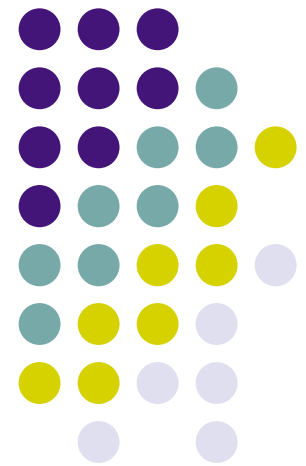


# A Roadmap to Michigan's Future

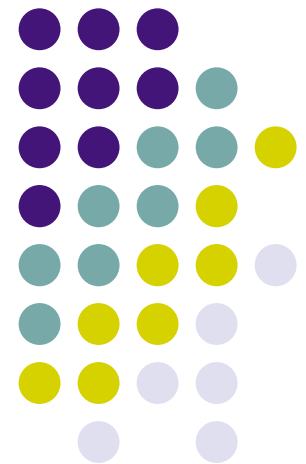
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# A Roadmap to Michigan's Future

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A Call for Leadership

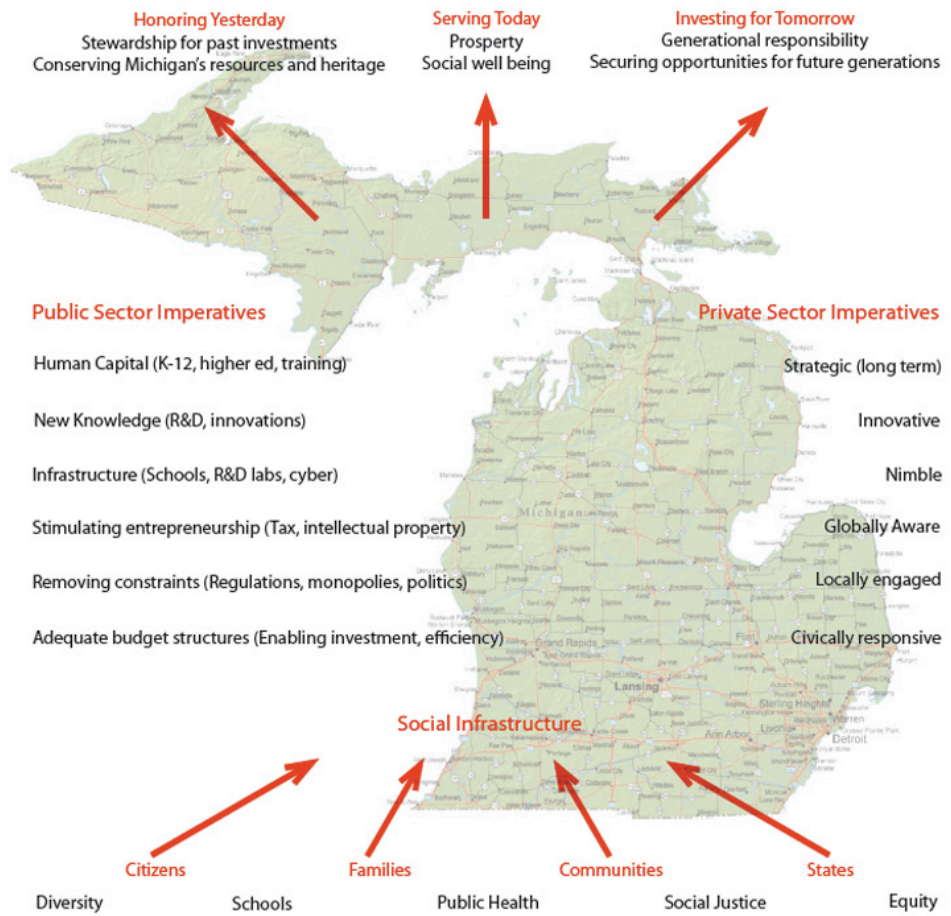




# The Michigan Roadmap *Redux*

## A Call for Leadership

The Millennium Project  
The University of Michigan  
Spring, 2008



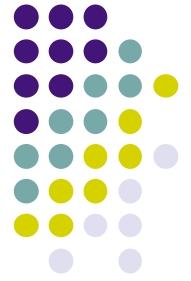


# The Roadmapping Process



- Michigan Today
- Michigan Tomorrow
- Gap Analysis
- The Roadmap

# The Roadmapping Process



- Michigan Today ("Where We Are")
- Michigan Tomorrow (Where We Need to Be")
- Gap Analysis ("How Far We Have to Go")
- The Roadmap ("How to Get There")

# Environmental Scans

## Today (2005)

Globalization  
 Transport + Commun  
 Integrated Economies, Culture, Conflict

Demographics  
 Population Growth  
 Baby-boomers vs. Global Teenager  
 Diversity

Exponentiating Technologies  
 Info-bio-nano technology  
 Complex systems

Explosion of New Knowledge

### Implications

Hypercompetitive, global,  
 knowledge-driven economy

Global disparity in wealth and power  
 driving geopolitical conflict

Market forces dominating public policy

Obsolescence of existing social  
 institutions (e.g., nation-state)

## Tomorrow (2010-2050)

Global Sustainability  
 Population growth to 8 - 10 billion  
 End of fossil fuels  
 Global climate change  
 Poverty, global health, infrastructure

Hypercompetitive, integrated, global economy  
 China, India, Eastern Bloc  
 Off-shoring

National/homeland Security  
 Terrorism vs. freedom

Exponentiating Technologies

Possible surprises:  
 Human lifespan doubles (or pandemics)  
 Disappearance of work  
 Artificial intelligence ("mind children")  
 Close encounters of the third kind

## Michigan Challenges

Erosion of Traditional Economic Base  
 Low-skill jobs (outsourcing) and high-skill jobs (off-shoring)  
 No obvious candidate for future economic engine  
 Current culture hostile to innovation

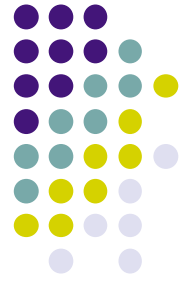
Increasing obsolescence of social institutions—but resistant to change  
 Government, corporations, labor, education  
 Political system, public opinion

Structural budget obsolescence  
 Unfunded mandates (Medicaid, K-12, Corrections)  
 Obsolete tax system (irrelevant to a service economy)

Inadequate Michigan leadership  
 Sense of denial—hoping the past will return  
 Lack of vision—and inability to develop one  
 Clueless—today's political issues are meaningless  
 (gay marriage, affirmative action, creationism, stem cell ban)  
 Current priorities are basically stupid  
 Detroit casinos, SUVs, Michigan football

Investments in higher education, research, and innovation are  
 Woefully inadequate (lowest in Midwest)  
 Blatantly political (Merit Scholarship Program, Life Sciences Corridor)  
 Tragically ill-considered (Low tuition + low support = low quality + low access;  
 targeting R&D investments to areas of weakness)

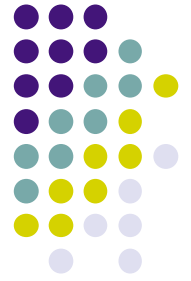
# Michigan Today?



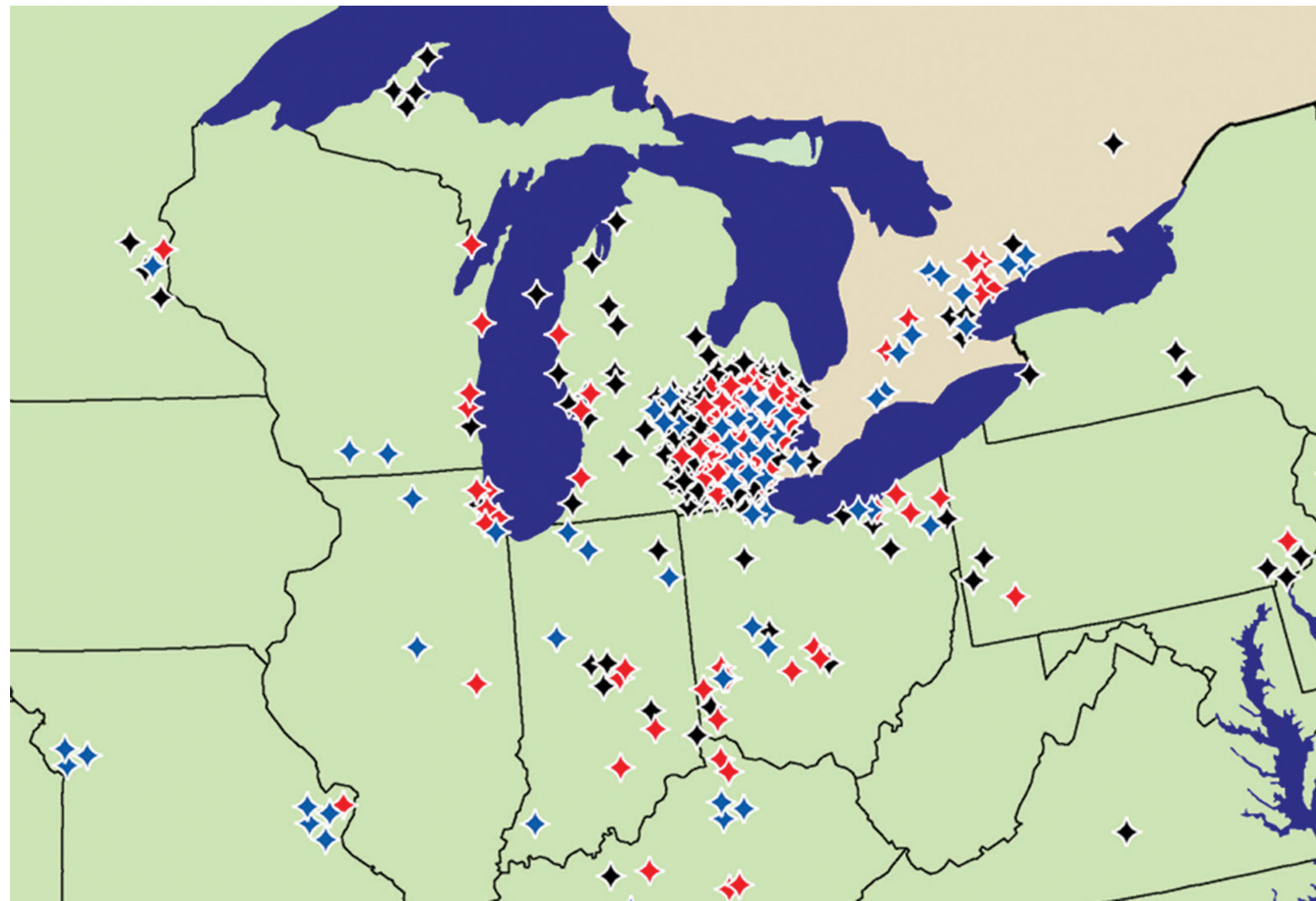
- The Michigan Economy
- Demographics
- Educational Performance
- Knowledge Generation
- Policies



