CREATING A STATE OF INNOVATION

UNLEASHING THE POWER OF NEW YORK'S ENTREPRENEURIAL ECONOMY

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NEW YORK STATE ASSEMBLYMAN

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Dear Fellow New Yorker:

They are all too common stories—another round of layoffs, another tax increase, another neighbor whose son or daughter has moved out of our state to pursue their dreams elsewhere. These have become the stories of New York State. As a business owner, an elected public official, and a father, I personally feel these unfortunate circumstances in all aspects of my life. Our approach as a state must change. That is why I have written this report.

New York State's economy, specifically Upstate New York's economy, is in dire condition. The same old, same old economic development policies are largely unsuccessful. They are failing to add significant good jobs to our economy; they are not working to revitalize our regions; they are not bringing people or businesses into New York. We need a different strategy and direction. We need to dramatically rethink our economic development.

This report, "Creating a State of Innovation: *Unleashing the Power of New York's Entrepreneurial Economy*" is a synthesis of my thoughts and ideas about what is wrong with our current economic development policies and what needs to be changed. But more so, this report is about policy changes that I believe WILL result in long-term growth and in measurable improvement in our economic situation.

I hope this report sparks discussion of these important economic ideas and issues. Our state is at a crossroads. If we fail to act soon, if we fail to create a business environment where innovation and entrepreneurship are encouraged then our economy will continue to decline. That is an option none of us can afford.

Warmest personal regards,

Joseph D. Morelle

Joseph D. Morelle
Member of Assembly
New York State

ACKNOWLEDGEMENTS

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Increasingly frustrated with the lack of sustained economic growth and job development in New York State, I have been writing this report in my head for some time. Unfortunately, reports do little good unless they somehow end up on paper. Without an outstanding team of collaborators, that important and necessary step would not have happened.

I am blessed to work each day with an outstanding group of highly dedicated and talented people -- my legislative staff. I want to thank them for their contributions to this document and for their committed efforts each and every day to the citizens of my community and our state.

- Kristin Anderson — Chief of Staff
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- Daniel Farfaglia — Legislative Assistant
- Olivia Nerkowski — Communications Director
- Adam Bello — Director of Constituent Services
- Vincent Esposito — Legislative Assistant

I am also indebted to our Project Director/Legislative Analyst Kathleen Muzdakis, who took my initial, disjointed ramblings on the Entrepreneurial Economy and fashioned it into legible and, I hope, thoughtful prose. A special thank you also to Mary Rose McBride whose work on the Executive Summary was timely and invaluable.

I also want to extend my thanks to one of my dearest and most trusted friends, Fran Weisberg, whose advice, counsel and encouragement is always welcome and comes in limitless supply.

A group of friends and advisors who make up my Leadership Cabinet contributed greatly to the organization and focus of this report and deserve enormous credit.

Finally, endless thanks to my family members, who sacrifice in ways too numerous to describe in order that I might pursue my public responsibilities.

Each of these individuals and more contributed greatly to this report. While they have made this volume possible, any and all omissions, mistakes or errors reside entirely with the author.

EXECUTIVE SUMMARY

CREATING A STATE OF INNOVATION:

Unleashing the Power of New York's Entrepreneurial Economy

Imagine New York State alive with entrepreneurial zeal. Imagine homegrown inventors using their creativity to conceive of product and service innovations that expand our economy. My community of Rochester, New York was like that 100 years ago - open to new ideas, hospitable to entrepreneurs and amenable to risk-taking. Other communities in New York, large and small, were like that too. That is the business environment we need today to reverse the economic decline that has become too rampant throughout New York, particularly Upstate.

SETTING THE STAGE

- Upstate New York did not fully reap the benefits of the 1992-1999 nationwide economic expansion. We lagged in job growth, population growth and housing price increases.
- New York's recession did not "officially" end until August 2003. The nationwide recession ended in November 2001.
- Higher paying jobs are disappearing and being replaced by lower wage jobs in 9 out of 10 Upstate regions.
- The Upstate New York tax burden is 22% above the national average.
- Upstate New York property taxes are 55% above national norms.
- Upstate New York job losses are "structural" because they are permanent, not merely part of the normal business cycle.
- The Upstate New York population has declined, particularly among the 18-24 year-old segment.

MISSING THE MARK

There is increasing evidence that zone-based tax incentives designed to lure or retain businesses are not working. These tax breaks are failing to produce significant impact on job growth or investment. There is little independent monitoring of operations or results and such programs appear to be extremely expensive versus the return on investment.

- Only 10% of new jobs in a community are actually due to tax incentives.
- It appears that tax incentives are drafted to attempt to attract larger firms, which detracts from a focus on early-stage entrepreneurial businesses.
- Tax incentives must generate new jobs and new investment, not simply relocate existing businesses from area to area.
- Electoral politics can distort tax incentive economic development efforts.
- New York State's Empire Zones program is the subject of a critical audit by the State Comptroller.

If the State needs a tax-reduced oasis to rescue the business environment from the drought-like conditions that policymakers have created, then it is incumbent on us to take a critical look at the state and local regulatory policies that make "carve-outs" necessary to attract businesses in the first place. We need to make New York's policies business-friendly throughout, not just in selected zones. In the absence of fundamental change, such zone-based tax incentive programs are arguably worth maintaining. However, New York needs a new approach to spurring economic development—one that does not rely on the traditional (and largely unsuccessful) methods of the past.

GETTING INTO THE GAME

New York has many fundamental problems that must be corrected before economic revitalization will occur. The strategy to create the Entrepreneurial Economy is structured like a pyramid. Unless the fundamental problems that stand in the way of a vibrant economy are fixed, we cannot hope to build an Entrepreneurial Economy. A strong foundation is critical to our future, and this report expands on the fundamental changes that need to occur in New York State.

- New York continues to have some of the highest tax burdens in the nation.
- Medicaid costs place enormous pressure on state and county budgets.
- New York has the second highest energy costs in the nation.
- We have made strides in regulatory reform, but there is a need for "regional one stop shopping" organizations to assist start-up firms.
- Whether in the form of health insurance, unemployment insurance, workers' compensation or general liability, insurance costs have been increasing at alarming rates.
- New York must not only work to attract new businesses to the state, we must also focus on retaining existing businesses in the state.

CREATING A STATE OF INNOVATION

Some regions of the country are growing successfully. They are creating quality jobs and they are increasing the per capita income. Why? I believe the answer is that they have retooled their economic development activities to focus on the Entrepreneurial Economy. The Entrepreneurial Economy is technology-driven, knowledge-based and entrepreneurial. Entrepreneurship involves product and service innovations that are achieved through creativity and technology. Successful entrepreneurs create high growth businesses that may become the industry giants of tomorrow. They hold the promise of job creation, higher paying jobs, the commercialization of the innovation, the ability to create wealth and more capital.

There are reasonable policies that have a great likelihood of reversing Upstate New York's dismal economic trends and promoting growth through entrepreneurship. We must organize our economic development strategies around four new Entrepreneurial Economy principles:

Entrepreneurship & Innovation

- Promoting production of home-grown, high-growth firms.
- Catalyzing business improvements (especially centered around research labs and universities) that will boost productivity.
- Valuing collaboration by building networks to support entrepreneurs, business retention and guide state policies.
- Utilizing clusters and organizing economic development around existing business resources.

Workforce Development

- Increasing the number of science and technology graduates our economy needs.
- Improving the skills of incumbent workers.
- Addressing quality of life issues to attract new "creative class" workers, who are the real engines of entrepreneurial activity, to our region.

Infrastructure & Funding

- Broadband: expanding access to high-speed communications technology.
- Expanding access to financing, including early-stage capital, using pension funds, tax incentives and "angel" investor networks.

Accountability & Benchmarking

- Charting the effectiveness of our strategies.
- Delineating goals and a quantifiable method of measuring results.
- Measuring Return On Economic Development Investment (ROEDI).
- Reporting regularly and openly on progress.

CONCLUSION

New York State's economic development strategies and practices must be completely transformed if we are to participate in the Entrepreneurial Economy's potential for growth and prosperity. By following the recommendations in the attached report, New York can develop a business environment that will create good jobs and wage growth—an environment that fully supports entrepreneurship, risk-taking and innovation. If we fail to act at the state and local levels, New York, especially Upstate New York, will continue to decline.

INTRODUCTION

At the turn of the last century, the small, upstate city of Rochester, New York was poised to become one of the leading technology centers of the United States. Alive with entrepreneurial zeal, the city had become a center of innovation. Leading-edge technology was being developed here, by local business leaders whose names today are known the world over. By 1889 George Eastman had invented and patented the first commercially viable photographic film, replacing the earlier, cumbersome wet and dry photographic plates, and bringing photography to the masses. His *Brownie* camera became a global phenomenon, with its famous marketing slogan, "You push the button, we'll do the rest." By 1900, Eastman Kodak was the largest photographic manufacturer in the world, and the company has continued to make Rochester prosperous into the 21st Century.

In the 1860s, John Jacob Bausch, a German immigrant to Rochester, discovered a new method of making eyeglass frames out of Vulcanite Rubber, and the optics industry giant Bausch & Lomb was born. The company continued to lead the optics world with patented innovations in lenses, camera shutters, optical-quality glass and microscopes. By 1903, Bausch & Lomb was producing tens of millions of eyeglasses per year, and one-half million photographic lenses and shutters.

By the early 20th Century, Rochester, New York was home to many of that era's top technology firms, in precision instruments, printing and lithography, and even automobiles and airplanes.

Author's Note: *The ideas and recommendations put forth within this report are intended to address the overall economic conditions of New York State. However, in several sections—particularly in the statistical and anecdotal examples in the next section—much of the emphasis is placed on Upstate New York and its economy. This was done intentionally given that the economic conditions of Upstate New York are far worse than within New York City. In many cases Upstate New York is used to better evidence a problem or better illustrate an improvement. Still, the economy of our state is inextricably linked together and this report is predicated on the foundation that our future is dependent upon a healthy economic balance throughout New York State.*

The city's reliance on innovation continued well into the 20th Century. Rochester's entrepreneurial success story continued with Chester Carlson, Joseph Wilson and the Xerox Corporation. Carlson patented his xerographic electrostatic duplication process in 1939, but it wasn't until 1947 that he found a commercial backer in a small Rochester photographic paper company named Haloid. Haloid's Joe Wilson was convinced of the value of Carlson's new process. In 1959, the first Xerox 914 office copier was introduced and the new Xerox was on its way to becoming a leading worldwide manufacturer of copying products.

What do all these stories share? They show how a small, upstate city encouraged innovation, how it was open to new ideas and hospitable to inventors and entrepreneurs. The city and the entire region have benefited for decades from these inventors and the companies they founded.

Can New York State once again foster a philosophy and environment that produced such innovation and economic growth? As we begin the 21st Century with an economy in long-term decline, it is instructive to look back and learn from our past. It may well be that the qualities that helped make 20th Century Rochester an economic success may be the very same qualities that can revitalize the Upstate New York economy of the 21st Century—qualities like innovation; commercialization of the latest technology; and a community and government that values and supports inventors, entrepreneurs and risk-takers.

The story of how and why the Upstate New York economy has declined is only part of this report. If we simply stopped there and failed to offer a prescription for the future, we would be doing a major disservice. We in New York need to set a new course. We need to reconfigure our entire perspective on economic development. We must assess the methods we use to foster economic growth in order to create an environment that drives the retention and expansion of existing industries, the attraction of new business and the transformation of new ideas into companies with the promise of becoming the next Eastman Kodak, the next Bausch & Lomb, the next Xerox. These are the two main thrusts of this report:

- to provide an analysis of immediate measures needed to improve the Upstate business climate for existing businesses, and to attract new firms, and;
- to recommend a series of new strategies designed to catalyze an Entrepreneurial Economy and create a region and a state at the forefront of change. The path to prosperity and long-term economic growth is within our grasp, but we can not delay nor can we ignore the very serious warning signs around us. We must act decisively and we must act now.

I SETTING THE STAGE

Trends & Statistics on the New York Economy

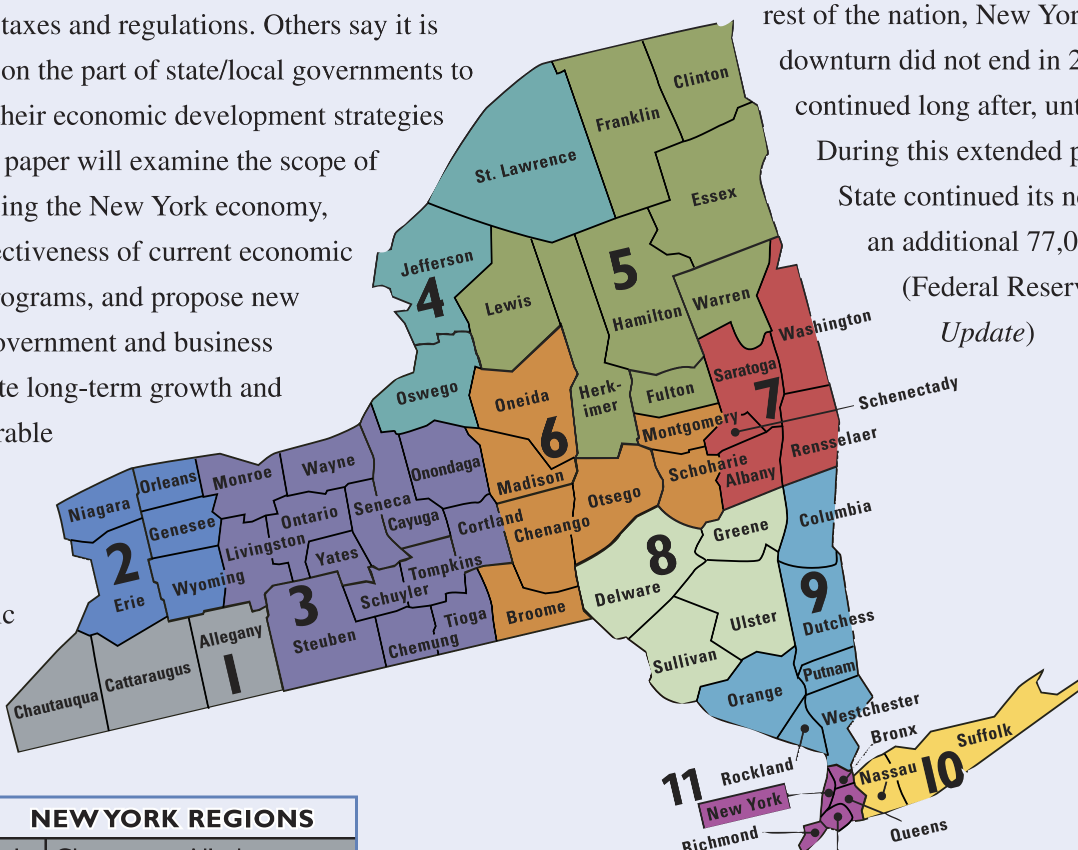
By the late 20th Century, New York State's economy, especially Upstate New York, had been harder hit by economic decline and was recovering more slowly than comparable neighboring states. Why did Upstate share so little of the 1990s national economic boom? Why has manufacturing continued its decades-long decline in Upstate New York? What is needed to reverse this trend?

Many experts and observers believe that the problems are due to state taxes and regulations. Others say it is due to a failure on the part of state/local governments to think and plan their economic development strategies creatively. This paper will examine the scope of the problem facing the New York economy, analyze the effectiveness of current economic development programs, and propose new strategies for government and business that will promote long-term growth and result in measurable improvements particularly in Upstate New York's economic situation.

JOB LOSSES IN UPSTATE NEW YORK

The most recent national recession, which began in March 2001, was officially declared to have ended in November 2001. During this time, New York State lost 189,000 jobs, 2.2% of total jobs, as compared with the national average of 1.3%. New York's manufacturing sector was hardest hit, losing 50,000 jobs in 2002 alone—the 6th largest decline in the nation, and the steepest of all our large and neighboring states.

Unfortunately our problems did not end there. Unlike the rest of the nation, New York's economic downturn did not end in 2001—it continued long after, until August 2003. During this extended period New York State continued its net job loss, with an additional 77,000 lost jobs. (Federal Reserve *Economic Update*)



NEW YORK REGIONS	
1	Chautauqua-Alleghany
2	Niagara Frontier
3	Finger Lakes
4	Thousand Islands - Seaway
5	The Adirondacks
6	Central Leatherstocking
7	Capital - Saratoga
8	The Catskills
9	Hudson Valley
10	Long island
11	New York City

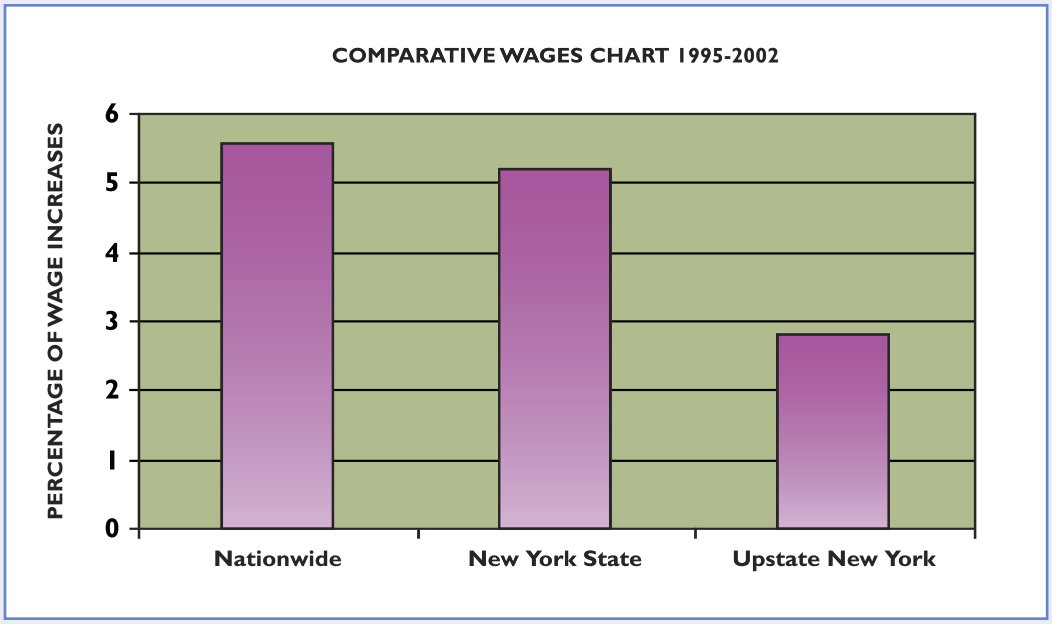
**For purposes of this report Upstate New York is defined as all parts of the state that are north of the 10-county New York City metro region encompassing the counties of: Suffolk, Nassau, Kings, Queens, Richmond, New York, Bronx, Westchester, Rockland and Putnam.*

Upstate New York's situation was even worse than the state as a whole because the region had not shared fully in the economic boom years of the 1990s. During the 1990s, Upstate bucked national trends in such key economic indicators as job growth, population growth and housing prices—all were down in most regions of Upstate New York.

