

## THE KEYS TO MICHIGAN'S FUTURE: LEARNING AND INNOVATION

### INTRODUCTION

Almost exactly 20 years ago I was invited by the Reverend Charles Adams to give a Sunday sermon at the Hartford Memorial Baptist Church stressing the importance of education.

While this was quite an intimidating experience, Rev. Adams gave me comfort afterwards by observing that 20 new souls had come forward to commit themselves to Christ after my remarks.

Perhaps it is appropriate that I begin my remarks today by quoting the same scripture passage that I did two decades ago,

*Scripture Isaiah 43:18-19*

*Remember ye not the former things, neither consider the things of old. Behold, I will do a new thing; now it shall spring forth; shall ye not know it? I will even make a way in the wilderness, and rivers in the desert.*

### THE BAD NEWS

The past two decades have been very difficult times for Detroit, Michigan, and indeed the entire Great Lakes area. Actually, although the collapse of our economy and several of our most important companies seems to have happened very fast, in reality it has been a long-time coming...

Today we find Michigan has fallen to the bottom of the nation, 50<sup>th</sup>, deadlast among the states, in almost every indicator that matters:

- Unemployment and employment growth
- GDP growth
- Personal income growth
- Economic momentum
- We've already seen several of Michigan's companies, which served as the economic engines of the 20th century, pushed over the brink by the global economy.
- Corporate tax rate and the cost of doing business (although ironically those states with highest tax rate such as Minnesota, Massachusetts, and California also have the highest per capita income, while those with the lowest tax rate fall at the bottom in percapital income)
- More important, I believe, is the fact that Michigan's support of higher education over the past decade has fallen to the bottom, 50<sup>th</sup> out of 50<sup>th</sup> among the states—rather appalling evidence of how much our state values providing educational opportunity to its citizens.
- Our educational system is underachieving with one quarter of Michigan adults without a high school diploma and only one-third of high school graduates college-ready. Less than one-quarter of Michigan citizens have college degrees.
- Furthermore, the out-migration of young people in search of better jobs is the fourth most severe among the states.
- Lest you think Ann Arbor is an oasis, immune from the challenges of the flattening world, our largest private employer, the huge Pfizer Global Research Center (the place that brought you Lipitor) was closed two years ago taking 2,400 high paying jobs with it!

And most of this happened BEFORE THE FALL—the collapse of the past year!!!

And there are signs that we continue to be in free-fall, yet to hit bottom.

It is almost as if we have been progressing through Elizabeth Kubler-Ross's five stages of dying:

Denial

Anger

Bargaining

Grief

And finally, acceptance and resignation.

But let me suggest that we need to replace that last phase with "a new thing", in the sense of Isaiah.

We need to replace resignation with five more stages:

Hope

Determination

Commitment

Sacrifice

Success!!!

My remarks today will focus on three key themes that I believe are necessary to turn things around:

1. We must think globally, but act regionally
2. We must begin to reinvest in our people as our highest priority
3. And we must accept our responsibility as one generation to the next to make the necessary sacrifices to secure for our descendents a better future.

## THE REGIONAL REALITY

The reality is that today's global knowledge-driven economy really doesn't respect the usual geopolitical boundaries—municipalities, states, even nations...

The economic concentrations of the global economy span regions characterized by common economic, demographic, and culture characteristics and anchored by world-class metropolitan areas.

It is for this reason that many have looked beyond state and municipal boundaries to regional economic strategies, in our case spanning the Great Lakes states and perhaps the entire Midwest.

Recently I have been asked to develop a "master plan" for creating a world-class workforce in this region. Although this really isn't due until early fall, let me give you an advance briefing on some of the conclusions and recommendations.

To begin with, we need to ask and answer three key questions:

*1. What skills and knowledge are necessary for individuals to thrive in a 21st century, global, knowledge-intensive society?*

Clearly a college education has become mandatory, for some at the associate level, for most at the bachelors level, and for many, at the graduate level.

Unfortunately, however recent polls still suggest the majority of our citizens just don't understand the imperatives of the global economy, convinced that their kids can get a decent job with only a high school diploma, while the tragic reality is that if they can even find a decent job, they will be only one paycheck away from the unemployment line.

