

# **Tech Valley Civic Forum Recommendations for Policy Action**



*Connecting high-tech growth and community well-being*

The Tech Valley Civic Forum is an initiative of the Center for Women in Government & Civil Society,  
Rockefeller College of Public Affairs & Policy, University at Albany

## EXECUTIVE SUMMARY

The recommendations presented in this document emerged from lively discussions among the members of the Community Outreach Task Force, the New Economy and P – 16 Education Task Force, and the Workforce Network Task Force. Participants in the 2007 Tech Valley Civic Forum and other community leaders contributed their time generously over the past 15 months to produce the vision for Tech Valley embedded in *Tech Valley Trends*, a report produced by the Metrics for Success Task Force, and in these recommendations. The recommendations are proposed as part of the region's response to two critical lessons that business, education, and nonprofit leaders in Austin shared with us: (1) *Create opportunities for broad community learning, planning, and visioning*; (2) *Involve stakeholders from all sectors — business, government, nonprofits, education — in creating the vision for Tech Valley*.

### **Recommendation #1**

Forge and sustain new connections at the community level that link business, nonprofits, education, and workforce development providers with individuals and groups in diverse communities throughout the region. Key players in promoting awareness of and access to Tech Valley's new opportunities are the gate keepers, door openers, youth influencers, job and career counselors in formal and informal education systems and in the community.

### **Recommendation #2**

Integrate 21<sup>st</sup> century skills into standards, assessment, and graduation requirements at all levels of our education system.

### **Recommendation #3**

The paradigm for student success must be refashioned and redefined through policy actions, including the formal recognition of multiple diploma types.

### **Recommendation #4**

Educators should partner with business leaders to ensure that training and resources are available to implement 21<sup>st</sup> century teaching and learning.

### **Recommendation #5**

Professional development and certification requirements should reflect 21<sup>st</sup> century skills in the content and design of instruction.

### **Recommendation #6**

More diverse resources related to 21<sup>st</sup> century teaching and learning should be available to educators at all levels.

### **Recommendation #7**

Utilize publicly-funded services more effectively for training programs focused on technology-related middle-skill jobs.

### **Recommendation #8**

Develop and implement a plan for coordination among providers of existing job training and educational services.

### **Recommendation #9**

Solicit support for and business engagement in the development of programs of value to the business community with sufficient rigor and relevance to jobs in appropriate targeted industries.

### **Recommendation #10**

Develop, support, and sustain a web-based product on career pathways in technology sectors that is free and easily accessible to the public and all stakeholders.

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## INTRODUCTION

"In far too many communities, the future just happens." Here in Tech Valley, however, civic activists in business, the nonprofit sector, government, and education are working together to envision, plan for, and shape the future to the extent possible. Convened as part of the Tech Valley Civic Forum planning and action process, over 100 participants in the deliberations of four task forces are addressing the human side of economic development in the Capital Region. The motto that best captures the Forum's fundamental purpose is "connecting high-tech growth and community well-being."

A collaborative cross-sector planning process in the Greater Capital Region was launched in September 2007 at the Tech Valley Civic Forum, held on the campus of UAlbany's College of Nanoscale Science and Engineering. The process was inspired, in part, by a case study sponsored by the Nonprofit Executive Roundtable titled "High-Tech Growth and Community Well-Being: Lessons Learned from Austin, Texas. (The report can be downloaded from [www.techvalleyfutures.org](http://www.techvalleyfutures.org).)

The goal of this civic change process is to promote the broadest possible sharing of both the direct and the indirect benefits of the region's high-tech economic growth. Primary means to accomplish this are systems and practice change at the policy level and increased awareness of and access to the region's dramatic new economic opportunities across all of Tech Valley's diverse communities.

## COMMUNITY OUTREACH

### Recommendation #1

#### Vision

Students and residents throughout Tech Valley will be aware of and have access to information related to the educational and employment opportunities that the region's new economy offers.

#### Issue

A key challenge is the development and implementation of community outreach and engagement strategies that promote accessibility to Tech Valley educational and economic opportunities.

