



# COMMUNITY NEWS

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&  
VIEWS

*THEME: Working Wired*

## Training For Light Speed

by *Blake Harris*

The mercurial rise and fall of many dot-com companies, and the “irrational exuberance” of investor speculation as Alan Greenspan called it, reveals just how poorly the New Economy is understood by a great many people. Somewhere along the line, fueled by hype and the magnificent potential of the Internet, other high-tech industries became, for many, virtually synonymous with the New Economy. Many dot-com investors might have fared far better if they knew modern economic history. The transformation to a new economic engine of prosperity and growth began decades before the Internet, when knowledge, rather than capital or physical resources, became the key to generating new wealth.

There is no doubt that the Internet will play an increasingly significant role in the economy of the future. But a host of complex new dynamics makes it difficult to predict exactly what that role ultimately will be. In times of change and uncertainty, returning to fundamentals is always prudent. We know, for example, that a knowledge economy will require excellence in education and training. We know that this New Economy is global, because knowledge and information itself is a borderless commodity, never completely contained by political or commercial boundaries. Competition can and does spring from many different regions as knowledge proliferates. And national economies become increasingly interdependent in the resultant global flux of information, goods and services.

Knowledge is a unique economic throttle. While the fruits of knowledge—such as a patent, a

trademark or the expression of an idea—can be owned, knowledge itself can never be exclusively possessed, at least not in the way capital or physical property can be. Nor can it be controlled the way physical resources are controlled by national and other interests.

***If knowledge is now  
the primary economic  
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This single point forms the bedrock of the social and economic transformation in which we are now engaged. And many of the dynamics of the New Economy reveal themselves directly from this underlying shift. So while knowledge itself cannot be exclusively owned for more than a short period, what can be owned is the timely application of that knowledge in advance of the

market. New, innovative applications can capture market share and generate brand-name recognition, making it economically difficult for others to catch up. Speed and continuous improvement are, therefore, two essential ingredients for any New Economy business.

Additionally, access routes to knowledge can also be owned. But this is a value proposition. There is a sharp distinction between mere information (of which there is always far too much in an electronic age) and true knowledge (of which there can never be enough). So the real value of access stems from the quality of knowledge accessed.

Understanding the knowledge economy is not easy, and as yet there really is no comprehensive economic theory that describes its new rules beyond the simple tenets of free-market competition. We have not developed, for instance, the means to effectively measure the quality of knowledge

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## ***LIGHT SPEED, continued from page 1***

independent of practical application, so it is not surprising that we are floundering somewhat in a new world of opportunity, where knowledge makes wealth. But at a time when many questions are now being raised about what the role of government should be in this new age, seeking to better understand this economy is paramount.

In this endeavor, some things are obvious. We clearly recognize that if knowledge is now the primary economic enabler, workforce skills are the real capital of this new age. Effective education and training have become so important in this new era that they increasingly dominate political and social issues. And of all spheres of government responsibility, none will be more radically transformed in the next decades than our current ailing system of education and workforce development. True reinvention of government actually starts with the reinvention of education, which in turn reinvents the citizen.

Peter Drucker suggests that to even begin to resolve the looming problems that the 21st century's social, economic and political turmoil will bring, we have to at least address those challenges that we currently face. And leading a list of his priorities is the urgent need to rethink education - its purpose, its values, its content. "We have to learn to define the quality of education and the productivity of education, to measure both and to manage both," he wrote in his book, *Managing in a Time of Great Change*.

And Drucker adds, "The school can no longer be content to be a place that takes care of juveniles not old enough to work. It will increasingly be the partner of adults as well as the partner of their employing organizations."

Education, in its broadest sense, is a word that means different things to different people. It is a word loaded with our own past experiences. We usually think of school, for instance, in terms of the kind of schools that we attended.

## ***LIGHT SPEED, continued on page 6***

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# Community and Economic Development in the Science and Technology Age

by Dr. Rex L. LaMore

While it is difficult to conceive of today, many of us still have a living memory of communities whose economies were not based in the information society or whose transactions were not dependent on computers or the internet. We may be the last generation of humans to have such a living memory. Like our ancestors who lived through the creation of the industrial age, we are experiencing a phenomenal transformation in our daily lives driven by the application of new technologies. The promise of our scientific applications has been that we would experience an improved quality of life and a more civil society. Certainly for many of us that promise has been fulfilled. However it also accurate to observe, that many of our fellow citizens have yet to realize this promise.

The generation and application of science to industrial or commercial objectives has had an uneven effect on the nature of our communities, the quality of our lives, and the strength of our economy. The digital divide continues to leave behind many residents and communities, thereby limiting their access to employment and opportunities for education. In retrospect that was probably a predictable outcome, recent research suggest that technology based industries are not isolated events but are rather evolutionary events. A community's economic past matters. What a metropolitan area has done for the past half century is related to what they may do in the science and technology economy of the future. Certainly the evolution of the auto industry in Michigan would support such an observation. The convergence of the iron ore resources with the wheel making/carriage making talents of the workforce resulted in the development of a new manufacturing based economy.

Describing the events of the past is obviously much easier than predicting the future. However, we are able to suggest with some certainty that a future economy based on science and technology will change the nature of our communities. Inner-city neighborhoods and isolated rural areas will face many challenges in succeeding in this economic evolution.

The MSU Center for Urban Affairs, Community and Economic Development Program is committed to applying its capacities to these challenges. With the support of the citizens of our state and their public and private organizations the CEDP will seek to identify opportunities to strengthen our communities and help them realize the promise of the science and technology society.

The current issue of Community News and Views is the companion edition to the annual Summer Institute hosted by the Michigan Partnership for Economic Development Assistance. This year's topic is "Working Wired: Empowering Workforce Development in an Information Society." The articles and essays included are intended to explore the changing environment that a knowledge-based economy presents, and to illustrate some of the most pressing issues facing economic development practitioners and policymakers in the 21st century.