# Economic Performance



- \$308 billion (larger than Russia and Switzerland)
- Per capita income of \$30,296 just below national average (\$30,941); grew 12% slower than national average over past 25 years (4th worst in the nation)
- Michigan ranks last in economic performance, losing more jobs than it is creating.
- Michigan is 3rd most dependent state on manufacturing, despite fact that most job growth has been in service jobs.
- Michigan lost 163,000 (out of 700,000) manufacturing jobs in the last three years.
- Michigan ranks 21st in knowledge-dependent service jobs, however.

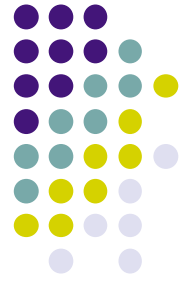




# Michigan Today...

- 50th in personal income growth
- 50th in unemployment rate
- 50th in employment growth (rather decline)
- 50th in index of economic momentum
- 50th in population loss (- 41,000 in 2007)
- 50th in outmigration (-94,000 in 2007)
- 50th in change of support for higher ed
- Detroit is the nation's poorest city

# Of course, Michigan is among the leaders in some areas...



- Incarceration rates
- Prison costs
- Health and retirement costs for public workers
- Mortality rates from smoking



## Michigan is below U.S. average in

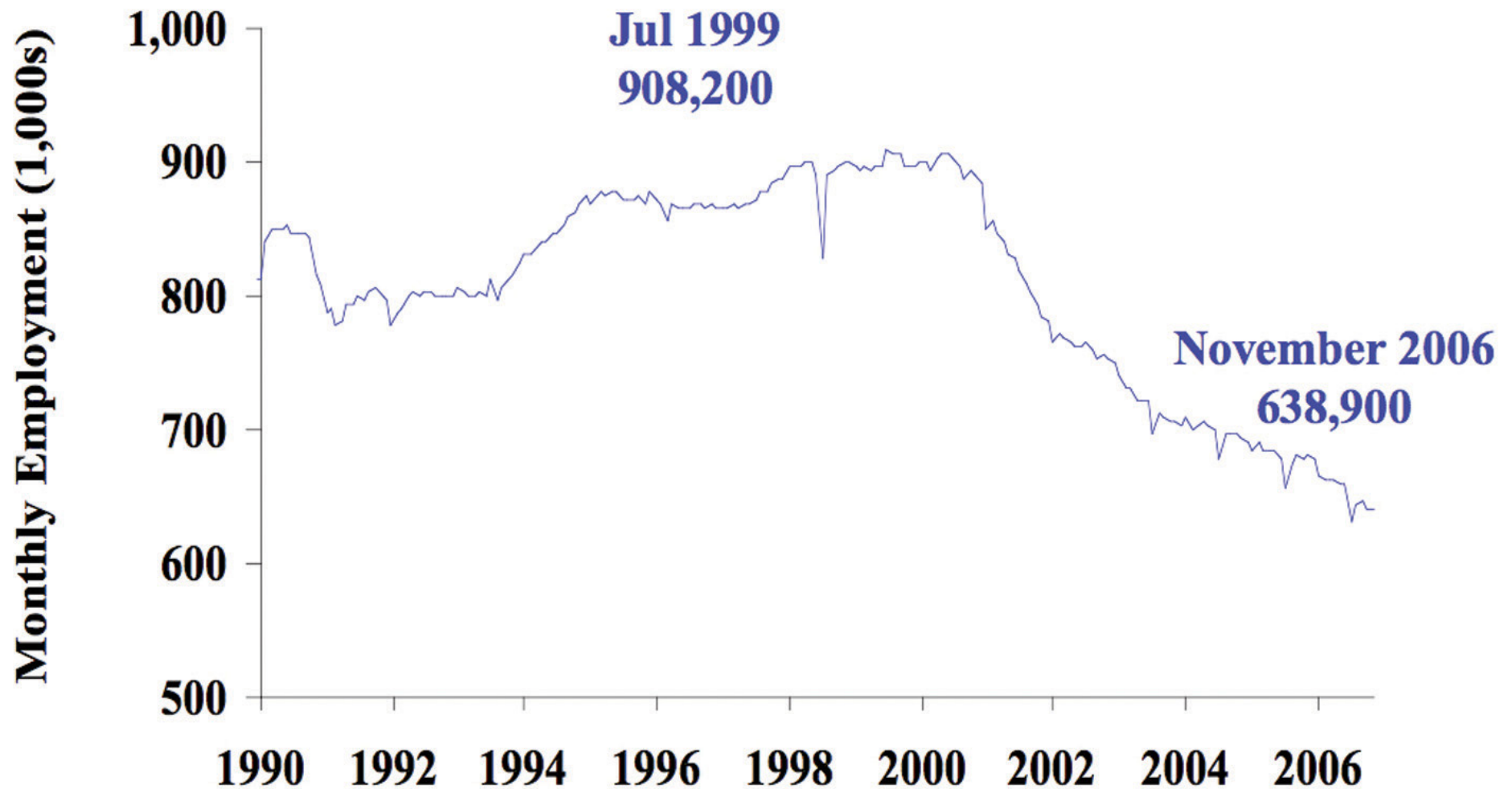


- Tax burden (and tax revenues)
- Legacy costs of public and private sector
- Lack of investment in civil infrastructure (schools, universities, transportation)
- Ill-informed voter referenda (Prop 2, etc.)
- Public awareness of imperatives of the knowledge economy

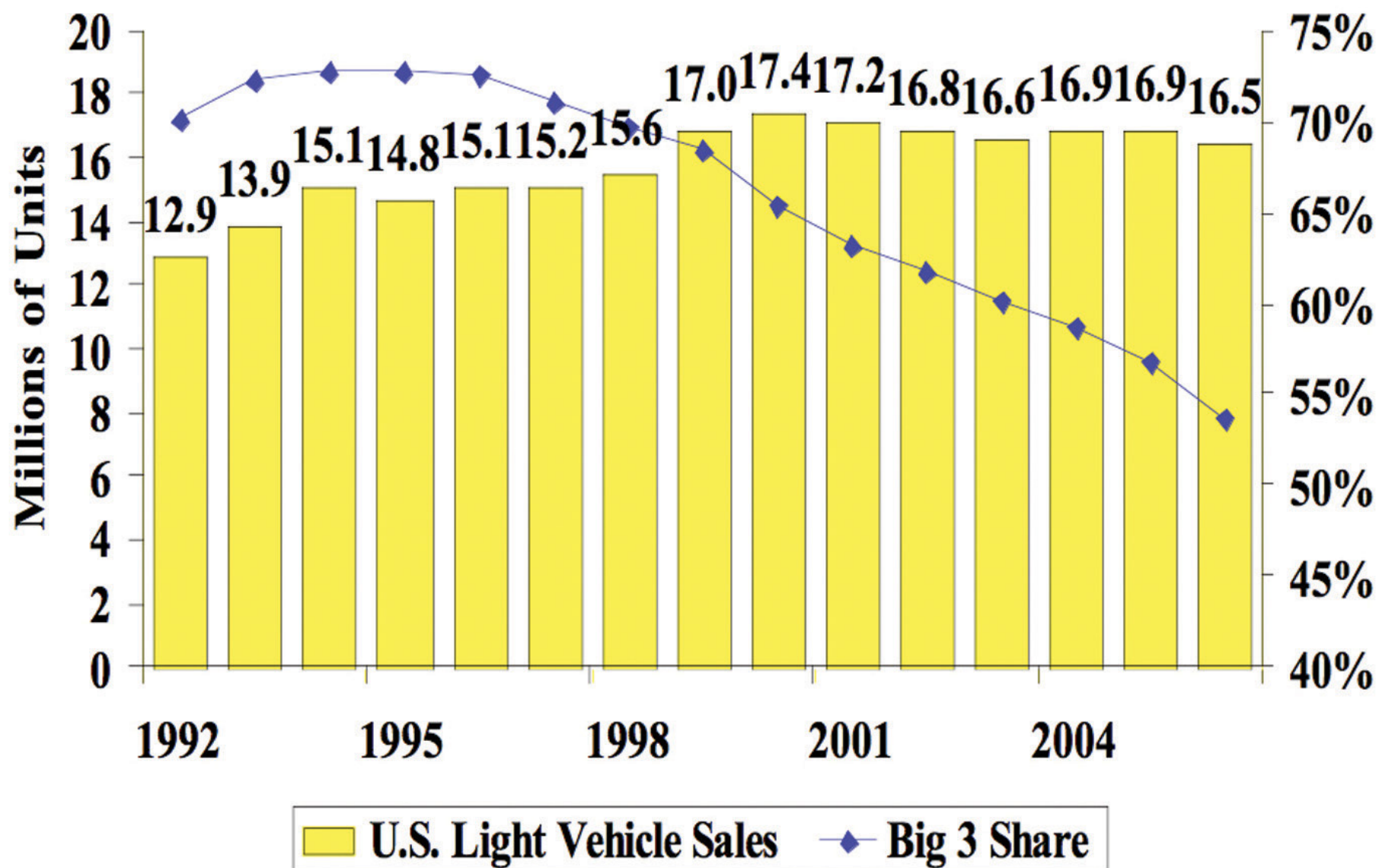
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# Michigan Manufacturing Employment

