for further economic development of established technology-based industries in the Mid-Hudson Valley. The concept of industry clusters was first popularized by Michael Porter, a widely-published strategy consultant and professor at Harvard Business School. A cluster is defined as a group of closely-related and complementary companies and industries that operate within a particular region. Porter and others have shown a number of benefits to industry clusters: "Industries participating in a strong cluster register higher employment growth as well as higher growth of wages, number of establishments, and patenting. Industry and cluster level growth also increases with the strength of related clusters in the region and with the strength of similar clusters in adjacent regions. Importantly, we find evidence that new regional industries emerge where there is a strong cluster environment. Our analysis also suggests that the presence of strong clusters in a region enhances growth opportunities in other industries and clusters. Overall, these findings highlight the important role of cluster-based agglomeration in regional economic performance."

There are several New York examples of successful cluster-based economic development, even though New York State has lagged certain other U.S. states in development of broad, technology-based industry clusters. The creation of the College of Nanoscale and Science Engineering at SUNY Albany in 2004 spurred the formation of a local electronics cluster in the Capital Region and, most recently, the September 2011 announcement that IBM, Intel, Samsung, Global Foundries and the Taiwan Semiconductor Manufacturing Company will invest $4 billion in local computer-chip research, creating 2,500 high-technology jobs and 1,900 construction jobs and preserving 2,500 existing jobs. On a smaller but significant scale, The Solar Energy Consortium in Ulster County has stimulated a local solar manufacturing industry there and, also very recently, a commitment by a Chinese company to invest $100 million and hire 1,000 employees to make solar panels at a former IBM plant in Dutchess County. Regeneron Pharmaceuticals of Tarrytown (Westchester County) began in 1988 as an idea of a young professor at the Cornell School of Medicine in Manhattan. Over the years, Regeneron, which now employs approximately 1,700, has recruited heavily from the various world-class medical schools and research institutions in Manhattan.

#### Biotechnology and Other Life Sciences

The rapid pace of scientific discovery from bio-medical research, along with the aging of the populations in developed countries and the consequent need for efficient and effective medical care, are expected to fuel significant growth in

the life sciences industries for the foreseeable future. Biotechnology is a young industry that began in the 1970s with the discovery and later the patenting of basic molecular biology techniques such as genetic engineering. The largest biotech hubs in the U.S., such as those around San Francisco, San Diego, Cambridge, MA, and Rockville, MD, are known for having created a set of conditions that are generally acknowledged to be requirements for developing a thriving biotechnology sector in a region:

- Access to modern and affordable R&D facilities

Although there is substantial commercial lab space in the Mid-Hudson Region, it lacks a life sciences "incubator" that offers biotech start-ups low-cost, well-equipped lab space as well as business support and broader research infrastructure. Commercial real estate developments that cater to life science companies do not typically offer the very small but well-equipped lab spaces that start-ups seek. There are biotech incubators in Manhattan and New Jersey, but none in the Mid-Hudson region. If they are successful, biotech companies typically graduate from incubator to commercial space in the areas where they start operations because the founding employees prefer not to relocate. The existence of a modern incubator is an important need for the region if it is to attract biotech start-ups that have other location options in the New York metro area as well as elsewhere on the East Coast and, of course, the West Coast.

- Access to capital

Bio-pharmaceutical companies are extremely capital-intensive. Access to investment capital is a perennial challenge for young biotech companies, as they must fund R&D for years before they have product revenues. New York State financial incentives to start-up or relocating bioscience companies are often not competitive with those of other states. And few venture capital firms that specialize in the life sciences have a history of investing in companies located in the Mid-Hudson Region. Improving access to public and private funding is important to attract and grow more biotechnology companies in this region.

- Access to a skilled workforce

The region enjoys a highly-skilled workforce for many job requirements, but the life sciences industry requires many specialized skills. Publicly-supported training for skills development and enhancement can deepen the labor pool and defray in-house training costs for small, cash-limited firms.

- Access to world-class research universities

The region is close to some of the finest medical research centers in the U.S. but it lacks one of its own. Proximity to New York City is an advantage, but connections with New York City institutions should be further developed for recruiting talent and licensing intellectual property. To date, most technology out-licensed from New York's elite research universities has gone to companies located outside of New York State. This is a wasted opportunity that has cost the state a significant number of jobs.

In sum, the Mid-Hudson Region must improve its "access" to each of these types of assets – start-up lab space; capital; talent, and ideas -- if the life sciences are to become a significantly larger part of the regional economy.

**High-Tech Manufacturing**

The Hudson Valley includes many manufacturing firms, and there are significant opportunities – as well as many reasons -- to leverage the current diverse manufacturing base to create more good-paying jobs. The manufacturing sector in the U.S. has the highest economic multiplier of all industries, according to the Bureau of Economic Analysis. The Bureau has calculated that every dollar in final sales of manufactured products supports $1.40 in output from other sectors of the economy. Manufacturing employees in the U.S. earned an average of $32 per hour in wages and benefits in March 2009, according the U.S. Bureau of Labor Statistics, more than workers in other industries. One reason was the high productivity of U.S. manufacturers. Between 1987 and 2008, manufacturing productivity grew by 103 percent, almost double the 56 percent increase in productivity in the rest of the business sector.

Although some of the Hudson Valley's anchor manufacturing companies, such as IBM, Texaco, Central Hudson, and Philips Semiconductor, experienced a wrenching downsizing in the 1990s, a substantial number of their manufacturing suppliers have continued in business here by developing new products and services and by selling to customers globally. This demonstrated ability of the manufacturing sector to continually invent its products and services and to be competitive in a global marketplace, despite being at a cost disadvantage compared to lower wage countries, is a sign of strength and resiliency for the region. Today the Mid-Hudsonis a diversified international exporter and a leading manufacturing center in New York State for solar and renewable energy products.

The High-Tech Manufacturing team of the Council found numerous issues that impede growth in the sector, some national or statewide in scope (corporate tax rates, labor costs, and environmental regulations), others more specific to the Hudson Valley region (the MTA payroll tax, high costs of energy and real estate, and the lack of business-ready manufacturing sites). The cost of electricity in most of the Hudson Valley can be as much as 20 percent higher than in other parts of the State, although some relief is on the way with low-cost "Recharge New York" power that will become available in the region in January 2012. Nonetheless, with the region's developing solar manufacturing sector and its spectrum of electronics-related manufacturing concerns, among other sub-sectors, the High-Tech Manufacturing team of the Council conservatively estimates that with appropriate strategies detailed in the next section of this Plan, annualized economic growth of 5 – 10 percent in this sector is attainable.

**Information Technology**

Substantial job growth in the U.S. information technology sector over the next five years is projected by the U.S. Department of Labor.

The agency projects growth of:

- 53% in jobs for network systems and data communications analysis;
- 22% for computer specialists;
- 24% for computer and information scientists and research;
- 32% for computer software engineers (32.46%);
- 30% for computer software engineers, systems software;
- 20% for computer systems analysts;

- 20% for database administrators; and
- 23% for network and computer systems administrators

With the Mid-Hudson Region's established cadre of technology companies, IT has great potential to retain and grow jobs in the Mid-Hudson Valley and transform the economy of the region. This is specifically true for the young fields of Cloud Computing and Analytics, fields where world-class research is currently being conducted in the Region.

Research analysts have identified Cloud Computing and Analytics as two areas that will drive growth within the IT industry across the global economy. McKinsey Global Institute's May 2011 "Big Data" report states that by 2018 demand for people with deep analytics talent could be 50 percent to 60 percent greater than the supply. McKinsey also projects that small and medium-sized businesses will grow the demand for public cloud services by 400-600 percent between 2011 and 2016.

Cloud Computing is a major paradigm shift in how computer services are delivered to people and organizations. In the past, companies had to purchase their own computers, set up their own networks, install and update their own software, hire and train their own IT staff, and purchase enough capacity to handle peak workloads. Cloud computing allows a company or individual to use the Internet to secure affordable and accessible software applications, technology platforms, and IT infrastructure, paying only for the IT resources they need when they need them.

This Cloud architecture is highly beneficial to small and business size businesses since it allows them to devote their attention to growing their businesses, avoiding the distractions and expense of building their own internal IT infrastructure. It is an ideal model for driving efficiency and green technologies. By consolidating and sharing IT resources, individual companies do not need to purchase their own IT equipment. The larger consolidated cloud center can afford to invest in the latest technology that not only provides faster, more secure IT services, but also reduces power consumption, transmission costs, and greenhouse gas emissions.

Analytics is software that allows companies to take control of massive amounts of information, extract actionable insights, and shape desirable outcomes. It is a critical tool for making sense out of data to ensure smart growth within an organization.

Analytics and Cloud Computing are entirely complementary technologies. For example, a company can connect to a cloud computing center to access analytics programs to, for example, manage inventory, predict product demand and price sensitivity, identify customer buying habits and anticipate market trends. The company does not have to buy the computer hardware or the sophisticated analytics software. The company effectively "rents" the hardware and software at an affordable price as needed from the Analytics Cloud.

## Growth Potential of More Mature Industries

### Distribution

The majority of distribution facilities in the Mid-Hudson Region have located in Orange County. A major reason for this occurrence is the availability of land and shovel-ready sites. Distribution facilities located in Orange County have the ability to reach approximately 52 million people within a one-day via ground transportation, allowing amazing access to a vast market. Nearly 30 business parks are located in Orange County, offering an array of development choices. Additionally, Orange and neighboring counties share a fiber optic ring, and both FedEx and UPS operate facilities in the region with many direct flights to key locations. Since 2008, there have been almost two million square feet of distribution space built in Orange County and almost 1,000 distribution jobs added to the market.

Orange County has approximately 3 million square feet of shovel ready space available for sale. Five distribution projects that are evaluating location options have the potential to add 3,500 jobs and approximately $200 million in capital investment. However, financing and tax abatements are crucial to winning these and other investments, due to stiff competition from other states, particularly New Jersey, Pennsylvania, and West Virginia. Although the region's infrastructure and workforce are second to none, without government assistance the region cannot compete for these additional jobs because costs are higher than in competing states.

### Financial and Professional Services

There is a general trend toward consolidation within this sector, and particularly in the financial services sector. The New York State Department of Labor forecasts an 8 percent decrease in jobs statewide in the financial activities sector through 2018, and a 6 percent increase in professional business services jobs.

Nonetheless, there are opportunities for the cluster to grow in the Mid-Hudson Region, in spite of consolidation pressures, due to the "attraction" factors listed above. Mid-Hudson Region locations are becoming known as viable locations for "main offices" of larger companies, since good north-south and east-west transportation corridors serve the area, and electronic communications enable work collaboration across long distances. Growth would be expected to be greater in the areas at or below the New Paltz/Poughkeepsie latitude, based upon proximity to New York, and ready transportation to and from the city.

### Food and Beverage

Recent relocations to Westchester County of food and beverage company facilities such as the U.S. research and development group of Dannon and Sabra Hummus demonstrate that the region is attractive for leading consumer food and beverage brands. Easy access to the marketing and advertising talent of New York City as well as the deep local talent pool are among the reasons why firms in this industry locate in the region.

### Health Care

According to the American Hospital Association's January 2009 report, Beyond Health Care, hospitals support nearly one out of every nine jobs in the United States, and employ 35 percent of all health care workers. In New York State, educational and health services added the most private sector jobs (+30,800) of any sector over the past year. Within that sector, job gains were greatest in health care and social assistance (+21,900), particularly

ambulatory health care services (+11,100) (NYS Dept. of Labor: "New York's Economy Lost 22,600 Private Sector Jobs in December." January 20, 2011).

Health care is projected to generate 3.2 million new wage and salary jobs in the U.S. between 2008 and 2018, more than any other industry, largely in response to rapid growth in the elderly population, according to the U.S. Bureau of Labor Statistics' Career Guide to Industries 2010-2011 Edition. Ten of the 20 fastest growing occupations are related to health care. Projections for growth in the health care sector also hold true for New York State. According to the New York State Department of Labor, health care employment is expected to grow in the seven counties that make up the Mid-Hudson Region over the next five years. By 2018, ambulatory and health care services is expected to grow the most dramatically (an increase of 26.3 percent), with increases also expected for hospitals (3 percent), nursing and residential care facilities (24.5 percent), and social assistance (21.2 percent).

The Council's health care team has identified these opportunities for job growth: Promote the high quality of health care offered in this region, as this can support recruitment of employers and skilled workers; catalog the region's high-quality health care training programs to increase accessibility and utilization, including by the unemployed and employed but under-skilled workers; foster strategic alliances among the many varied health care entities throughout the region to increase patient access and improve the outcomes of their health care experiences.

Issues identified by the health care team include: a lack of qualified applicants to fill clinical-technologic positions (e.g., specialty physicians in highly technical areas with more risk, such as neck, spine and brain surgeons, and obstetricians; technologists across many different diagnostic and therapeutic regimens; medical coding experts for ICD-10; and experienced case managers required for effective patient navigation in accountable care organizations and medical homes); and an increasing patient population with no health insurance or larger deductibles and co-pays. The latter make it more difficult and expensive for insured patients to obtain necessary primary and specialty health services; it also increases hospitals' bad debt.

### Leverage The Region's Impressive Natural Resources and High Quality of Life

The Council believes there are major synergies between natural resources, agriculture, and tourism. What the Council calls The Natural Resources sector is the key unique unifying element that gives character to the Mid-Hudson region overall. This sector also is a factor in housing and waterfront development.