*Rex L. LaMore is State Director of the MSU Center for Urban Affairs, Community and Economic Development Program, and Project Director for the Michigan Partnership for Economic Development Assistance.*

# Toward a New Workplace Ethic of Craft and Community

by Dr. Alan Shaw

We live in a modern age of anxiety. Today's workforce must be prepared for an ever-increasing pace of change in the technologies and the expectations that it must face. There is always more to learn and new skills to acquire. Yet in confronting these demanding realities, the key may no longer be in what you know or who you know, but instead in how you go about knowing it.

The World Wide Web is perhaps the closest thing to a motif in the new technological order in which we live.

We call ours an "information age" because of the vast sea of data that is literally at our very fingertips. But its very proximity along with its unceasing growth brings home the reality that it can also be seen as an ocean that threatens to drown us. There is always uncharted data in that ocean that may be waiting to be processed into meaningful information and synthesized into useful knowledge. So, if mere accumulation is the goal, then enough is never enough. But if our goal is more qualitative than quantitative, more contextual than elemental, and more communal than individualistic, then our age of information becomes more manageable.

In a workplace where constant upgrading and re-tooling have become the norm, a regimen of training and re-training have become a necessity. However, training modules often focus on skills instead of craft and ideas instead of conceptual frameworks. Yet, if new skills and new information do not help the learner piece together a growing conceptual model of the various tasks with which the learner is faced, then the new material may be a developmental impediment. It is only when the learner is empowered to synthesize experiences, that the whole becomes greater than the sum of the parts. Empowered learners have more ownership over the process and product of their work and they

are in a better position to balance the effects of the rapid flow of information and the shifting pace of change.

We need a modern workplace ethic that transforms work into craft and training into a developmental cycle.

When work becomes craft it casts everything in the light of a growing body of expertise that is the prerequisite for supporting a community of professionals, para-professionals, and members of a trade. Thus, the changing technological landscape does not dominate the

focus of these workers, but instead it plays a more supportive role, acting mainly as a context through which they engage the craft in new ways and with others who share in their experiences. When learning to master new technologies becomes an end rather than a means to an end, this critical sense of perspective can be lost. And this in turn robs the individual involved of a sense of the context, ownership, and relevance of their work.

However, reclaiming the craftsman's perspective must be coupled with building the capacity for developmental growth. This is increasingly necessary because of the evolving nature of the modern workplace. Developmental growth that can address this flux can be characterized as the ability to progressively engage in a work and then to disengage in order to reflect upon it. This cycle of engaging and disengaging is especially consequential when there is a community with which to examine the work and share in the reflections. At its best, such a community can be characterized as a learning community, with active apprenticeships that take place during the work in the field and with a strong peer review process that takes place during the period of reflection. Training that is limited to an individual focus and does not provide a paradigm for ongoing development can be

***Empowered learners have more ownership over the process and product of their work and they are in a better position to balance the effects of the rapid flow of information and the shifting pace of change.***

an extreme disservice to those in the modern workplace.

In certain occupations those involved often maintain a professional community through publications, but other professionals, para-professionals and non-professionals do not experience this. Fortunately, the same technology that is making the existence of an active learning community a necessity for today's workers, also provides a rich set of tools to support these types of communities. I have been lucky enough to see an example of this in Boston, among teachers who use an on-line lesson planner that I helped to develop.

Today's teachers are perfect examples of those on the front-line of the changing workplace expectations and technologies. Over the years, as social issues such as family instability, violence, drug use, and teen sexuality have become issues that teachers have had to increasingly address, schools have also been compelled to raise academic standards and increase their use of new technologies. And on top of all of this, teachers are often asked try out a new curriculum involving a new pedagogy or educational theory. Their fortitude in the midst of such conditions is a testament to their passion and their commitment to the children, but clearly their work can be overwhelming and they often need more support.

In Boston, to help provide more support for teachers and to help increase their facility with technology, many new initiatives have been started. Some of these aim to help foster a professional community among the teachers, while others aim to give them more access to technology. Some of the initiatives do both. One of the latter included the development of an on-line lesson planner called MetroLINC. MetroLINC enables teachers to create lesson plans and curriculum units that include automatically embedded links to curriculum standards to which the teachers give relevancy ratings. The teachers share their works with one another in small teams and later in larger groups, and they also engage in on-line discussions about their work.

By using the MetroLINC system, the teachers get added training and experience using the Web, but for some of them their exposure to the system was a catalyst for more important non-technical accomplishments. By writing up their own lesson plans and evaluating their relevancy to various curriculum standards, the teachers use the

technology to develop products of their craft that they have ownership of and that represent both engaged practice and disengaged reflection. And by sharing these products on-line within a professional community, the teachers broaden their access to feedback, analysis and opportunities for professional partnership and affiliations. When teachers are not creating a body of work that they can articulate, share, and reflect upon, then they risk being forced to abandon their sense of craft the next time a major educational reform brings in a new sea of change. However, if they have core products of their craft, then future reforms will be seen in the light of those products, which in the above case meant that the curriculum standards were integrated into the

***We need a modern workplace ethic that transforms work into craft and training into a developmental cycle.***

teachers' existing lesson plans, instead of having the lesson plans written to the new standards.

It is difficult to develop and maintain a sense of ownership over one's work in today's evolving workplace environment. However, when work loses its qualitative, contextual and communal nature, the end product is not rooted in deeper principles and constant technological changes can be destabilizing. For this reason new efforts must be made to bring craft and community into the modern workforce at every level. The ongoing regimen of re-tooling and retraining to appropriate new technologies will certainly continue, but we should not view this as merely an opportunity to learn new skills and digest new occupational information. Instead, we should look at new technologies as opportunities to reflect upon and develop our craft in new ways, to create new types of products over which we can maintain some type ownership, and to find new ways to share those products within a community of our peers.