While the value of homes grew substantially in the United States during this period, Upstate New York lagged well behind. In fact, during the 1990s, some Upstate cities actually saw housing prices fall: in Binghamton, housing prices were down 25%. Albany housing saw only a 0.2% increase, and Rochester a 8.9% hike—all well below the average "Rust Belt" housing price gain of 20%. (Zremski)

Not surprisingly, wage growth in Upstate New York has also lagged behind the rest of the state and nation. Between 1995 and 2002, wage growth in New York State as a whole was 5.2 % (compared to the nation's 5.6%). In the regions of Upstate, however, the lag was far more serious—less than or barely half the national gain. (Ways & Means Economic Report) Some of this lag is due to Upstate's ongoing shift from higher-paying manufacturing jobs to lower-paying service sector jobs. Because economists are increasingly coming to see wage growth, as opposed to simply job growth, as a key indicator of a region's prosperity, this presents a serious challenge to Upstate's economic future.

Sadly, economic decline is nothing new for Upstate; both the Rochester and Buffalo regions have been confronting the problem for decades. From 1960 to 1997, jobs in the Goods Production and Distribution sector fell 21% in Rochester, resulting in a loss of 33,000 jobs. Buffalo's steel and auto industry lost 70% of its employment during this period; Rochester's main photographic equipment industry lost 28% of its jobs. Three-quarters of all jobs in Rochester's communications equipment industry (much of which was defense-related) are gone, and about half of ophthalmic equipment jobs have disappeared. Overall, Rochester lost 23% of its manufacturing jobs between 1969 and 1997. Incredibly, Buffalo's losses were twice that amount. (Federal Reserve, *Economic Restructuring of Western NY*)

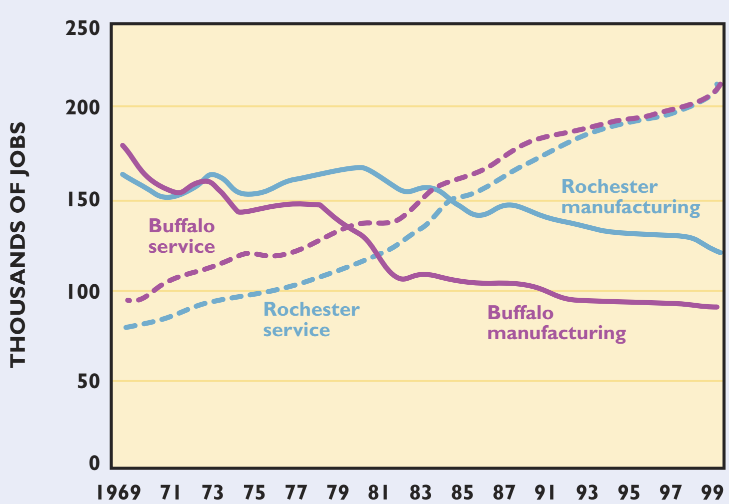


Throughout the 1990s, national employment grew by 15%. States that had shared an emphasis on heavy manufacturing were also beginning to turn around. But Upstate New York's employment grew only 1.2% during the 1990s, with the majority of job growth in lower-paying sectors, and the region continued to lose population, especially among the important 18-24 year-old demographic. (Zremski)

This trend of higher-paying jobs disappearing and being replaced by low-wage jobs has been going on for some time in Upstate New York, even during the 1992-2000 economic expansion experienced by the rest of the nation. The share of total jobs in the manufacturing industries (including Durables Manufacturing, Information Services, Professional & Business Services) in New York is decreasing—which is particularly unfortunate since these are the sectors where average salaries are very high: $54,537 in 2001. By contrast, the job share for sectors like Education, Health Care and Leisure/Hospitality has increased during this decade, but average wages in these sectors are much lower: just $34,081. The Fiscal Policy Institute concludes that the average wage in industries that are increasing job share is 38% less than wages in declining industries. This replacement of one manufacturing sector job by one service sector job results in an average wage loss of $20,500. This trend of a shift to lower-paying jobs was consistent in nine out of ten Upstate regions between 2000 and 2002, the period in which the most recent national recession began and supposedly ended.

The most recent news about job creation in New York State remains bleak. In August 2004, The Business Council of New York State's Public Policy Institute published data comparing job creation in industry sectors in all 50 states. This study found that, for the ten years ending in December 2003, New York ranked 41st of 50 states in creating private-sector jobs. Employment growth in the private sector in New York was up only 8.9% during this period, compared to a national growth rate of 16.5%. This analysis measures "taxpaying" private-sector employment only, excluding both Government sector and jobs in Health Care/Social Assistance which, though a private-sector, receives a majority of its revenues from taxpayer-funded programs like Medicare and Medicaid.

MANUFACTURING AND SERVICE EMPLOYMENT:
Buffalo and Rochester Metro Areas, 1969-99



Source: US Department of Commerce, Bureau of Economic Analysis, Regional Economic Information Systems

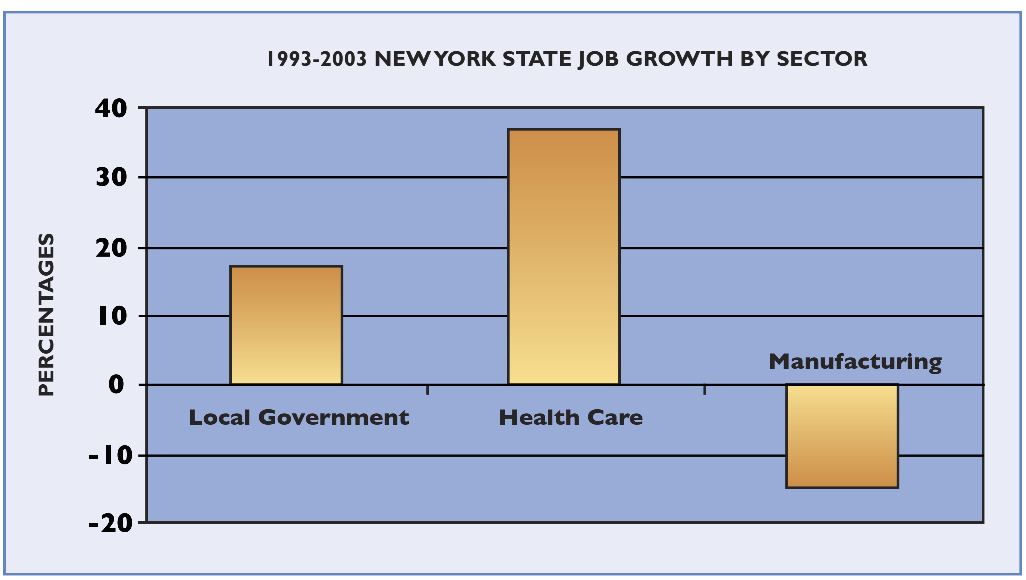
In the Manufacturing sector, New York lost 26.7% of its jobs between 1993 and 2003, compared to a national loss of 14.8%. In the Information sector, where New York placed highest, our level of employment growth ranked only 38th out of 50 states—5% job growth, as compared to the U.S. average 18% growth. New York ranks 42nd in job creation in the Professional and Business Services sector, and 48th in Trade, Transportation and Utilities.

Of course, it is not just New York that is experiencing manufacturing jobs loss. Nationwide, 15% of manufacturing jobs were lost between 2001 and 2003. Yet manufacturing output is on the increase, especially in the high-tech manufacturing sector. This is attributable in part to growth in productivity, and contributes to what economists call the "jobless recovery."

This dismal scenario shows few signs of changing anytime soon. Job creation in New York State continues to fall steadily below national averages. The quality of jobs available in Upstate New York is deteriorating, and with it the prospect of a middle-class lifestyle for many New Yorkers. (Fiscal Policy Institute, *January 2004 Update*) We need to examine why this is the case, and what can be done to reverse this downward trend.

STRUCTURAL CHANGE IN THE UPSTATE ECONOMY

The Federal Reserve Bank of New York cites as one key factor in New York's more negative experiences during the recessions of the past 35 years, "structural change in labor markets—a permanent reallocation of workers across industries and occupations." (Federal Reserve, *Economic Restructuring*) A structural change occurs when job losses in a particular sector are permanent, not merely part of the normal business cycle. Once lost, jobs do not return in these sectors; they can only be offset by new jobs in other sectors. Structural change always accelerates during recessions, and New York State experienced this phenomenon in the recessions of the 1970s, early 1990s and 2001. Specifically, New York State lost higher wage jobs in manufacturing sectors at an alarming rate, and has largely replaced them with lower-paying service sector jobs.



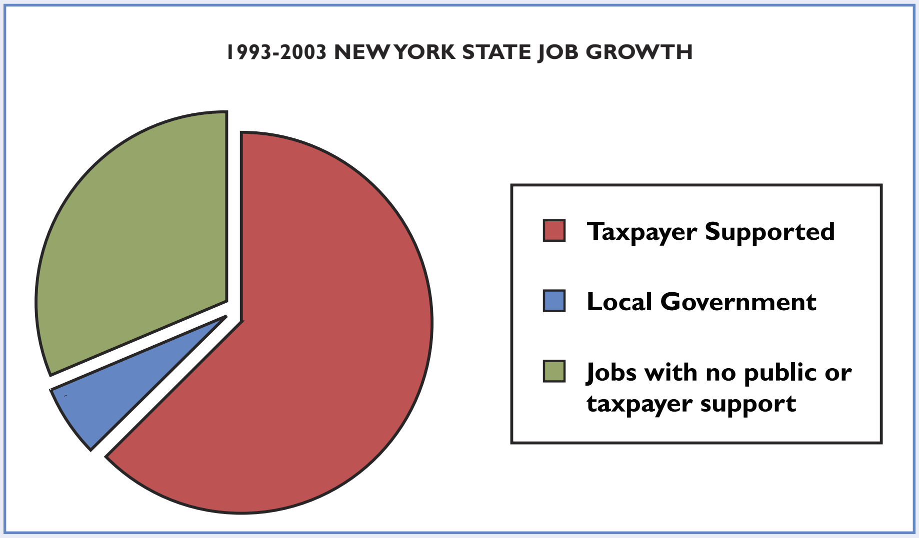
Increased competition from other U.S. regions and abroad is one cause of manufacturing job loss; another factor is the advances in technology that allow firms to increase productivity while reducing their workforce, especially unskilled labor, a trend that has been affecting New York State's economy for decades. During the recession of the 1970s, 30% of all jobs in the state were found in industries that were undergoing structural job change. During the 1990s downturn, 81% of all jobs in New York State were in industry sectors experiencing structural job losses; by the 2001-03 recession, 67% of jobs in New York were still to be found in the job-losing sectors. (Federal Reserve, *Economic Restructuring*)

The conclusion: New York State spends a longer time in recession, and its job losses are more severe and more permanent than the nation as a whole. Each time the state emerges from the various downturns, there are fewer jobs in manufacturing—and the job recovery we do experience is occurring more and more in lower-paying service sector jobs, or in job sectors tied directly or indirectly to taxpayer funding.

PUBLIC-SECTOR JOB GROWTH

According to the Public Policy Institute, in recent years New York State has added few net jobs that were not taxpayer funded, directly or indirectly. Between 1990 and 2003, New York State saw a small increase in employment, but the majority of these jobs came in just two sectors. The Local Government sector saw a 16.7% increase in employment, primarily in local education (although school enrollment grew only 12% during this period). Employment in the Health Care/Social Assistance sector grew by an astonishing 36.8% between 1990 and 2003, with the addition of 313,000 jobs. (*"Which Way Out?"*)

The Health Care/Social Assistance sector includes nursing homes, hospitals, home health care, rehabilitation centers, and doctors' offices. While most of these are private-sector jobs, the Public Policy Institute estimates that between 40% and 60% of the jobs are supported by tax revenues (i.e. Medicaid, Medicare) and by government contracts with service providers. Those that are not taxpayer-funded are supported by health insurance premium contributions paid for by employers. Furthermore, the fastest growing sub-groups in this sector are those that are taxpayer-supported, such as home health care (employment up 63%) and residential treatment (up 78%).



The calculations on the source of job growth in New York go as follows: between 1990 and 2003, the state experienced net job growth of 191,000. If, at a conservative estimate, 120,000 of these new jobs were taxpayer supported in some form or another, plus the 12,000 new local government jobs, then nearly 70% of all new jobs in New York State over the past 14 years are public-sector or tax-supported. This is a potentially disastrous problem for New York's economy, because it continues to increase the cost of living and doing business in New York State. Fewer private-sector tax paying jobs and more public-sector, tax-supported jobs in New York is not a recipe for long-term economic health or future stability. The problem, if unaddressed, will only continue to spiral. (*"Which Way Out?"*)

There are consumer services sector jobs being created in Upstate that offer hope and represent opportunity for the future. Upstate New York is becoming a producer of higher education, with universities in Buffalo, Rochester, Syracuse and Albany enjoying national reputations. (Unfortunately, as we discuss later in this report, the graduates of these universities are not choosing to remain in New York State.) In the category of Producer Services (non-financial), Rochester is developing specializations in communications services (where employment grew by 50% between 1997 and 2001) and computer-data processing. Rochester also added jobs in two manufacturing industries—fabricated metals, and miscellaneous plastics. Buffalo is developing companies specializing in biotechnology, and Albany is seeing growth in nanotechnology firms. Still, without dramatic change these isolated instances of growth will not offset New York's structural economic decline.

POPULATION IMPACTS OF LONG-TERM ECONOMIC DECLINE

Sluggish population growth is another indicator of the long-term economic problems confronting Upstate New York. While the U.S. population grew 13% during the 1990s, Upstate's population grew only 1.1% (excluding the Hudson Valley region, which experienced higher growth). Only the states of West Virginia and North Dakota grew at a slower rate than Upstate New York. Almost all the other regions of the country experiencing similarly low population growth were in areas of rural poverty. Rolf Pendall, of Cornell University and the Brookings Institution, who studied this issue, called Upstate "almost unique as a major urbanized region in decline." (*"Population Plateau"*)

900,000 households, containing 1.7 million people, moved out of Upstate New York during the 1990s; only 690,000 households moved in. Other Rust Belt states, with similar economic underpinnings, saw much higher growth; for example, Wisconsin's population grew 7% during this period.

All across Upstate, the population is in decline: Binghamton lost 4.6%; Elmira was down 6.7%, ranking them among the fastest declining metropolitan areas in the entire country. Buffalo has lost 6% of its total population since 1980. Rochester was the only Upstate metro area to gain during the 1990s, with population growth of 3.4%. (*"Population Plateau"*)

Even more troubling, the population decline is particularly acute among younger people. During the 1990s Monroe County lost 19.3% of its 18-24 year olds. Erie County was down 23%; Onondaga County down 21% and Oneida County lost 26%. Upstate is not only failing to attract young workers from around the nation; we are also failing to retain the students who do flock to our region to attend colleges and universities. This population group represents the future workforce—educated, talented and full of youthful initiative—and this resource is rapidly being lost. Job growth is further limited by the population drain of young people, especially in high-tech fields. In the past, Eastman Kodak has had difficulty finding enough skilled engineers to fill jobs in Rochester. A group of Syracuse high-tech companies came together to design a website to market the benefits of Upstate living—because they too need access to a broader pool of highly trained workers than currently exists here. (Zremski)

Perhaps the most disturbing statistic unearthed by Pendall, is that *prisoners* made up nearly 30% of Upstate's small population increase during the 1990s. 61 of 70 New York State correctional facilities are located Upstate, and 38 of these were built since 1980. Upstate cannot prosper, and will only continue to decline if our population growth rests on growing numbers of incarcerated, and their displaced families, and not on educated, motivated younger workers.

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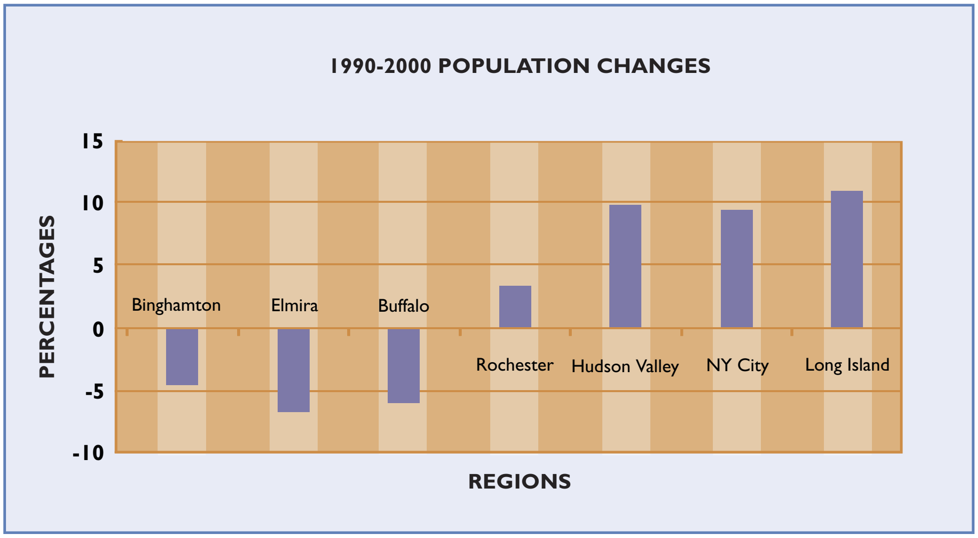
Clearly, Upstate New York is facing economic problems on many fronts. Job losses, population decline and trends towards lower-paying jobs plague the region. While state government has taken steps to boost economic development they have not reversed the downward trend. Why these policies have failed, and what kind of new thinking and new strategies are needed are the subject of the next sections of this report.