The region's quality of life depends on plentiful clean water, spectacular natural parks, farms, and waterfront access. Emerging revitalized green cities with protected world-renowned surrounding natural areas drive a significant part of our economy with jobs in parks, outdoor recreation, eco-tourism, and natural resource management. Promising green businesses in areas of alternative energies/conservation create jobs in new green cities. They also cross over into every other economic cluster by helping to form the quality of life critical to our substantial New York City commuter population. Additionally, this region provides critical clean water; local, healthy food; recreation; and vacation and second-home opportunities. By solidifying our local commitment to protecting our natural resources available to Mid-Hudson Valley residents, one of our greatest commodities is protected and green job opportunities are expanded.

The Mid-Hudson Region has a long history of public engagement in natural resource issues. State government

and community organizations have built programs and partnerships that incorporate the region's economic needs, the latest science, and community goals into tangible action agendas for the region that enhance our natural resources. This work of creating water-centered "blueways" and land-based "greenways" is essential to the quality of life in the region and creates the context for economic growth in key sectors, including tourism and recreation, agriculture, and manufacturing, all together making the region a desirable location for new businesses to relocate. The Natural Resources sector agenda builds on the success of these efforts that are reflected in a collaborative, multi-agency plan for management and restoration of the region's natural resources. The Hudson River Estuary Program's Action Agenda has united the interests of more than 500 municipalities and partner organizations and includes a plan that prioritizes investments in the region's water, land, and air. The plan encourages further cooperation and creates synergies among diverse stakeholders by providing technical expertise to local decision makers, coordinating community-based projects, and providing grants to support these efforts. Not-for-profit organizations have also advanced plans for revitalization of waterfront towns through home-port initiatives, highly-focused efforts to save the lands that matter most in the region, biodiversity partnerships, and natural resources and recreation hubs. These efforts offer a cost-saving opportunity for state government to leverage its own resources with private philanthropic capital.

Of national importance, the Hudson River estuary ecosystem directly benefits nearly 18 million people. Recognized as a spectacular biological mixing zone, the estuary and its watershed—the source of New York City's water supply—are home to more than 180 rare or imperiled species, as well as globally significant freshwater tidal habitats. It provides incomparable opportunities for bird watching, fishing, and recreation, all of which contribute substantially to the region's $4.7 billion tourism economy. Consideration should be given to high-priority landscape management and, where appropriate, protection to create contiguous "greenways" that ensure the productive capacity of our lands for future generations. Clean and abundant water is essential for sustainable economic development, and the Hudson Valley, "compared to almost any other part of the world is water rich and in an enviable position," according to a paper issued by the Center for Research, Regional Education and Outreach at SUNY New Paltz. Predicted to become the "Saudi Arabia of water," it is essential that a 21st-century, big-picture approach be taken to manage this American Heritage River and Estuary of National Significance. Regional "blueways" that provide clean and abundant water are essential for public health, and recreational and manufacturing economies need to be maintained through focused and strategic upgrades to municipal waste water and drinking water facilities.

Energy-smart communities can be achieved by retrofitting aging structures with outdated technologies, thereby promoting energy efficiency, air quality and creating "green collar" jobs. This initiative will help businesses and communities make smart energy and land-use choices in the face of a changing climate, promoting recycling and closed-loop waste streams.

### Rebuild the Tappan Zee Bridge and Improve Other Current Infrastructure

There are several pending and potential infrastructure projects that can be transformational for the region. Construction of a new Tappan Zee Bridge unquestionably would provide thousands of construction jobs in the short-term and in the long term assure the safety and efficiency of this vital connection between Rockland and Westchester Counties. Stewart Airport presents an excellent opportunity to catalyze development in Orange County, not only as a air transportation hub for the distribution industry and for passenger travel, but also as a potential regional center for aviation-related industry. Large and underutilized Pfizer and IBM facilities in Pearl River (Pfizer) and Fishkill and Kingston (IBM), offer great potential to be repurposed for commercial-industrial uses.

# Public and Stakeholder Engagement

The Mid-Hudson Regional Council recognized early on that soliciting input, ideas, and feedback from the general public (as well as from key stakeholders, business leaders, institutions of education, and community groups in the region) would be crucial to the development of its 5-year Strategic Plan. Specifically, the Council sought early input on the perception of the region's strengths, weaknesses, opportunities, and threats, as well as direction and feedback on the draft Plan during various stages of progress. Throughout the planning process, the Council viewed the Strategic Plan's development as flexible and iterative, necessarily incorporating the findings and suggestions received from ongoing public outreach. It similarly recognized that the resulting Plan would never be finished and placed on a shelf, but rather would serve as a living document that would continue to evolve through assessment and improvement, as planning is a process and not a product.

The region implemented a wide range of methods to gather public and stakeholder input, utilizing public awareness, participation during public comment portions of Regional Council Meetings, involvement though Working Groups, attendance at Public Forums or stakeholder meetings, and through interactive media.

## Public Awareness

The Mid-Hudson Region is home to a diverse socio-economic population requiring a broad range of notification and coordination initiatives. Because public awareness was essential in notifying the public of forums, meetings, and interactive outreach, the Public Participation Working Group developed a strategy to ensure maximum turnout at events, collate quantitative responses, and disseminate findings. The Council broadcast its message via print media; broadcast media; community newspapers; electronic media; social media (Facebook and Twitter); the Council's website; existing agency, governmental, business, and not-for-profit networks; and multiplier groups.

The Council worked through County Executives (or other county-wide elected officials), to post all Council Meeting and Public Forum dates on county, town, and village websites. Press Releases were created and issued to notify media outlets of upcoming meetings, survey participation, and Regional Council milestones. Press releases, clips, and Council-approved documents were posted to the Mid-Hudson Regional Council website for public viewing and/or feedback.

## Public Participation at Regional Council Meetings

All scheduled Council Meetings included a segment allotted for general public comment and input. Meetings were held in six counties of the Mid-Hudson and all meeting dates and logistics were posted in advance on the Mid-Hudson Regional Council's website (http://nyworks.ny.gov/content/mid-hudson), as well as provided to the media and communicated through Council members and multiplier groups. Meetings took place at the following dates, times, and locations:

August 9, 2011, 3:00 p.m. SUNY New Paltz (Ulster County)

August 18, 2011, 3:00 p.m. Marist College (Dutchess County)

September 15, 2011, 3:30 p.m. SUNY Purchase (Westchester County)

October 6, 2011, 3:30 p.m. SUNY Sullivan (Sullivan County)

October 20, 2011, 3:00 p.m. SUNY Rockland (Rockland County)

November 3, 2011, 3:00 p.m. SUNY Orange (Orange County)

## Public Participation through Working Groups

Working Groups led by Council Members were established to allow in-depth examination and discussion of various opportunities and issues that could not fit into the time constraints of Council meetings or work sessions. Members of the public were invited to serve on Working Groups because of their expertise on the topic to be addressed. More than 100 individuals participated in the development of the Strategic Plan through their contributions made as parts of Working Groups. The Working Groups were as follows:

- Access to Capital (Led by Carol Fitzgerald and Payal Malhotra)
- Criteria for Priority Project Selection (Led by Ned Sullivan, Christopher St. Lawrence, March Gallagher, and Ron Hicks)
- Industry Clusters & Strategies (Led by Jonathan Drapkin and Marsha Gordon)
    - Agriculture
    - Biotech and Other Life Sciences
    - Distribution
    - Food and Beverage
    - Health care
    - High-Tech Manufacturing
    - Information Technology
    - Natural Resources
    - Financial and Professional Services
    - Tourism, Art, Culture
- Infrastructure (Led by Paul Ryan and James Taylor, III)
- Inhibitors (Led by Al Samuels and Tom Endres)
- MWBE (Led by Aleida Frederico, Wiley Harrison, and Robin Douglas)
- Performance Measures (Led by Gerald Benjamin and James Bernardo)
- Public Participation (Led by Robin Douglas and Mary Rodrigues)
- Small Business (Led by Wiley Harrison and Terri Ward)
- Vision (Led by Laurence Gottlieb and Maureen Halahan)
- Workforce Development (Led by Aleida Frederico and Cliff Wood)
- Writing (Led by Peter Dworkin and Emily Saland)

## Public Forums

To maximize the opportunity for public input, the Mid-Hudson Region also conducted Public Forums in each of the seven counties in the region:

Sullivan County – Monday, September 12, 2011, 5:00 p.m. at Bethel Woods, Bethel

Ulster County – Wednesday, September 21, 2011, 5:30 p.m. at SUNY Ulster, Stone Ridge

Orange County – Thursday, September 22, 2011, 5:00 p.m. at the Orange County Emergency Services Center, Goshen

Putnam County – Monday, October 3, 2011, 5:00 p.m. at Putnam Hospital Center, Carmel

Dutchess County – Tuesday, October 4, 2011, 5:30 p.m. at Locust Grove Estate, Poughkeepsie

Westchester County – Tuesday, October 25, 2011, 5:00 p.m. at SUNY Purchase Performing Arts Center, Purchase

Rockland County – Wednesday, October 26, 2011, 5:30 p.m. at SUNY Rockland Community College, Suffern

This focus enabled the Council to identify a regional vision, as well as the particular strengths/weaknesses of each county and how they contribute to that vision. All members of the public were welcome to attend any public meeting, and roughly 750 individuals participated. The forums utilized an interactive format. Regional Council members and State staff were in attendance, and each County Executive (or other county-wide elected official), Chamber of Commerce, Economic Development Agency, and Workforce Investment Office was asked to identify key stakeholders, including Disabled/Minority/Women Business Enterprises (D/M/WBE), veterans and socio-economically disadvantaged participants to be invited to the forum and be involved in the development of the Strategic Plan. These groups also identified county-by-county key tools, media, and methods for communication.

At each Public Forum, a Co-Chair or member of the Council gave an overview of the Council's activities, which included a PowerPoint presentation designed to be interactive. Facilitators then implemented smaller group communication to discuss key topics, ideas, and/or documents presented. Groups reported back to attendees on findings. Following group reporting, a lead facilitator engaged the public for open participation/comments.

Following the Public Forums, any material presented or distributed was posted on the Council's website along with a summary of the Forum discussion with the main points highlighted. Several cross-regional themes developed, which can be seen reflected in the direction of the Strategic Plan. These themes included: key industries; urban/community development and housing; natural and cultural assets; tourism; workforce and education; infrastructure; agriculture; state-wide issues and inhibitors; regional branding; proximity to other markets; green and energy efficient projects; and shovel-ready sites.

A Consolidated Funding Application (CFA) workshop was held on October 5, 2011 in Purchase (Westchester County) to assist those members of the region who were in the process of filling out applications. Finally, one last Region-wide Public Forum was held on November 9, 2011 at Locust Grove Estate in Poughkeepsie (Dutchess County) to solicit input on the draft Strategic Plan. All county stakeholders and past forum attendees were invited to attend in person or provide input via the Regional website.

## Additional Meetings with Key Stakeholders

Housing Meeting – September 23, 2011, 10:00-12:00 p.m. at Pattern for Progress, Newburgh (Orange County)

Mayors' Meeting – October 25, 2011, 8:30-10:30 a.m. at Marist College, Poughkeepsie (Dutchess County)

MWBE Meeting – October 26, 2011, 2:00-4:00 p.m. at TD Bank, Purchase (Westchester County)

## Presentations Made to Various Constituent Groups

Hudson Valley Greenway Board meeting – October 12, 2011 in Hyde Park (Dutchess County)

Westchester Expo – October 14, 2011 in White Plains (Westchester County)

Hudson Valley EDC Board meeting – October 28, 2011 in Poughkeepsie (Dutchess County)

Business Council of Westchester Board meeting – November 2, 2011 in Hawthorne (Westchester County)

## Workforce Investment Board meetings:

September 13, 2011 in Monticello (Sullivan County)

September 16, 2011 in Kingston (Ulster County)

September 22, 2011 in Poughkeepsie (Dutchess County)

October 7, 2011 in White Plains (Westchester-Putnam Counties)

October 13, 2011 in Pomona (Rockland County)

October 21, 2011 in Middletown (Orange County)

## Public Participation through Technology

Given the geographic and demographic diversity among Mid-Hudson public and stakeholder participants, the Council recognized that not all stakeholders would be able to give feedback in person at Regional Council Meetings, Public Forums, stakeholder meetings, or through participation in Working Groups. Therefore, the Council's interactive outreach was necessarily comprehensive. Utilizing the resources within the region, the Council conducted quantitative and qualitative research to aid in the development of the 5-Year Strategic Plan. Initiatives included:

- Regional Website General Suggestions (http://nyworks.ny.gov/content/mid-hudson)
- Regional Website Survey (http://nyworks.ny.gov/content/mid-hudson)
- Social Media
    - o Facebook (Mid-Hudson Regional Economic Development Council
    - o Twitter (http://twitter.com/#!/MidHudsonREDC)

- iCollaborate (a secure, internal, collaborative platform provided by Marist College, to which all written communications from members of the public were scanned and posted for Council review)

## Public Participation through Scientific Polling by the Marist Institute for Public Opinion

This research was undertaken to inform the Council about how business leaders view the economic vitality of the seven-county region of the Mid-Hudson Valley. Conversations were initiated with a randomly-selected group of business leaders to collect their opinions about what it's like doing business in the Mid-Hudson Valley. Participants expressed their perceptions of the vitality of the local economy; outlined what they see as the strengths, weaknesses, opportunities, and threats to businesses in the region; and discussed their hopes and plans for the future.