## Lost 1 in 4 Manufacturing Jobs



# Big 3 Losing Market Share





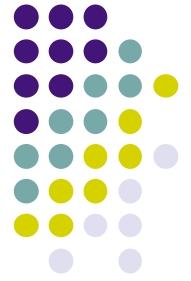








# Demographics



- 10 million (8th nationally)
- Increased only 7% in 1990s (13% in U.S.)
- 25% of growth from foreign immigrants
- Brain drain: loss of 12% of 25 to 44 year olds (4th largest in nation)
- Loss of 4% of 18 to 24 year olds
- Michigan is aging rapidly.

# Metrics for a Knowledge Society



- Only 22% have BA or advanced degrees (4% below U.S. average and 34th)
- Below national average in S&E degrees
- UM and MSU have capacity to attract S&E students from outstate, 55% of whom stay (but state discourages this).
- Most R&D is product development (automobile or pharmaceuticals)
- Michigan is at national average in academic R&D, but this is mostly due to UMAA.
- Michigan ranks last in venture capital (only 10% of national average).

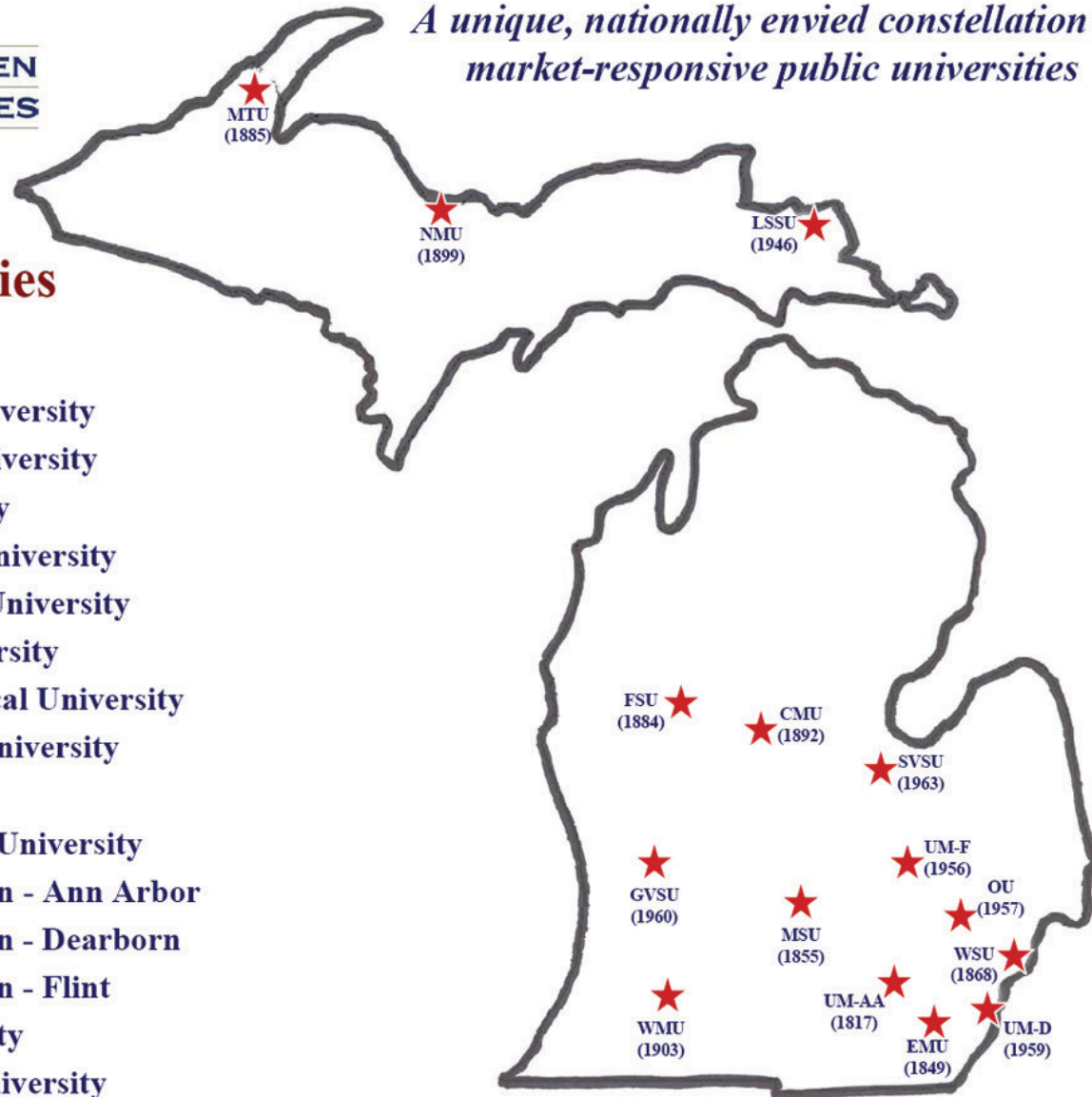




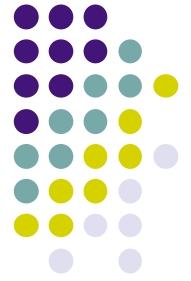
*A unique, nationally envied constellation of market-responsive public universities*

## State Universities of Michigan

- Central Michigan University
- Eastern Michigan University
- Ferris State University
- Grand Valley State University
- Lake Superior State University
- Michigan State University
- Michigan Technological University
- Northern Michigan University
- Oakland University
- Saginaw Valley State University
- University of Michigan - Ann Arbor
- University of Michigan - Dearborn
- University of Michigan - Flint
- Wayne State University
- Western Michigan University

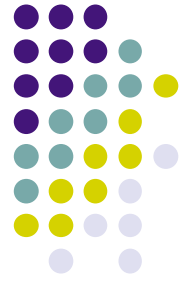


# Higher Education Policies of State Government



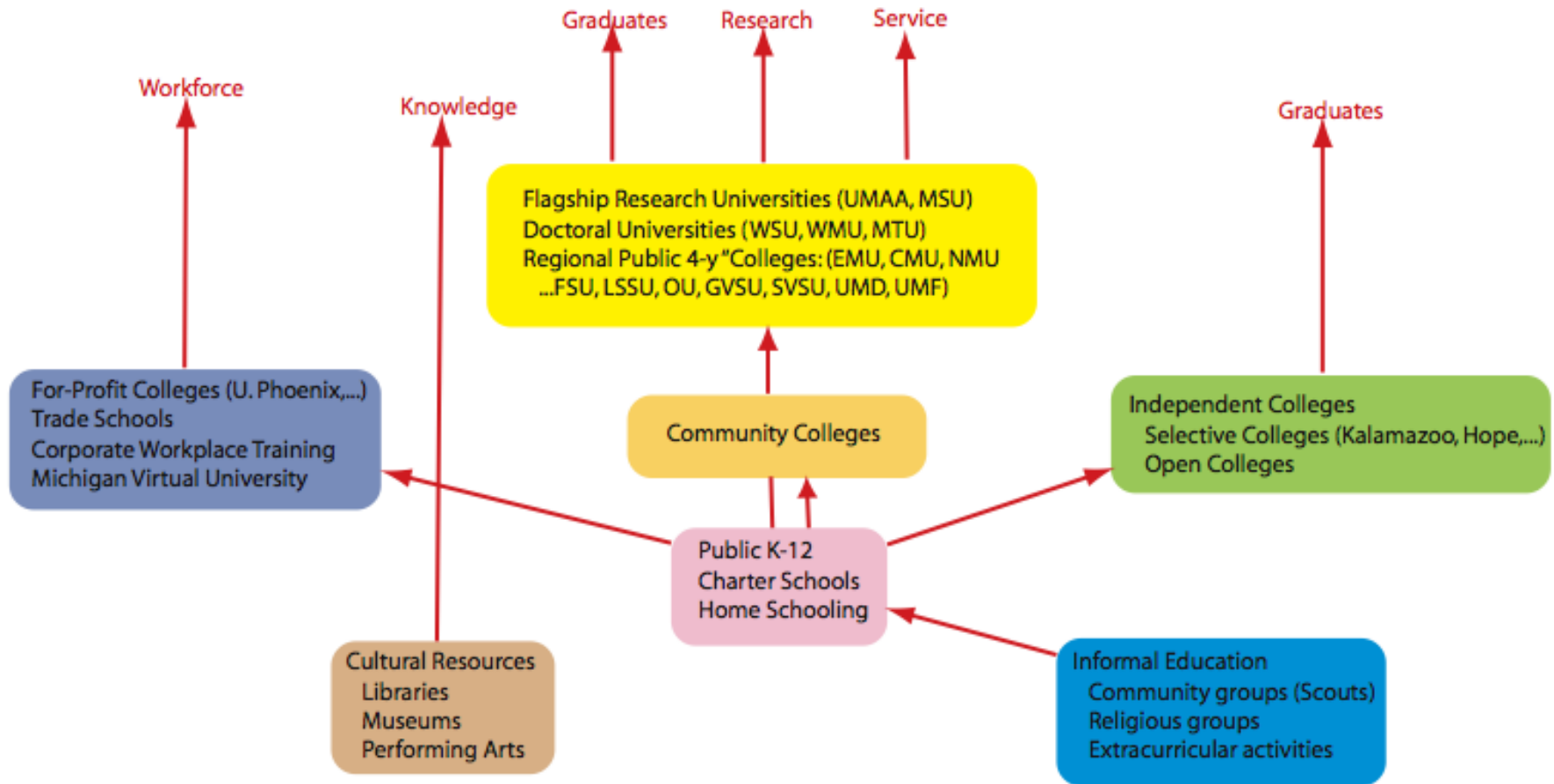
- No real state higher education policy (at least at a strategic level)
- The funding of higher education has been a low priority of the state. Over the past 20 years, higher ed funding has increased by 30%; prison funding has increased by 300% and now is considerably larger than higher ed.
- Recent polls suggest that much of population does not perceive a need for post-secondary education.
- Little understanding of R&D needs or opportunities.