*Alan Shaw is a technology consultant and researcher based in Dorchester, Massachusetts. He is a featured keynote speaker at the MP/EDA 2001 Summer Institute, "Working Wired: Empowering Workforce Development in an Information Society."*

## **LIGHT SPEED, continued from page 2**

In a complex world, education and training is an equally complex subject, especially when it comes to curriculum choices and course content. Yet we all instinctively realize that, in a knowledge economy, education and learning is everything. Even businesses, to continue to be successful, must now become what has been dubbed “learning organizations.”

“The ability to learn faster than your competitors may be the only sustainable competitive advantage,” Arie De Geus, head of planning for Royal Dutch/Shell told *Fortune* magazine several years ago. In other words, in this New Economy, knowledge provides the competitive edge for corporations as well as individuals.

Of course, organizations don’t learn. Only individuals can truly learn and innovate, and the concept of a learning organization really refers to who in an organization is charged with the corporate responsibility of acquiring and using new knowledge to effect change.

“It’s just not possible any longer to ‘figure it out’ from the top, and have everyone else follow the orders of the ‘grand strategist,’ wrote MIT’s Peter M. Senge in *The Fifth Discipline*. “The organizations which will truly excel in the future will be the organizations that discover how to tap people’s commitment and capacity to learn at all levels in an organization.”

The distinction between education and work, as separate activities, grows increasingly blurred. The purpose of education is to bring about learning. And more and more, part of the purpose of work is also to learn. This seems to be an integral part of the natural social evolution of post-industrial society. Pollster Daniel Yankelovich describes the shift away from what he calls an “instrumental” view of work, where work is seen purely as a means to an end, to a more involved workforce, where people seek the “intrinsic” benefits of work. Increasingly, part of the calculation in taking a job is not just the money, but also what that job offers as a learning experience, a stepping stone to career development and a future with interesting possibilities.

So the learning organization concept goes beyond a competitive strategy. It is also a big part of what attracts and retains skilled workers, and what, in fact, helps to glue a New Economy organization together.

### **Challenges of Training**

In a knowledge economy, with high levels of automation, there is never a shortage of workers. Any shortage is in the area of skills possessed by the workforce. On the surface, this arises because of a mismatch between the education and training received, and the changing skill demands of the marketplace.

However, at a more fundamental level, part of the problem is that an industrial mentality still dominates much of the education and training world. Consider the following: Training is still seen largely as an activity

distinctively separate from doing a job. Yet some of the best training is on the job. Add to that the notion of the learning organization, and where does that leave training?

***An educational approach designed for an Industrial Age mentality will be increasingly inadequate for a knowledge economy.***

In a world of constant change, where technology and knowledge grow obsolete with increasing rapidity, the whole notion of mismatched skills itself becomes nebulous. As technological change escalates, there will always be a mismatch if we don’t know how to train and retrain people fast enough. If it only took two months to train anyone to do any job, for example, the only problem with skill shortages would be because people didn’t want the job in the first place.

The knowledge and skill requirements of almost any job continue to increase. Yet there is a practical limit upon how much time can be spent in formal, pre-job education. In the years ahead, this limit could easily be outpaced by rising skills expectations such that fewer and fewer students graduate fully prepared to enter the labor market as a trained, skilled employee.

In a technological age, where the Internet and other media can be used to accelerate distribution and relay of knowledge beyond any capacity to retain the information, speed of training is really limited by one thing — the learning speed of the individual.

In a general sense, the competitive strength of an organization in a knowledge economy is actually determined by the rate or speed with which employees learn. The same applies to the individual. Therefore, measuring what people have learned is Industrial Age thinking. For a knowledge economy, what matters is both what people have learned and how fast they have learned it. And the latter may be the most important thing to measure.

And of course, because government organizations are increasingly measured for efficiency against the private sector, anything that applies to corporations ultimately applies to the public sector as well.

### **Shared Responsibility**

As soon as learning became a lifetime necessity, old notions about who was responsible for training citizens become more and more questionable. Industrial Age education and training developed from the notion that a workforce with the desired, fixed set of behavioral and skill characteristics could be developed by adopting

“scientific” methods of teaching and shaping people. Part of this approach necessitated a state-run public system of education that required so many years of attendance. The instigators of this system believed that a planned, ordered society was possible by matching native learning ability with social requirements. Leaving aside the issue of whether this really ever worked as intended, today, it clearly is out of step with an economy where change is the operative word, and where everyone requires more and more knowledge to earn a living.

So who is ultimately responsible for educating and training the workforce in a knowledge economy?

The only workable answer to that seems to be that everyone is responsible — parents, professional educators who increasingly are being called upon to be accountable for results, governments, businesses

and commercial organizations that need a skilled workforce, citizens who want skilled delivery of services such as health care, and ultimately the individual, who is, in the end, the only one who can ensure that life is a successful and happy endeavor.

However, the actual mechanisms for sharing this responsibility are, today, crude at best. Some parents are very engaged in their children’s education, while others leave it up to the school. Some companies invest in training workers more vigorously than others, but even when this does occur, much of that training is seen as private and is often very detached from public education.

So where does the needed “rethink” of education and training begin? A good place to start is with the industrial notion that education and training are somehow separate from employment. Our society pays for most education and training one way or another, either through taxes or through higher prices of goods and services. So old funding formulas that are not adaptive to the new requirements of lifelong learning need to be replaced by new funding systems that facilitate needed training.

On a systems level, we should question everything about how we educate and train. And such questions need to spring from a much better understanding of what a knowledge economy is all about — how it functions, how it sustains itself and how it expands. And because education is always future-oriented, where we are ultimately going with our knowledge and technology is also highly relevant — something ultimately determined by our collective vision.

Beyond this, we need to understand the real purpose to which new technologies should be harnessed by education and training programs. That purpose is not

simply to fix what is broken in the system. An educational approach designed for an Industrial Age, assembly-line mentality will be found to be increasingly inadequate for a knowledge economy, where skill requirements are both changing and increasing at an ever-accelerating velocity.