A three-part research methodology was implemented to ensure a cross-section of views from business leaders with different experiences, from different sectors, and from businesses of varying size. Interviews were conducted with:

- **Part 1:** C-Suite Executives of large companies headquartered in the region (n=10)
- **Part 2:** Interviews with Economic Development Professionals with experience representing the Mid-Hudson Valley to businesses looking to relocate to the region (n=14)
- **Part 3:** Interviews with business leaders of small (n=12), medium (n=14), and large (n=12) companies. *Business size was defined by the number of employees.*

Participants were randomly selected from a list of businesses in the seven-county region (Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester). All interviews were conducted by telephone from the Marist Institute for Public Opinion (MIPO) at Marist College from September 12, 2011 through September 22, 2011. MIPO's scientific findings were consistent with the Council's own SWOT analysis, as well as the issues and opportunities heard at each of the Public Forums. A complete summary of MIPO's findings was presented to members of the Regional Council during their October 6, 2011 meeting and posted to the Council's iCollaborate site.

## Implementation

The Council will continue public outreach during the implementation of the Strategic Plan and will use the outreach approaches outlined above to continue public engagement in seeking:

- Reactions to the initial Strategic Plan
- To identify the organizations, individuals, and partnerships best positioned to assist in implementing the Plan
- Opinions on how the strategies are working
- Suggestions about emerging critical issues or opportunities
- New strategies

# Goals and Supporting Strategies

The Mid-Hudson Regional Council is proposing a series of 15 goals and supporting strategies. While this may seem like a large number, the Council recognizes that the diversity of the Mid-Hudson is a strength for the preservation and creation of jobs, and must be a central tenant of our Strategic Plan. The region's diversity also means that a group of coordinated and overlapping goals and strategies must be put in place, as no single strategy is sufficient to serve the region's two million residents. One of the region's seven counties has nearly one million residents and six cities, and 20 percent of its residents use mass transit to get to work. Another county has fewer than 80,000 residents, no cities, and no mass transit, and so little population that it has limited broadband service. This plan's strategies, and indeed the entire plan, must reflect the diversity of the Mid Hudson Region and also the desire to forge new commonality.

**The following illustration depicts the complexity of the Mid-Hudson economy and forms the basis of our 15 goals and supporting strategies:**

At the center of the diagram are the people of the Mid-Hudson, as they are the heart of the region's economy. The people are ringed by an inner circle depicting the 10 major industry sectors identified by the Council and regional stakeholders as significant to the regional economy.

In an age of limited public sector resources, this Plan must especially encourage public- and private-sector investments in the sectors that offer the greatest opportunity to create the greatest number of desirable jobs. The Council defined these as jobs that would pay above-average wages, be "sustainable" (i.e., unlikely to disappear due to economic changes), and have an above-average multiplier effect in terms of the additional jobs and output they stimulate. In this regard, the Council recognized that all jobs are not created equal, and that particularly in a high-cost region like the Mid-Hudson, the most desirable jobs are those that can generate the salaries, medical and other benefits, tax base, and ancillary jobs to preserve the prosperity of the region.

The Council believes that some industries that account for a sizeable number of jobs today in the region lend themselves to a clustering strategy while others do not, and that this fact alone in no way diminishes the importance of the second group of industries to either job retention, job creation, or to enhancing the region's quality of life. Other lenses through which current industries were analyzed included future growth projected for these industries and their economic multiplier; this information was supplied by the New York State Department of Labor. Further, current or potential linkages to be made among sectors were taken into account, for example, between biotechnology and agriculture, as these might lead to new approaches to job creation that also serve to enhance the region.

A pro-business environment does not have to mean a less vibrant natural environment. In fact, the Council's analysis shows that the region's environmental assets – for example, our abundant water supplies, scenic beauty, and open spaces – are important to significant industries such as tourism and agriculture, as well as to the maintenance of the high quality of life in the region that is attractive to many other businesses and their employees. Highlighting some sectors for investment does not mean the undervaluing of other sectors, only the different incremental contributions sectors can make to regional prosperity.

Applying these criteria, the Council classified the 10 industries into four color-coded groups:

- Red circles – high-tech industries with high growth potential that are appropriate for a clustering strategy.
- Purple circles - industries with a significant number of existing jobs and the ability to create more jobs as the region grows.
- Green circles - industries that are meaningfully tied to the land and our natural infrastructure and important to retain and attract employers and employees in all industry sectors.
- Light blue circle – other industries that may not have been identified by the Council, but which may emerge over the five-year course of the Plan as important growth areas.

The Council also acknowledged that there are many other components of the region and influencers of economic vitality that must be integrated into our Strategic Plan. These factors are represented as the labels in the outer circle of the diagram. The arrows in the outer circle elements represent the fact that these forces are not "static" or tied to any one specific industry. Rather they are forces that to varying degrees affect each industry.

The goals and strategies adopted by the Council are divided into two groups, one that affects individual industries (the inner circle) (goals I-III) and another that affect pan-industry factors (the outer circle) (goals IV-XV).

## Goals and Supporting Strategies

### I. Target job creation investments in identifiable industry "clusters" (red circle industries) such as biotech, high-tech manufacturing, and information technology.

**Biotech and other Life Sciences**

1. Establish a life science "incubator" in the region that offers start-up firms low-cost, well-equipped lab space, as well as business support and access to broader biological research infrastructure.

2. Improve access to capital for start-up life sciences firms by:

   A. Fully funding and expanding two new early-stage capital investment funds, the NYS Common Retirement Fund ($15 million) and the Innovate NY Fund ($25 million), for while these are a good start, many state seed-fund programs exceed $100 million or more;

   B. Renewing and expanding the Qualified Emerging Tax Credit (up to $250,000 per year for four years), which has funded facilities operations and training but will expire this year unless reauthorized by the Legislature;

   C. Allowing available R&D Tax Credits to be bought and sold between companies, as this would monetize credits held by unprofitable young companies. Consider including Net Operating Losses (NOLs) to this formula, as this would create further opportunities for young companies to monetize their losses;

   D. Developing and funding a program of state matching grants for New York-based companies that win U.S. Small Business Innovation Research/Technology Transfer (SBIR-STTR) grants.

3. Provide specialized training to further develop the local workforce (see also Goal VII). Encourage publicly-supported training for skills development and enhancement to deepen the labor pool and defray in-house training costs for small, cash-limited firms.

4. Deepen relationships with New York City's world-class research universities, which can be the source of employees, ideas, collaborations, and patents for many biotech and other life sciences firms.

5. Restore full funding for the Centers for Advanced Technology (CAT) program, which capitalizes on the $2 billion annual investment by the federal government in New York's academic research infrastructure by bridging the gap between early-stage discovery and commercial development. Funds for life sciences workforce training programs, such as the Building Skills in New York State (BUSINYS) training grant program, should be expanded immediately, as this can be an immediate spur to job growth.

6. Seek New York State funds for more competitive marketing programs and business start-up assistance programs, as both are needed to raise the profile of the Mid-Hudson Region and make the process of locating in the region easier for start-up and growing life sciences companies.

7. Convene regional stakeholders to explore opportunities to repurpose the excess capacity/surplus real estate at Pfizer's Pearl River facility and provide funding in 2012 for a third-party feasibility analysis.

**High-tech Manufacturing**

8. Offset the relative high costs of real estate and other cost disadvantages with a threefold strategy:

    A. Invest in shovel-ready development sites to mitigate the time and expense typically associated with construction projects in the region;

    B. In collaboration with county IDAs and local development corporations, provide low-cost building loans and tax abatement plans to improve affordability;

    C. Provide incentives similar to those provided under the former Empire Zone program to assist all manufacturers seeking to expand or relocate to the region.

9. Create a regional center to provide base studies, applied science and engineering, business systems support, business process support, and a facility to help foster shared research or collaborations between companies. This would be the applied manufacturing equivalent of the CNSE (Center for Nanoscale Engineering) in Albany.

10. Provide tax credits for capital purchases in recognition of the sector's high investments in capital equipment.

**Information Technology**

11. Establish the region as a world leader in cloud computing and analytics by:

    A. Developing a regional public Cloud Center to foster development projects and new application of cloud and analytics technology;

    B. Promoting collaboration between university Computer Science and Information Technology faculty and research companies in the region. Engaging undergraduate and graduate students with IT professionals on early-stage development, test deployment, and proof-of-concept projects.

12. Foster growth of mid-sized businesses and attract new businesses to the region by:

    A. Providing access to the services of a regional Cloud Center at very affordable rates;

    B. Encouraging development projects that ensure future growth and expansion of services, including specialized, value-added products and services based on cloud technology.

13. Enable small businesses to devote their attention to growing their businesses (avoiding the distractions and expense of building their own internal IT infrastructure) by delivering affordable IT services and expertise. Examples might include CRM (Customer Relationship Management), inventory management, information management, market research including buying trends, price sensitivity, back office functions, human resource information systems, and learning platforms or collaboration tools.

14. Provide IT services to businesses across all clusters, regions, and market segments through access to shared services, software applications, infrastructure support, and content as a service.

15. Offer incubation and support for early-stage development and innovation projects, especially SMBs, start-ups, veteran-owned, minority-owned and women-owned businesses. Provide support, collaboration, and infrastructure to new and existing IT companies, drawing out-of-state companies to the area as well, that want to offer services through the cloud.

16. Provide workforce development and consulting services on emerging technologies (see also Goal VII) through:

    A. Existing technology training programs at regional community colleges;

    B. The NSF-funded Institute for Data Center Professionals (IDCP) formed in 2004 and offering online courses and certificates in many areas of IT and data center technologies, including business analytics, virtualization, project management, networking, security, energy efficiency, and other emerging technologies.

## II. Undertake initiatives to retain and stimulate more mature (purple circle) industries such as distribution, financial and professional services, food and beverage, and health care, as these sectors represent large, vital anchor industries in the Mid-Hudson economy.

**Distribution**

1. Initiate a marketing campaign to raise awareness of the inventory of distribution sites in the Mid-Hudson, highlighting the proximity of the Mid-Hudson to the major economic centers of the northeastern United States, including Boston, New York, Washington DC, and Philadelphia.

2. Create a program similar to the former Build Now NY Program, which shared the costs with property owners for developing a site to shovel-ready status. This would be an incentive for companies to invest in modifications to existing structures while receiving government assistance that is necessary to share in the costs.

3. Create customized workforce training programs that target distribution careers to improve and enhance labor force skills here in the Hudson Valley (see also Goal VII).

**Business and Professional Services**

4. Identify locations for siting, particularly those that would support viability of revitalization or Transit Oriented Development (TOD) projects, and otherwise enhance growth in the sector.

5. Market the Mid-Hudson Region on a wider basis to professional services located outside the state, but in the tri-state area (see Goal XV).

6. Seek state programs to incentivize (thus reinforcing) the tendency of the sector to offer internships/training to young people (see Goal XII).

7. Encourage significant governmental commitment to infrastructure improvements (local access roads, parking, utility upgrades) to enhance the viability of TOD opportunities along existing rail corridors in the region (see Goal IV).

**Health Care**

8. Recognize the economic and quality of life contributions of the not-for-profit sector providing health care related services by encouraging growth, innovation and employment opportunities through education and training.

9. Invest in workforce training (see also Goal VII), encompassing the traditional method of tuition advancement/reimbursement and a more novel approach of bringing the scientific classrooms required for health care students into rotational availability. This would expand teacher availability while facilitating health care workers' access to classes. Emphasis should include the growth areas of IT, nursing, and various tech jobs needed in all health care facilities, and a growing number of physician offices.

10. Provide stimulus funding and remove regulatory roadblocks to enable a more rapid transition of existing health care facilities into affordable housing. This affordable housing could have a health care component, such as assisted living with transitional settings that provide increasing levels of care for our growing elderly population. Alternatively, it may feature a blended environment offering multiple services for a portion of the Medicaid population, which is difficult to manage without a residential component.

**Food and Beverage**

10. Assist existing businesses including, but not limited to, agriculture, distilleries, distribution, manufacturing, bottling, food processing, corporate headquarters, research and development, and world-class academic institutions. Provide assistance with:

    A. Workforce training programs (see also Goal VII) to ensure that the sector has a talented and skilled workforce;

    B. Farm to Market Programs to ensure that farmers can get their products to market in a cost-effective way;

    C. Policy advocacy (see Goal IX) to ensure that burdens are reduced on businesses in the sector;

    D. State-funded marketing programs to assist businesses in getting their products to market and to promote the region as open to the industry.

## III. Leverage the region's outstanding natural resources, tourism industry, and agriculture (green circle industries) in a "natural infrastructure" strategy that protects agriculture and the environment and recognizes these as important to tourism and as quality-of-life attributes that are critical to attracting and retaining high-quality jobs for all key industry sectors.

1. Encourage support for waterfront projects that are generally consistent with local environmental planning principles (some of which are included in the Hudson Valley Greenway principles, the Department of State-funded Revitalizing Hudson Waterfronts, the Hudson River Estuary Program) and/or local comprehensive plans and zoning.

2. Support agriculture by creating regional food aggregation and distribution hubs and by increasing state funding for farmland preservation to leverage federal and private dollars.

3. Encourage the creation of destination hotels to capitalize on and enhance existing attractions and support more overnight stays that would lead to greater and longer tourist visitation from outside of the region and greater local expenditure. Where appropriate, the viability of casino gambling should also be considered.

4. Promote the Mid-Hudson as a tourist destination (see Goal XV).

5. Prioritize land conservation and public park projects that link city/town centers and transit stations with open space, cultural, and heritage sites; link farms with city and town centers; protect clean water and ecological resources that are in-holdings or buffers to existing state and other parks; and enhance sub-regional eco-tourism assets and corridors.

### IV. Improve key regional infrastructure to make the region more business-ready.

1. Develop an Infrastructure Bank that combines state, federal, and union pension funds to finance projects that will provide jobs and that have a demonstrable rate of return to taxpayers and pension-fund investors and also provide jobs.