2. *What skills and knowledge are necessary for a population (workforce) to provide regional advantage in such a competitive knowledge economy?*

Here it is important to stress that we are not just competing for prosperity or with other states such as Ohio or Indiana or California or Texas. More serious is the competition from the massive and increasingly well-educated workforces in emerging economies such as India, China, and Central Europe.

3. *What level of new knowledge generation (e.g., R&D, innovation, entrepreneurial zeal) is necessary to sustain a 21st century knowledge economy, and how is this achieved?*

Here it is increasingly clear that the key to global competitiveness in regions aspiring to a high standard of living is innovation. And the keys to innovation are new knowledge, human capital, infrastructure, and forward-looking policies.

Not only must a region match investments made by other states and nations in education, R&D, and infrastructure, but it must recognize the inevitability of new innovative, technology-driven industries replacing old obsolete and dying industries as a natural process of “creative destruction” (a la Schumpeter) that characterizes a hypercompetitive global economy.

#### A ROADMAP TO THE FUTURE

So, what do we need to do? What is the *roadmap to our future*?

In a knowledge-intensive society, regional advantage in a highly competitive global marketplace is achieved through creating a highly educated and skilled workforce.

It requires an environment that stimulates creativity, innovation, and entrepreneurial behavior.

More generally, in an age of knowledge in a global economy, educated people, the knowledge they produce, and the innovation and entrepreneurial skills they possess have become the keys to economic prosperity, social-well being, and national security.

Moreover, education, knowledge, innovation, and entrepreneurial skills have also become the primary determinants of one's personal standard of living and quality of life.

Hence one could well make the case that democratic societies—and state and federal governments—must accept the responsibility to provide all of their citizens with the educational and training opportunities they need, throughout their lives, whenever, wherever, and however they need it, at high quality and at affordable prices.

Beyond a commitment to educational opportunity, there is another key to economic prosperity: technological innovation.

As the source of new products and services, innovation is directly responsible for the most dynamic sectors of the U.S. economy.

Here our nation has a great competitive advantage, since our society is based on a highly diverse population, democratic values, and free-market practices.

These factors provide an unusually fertile environment for technological innovation. However, history has also shown that significant public investment is necessary to produce the essential ingredients for innovation to flourish: in new knowledge (research), human capital

(education), infrastructure (schools and colleges, facilities, laboratories, communications networks), and policies (tax, intellectual property).

Adequately supporting education and technological innovation is not just something we would like to do; it is something we have to do.

What is really at stake here is building our regional advantage, our ability to compete for prosperity, for quality of life, in an increasingly competitive world.

In a knowledge-intensive society, regional advantage is not achieved through tax cuts for the wealthy or using public dollars to prop up dying industries. It is achieved through creating a highly educated and skilled workforce.

As Bill Gates warned, cutting-edge companies no longer make decisions to locate and expand based on tax policies and incentives.

Instead they base these decisions on a state's talent pool and culture for innovation—priorities apparently no longer valued by many of Michigan's leaders, at least when it comes to tax policy.

The reality is that the Midwest is no longer capable of supporting its current population with an economy based upon low skill yet highly compensated manufacturing jobs that are rapidly being off-shored. It is clear that the legacy costs of the old entitlement culture can no longer be sustained without a dramatically restructured economy capable of generating wealth in the global, knowledge-driven economy.

Hence our goal is simple in principle if challenging in execution:

To transform what was once the manufacturing center of the world economy into what could become its knowledge center.

Put another way, while this region provided the muscle for the manufacturing economy that powered the 20th century, I believe it has the capacity to become the brains of the 21st century knowledge economy.

Hence the most immediate priority of the Midwest region—its governments, cities, and towns—is to make the investments today that will create the knowledge and human resources capable of competing and prospering in a global knowledge-driven economy.

But this will take time. We must first elevate our educational, research, and innovation resources to the world-class levels. Then we must utilize these assets to provide future generations with world-class education opportunities, innovative skills, and entrepreneurial spirit.

The Midwest must take bold actions to recapture the resources necessary to upgrade the quality of its workforce, to provide its citizens with the educational opportunities and skills demanded by the global economy.

Put more bluntly, the regions must shrink the burdens of a workforce no longer competitive in the global economy if it is free up the resources necessary to invest in its future.