Economic realities demand that people learn more and more, both in school and later in life. Rising workplace expectations and the speed of development in all fields of knowledge have, of necessity, antiquated many earlier theories of learning. Notions that

intellectual capacity was somehow genetically fixed or that some students naturally do well in school or training, while others do not, are too crude and limiting in a world where individual and organizational success

***What matters is both what people have learned and how fast they have learned it. And the latter may be the most important thing to measure.***

rests so firmly upon an ability to absorb increasing amounts of knowledge, to apply that knowledge effectively in real world situations, and to be innovative and creative with it — in essence, use knowledge to create new knowledge.

Although we probably have not realized it, we have instinctively redefined a “good educational system” as one where virtually everybody learns. That definition needs to be pushed to new levels, as far as it can possibly be stretched. And in line with this, new technology in education and training requires three overarching thrusts — faster training, better skill retention and application, and enhanced creativity with the knowledge possessed.

In a knowledge economy, what becomes increasingly unacceptable and even dangerous is the student who has “studied” a subject but cannot apply it, and the student who is unable to learn at the rate required of a high speed, ever-changing world.

A knowledge economy requires knowledgeable citizens. The faster we wake up to this exciting reality, the easier the transition will be across all sectors of society.

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# Working Wired:

## A Survey of How Michigan Residents Use Information Technology

by Dr. Mark Wilson

Increasingly, technology has come to define many of our day-to-day activities. Expressions such as 'digital divide' or 'information age' are widely used, yet what do they mean at a personal level?

Information age refers to the preeminence of information as the defining component in many of the economic, social, and political actions that shape our lives. The shift in the economy and work from the physical nature of agriculture and manufacturing to the intangibility of information brings significant changes in the occupations and industries of most economies and societies.

As technology becomes increasingly important, we face concerns about the ability of all people to access and use information technologies, such as computers, the Internet, and wireless communications; the digital divide that separates the technology haves and have-nots.

Information technology is increasingly common in the workplace and an activity associated with many jobs. As part of its ongoing research on community and economic development, the Michigan Partnership for Economic Development Assistance (MP/EDA) at the Michigan State University Center for Urban Affairs is undertaking a multi-year study of technology and community growth in Michigan.

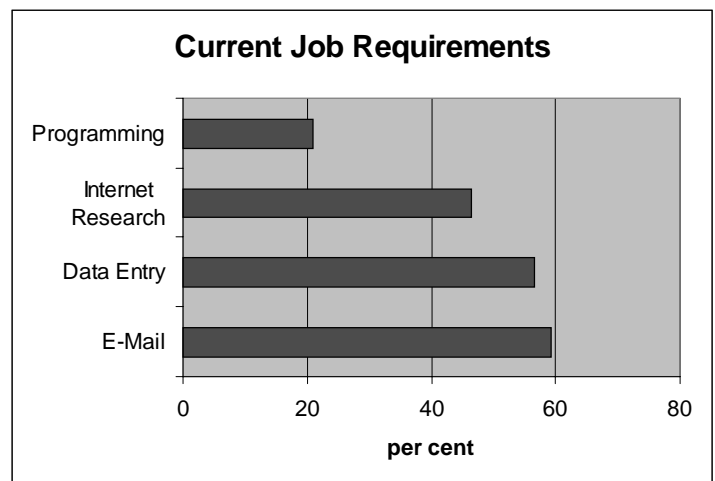
As part of this research, Michigan residents were surveyed about their attitudes to, and experience with, information technologies, in particular, the use of technology on the job. The survey of Internet and technology use was conducted for the MP/EDA as part of the quarterly State of the State surveys by the MSU Institute for Public Policy and Social Research.

### **Wired at Work**

Computer use is an important skill for many jobs. In 1997, 50% of the American workforce used computers as part of their job, an increase from 46% in 1993. Computer use varied across society, with 44% of men and 57% of women using computers at work. Differences are also evident by race and ethnicity: White (54%); Black (40%); and Hispanic (30%). Computer use in the workplace is closely tied to better paid jobs, with three-quarters of workers in managerial,

professional, administrative, and technical occupations using computers. Computer use was less than 25% for service, production, and agricultural workers. [Data from Digest of Education Statistics 2000, Table 430]

In our Michigan survey, almost half of the respondents commented on their work experience with computers. Of this group, almost 60% used data entry and e-mail at work, with just under half undertaking Internet research and just over 20% performing computer programming.



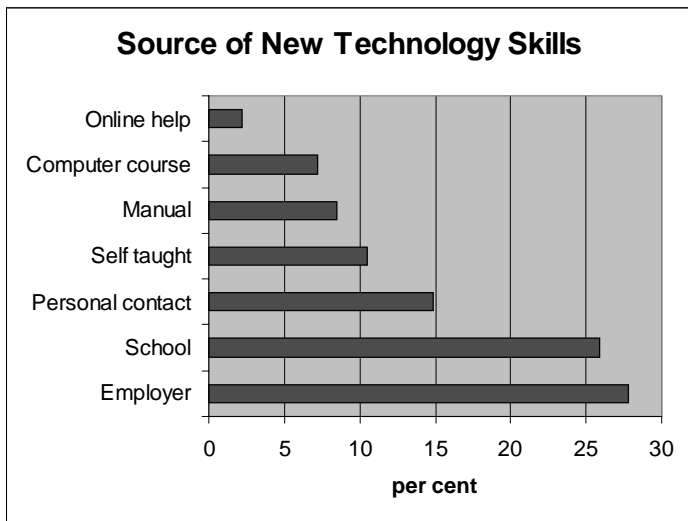
### **Technology Training**

With technology a common element of work, we asked workers about where they learned technology skills. New skills were most commonly learned through employers or school, although personal contacts and the basic trial and error of self-teaching were also important. Less common were reading program manuals, attending a computer course or using online resources.

Some differences did emerge, most dramatically between men and women. Reading a manual was used by 16% of men and 2% of women, while school was the primary source for 32% of women and 19% of men.