2. Prioritize anchor projects. These include rebuilding the Tappan Zee Bridge in the southern part of the Mid-Hudson Region and strengthening the capacity of the area surrounding Stewart Airport to support ancillary businesses in the middle part of the region. The federal government recently announced that the Tappan Zee is one of the 14 projects nationwide to receive expedited approvals through the advocacy of the Governor, and the Council supports the preservation of mass transit options for the future. The Council also recommends that sewer and water be brought to Stewart Airport, potentially from the nearby City of Newburgh, which has excess water capacity.

3. Regionalize water and sewer infrastructure planning and management. Work with the county planning departments to map and integrate information on existing infrastructure to help identify places where water and sewer are already available and where there is additional capacity. This can help identify business-ready sites across the region. Where feasible, consolidating water and sewer services can help improve services and defray the costs of extending or improving infrastructure. Conserve green infrastructure, such as aquafiers, recharge areas, and surface heaters.

4. Promote infrastructure investments in priority growth areas and established city or village centers to take advantage of our region's existing infrastructure (see Goal VI).

5. Provide broadband service to underserved rural areas by tapping federal programs and offering economic incentives to private firms.

6. Create a program similar to the former Build Now NY Program, which shared the costs with property owners for developing a site to a shovel-ready status.

7. Support Transit Oriented Developments (TODs) to provide more sustainable, mixed-used development around transportation hubs. TODs can improve public transportation, generate jobs, expand the tax base, and establish a base of retail establishments and housing options.

## V. Foster housing investment to attract jobs to the region, create construction jobs, and support the overall health of the regional economy through a vibrant housing market.

**Youth Housing** (see also Goal XII)

1. Develop housing near mass transportation for easy access to New York City.

2. Create housing units that are "wired" with state-of-the-art technologies to promote networking, business development, and sharing of ideas and concepts on a regional, national, and global scale.

3. Develop home ownership programs for first-time buyers that allow for non-traditional households.

**Senior Housing**

4. Encourage municipalities to adopt guidelines and policies to create and encourage sustainable senior developments with universal design features in new construction.

5. Create home improvement, weatherization, and accessibility programs.

6. Preserve the existing affordable rental housing and protect and maintain manufactured home communities.

7. Establish a broad range of housing choices for very-low and low-income seniors.

**Affordable and Workforce Housing**

8. Promote housing development by:

   A. Procuring financing and grants to leverage and maximize funding from local, state, and federal resources to subsidize capital and operating costs to achieve the most affordable rent levels or purchase price;

   B. Assisting municipalities in creating Inclusionary Zoning Ordinances and maximizing local tax incentives through available NYS Real Property Tax Laws;

   C. Developing housing in locations where infrastructure is available (see Goal IV); utilizing existing industrial, commercial, or institutional buildings under adaptive reuse and locating housing near mass transit.

9. Preserve existing housing, when financially and economically feasible, using local Code Enforcement, tax relief assistance, and refinancing of existing debt combined with rehabilitation of housing units.

10. Promote asset building by:

    A. Establishing Individual Development Accounts (IDAs) as a matching savings program to assist first-time home buyers to achieve home ownership;

    B. Continuing Homeownership and Education Counseling for first-time home buyers and Foreclosure Counseling for existing home owners;

    C. Leveraging the Section 8 Homeownership Program to assist with homeownership for very-low and low-income families.

## VI. Support the revitalization of our urban centers as engines of regional prosperity.

1. Target regional growth in urban centers, whose compact, mixed-use development pattern creates an opportunity for growth that is sustainable, cost-effective, energy- and natural resource-conserving, climate-friendly, affordable, and attractive to young workers (see Goal XII).

2. Promote the redevelopment of vacant and distressed properties, as well as the removal of blight and impediments to revitalization, by expanding state land bank legislation to cities that demonstrate the capacity to administer an integrated distressed property remediation program.

3. Encourage a State commitment to making improvements to existing infrastructure in urban centers more cost-effective (see Goal IV).

4. Attract investment and lay the foundation for transformative projects in urban centers by encouraging economic development planning, promoting development readiness, and streamlining the development process.

5. Provide strategic implementation workshops and training programs in urban centers involving land use board members and economic development staff to build understanding of new standards, programs, and processes, and to enhance collaborative decision-making skills to facilitate an expedited development process.

## VII. Enhance the region's talent pipeline through its colleges and universities, One-Stop Career Centers, BOCES, school systems, public libraries and library systems, and child care system. Support investments that build long-term strategies for growth as well as short-term responses to emerging needs.

1. Invest in the region's capacity for innovation, entrepreneurship and business expansion by establishing a network of Innovation Centers in the region's public and private colleges that provide access to national, state, and regional resources for new business development, similar to exemplary best practice models in North Carolina, Georgia, and Massachusetts. Share incentives for faculty mentoring, access to national resources, regional business competitions and learning opportunities in biotech, IT, entrepreneurship, and other high priority areas in line with the Strategic Plan.

2. Increase the responsiveness of the workforce training system to emerging business needs by investing in the region's One Stop Centers to provide enhanced business outreach and design customized workforce training solutions, refocusing existing resources more directly on existing business needs. Support the development of cross-county job referrals in line with a new regional approach to workforce development.

3. Improve the flexibility of the workforce development system to respond to emerging middle skill jobs requiring short-term retooling of an individual's skill set by evaluating incremental additions of coursework and on-the-job experiences to existing programs at the associate, bachelors and masters levels and by adapting the skills sets of highly-skilled, work-authorized immigrants.

4. Build the long-term talent pipeline and capacity for economic growth by ensuring that the region's K-12 students develop 21st century skills aligned with specific industry clusters.

5. Recognize the importance of licensed, quality child care and child care referral, which supports the needs of working parents and the region's first investment in the education of our children.

## VIII. Promote entrepreneurship, start-ups, and small businesses through a variety of measures that will make it easier to access public- and private-sector resources for access to capital; workforce training; and business and technical consulting. Offer tax incentives for businesses to renovate existing buildings and sales tax holidays to stimulate retail sales.

1. Create a Mid-Hudson Small Business One Stop Resource Website that contains information from each of the counties as well as state and federal resources available to small businesses. The site would contain an online form that each business owner or potential entrepreneur fills out answering specific questions about their business needs and that when completed gives the person a menu of resources that they could use specifically for their needs. Each chamber of commerce, business association, municipality, and any other business service organization should have this on their website and use it as a tool with their membership and potential members. The completed project would be an absolute one-stop resource center for all small businesses in the Mid-Hudson Region. This site would also create solutions to many of the problems that small businesses face:

    A. Access to capital - Once the business identified a need for capital in that specific portion of the form a list of available capital lenders/granters should lead them to local, state, and federal links specific to their industry needs. Capital sources should include existing New York and/or Federal public/private funding programs that can be leveraged for the Region or strategy created for modification to include further incentives;

    B. Regulations and Permitting - For existing or start-up businesses, the issue of permits and regulations is a struggle, and the online form would ask a series of questions in such a way to identify what permits would be needed in order to start the business and what the total cost would be for a business to open within a specific industry. Existing business would have the option of signing up to receive updates on all government regulations (local, state, and federal) as they change;

    C. Training and Technical Assistance - Once the individual has defined their industry and business needs through the online form, the list of available resources for training and education in their area would be displayed;

    D. Access to and technical assistance with Government Contracts- The process for becoming a contractor with the state is very daunting to businesses and once it's finally completed, it's difficult for businesses to access the capital necessary to carry out the proposal since the turn-around time on reimbursement for contracts is very slow, this could mean businesses struggle or go under simply trying to carry out a government proposal. In addition to the ability to sign up to become a government contractor on this site, the Council suggests partnering with one of the many lending facilities to provide no interest government contract funds to businesses with state guarantees;

2. Offer incentives for a business that wants to open or expand into an existing building similar to the tax breaks available to businesses that are building new buildings. This will create incentives to fix up depreciating existing inventory. An alternative would be for localities with properties up for tax auction to retain ownership in order to be able to offer any incentives they felt would best recruit businesses into these properties.

3. Implement additional State Tax Holidays throughout the region in order to promote shopping local and

getting small business some much needed customers. Holidays would not only be on clothing as they have in the past but all Sales & Gas taxes for a short specific amount of time in different areas of each region. This would promote tourism and shopping on the off peak times as well as ensure the money is staying in our region.

4. Identify the five main criteria that make for a business friendly environment that municipalities can use as a guideline in order to become more business friendly. Municipalities that adhere to these guidelines and have a proven track record for fostering a business friendly environment should be the ones that are prominently promoted through our business recruitment organizations such as Empire State Development and our local Economic Development agencies.

5. Meet with private equity and venture capital organizations to better learn what their industries require to locate and/or expand regionally to boost access to capital.

6. Build a "pipeline" of funding opportunities for different clusters in the region to identify enough company deal flow to increasingly attract the resources of venture capital firms. Implement events inviting private equity/venture capital firms to see presentations by local companies seeking funding.

7. Create an outreach support program for peer-to peer mentoring and networking for all levels of business and different industries.

8. Identify programs in other parts of the country that are successful in increasing public/private capital such as the "Jump Start" program in Ohio, "Georgia Works" program in Georgia, "Venture Capital Tax Credit program" in Indiana and Delta Regional Authority. Review these programs for information and ideas that may be applicable to our region.

9. Create an Electronic Funding Program Database to help build awareness of existing funding programs in the region and leverage programs for availability to the entire region. We have identified that there exist many funding programs that are regional such as micro loans or local funding and that businesses do not have one place to learn about funding programs that fit their needs.

10. Promote private equity investments by encouraging the State to aggressively leverage investments with the private sector to boost investor confidence.

## IX. Make the region and NY State more business friendly by considering tax and administrative policy initiatives to ensure businesses locate and stay in the region. The Mid-Hudson Council's Co-Chairs will raise the following issues at the state-wide Chairman's Committee:

1. Lessening the overall tax burden and consider the impact of the MTA tax in the areas outside of New York City.

2. Reforming SEQRA.

3. Including targeted industries in Excelsior program.

4. Reforming Department of Environmental Conservation permitting process.

5. Reviewing State constitutional limits to casino gambling.

## X. Develop non-mandated programs that encourage, educate, and foster green development projects as part of developing a green Hudson Valley economy.

1. Reward projects that address sustainable practices:

A. Outreach – Support educational and training programs that help businesses to incorporate sustainability into company operations. Engage local and regional chambers of commerce, industry groups, local business districts (BIDs), and the business community at large. Incorporate strategies such as live events, webinars and social media sources in order to gain a wide reach;

B. Energy – Support programs that help organizations reduce energy use through energy efficiency and renewable energy technologies. Engage building owners, property managers and facilities managers in benchmarking and improving existing multifamily housing and commercial building stock. Collaborate regionally to seek funding and incentives to reduce emissions and costs and move toward a clean energy future;

C. Transportation – Promote reduction of transportation demand; shifting from single-occupant vehicles to reliance on mass transit, ride sharing/car pooling, and alternative modes of transportation such as biking and walking; using hybrid vehicles or non-fossil fuels in vehicles; and reducing fuel consumption;

D. Land use – Promote preserving undeveloped land; encouraging higher density mixed use development in centers and along major transportation corridors; and enhancing current regional planning efforts;

E. Water resources – Support programs that promote improving storm water management and mitigating flooding consequences associated with global warming; adapting to rising water levels; protecting and preserving drinking water reservoirs and watersheds; and conserving drinking water. Provide public and professional education campaigns;

F. Waste reduction – Adopt the goals and timelines of the New York State "Beyond Waste" program, through reducing consumption and waste; increasing reuse, recycling and composting; and decreasing use of land fill and incineration. Include municipal, industrial, construction, hazardous, and all other wastes in this process;

G. Green procurement – Support programs that promote increasing use of green products; using products from local and organic farms; prohibiting hazardous products for which more environmentally friendly options exist; and extended producer responsibility (EPR) programs;

## XI. Embrace inter-regional partnerships that leverage cross-region resources.

1. Deepen relationships with major research universities and other institutions of higher education that offer specific programs unavailable in the Region.

2. Expand the ability of the Mid-Hudson's agricultural and food and beverage sectors to sell to New York markets such as the Hunt's Point Wholesale Food Market or the Union Square Market.

3. Promote R&D facilities in higher cost counties of the Hudson Valley to locate their manufacturing in less expensive markets, if not in the region, than in other regions upstate.

4. Pursue periodic meetings between representatives from the Mid-Hudson Regional Council and the New York City Regional Council to discuss new opportunities for collaboration.

## XII. Make the Mid-Hudson region more attractive to young educated professionals in order to stop "youth flight" and "brain drain" in the region.

1. Pursue affordable housing strategies specific to the region's youth (see Goal V).

2. Emphasize entertainment and recreation through downtown development (See Goal VI).

3. Establish meaningful linkages between the region's many institutions of higher education, businesses, and young professionals so that more graduates will settle where they studied (See Goal VII).

4. Support the region's entrepreneurial youth by:

   A. Offering financial assistance, technical support and mentoring from successful businesses;

   B. Providing business development workshops and education;

   C. Creating a technology sharing facility for high-tech needs;

   D. Partnering with regional businesses and corporations to offer apprentice or intern programs beyond college.

5. Utilize the many organized "40 under 40" groups in the region to further understand and implement the strategies.

6. Start and support a Mid-Hudson Young Professionals Network (YPN) and

   A. Explore the possibility of the YPN being an arm of the local Chamber of Commerce;

   B. Use the YPN as a means of connecting with youth in other communities and cities who are looking to relocate and of offering support to young talent within the region.

## XIII. Build on the unique location of the Hudson Valley (situated between the majestic Hudson River, the Delaware River, and Long Island Sound) and promote waterfront development in order to enhance tourism, recreation, and trade.