2 MISSING THE MARK

Analysis of Traditional Economic Development Programs

Like many states, New York has long relied on zone-based tax incentives to lure businesses to locate or remain here. But evidence increasingly shows this practice of using zone-based tax expenditures to spur economic growth is largely unsuccessful. Among the troubling issues raised by those who have studied traditional economic development policies are:

- Failure to show that indiscriminant, non-strategic tax breaks produce significant impacts on job growth or investment.
- Growing public mistrust that benefits are being manipulated for political purposes; with little independent monitoring of operations or results.
- Burdening taxpayers with extremely expensive programs, especially given the paucity of results.

In the absence of fundamental change, such zone-based tax incentive programs are arguably worth maintaining. However, New York needs a new approach to catalyzing economic development—one that does not rely on the traditional, and largely unsuccessful, methods of the past.

ZONE-BASED TAX INCENTIVES

The explicit purpose of traditional zone-based tax incentive programs is to focus state assistance to economically distressed communities, generally in urban areas, and promote job creation and private investment. These types of incentives were thought to be effective because they were narrowly targeted to particular geographic areas. Since the 1970s, state tax expenditures in this arena (including loopholes, credits, "carve-outs," and abatements) have grown into billions. One estimate is that state and local governments nationwide have invested between $40 and $50 billion in these traditional economic development programs. (Peters, Fisher) While designed to stimulate economic growth, numerous studies (econometric, survey and case studies alike) have found the billions spent across the country have had little or no positive impact on jobs or investment. Why are these zone-based policies so ineffective?

Academics from a variety of disciplines have been looking at these programs for the past decade, and have come up with a variety of reasons to explain their ineffectiveness. Peters and Fisher, in the *Journal of the American Planning Association* point out that, "the locational negatives associated with enterprise zones are seldom mitigated by the incentives offered." Another study concluded that tax breaks do little to attract investment to high unemployment areas. (Oden)

Research has also shown that these tax incentives, though expensive to taxpayers, are still too small to matter much to most firms. The average U.S. manufacturing company has payroll costs that are 11 times their tax costs, so that wage rates in different sections of the country are still going to be much more important to location decisions than tax incentives. Other factors such as land costs and the availability of a talented workforce are also more important to firms. Tax incentives, in these cases, are so insignificant that they often go to companies that would have chosen to locate in that particular state or region even without the tax break, rendering them completely counter-productive. In interviews with businesses taking part in a Minnesota economic development tax incentive program, one researcher found that "corporate managers … readily stated later that subsidies had not made a difference in the corporate decision" about location. Half of those interviewed said they were likely to have gone ahead with their location or expansion project even without the subsidy. One manager said he went after the subsidy largely to get his Board of Directors to go along with his decision—this was a large company, and the $250,000 subsidy was too small to be the definitive factor. Other businesses applied for program funding after their location decision had already been made. (Dewar)

Recent research on traditional economic development programs has led to a "new consensus" that only 10% of new jobs in a community are actually due to zone-based tax incentives, even if incentives were provided for all new jobs. Therefore, one can conclude that incentives work 10% of the time, and the other 90% of state and local tax expenditures to attract business is simply wasted money. (Peters, Fisher)

Some economists believe that because zone-based tax incentives are usually used to attract larger firms, they create a "market-distorting competitive disadvantage" for small and medium-sized enterprises. (Oden) Focusing mostly on larger, established businesses distracts focus from early-stage entrepreneurial firms, those with the potential to turn into high-growth companies if given even a relatively small level of support. Such companies are called "gazelle" firms because they generate 15-20% annual growth in their early years and can lead to spin-off firms, cluster growth and recruitment of talented workers–all of which are extremely beneficial to local economies. (National Governors Association Report)

In order to be considered successful, an economic development program that relies on tax incentives must generate new jobs and new investment, and not simply displace or relocate existing businesses within the region. Tax incentives that help firms producing "tradable goods," products that are distributed to other regions, are most

Legislative Highlight:
Empire State Film Production Tax Credit

New York State hosts the second largest concentration of motion picture economic activity in the nation. The film and television industry provides a tremendous economic boost through direct and indirect spending, tax revenue, and the notoriety that comes with a film production that occurs in New York State. New York City's film production industry employs 100,000 people and contributes an estimated $5 billion to the economy annually.

However, New York's place in this highly lucrative industry has been in jeopardy. Growing competition from other localities, particularly Canada, has led to the decline of the New York (and U.S.) feature film and television production industry—a phenomenon known as "runaway film production".

In 2004, New York State enacted tax credits in order to lure film production—and its economic activity—back to the state. The Empire State Film Production Tax Credit, originally introduced as legislation I sponsored (A.11595-A of 2004), was enacted as part of the 2004-05 budget (A.9560-B, Part P of 2004). The historic tax incentives lowered the costs of producing films in New York State and allow the New York film industry to utilize its competitive advantages in talent and locale to attract major productions. Specifically, the initiative provides $100 million over four years - $25 million annually—to provide a 10% credit on qualified production costs (below the line production costs only; actors/director wages and costs for scripts are not included) paid or incurred for films, television films or series, and similar productions. Additionally, New York City has provided $12.5 million annually in tax credits for production in New York City for a 15% total tax credit.

The Empire State Film Production Tax Credit serves as an example of a strategic, productive tax incentive that has already proved to be a quantifiable success by increasing economic activity in New York in an industry with "tradable goods" that would otherwise be lost.

useful to economic growth. Tax breaks for new retail or office construction, or for sports/leisure, however "rarely yield significant new jobs and income for a region." (Oden) The latter too often simply involve relocating economic activity within a metropolitan area such as from downtown to a suburban mall or office park. Such relocation creates no net economic benefit for the state as a whole, since any gain comes at the expense of other parts of the region or state. The state taxpayer is merely subsidizing the movement of business within the state, and the entire incentive cost is a state loss. (Peters, Fisher)

POLITICAL REALITIES

A case study of a Minnesota economic development program in the late 1980s shows many of the problems that individual programs face. Minnesota's "Small Cities Economic Development Program," also known as the Economic Recovery Fund, did not produce economic growth results in the economically distressed areas the program was initially designed to help. The program's explicit goals of reviving areas in economic decline were not met, due to technical problems with the design and administration of the program, as well as political problems associated with such programs. Tax benefits ended up being distributed to more prosperous areas of the state, with the state legislative leaders' districts getting a disproportionately large share; a study of the geographic distribution of tax breaks showed "influences on distribution that did not relate to economic distress." (Dewar) The Governor and legislative leadership made sure that all legislators got a "stake" in the program; by 1988, there was at least one Economic Recovery Fund project in every State Senate district outside of metropolitan areas, and one in most metro area districts as well.

Program administrators kept track of projects in order to assist legislators in the "politics of announcement" and other credit-claiming activities (Dewar). This "erosion of targeting" is common to many traditional economic development programs, and as it continues, states end up giving localities money simply to compete against one another for new investment—"simply subsidizing mobility." (Oden)

The imperatives of electoral politics can easily distort targeted economic development efforts. Projects must be seen to be speedily effective and useful for elected officials in re-election campaigning. Politicians, and the program administrators who are answerable to them, have little incentive to turn down any project request, no matter how incongruent with the program's original goals. This discourages serious scrutiny of project applications, and undermines any evaluation of whether the jobs would have been created even without tax incentives. Economic development programs often need long lead times to be successful; when short-term results do not materialize, the program can be criticized as ineffective. On the other hand, the pressure to produce impressive short-term results can lead bureaucrats and politicians to create a "public story" about program success that is vulnerable to media investigation. When exaggerations about job creation or investment are uncovered, the public's confidence in the program—and the government—declines. This can lead to altering or abolishing the program—and the cycle starts over once again. (Dewar)

"Horror stories" do exist about economic development tax incentive programs going particularly awry. For example, Alabama officials put together a $250 million tax incentive package for a Mercedes-Benz factory, which worked out to cost taxpayers $250,000 per job created. In Michigan, $80 million in tax breaks were awarded to a paper recycling firm that employed just 34 workers. (Oden) The state of Maryland paid the Marriott Corporation $60 million not to relocate its headquarters to Virginia, even though later information suggested that Marriott never intended to make this move. The quality of jobs generated through these programs are often mostly low-wage: in Minneapolis, one-half of all jobs created by firms getting tax breaks paid less than $8/hour. (Progressive Policy Institute)

NEW YORK STATE EMPIRE ZONES PROGRAM

Here in New York State we have our own history of problems in the Empire Zones program designed to provide tax incentive benefits to firms that locate or expand in designated economically distressed areas of the state. The subject of recent controversy, and a critical audit by the State Comptroller, investigators have discovered many flaws in this zone-based economic development program.

The State Comptroller's 2004 audit of Empire Zones looked at 11 metro area zones and found that 47% had created fewer jobs than promised in their program applications. 23% of firms in the program had actually lost jobs; 30% exceeded their jobs goal. A random sample of 2002 Business Annual Reports found that more than one-quarter of the businesses getting benefits had not even submitted the required documents to the state Department of Economic Development (DED). Further, the Comptroller found the DED has no specific job investment criteria for the designation of Empire Zones, and officials are not required to justify their decisions on zone designation. (Comptroller's Audit, 4/04)

A recent Assembly report on the Monroe County Empire Zone program raised concerns about the "suburbanization" of zones in Monroe County and the extension of zone boundaries to include vacant buildings and office parks. According to the report, the DED Commissioner used discretionary authority to approve boundary revision applications that fragmented existing zones, and were justified on the grounds that the buildings and office parks in these suburban areas were vacant. There were no assurances of job creation, retention or capital investment, which was the original intent of the Empire Zones program. Six of the vacant building boundary amendment beneficiaries (including several office parks) also received Qualified Empire Zone Enterprise (QEZE) extra benefits, which included property, business and income tax breaks. Five of these six were located in two of Monroe County's wealthiest suburbs, where controlling growth is more of a problem than stimulating it. (Assembly Committee on Corporations, Authorities and Commissions, March, 2004 report)

It is certainly legitimate to raise the question of whether adding vacant buildings to Empire Zones has any positive impact on job creation or capital investment. Such projects are certainly outside the spirit of the Empire Zones program and its explicit goals. And is the program efficiently administered? DED Commissioner Charles Gargano claims the per job cost of the Empire Zones program is $1,200; the Assembly Corporations Committee Chair counters that the cost could actually be as high as $500,000 per job. Whatever the true figure, the fact that such an important number is in wide dispute signals a serious problem with the Empire Zones program. (The Business Review, 4/27/04)

Experts largely agree on recommended reforms of Empire Zones and other similar tax incentive programs around the country. Needed reforms, some of which were included in the 2005-2006 State Budget, include:

- Zone-based tax incentive programs must be brought in line with a broader state economic development mission and strategy;
- A rigorous, standardized approval process must be put in place, with clear rules and little role for discretionary decisions by program officials;
- Pre-approval analysis of applications should include an analysis of the expected project benefits, including job creation goals;
- The New York State Department of Economic Development must publish regular, independently verified cost-benefit data on all tax incentive programs, and a formal cost-benefit analysis should be publicly available to show how the project will yield net benefits;
- Full public disclosure of all costs associated with business tax incentive programs, including direct and indirect costs;
- Reports from participating businesses and regional zone officials should be standardized for clarity and comparison purposes;
- Strict "clawback" agreements must be included, and enforced, in case beneficiary firms fail to live up to their end of the agreement.

It is illustrative that Empire Zones are necessary at all. If we need a tax-reduced oasis to rescue us from the drought-like conditions policymakers have created in New York State, then it is incumbent upon us to take a critical look at those aspects of our state and local tax and regulatory policies that make "carve-outs" necessary to attract business development. Shouldn't we strive to make New York's policies more pro-growth throughout the state, and not just in selected zones? Shouldn't we strive to make all of New York an "Empire Zone?"

Given the political benefits of zone-based programs and recent proposals to expand these tax incentives, it is likely that such tax expenditures will remain a part of state economic development policy. Reforms are vital to maintaining program integrity and even the hope of effectiveness. However, even with the recommended reforms in place, "evidence suggests that use of tax incentives for development is, at best, an inferior means to improve economic welfare" and we are still left with the crushing structural problems that make carve-out programs necessary in the first place. (Oden) New York State must address these issues in order to foster a more competitive business environment that will help reverse the exodus of companies from New York as well as lay the foundation necessary for Entrepreneurial Economy growth. These challenges are the subject of upcoming sections of this report.

3 GETTING INTO THE GAME

Addressing Business Fundamentals in New York

For too long, New York State policies have discouraged business development and forced many existing companies out of business or out of state. One observer of the state's business climate goes so far as to call the environment here "utterly toxic" to growth. There are a number of reasons for this perception.

At the conclusion of the 20th century, New York was second only to Hawaii in its combined state and local tax burden—a figure that is 25% above the national average. Workers' Compensation premium costs in New York are still the most expensive of all Rust Belt states, despite benefits to workers that are modest, at best. A large and extremely complex bureaucracy makes it more of a chore to start or expand a business here. In 1999, Cognetics, a Massachusetts forecasting firm, ranked 50 metro areas according to best places to start a business; Rochester ranked 50th; Buffalo was 43rd. (Zremski)

We cannot achieve economic revitalization without first dealing with these fundamental problems. The Entrepreneurial Economy, like a pyramid, is comprised of multiple layers. The foundation must be a healthy business environment. State government must design a supportive, inviting economic landscape by addressing New York's enduring problems, like high taxes, a suffocating debt load, rising insurance costs, an unbalanced tort system, expensive energy costs, burdensome local mandates and regulations. A strong foundation is critical to our future. While much more than this is needed to effect change and assure prosperity, without a sturdy economic base recovery is impossible. In the absence of significant reform, an Entrepreneurial Economy will remain elusive—a pyramid in ruins.

THE QUESTION OF TAXES

From the 1960s through the 1980s, state spending in New York increased 200%, and taxes were hiked to 60% above the national average. Much of this occurred during an era when other Rust Belt state were cutting taxes and government spending in an effort to attract new business development to replace declining older industries. For example, in Ohio, which was as hard hit as Upstate New York during the recessions of the 1970s and 1980s, Governor Voinovich cut the rate of state spending growth, kept state taxes below the national average and lobbied hard for foreign businesses to locate in Ohio. The results, especially when compared to Upstate New York's experience, were impressive: new manufacturing plants brought well-paying jobs back to the Rust Belt. Ohio saw a 13% hike in job growth during the 1990s. Other Rust Belt states benefited from similar strategies. Michigan, which also kept state taxes below the national average, saw job growth increase by 15% during this period. In Wisconsin, where corporate taxes were 20% below New York's by the mid-1990s, employment increased by more than 20%. Population growth in these states is beginning to rebound, and housing prices are back on the rise. (Zremski)

But the news for New York taxpayers, particularly Upstate, continues to be dismal. A recent study by the Tax Foundation ranked New York 49th on its State Business Tax Climate Index, which reflects five factors to rate a state's competitiveness: corporate income tax, individual income tax, sales and use tax, unemployment insurance tax, and state fiscal balance. In addition, The Public Policy Institute recently reported that "Upstate's businesses and taxpayers are paying state and local taxes that are about $5 billion to $6 billion a year higher than they would be if they were living in, say, Ohio." The August 2004 report claims that New York State income taxes are about 22% above national average, and Upstate property taxes here are actually 55% above national norms.

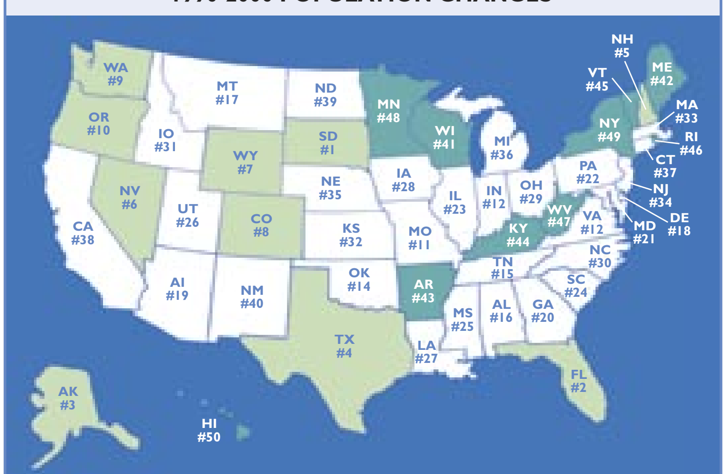
Local property taxes are a serious threat to economic growth in Upstate New York. Monroe County's property tax rate is 58% above the national average; Onondaga County's is 35% higher, and Albany County is 60% above national rates. Property taxes in New York as a whole are dramatically out of line with comparable states: for example, Michigan taxes exceed the national average by a mere 8%, while Ohio's tax rate is actually 5% below national average. (Public Policy Institute, *Let Upstate be Upstate*) According to Rolf Pendall, a "thorough, systematic readjustment of New York State's state-local tax system appears critical to the economic revival and repositioning of Upstate New York."(Pendall,"Transition and Renewal")

New York also needs to increase its share of federal resources. While appropriate public policy argues against a dollar-for-dollar return, New York's economic situation certainly merits greater federal support. Currently New York receives $0.85 for every federal tax dollar we send to Washington. State and federal officials must work together to secure a more equitable share of federal spending, and use this additional money to establish more federal research facilities in Upstate New York, as a spur to industry research, development and entrepreneurship.

Other recommendations for changes in state tax policies that would benefit the Entrepreneurial Economy include modifying state capital gains taxes for entrepreneurial reinvestment as a way of removing barriers to "serial entrepreneurship."

New York should also recognize the importance of the intangible assets of the Entrepreneurial Economy and

1990-2000 POPULATION CHANGES



TEN WORST BUSINESS TAX CLIMATES
TEN BEST BUSINESS TAX CLIMATES

Note: Virginia and Indiana were the only states with identical scores. Both rank 12th, and the next state ranks 14th.