As employers place greater value on worker knowledge and facility with technology, occupations change and workers often face the need to retrain or learn new skills. Maintaining and developing new skills has never been more important, as the ability to find employment and earn high wages is a challenging task in an information economy.





Maintaining skill levels in a period of technological change is an important labor and economic issue for Michigan. Two decades ago, Michigan experienced the economic damage of well-paid production workers in manufacturing being displaced and finding few, if any, equivalent jobs in the state. It is important for the Michigan workforce to be prepared to work with technology and for changing occupational demands.

As part of our study we analyzed how workers at different age levels learned about computers. For most age groups, employers play a significant role in upgrading skills, followed by school and personal contacts. Not surprisingly, younger workers are trained through schools, with computer courses

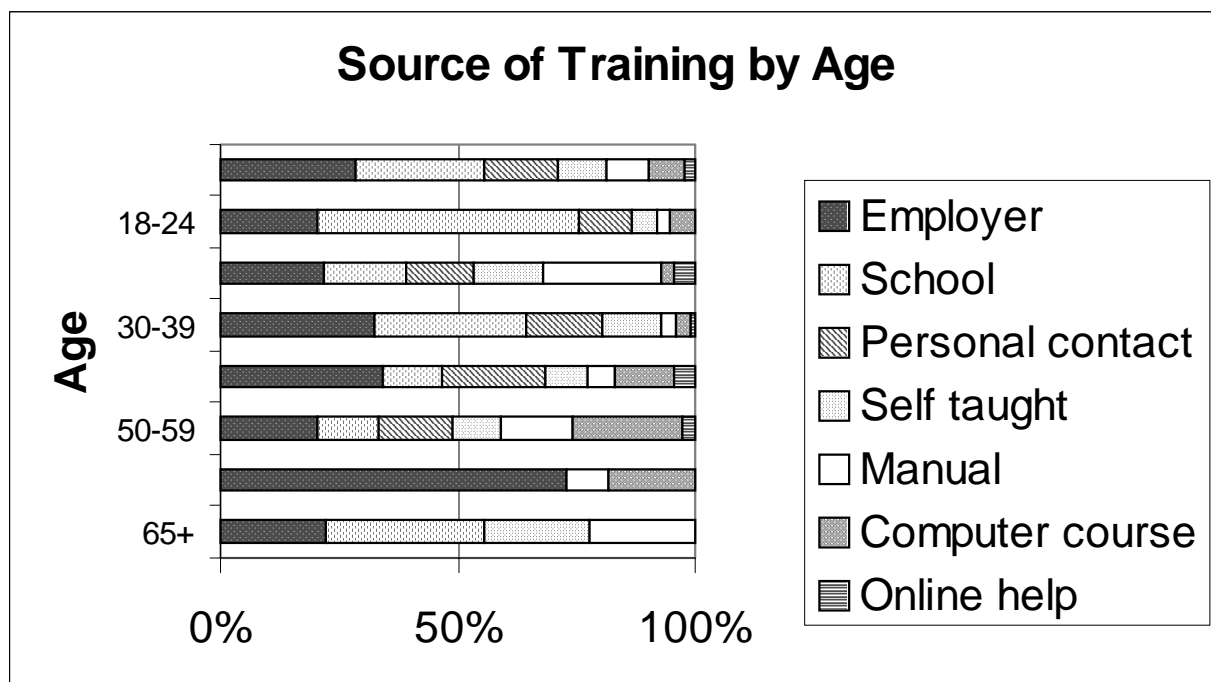
growing in importance as workers age. For older workers, employers and formal courses are most important, with personal contacts and school having little impact.

#### **The Future of Work**

Our survey shows the importance of information technology to the daily work of many Michigan residents, and the range of resources used by workers to maintain skills or learn about new technology. If all regions of Michigan are to benefit from technology driven growth, however, it is essential for them to be able to support well-trained workers able to use information technologies.

The types of careers and jobs currently expanding and paying good wages include information and communication technologies, advanced manufacturing (e.g., auto industries), life sciences, biotechnology, biomedical science, bioinformatics, pharmaceuticals and chemistry. These careers are a radical shift from the previous service and manufacturing economic base found in many communities in the state of Michigan. As careers change, it is equally important that workers have opportunities to develop their careers or redirect their skills to new employment opportunities.

*Mark Wilson, a member of the MP/EDA research team, is an Associate Professor of Geography/Urban Planning and the Institute for Public Policy and Social Research at Michigan State University.*



# The Metropolitan New Economy Index

by Robert D. Atkinson and Paul D. Gottlieb

*The following is a summary of a report published in April 2001 by the Progressive Policy Institute in Washington, DC.*

In the last 15 years, a “New Economy” has emerged in the United States. Among its defining characteristics are a fundamentally altered industrial and occupational order, a dramatic trend toward globalization, and unprecedented levels of entrepreneurial dynamism and competition — all of which have been spurred to one degree or another by revolutionary advances in information technologies (IT). As these developments have swept through our national economy, they have also restructured and reshaped the nation’s 261 metropolitan area economies (a metropolitan area is defined as an urbanized area with a population of more than 50,000). Metropolitan areas differ, however, in the degree to which their economies are structured and operate in accordance with the tenets of the New Economy.

America is predominantly neither an urban nor a rural nation, but rather a metropolitan nation where the majority of the population lives and works in large metropolitan areas that include both historic central cities and dispersed suburban development. Moreover, leading-edge New Economy activities are more concentrated in metro areas, particularly large and mid-sized ones. Both factors make it appropriate to use a metropolitan lens to view the New Economy.

As a result, this report uses a set of 16 economic indicators to assess the 50 largest metropolitan areas’ progress as they adapt to the new economic order. Collectively, these metros account for approximately 60 percent of the nation’s workforce. The report is not intended to rank business climates, economic performance, or economic development policies in the traditional sense. Nor is it intended to crown “winners” or stigmatize “losers.” Rather, our intent is to highlight differences among the structural foundations of metro economies and to focus attention on a policy framework aimed at promoting fast and widely shared income growth.