1. Promote overnight accommodations, restaurants and recreation that appeal to diverse populations.
2. Create opportunities for open spaces that attract citizens to enjoy the rivers and the Sound.
3. Educate visitors about the waters and natural environment.
4. Link urban centers via waterfronts, greenways, ferries, and parks.
5. Encourage water-based trade opportunities appropriate for our economy.
6. Encourage waterfront projects that are generally consistent with local environmental planning principles, local comprehensive plans and zoning, state smart growth law, and that are transit-oriented.

## XIV. Support MWBEs (Minority and Women Business Enterprises).

1. Streamline the paperwork involved in the MWBE certification and other processes in order to ease the burden on small business men and women.
2. Establish ongoing, accessible community outreach with a focus on trust and relationship building between the state and the MWBE community. Such outreach could be the responsibility of a designated staff member at a one stop business resource center (See also Goal VIII).
3. Develop strategies to effectively market MWBE "success stories" in order to encourage more businesses to seek certification.
4. Support the Governor's commitment to awarding 20 percent of State contracts to MWBEs.

## XV. Align public-private support to ensure implementation of the regional Plan and consideration of new opportunities.

1. Ensure that the Mid-Hudson Empire State Development office has the necessary resources and support to monitor the implementation of the Strategic Plan.
2. Develop a brand identity and integrated marketing and communication strategy to promote the region both to individuals and organizations.

# Implementation Agenda

## Long Term Structure and Operational Arrangements for Implementing the Plan

Too often plans fail or remain "reports on a shelf" due to the inability of having developed the practical understanding as to how to implement it. The success of the Mid- Hudson's Strategic Plan hinges not on the matrix document, but rather the oversight operations supporting the Plan itself. Responsibility will be assigned for monitoring and insuring compliance with the goal of moving the Plan forward over the next five years. The timeline below is meant to be read with the attached Council Implementation Organizational Chart.

Our implementation plan calls for the Regional Council to be convened on a quarterly basis preceding the Statewide Co-Chair meetings. The Regional Council's Executive Director will provide the overall coordination. The Council will create four committees to ensure the success of the Council's plan:

## Marketing, Monitoring and Compliance, Strategies Task Force and Public Participation

**Marketing Committee:** The Council has identified marketing as a key component to implementing its strategies. The Marketing Committee will create marketing activities to support various aspects of the Plan. Marketing is essential for the recruitment and attraction of the industry segments as depicted in our model on page 35. For instance, marketing strategies supporting the clusters are of keen importance.

**Monitoring and Compliance:** Through various resources in the region, we will ensure that the Plan is monitored for compliance from its initiation. As an example, the metrics section indicates that within the first 14 months of initiation the strategy will be held up against the Plan.

**Strategies Task Force:** In December, the Council will recruit the Strategies Task Force to initiate the implementation of and ensure reporting on the status of each of the 15 strategies. The Strategies Task Force will meet on a monthly basis but timed to supply information to the Regional Council for their quarterly meetings.

In furtherance of Strategy 15, the Council will align public and private support and resources to ensure the implementation of the Strategic Plan.

A full implementation matrix will be established by the Strategies Task Force based upon several components, including the Priority Project funding opportunities that are presented to the Council, the strategies contained herein, and other existing private and public opportunities. The attached format will be used and actual information will be inserted to supplement the overall planning process. As funding information is made available we will initially fill out the first four quarter of year one and then insert the placeholder for years two through four as we anticipate a dynamic implementation.

**Public Participation:** Following each of the quarterly meetings of the Regional Council, an e-update will be provided to the public to both inform them of the status and then obtain their feedback in order to track the public's reaction to the status of the strategies implementation to date. The regional website will be utilized for comments to be captured on an ongoing basis. Beyond simply keeping the public informed, we will seek to engage the public wherever possible in the actual implementation of the strategy.

## Implementation Timeline:

### 1. Regional Council submits the 5-year Strategic Plan on November 14

### 2. December 2011: "Operationalize Implementation"

- Establish organizational structure
- Schedule meeting dates prior to the statewide co-chair meetings
- Establish staffing for Marketing, Monitoring and Compliance, and the Strategies Task Force committees
- Establish meeting schedule with Priority Project Teams. The Priority Project Teams will be composed of the key planning members of each Priority Project. The Teams will meet regularly with members of the Monitoring and Compliance Committee.

### 3. January 2012: "Convene the Mid-Hudson Regional Economic Council"

- Further review and identify the action items corresponding to the Plan's strategies
- Identify marketing opportunities
- Monitoring and Compliance Committee to meet with Priority Project Teams to review planning and financing schedules and report to the Council
- Compose any modifications to the Strategic Plan based upon the awarding of the Priority Projects

### 4. April 2012: "Track Performance and Identify New Opportunities"

- Begin evaluation of strategies and preparation of evaluation report
- Begin process of identifying how new projects may be included based upon state input (e.g. will there be another funding round; are there new opportunities for funding that are added to the CFAs?)
- Continue to implement projects and actions in conjunction with the Monitoring and Compliance Committee
- Early revision of strategies to apply to year two funding opportunities
- Report on region's progress to the public and seek feedback

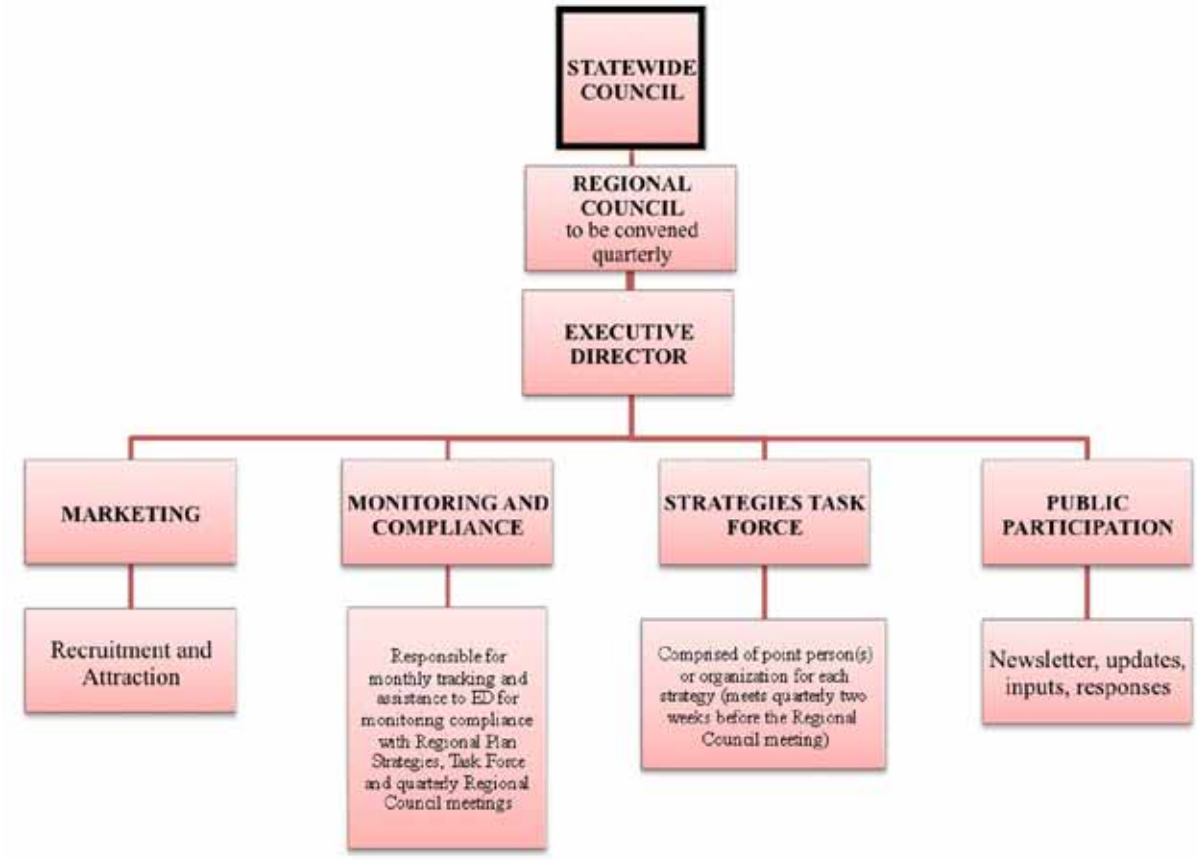
### 5. July 2012: "Hold 3rd Quarter Meeting of the Regional Council"

- Issue six month evaluation report on the progress of the Strategic Plan
- Provide outreach to the public
- Analyze strategies for effectiveness of performance metrics
- Assume preparation for major round of CFAs
- Reprioritize action items

### 6. October 2012: "Hold 4th Quarter Meeting"

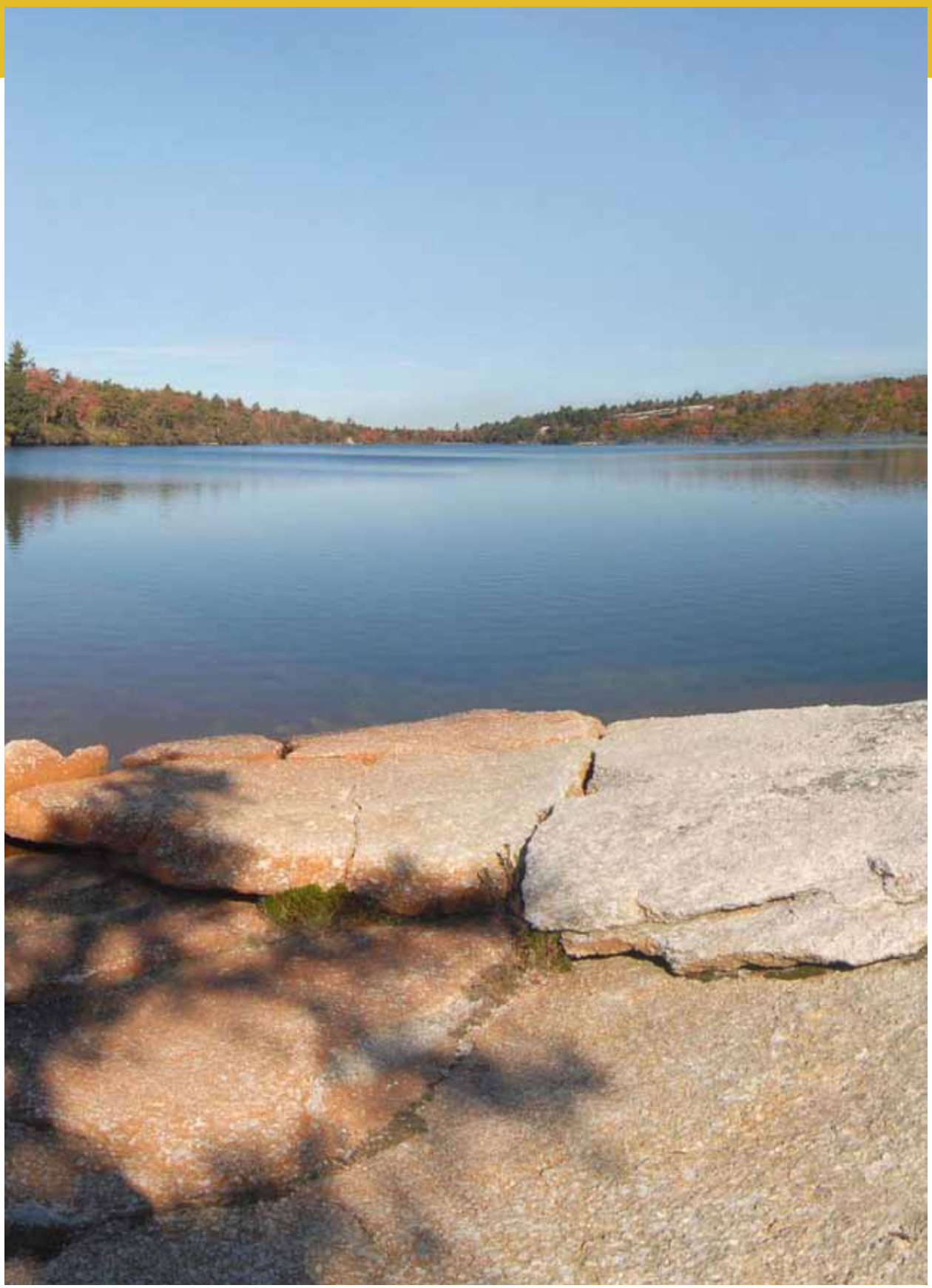
- Final evaluation of first year performance and vote on any modifications to the five year plan

## Mid-Hudson Regional Council
## Implementation Organizational Chart



# Implementation Matrix

| Goal | Lead Individual or Organization | Year 1 | | | | Year 2 | Year 3 | Year 4 | Year 5 | Metric for Success |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1st Q | 2nd Q | 3rd Q | 4th Q | | | | | |
| I. Target job creation investments in identifiable industry "clusters" such as biotech, high-tech manufacturing, and information technology. | | | | | | | | | | |
| II. Develop strategies to retain and stimulate more mature industries such as distribution, business and professional services, healthcare, and food and beverage. | | | | | | | | | | |
| III. Leverage the region's outstanding natural resources in a "natural infrastructure" strategy that views agriculture, tourism, and the environment as quality of life attributes that are critical to attracting and retaining high-quality jobs for all key industry sectors. | | | | | | | | | | |
| IV. Improve key regional infrastructure to make the region more business-ready. | | | | | | | | | | |
| V. Use housing investment to attract jobs to the region, create construction jobs, and support the overall health of the regional economy through a vibrant housing market. | | | | | | | | | | |
| VI. Support the revitalization of our urban centers as engines of regional prosperity. | | | | | | | | | | |
| VII. Enhance the region's talent pipeline through its colleges and universities, One-Stop-Centers, BOCES, school systems, public libraries and library systems, and child care system. Support investments that build long term strategies for growth as well as short term responses to emerging needs. | | | | | | | | | | |
| VIII. Serve small and medium-sized businesses by making it easier for them to access public- and private-sector resources for access to capital; workforce training; and business and technical consulting. Offer tax incentives for businesses to renovate existing buildings and sales tax holidays to stimulate retail sales. | | | | | | | | | | |
| IX. Make the region and NY State more business friendly by considering tax and administrative policy initiatives to ensure businesses locate and stay in the region. | | | | | | | | | | |
| X. Develop non-mandated programs that encourage, educate, and foster green development projects as part of developing a green Hudson Valley economy. | | | | | | | | | | |
| XI. Embrace inter-regional partnerships that leverage cross-region resources. | | | | | | | | | | |
| XII. Make the Mid-Hudson region more attractive to young educated professionals in order to stop "youth flight" and "brain drain" in the region. | | | | | | | | | | |
| XIII. Build on the unique location of the Hudson Valley (located between the majestic Hudson River, the Delaware River, and Long Island Sound) and promote waterfront development in order to enhance tourism, recreation, and trade. | | | | | | | | | | |
| XIV. Support MWBEs (Minority and Women Business Enterprises) | | | | | | | | | | |
| XV. Align public-private support to ensure implementation of the regional Plan and consideration of new opportunities. | | | | | | | | | | |



# Performance Measures

This section describes a measurement process, identifies a dashboard of general economic indicators for the Mid-Hudson Regional Economic Development Council Strategic Plan, and suggests performance measures for each goal in this plan.