# State government constraints

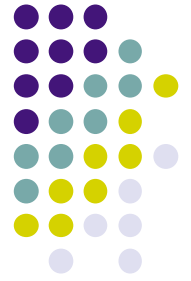


- Term limits
- Full-time legislature
- Easily amended constitution
- Election of judges (and regents)
- Badly divided politics
- Political parties trapped in past
- Still fighting all the old, obsolete battles (cities vs. farms, religious right vs. labor left, black vs. white,...)

# Michigan Today

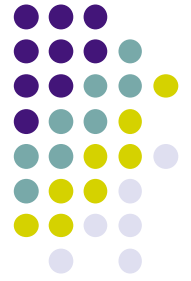


# Educational Needs for 21st C Citizens



- College education is a necessity
  - Perhaps even graduate education
- Lifelong learning is an imperative
- New forms of pedagogy
  - Collaborative, interactive, hyperlearning
  - Constructionist, extrinsic, intrinsic
- "Liberal learning" for the 21st C?

# Building a Competitive Workforce

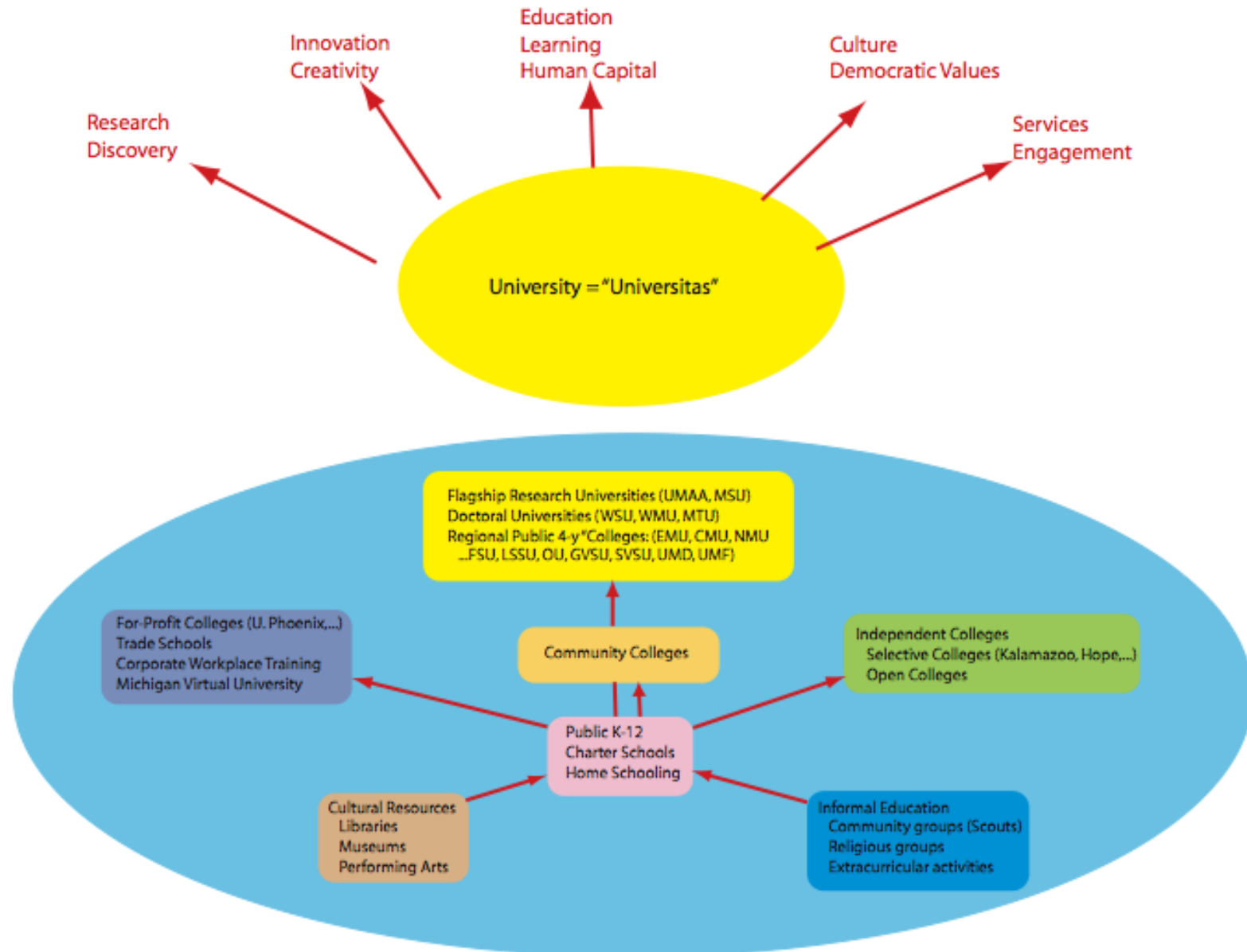


- Continuous improvement of workforce skills (20% of time in formal learning)
- Knowledge workers will make less and less distinction between work and learning.
- From "just-in-case" to "just-in-time" to "just-for-me"
- Capable of competing with workforces in China and India earning much less...



A university is a community of masters and scholars (universitas magistorium et scholarium), a school of universal learning (Newman) embracing every branch of knowledge and all possible means for making new investigations and thus advancing knowledge (Tappan).

→ "A Catholepistemiad for the 21st Century"  
 "A Knowledge Society"  
 "A Knowledge Net"  
 "A Learning Ecology"

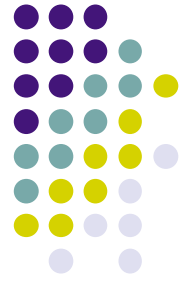




# Technological Innovation

- The key to U.S. economic prosperity and national security: innovation!!!
- Schumpeter: "Creative destruction" ... continually replacing old industries with new...
- But other nations are investing heavily in creating the human capital, new knowledge, and infrastructure necessary for innovation.

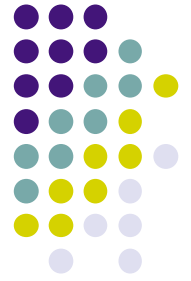
# The Ingredients of Innovation



- The U.S. culture—a diverse population, democratic values, free market practices— provide a fertile environment for innovation,
- But history has show that significant public investments is necessary to produce key ingredients for technological innovation:
  - New knowledge (research)
  - Human capital (education)
  - Infrastructure (physical, cyber)
  - Policies (tax, intellectual property)