Legislative Highlight: *Single-Sales Factor*

Revising our tax code to reward firms that invest their resources in New York is essential in building an Entrepreneurial Economy. A prime example of this is legislation (A.4138 of 2005) I sponsored that was recently enacted in the 2005-06 budget (A.6845/S.3671-Part A) that alters the method of computing strategic industries' corporate franchise tax liability in New York State. Under the previous structure, companies' New York profits are determined on a blended percentage of their New York-based sales, payroll and property. Companies with a heavy investment in New York paid higher taxes than competitors based primarily out-of-state. This allocation formula acted as a disincentive for companies that invest in New York and employ New York workers. Both for retention and growth, this needed to change.

New York will improve its competitive position by moving to a single-sales factor allocation method, which, when fully enacted, would calculate a company's New York profit (and by extension, its corporate tax liability) solely by using a percentage of its sales into New York. By enacting a single-sales factor, New York will reward private investment and establish a competitive advantage over other states. Such a tax policy will not only encourage and reward existing companies who invest in New York, but will enhance the state's ability to attract new high-tech companies. Research estimates that adopting a single-sales factor initiative will result in 133,000 new and retained jobs in New York State.

enact tax policies that treat them favorably. Traditional businesses enjoy many tax benefits on their tangible assets. By extending similar tax treatment to the intangible assets of firms steeped in technology and innovation, we give encouragement to economic growth in New York.

Our tax policy must evolve to reflect the changing world. These changes will help both to retain existing businesses and to spur the growth of entrepreneurial firms. For example, helping entrepreneurs by allowing deferred expenses and the conversion of tax incentives into cash will keep expenses down, which is particularly important during an organization's start-up phase.

MEDICAID

A recent report concludes that expanding local government payrolls and Medicaid spending are the two main culprits of high property taxes. Medicaid, a federal and state government mandate, puts enormous pressure on county government budgets, often giving localities little control over this spending. (Public Policy Institute, "How High is the Upstate Tax Burden?"). Reining in the skyrocketing costs of New York's Medicaid program might help improve the situation. But as long as state spending continues to grow through programs like Medicaid, New York—and especially Upstate New York—will continue to lag behind.

Medicaid is one of the largest public expenditures in New York State, costing $44.5 billion in state fiscal year 2004-05. New York State mandates that county governments and City of New York pay approximately one-third of the state's cost of Medicaid. This has created a fiscal crunch for counties where ballooning Medicaid costs force localities to cut essential services and raise revenue to meet the mandate—primarily by increasing property and sales taxes. In 2004, 54 of New York State's 62 counties raised property taxes, and some counties sought an increase in the sales tax in order to avoid double-digit property tax hikes.

We must adjust our budget and spending practices to rely less on the property tax to support entitlement programs such as Medicaid, where cost containment is difficult—if not impossible—at the local level. A solution to the Medicaid crisis remains an elusive and complex undertaking that is complicated by regional and political divisions. Meaningful reform that addresses escalating drug costs, system capacity, long-term care insurance costs and efficient service delivery is vital to the economic health of New York. Ideas like the development of a preferred drug list for Medicaid recipients, a program promoting more affordable long-term care insurance, a review of system capacity issues and the state takeover of local Medicaid costs merit serious consideration and further discussion. Some of these reforms were adopted as part of the 2005-06 State budget, but much work remains to be done.

EXPENSIVE ENERGY

High energy costs are another troubling feature of New York's economic landscape. Although New York State's energy costs were nationally competitive before the 1980s; by 1996, our utility costs had shot up to twice the national average. (Zremski) According to the Small Business Survival Index, in 2004, only Hawaii had higher electric utility costs than New York.

High energy costs are of particular concern to the Upstate region because of its dependence on automobiles and single-family homes instead of the more energy efficient mass transit and multi-unit housing typical of the metro New York City region. Additionally, many businesses cite energy costs as one of their biggest expenses, and keeping these costs down is essential to retaining, expanding and attracting businesses to New York.

New York State's Power for Jobs program has been successfully implemented to reduce electric energy rates for manufacturers and other businesses. Power for Jobs, however, by itself will not be enough to meet the growing demands for adequate, reliable power in the information dependent Entrepreneurial Economy. New York must address the need for greater energy supply, enhanced investment in the state's transmission and distribution systems, support for alternative fuel technologies, and sustainability through remanufacturing, reuse, and recycling.

REGULATORY ENVIRONMENT

New York has made strides in the area of business regulatory reform, but much remains to be done. Firms still report that establishing a business in New York State is more difficult than elsewhere. The president of a technology firm in West Seneca found it easier to establish a branch of his firm in the United Kingdom than in New York. In Britain, "it took only one face-to-face visit to set up the entire program … it was one-stop shopping. Unfortunately, I don't think we are there yet in New York." (Federal Reserve, "Manufacturing Matters")

New York State's own website devoted to starting a business says that some businesses may need to contact as many as six different agencies, four of these at the state level—the Governor's Office of Regulatory Reform, the Department of State Division of Corporations, the Department of Taxation & Finance, and the Department of Labor. These agencies do not routinely interact with each other, and the potential business owner must contact all four agencies separately.

Regulations that require firms to deal with multiple state agencies are confusing and time-consuming. Expanding the size of a business can also lead to burdensome paperwork and legal fees, and can discourage entrepreneurs from moving beyond sole proprietorship. Entrepreneurial start-ups lack the staff, time or expertise to take on a confusing bureaucracy. Owners of these firms may well choose to locate in states with the fewest regulations—which would not include New York State. This is counter-productive to our goal of encouraging new technology and other start-up firms in New York.

While New York State has experimented with "one-stop" shopping programs for businesses, the lack of coordination and consistency has undermined their effectiveness. New York should create sub-regional based "one-stop shopping" economic development organizations that would assist existing and start-up businesses in all aspects of their business. The organization would be charged with building relationships with existing businesses, assisting start-up firms, identifying and resolving issues and facilitating knowledge of and access to government programs and services, including permitting. Based regionally the organization's knowledge of the area would allow more effective incentive programs.

We must ensure that regulations do not hamper entrepreneurs or burden them disproportionately. Economic impact studies should be conducted on existing and new business regulations, and the special needs and concerns of entrepreneurs taken into consideration. One logical and easy step has been taken in Kentucky and North Dakota, where state business regulatory offices have been given deadlines by which paperwork must be processed. This new policy helps firms more accurately gauge how much time is necessary to secure the proper permits.

Finally, New York should reduce or eliminate rules that impede universities from owning equity stakes in for-profit firms arising out of their faculty and research in order to encourage commercialization of technology.

INSURANCE COSTS

Insurance is another item that is often cited as a contributing factor to the high cost of business in New York. Whether in the form of health insurance, unemployment insurance, workers' compensation or general liability, insurance costs have been increasing at alarming rates, further suffocating businesses already fighting tax and regulatory burdens that are among the highest in the nation. While recent premium increases are in part attributable to market factors; New York continues to add to the problem with antiquated laws and countless mandates. The following sub-sections focus on those areas where New York can, and should, do more to reduce the costs associated with escalating insurance premiums while still meeting the needs of New Yorkers.

WORKERS' COMPENSATION

The workers' compensation system in New York is notorious as one of the most expensive systems in the nation while providing some of the lowest benefit levels for injured workers. A recent report published by the Public Policy Institute illustrates this by identifying New York State as having the third highest average cost per workers' compensation case in the country at $11,793 per case. (Public Policy Institute, *Just the Facts*)

There is little dispute that the system needs significant reform. Businesses decry the cost of premiums, while workers criticize the low benefits. Unfortunately for the businesses paying the insurance, and the injured workers in need of support, reform of the system has remained in political limbo for years as competing interests argue over how best to solve the problem.

It is paramount for New York's political leaders to bring together the concerns of business and labor alike to improve the workers' compensation system, which is fundamental to our economic landscape. It makes sense to reduce the costs associated with providing security to injured workers while at the same time protecting and enhancing the benefits provided to those who suffer such misfortune.

TORT REFORM

The civil litigation system, commonly referred to as the "tort" system is often the target of business groups who describe it as being out of balance and in part, responsible for the rise in insurance costs, particularly in New York. Civil claims on issues ranging from medical malpractice to vicarious liability to the so-called "Scaffold Law" have drawn criticism for the adverse effect they have had on the economic condition of New York.

It is important to remember that the tort system is, at its core, an invaluable and indispensable instrument used to insure justice in cases of neglect or willful damage. However, there are several specific examples within the system where laws that are outdated, antiquated or simply unfair allow the exploitation of businesses at the expense of the overall economic and social good of our state. It is therefore reasonable—and responsible—to address and reform those unjust statutes without compromising the integrity of the system or the protections it affords the citizens of New York.

RETAINING EXISTING BUSINESS

Improving New York State's economic environment through reform of our tax, regulatory and tort systems will aid in the retention and expansion of businesses in our state. Without a concerted effort aimed at retention of New York's current employer base, the Entrepreneurial Economy will not have the opportunity to flourish. Without a strong foundation, the successful economic pyramid will not be built.

Legislative Highlight: *Scaffold Law*

The term "Scaffold Law" is commonly used to describe Sections 240/241 of the New York State Labor Law because it was enacted as protection for workers injured during a fall from a scaffold or raised elevation. This law, the only one of its kind in the nation, sets forth an absolute liability standard whereby a contractor or business owner is fully responsible for any fall-related injury. This absolute liability standard is a primary cause of the general liability insurance crisis facing New York's construction industry. Contractors across the state—particularly small contractors—are receiving insurance cancellation notices and being forced to seek coverage from non-admitted carriers with exclusions from coverage at exorbitant rate increases. Even worse, many long-standing, reputable businesses are being forced to lay off workers, or worse, close their doors altogether. Many insurance carriers who have withdrawn from the market are citing the costs associated with Scaffold Law claims.

I have introduced legislation (A.2946 of 2005) that would create, for qualified contractors, a comparative negligence standard. Giving the defendants in a 240/241 claim an opportunity to have their day in court will create needed balance in the system, lower the cost of doing business—and create more, safer, job opportunities for workers.

As we witness the further development of the global economy, New York companies continue to outsource parts of their businesses around the world where the costs of production are lower and the means of production are closer to markets. This has been one of the contributing factors in the decline of New York's economy. Enacting economic development policies that assist companies located in our state and will help them not only remain here, but consider job expansion.

New York State should establish a business retention tax credit program providing multi-year income tax credits to qualified employers committed to retaining a specific number of jobs or to making sizable capital plant and equipment investments to their existing locations. The program would include clawback provisions that would require companies to pay back the credit if their commitment was not met. In 2001, the State of Ohio enacted their successful Job Retention Tax Credit Program.

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New York will reverse its economic decline by first addressing the real deficits in its business environment and helping current New York employers retain jobs and ultimately look to expand in our state. But even as we begin the transformation of our economic environment necessary for retention and expansion, we must at the same time move forcefully to a new economic development strategy. Our strategy must be smart, focused, determined and consistently applied. This strategy, if adopted, will usher in a new Entrepreneurial Economy. Developing such a strategy is the subject of the next section of this report.

Legislative Highlight:
Manufacturing Equipment Tax Exemption

I have authored legislation designed to further promote and encourage business retention in New York State by clarifying certain sales and use tax exemptions for manufacturers of equipment (A.1138 of 2005). The proposal would (1) exempt computers and software used by a manufacturer in the course of production of his business product; (2) exempt energy costs related to maintaining a comfortable manufacturing environment; and (3) exempt tooling that is reconditioned as a service.

4 CREATING A STATE OF INNOVATION

Unleashing the Power of the Entrepreneurial Economy

All across America, states spend billions annually on firm-specific economic development incentives, many of which experts characterize as “expensive and usually wasteful.” Rust Belt states and other manufacturing regions have experienced significant declines, which traditional economic development programs have not reversed. Yet some regions of the country are growing their economies at record rates. What are these regions doing that New York is not? They have successfully retooled their economic development activities to create what I call the Entrepreneurial Economy. This Entrepreneurial Economy is technology-driven, knowledge-based and innovative. Increasingly, business leaders and policymakers are coming to realize that the high-wage jobs of the future will come from fast-growing entrepreneurial firms.

These forward-looking states and regions understand the goal of economic development efforts must be to create a business climate in which existing and emerging firms can boost productivity and innovation. Those states that provide such a climate will significantly outperform those that offer only lower-wage jobs or even lower taxes.

Economists and experts increasingly agree that the true measure of economic growth and prosperity for a region should not be solely judged by the number of jobs created, since many of these are frequently low-wage jobs with little chance for advancement. They argue further that it is the quality, not the quantity of jobs that is most important, as identified by the Progressive Policy Institute in their 2002 New Economy Index. In my view, aggregate growth in income for New York State, as well as per capita income and population growth should be the determinant of a successful economic development effort. States cannot attract jobs by simply being the cheapest location—a low-cost region with a poor quality of life and minimal infrastructure is not an effective recipe for economic growth. By contrast, public-private partnerships and other government efforts to boost high technology, innovation and entrepreneurship are much less expensive to operate, and have a much greater likelihood of producing long-term regional growth than tax cuts alone.

What policies, then, have the greatest likelihood of reversing New York’s dismal economic trends? Creating real economic growth will require a new way of thinking about economic development—abandoning the failed ideas of the past and implementing new 21st Century strategies. Therefore, this report recommends organizing economic development strategies around the following four new **Entrepreneurial Economy Principles**:

1. ENTREPRENEURSHIP & INNOVATION

- Promoting production of home-grown, high-growth firms.
- Catalyzing business improvements (especially centered around research labs and universities) that will boost productivity.
- Valuing collaboration by building networks to support entrepreneurs, business retention and guide state policies.
- Utilizing clusters and organizing economic development around existing business resources.

2. WORKFORCE DEVELOPMENT

- Increasing the number of science and technology graduates our economy needs
- Improving the skills of incumbent workers.
- Addressing quality of life issues to attract new “*creative class*” workers, who are the real engines of entrepreneurial activity, to our region.

3. INFRASTRUCTURE & CAPITAL

- Broadband: Expanding access to high-speed communications technology.
- Expanding access to financing, including early-stage capital, using pension funds, tax incentives and "angel" investor networks.

4. ACCOUNTABILITY & BENCHMARKING

- Charting the effectiveness of our strategies
- Measuring Return On Economic Development Investment (ROEDI)
- Reporting regularly and openly on progress.

These principles form the second tier of the Entrepreneurial Economy pyramid. While it is important to note that New York State is currently utilizing elements of some of these principles, this is not enough. In order to harness the prosperity of the Entrepreneurial Economy, *every* policy and program must be measured against these four principles. We will examine these principles in more detail in the following section of this report.

1. ENTREPRENEURSHIP & INNOVATION

Rather than trying to compete globally with low labor costs, the New York State economy must instead concentrate on realizing its advantages in the creation of new ideas and innovative technology—in a word, entrepreneurship. In addition, we must focus on fostering new, high-growth business formation in order to achieve real Entrepreneurial Economy prosperity.

PROMOTING HIGH-GROWTH FIRMS

Research demonstrates that entrepreneurial activity is closely tied to a state or region's level of economic growth. In fact, the 1999 Global Entrepreneurship Monitor (GEM) stated that levels of entrepreneurship may account for as much as one-third of the variation in economic growth among regions, states and nations. But despite the widespread consensus among those who study economic development issues, state and local governments are only now coming to recognize and understand the importance of promoting entrepreneurial enterprises.

A generally agreed upon definition of entrepreneurship is the ability to amass the necessary resources to capitalize on new business opportunities; and an entrepreneur is one who combines smart business practices with innovation, without regard for resources under their control. (National Governor's Association *A Governor's Guide to Strengthening State Entrepreneurship Policy;* and Kayne) Successful entrepreneurs create high-growth firms that may become the industry giants of tomorrow. Entrepreneurial activity is not bound by the size of a business or by a particular industry segment. Even larger firms like Eastman Kodak and Xerox are re-developing their sense of entrepreneurship that in an earlier age catapulted them to greatness. Entrepreneurship is a state of being—a way of incorporating innovation into new business opportunities.

Why are such firms increasingly coming to be seen as crucial to a region's economic growth? In the U.S, entrepreneurial firms created 60% of all new jobs between 1993 and 1997. The fastest growing of these firms, called "gazelles," can expand at a rate of 15% to 20% per year in the first five years, providing the fuel for an expansion of business cluster growth in a region. (National Governors Association, *Guide to Entrepreneurship)* Additionally, entrepreneurial enterprises generate spin-off firms; create higher-paying jobs; act to commercialize innovation; and create new wealth and more capital for future investment and growth.

Despite the recognized economic development benefits of creating what Austin, Texas Mayor Kirk Watson calls a "habitat for entrepreneurship," many states have underdeveloped policies and programs for new business formation. They continue to place greater emphasis on old models of business retention and recruitment, with little focus on entrepreneurial individuals. This is particularly noticeable in the aftermath of the technology bubble's bursting and the 2001 recession—investors and states have been wary of risky new investments. A 1998 survey by the National Association of State Development Agencies found that support for entrepreneurial programs lagged far behind all other areas of economic development spending, making up less than 1% of the more than $2 billion spent by states and local governments annually. Entrepreneurial development was the lowest of 15 spending categories; the average state was investing just $400,000 in this effort. Fortunately, this attitude is beginning to change.

Even states, like New York, that acknowledge the importance of entrepreneurship still have difficulty differentiating between entrepreneurial firms and small businesses. While small business remains a key sector of our economy, and the number of start-up businesses has risen in recent years, it is important to note their distinction from entrepreneurial firms. According to the 2003 GEM study, less than 20% of new businesses have the innovative "spark" to generate jobs; 40% are single-employer firms with no plans to add employees. And 60% of new start-ups are replicating existing goods or services; while vitally important, these are not the only business ventures necessary for high growth.