## The Measurement Process:

Measurement will be annual and the Council will establish regional performance goals related to these measures, as it deems it appropriate. Measurement reporting will begin 14 months after the first announcements of awards under the recommendation and review process resulting from this plan. The base year for reporting will be 2011, or the closest antecedent year for which data is available. Where possible, reporting will be on a county and regional basis. Also where possible, measurement will be comparative, for example, with other regions, or with statewide information.

Responsibility for aggregating and reporting on measures will reside with the Hudson Valley Regional office of the State Economic Development Agency. The Council therefore also recommends that sufficient resources be provided to this agency to perform this task. The Council will consider the annual report relative to the goals it has established, based upon these indicators, no later than its second meeting following the receipt of this report. As described in the implementation agenda, the Council will annually consider adaptation of its plan, goals, and measures in accord with reported results.

## Indicators:

It is important to reemphasize that this plan has multiple objectives. In the broadest sense, it seeks to invigorate the economy and general well being in the region. More particularly, it establishes and guides an annual process that will result in the selection of a small number of priority transformative projects (PTPs) that have the potential to energize and fundamentally alter the economy of the region and smaller projects made under the newly established Consolidated Funding Application (CFA) process.

No small standard group of measures is appropriate for use across this range of objectives. The following three sets of measures are advanced:

I. Nine General Economic Indicators (GEIs), which constitute the regional dashboard. They provide a basis for assessing the impact of plan implementation over time upon economic conditions and community well-being in the region and its constituent counties. These general indicators also may be used to assess the plan's overall effectiveness at specified stages of its implementation, and to guide adjustment of the plan as determined to be necessary from periodic feedback.

II. Goal Specific Indicators (GSIs), which are organized in two categories. These are designed to measure progress made toward achieving one or more of the plan's fifteen strategic goals, using two focal points:

    A. Measuring outputs linked to Priority Transformative Projects (PTPs) and Consolidated Funding Applications (CFAs). Output measures focus on specific results directly attributable to funded PTPs/CFAs. Collecting output measures require funded PTPs/CFAs to report their economic impact for each of five years following their award. Successful PTPs/CFAs must build the performance reporting and verification of performance measures into their applications.

B. Measuring outputs linked to specific strategic objectives: Additional measures are proposed for are germane to specific goals in the strategic plan. Some may apply to a number of goals. Others apply to only a single goal.

III. Key Performance Indicators (KPIs), or those common measures the Council will use to assess progress across the plan's fifteen strategic goals. Compiling necessary data in accord with these metrics must be integrated into contracts for Priority Transformative Projects and approved Consolidated Funding Applications to ensure accountability. Four sets of key performance metrics have been developed:

1. Overall Goal Key Performance Indicators (OG KPIs), which apply to all projects.
2. Priority Transformative Project Key Performance Indicators (PTP KPIs), which apply to Priority Transformative projects only.
3. Consolidated Funding Project Key Performance Indicators (CFR KPIs), which apply to only funded CFAs.
4. Type specific key performance indicators, which may be used for similar projects within different strategic goal areas (e.g. incubators established in different target areas) and are presented with reference to those goals below.

## Strategic Area Specific Measures:

Finally, some discrete measures are specific to projects in one strategic area.

### The Nine General Economic Indicators (GEIs)

1. Total number of employers/businesses
2. Total number of jobs
3. Average wage
4. Regional productivity
5. Regional Well-Being Economic Indicator. This is a summary number that incorporates four elements:
    a. Median income
    b. % of households with 30% or more of income needed for housing costs
    c. Unemployment rate
    d. Poverty rate
6. Average tax burden (total property tax bill/median income)
7. Population: Net migration by income/education/age and other relevant demographic and socioeconomic factors
8. Percent of workforce traveling outside of county/region for work
9. Public opinion data (Marist Institute), e.g. perceptions of economic outlook, intention to stay or leave the region based on economic factors

## Goal Specific Indicators – The Key Performance Indicators

### Proposed Overall Goal Key Performance Indicators (OG KPIs)

Aggregate measures for each goal in designated NAICS codes or other appropriate definition:

1. Total businesses
2. Total employees
3. Average wages & median income
4. Ratio of business births/deaths

### Proposed Priority Transformative Project Key Performance Indicators (PTP KPIs)

Measures for each goal's priority transformational projects:

1. PTP applications:
    a. Number of applications
    b. Number/percent of applications recommended by council
    c. Number/percent of applications funded
2. Funded PTPs:
    a. Funds leveraged (local/state/federal)
    b. Patents & licenses filed
    c. Total jobs created
    d. Average wage & median salary of jobs created
    e. Program assessment and satisfaction surveys

### Proposed CFA Key Performance Indicators (CFA KPIs)

CFA-level measures for each goal in designated NAICS codes or other appropriate definition:

1. CFA applications:
    a. Number of applications
    b. Number/percent of applications recommended by council
    c. Number/percent of applications funded
2. Funded CFAs:
    a. Funds leveraged (local/state/federal)
    b. Patents & licenses filed
    c. Job creation and retention
    d. Average wage & median salary of jobs created
    e. Program assessment and satisfaction surveys

## Measurements Organized With Reference to Strategic Plan Goals

**Target job creation investments in identifiable industry "clusters" (red circle industries) such as biotech, high-tech manufacturing, and information technology.**

GOAL 1:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Incubator KPIs:
    - Total number of businesses assisted
    - Incubator capacity (% full)
    - Time to maturity (e.g. how long before assisted businesses grow and leave the incubator / average length of stay, turnover rate)
    - Total jobs created by assisted businesses
    - Average wage & median income of jobs created by assisted businesses
- High Tech Manufacturing Center and Cloud Center KPIs:
    - Total businesses assisted, trained, coached or served
    - Total jobs created by assisted businesses
    - Average wage & median income of jobs created by assisted businesses

**Undertake initiatives to retain and stimulate more mature (purple circle) industries such as distribution, financial and professional services, food and beverage, and health care, as these sectors represent large, vital anchor industries in the Mid-Hudson economy.**

GOAL 2:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Training KPIs:
    - Total businesses assisted, trained, coached or served
    - Total jobs created by assisted businesses
    - Average wage & median income of jobs created by assisted businesses
- Other
    - Establishment of marketing program

**Leverage the region's outstanding natural resources, tourism industry, and agriculture (green circle industries) in a "natural infrastructure" strategy that protects agriculture and the environment and recognizes these as important to tourism and as quality-of-life attributes that are critical to attracting and retaining high-quality jobs for all key industry sectors.**

GOAL 3:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Other
    - Establishment of Hudson River brand office
    - Number of land conservation / public park projects

**Improve key regional infrastructure to make the region more business-ready.**

GOAL 4:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Infrastructure Bank KPIs
    - Total investment (capitalization)
    - ROI
    - Jobs created
    - Average wages & median income
    - Funds leveraged (local/state/federal)
- Other
    - NY DOT bridge rankings
    - Broadband penetration
    - Percent population with wells or municipal sewer
    - Studies initiated to determine infrastructure needs
    - Number of TOD projects

**Foster housing investment to attract jobs to the region, create construction jobs, and support the overall health of the regional economy through a vibrant housing market.**

GOAL 5:

- OG KPIs
- CFG KPIs
- PTP KPIs

- Other
    - New housing starts
    - Number of vacant/occupied units
    - Foreclosure rates
    - Affordability of housing
    - Homeownership rate: percent of households own/rent

**Support the revitalization of our urban centers as engines of regional prosperity.**

GOAL 6:

- OG KPIs
- CFG KPIs
- PTP KPIs
- GEIs for urban areas (populations greater than 20K)

**Enhance the region's talent pipeline through its colleges and universities, One-Stop Career Centers, BOCES, school systems, public libraries and library systems, and child care system. Support investments that build long-term strategies for growth as well as short-term responses to emerging needs.**

GOAL 7:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Other
    - Education attainment
    - K-12
        - Graduation rates
        - Performance: SED Report Cards
        - Percent of HS students earning college credits
        - Percent of graduates who stay in county/region
        - Percent of graduates who are employed in county/ region
        - Percent of graduates intending to go to college
    - Higher Education
        - Retention and graduation rates
        - Number of degrees granted
        - Percent of graduates who stay in county/region
        - Percent of graduates who are employed in county/region

- Training
    - Total number individuals trained, coached, or served through One-Stop initiatives and BOCES
    - Certificates granted
    - Percent who stay in county/region
    - Percent who are employed in county/region
- Employer surveys:
    - Assessment of workforce preparedness and satisfaction with applicant pool and new hires

**Promote entrepreneurship, start-ups, and small businesses through a variety of measures that will make it easier to access public- and private-sector resources for access to capital; workforce training; and business and technical consulting. Offer tax incentives for businesses to renovate existing buildings and sales tax holidays to stimulate retail sales.**

GOAL 8:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Incubator KPIs:
    - Total number of businesses assisted
    - Incubator capacity (% full)
    - Time to maturity (e.g. how long before assisted businesses grow and leave the incubator / average length of stay, turnover rate)
    - Total jobs created by assisted businesses
    - Average wage & median income of jobs created by assisted businesses
- Other
    - Number of angel investors in region or # of projects that receive angel funding

**Make the region and NY State more business friendly by considering tax and administrative policy initiatives to ensure businesses locate and stay in the region.**

GOAL 9:

- Ranked "Business Friendliness" of region
- Number of shared service initiatives funded by the NY Dept. of State Shared Service Program
- Funds saved through NY Dept of State Shared Service Program
- Change in effective corporate tax rate
- Analysis of regulatory best practices elsewhere in the United States and compare to NYS

**Develop non-mandated programs that encourage, educate, and foster green development projects as part of developing a green Hudson Valley economy.**

GOAL 10:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Other
    - Home energy fuel type: Renewable or Non-renewable
    - Gasoline usage per capita
    - Workforce Commute: driving alone/carpool/public transportation/walk/work at home
    - Ride-sharing sites: number and usage
    - Percent traveling outside of county/region for work
    - Number of "Climate Smart Communities"

**Embrace inter-regional partnerships that leverage cross-region resources.**

GOAL 11:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Other
    - Number of partnerships funded
    - Funding leveraged in partnerships (total matching funds)

**Make the Mid-Hudson region more attractive to young educated professionals in order to stop "youth flight" and "brain drain" in the region.**

GOAL 12:

- OG KPIs
- CFG KPIs
- PTP KPIs
- GEIs for young workers (residents aged 18-34)

**Build on the unique location of the Hudson Valley (situated between the majestic Hudson River, the Delaware River, and Long Island Sound) and promote waterfront development in order to enhance tourism, recreation, and trade.**

GOAL 13:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Other
    - Hotel occupancy rates
    - Visitor spending
    - Visitors to parks, museums, and historic sites

**Support MWBEs (Minority and Women Business Enterprises).**

GOAL 14:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Other
    - Total certified MWBE per capita
    - Total certified MWBE as a percentage of minority population
    - Number of MWBE eligible for certification per capita

**Align public-private support to ensure implementation of the regional Plan and consideration of new opportunities.**

GOAL 15:

- OG KPIs
- CFG KPIs
- PTP KPIs
- Other
    - New projects initiated/completed
    - Number of individuals employed in economic development
    - Economic Development spending per capita (local, state, federal)

# Appendix A

## NEW YORK MEDICAL COLLEGE BIOTECH INCUBATOR CENTER FOR ADVANCED RESEARCH AND ECONOMIC DEVELOPMENT

New York Medical College (NYMC) is planning to install a significant new biotechnology incubator laboratory and advanced development center – based in Valhalla, Westchester County, New York – as part of a public-private enterprise to enhance job growth in the private biotech sector and to enhance the nation's preparedness against chemical, biologic, radiologic, and nuclear (CBRN) threat agents, including pandemic influenza.

NYMC is one of only six current federally funded CounterACT Centers of Excellence in the U.S., a division of the White House-funded Project Bioshield. New York Medical College is the only chemical CounterACT Center located in the Northeast U.S. This region continues to be at heightened risk of CBRN attacks, but also is home to the research and development divisions of many major pharmaceutical and biotechnology companies.