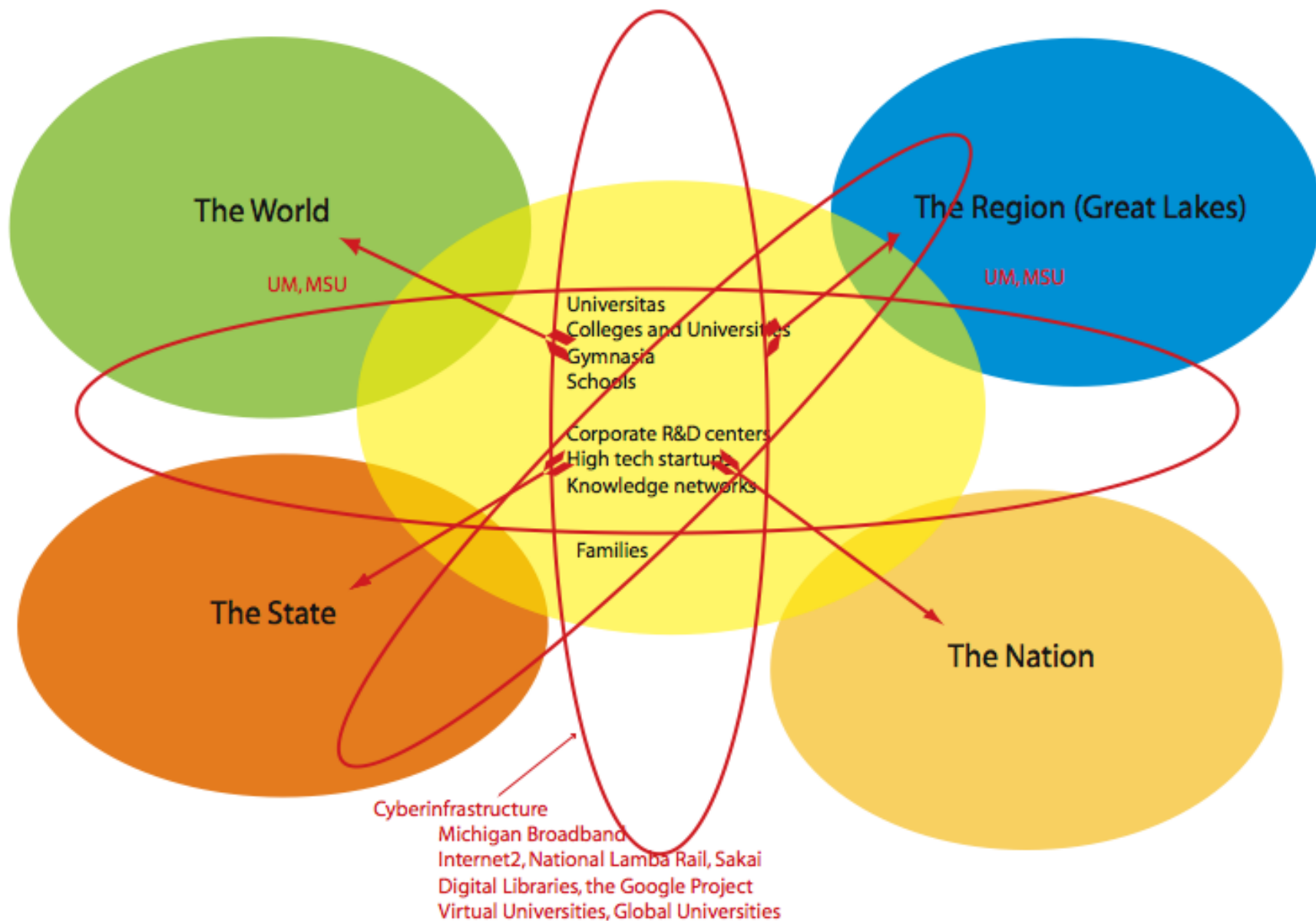
# Michigan Tomorrow



- What skills and knowledge are necessary for individuals to thrive in 21st Century?
- What skills and knowledge are necessary for a population (workforce) to provide "regional advantage" in such a competitive economy?
- What level of knowledge generation (R&D, innovation, entrepreneurialism) is necessary to sustain a 21st Century Economy?

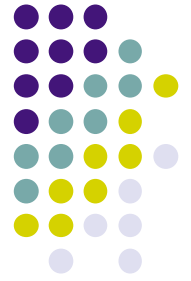
# Michigan Tomorrow

A Digital "Catholepistimead" or "Society of Learning"



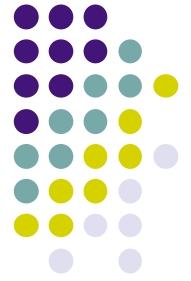


# Gap Analysis: How Far to Go?



- Educational Performance
- Knowledge Generation
- Infrastructure
- Investments
- Public Policy
- Public Attitudes

# Glazer-Grimes Report



"These days the keys to economic success are a well-educated workforce, technical know-how, high levels of capital investment, and entrepreneurial zeal. If the U.S. (and Michigan) is to meet the challenge posed by a truly global economy, it will have to insure that its scientists are the most creative, its business leaders are the most innovative, and its workers are the most highly skilled—not easy when other nations (and other states) are seeking the same goals.



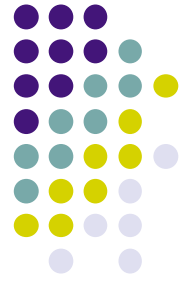
# Yet...Michigan lags behind

In educational achievement:

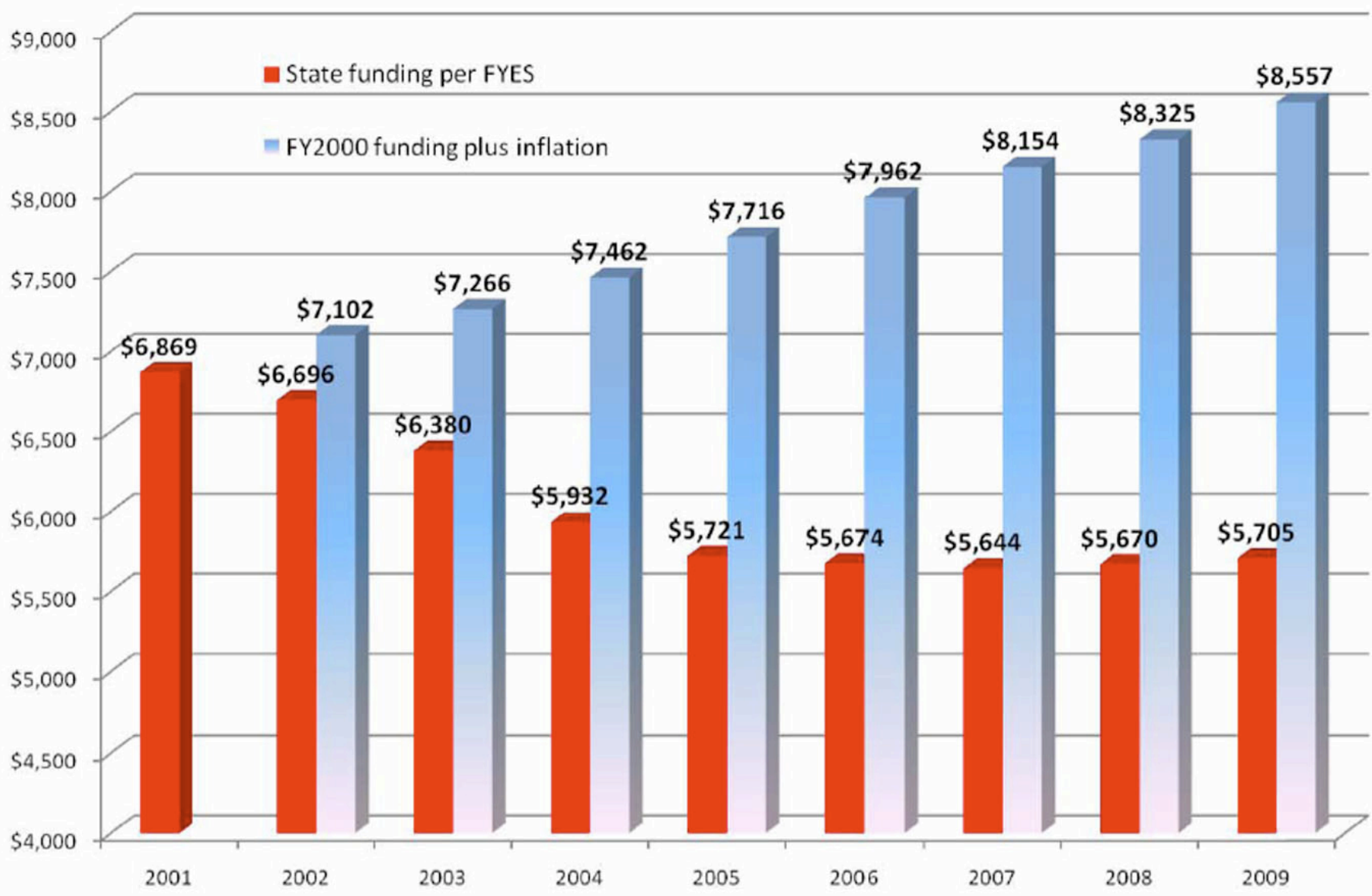
- Our population is aging and our 25-44 year olds are leaving the state.
- Only one-third of K-12 graduates are college ready.
- Only 22% have bachelors degrees, a shortfall of 270,000 degrees.

There is growing evidence that a skilled worker shortage—created by low birthrates, out-migration of young adults, and poor performance of our educational systems—poses a serious threat.

# Investments



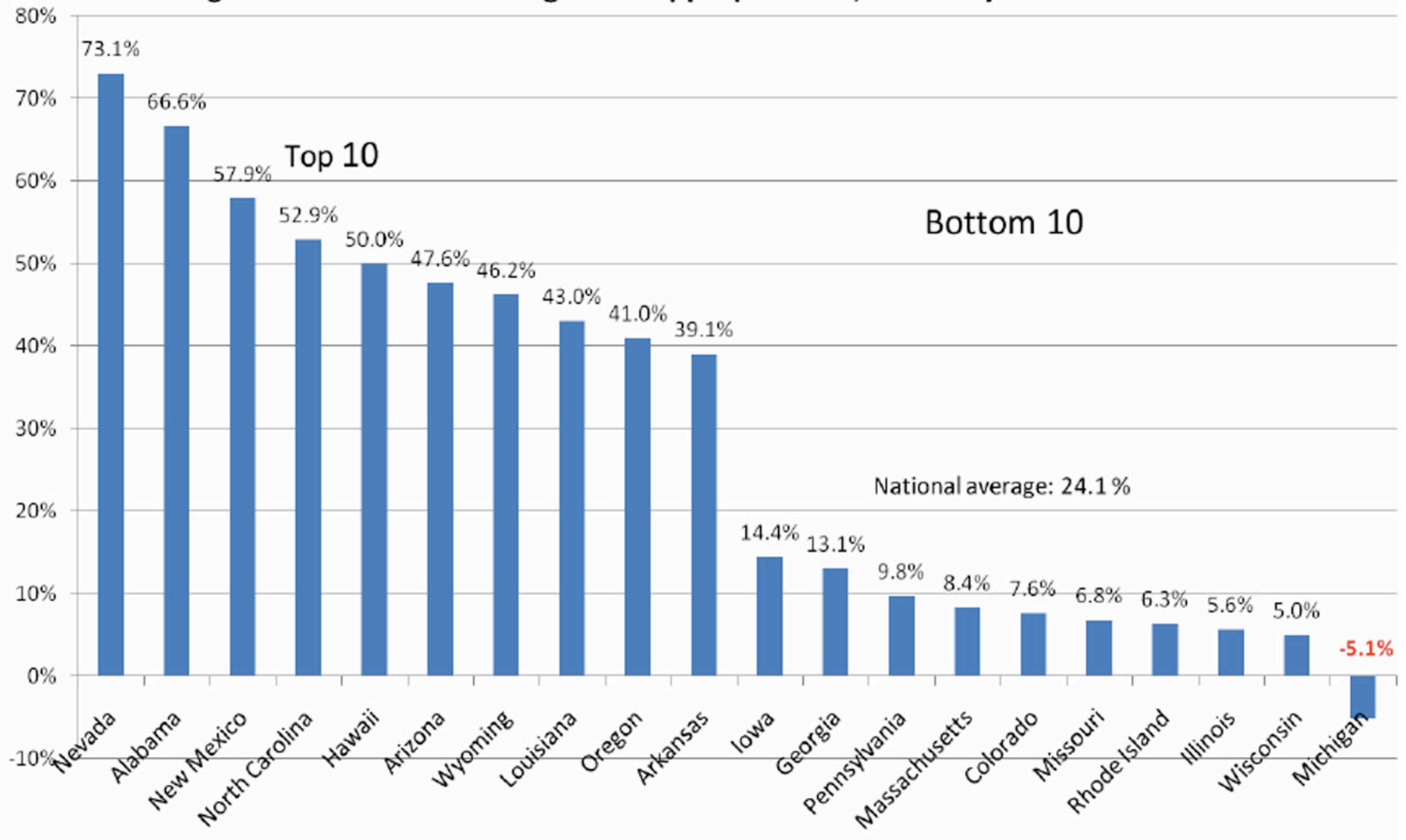
- Michigan's support of higher education is the lowest among the Great Lakes states and ranks in the bottom third of the nation.
- Over past two years, state has cut \$260 million from higher ed budget (while exerting political pressure to cap tuitions).
- Michigan also lags far behind other states in providing state support of academic buildings (with no capital outlay program for almost a decade).