Those governments that do understand this distinction also recognize that entrepreneurs have different assets and different needs. Entrepreneurial start-ups require different investment and debt strategies, and unique capital needs. They have a much greater need for research and development investment, both public and university-funded. In turn, these firms represent an enormous potential for high-growth, and can provide a higher rate of return on public investment than traditional firms. State policymakers who recognize these distinctions are much more likely to put in place economic development policies specifically designed to promote entrepreneurial growth. And such policies can succeed. Experts advise that, through laws, regulations, investments and assistance programs, states "can have considerable impact on where entrepreneurs choose to establish new enterprises and the probability that those enterprises will succeed." (Kayne)

These efforts can easily go wrong, however. Even if we in New York State were to give up all our traditional economic development policies of the past, and transfer focus and dollars into entrepreneurship, we cannot expect to instantly build the next Silicon Valley. Pulling together a hasty plan and producing a fancy brochure is simply dabbling in entrepreneurial policy; without an understanding of the dramatic change in culture necessary for success. These half-hearted efforts usually fail, or produce only very modest results. (Pages)

Then how can New York best encourage the development of high-growth, innovative enterprises? How can we fashion an Entrepreneurial Economy policy that supports the start-up and expansion of new businesses that create new goods and services using innovative technology and processes. How can we foster new business models that result in the opening of new markets?

In the first place, government officials must accept that building an entrepreneurial business climate takes not months but years. State policies and resources must be diverted away from the more immediately gratifying results of traditional business recruitment activities—and instead commit to staying the course over the long haul.

A successful entrepreneurial policy also requires a shift in focus away from emphasizing specific firms, and towards an emphasis on fostering individual, homegrown entrepreneurs who can generate important economic growth for the state and its regions. This change in the culture of economic development does not happen quickly, nor are its results immediately apparent. For example, the renowned North Carolina Council for Entrepreneurial Development began operating in 1984, but it was not until the mid-1990s that significant growth in local entrepreneurship become apparent. (Pages)

In order to create economic development policies that encourage and support entrepreneurship, New York must address such questions as: what business sectors or clusters should be targeted? How can we learn more about the existing barriers to entrepreneurship around the state, and how can we better learn to recognize opportunities? Who are the stakeholders that must be recruited into this effort? How will our efforts be monitored and evaluated? (Hart, Kennedy School of Government presentation)

Our economic development activities in New York must recognize the unique needs and benefits of entrepreneurs, and comprise policies specific to those needs. It is wrong to assume that entrepreneurs will benefit sufficiently from existing development programs like zone-based tax incentives or loan guarantees. Start-up firms require a top level of human capital—people with education and talent, what Richard Florida calls the "creative class." Entrepreneurial development benefits immensely from university-industry research collaboration and technology commercialization, from government and academic business incubators, and from government programs that encourage so-called "angel investors" to make seed and early-stage capital available.

But most of all, entrepreneurs can benefit from public-private networks and collaborations that help guide government policy as we work to create the most supportive environment for high-growth enterprises.

INNOVATION & TECHNOLOGY: BUSINESS PRODUCTIVITY

All successful firms, whether established or start-up, small or large, must innovate in order to thrive in the modern global economic environment. Innovation is the key to increased productivity growth, and was one of the hallmarks of the economic boom of the 1990's. Growth in productivity from technology and innovation, in turn, drives prosperity and higher wages, and creates the new products and services that capture global market share. (National Governor's Association, *Science and Technology Report*)

What the Progressive Policy Institute calls the "New Economy" is driven by innovation, a "transformation of all industries and the overall economy." This transformation is produced by such factors as science and technology; efficient and dynamic capital markets; world-class education and skills; organizational innovation; economic "churning" and entrepreneurship; continuous global competition and volatile labor markets. The top two states in the PPI's New Economy Index, Massachusetts and Washington State, scored highest in the number of technology firms, a high concentration of knowledge workers, a solid "innovation infrastructure" and a healthy rate of what is called "creative destruction"—the measure of an economy's adaptability, through the rapid shedding of old or unworkable ideas in favor of innovative methods and procedures.

According to a 2002 Progressive Policy Institute Report on the New Economy Index, New York is in fairly good shape, ranking 10th out of 50 states. New York State also scores well on indexes of creativity and information technology. In measuring inventions per capita, a key indicator of innovation, New York State exceeds the national average by 15% per year, and has done so since 1974. The Rochester region is the source of much of this innovation, due to the numerous patents generated over the years by industrial giants Kodak and Xerox. Rochester also ranks 4th among the top 50 metropolitan areas in technology; Buffalo is 14th. Clearly, many of the factors driving business innovation are already in place in New York. (Federal Reserve Bank of New York, *Economic Restructuring*)

In order to support this climate of innovation, state and regional economic development policies must also be flexible, adapting quickly to create conditions under which innovation can occur. Regulatory and other programmatic barriers must be removed, and a new model of governmental policymaking developed—one that is decentralized, non-bureaucratic and empowering of innovative institutions and enterprises.

One program underway in New York and other states uses state research and development funding to help establish “Centers of Excellence”—university-based facilities focusing on one or more industry sectors or clusters. The goal of creating an environment that supports business innovation and entrepreneurship can best be achieved by further increasing our investment in cutting edge research programs and facilities. This new funding can be redirected from traditional economic development spending, and it can also serve as a business recruitment tool. Businesses that spend heavily on research and development (R&D) tend to locate in regions where there is already a serious commitment of public research dollars. A greater state investment in R&D can be leveraged to help regional institutions better compete for both federal and private research funding. (National Governor’s Association, *Science and Technology Report*)

Some of New York State’s research funding is already targeted to specific industry sectors and business clusters that support long-term development strategies. But the state commitment and focus needs to be strengthened, particularly Upstate, to foster stronger collaboration between emerging business clusters and state universities and colleges. We need to set clear goals for state universities on economic development and technology commercialization, and tie research dollars to those goals. One recommendation would be to require SUNY and private colleges to establish External Advisory Councils, made up of industry leaders and faculty, to look at business and research trends, and create joint strategies to promote innovative research and commercialization. Universities should establish closer relationships with industry, and faculty members should be encouraged to become entrepreneurs, with equity positions in the companies that develop from their research efforts. New York State could also provide greater tax incentives for established firms subcontracting their research and development through state universities. Because private firms do not get the exclusive benefit of such research, many companies do not invest in academic research as fully as they might. (Progressive Policy Institute, *New Economy Index*)

An example of a large-scale public/private R&D partnership is the North Carolina State University “Centennial Campus,” a ‘technopolis’ of university researchers, government R&D facilities and business incubators all located in the same setting. Centennial Campus is home to 100 large and small businesses, government agencies and university departments. Here they share access to university research labs and equipment, with the faculty and graduate students staffing and maintaining the labs. In this setting, partnership opportunities develop between companies and academic researchers; research is more likely to be targeted to specific company needs, and technology

Legislative Highlight:
Academic Collaborative Districts

Collaboration between higher education institutions and businesses stimulates private investment, business development and job creation. The state should recognize the importance of colleges to the economy by promoting development at locations in and around colleges. I have introduced legislation (A.4950 of 2005) that would establish Academic Collaborative Districts on or near college property. The program will provide technical assistance to match business needs with the assets and research available at higher education institutions, with the goal of creating new jobs and attracting new business to New York State. At the same time, the program will provide tax incentives and other benefits to businesses that choose to participate.

New York's colleges are ideal places for this sort of program. Combined employment at public and private colleges and universities in New York State grew 27 percent between 1995 and 2002, making it one of the fastest growing sectors of the economy, according to the New York State Department of Labor. In addition, New York's higher education institutions attract a substantial number of federal research and development funds that come into the state, and New York's colleges are home to world-class researchers and research facilities.

This program would also help reverse the exodus of the 18-24 year old age demographic—a problem so vexing it has often been called New York's "brain drain."

commercialization is enhanced. Undergraduates and graduate students also have the opportunity to get valuable hands-on training and exposure to entrepreneurs. Such a large-scale project should be considered for one of the SUNY University centers. (National Governor's Association, *Science and Technology Report*)

Another state economic development program designed to encourage innovation is Michigan's NextEnergy Initiative, with a goal of positioning Michigan as a leader in alternative energy technology and research. Part of that state's long-term economic development strategy includes the recognition that fuel cells and other alternative energy sources are expected to eventually replace the internal combustion engine; the NextEnergy Initiative is part of the effort to place the automotive state at the head of this emerging technology. The NextEnergy center will fund industry-university research, serve as an information clearinghouse, and help raise scholarship dollars to increase science and technology enrollment at state universities.

One important reason why New York State needs to increase its R&D commitment to the state's universities is that federal research support is declining. Once motivated primarily by defense concerns, the end of the Cold War saw cutbacks in federal research dollars. As of 2000, the Federal government funded 58% of university R&D, down from 73% in the 1960s. The top 100 universities in the U.S. receive 80% of all federal dollars, with the majority of this funding going for life sciences research; there is far less support for industrial or engineering research. Federal support for construction and maintenance of research labs is also declining. The National Science Foundation found that between 1988 and 1998 the amount of laboratory space needing repair or renovation increased in every science and engineering field. Failure to adequately fund research labs will keep U.S. universities and industries from being truly cutting-edge, and makes it harder to recruit the top faculty, students and private researchers who are most likely to generate innovation. (National Governor's Association, *Science and Technology Report*)

In New York, higher education and healthcare provision are two sectors where Upstate particularly competes effectively, but these are not enough. We need to expand further to grow more innovative export industries, producing the traded goods and services that bring outside wealth to New York, such as photonics and life sciences. (Pendall "Transition and Renewal")

Creativity and innovation, according to George Mason University Professor Richard Florida, are now the decisive sources of competitive advantage. In virtually every industry sector, from automobiles to apparel to information technology, the long-term winners will be those who create new products, services and ways of doing business. According to economist Paul Romer's "New Growth Theory," ideas are potent economic goods—they are reusable and increase in value with greater use. We who are concerned about the economic future of New York must acknowledge this about the changing economy, and make sure our strategies and policies are fully focused on supporting innovation in every sector of our economy. (Florida, Rise of Creative Class)

COLLABORATION: BUILDING & VALUING NETWORKS FOR ENTREPRENEURS

According to David Hart of Harvard's Kennedy School of Government, government economic development policymakers and administrators lack both the expertise and the power necessary to meet all the needs of entrepreneurs. Rather, networks of stakeholders must be developed, with state government acting as both facilitator and participant. Guidance about what entrepreneurs need to flourish, technical assistance in crafting workable business plans, and distribution of knowledge can all be accomplished through networks of private sector mentors. This process is what Hart calls governance, "a conscious, collective action that extends beyond government, deploying the capacities of businesses, community groups and academic institutions" to support an entrepreneurial, high-growth business environment. (Hart)

The idea of networks as a means of fostering entrepreneurship has gained wide support not just among academics but also from think tanks and governmental associations—for example, economists at the Federal Reserve, the Progressive Policy Institute and the National Governors Association. The Federal Reserve Bank of New York advises that firms hoping to break into a high-growth phase need help not just with tactics, but with business *strategies*—but that kind of advice and assistance is just what government is ill-equipped to provide on its own. Instead, government should help build the public/private networks of stakeholders, joining business leaders with government officials, bankers, realtors, university researchers and entrepreneurs themselves, to build consensus around policies and practices, and provide the specific expertise and mentoring that start-up firms require. (Federal Reserve Bank of New York, *Manufacturing Matters*)

Such networks are not always easy to build. Early-stage entrepreneurial firms are usually quite small and lack the time, expertise or interest that larger established firms have in government policy. Entrepreneurs are often characterized as 'lone wolves,' highly individualistic and scornful of government. This attitude must change. Entrepreneurs must be shown the advantages of networking—for their immediate benefit as well as for longer-term policy implications—and enticed into participating, if such networks are going to be effective in guiding us toward government policies that will support entrepreneurship. (Hart)

A successful network will help identify clusters or sectors of the economy where entrepreneurs can prosper. It can provide the business assistance and mentoring that start-up firms need to attract capital investment. State and local governments cannot and should not try to achieve these results in a "top-down" manner; if they do, failure would likely result. But by coordinating networks of stakeholders and facilitating the partnerships, state and local governments help develop a business environment in which high-growth businesses can thrive. (Hart)

There are numerous examples of successful state-sponsored networks supporting entrepreneurial development. In the nine-county Finger Lakes region, High Technology of Rochester (HTR) is an independent, not-for-profit organization focused on high technology economic development initiatives. Their goal is to stimulate growth in the tech-based business sector by identifying, developing and incubating new business opportunities, as well as providing training, consulting and connections to key resources. This organization also supports a 50,000 square foot business incubator, serving more than 50 companies since 1997. HTR receives funding from the NYSTAR program, but is a privately run network.

North Carolina's Council for Entrepreneurial Development is one of the nation's biggest and oldest such networks. The Council provides no direct technical assistance to businesses, but instead sponsors various peer and mentoring networks where members can interact and get specific assistance. One value of the Council's 'outsourcing' of assistance programs to private-sector providers is that the network can concentrate on the broader objectives of attracting capital, building further cluster-specific networks and identifying new markets. (Pages)

Another example of a decentralized network is the Northern Virginia Netpreneur Program, which focuses on individuals in Internet-related businesses in the Washington, D.C. area. The program, which had 10,000 members at its peak, hosts events and on-line networking, and is privately funded. (Pages)

There is more direct governmental involvement in the Arizona Governor's Strategic Partnership for Economic Development. Here, the Governor's office has directly involved entrepreneurs and executives from emerging tech-based industries to help guide state policymakers, as well as promoting business-to-business networking. (Hart)

In Michigan, the Life Sciences Corridor steering committee helps set entrepreneurial and high technology state policies by tapping the expertise of entrepreneurs, venture capitalists, established firm CEOs and university researchers. (NGA Entrep) Connecticut's Cluster Initiative promotes business networking in clusters that trade with government. Tennessee's State Technology Corporation expands public/private partnerships to commercialize homegrown technologies as well as making seed capital available to start-up entrepreneurs. (Kayne)

A final example is Wisconsin, where the Governor's Business Plan Contest is aimed at the most fledgling of entrepreneurs. Its mission is to encourage entrepreneur "wannabes" in the creation, start-up and early growth stages of high growth businesses in Wisconsin. As part of a six-month competition, entrepreneurs submit business plans, receive mentoring and feedback, and compete for up to $20,000 in seed capital. Tom Still of the Wisconsin Technology Council, which sponsors the contest, explained that developing an effective business plan is a crucial first step for entrepreneurs. "The three dozen or so judges in the Governor's Business Plan Contest will not only 'score' each plan numerically, but provide written feedback on what they liked or questioned. A pool of volunteer mentors will be available for those contestants who survive the first round." (Still, "Business Plan Contest Taps Into Wisconsin's Entrepreneurial Spirit") The winners of the contest end up with a peer-reviewed business plan, and the enhanced ability to attract the venture capital investment they need to grow their businesses.

The most important factor linking all these examples is the long-term commitment by business and government that each represents, especially given that such efforts can take years to produce quantifiable results.

Another type of program that supports entrepreneurship is the business incubator concept. Defined as an economic development tool to accelerate growth through an array of business support resources and services, its goal is to nurture start-ups to eventually produce firms that can successfully stand alone. Incubators leverage government research dollars (federal and state) to provide start-ups with affordable rental space, access to labs, shared office services and equipment as well as technical assistance and financing advice. (National Governors Association, *Guide to Entrepreneurship*) While not technically an incubator, the Center for Integrated Manufacturing Studies (CIMS) at Rochester Institute of Technology was founded in 1992 and represents "a dynamic collaboration of in-house technical experts, as well as academic, industry and government resources." (CIMS Mission Statement) High Technology of Rochester (HTR) also operates the Lennox Tech Enterprise Center, where client companies pay rent and receive business assistance services along with office space. In a recent white paper, HTR called for the establishment of more business incubators in the Finger Lakes region, including wet labs for biotech research; they also recommended that the area's incubators be centrally coordinated.

Business incubators are one key way to fostering homegrown entrepreneurs. Another is to promote private

Legislative Highlight: *Orphan Technologies*

I developed together with High Technology of Rochester (HTR) an innovative idea to commercialize undeveloped technologies also known as Orphan Technologies. Many of New York's larger businesses invest money into research and development to establish new technologies, but due to competitive pressures or changing focus and direction many of these technologies are not utilized. We theorized that since the Rochester region has a high level of research and development activity in electronics, optics, photonics, imaging, and software development and a substantial infrastructure for manufacturing and business support it could create a Commercial Development Organization that would link small businesses with these Orphan Technologies.

I secure $100,000 in state funding to help bring together the large companies and small entrepreneurs in the area to further develop these Orphan Technologies for commercial use. This collaboration benefits the companies that developed the unused technologies by delivering royalties through licensing agreements and the entrepreneur that receives licensing and commercialization rights. The community benefits as well through new jobs and enhanced economic activity.

In 2003, Lumetrics took one of Eastman Kodak's Orphan Technologies and developed DI 330 Optiguage Film Thickness measurement system. With in four months Lumetrics was already generating revenues. (High Tech of Rochester, HTR Highlights) Lumetrics is currently a tenant at the HTR incubator and is continuing to design, manufacture, and market optical medical instruments. Lumetrics is a perfect example of the success that can happen when area companies, entrepreneurs and government work together.

sector efforts to turn university research into products and services—the rapid deployment of knowledge known as technology commercialization. In order to accomplish this, state university faculties must be encouraged to pursue entrepreneurial ventures and collaborations with industry. Promoting this technology transfer can be done through easing of state regulations on licensing agreements and intellectual property rights. We must work to change the long-standing idea that academic research must be kept separate from industry commercialization—or that research faculty should not share in the profits from their efforts. One important example of an "outward-facing research institution" is the University of California at San Diego's CONNECT program, established in 1985 to link entrepreneurs to necessary resources, technology, research and partners. (National Governor's Association, *A Governor's Guide to Building State Science and Technology Capacity*)

Intellectual property that results in commercial production, when funded by state economic development programs, could also help provide an emerging revenue stream for New York State government. New York should begin to realize direct benefits from the intellectual property that it helps develop. Very modest royalties on products developed with public support can be returned to New York's Department of Economic Development and reinvested in other entrepreneurial programs. As an incentive to boost business retention and manufacturing, the state could agree to defer its royalty payments as long as the product is built in New York State.