NYMC operates one of just three laboratories in the world (and the only U.S. facility) that produce high growth reassortant "seed" viruses for influenza vaccine, an essential first step in producing hundreds of millions of doses of a new vaccine each year.

If the NYMC Biotechnology Incubator is funded, the enterprise will stimulate partnerships among scores of biotech companies in the Mid-Hudson Region, but also in New York, Rochester, the Capital District, the Pfizer manufacturing facility in Pearl River, and the SUNY academic medical centers. New York State will assume a major branding position, attracting more biotech startups and small companies leading to advanced development, scale-up production, manufacture, and commercialization of CBRN medical countermeasures and vaccines. Construction time will be minimized by retrofitting an existing 120,000 sq-ft biopharmaceutical research facility on the NYMC campus. Secure BSL-3 and other advanced biotech assets will be built out and equipped to generate candidate compounds, drugs, and vaccines for full surge-manufacturing capacity and production. The Center will provide incubator space, comprehensive work-force training, and other core resources essential for incubator tenant/ client companies, throughout the lifetime of the facility.

The NYMC facility will undergo continuous capability upgrade, FDA process improvements, and integration of lessons learned, making it a vital and potentially life-saving asset for the people of New York State and the Nation. NYMC has dedicated more than $12 million of its own resources to initiate the enterprise and requires $11 million additional to complete the Biotechnology Incubator and leverage additional federal funds. A consortium of committed biotech research and industrial partners is already in place, selected for their track records in scientific innovation, marketing, and job growth. Job creation plus multiplier effect will be substantial.

# Appendix B

## CLOUD COMPUTING CENTER AT MARIST COLLEGE

Cloud computing poses a significant threat and a unique opportunity to the IT industry in the Hudson Valley region and throughout New York State. The threat is to the 1,463 IT businesses and more than 20,000 jobs in IT-related occupations within the region (not including IT manufacturing). It is conservatively estimated that as many as 10 percent of these 20,000 jobs could be threatened by the emergence of this transformative technology. On the other hand, if the region were to be recognized as a national leader in cloud computing, we could not only retain these jobs, but create many new ones in this field.

Cloud computing is a major paradigm shift in how computer services are delivered to people and organizations. It is a computing architecture that provides IT infrastructure, platforms, software, education, and services over a network in a self-service and on-demand manner. In the past, companies had to purchase their own computers, set up their own networks, install and update their own software, hire and train their own IT staff, and purchase enough capacity to handle peak workloads.

Cloud computing allows a company of any size, or an individual, to use the Internet to access affordable and secure software applications, technology platforms, and IT infrastructure, paying only for the IT resources they need when they need them. For Small and Mid-sized Businesses (SMBs), this model allows them to devote their attention to growing their businesses, avoiding the distractions and expense of building their own internal IT infrastructure. For large companies, cloud computing 1) frees up IT funding, allowing companies to develop new business-related applications; 2) allows company employees to access data and services from anywhere on the globe; and 3) provides a full suite of collaboration features, keeping the company globally connected. Andrew McAfee, a principal research scientist at MIT's Center for Digital Business, wrote in the November 2011 issue of Harvard Business Review that the movement to cloud technology is "as inevitable and irreversible as the shift from steam to electric power."

**The six key components of the overall strategy for the cloud initiative are:**

1. Support established companies and research organizations, to assure their continued growth in the Mid-Hudson Region and continue their worldwide leadership.
2. Foster growth of mid-sized businesses and attract new businesses to the region.
3. Help small businesses grow by delivering affordable IT services and expertise.
4. Provide IT services to businesses across all clusters, regions, and market segments.
5. Offer on-site and virtual incubation and support for start-ups.
6. Provide workforce development and consulting services.

**The New York State Cloud Computing Center would establish the following:**

- Cloud Computing Incubation Center
- SMB Cloud
- Smarter Business Development Cloud
- Workforce Development Cloud
- Green Cloud Data Center

The New York State Cloud Computing Center will grow and keep jobs in our state. It will be the first project in the country to use this transformational technology as an economic development tool.

# Appendix C

## HIGH-RISK ASSESSMENT CLINIC AT THE CENTER FOR DISCOVERY

The Center has committed to developing a High-Risk Assessment Clinic to serve children with complex autism and other disabilities in a short-term stay facility with the goal of avoiding life-long institutional placement by maintaining children in their home school districts. The Assessment Clinic will add more than $20 million in infrastructure improvements in Sullivan County and approximately 200 jobs in Phase I, with an initial budget of $14 million. The Assessment Clinic is designed as a new model for New York State to address the global pandemic of autism with particular emphasis on its ever increasing cost to New York State with a net result of keeping children and families together while keeping and investing millions of additional dollars and jobs in New York State.

The High-Risk Assessment Clinic seeks to reduce costs and reliance on life-long institutional placements, stop the flow of children being placed annually in out of state placements, and provide efficiencies when caring for children and adults who have developmental disabilities. Currently NYS spends in excess of $17 million on out of state residential placements a year, and another $1 billion on in-state placements over the past five years. That cost continues to rise annually as the epidemic of autism continues to grow exponentially.

**Capacity:** 32 short-term stay beds serving 150-200 children annually

**Medical, clinical and educationally-based services:**

- Integrated assessment of co-occurring medical conditions such as gastrointestinal problems, seizures, sleep disorders, anxiety disorder, obesity and nutritional problems, sensory processing problems, and psychiatric conditions
- Assessment of intellectual, behavioral, social and communication functioning in all areas of functioning including the home, school, and community
- Assessment of family functioning and support needed to maintain the child in the home environment

**Individually tailored treatment and assessment plans include the following options:**

- 5 day intensive medical and clinical in-patient evaluation
- 10 to 90 day State Education Dept. designated 853 Residential-Based School Intervention Program
- 10 to 15 day in home/school training/support program post comprehensive evaluation
- Regular follow-up as needed for one year post comprehensive evaluation

# Appendix D

## INDUSTRY SECTOR DEFINITIONS BY NAICS CODES

**Code Industry Name**

### Agriculture

111211 Potato Farming
111219 Other Vegetable (except Potato) and Melon Farming
111331 Apple Orchards
111332 Grape Vineyards
111333 Strawberry Farming
111334 Berry (except Strawberry) Farming
111336 Fruit and Tree Nut Combination Farming
111339 Other Noncitrus Fruit Farming
112120 Dairy Cattle and Milk Production
424420 Packaged Frozen Food Merchant Wholesalers
424430 Dairy Product (except Dried or Canned) Merchant Wholesalers
424440 Poultry and Poultry Product Merchant Wholesalers
424450 Confectionery Merchant Wholesalers
424460 Fish and Seafood Merchant Wholesalers
424470 Meat and Meat Product Merchant Wholesalers
424480 Fresh Fruit and Vegetable Merchant Wholesalers
424490 Other Grocery and Related Products Merchant Wholesalers
424510 Grain and Field Bean Merchant Wholesalers
424520 Livestock Merchant Wholesalers
424590 Other Farm Product Raw Material Merchant Wholesalers

### Biotech and Other Biomedical

325411 Medicinal and Botanical Manufacturing
325412 Pharmaceutical Preparation Manufacturing
325413 In-Vitro Diagnostic Substance Manufacturing
325414 Biological Product (except Diagnostic) Manufacturing
339116 Dental Laboratories
541380 Testing Laboratories
541711 R&D in Biotechnology
541712 R&D in the Physical, Engineering, and Life Sciences (except Biotech)
541711 Research and Development in Biotechnology
541712 Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)

### Distribution

481112 Scheduled Freight Air Transportation
481212 Nonscheduled Chartered Freight Air Transportation
481219 Other Nonscheduled Air Transportation
541614 Process, Physical Distribution, and Logistics Consulting Services

488510 Freight Transportation Arrangement
492110 Couriers and Express Delivery Services
492210 Local Messengers and Local Delivery
484110 General Freight Trucking, Local
484121 General Freight Trucking, Long-Distance, Truckload
484122 General Freight Trucking, Long-Distance, Less Than Truckload
484210 Used Household and Office Goods Moving
484220 Specialized Freight (except Used Goods) Trucking, Local
484230 Specialized Freight (except Used Goods) Trucking, Long-Distance
493110 General Warehousing and Storage
493120 Refrigerated Warehousing and Storage
493130 Farm Product Warehousing and Storage
493190 Other Warehousing and Storage
531130 Lessors of Miniwarehouses and Self-Storage Units
482111 Line-Haul Railroads
482112 Short Line Railroads
483111 Deep Sea Freight Transportation
483113 Coastal and Great Lakes Freight Transportation
483211 Inland Water Freight Transportation
488310 Port and Harbor Operations
488320 Marine Cargo Handling
488330 Navigational Services to Shipping
488390 Other Support Activities for Water Transportation

### Food and Beverage

312111 Soft Drink Manufacturing
312112 Bottled Water Manufacturing
312113 Ice Manufacturing
312120 Breweries
312130 Wineries
312140 Distilleries
311111 Dog and Cat Food Manufacturing
311119 Other Animal Food Manufacturing
311211 Flour Milling
311212 Rice Milling
311213 Malt Manufacturing
311221 Wet Corn Milling
311222 Soybean Processing
311223 Other Oilseed Processing
311225 Fats and Oils Refining and Blending
311230 Breakfast Cereal Manufacturing
311311 Sugarcane Mills

311312 Cane Sugar Refining
311313 Beet Sugar Manufacturing
311320 Chocolate and Confectionery Manufacturing from Cacao Beans
311330 Confectionery Manufacturing from Purchased Chocolate
311340 Nonchocolate Confectionery Manufacturing
311411 Frozen Fruit, Juice, and Vegetable Manufacturing
311412 Frozen Specialty Food Manufacturing
311421 Fruit and Vegetable Canning
311422 Specialty Canning
311423 Dried and Dehydrated Food Manufacturing
311511 Fluid Milk Manufacturing
311512 Creamery Butter Manufacturing
311513 Cheese Manufacturing
311514 Dry, Condensed, and Evaporated Dairy Product Manufacturing
311520 Ice Cream and Frozen Dessert Manufacturing
311611 Animal (except Poultry) Slaughtering
311612 Meat Processed from Carcasses
311613 Rendering and Meat Byproduct Processing
311615 Poultry Processing
311711 Seafood Canning
311712 Fresh and Frozen Seafood Processing
311812 Commercial Bakeries
311813 Frozen Cakes, Pies, and Other Pastries Manufacturing
311821 Cookie and Cracker Manufacturing
311822 Flour Mixes and Dough Manufacturing from Purchased Flour
311823 Dry Pasta Manufacturing
311830 Tortilla Manufacturing
311911 Roasted Nuts and Peanut Butter Manufacturing
311919 Other Snack Food Manufacturing
311920 Coffee and Tea Manufacturing
311930 Flavoring Syrup and Concentrate Manufacturing
311941 Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
311942 Spice and Extract Manufacturing
311991 Perishable Prepared Food Manufacturing
311999 All Other Miscellaneous Food Manufacturing
722110 Full-Service Restaurants
722211 Limited-Service Restaurants
722212 Cafeterias, Grill Buffets, and Buffets
722213 Snack and Nonalcoholic Beverage Bars
722310 Food Service Contractors
722320 Caterers

722330 Mobile Food Services
722410 Drinking Places (Alcoholic Beverages)

### Healthcare

621111 Offices of Physicians (except Mental Health Specialists)
621112 Offices of Physicians, Mental Health Specialists
621210 Offices of Dentists
621310 Offices of Chiropractors
621320 Offices of Optometrists
621330 Offices of Mental Health Practitioners (except Physicians)
621340 Offices of Physical, Occupational and Speech Therapists, and Audiologists
621391 Offices of Podiatrists
621399 Offices of All Other Miscellaneous Health Practitioners
621410 Family Planning Centers
621420 Outpatient Mental Health and Substance Abuse Centers
621491 HMO Medical Centers
621492 Kidney Dialysis Centers
621493 Freestanding Ambulatory Surgical and Emergency Centers
621498 All Other Outpatient Care Centers
621511 Medical Laboratories
621512 Diagnostic Imaging Centers
621610 Home Health Care Services
621910 Ambulance Services
621991 Blood and Organ Banks
621999 All Other Miscellaneous Ambulatory Health Care Services
622110 General Medical and Surgical Hospitals
622210 Psychiatric and Substance Abuse Hospitals
622310 Specialty (except Psychiatric and Substance Abuse) Hospitals
623110 Nursing Care Facilities
623210 Residential Mental Retardation Facilities
623220 Residential Mental Health and Substance Abuse Facilities
623311 Continuing Care Retirement Communities
623312 Homes for the Elderly
623990 Other Residential Care Facilities

### High Tech Manufacturing

333298 All Other Industrial Machinery Manufacturing
334510 Electromedical and Electrotherapeutic Apparatus Manufacturing
339112 Surgical and Medical Instrument Manufacturing
339113 Surgical Appliance and Supplies Manufacturing
339114 Dental Equipment and Supplies Manufacturing
339115 Ophthalmic Goods Manufacturing
334111 Electronic Computer Manufacturing