It must downsize its public and private commitments and legacy costs (e.g., health care, pensions, corrections, social services) to levels more appropriate for a smaller population, particularly in those cities experiencing major economic decline and population loss.

It must restructure its tax, expenditure, entitlement, and legacy cost structures to align with this “smaller but better educated” population.

More specifically, some of the elements in the Midwest Education Master Plan:

1. Regional → National → Global: While it is natural to confine policy to state boundaries, in reality such geopolitical boundaries are of no more relevance to public policy than they are to corporate strategies in an ever more integrated and interdependent global society. Hence the Midwest's strategies must broaden to include regional, national, and global elements.
2. Competition → Collaboration: Midwestern states, governments, and institutions must shift from Balkanized competition to collaboration to achieve common interests, building relational rather than transactional partnership most capable of responding to global imperatives.
3. All Students College-Ready: The Midwest region will set as its goal that all students will graduate from its K-12 systems with a high school degree that signifies they are college ready. To this end, all students will be required to pursue a high school curriculum capable of preparing them for participation in post-secondary education and facilitating a seamless transition between high school and college. State government and local communities will provide both the mandate and the resources to achieve these goals.
4. Restructuring K-12 to Achieve World-class Performance: To achieve a quantum leap in student learning, Midwestern schools systems will have to restructure themselves to achieve world-class performance, including extending the school year (from 180 to 240 days), developing and implementing rigorous methods for assessing student learning; restructuring school organizations (including administration and governance), teacher qualifications, performance evaluation and incentives; and investing in state-of-the-art technology infrastructure.
5. Social Infrastructure: Beyond the necessary investments in K-12 education and the standards set for their quality and performance, raising the level of skills, knowledge, and achievement of the Midwest's workforce will require a strong social infrastructure of families and local communities,

- particularly during times of economic stress. To this end, state and local governments must take action both to re-establish the adequacy of the Midwest's social services while engaging in a broad effort of civic education to convince the public of the importance of providing world-class educational opportunities to all of its citizens.
6. Higher Education Engagement with K-12: Higher education must become significantly more engaged with K-12 education, accepting the challenge of improving the quality of our primary and secondary schools as one of its highest priorities with the corresponding commitment of faculty, staff, and financial resources. Each Midwest college and university should be challenged to develop a strategic plan for such engagement, along with measurable performance goals.
  7. Demanding Zero-Defects Institutional Performance: All Midwestern colleges and universities should be challenged to achieve a "zero-defects, total quality" performance goal in which all enrolled students are expected to graduate in the prescribed period. This will require adequate financial, instructional, and counseling support but as well strong incentives and disincentives at the individual and institutional level (e.g., basing public support on graduation rates rather than enrollments, demanding that faculty give highest priority to adequate staffing of required curricula, and setting tuition levels to encourage early graduation).
  8. Institutional Diversity: The Midwest should strive to encourage and sustain a more diverse system of higher education, since institutions with diverse missions, core competencies, and funding mechanisms are necessary to serve the diverse needs of its citizens, while creating a knowledge infrastructure more resilient to the challenges presented by unpredictable futures. Using a combination of technology and funding policies, efforts should be made to link elements of the Midwest's learning, research, and knowledge resources into a market-responsive

- seamless web, centered on the needs and welfare of its citizens and the prosperity and quality of life in the region rather than the ambitions of institutional and political leaders.
9. **Social Inclusion:** The Midwest must recommit itself to the fundamental principles of equal opportunity and social justice through the actions of its leaders, the education of its citizens, and the modification of restrictive policies, if it is to enable an increasingly diverse population to compete for prosperity and security in a intensely competitive, diverse, and knowledge-driven global economy.
  10. **Lifelong and Life-wide Learning:** The Midwest should explore bold new models aimed at producing the human capital necessary to compete economically with other regions (states, nations) and provide its citizens with prosperity and security. Lifelong learning will not only become a compelling need of citizens (who are only one paycheck away from the unemployment line in a knowledge-driven economy), but also a major responsibility of the state and its educational resources. Furthermore, formal learning experiences should be augmented by broader learning opportunities that take advantage of emerging technologies such as social networking and open education resources.
  11. **Immigration:** Immigration is vital to transforming the Midwest economy, as a source of both talent and energy and contributing to its innovation and entrepreneurship. The only immigration policy that will help the Midwest is one that opens the door as widely as possible.
  12. **Increased Investment in Innovation:** The Midwest must invest additional public and private resources in initiatives designed to stimulate R&D, innovation, and entrepreneurial activities. Key elements would include reforming state tax policy to encourage new, high-tech business development, securing sufficient venture capital, state participation in cost-sharing for federal research projects, and a far more aggressive and