Legislative Highlight:
Intellectual Property Management Act of 2005

In an effort to develop recommendations on how the state should treat intellectual property created under state contracts, grants and agreements, I have introduced the New York State Intellectual Property Management Act (A.6141 of 2005). This legislation creates the New York State Office of Intellectual Property Asset Management and establishes a special advisory group to help develop a comprehensive policy to manage New York's Intellectual Property. State-funded research grants represent an investment of public resources. Intellectual property generated from this State-funded research represents a great opportunity to return social and economic value to New York taxpayers in return for public investment in research.

Finally, an area where state and local governments have a unique ability to assist entrepreneurs is in helping to educate citizens and the news media about the value of entrepreneurs. Governments can work with entrepreneurial networks to increase publicity around start-up firms, and establish awards programs to bring successful entrepreneurs to public attention. Government can also help to manage public expectations about entrepreneurship as an economic development policy, particularly about the lengthy lead times required. A public and a media accustomed to the publicity generated by traditional business retention and recruitment policies will need some help in understanding the longer timeframes, but potentially enormous benefits, of home-grown entrepreneurial development.

CLUSTERS: BUSINESS DEVELOPMENT

Another important driving force behind regional economic growth, innovation and a rising standard of living is strong and competitive business clusters, according to Michael Porter of Harvard Business School. His thesis is that in the best regional economies "competitiveness and innovation are concentrated in clusters, or interrelated industries, in which the region specializes." Clusters are groups of businesses that are geographically close, related to a particular field and linked by common technology and skills. (Porter, *Clusters of Innovation*; National Governor's Association, *Science and Technology Report*)

Those states with successful business clusters, whether high tech or not, enjoy higher wages, greater productivity, and higher levels of business formation and innovation. Clusters can accomplish all this by acting as "incubators of information;" within each cluster lies much of the knowledge necessary for businesses to prosper. Clusters also represent fertile ground in which entrepreneurial firms can take root.

Successful clusters are made up not only of business firms, but also include universities and research centers, business suppliers, marketing and distribution firms, and supportive state and regional governments. (Porter, *Clusters of Innovation*)

A critical step in strategizing a new economic development policy for New York must be to make a realistic assessment of our current economic performance, region by region, with the goal of further identifying existing and nascent business clusters. This inventory and benchmarking process should look at industrial assets, research capacities, and current rates of innovation (generally measured by patents per capita) both in large metro areas and in regions outside of the larger cities. (National Governor's Association, *Science and Technology Report*)

Porter identifies three types of industries and industry clusters that can be measured, which are listed here:

- Resources-driven: based on natural resources; in early days a key factor in firms' locational decisions, but now declining in importance;
- Local industries: makes up the majority of regional employment, but these goods and services are not traded outside the region; not a source of regional economic growth;
- Traded industries: these industries compete across states, regions and nations. Although it has only one-third of the employment of local industries, wages and productivity levels are highest in this sector, making it the top source of regional economic growth.

It is interesting to note that the majority of jobs in traded industries are not in the high technology sector. For example, in New York, the top traded clusters are business services; distribution services; financial services; transportation/logistics; and education/knowledge creation. But rising wages in these sectors are key to raising the median wage level of the entire region—and therefore innovative capacity, specialization and support for entrepreneurial activity must be promoted in the traded industries sector if significant regional growth is to be realized.

New York State should make clusters a key focus of its economic development policy. The growth of successful business clusters depends, according to Porter, on generating new firms within a region—and less on recruiting existing firms from elsewhere. Like David Hart, Porter agrees that the best strategy to increase new firm growth within existing clusters is through institutions of collaboration—such as Industry Roundtables to encourage interaction among firms, and mentoring networks where firms provide advice and assistance within a cluster. Working together, industry clusters produce a shared knowledge that benefits both private and public sector alike. And including academics and private sector firms along with state and local government officials in regional networks also helps address the need for a longer-term commitment that lasts beyond the shorter political cycles. (Progressive Policy Institute, New Economy Index)

New York already supports innovation and business cluster development through research and development investments at colleges and universities, and through its support for research parks and business incubators. But these forms of state investment must be strategized around identified business clusters within each region of New York. Any ongoing recruitment of firms from outside the state should also be firmly based on a regional cluster development strategy, allowing "the region to market its unique assets, rather than compete on subsidies." (Porter, *Clusters of Innovation*)

Massachusetts has established a benchmarking system for business clusters that could be applied in New York State as well. The Massachusetts Technology Collaborative publishes an "Index of the Massachusetts Innovation Economy," which monitors economic performance and innovation statistics for nine key industry clusters. The index not only helps set goals and measure economic growth in this crucial traded business sector, but also boosts public awareness of that state's long-term economic development strategy.

New York has a number of business clusters, identified in Porter's New York State Profile, but we lag behind in specialization by traded industry cluster. Currently, New York has only one dynamic traded industries cluster: the apparel industry in New York City. A number of other clusters are strong, but are losing relative position (as a percentage share of national cluster employment); these include publishing; business services; power generation and biotech/pharmaceuticals. Financial services, hospitality and transportation/logistics have been identified as business clusters in decline in New York.

The good news is that average wages in all clusters are higher in New York than the national average. But it is clear that the current state investment in incubators, Centers for Excellence, and NYSTAR grants needs to be increased—and these can be financed by funding diverted away from the less effective traditional tax incentive programs. Increasing the number of dynamic business clusters must be a central strategy of New York's Entrepreneurial Economy development efforts.

2. WORKFORCE DEVELOPMENT: PREPARING QUALIFIED EMPLOYEES

If New York State really wants to boost innovation and grow more dynamic business clusters, it will require a top-flight workforce. There is a great deal of research evidence that the education level of a state or region's workforce is a crucial factor in generating economic growth, which makes the state's role in workforce education and development vital for Entrepreneurial Economy success. In fact, University of Pittsburgh economist Patricia Beeson found that state spending on higher education infrastructure is an even better predictor of economic growth than spending on physical infrastructure like highways or canals. (Florida, Rise of the Creative Class)

INCREASING SCIENCE & TECHNOLOGY GRADUATES

Because human intellectual capital is such an important driver of economic prosperity, New York needs to maintain a well-trained pool of talent, particularly in the science and technology fields. The problem is that the entire nation is facing a growing shortage of college graduates in all fields. The U.S. Bureau of Labor Statistics predicts that by 2020 there will be a 22% increase in the number of jobs requiring at least some college education, an estimated 15 million jobs. But the Bureau predicts only 3 million new college-educated workers will be produced by 2020, leaving 12 million skilled jobs unfilled as the Baby Boom generation retires from the workforce.

The prediction for science and technology worker shortages is even more dire. Jobs requiring an advanced technology degree are the fastest growing categories in the labor market today; the U.S. Department of Labor projects that jobs in these fields will grow 51% by 2008. But the number of American graduates in these fields is static or declining. During the 1990's, U.S. colleges awarded 37% fewer computer science degrees, 24% fewer degrees in math and 16% fewer engineering degrees.

America used to rely heavily on foreign graduate students in technology fields—they once earned one-half of all PhD's in science and engineering. Since the attacks of September 11, 2001, however, immigration restrictions have meant many fewer foreign students are studying in the United States. Continued failure to address this workforce development problem could jeopardize Entrepreneurial Economy prosperity across the nation as well as in New York.

New York State must take steps to increase college enrollment in science and technology fields, using scholarships, internships and tuition incentives, as well as increasing the enrollment of women and minority students in these fields. We should also link state funding of scholarships at New York's colleges and universities to our long-term economic strategies such as supporting high technology industry clusters and entrepreneurial development. Post-graduate programs should be developed around cluster fields and the Centers for Excellence, and colleges and universities could be asked to meet specific goals to increase the number of science, engineering and technology graduates produced.

The state of Oklahoma is working to increase recruitment of out-of-state science and technology students in state colleges by offering in-state tuition rates for students who commit to staying in-state to work for a specified period after graduation. (Progressive Policy Institute, *New Economy Index*) This innovative program also helps address the "brain drain" problem experienced in Upstate New York, where too many talented graduates come here for college and then leave the state for jobs elsewhere after graduating.

Another example is Pennsylvania's "Sci-Tech" scholarship program, which provides $3,000/year for three years to students earning degrees in selected science and technology fields. Students are required to maintain a 3.0 GPA, complete an internship with a high technology firm and work in Pennsylvania for one year for each year of scholarship aid awarded. The state expects to fund 14,500 students per year through this program, at a total cost of $43.5 million. (National Governor's Association, *Science and Technology Report*)

INVESTING IN CURRENT WORKFORCE

Workforce development involves more than just boosting the number of science and technology graduates, however. Workplace training and career advancement are also critical to growing intellectual capital in New York. New York needs a workforce that is skilled and adaptable. In our modern economy, rapid job turnover is the rule, not the exception. One-third of all U.S. jobs are added or eliminated from our economy each year. This "job churning," and an increasingly rapid employee turnover rate, means that workers, not firms, are increasingly responsible for their own job training and career advancement. In addition, the smaller firms that make up 90% of all new businesses are the least likely to provide employer-sponsored training, either off-site or on-site. In fact, business investment in job training fell 18% as a share of GDP between 1988 and 1999. (National Governor's Association, *A Governor's Guide to Creating a 21st Century Workforce*)

State-sponsored workforce programs in New York often focus on training workers for entry-level positions that will get them off public assistance, rather than on higher-skilled workers or high-demand job sectors. But employers in high growth firms do not generally wish to hire from these state-sponsored training programs, since the graduates often lack the high and medium-level skills needed. Once again, New York should target more of its workforce development funding around the identified business clusters we wish to support as part of our long term Entrepreneurial Economy strategy. Working with firms in these clusters, as part of networks and roundtables, New York State officials can identify the training needs of high growth firms and begin to invest additional resources in this key area.

Rhode Island, for example, has funded employer-based job training programs focused on key industrial sectors. The goals of this program are to boost productivity, increase worker skills and reduce the period of unemployment should the worker later be laid off. (National Governor's Association, *21st Century Workforce*)

In Oregon, state officials recognized the value of incentivizing workers to further their own ongoing education by offering tuition aid for non-credit career training at community colleges. Most community colleges only offer aid for programs leading to degrees, which discourages the continuous learning that many American workers need today. Currently, in Oregon, 30% of community college enrollees are in career training classes. (Progressive Policy Institute, *New Economy Index*)

Of course, New York must still address the problem of workforce development for disadvantaged workers. Employers are already spending $62 billion nationwide on basic skills training for the one out of every four young workers with low literacy and few basic skills, despite record state spending on K-12 education. We can help increase employer spending on skills training, which shows a more positive record of success than off-site programs, through tax incentives. We must also provide easier access to training, perhaps through "one-stop learning centers" for low-skilled workers to learn about available programs to increase their employability. (Progressive Policy Institute, *New Economy Index*)

Finally, entrepreneurial education should be integrated as part of New York's workforce development—at colleges and universities, as well as in high schools and grade schools. Entrepreneurial training can be used as a retention tool for students who are at risk of dropping out, and state colleges and universities should offer major and minor programs in entrepreneurship as companions to technology and science degrees. (National Governor's Association, *Strengthening State Entrepreneurship*)

Legislative Highlight:
Entrepreneurial Education Curriculum

Public high schools in New York do not offer much in terms of entrepreneurial education. That is why I have proposed legislation (A.1056 of 2005) to establish an economic and entrepreneurial education curriculum in the State Department of Education. This legislation would provide grants of up to $5,000 to cover costs of instructional materials and teacher training for public high school economics teachers. Schools will be encouraged to work with private sector organizations in developing programs and applying for grant funds, thereby linking the theory and practice of entrepreneurship through the participation of private firms in in-school and extracurricular programs.

Massachusetts recently inaugurated a high school program called Youth Tech Entrepreneurs (YTE) targeted to grades 10, 11 and 12. Students make a three-year commitment to the program, which has a project-based curriculum. The course involves daily classes, monthly Saturday labs, and work on after-school technology based projects. Students from diverse backgrounds are thereby exposed to technology career options and entrepreneurship at an early age, increasing their likelihood of staying in school and pursuing a college degree in a science or technology field.

Programs such as these can help improve the skills of our workforce, especially the younger members. Another response to the "brain drain" problem is to make Upstate New York a more attractive location for the most talented young worker. How this might be accomplished so that we can retain more of these highly skilled young people in Upstate New York is the subject of the next section.

QUALITY OF LIFE: BUILDING "CREATIVE CENTERS"

Just as firms in a similar field cluster together for greater efficiency and effectiveness, so do the most highly skilled and coveted workers. The top workers, what Richard Florida calls the "creative class," often choose to locate in cities or regions with large numbers of clustered firms—giving these workers the greatest number of job options, which is an important factor for workers in this era of job "churning" and frequent job changes.

By the same token, firms are also drawn to regions with a "thick labor market"—a critical mass of the best, most highly skilled workers who will stimulate increased productivity and innovation. As former CEO of Hewlett-Packard Carly Fiorina said in a speech to the National Conference of Governors, "Keep your tax incentives and highway interchanges; we will go where the highly skilled people are." (Florida, *Rise of the Creative Class*)

Upstate New York's colleges, universities and existing companies do produce and employ large numbers of highly skilled people, which should be a magnet for the development of more Entrepreneurial Economy firms. The problem is that not enough of these people stay in Upstate New York. Discovering how to correct this problem is vital in the effort to turn around the Upstate economy and become an Entrepreneurial Economy winner.

George Mason University professor Richard Florida's research reveals that creativity is now the most important source of competitive advantage for a firm or a region. Creativity, in the form of intellectual property and innovation, "embodied in computer programs or patents or formulas, has now become more valuable than any kind of physical property" to the economy, he writes. As creative class workers are drawn to particular cities or regions, such as the Silicon Valley, Boston, MA or Austin, TX, those areas are far more likely to enjoy economic growth. How then can Upstate New York develop "creative centers" that will attract and nurture high growth firms?

Florida describes "creative class" workers as the scientists, engineers, professors, designers and knowledge workers who produce "new forms or designs that are readily transferable and widely used." They are problem-solvers as well as problem-finders, and their numbers are growing. As of 2004, Florida estimates 40 million workers—30% of the national workforce—are part of the "creative class". By contrast, the working class, the staple of the old economy's large corporations and manufacturers, is in serious decline, both in terms of numbers and earnings. The service sector workforce is growing, but wage levels here are largely stagnant and likely to remain so. (Florida, *Rise of the Creative Class*)

Regions with a large percentage of "creative class" workers rank high in innovation (measured in number of patents per capita) and technology. The top "creative class" centers also score well on measures of population talent (the percentage of the population with at least a Bachelor's degree). These factors have produced impressive economic growth for certain areas of the country, such as Austin, Texas, that have never enjoyed prosperity on such a scale before.

In the early days of American industrialization, regional economic growth depended on transportation (rivers, railroad hubs) or natural resources to support heavy industry. As the economy underwent significant structural change in the latter years of the 20th Century, these advantages no longer held. Tax incentives, infrastructure spending and other traditional efforts to boost economic growth in a region by solely addressing the costs of doing business are thus no longer sufficient. For one thing, these efforts target firms, when Florida and many other researchers believe that individuals and business clusters are what must be recruited and retained. Modern high technology firms today decided where to locate based on where the top workers have already chosen to live. If the new key to economic growth is a sufficient supply of human capital, in the form of the most highly skilled and creative workers, then our economic development strategies and policies must adapt to accommodate this.

Richard Florida and his research team have found that "cities need a people climate even more than they need a business climate." Thus it follows that Upstate New York can benefit by concentrating economic development efforts on transforming our cities into places that are attractive to "creative class" workers. Businesses will follow these workers, and innovation and entrepreneurship will flourish.

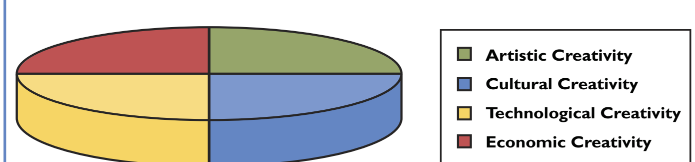
Technology, talent and tolerance are the top three factors identified in Rise of the Creative Class as vital to a region's becoming a creative center like Austin, the San Francisco Bay Area, Boston or Seattle.

In promoting a region's technology base, a research university is a major advantage. As we know, universities produce leading edge research and are sources of innovation, business spin-offs and entrepreneurship. Upstate New York has a number of top research institutions, both SUNY and private, which helps boost our region's scores on Florida's Creativity Index. But this alone is not enough. Technology commercialization, recruitment of top faculty and students, and retention of graduates are also necessary. This talent must be induced to locate and remain in our Upstate cities in order to convert innovative research into economic growth and regional wealth.

The third factor, tolerance, represents the diversity of a metropolitan area. Levels of tolerance and diversity mean openness to a variety of ways of thinking, of ethnicity, age, sexual orientation and even appearance and dress. Richard Florida uses diversity to portray cities and communities that are open to outsiders, and they personify the "open meritocratic values of the Creative Age." These creative centers display energy, tolerance of strangers, and speedy absorption of outsiders—all qualities that promote innovation, risk-taking and entrepreneurship.

One measure used to demonstrate a city's openness and

COMPONENTS OF AN INTEGRATED ECO-SYSTEM TO DEVELOP THE "CREATIVE CLASS"



diversity is the “Bohemian index,” calculated by using census data to assess the number of writers, artists and musicians—the producers of culture—living in a metro area. Cities ranking high on this index also score well on levels of high technology, population and employment growth. Artistic creativity in a city helps to attract the most talented young science and technology professionals, and can lead to economic growth.

A truly tolerant community, in Richard Florida’s terms, is an “integrated eco-system or habitat where all forms of creativity—artistic and cultural, technological and economic—can take root and flourish.” Such a community recognizes and responds to the unique needs of the “creative class.” Demographically, the new high skill workforce is quite different from previous generations of 20 and 30-something workers: they remain single longer and marry less often. They move to suburban areas much later in life than professionals of previous eras. The weakening of nuclear family ties means that young professionals look more to friends and coworkers for their close connections; they spend their free time differently than traditional families and they are looking for an urban environment that supports their lifestyle.