#### Recommendation #1

Forge and sustain new connections at the community level that link business, nonprofits, education, and workforce development entities with individuals and groups in diverse communities throughout the region who may be less knowledgeable about the meaning of the new economy and the potential opportunities it presents. These connections should promote awareness of and access to the new opportunities that Tech Valley now offers. Key players in making this happen are the gate keepers, door openers, youth influencers, job and career counselors in formal and informal education systems and in the community.

#### Strategies

- Develop a campaign of media Public Service Announcements that invite broad participation in Tech Valley's new opportunities.
- Develop case studies that profile successful employees in Tech Valley jobs.
- Develop a traveling presentation that can be offered at area schools.
- Create an ongoing web site with guidance to potential employers and employees, providing access to information and tools for success.
- Arrange site visits so that Tech Valley leaders can become more familiar with Tech Valley communities.
- Sponsor regular field trips so that Tech Valley youth and their parents can tour Tech Valley employment sites.

## P – 16 EDUCATION

### Recommendation #2

#### Vision

Our region is poised to become an epicenter of high tech growth as innovation drives the global economy. We have a unique opportunity in the region and state to become a driver of national economic growth and development. Leaders in both business and education agree that it is time for a paradigm shift: to ensure the global competitiveness of the region, state, and nation, it is essential that the worlds of business and education work together to embed 21<sup>st</sup> century skills across all levels of education.

#### Issue

Our current New York State educational system provides a strong pathway to prepare students for traditional careers. However, by all accounts, it is not enough to adequately prepare them for the world of work and citizenship in the 21<sup>st</sup> century global economy. The careers of the new economy require our students and workforce to be proficient in 21<sup>st</sup> century skills, such as critical thinking, problem solving, creativity, innovation, collaboration, and effective communication. The business community tells us that effective P – 16 programs should train the workforce of tomorrow in these areas while providing students with a breadth and depth of knowledge necessary to be successful contributors in our “new economy” society.

#### Recommendation #2

Integrate 21<sup>st</sup> century skills into standards, assessment, and graduation requirements at all levels of our education system.

#### Strategies

- Leaders in education and business should partner to develop and provide professional development for teachers already in service, training them in 21<sup>st</sup> century skills, grounding them in real-world experiences, and assisting them to incorporate best practices into their instruction and assessments.
- Pre-service teachers should be required to demonstrate 21<sup>st</sup> century skills in addition to content knowledge in the core subjects.
- Certification requirements for elementary education should include enriched science, technology, engineering, and mathematics (STEM) competencies.
- P – 16 learning environments should reflect the paradigm shift toward 21<sup>st</sup> century skills acquisition. Educational facilities and technology should support new approaches to teaching and learning.
- New York State should provide tax incentives for business to encourage active partnerships with P – 16 educators. Adopt the “21<sup>st</sup> Century Skills Framework” and partner with other states to develop effective programs to accomplish the larger goal/shared vision.

### Recommendation #3

#### Vision

In determining where to locate a manufacturing facility, one of the principal factors considered by industrial and economic developers is the availability of an educated and trainable workforce. As Tech Valley evolves into its full potential, economic growth will be bolstered by a direct relationship between P – 16 education and the needs of existing and emerging high tech industry.

#### Issue

There is a disconnect between the needs of high-tech industries and the workforce preparation of youth in New York State. Through its one-size-fits-all diploma system, New York State does not appear to value technical education, except at the baccalaureate level, and the predominant measure of student success, shared by parents, districts, and state officials alike, is the Regents Diploma which leads to acceptance into baccalaureate degree institutions. At the same time, more youth than ever are dropping out of high school before graduation, thus creating an under educated, unskilled class, and many adults have lost their jobs due to a changing economy. As Tech Valley becomes the epicenter for high-tech manufacturing, we must ensure that appropriate education and workforce training enable the greatest number of our citizens to capture the many opportunities which will exist for entry level and middle- skill jobs in 21<sup>st</sup> century industries.

### **Recommendation #3**

The paradigm for student success must be refashioned and redefined through policy actions, including the formal recognition of multiple diploma types.