## ***The Transformation to a New Economy***

Was the New Economy a flash in the pan? Or, even worse, a myth spun by an over-imaginative media? To paraphrase Mark Twain, reports of the New Economy’s demise have been greatly exaggerated. The New Economy is here to stay. To be sure, the NASDAQ has fallen sharply, many dot-

coms are going bust, and investment in information technology is down. When this news is conflated with the other negative economic indicators that surfaced in winter 2001, it is an easy but mistaken step to

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*The New Economy embraces a profound transformation of all industries, the kind of transformation that happens perhaps twice in a century.*

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pronounce the death of the New Economy.

The fallacy of this leap rests on the belief that all the New Economy is about is the Internet and what investor Jim Clark and writer Michael Lewis dubbed the “next new thing.” On the contrary, the New Economy embraces more fundamentally a profound transformation of all industries, the kind of transformation that happens perhaps twice in a century. The emergence of the New Economy is equivalent in scope and depth to the rise of the manufacturing economy in the 1890s and the emergence of the mass-production, corporate economy in the 1940s and ’50s. As documented in PPI’s *New Economy Index* the New Economy represents a complex array of forces including the reorganization of firms, more efficient and dynamic capital markets, more economic “churning” and entrepreneurial dynamism, globalization, economic competition, and volatile labor markets.

But underlying and powering these changes is the information technology revolution which, notwithstanding media reports of new “pure play” dot-com bankruptcies, is fundamentally healthy. The online market continues to grow at a robust pace, with more and more of its work done by traditional “bricks and mortar” companies diversifying into “clicks and mortar” operations. The Census Bureau reports that e-commerce retail sales grew seven times faster than all retail sales in the fourth quarter of 2000 and was 67 percent higher than in the fourth quarter of 1999. Moreover, between October 2000 and February 2001 Internet growth actually accelerated. Almost five million Internet domain names (e.g., dot-coms) and 17 million Internet hosts (Internet addresses) were added. Home broadband use increased 150 percent last year and is projected to continue growing rapidly.

Worldwide Internet use is expected to more than triple by 2005 to more than 1.5 billion people.

But what about the slowdown in tech investments? Doesn't this mean that the tech revolution, and by extension, the New Economy has run its course? On the contrary, as a host of new technologies becomes ready for the market, IT investments will remain robust. These include voice recognition, expert systems, smart cards, e-books, cheap storage devices, new display devices and video software, intelligent transportation systems, "third generation" wireless communication devices, and robots.

In short, a New Economy has emerged: it is a global knowledge and idea-based economy where the keys to wealth and job creation are the extent to which ideas, innovation, and technology are embedded in all sectors of the economy—services, manufacturing, and agriculture.

### ***The New Economy in Metropolitan Areas***

The same forces that are driving the New Economy — new industries and jobs, globalization, competition and dynamism, and the information technology revolution — are also driving a new reordering of the economic geography of America, including its metropolitan regions.

In the old economy most economic activity took place in large metropolitan areas. As the IT revolution gives companies and workers more locational freedom, a smaller share of employment is located in the largest metropolitan areas than was the case just 10 years ago. The share of employment located in the largest 61 metropolitan areas actually declined by 1.5 percent between 1988 and 1997, from 55.1 percent to 54.3 percent. In contrast, the share of jobs in mid-sized metros (between 250,000 and 1 million) increased by 4 percent, and the share in small metros (between 50,000 and 250,000) increased by 7 percent. But so far the deconcentrating forces of the New Economy are not all powerful — the share of jobs in rural counties not adjacent to metro areas declined by 11 percent.

These forces are also leading to a decentralization within metropolitan areas. The old economy metropolis was like an atom — most of a region's economic activity was concentrated densely at the center like a nucleus, with residents spread out in rings around the city, poorer ones close in, richer ones farther out. Nothing epitomized this better than the skyscrapers located in the downtown and the large factories adjacent to the downtowns.

But fundamental New Economy forces have acted like an atom smasher, breaking the nucleus up

into hundreds of pieces and strewing it across the countryside. An office is more likely to be located in an anonymous building in a remote suburban office park, while the typical manufacturer is a small operation located in a metal "Butler" building located at the outer edges of a metro or in a small town.

In short, the common vision of the metropolitan area as a place with one economy, located among downtown skyscrapers and inner-ring factories, no longer describes the metropolis common to America at the beginning of the 21st century. By the early 1990s, 57 percent of office stock in America was located in the suburbs, up from 25 percent in 1970. Similarly, most high-tech jobs are in the suburbs as well.

And these trends are occurring not just in the newer metros of the West, but all over. Milwaukee's central city lost 14,000 jobs between 1979 and 1994, while inner-ring suburbs gained 4,800, and outer-ring suburbs gained a staggering 82,000. The District of Columbia's share of regional jobs fell from 33 percent in 1990 to only 25 percent in 1998, in part because office space in the high-tech outer-suburban Dulles Airport corridor increased from 20 million square feet in 1992 to 100 million in 1999. Atlanta's share of the metropolitan region's jobs declined from 40 percent in 1980 to 28 percent in 1990, with the northern, predominately white suburbs gaining all the share that the city lost — exacerbating the spatial mismatch for underemployed minorities, who are concentrated in the central and southern part of the city while jobs are increasing in the northern suburbs.

The bedroom suburb — little more than a home to workers commuting to the central city — is an anomaly, something to be experienced in reruns on Nickelodeon. Today, many people live and work in the suburbs and rarely visit the central city; others still commute to the core for work, but find any and all services needed for their daily lives available in the suburbs. These changes have proceeded to the point where even the terms "cities" and "suburbs" have become artifacts of the old economy.