The “creative class” worker is seeking a different kind of urban environment. They seek active, less formal, street-level amenities, with “just-in-time” leisure activities available to suit their long working hours. Many choose to locate in cities with vibrant downtown districts, authentic urban neighborhoods teeming with small galleries, music clubs, performance spaces, coffee shops, ethnic restaurants and accessible outdoor recreation. How many of our Upstate downtown districts offer these types of amenities? It is important to ask this question, says Florida, because cities hoping to become true creative centers must provide the lifestyle that creative workers are seeking. “In fact,” he writes, “you cannot be a thriving high-tech center if you don’t do this.”

Take, for example, Austin, Texas, a city with no national sports franchises and no nationally renowned cultural institutions. Yet Austin has become a high technology mecca, a destination of choice for some of the top young technology graduates of the nation’s most prestigious universities. Many talented young people move to Austin (and other creative centers) without even securing a job first. The lifestyle advantages of the creative centers are driving people’s locational choices; businesses know this, and are following them there.

It is instructional to look more closely at how Austin became a creative center. Former Mayor Kirk Watson recognized the necessary three factors (Technology, Talent and Tolerance) and took steps to maximize each in his city. Tactics included some recruiting of high tech firms to support existing clusters (branches of IBM and Intel), and attracting two major research consortia, largely supported by federal funding. Efforts to promote and attract the top talent included investment of hundreds of millions of dollars in the University of Texas’ research capacity, and publicizing success stories such as that of Michael Dell, a UT graduate and Austin’s first Entrepreneurial Economy champion. Tolerance and artistic creativity centered most importantly on a homegrown music scene that soon attracted national attention, and which received not just city but corporate financial support as well—a film festival was established, a downtown nightscape was developed. The city promoted and publicized its interesting ethnic mix and authentic traditional neighborhoods. Austin became known as an economically vital, culturally rich, open and diverse city, and the “creative class” has converged on it.

As Austin officials also understood, the "creative class" is increasingly choosing to live in cities with vibrant, livable downtown areas. Historic buildings and established neighborhoods are attractive features to these talented workers. Our Upstate New York cities certainly have these features in abundance, although we have not fully developed our potential. We must do so. Research has shown that downtown revitalization correlates closely with the other factors that attract "creative class" workers. Milken's High Tech Index is positively correlated with the percentage of a region's population that lives downtown. And the level of innovation in a region, as measured by patents and high tech industries, is closely associated with population density and a concentration of "creative class." (Florida, "Revenge of the Squelchers")

To maximize the potential of our Upstate downtown districts, we should target funds into restoring older buildings—warehouses, lofts—that can be converted to attractive housing. State and local officials should recognize that finding ways to promote a strong local cultural scene, such as that which exists in Austin and Seattle, is a more effective economic development strategy for cities than building a large downtown mall, or casino, and it is far less expensive.

Regions across the country that are experiencing significant Entrepreneurial Economy growth offer attractive urban amenities, as well as the thriving suburbs, good schools and support for quality family life that Upstate New York contains in abundance. Upstate must focus on its downtown centers, and fully exploit our advantages. Newer cities lack the infrastructure to create an authentic "urban village." A journalist in Phoenix, AZ, for example, complains that the city's lack of older buildings and authentic urban neighborhoods is hampering its efforts to recruit the most talented workers. The Research Triangle area of North Carolina is facing the same problem. (Florida, Rise of the Creative Class)

Officials in many major U.S. cities are working to revitalize their downtown districts and restore what few older neighborhoods they have. Atlanta, Los Angeles and San Jose, California, are all implementing major urban development projects designed to attract educated professionals to rebuilt urban neighborhoods, to fight sprawl and mitigate the horrendous traffic problems these areas face. San Diego is spending $2.5 billion on its "City of Villages" plan to develop high-density upscale housing in older areas, with pedestrian-friendly thoroughfares, parks, local libraries and shops. But here in Upstate New York, we have not been so forward thinking. But we do already have the underpinnings of what this "creative class" is looking for in an urban environment. We also have strong academic research institutions to foster innovation, and the outdoor recreation options high tech workers are seeking. Our next important goal must be to focus on realizing the potential of our downtown districts to support bringing Entrepreneurial Economy benefits to urban centers across Upstate New York. Not only must we work to develop our state's creative centers, but we must make sure we market our region's positive assets to both Upstate residents and residents of other states.

Legislative Highlight: *Cultural Development Areas*

I have introduced legislation (A.3433 of 2005) that would establish the New York State Arts and Cultural Development Areas program, whose purpose is to provide for the development and support of arts and cultural institutions and the preservation of cultural heritage, including the development and support of ancillary organizations and infrastructure, and the creation of jobs and the encouragement of economic development. Such a program could utilize New York's unmatched cultural assets and resources to facilitate an environment that enabled artists and cultural organizations to flourish, further expanding New York's role as the cultural capital of the world.

Legislative Highlight: *Tourism Dedicated Fund*

Tourism, one of our state's most effective economic development and job creation tools, can help attract members of the "Creative Class". It is the second leading industry in New York State with direct consumer spending on tourism related activities accounting for over $21 billion annually. Tax receipts for this industry account for over $6 billion a year in revenue to state and local governments, and travel related industries employ 700,000 people statewide. Tourism has become a vital component of economic growth in New York, and increasingly so in the rural economies of Upstate. In addition to the direct impact the tourism industry has on our state, recreational activities and the arts are essential in developing a rich cultural environment to attract our emerging workforce.

In the 1980's New York launched the "I NY" marketing campaign and revolutionized the way state governments promoted tourism for the purposes of economic development. However, while the "I NY" slogan remains world famous, our state's investment in tourism promotion has steadily declined since the mid-1990's and New York falls far short of states like Florida, Illinois and Pennsylvania when it comes to marketing to tourists around the country and world. It is widely agreed upon that investing in tourism is an extremely successful endeavor, given the multitude of ways tourists spend money when they visit a destination. As tourism statistics point out, tourism spending generates a 3:1 revenue return for every dollar spent on tourism marketing. During fiscally restrictive times, the inclination often is to cut tourism spending. However, considering the vast amount of direct spending, and therefore state tax revenue generated by tourism, it makes economic sense to provide increased support the tourism industry.

For those reasons, I have proposed a dedicated Tourism Economic Development Fund (A.5453 of 2005), which would increase the amount of funding available for tourism-related marketing and promotion programs and would be funded by a portion of the proceeds collected from the increased gaming activities within the state. Reinvesting some of the funds spent by those tourists enjoying our casinos is an excellent way to invigorate our tourism industry and state economy.

Becoming a creative center is not an easy task. Cities such as Pittsburgh or Baltimore, have the technology and talent, but are not perceived as diverse, tolerant of new ideas—in a word, not creative. Other cities, such as Miami and New Orleans offer a desirable, creative lifestyle, but lack the technology infrastructure and research capacity. Upstate New York's urban centers start with many built in advantages, but much more needs to be done. It is a difficult, but not impossible task to begin turning our Upstate urban areas into creative centers that will allow us to become a Entrepreneurial Economy success. We must recognize the new imperatives of modern economic development, and summon up the vision and will to begin the transformation.

3. INFRASTRUCTURE AND CAPITAL

It is imperative that New York communities have the physical and financial infrastructure to support the entrepreneurial activity we seek to attract. Even in the information rich Entrepreneurial Economy, infrastructure and capital still matter. But infrastructure takes on additional meaning in the Entrepreneurial Economy where broadband deployment becomes as important as canals, roads and bridges in the 21st century. In this new age every community in our state must have access to high-speed communications infrastructure. Similarly, ensuring an adequate capital infrastructure and supply to assist entrepreneurial start-ups and expanding businesses is vital.

BROADBAND: EXPANDING ACCESS TO HIGH-SPEED COMMUNICATIONS

Although hardly a new idea, New York must ensure that Upstate regions, both metro and rural, have access to cheap broadband technology. Cities without widespread access to affordable high-capacity fiber optic networks are in no position to even begin to attract or grow high technology enterprises.

Broadband access is crucial to economic advancement outside of metropolitan areas. Rural areas need these high-speed connections as well, although the cost can be prohibitive. State government can provide valuable assistance in aggregating rural demand (for government offices, schools and colleges, businesses and hospitals) to help make it more affordable. State economic development officials should also target specific rural industries and offer assistance and advice to ensure that they are taking full advantage of this necessary business tool.

In addition, New York should establish regional broadband planning grants (A.2001 of 2005) to county-level economic development organizations conducting telecommunications assessments. These matching grants would encourage counties to assess the need for high-speed internet access and develop an inventory of the kinds of technologies available in each county.

Legislative Highlight:
Broadband Development Authority

One program that will help to expand broadband infrastructure throughout the state is the New York State Broadband Development Authority legislation that I have introduced (A.5663 of 2005). As of 2000, New York State ranked only 18th in the nation on internet access—with only 67% of Upstate zip codes having high-speed internet service providers. Based on a similar program in Michigan, this Authority will make loans to telecommunications companies, as well as entering into joint ventures and partnerships with broadband developers and operators. Other incentives programs proposed include tax credits for providers to broadband access services (A.3087 of 2005), and a Broadband Deployment Act (A.2889 of 2005) requiring municipalities to grant access to the use of rights-of-way, easements and public spaces for provision of internet services.

ACCESS TO CAPITAL: SATISFYING INVESTMENT NEEDS

Expanding access to early stage capital is crucial to growing entrepreneurial firms. Most states' financial assistance programs come in the form of loans and loan guarantees, which do not address the unique needs of entrepreneurs for equity investment. Less than 10% of state assistance programs offer the direct or indirect equity investment that entrepreneurs require. (Kayne)

Entrepreneurial firms in the early stages usually have expenses that exceed revenues, and this "pre-competitive" situation can continue for some time. For this reason, such firms cannot afford to carry large debt from loans in the start-up years; they require capital investment from public or private sources. State investment programs and assistance in linking firms to private investors can be critically important to supporting successful entrepreneurs, especially the so-called "serial entrepreneurs" who reinvest gains from a first business into successive firms, and whose efforts we should particularly encourage.

Start-up firms have the greatest need for seed capital and pre-seed investments in amounts ranging from $50,000 to $3 million. But traditional venture capitalists tend to look mostly at investments of $5 million or more, and often require firms to give over some control to the investors—sometimes even requiring them to relocate. (National Governor's Association, *Strengthening State Entrepreneurship*) What can New York State do to provide another source of investment for entrepreneurial firms at all stages of development?

One answer is the state's pension fund as a potential source for entrepreneurial capital. Rolf Pendall of Cornell University recommends that New York State earmark 1% of its pension fund to provide funding to private venture capital funds aimed at innovative manufacturing, such as photonics. Such a fund should focus on helping to commercialize research technology from New York's public and private universities. (Pendall, "Transition and Renewal") Providing venture capital funds to private firms would ensure funding be distributed to firms with solid business plans and without regard to political considerations.

This idea is only slowly gaining acceptance. As of 1999, only five states reported to the National Governor's Association that their state retirement system took part in an "economically targeted investment program," and only three of these state pension funds were authorized to invest in venture capital, New York State being one of these. (Kayne)

The State of Iowa has an innovative program that defers taxes on qualified start-up firms if they are at least 25% venture capital funded. Iowa also provides additional tax credits for "angel investors" who invest in start-ups within the state.

Angel investors are high net-worth individuals who invest in companies in the seed and early stages. They can also serve as mentors and advisors to new firms, and often bring expertise and access to existing networks. Often local or regional in nature, Angels invested $30 billion in 50,000 deals in 2002—far more than the institutional venture capital market. (National Governor's Association, *Strengthening State Entrepreneurship*)

Legislative Highlight: *CAPCO*

In New York State, the Certified Capital Company Tax Credit Program (CAPCO), which I co-authored with Assembly Speaker Sheldon Silver, offers a tax credit incentive to encourage insurance companies to invest in New York's venture capital markets. Insurers, investment management firms, banks and other financial institutions can start their own CAPCO's, which are mandated to invest in small businesses located within the state. The program's tax credits are designed to encourage insurance companies to become venture capitalists, since they generally have large pools of capital and are seeking investment options.

In order to encourage more of this type of investment, New York should consider allowing tax credits for funds invested in Angel networks and investment pools—anywhere from 20% to 100%. We should also assist these networks and pools with access to affordable investment insurance, to further pave their way. (National Governor's Association, *Strengthening State Entrepreneurship*)

Finally, New York should join the Angel Capital Electronic Network (ACE-Net), a national internet-based listing service that makes information available to angel investors about small, growing businesses seeking $250,000 to $5 million in equity financing. The network gives entrepreneurs a nationwide forum to present their business plans to a wider range of potential investors.

Certainly there are other creative approaches that will help finance these efforts. But one thing is certain, without capital to fuel New York's Entrepreneurial Economy our growth agenda will run out of gas.

4. ACCOUNTABILITY AND BENCHMARKING: MEASURING EFFECTIVENESS

New York State government works for its citizens and therefore is accountable to them for its actions. Currently, state government lacks a comprehensive tool to track the effectiveness of its economic development policies. How can you expect to have a successful economic development strategy when you don't use any consistent, formal measure to track your results? How can you tell if your policies are on track without clearly delineated goals and a quantifiable method of measuring your progress in meeting them? How do you begin to make choices on varying policy options when you have not had consensus on what you value?

Accountability and benchmarking are lacking in our current system. As discussed earlier, the criticisms and discrepancies over the results of New York's Empire Zones Program clearly illustrates this point. We need to enact reforms previously discussed in this report to ensure the integrity and effectiveness of economic development programs.

Any successful organization tracks its outcomes and measures them against its competitors. State government should be no different. New York must begin benchmarking our results to assess how well we are meeting our economic development goals. These performance measurements then become the basis for sound decision-making and the objective evaluation of existing policies.

New York should also begin to measure itself against other states. New York must examine its strengths and weaknesses directly against its competitors. The Michigan Economic Development Corporation, for example, commissioned a study to benchmark Michigan's business climate against competing cities as part of its efforts to attract and retain businesses. (Michigan Economic Development Corporation, *Michigan Business Climate Benchmarking Update Study*) If New York is going to compete and prosper, we must establish effective benchmarking criteria.

What are our goals? What do we hope to achieve? For example, in many government circles the sole measure of economic development efforts is net job growth. I believe the success of economic development programs cannot solely be measured on the number of net jobs created, but must consider the wage levels of jobs. The aggregate growth in income for New York State as well as per capita income and population growth should be the real benchmarks of economic development policy success. An economic development policy that results in the creation of minimum wage jobs only will not substantially benefit our economy.

While many legitimate measurements can be applied as standards allowing an objective review of our economic development policy, I have identified the following to consider:

- Private sector wage growth
- Growth in number of jobs in traded industries sector, and other sectors
- Net population growth
- Number of science/technology/engineering graduates from New York's colleges and universities
- Increase in state university technology licensing agreements
- New York's income disparity—measure gap between top and bottom quintile
- Total research & development funding (per National Science Foundation), including state and private sector funding
- Number of Initial Public Offerings (IPOs) issued in New York annually, broken out by region
- New business formation (in Traded Industries sector)
- Poverty rates, broken out by region
- Value of venture capital investment by region
- Numbers of angel investors and their levels of investment
- Patents per capita
- High technology industry (Milken Institute index)
- Volume of products and services exported by New York firms

One could argue, and I do, that specific tests are less important than the principles of goal setting and benchmarking. One thing is certain, the failure to identify state and regional goals each year in quantifiable ways will prevent us from enjoying the prosperity of the Entrepreneurial Economy.

An excellent example of the types of forward thinking, strategic planning activities that New York State should encourage can be found in the *Roadmap Initiative,* currently underway at The Rochester Institute of Technology's Center for Integrated Manufacturing Studies. This initiative seeks to develop strategic action plans to improve the competitiveness of upstate New York manufacturers. The *Roadmap Initiative* gathers information on the operations of companies in certain industry clusters through extensive surveys and on-site assessments. "This data is then combined with extensive business environment benchmarking to form an understanding of the competitive challenges facing firms and how they are overcoming them." (Rochester Institute of Technology, *RIT Offering "Roadmap" for Upstate Manufacturing Competitiveness* News Release) The results of this comprehensive analysis will be a realistic, measurable plan that industry and government can follow to confront the identified challenges. New York State must begin utilizing forward thinking, proactive analyses, such as the *Roadmap Initiative*, in order to determine and quantify the problems we face as well as formalize an action list to address these challenges. (Center for Integrated Manufacturing Studies, *Roadmap: Development of a Roadmap Focused on Revitalizing Upstate New York Manufacturing*)

In order to better track the efficacy of the new Entrepreneurial Economic principles, the Governor should also be required to publish annual, independent benchmarking and accountability data on the measurable success of all economic development policies, and levels of business growth in New York State.

Additionally, The New York State Department of Economic Development (NYSDED) should be required to publish regular and independently verified cost-benefit data on all tax incentive programs, including the full disclosure of all decision rules. This step would allow the

Legislature and Governor to better understand the impact of their tax incentive policies, and give them the ability to expand programs that work, and scale back largely ineffective and costly initiatives.

I would also propose creating a new index to measure the Return on Economic Development Investment (ROEDI). ROEDI should measure our economic development and tax expenditures against the annual growth in the state's aggregate personal and corporate income. As population, job and income levels rise or fall and we compare that to spending on our economic plan we will be well able to measure our relative success and adjust our efforts accordingly. I believe it is imperative that we have a measure to track the effectiveness of our investments. This dimension is certainly lacking in our current approach to economic development, but it is absolutely necessary to determine our progress and assess the effectiveness of our programs.

CONCLUSION: FROM PRINCIPLES TO PROSPERITY

Recommendations for an Entrepreneurial Economy in New York

New York State's economic development strategies and practices must be completely transformed if we are to benefit from the growth and prosperity of the Entrepreneurial Economy. We know that New York can achieve success—we've seen it before, in the early to mid 20th Century boom in heavy manufacturing, and with the innovation and technology breakthroughs that in my hometown established Kodak, Xerox and Bausch & Lomb as world leaders in their fields. By following the recommendations in this report, summarized below, New York can develop a business environment that will help create good jobs and wage growth—an environment where innovative firms, new and existing, can flourish. If we fail to act, at the state and local levels, New York's economy particularly in Upstate regions will remain stagnant and lag further behind.