334112 Computer Storage Device Manufacturing
334113 Computer Terminal Manufacturing
334119 Other Computer Peripheral Equipment Manufacturing
334210 Telephone Apparatus Manufacturing
334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
334290 Other Communications Equipment Manufacturing
334310 Audio and Video Equipment Manufacturing
334411 Electron Tube Manufacturing
334412 Bare Printed Circuit Board Manufacturing
334413 Semiconductor and Related Device Manufacturing
334414 Electronic Capacitor Manufacturing
334415 Electronic Resistor Manufacturing
334416 Electronic Coil, Transformer, and Other Inductor Manufacturing
334417 Electronic Connector Manufacturing
334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing
334419 Other Electronic Component Manufacturing
325992 Photographic Film, Paper, Plate, and Chemical Manufacturing
333314 Optical Instrument and Lens Manufacturing
333315 Photographic and Photocopying Equipment Manufacturing
335110 Electric Lamp Bulb and Part Manufacturing
335121 Residential Electric Lighting Fixture Manufacturing
335122 Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing
335129 Other Lighting Equipment Manufacturing
335211 Electric Housewares and Household Fan Manufacturing
335212 Household Vacuum Cleaner Manufacturing
335221 Household Cooking Appliance Manufacturing
335222 Household Refrigerator and Home Freezer Manufacturing
335224 Household Laundry Equipment Manufacturing
335228 Other Major Household Appliance Manufacturing
335311 Power, Distribution, and Specialty Transformer Manufacturing
335312 Motor and Generator Manufacturing
335313 Switchgear and Switchboard Apparatus Manufacturing
335314 Relay and Industrial Control Manufacturing
335911 Storage Battery Manufacturing
335912 Primary Battery Manufacturing
335921 Fiber Optic Cable Manufacturing
335929 Other Communication and Energy Wire Manufacturing
335931 Current-Carrying Wiring Device Manufacturing
335932 Noncurrent-Carrying Wiring Device Manufacturing
335991 Carbon and Graphite Product Manufacturing
335999 All Other Miscellaneous Electrical Equipment and Component Manufacturing

332111 Iron and Steel Forging
332112 Nonferrous Forging
332114 Custom Roll Forming
332115 Crown and Closure Manufacturing
332116 Metal Stamping
332117 Powder Metallurgy Part Manufacturing
332211 Cutlery and Flatware (except Precious) Manufacturing
332212 Hand and Edge Tool Manufacturing
332213 Saw Blade and Handsaw Manufacturing
332214 Kitchen Utensil, Pot, and Pan Manufacturing
332311 Prefabricated Metal Building and Component Manufacturing
332312 Fabricated Structural Metal Manufacturing
332313 Plate Work Manufacturing
332321 Metal Window and Door Manufacturing
332322 Sheet Metal Work Manufacturing
332323 Ornamental and Architectural Metal Work Manufacturing
332410 Power Boiler and Heat Exchanger Manufacturing
332420 Metal Tank (Heavy Gauge) Manufacturing
332431 Metal Can Manufacturing
332439 Other Metal Container Manufacturing
332510 Hardware Manufacturing
332611 Spring (Heavy Gauge) Manufacturing
332612 Spring (Light Gauge) Manufacturing
332618 Other Fabricated Wire Product Manufacturing
332710 Machine Shops
332721 Precision Turned Product Manufacturing
332722 Bolt, Nut, Screw, Rivet, and Washer Manufacturing
332811 Metal Heat Treating
332812 Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers
332813 Electroplating, Plating, Polishing, Anodizing, and Coloring
332911 Industrial Valve Manufacturing
332912 Fluid Power Valve and Hose Fitting Manufacturing
332913 Plumbing Fixture Fitting and Trim Manufacturing
332919 Other Metal Valve and Pipe Fitting Manufacturing
332991 Ball and Roller Bearing Manufacturing
332992 Small Arms Ammunition Manufacturing
332993 Ammunition (except Small Arms) Manufacturing
332994 Small Arms Manufacturing
332995 Other Ordnance and Accessories Manufacturing
332996 Fabricated Pipe and Pipe Fitting Manufacturing
332997 Industrial Pattern Manufacturing

332998 Enameled Iron and Metal Sanitary Ware Manufacturing
332999 All Other Miscellaneous Fabricated Metal Product Manufacturing
334511 Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing
334512 Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
334513 Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
334514 Totalizing Fluid Meter and Counting Device Manufacturing
334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
334516 Analytical Laboratory Instrument Manufacturing
334517 Irradiation Apparatus Manufacturing
334518 Watch, Clock, and Part Manufacturing
334519 Other Measuring and Controlling Device Manufacturing
333111 Farm Machinery and Equipment Manufacturing
333112 Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing
333120 Construction Machinery Manufacturing
333131 Mining Machinery and Equipment Manufacturing
333132 Oil and Gas Field Machinery and Equipment Manufacturing
333210 Sawmill and Woodworking Machinery Manufacturing
333220 Plastics and Rubber Industry Machinery Manufacturing
333291 Paper Industry Machinery Manufacturing
333292 Textile Machinery Manufacturing
333293 Printing Machinery and Equipment Manufacturing
333294 Food Product Machinery Manufacturing
333295 Semiconductor Machinery Manufacturing
333298 All Other Industrial Machinery Manufacturing
333311 Automatic Vending Machine Manufacturing
333312 Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing
333313 Office Machinery Manufacturing
333319 Other Commercial and Service Industry Machinery Manufacturing
333411 Air Purification Equipment Manufacturing
333412 Industrial and Commercial Fan and Blower Manufacturing
333414 Heating Equipment (except Warm Air Furnaces) Manufacturing
333415 Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing
333511 Industrial Mold Manufacturing
333512 Machine Tool (Metal Cutting Types) Manufacturing
333513 Machine Tool (Metal Forming Types) Manufacturing
333514 Special Die and Tool, Die Set, Jig, and Fixture Manufacturing
333515 Cutting Tool and Machine Tool Accessory Manufacturing
333516 Rolling Mill Machinery and Equipment Manufacturing
333518 Other Metalworking Machinery Manufacturing
333611 Turbine and Turbine Generator Set Units Manufacturing
333612 Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing

333613 Mechanical Power Transmission Equipment Manufacturing
333618 Other Engine Equipment Manufacturing
333911 Pump and Pumping Equipment Manufacturing
333912 Air and Gas Compressor Manufacturing
333913 Measuring and Dispensing Pump Manufacturing
333921 Elevator and Moving Stairway Manufacturing
333922 Conveyor and Conveying Equipment Manufacturing
333923 Overhead Traveling Crane, Hoist, and Monorail System Manufacturing
333924 Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing
333991 Power-Driven Handtool Manufacturing
333992 Welding and Soldering Equipment Manufacturing
333993 Packaging Machinery Manufacturing
333994 Industrial Process Furnace and Oven Manufacturing
333995 Fluid Power Cylinder and Actuator Manufacturing
333996 Fluid Power Pump and Motor Manufacturing
333997 Scale and Balance Manufacturing
333999 All Other Miscellaneous General Purpose Machinery Manufacturing
325110 Petrochemical Manufacturing
325120 Industrial Gas Manufacturing
325131 Inorganic Dye and Pigment Manufacturing
325132 Synthetic Organic Dye and Pigment Manufacturing
325181 Alkalies and Chlorine Manufacturing
325182 Carbon Black Manufacturing
325188 All Other Basic Inorganic Chemical Manufacturing
325191 Gum and Wood Chemical Manufacturing
325192 Cyclic Crude and Intermediate Manufacturing
325193 Ethyl Alcohol Manufacturing
325199 All Other Basic Organic Chemical Manufacturing
325211 Plastics Material and Resin Manufacturing
325212 Synthetic Rubber Manufacturing
325221 Cellulosic Organic Fiber Manufacturing
325222 Noncellulosic Organic Fiber Manufacturing
325311 Nitrogenous Fertilizer Manufacturing
325312 Phosphatic Fertilizer Manufacturing
325314 Fertilizer (Mixing Only) Manufacturing
325320 Pesticide and Other Agricultural Chemical Manufacturing
325510 Paint and Coating Manufacturing
325520 Adhesive Manufacturing
325611 Soap and Other Detergent Manufacturing
325612 Polish and Other Sanitation Good Manufacturing
325613 Surface Active Agent Manufacturing

325620 Toilet Preparation Manufacturing
325910 Printing Ink Manufacturing
325920 Explosives Manufacturing
325991 Custom Compounding of Purchased Resins
325998 All Other Miscellaneous Chemical Product and Preparation Manufacturing
324110 Petroleum Refineries
324121 Asphalt Paving Mixture and Block Manufacturing
324122 Asphalt Shingle and Coating Materials Manufacturing
324191 Petroleum Lubricating Oil and Grease Manufacturing
324199 All Other Petroleum and Coal Products Manufacturing

### Information Technology

511210 Software Publishers
519130 Internet Publishing and Broadcasting and Web Search Portals
518210 Data Processing, Hosting, and Related Services
541511 Custom Computer Programming Services
541512 Computer Systems Design Services
541519 Other Computer Related Services
541513 Computer Facilities Management Services
334111 Electronic Computer Manufacturing
334112 Computer Storage Device Manufacturing
334113 Computer Terminal Manufacturing
334119 Other Computer Peripheral Equipment Manufacturing
334413 Semiconductor and Related Device Manufacturing

### Professional Services

561110 Office Administrative Services
561210 Facilities Support Services
561320 Temporary Help Services
561330 Professional Employer Organizations
561421 Telephone Answering Services
561422 Telemarketing Bureaus and Other Contact Centers
561450 Credit Bureaus
551111 Offices of Bank Holding Companies
522110 Commercial Banking
522120 Savings Institutions
522130 Credit Unions
522190 Other Depository Credit Intermediation
522210 Credit Card Issuing
522220 Sales Financing
522291 Consumer Lending
522292 Real Estate Credit
522293 International Trade Financing

522294 Secondary Market Financing
522298 All Other Nondepository Credit Intermediation
522310 Mortgage and Nonmortgage Loan Brokers
522320 Financial Transactions Processing, Reserve, and Clearinghouse Activities
522390 Other Activities Related to Credit Intermediation
525110 Pension Funds
525120 Health and Welfare Funds
525190 Other Insurance Funds
525910 Open-End Investment Funds
525920 Trusts, Estates, and Agency Accounts
525990 Other Financial Vehicles
531110 Lessors of Residential Buildings and Dwellings
531120 Lessors of Nonresidential Buildings (except Miniwarehouses)
531190 Lessors of Other Real Estate Property
524113 Direct Life Insurance Carriers
524114 Direct Health and Medical Insurance Carriers
524126 Direct Property and Casualty Insurance Carriers
524127 Direct Title Insurance Carriers
524128 Other Direct Insurance (except Life, Health, and Medical) Carriers
524130 Reinsurance Carriers
524291 Claims Adjusting
524292 Third Party Administration of Insurance and Pension Funds
524298 All Other Insurance Related Activities
523110 Investment Banking and Securities Dealing
523120 Securities Brokerage
523130 Commodity Contracts Dealing
523140 Commodity Contracts Brokerage
523210 Securities and Commodity Exchanges
523910 Miscellaneous Intermediation
523920 Portfolio Management
523930 Investment Advice
523991 Trust, Fiduciary, and Custody Activities
523999 Miscellaneous Financial Investment Activities
541110 Offices of Lawyers
541191 Title Abstract and Settlement Offices
541199 All Other Legal Services
541211 Offices of Certified Public Accountants
541214 Payroll Services
541219 Other Accounting Services
541410 Interior Design Services
541420 Industrial Design Services

541430 Graphic Design Services
541490 Other Specialized Design Services
541611 Administrative Management and General Management Consulting Services
541612 Human Resources Consulting Services
561312 Executive Search Services
541613 Marketing Consulting Services
541618 Other Management Consulting Services
541720 Research and Development in the Social Sciences and Humanities
541810 Advertising Agencies
541820 Public Relations Agencies
541830 Media Buying Agencies
541840 Media Representatives
541850 Display Advertising
541860 Direct Mail Advertising
541870 Advertising Material Distribution Services
541890 Other Services Related to Advertising
541910 Marketing Research and Public Opinion Polling
541922 Commercial Photography
541930 Translation and Interpretation Services
541990 All Other Professional, Scientific, and Technical Services
541310 Architectural Services
541320 Landscape Architectural Services
541330 Engineering Services
541340 Drafting Services
541350 Building Inspection Services
541360 Geophysical Surveying and Mapping Services
541370 Surveying and Mapping (except Geophysical) Services
541380 Testing Laboratories
541620 Environmental Consulting Services
562910 Remediation Services
551112 Offices of Other Holding Companies
551114 Corporate, Subsidiary, and Regional Managing Offices
813910 Business Associations
813920 Professional Organizations

### Tourism

721110 Hotels (except Casino Hotels) and Motels
721120 Casino Hotels
721191 Bed-and-Breakfast Inns
721199 All Other Traveler Accommodation
721211 RV (Recreational Vehicle) Parks and Campgrounds
721214 Recreational and Vacation Camps (except Campgrounds)

721310 Rooming and Boarding Houses
512131 Motion Picture Theaters (except Drive-Ins)
512132 Drive-In Motion Picture Theaters
711110 Theater Companies and Dinner Theaters
711120 Dance Companies
711130 Musical Groups and Artists
711190 Other Performing Arts Companies
711211 Sports Teams and Clubs
711212 Racetracks
711219 Other Spectator Sports
711310 Promoters of Performing Arts, Sports, and Similar Events with Facilities
711320 Promoters of Performing Arts, Sports, and Similar Events without Facilities
711410 Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
711510 Independent Artists, Writers, and Performers
712110 Museums
712120 Historical Sites
712130 Zoos and Botanical Gardens
712190 Nature Parks and Other Similar Institutions
713110 Amusement and Theme Parks
713120 Amusement Arcades
713210 Casinos (except Casino Hotels)
713290 Other Gambling Industries
713910 Golf Courses and Country Clubs
713920 Skiing Facilities
713930 Marinas
713940 Fitness and Recreational Sports Centers
713950 Bowling Centers
713990 All Other Amusement and Recreation Industries
453220 Gift, Novelty, and Souvenir Stores

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**SUNY Rockland**

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