- effective effort by the Midwestern state's Congressional delegations to attract major federal research funding to the region.
13. Innovation Infrastructure: Providing the educational opportunities and new knowledge necessary to compete in a global, knowledge-driven economy requires an advanced infrastructure: educational and research institutions, physical infrastructure such as laboratories and cyberinfrastructure such as broadband networks, and supportive policies in areas such as tax and intellectual property. The Midwest must invest heavily to transform the current infrastructure designed for a 20<sup>th</sup>-century industrial economy into that required for a 21<sup>st</sup>-century knowledge economy.
  14. Technology Transfer: The Midwest's research universities should explore new models for the transfer of knowledge from the campus into the marketplace, including the utilization of investment capital (perhaps with state match) to stimulate spinoff and startup activities and exploring entirely new approaches such as "open source – open content paradigms" in which the intellectual property created through research and instruction is placed in the public domain as a "knowledge commons," available without restriction to all, in return for strong public support.
  15. World-Class Learning: Colleges and universities should aspire to achieve world-class quality, nimbleness, innovation, efficiency, and the capability of providing our citizens with the higher order intellectual skills (critical thinking, moral reasoning, an appreciation of cultural and human values, commitment to lifelong learning, adaptive to change, tolerance of diversity) necessary for achieving national prosperity, security, and social well-being in a global, knowledge-driven society.

There are many more recommendations in the full report, but this is a good list to start with!!!

## THE CHALLENGES

So how are we responding?

The good news is that Detroit now has strong leadership in place

With both vision and plans for the city and its schools

And with support and momentum beginning to build.

But the bad news is that Lansing sure isn't helping very much.

State government continues to prefer to spend more money locking folks up in prison than educating them in our colleges and universities.

Our tax system is so encrusted with the barnacles of past giveaways—to prop up dying industries, to pay off influential lobbyists, to widen still further the appalling gap between the rich and poor.

And, unfortunately, we continue to do lots of misguided things...

Like trying to buy our way into Hollywood.

In reality we are giving away hundreds of millions of dollars of tax abatements to purchase too many old-economy jobs—at the expense of the investments we should be making to prepare Michigan citizens for the high-skill, high income jobs of the future.

Sure are some well-intentioned like investing in green energy jobs, but there are times when this sounds to me like a strategy to take out-of-work auto workers and putting them into abandoned assembly plants to make

wind turbines, almost as if we are trying to rebuild the old 20<sup>th</sup> century manufacturing economy based on low-skill but highly compensated commodity manufacturing.

There continues to be a deafening silence about the implications of a global, knowledge-driven global economy for our state's future.

Too many of our leaders in both public and private sectors continue to cling tenaciously to past beliefs and practices, preoccupied with obsolete and largely irrelevant issues (e.g., the culture wars) and drawing partisan lines in the sand rather than developing strategies, taking actions, and making the necessary investments to achieve economic prosperity and social well-being in the new global economic order.

To many still hold fast to an economic model that is not much different from the one that grew up around the heyday of the assembly line era—an era that passed long ago.

Yet that agricultural and manufacturing economy so dominant in a 20<sup>th</sup> century world has not returned, and the risk of today's myopia is that by the time we come to realize the permanence of this economic transformation, the out-sourcing and off-shoring train have left the station, taking with it the rest of our good jobs.

Perhaps nowhere is this inability to read the writing on the wall more apparent than in our state's approach to the development of the human resources and new knowledge necessary to compete in a global, knowledge-driven economy.

It is painfully clear that future will be determined, more than any other factor, by our investments in human capital.

Yet what is the first thing that goes on the chopping block when the state gets into economic difficulty? Education!!! At all levels!!! K-12, college,

graduate, R&D... the only things that really matter in a knowledge-driven economy.