MISSING THE MARK

- Reform the existing zone-based tax incentive programs to be more in line with a broader state economic development mission and strategy.
- Establish a rigorous standardized approval process for tax incentive programs with clear rules and little role for discretionary decisions by program officials.
- Pre-approval of applications should include an analysis of program benefits and job creation goals.
- All business tax incentive programs must publicly disclose all indirect and direct costs associated with their operations.
- Reports from officials and businesses participating in incentive programs must be standardized for clarity and comparison.

GETTING INTO THE GAME

New York State government must do its part to create a business-friendly environment by addressing the following:

- Control spending growth to be at or below the rate of inflation.
- Bring state and local tax rates in line with national averages.
- Reform existing state tax code to promote entrepreneurship and pro-growth business investment.
- Establish a business retention tax credit program to employers committed to retaining a specific number of jobs or to making sizable capital investments.
- Increase New York's share of federal resources, which returns $0.85 for every federal tax dollar. Particularly in the areas of Medicaid reimbursement and research dollars.
- Modify capital gains taxes to promote entrepreneurial reinvestment.
- Extend tax benefits to the intangible assets of firms steeped in technology and innovation, similar to traditional benefits offered on tangible assets.
- Allow entrepreneurs to defer expenses and convert tax incentives to cash in order to keep expenses down during the start-up phase.
- Adjust budget and spending to rely less on the property tax to support entitlement programs like Medicaid.
- Address high energy costs by extending the Power for Jobs program, investing in transmission and distributions systems, supporting alternative fuel technologies and promoting sustainability through remanufacturing, reuse and recycling.

- Aid accessibility to regulatory agencies and requirements by creating sub-regional "one-stop shopping" economic development organizations to assist existing and start-up businesses.
- Eliminate barriers that impede universities from owning equity stakes in for-profit firms arising out of their faculty and research in order to encourage commercialization of technology.
- Reduce costs associated with escalating insurance premiums by reforming workers' compensation and the tort system to more fairly address the concerns of all parties affected by these systems. Reform of the Scaffold Law would be an important first step.

CREATING A STATE OF INNOVATION

- New York State must expand its main economic development focus to policies that support and promote entrepreneurship, with the goal of creating home-grown, high-growth firms.
- Measure and place value on the quality of all jobs created, not simply the quantity. Make aggregate growth in income, as well as per capita income and population growth the real benchmark of economic development policy success.

Entrepreneurship and Innovation

- Create Academic Collaborative Districts (A.4950-A of 2005) to provide technical assistance to match business needs with the assets and research available at high education institutions, and provide tax incentives and benefits to those businesses.
- Facilitate public-private partnerships to develop and market technologies that are not utilized by large research institutions and companies, known as orphan technologies.
- Create the New York State Office of Intellectual Property Asset Management (A.6141 of 2005), to develop a comprehensive policy to manage intellectual property developed from State-funded research.
- State government must serve as facilitator for business networks and collaborative efforts that support innovation, efficiency and entrepreneurship.
- Educate the public on the value of investing in entrepreneurial activities; promote publicity for Entrepreneurial Economy risk takers and success stories.
- Create state and regional economic development policies that are flexible and can adapt quickly to conditions under which innovation can occur. Regulatory and other programmatic barriers must be removed, and a new model of governmental policymaking developed—one that is decentralized, non-bureaucratic and empowering of innovative institutions and enterprises.
- State should claim a share of state-funded intellectual property, providing a revenue stream for the Department of Economic Development—or waive the state share as an incentive to keep these new business ventures in New York.
- Identify, track and support the development of business clusters; use state university research funding as a strategic factor in promoting business cluster development.
- Provide more state support for business incubator programs across New York.
- Work with federal representatives to bring more federal research dollars to New York, ideally including a federal research lab facility.
- Require SUNY and private colleges to establish an External Advisory Council, made up of industry leaders and faculty, to look at business and research trends and create joint

strategies to promote innovation research and commercialization.

- Provide tax incentives for established firms subcontracting their research and development to state universities.
- Ease state regulation on licensing agreements and intellectual property rights to encourage technology transfer between universities and industry.

Workforce Development

- Target state university scholarship programs to produce more science and technology graduates from New York's colleges and university.
- Post-graduate programs should be developed around cluster fields and the Centers for Excellence.
- Offer in-state tuition rates for out of state technology students willing to commit to stay and work in New York State after graduation.
- Adapt existing state sponsored workforce development programs to include training needs of high growth firms.
- Offer tuition aid for non-credit career training at community colleges.
- Develop "one-stop learning centers" for low-skilled workers to learn about available programs to increase their employability.
- Provide tax credits for employers for skills training.
- Establish entrepreneurial education programs (A.1056 of 2005) in New York's public schools, K through 12 to introduce new generations to entrepreneurship and help at-risk students stay in school by enacting legislation that establishes economic and entrepreneurial education curriculum in the state Education Department.
- Assist local governments in developing and supporting vibrant arts and cultural communities (A.3433 of 2005), authentic center city neighborhoods and downtown entertainment districts to attract talented, young "creative class" workers.
- Market New York's positive assets to both residents of our state and residents of other states.

Infrastructure and Capital

- Expand access to broadband technology in underserved center city and rural areas across New York.
- Establish tax incentive programs (A.3087 of 2005) for providers to broadband access services.
- Enact the Broadband Deployment Act (A.2889 of 2005), which requires municipalities to grant access to use of right of way, easements and public spaces for broadband deployment.
- Expand broadband infrastructure throughout the state by enacting the New York State Broadband Development Authority legislation (A.5663 of 2005), which would create an Authority to make loans to telecommunications companies, as well as entering into joint ventures and partnerships with broadband developers and operators.
- Encourage county economic development organizations to determine high-speed internet access needs within each county through regional broadband planning grants (A.2001 of 2005).
- Offer tax credits to encourage more "angel investors" to provide locally based venture capital for entrepreneurial start-ups.
- Authorize utilization of a portion of state pension funds as a source of early-stage venture capital.
- New York State should join the Angel Capital Electronic Network (ACE-Net), which is a national internet-based listing service that makes information available to angel investors about

small, growing businesses seeking $250,000 to $5 million in equity financing.

- Increase state investment in Certified Capital Companies, without unnecessary restrictions.

Accountability and Benchmarking

- Create a new index to measure the Return on Economic Development Investment (ROEDI).
- Require the Governor to publish annual, independent benchmarking and accountability data on the measurable success of economic development policies, and levels of business growth in New York State.
- New York should implement a program like the Index of the Massachusetts Innovation Economy, which monitors economic performance and innovation statistics in key industry clusters.
- Begin measuring New York's strengths and weaknesses directly against other competing states.
- New York State Department of Economic Development must publish regular and independently verified cost-benefit data on all tax incentive programs, including full disclosure of all decision rules.
- Formalize a process to identify and quantify state and regional goals each year.
- All DED tax incentive offers to firms that locate or expand in New York State must include "clawback" provisions guaranteeing that if the promised jobs are not created, the tax break monies must be returned to the state.

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For too long New York has rested on its economic laurels and ignored the harsh realities of the new emerging economic age. We will continue to avoid tough decisions at our own peril.

Instead we must seize a new initiative and take bold action to reform government, cut taxes and ignite the fire of the Entrepreneurial Economy.

This report is intended to stimulate debate on this Entrepreneurial Economy and to suggest sweeping changes that would make it a permanent and central element of our economic policy. Some may question our specific recommendations or even our larger view. We encourage an honest and open debate. But there can be little disagreement that we must chart a new course to the future. In the final analysis, ensuring job opportunities is New York's first and most critical responsibility. Without a growing economic base our schools, health care institutions and countless other government services will bounce from crisis to crisis. That has not been the history of the Empire State nor can it be our future.

APPENDIX A: LEGISLATIVE HIGHLIGHTS SUMMARY

Empire State Film Production Tax Credit
(A.11595-A of 2004)—*Page 17*
A 15% tax credit on below-the-line production costs for films made in New York State to combat the runaway film production epidemic. Passed within the 2004-05 New York State Budget (A.9560-B, Part P of 2004).

Single-Sales Factor
(A.4138 of 2005)—*Page 22*
Revises the tax code to reward firms that invest their resources in New York, by calculating the company's New York profit solely by using a percentage of its sales in New York State. Passed within the 2005-06 New York State Budget (A.6845, Part A of 2005)

Scaffold Law
(A. 2946 of 2005)—*Page 25*
Amends sections 240 and 241 of the NYS Labor Law to create a comparative negligence standard for workers injured during a fall from a scaffold or raised elevation.

Manufacturing Equipment Tax Exemption
(A.1138 of 2005)—*Page 26*
Clarifies certain sales and use tax exemptions for manufacturers of equipment.

Academic Collaborative Districts
(A.4950-A of 2005)—*Page 32*
Provides technical assistance to match business needs with the assets and research available at high education institutions, and provide tax incentives and benefits to those businesses.

Orphan Technologies—*Page 35*
Facilitating public-private partnerships to develop and market technologies that are not utilized by large research institutions and companies.

Intellectual Property Management Act of 2005
(A.6141 of 2005)—*Page 36*
Creates the New York State Office of Intellectual Property Asset Management.

Entrepreneurial Education Curriculum
(A.1056 of 2005)—*Page 40*
Provides grants to cover the costs of instructional materials and teacher training for public high school economic teachers, and encourage work with private sector organizations to link the theory and practice of entrepreneurship.

Cultural Development Areas
(A.3433 of 2005)—*Page 44*
Provides property tax exemptions and income tax credits for investments in the development, support, and preservation of arts and cultural institutions.

Tourism Dedicated Fund
(A.5453 of 2005)—*Page 45*
Increases funding for the "I ♥ NY" tourism marketing and promotion program through designation of state revenues received from increased gaming activities.

Broadband Development Authority
(A.5663 of 2005)—*Page 46*
Creates an authority to provide loans to telecommunications companies and enter into joint ventures and partnerships with broadband developers and operators.

Tax Credits for Broadband Service Providers
(A.3087 of 2005)—*Page 46*
Creates a tax credit for people who deliver broadband services to a target group of subscribers.

Broadband Deployment Act
(A.2889 of 2005)—*Page 46*
Requires municipalities to grant access to the use of rights-of-ways, easements and public spaces to telecommunications providers.

Regional Broadband Planning Grants
(A.2001 of 2005)—*Page 46*
Establish match-based grants to county-level economic development organizations conducting telecommunication assessments.

Certified Capital Companies
(CAPCO)—*Page 47*
Offers tax credit incentives to encourage insurance companies to invest in New York's venture capital markets. Enacted in 1998.

APPENDIX B: REFERENCES

Atkinson, Robert D. "2002 New Economy Index." Washington, D.C.: The Progressive Policy Institute, 2002.

Anderson, Patick. *Michigan Business Climate Benchmarking Update Study*. East Lansing, MI: Anderson Economic Group, November 2004.

Bartik, Timothy J. "8 Issues for Policy Toward Economic Development Incentives." In The Region, Federal Reserve Bank of Minneapolis, June, 1990.

Center for Integrated Manufacturing Studies. "Roadmap: Development of a Roadmap Focused on Revitalizing Upstate New York Manufacturing." Rochester Institute ofTechnology, New York, Spring 2004.

Chmura, Michael. "Key GEM Study Findings." News Release. Babson College, Wellesley, MA, 2003.

Coughlin, Teresa A. "State Responses to Budget Crises in 2004: New York." New York: The Urban Institute, February 2004.

Dewar, Margaret E. "Why State and Local Economic Development Programs Cause So Little Economic Development." *Economic Development Quarterly 20* (February, 1998): pp. 68-109.

Durr, Eric. "Assembly Hearings Examine Empire Zone System." *The Business Review*, April 27, 2004.

Federal Reserve Bank of New York. "Economic Restructuring in Western New York State." In *The Regional Economy of Upstate New York*. Buffalo Branch, Fall, 2001.

Federal Reserve Bank of New York. "The Information Technology Industry in New York State." In *The Regional Economy of New York State*. Buffalo Branch, Spring, 2001.

Federal Reserve Bank of New York. "Manufacturing Matters: Conference Explores Challenges Faced by Buffalo's Manufacturing Sector." In *The Regional Economy of Upstate New York*. Buffalo Branch, Summer, 2002.

Fiscal Policy Institute. "New York's Job Shift from Higher-Paying to Lower-Paying Industries." Albany, NY: Economic Update, January 21, 2004.

Florida, Richard. <u>The Rise of the Creative Class</u>. New York: Basic Books, 2002.

Florida, Richard. "The Revenge of the Squelchers." The Next American City. Issue 5, Spring 2004. <http://www.americancity.org>.

Greater Rochester Enterprises. Strategic Plan. Rochester, NY: 2003. <http://www.greaterrochesterenterprise.com>.

Groshen, Erica L., and Potter, Simon, and Sela, Rebecca J. "Economic Restructuring in New York State." Current Issues in Economics and Finance. 2nd District Highlights. Federal Reserve Bank of New York. Vol. 10 #7, June 2004.

Hart, David M. “Knowledge, Power and Entrepreneurs—A First Pass at the Politics of Entrepreneurship Policy.” In The Emergence of Entrepreneurship Policy—Governance, Start-ups and Growth in the U.S. Knowledge Economy. David M. Hart, ed., Cambridge, U.K.: Cambridge University Press, 2003.

Hart, David M. “The Relevance of U.S.Experience: Technology, Entrepreneurship, and Public Policy.” Kennedy School of Government, Harvard University, Cambridge, MA: Presentation material from Science, Technology and Innovation Policy Executive Program, December 12, 2003.

High Tech Rochester. HTR Highlights. August 2003. <http://www.htr.org>.

High Tech Rochester. Rochester on the Rise: Technology White Paper. June 2004. <http://www.htr.org>.

Kayne, Jay. “State Entrepreneurship Policies and Programs.” Kaufmann Center for Entrepreneurial Leadership. November, 1999. <http://www.publicforuminstitute.org>.

The Kiplinger Letter. “Is the U.S. Losing Its Technology Edge?” Knight Kiplinger, ed. The Kiplinger Washington Editors, Inc. Vol. 81, i.27. July 2, 2004.

Lumetrics. About Us. 2004. <http:// www.lumetrics.net>.

Lynch, Robert G. “Rethinking Growth Strategies: How State and Local Taxes and Services Affect Economic Development.” Washington, D.C.: Economic Policy Institute, March 2004.

National Governors Association. *A Governor’s Guide to Cluster-Based Economic Development*. Washington, D.C.: 2002.<http://www.nga.org>.

National Governors Association. *A Governor’s Guide to Creating a 21st Century Workforce*. Washington, D.C.: 2002.<http://www.nga.org>.

National Governors Association. *A Governor’s Guide to Strengthening State Entrepreneurship Policy*. Washington, D.C.: 2004.<http://www.nga.org>.

National Governors Association. *A Governor’s Guide to Building State Science and Technology Capacity.* Washington, D.C.: 2002. <http://www.nga.org>.

New York State Assembly Committee on Corporations, Authorities and Commissions. “An Inquiry into Empire Zone Amendments and Benefits in Monroe County—Interim Report.” Albany, NY: March 24, 2004.

New York State Assembly Committee on Ways & Means. “New York State Economic Report.” Albany, NY: February, 2004.

New York State Assembly Committee on Ways & Means. “Focus on the Western New York Economy.” Albany, NY: February 7, 2000.

New York State Office of the State Comptroller. “Administration of Empire Zone Program.” Albany, NY: Division of State Services, 2003-S-41.

Oden, Michael D. “The Horse Before the Cart: Toward a More Rational Management of Economic Development Incentives.” *Texas Business Review*. University of Texas at Austin, College and Graduate School of Business, June, 1999.

Pages, Erik R., and Freedman, Doris, and Von Bergen, Patrick. “Entrepreneurship as a State and Local Economic Development Strategy.” In *The Emergence of Entrepreneurship Policy—Governance, Start-ups and Growth in the U.S. Knowledge Economy*. David M. Hart, ed., Cambridge, U.K., Cambridge University Press, 2003.

Peters, Alan, and Fisher, Peter. “The Failure of Economic Development Incentives.” In *Journal of the American Planning Association,* vol. 70, #1, Winter, 2004.

Porter, Michael E. Clusters of Innovation: Regional Foundations of U.S. Competitiveness. Monitor Company Group, Council on Competitiveness and on the Frontier, 2001.

Porter, Michael E. *Profile of the New York State Economy.* Washington, D.C.: National Governor’s Association, 2002.

Pendall, Rolf, and Drennan, Matthew P., and Christopher, Susan. *Transition and Renewal: The Emergence of a Diverse Upstate Economy.* Washington, D.C.: Brookings Institute Center on Urban and Metropolitan Policy, January 2004.

Pendall, Rolf. *Upstate New York’s Population Pleateau: The Third-Slowest Growing State*. New York: The Brookings Institution Center on Urban and Metropolitan Policy, August 2003

The Public Policy Institute. *Could New York Let Upstate Be Upstate?* Albany, NY: The Business Council of New York State, May, 2004.

The Public Policy Institute. *How High Is the Upstate Tax Burden—and Why?* Albany, NY: The Business Council of New York State, August 2004.

The Public Policy Institute. *Just the Facts 2004: Key Economic and Social Indicators for New York State.* Albany, NY: The Business Council of New York State, August 2004.

The Public Policy Institute. *New York’s Economy in 2004: Which Way Out?* Albany, NY: The Business Council of New York State, April 2004.

“RIT Offering “Roadmap” for Upstate Manufacturing Competitiveness”. News Release. Rochester Institute of Technology, New York, December 9, 2004.

Stern, William J. “The Wrong Prescription for Upstate.” New York: City Journal, The Manhattan Institute, Spring 2000.

Still, Tom. “Business Plan Contest Taps Into Wisconsin’s Entrepreneurial Spirit.” February 9, 2004. <http://www.wisbusiness.com>.

Zremski, Jerry. “Down and Out Upstate.” New York: City Journal, The Manhattan Institute, Autumn 1999.

INNOVATION

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