#### **Strategies**

- New York State Regents should approve multiple diploma types to recognize academic achievement beyond the minimum graduation requirements and designed to prepare students for a variety of 21<sup>st</sup> century career pathways.
- 21<sup>st</sup> century skills should be embedded into New York State educational standards and their assessment instruments.
- The categories that measure school and student success should recognize the value in non-traditional career pathways, such as students entering an apprentice program or other pre-college/work training upon graduation from high school.
- School funding formulas should be expanded to allow for the reimbursement of the tools necessary to teach and learn in the 21<sup>st</sup> century, such as: manipulatives, equipment, supplies, and wireless devices.
- Programs in place and under development that offer formal worker certification for students, out-of-school youth, and adults should be expanded and strengthened to encourage buy-in from the technical companies (small and large) that might be looking for middle-skill employees. These programs should be implemented and recognized across Tech Valley.
- A formal structure must be created to enable ongoing dialogue between business and education leaders to formulate and implement policy regarding the preparation of students for work in the 21<sup>st</sup> century.
- Student educational preparation should be aligned with the needs of business and industry through math and science requirements (4<sup>th</sup> year in secondary schools) which are contextualized to the work environment.
- P – 16 career pathways and the corresponding multiple measures of school success should be developed which link directly to the economic development thrusts which have been targeted by the Tech Valley Initiative.

### **Recommendation #4**

#### **Vision**

As Tech Valley grows, teachers at all levels will have easy access to content-rich resources and materials embedded with 21<sup>st</sup> century skills that prepare students for the new global economy. Professional development opportunities for educators will be designed and provided to support innovative teaching, learning, and assessment.

#### **Issue: *Teacher Resource Necessary for the 21<sup>st</sup> century classroom***

Current educational resources have been developed in isolation to serve a curriculum designed for a 20<sup>th</sup> century industrial economy.

### **Recommendation #4**

Educators should partner with business leaders to ensure that training and resources are available to implement 21<sup>st</sup> century teaching and learning.

#### **Strategies**

- The business approach to the utilization of technology tools that enhance collaboration and sharing should be adopted by educators.
- A sustainable online library of curriculum, content, and best practices should be developed and integrated into professional development activities in Tech Valley schools.
- Incentives should be provided to encourage formation of partnerships between P – 12 schools, post-secondary institutions, and representatives from local businesses to align 21<sup>st</sup> century skills measures and outcomes with workforce and economic development initiatives.

### **Recommendation #5**

#### **Issue: *New Opportunities for Professional Development Required***

Given mandated subject areas and add-ons, teachers have little time to devote to extraneous subject matter, even if that subject matter may be critical to New York State economic development initiatives. Training is designed in isolation from teachers, and often does not address their individual professional needs.

The time available for professional development is limited, resulting in minimal changes in teaching practices and, consequently student achievement.

**Recommendation #5**

Professional development and certification requirements should reflect 21<sup>st</sup> century skills in the content and design of instruction.

**Strategies**

- School districts and colleges should identify the gaps in teacher knowledge of 21<sup>st</sup> century skills and implement appropriate professional development programs to embed these skills and assessments into existing curricula.
- Time allotted for professional development should be increased and carefully constructed to provide for sequential growth. Districts should be provided adequate resources to support and sustain professional development initiatives.
- The Commissioner of Education should promote the integration of 21<sup>st</sup> century skills into post-secondary curricula and student outcomes assessment.

**Recommendation #6**

**Issue: Access to Resources**

Educators encounter a number of obstacles when attempting to access classroom materials and community resources that support 21<sup>st</sup> century teaching and learning.

**Recommendation #6**

More diverse resources related to 21<sup>st</sup> century teaching and learning should be available to educators at all levels.

**Strategies**

New York State should take steps to ensure that every student and teacher has a computer of their own and the support to maximize its value in the classroom.

- The Commissioner of Education’s regulations should provide avenues for schools to utilize non-certified, highly qualified, field experts to teach specialized content.
- Tax incentives should be established for businesses that provide P – 16 educators and students with access to facilities, internship opportunities, and professional expertise.

**WORKFORCE NETWORK**

**Vision**

Tech Valley’s diverse communities are engaged in building sustainable bridges between employers, education, training and employment services to insure that all segments benefit from the opportunities provided by regional development of technology industries.