The centripetal forces sending businesses throughout all parts of the metropolitan area mean that people can live farther from the center and not face inordinately long commutes. In the old industrial metropolis, when most jobs were downtown, few people wanted to live 25 miles from the center city. With edge cities and office parks 20 miles from the center city, people now live 30, 40, and even 50 miles from downtown and still have reasonable commutes. For example, the growth of the high-tech I-270 corridor in the Washington, D.C., suburb of Montgomery County, Maryland, has meant that

people who work there are increasingly commuting from as far away as West Virginia.

This kind of sprawl is not necessarily leading to lower population densities within the current bounds of metro areas. On the contrary, the fact that suburban areas are becoming urbanized accounts for much of the concern over sprawl. Residents who moved to the suburbs to get away from it all — to experience the equivalent of Frank Lloyd Wright's Broadacre City — are increasingly wondering what happened to their semi-rural good life. For example, while population density in the city of Chicago fell from 16,000 persons per square mile in 1950 to 12,000 in 1990, the density in already developed suburbs increased from 400 to 1,200 as infill and multifamily homes increased. Between 1980 and 1990, population density of the built-up areas of the 40 largest metropolitan areas actually increased 14 percent, from 456 persons per square mile to 523. Thus, while many urban core areas are getting less dense, inner and outer suburbs are getting more dense.

But while inner and outer suburban densities may be increasing, development on the far fringes of metropolitan areas, which often leapfrogs existing metropolitan development by miles, has meant that overall population densities are declining as many metro areas encompass increasing amounts of land. For example, by the mid-1990's the population of the Philadelphia metropolitan area was only 100,000 more today than it was in 1960, but it's spread out over a land area 32 percent larger than in 1960, representing the development of 125,000 acres of open space. In Chicago, while the region's population grew only 4 percent, the residential land area expanded 50 percent. It is this low-density development at the fringes of metro areas that is commonly referred to as sprawl.

But these patterns of dispersal differ by region. Places like Phoenix and Los Angeles are sprawling outward, but because they are gaining population, overall densities are going up. In contrast to this "dense sprawl," places like Rochester, N. Y., and other slow-growth metropolitan areas can be characterized as "thinning metropolises," where low-density exurbs continue to develop even as the population remains constant (or, as in the case of places like Buffalo, N. Y., even declines). In the New Economy, dispersed development is the dominant spatial form in virtually all areas.

But it's not just the spatial order of economic activity that the New Economy has transformed; it's also the industrial and occupational order. Because of superior productivity, in the last two decades manufacturing employment has declined as a share of total jobs and now accounts for only 14 percent of total employment. But in the 50 largest metro areas, its share is even less — only 11 percent of jobs.

With the relative decline in manufacturing employment, the economy has specialized in high-tech and business services (e.g., banking, consulting, insurance). Office jobs now account for over 40 percent of all jobs, while managerial, professional, and technical jobs account for almost 30 percent of employment. But these activities are even more concentrated in metro areas. While the 114 largest metro areas account for 67 percent of all jobs, they account for 81 percent of high-tech employment, and 91 percent of Internet domain names (e.g., dot coms). Between 1988 and 1997, urban counties of large metropolitan areas (over 1 million in population) have seen advanced business services jobs increase by 21 percent, and high-tech by 24 percent, while their suburban areas have seen increases of 39 percent and 43 percent, respectively.

The inherent drivers of the New Economy — the rise of information and knowledge jobs, constant innovation and "churning," and competition, all coupled with a radical and deeply transformative information technology revolution — have enabled these changes. The New Economy gives both companies and workers more locational freedom. Whereas manufacturing and distribution facilities formerly needed to locate on water or rail lines, ubiquitous highway access now lets them locate almost anywhere. Likewise, many service facilities needed to locate downtown to facilitate face-to-face transactions, but now e-mail, faxes, and the Internet give them new freedom. As more and more Americans own cars and can afford single-family homes, they too can live in a much wider range of places. The result is that dispersed development of people and jobs — what critics call sprawl — is by its very nature a part of the New Economy.

This isn't to say that public policies should seek to exacerbate the centrifugal forces of the postindustrial New Economy. It is to say that policy makers need to understand and work with its systemic forces. It also is to say that, because the working economy now is not just the central city but the entire region, policy makers must view the region as a complex interconnected organism whose overall health is affected by the health of the parts. Because the metro area as a whole is the right unit for analysis, it's also the right unit for policy. Policy makers need to look at a host of issues, including transportation, education, training, and economic development, through a regional frame.

*Robert D. Atkinson is vice president of the Progressive Policy Institute and director of PPI's Technology & New Economy Project. Paul D. Gottlieb, associate director of the Center for Regional Economic Issues at Case Western Reserve University, is one of the nation's leading experts on metropolitan economic development. Copyright 2001 by Progressive Policy Institute. Reprinted with permission.*

# Partnership for Prosperity: A Federal Economic Development Agenda

*In February 2001, the Council for Urban Economic Development presented a set of economic development policy recommendations to the Bush Administration and the 107th Congress. A summary of this report is reprinted below.*

The Council for Urban Economic Development (CUED) in partnership with leading national and regional economic development associations including the National Association of Installation Developers (NAID), the American Economic Development Council (AEDC), the Northeastern Economic Developers Association (NEDA), the Southern Economic Development Council (SEDC), the Mid-American Economic Development Council (MAEDC) and the California Association for Local Economic Development (CALED) produced this paper to examine how the federal government can partner with state and local governments and the private sector to combat economic distress and guarantee long-term economic prosperity for all American communities. The paper addresses:

- How the transition to the new economy is changing the way communities safeguard and invest in their economic health; and
- How federal government efforts can support communities' efforts to enhance their competitiveness and generate wealth in the new economy.

We assume at the outset that the federal role in economic development is not to intervene but to complement state and local initiatives. Specifically, the federal government's role should be to:

- Stimulate private sector activity to meet development goals;
- Strengthen partnerships across government agencies and among federal departments, state and local governments, community stakeholders, and the private sector; and
- Improve its current portfolio of programs and policies.