State budget cuts have reduced per student spending by \$2,852/student since FY2001



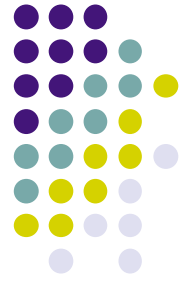
### Michigan last in increases in higher ed appropriations, last five years combined



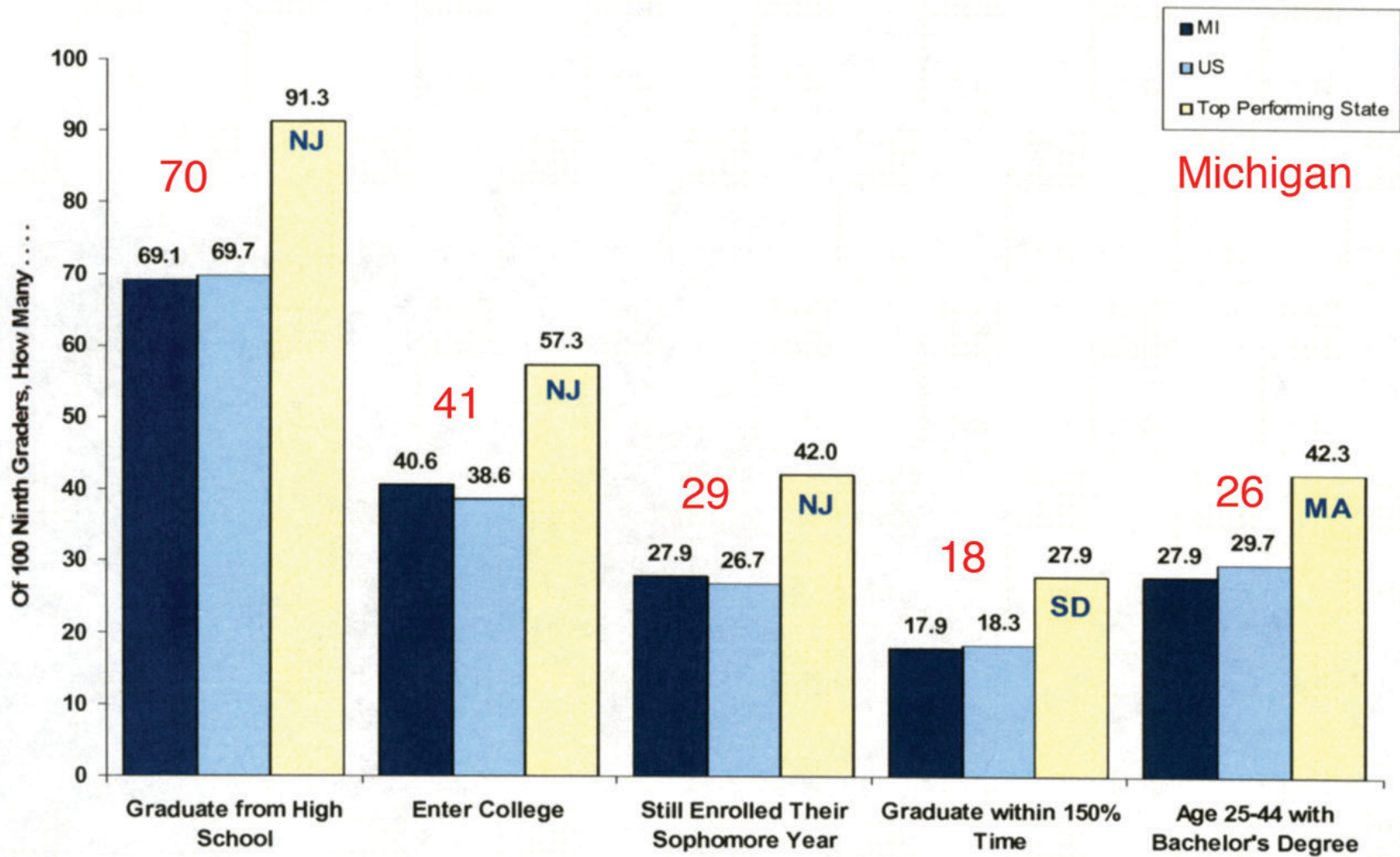
# FY2009 & 2010 Budgets (000s)

<b>Department</b>	<b>FY2009</b>	<b>Executive Budget FY2010</b>
Corrections	\$1,947,451	\$1,898,399
Higher Education	\$1,645,605	\$1,545,605

# Educational Performance

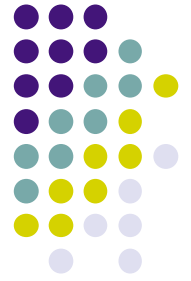


- 44% of Michigan adults have a literacy level too low to function in today's society.
- Serious regional and ethnics gaps.
- Only 73% of 9th graders will graduate from high school
- Only 32% of H.S. graduates are "college ready" (below national average)
- Less than 50% of college students will graduate
  - UM: 90%; MSU: 70%
  - All other publics at less than 50%!

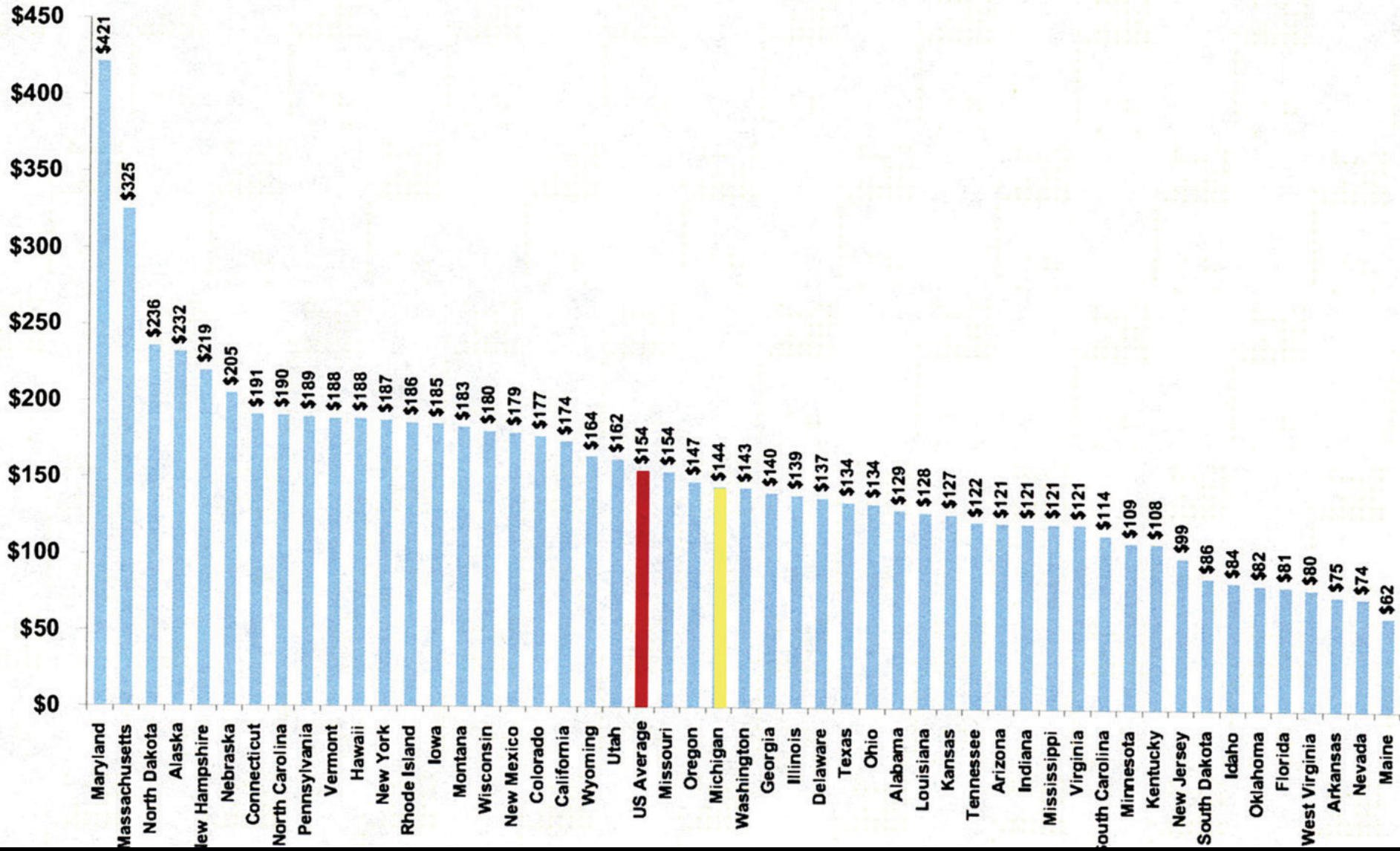




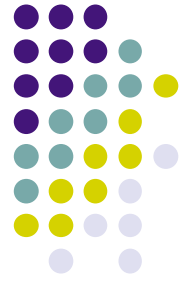
# In generating new knowledge...