**Fundamental Issue**

Systems that connect job seekers to employers are fragmented, limited in value, and under-resourced. As a result, employers find little value in using the system and employer input is often not included in the design of services that intends to create a preeminent regional workforce. All too often, mismatched resources do not allow for dynamic use of funding, flexibility and responsiveness to local needs.

**Recommendation #7**

**Issue**

Although many of the projected new jobs do not require a bachelors level degree, information about associates degrees and certificate programs is not readily available through traditional sources. Training and development efforts are not targeted to the identified need for workers to fill specific middle-skill jobs such as technicians.

**Recommendation #7**

Utilize publicly-funded services more effectively for training programs focused on technology-related middle-skill jobs.

### **Strategies**

- Focus the development of training programs on technology-related middle-skill jobs.
- Ensure that stimulus funds support retraining of dislocated/unemployed adults among others, as mandated.
- Support career pathways in emerging industries.
- Make industry specific training available for new and incumbent workers in middle-skill areas.

### **Recommendation #8**

#### **Issue**

Current services and resources “belong to” specific organizations and are marketed to specific job seekers. The result is a fragmented, separated menu of opportunities that is not available to the community. Without a region-wide coordination, education and job training services and resources risk being duplicated and undersubscribed, and therefore not sustainable.

#### **Recommendation #8**

Develop and implement a plan for coordination among providers of existing job training and educational services.

#### **Strategies**

- Require shared information gathering and reporting – specifically utilizing outcomes of regional reports (such as 13-N Talent Pipeline Study, NYSAC Cornell Workforce Intelligence Report, and other NYS Department of Labor resources where recent employer input was solicited and documented).
- Require stronger commitment to targeting underserved populations in public education and awareness activities.

### **Recommendation #9**

#### **Issue**

Information for businesses about the assortment of public systems that prepare workers is haphazard and inadequate. The private sector has repeatedly stated that the public system does not work for them and that they depend on a parallel, alternative system for worker recruitment.

#### **Recommendation #9**

Solicit support for and business engagement in the development of programs of value to the business community with sufficient rigor and relevance to jobs in appropriate targeted industries.

#### **Strategies**

- Address the “threshold skills”, i.e. the minimum skills required by employers.
- Improve methods of assessment of worker readiness and skill proficiency.
- Incorporate national 21<sup>st</sup> century learning skills into the region’s economic development and education strategies.

### **Recommendation #10**

#### **Issue**

Information about career pathways in technology sectors is not well publicized or promoted and therefore not readily available to communities. The opportunities available through initial entry level jobs that are supported by training and education have been demonstrated in other communities to be an effective strategy for low wage workers to improve skills and move up a career ladder. Further, career planning by students is positively influenced by career pathways strategies.

#### **Recommendation #10**

Develop, support, and sustain a web-based product on career pathways in technology that is free and easily accessible to the public and all stakeholders.

#### **Strategies**

- Build on learning from previous and existing attempts to develop technology platforms.
- Focus on access to users, rather than on proprietorship.
- Link to appropriate websites that serve underserved populations.
- Ensure that the product is supported, used, publicized and maintained by all stakeholders.

## ACKNOWLEDGEMENTS

The recommendations presented in this document emerged from lively discussions among the members of the Community Outreach Task Force, the New Economy and P – 16 Education Task Force, and the Workforce Network Task Force. The Metrics for Success Task Force conceptualized and produced *Tech Valley Trends: A Basis for Civic Change*, released on May 29, 2009 at the Tech Valley Futures Policy Forum. Participants in the 2007 Tech Valley Civic Forum and other community leaders contributed their time generously over the past 15 months to produce the vision for Tech Valley embedded in *Tech Valley Trends* and in these recommendations. The recommendations are proposed as part of the region's response to two critical lessons that business, education, and nonprofit leaders in Austin shared with us: (1) *Create opportunities for broad community learning, planning, and visioning*; (2) *Involve stakeholders from all sectors — business, government, nonprofits, education — in creating the vision for Tech Valley.*

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