Economic developers identified economic development priorities in five action areas:

## *I. Competitive Communities*

The opportunities proffered by the new economy must be available to all Americans regardless of where one lives, with special emphasis on the most distressed urban neighborhoods and rural communities. The federal government, in partnership with the private sector and state, local and community organizations should prioritize the following activities:

- Stimulate market development in underserved areas by leveraging private investment, thereby increasing available financial resources.
- Partner with the private sector to close the digital divide, ensuring that all communities, individuals, social groups and businesses have access to, and an understanding of, information and communication technologies.

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*Quality education and lifelong educational and training opportunities are essential for the long-term competitiveness of the U.S. economy.*

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## *II. Competitive Government*

The federal government's portfolio of programs and policies have helped communities nationwide finance, maintain and upgrade critical physical infrastructure, affordable housing and business and housing financing, especially in distressed and marginal areas. Some federal programs, however, are overly bureaucratic, which has resulted in reduced program effectiveness and increased costs, and has inhibited private participation in development efforts.

Government, in the new economy, needs to look to improve its performance through coordinating efforts, concentrating resources, deregulation and decentralization in the following areas:

- Enhancing the Economic Development Administration (EDA), at the Department of Commerce, which recently streamlined its regulatory requirements. EDA remains a significant direct federal economic development player. The agency has a competitive bidding process and has an excellent track record for leveraging investment.
- Pursuing regulatory reforms in: 1) the Community Development Block Grant program, the Department of Housing & Urban Development's main economic development offering; 2) the Small Business Administration's 504 lending program, its main economic development loan program which receives no government subsidy, paid for entirely by private sector fees; and 3) the federal government's management of private activity bonds, tools used by local government to foster public-private partnerships and provide financing for critical economic development objectives.
- Increasing coordination among federal economic development programs, to improve program effectiveness, reduce bureaucracy on local government, and create synergies among different economic development goals.

### ***III. Competitive Businesses***

Competitive communities have competitive businesses. One of the key roles economic developers play is helping businesses operate more efficiently. To support business competitiveness in the new economy, federal government—in partnership with communities and the private sector—should:

- Stimulate investment in research and development, especially in longer-term, higher risk areas of societal benefit, and promote its commercialization
- Facilitate small businesses investment in the adoption of new and existing technologies, research and development, commercialization opportunities, and export development

### ***IV. Competitive People***

Maintaining the prosperity of the United States and its communities means investing in people. In the old economy, manufacturing companies, producing standardized goods, relied on unskilled and semi-skilled, low-cost labor to perform routine tasks. In the new economy, wealth is created through rapid

and regular innovation, requiring higher levels of education and continuous training and retraining opportunities for people in all economic sectors, including entry-level positions. Quality education and lifelong educational and training opportunities are essential for the long-term competitiveness of the U.S. economy, raising per capita income and reducing income disparities. Federal efforts should prioritize:

- Promotion of innovation and reform within the Workforce Investment Act to increase its effectiveness
- Facilitation of investment in talent development, such as seeding private sector consortia to provide training and retraining options aligned to business requirements, upgrading the skills of the unemployed and underemployed, facilitating the use of immigrant and foreign labor, and working with intermediaries such as faith-based organizations to enhance employment opportunities for low-income individuals.

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***The forces of the new economy are regional in scope. Its problems—sprawl, labor shortages, congestion, distress—also are regional in nature.***

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### ***V. Competitive Regions***

The forces of the new economy—education and training systems, mobility, quality of life, access to amenities, industrial clusters—are regional in scope. Its problems—sprawl, labor shortages, congestion, distress—also are regional in nature. Businesses often lead the crusade for regional action because their economic sectors, supply chains and labor force are regional. The federal government, partnered with local government and the private sector, should:

- Stimulate investment in urban revitalization in inner cities and inner-ring suburbs—including an emphasis on brownfields redevelopment—to counter sprawl and create economic opportunity;
- Facilitate smart growth efforts; and
- Provide incentives for regional cooperation.

*The principal author of this paper is Dr. Shari O. Garmise, former vice president for research at the Council for Urban Economic Development. Reprinted with permission from the International Economic Development Council.*

# CEDP UPDATES

## Michigan State University Community and Economic Development Program Receives Neighborhood Partnership Award

At a ceremony celebrating university-community partnerships, Michigan State University's Community and Economic Development Program (CEDP) was recently honored by the Michigan Neighborhood Partnership in Detroit. MSU CEDP received the award for the development and implementation of a Community Income and Expenditure Model, which was created in cooperation with the Southwest Detroit Business Association to identify economic opportunities for residents and businesses in southwest Detroit.

The Community Income and Expenditure Model (CIEM) helps to identify patterns of economic exchange within a community by examining local consumers' expenditures in the local business sector and the local business sectors' support of the local work force. The CIEM is based on the observation that development of an accessible and appropriate information base that facilitates a community's understanding of their asset flows in an important step in the sustainable rehabilitation of a distressed community's economy. By using the CIEM, communities can identify how to keep more of their money within the local economy and how to attract additional resources to stimulate economic growth for local residents and entrepreneurs. The model identifies how much money local residents, businesses, nonprofits, and government agencies contribute to the local economy through purchases of goods and services and hiring of local residents, and how much money is spent outside of the community. Using this collected data, the CIEM can help to identify how the community can create, improve or expand existing business to attract more customers and how to increase employment opportunities by training local workers so they are better prepared to meet the needs of local businesses.

The CIEM is the result of work completed by the partnership of the MSU-CEDP and the Southwest Detroit Business Association with support from the MSU Michigan Partnership for Economic Development Assistance (MP/EDA) and the U.S. Department of Commerce, Economic Development Administration. The goal of this partnership was to create opportunities for residents and businesses in southwest Detroit. Since its inception, the CIEM has been refined and implemented in other Michigan communities.

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