- New jobs will be created by new knowledge and new activities (info-bio-nano, knowledge services, etc.)
- Private rate of return from R&D investments is 25% to 30%.
- Unfortunately, most industrial R&D in Michigan is in product development rather than basic research.
- While the state has two world-class research universities (and only can support two), they are funded at a level more typical of regional four-year colleges than research-graduate-intensive universities.
- And again chasing rainbows such as the Life Sciences Corridor.

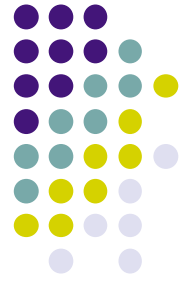


# In infrastructure...



- Ranking only 24th among states in deployed broadband
- And very last in ILEC per-line investments.
- Also lacking in any visionary public policy (instead wasting time and funding on wild goose chases such as giving all 6th graders laptop computers).
- Relying on the marketplace (e.g., SBC...which is headquartered in San Antonio) to provide connectivity.

# Public Policy?



- Higher education is a low priority.
- Rather than adequately funding higher education, Michigan prefers to attack its universities (e.g., tuition) of set empty goals such as "doubling the number of college graduates" with no strategy for funding this growth.
- Instead state politicians grasp at straws such as gambling, tax abatements for dying industries, or tax cuts (primarily benefiting the wealthy).

# Public Policy?



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- Rather than adequately funding higher education, Michigan prefers to attack its universities (e.g., tuition) of set empty goals such as "doubling the number of college graduates" with no strategy for funding this growth.
- Instead state politicians grasp at straws such as gambling, tax abatements for dying industries, or tax cuts (primarily benefiting the wealthy).

"State government treats its universities the way I treat my roof, putting off repairs to fund other desires, and waiting until the roof falls in before paying any attention to needs."

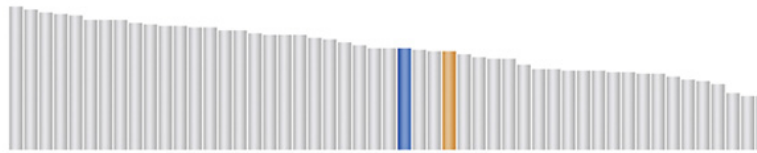


# Michigan Higher Education's Share of State Resources: The Second Lowest Increase from 1980 - 2000

Growth in Adjusted Gross Appropriations by Major Program Area  
(percentage change increase)

<b>Corrections</b>	<b>627%</b>
<b>K-12 education</b>	<b>475%</b>
<b>Agriculture and natural resources</b>	<b>270%</b>
<b>Capital outlay</b>	<b>259%</b>
<b>Economic development &amp; regulatory</b>	<b>215%</b>
<b>Transportation</b>	<b>204%</b>
<b>Public safety</b>	<b>201%</b>
<b>Human services support</b>	<b>173%</b>
<b>Revenue sharing</b>	<b>159%</b>
<b>Higher education</b>	<b>146%</b>
<b>General government operations</b>	<b>68%</b>
<b>Total appropriations</b>	<b>243%</b>

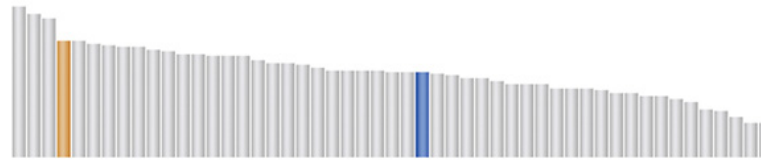
State Crime Rates (Per 100,000 People)



Michigan National Avg.

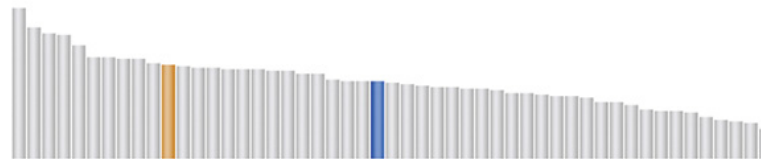
Crime Rates (2005)	3,643	3,751
Violent Crimes	552	401
Property Crimes	3,091	3,350

State Population Rates (Per 100,000 People)



Michigan National Avg.

Population Rate (2004)	3,527	2,572
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Michigan National Avg.

Incarceration Rate (2005)	489	400
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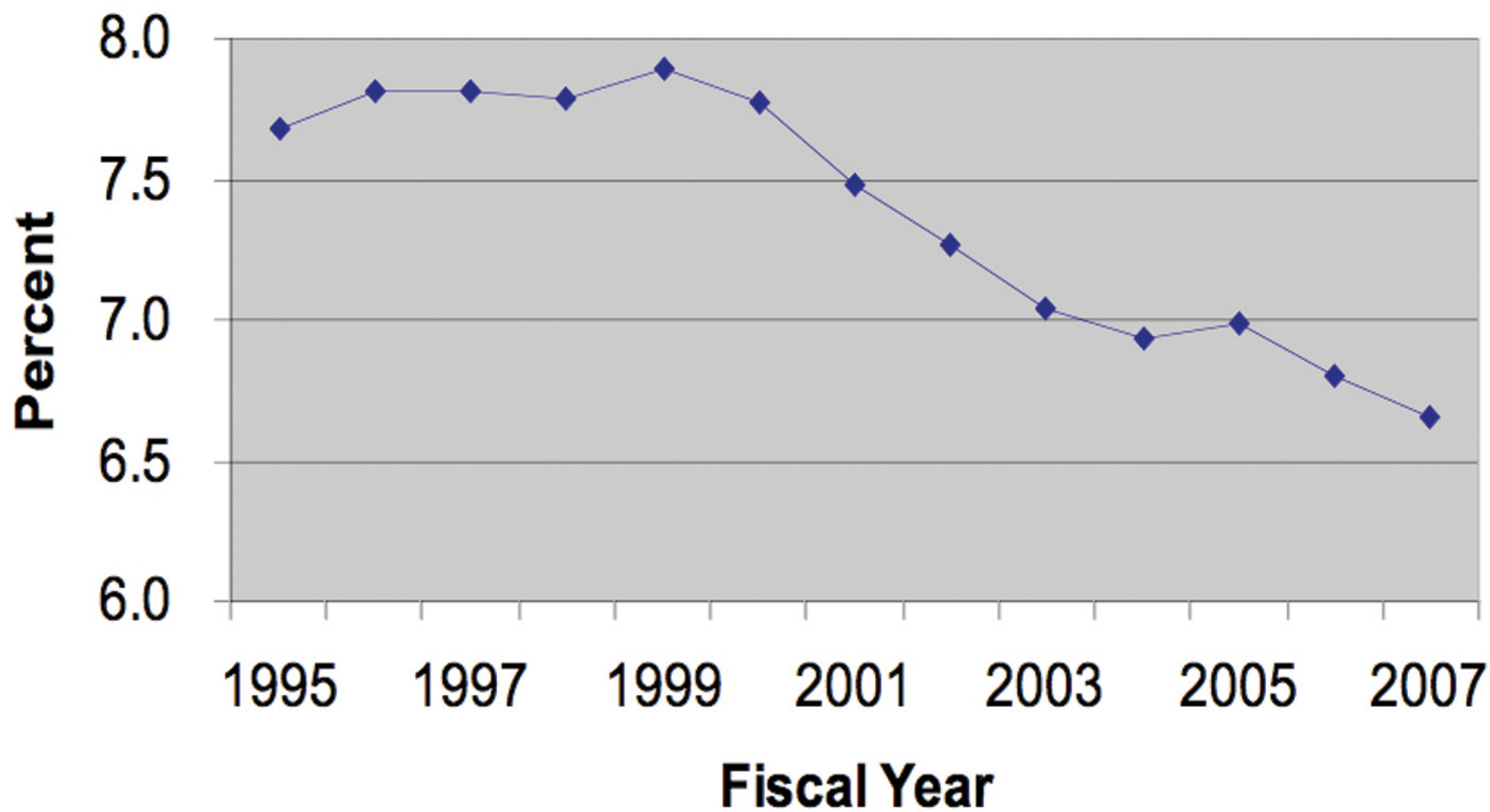
Cost Per Inmate