We continue to eat our seed corn while pursuing a foolish and hopeless quest to bring back our obsolete entitlement economy .

Michigan's state motto continues to be "Eat dessert first; life is uncertain."

We need to face reality: the Midwest's greatest weakness is the quality of our workforce. We simply no longer have the level of education or skills to compete in a hyper competitive global economy driven primarily by knowledge—that is, educated people and their ideas.

Face it, folks. There are smart, hard-working, and increasingly well-educated people all around the world all too willing to perform our current jobs for 20 cents on the dollar.

Today and ever more so in the future, the knowledge content of jobs will determine their value and hence compensation increasingly at levels determined by a global marketplace. Low skills jobs will earn low levels of compensation in a global economy. And there is absolutely nothing we can do about this for the long term. It is the way that a global, knowledge-driven economy works.

Highly educated, high-skill knowledge workers will become the backbone of the workforce of the most prosperous economies. The low skill but generously compensated factory jobs that once powered the Midwest's economy and sustained its middle class will disappear as these jobs continue to be off-shored to regions characterized by labor costs more competitive in the global economy.

To be sure, Midwest industry will continue to manufacture products. But tomorrow's factories will likely employ only a handful of workers, e.g., highly

trained engineers to program the robots performing the tasks that once employed millions of the Midwest's workforce. Instead most of the region's manufacturing jobs will be in knowledge-intensive areas such as R&D, design, global supply chain management and logistics, marketing, sales, and service.

These are the high pay jobs that will sustain the middle class, and they will all require not only a college education but furthermore a commitment to lifelong learning.

#### CONCLUDING REMARKS

To be sure, it is difficult to address issues such as developing a tax system for a 21st-century economy, building world-class schools and colleges, or making the necessary investments for future generations in the face of the determination of the body politic still clinging tenaciously to past beliefs and practices.

Yet the realities of a flat world will no longer tolerate procrastination or benign neglect. It will cut us no slack!

We simply must stop backing into the future and, instead, turn our attention to making the commitments and investments today necessary to allow Michigan to compete for prosperity and social well-being tomorrow in a global, knowledge-driven economy.

We simply must recognize that in an age of knowledge, our greatest wealth is the quality and diversity of our people.

From our forbearers, we inherit a priceless legacy of pioneering spirit, gritty courage, and self-reliance. They made our farms and factories the best in the world in earlier times.

If we believe in our people and invest in their education and training, we can rely on them to once again put us at the forefront of innovation, productivity and trade.

Today and in the future, it is people, their character, knowledge, skill, and ability to innovate that, when allied with developing technologies, give us the competitive edge in the world economy.

The key to economic growth is not tax cuts that provide just more welfare for the rich.

It is not economic development programs that attempt to re-create the past,

Nor tax and policy giveaways that respond to primarily to lobbyists and special interests groups,

Nor gimmicks like “cool cities” or trying to make Michigan into Hollywood.

The key to our future is education.

Education is the only enterprise that will save us from becoming a backwater economy. It is a point of lift off, from which we can create new markets, processes, and skills.

And what could be more appropriate for a region of the nation established more than two centuries ago on a founding principle of the Northwest Ordinance (now chiseled in the frieze above the central building on our Ann Arbor campus)

“Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged.”

Perhaps it has never been more imperative that we heed this principle by making education the cornerstone of the effort to position Michigan for prosperity and social well being in a global, knowledge economy!

America---and Michigan---have called on some generations more than others for exceptional service and sacrifice to defend and preserve our way of life for future generations. And Americans have always answered the call.

Now no less than in those earlier struggles, our generation must rise to the challenge to serve. This time there are no foreign enemies . Our battlefield is at home and with ourselves.

In the years to come I hope future generations can look back with pride and gratitude and say that in this time and at this place, the people of Michigan and Detroit took a stand. They came together and worked together, making the necessary investments and sacrifices to build a future based on learning and innovation.

I hope future generations will say that our generation made a difference. That together we became a mighty force for change. Let us, as the Isiah says, "Do a new thing; now it shall spring forth."

Nothing we do in our lives is more important than securing the future for our descendants!

Thank you very much.