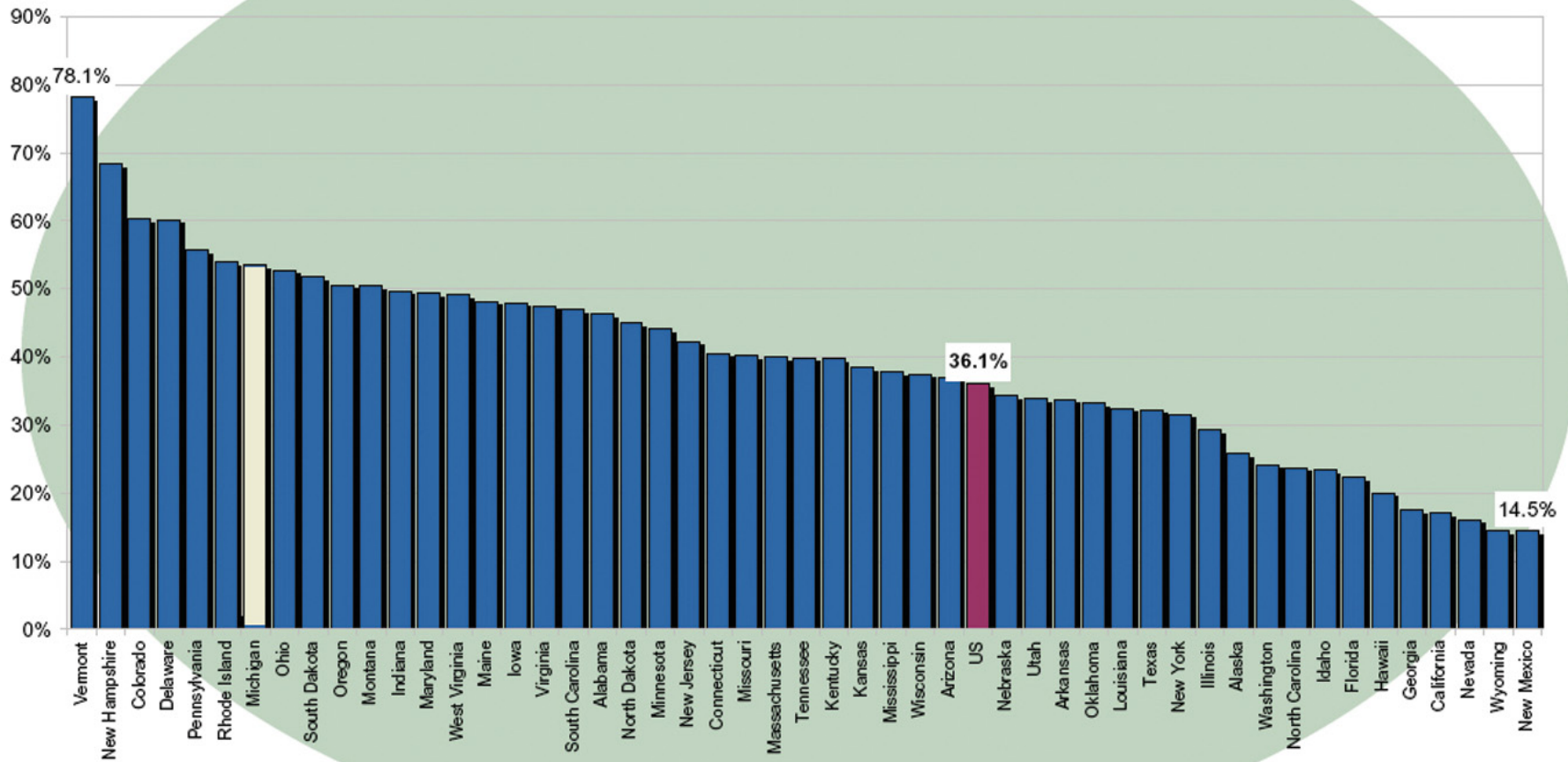
Michigan National Avg.

Cost Per Inmate (2001)	\$32,525	\$24,052
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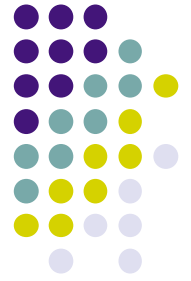
## State Taxes as a Percent of Michigan Personal Income



## Net Tuition as a Percent of Public Higher Education Total Educational Revenue by State, Fiscal 2006



# Public Attitudes



- Polling indicates that the public supports a greatly enhanced investment in education.
- They view education as the key to their economic future.
- But, as yet, state politicians do not recognize this sea change.











# The Gap: A Summary

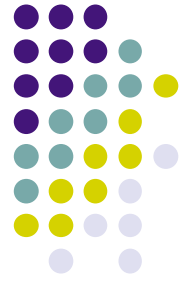
- A difficult transition from a manufacturing to a knowledge economy: unemployment, declining per capita income, brain drain
- **Education gap**: Weak K-12, low college participation, low public investment
- **Knowledge gap**: Low federal R&D, industry R&D almost all product development
- **Culture gap**: inadequate investment in future, baby boomer priorities, fighting old battles, "an extreme intolerance of extraordinary excellence"







# What to do?



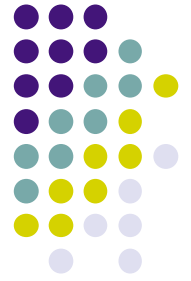
Suppose you were Governor...

...and you could persuade the Legislature to carry out your agenda...

What would you do?



# What has been done?



Build casinos...

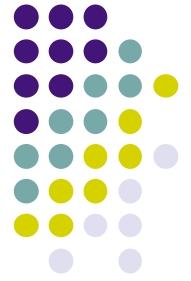
Subsidize film production in Michigan...

Blame the victims (e.g., higher education)...

Hide behind “voo-doo” accounting...

And Michigan burns while Lansing fiddles!!!

# A Roadmap for Michigan



- The Near Term
  - Human capital
  - New Knowledge
  - Infrastructure
  - Policies
- Longer Term

**Honoring Yesterday**  
Stewardship for past investments  
Conserving Michigan's resources and heritage

**Serving Today**  
Prosperity  
Social well being

**Investing for Tomorrow**  
Generational responsibility  
Securing opportunities for future generations



**Public Sector Imperatives**

Human Capital (K-12, higher ed, training)

New Knowledge (R&D, innovations)

Infrastructure (Schools, R&D labs, cyber)

Stimulating entrepreneurship (Tax, intellectual property)

Removing constraints (Regulations, monopolies, politics)

Adequate budget structures (Enabling investment, efficiency)

**Private Sector Imperatives**

Strategic (long term)

Innovative

Nimble

Globally Aware

Locally engaged

Civically responsive

**Social Infrastructure**

Citizens

Families

Communities

States

Diversity

Schools

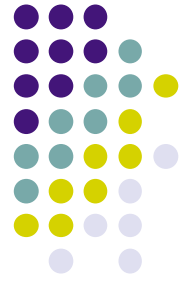
Public Health

Social Justice

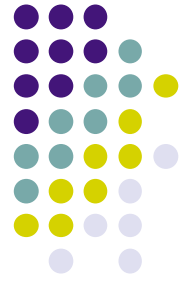
Equity



# Objectives for government



- Create a broad, progressive, and adequate tax system
- Reduce legacy costs (prisons, benefits)
- Reduce constraints (term limits, lobbying)
- Increase federal support



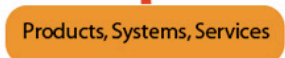
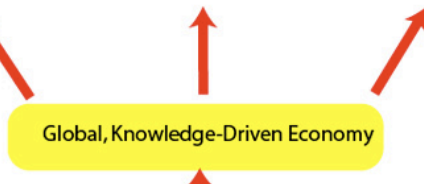
# Objectives for business

- Restructure legacy costs to globally competitive levels
- Break dominance of big companies
- Resist monopolies (telcoms, cable)
- Allow Schumpeter creative destruction to work
- Accept civic responsibility for local welfare
- Actively support long-term public investments (schools, higher education, social safety net)

**Honoring Yesterday**  
Stewardship for past investments  
Conserving Michigan's resources and heritage

**Serving Today**  
Prosperity  
Social well being

**Investing for Tomorrow**  
Generational responsibility  
Securing opportunities for future generations

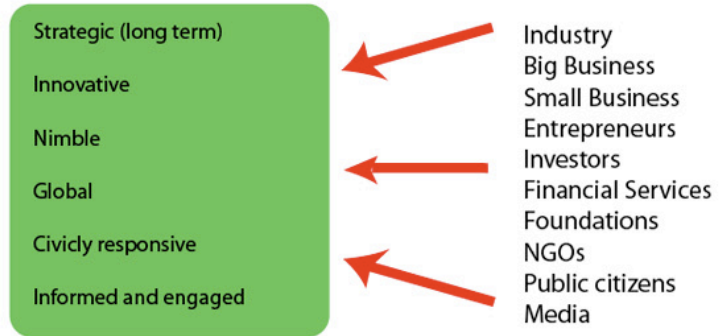
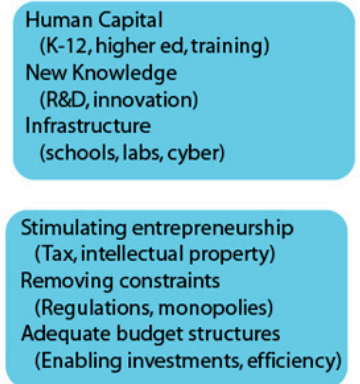


Public Sector Imperatives

Private Sector Imperatives

Federal Government  
**State Government**  
Local Government

Investments  
Public Policies



Industry  
Big Business  
Small Business  
Entrepreneurs  
Investors  
Financial Services  
Foundations  
NGOs  
Public citizens  
Media

Social Infrastructure





# Recommendations

## The Near Term

Today's Challenge: Enabling Michigan's transition to a knowledge-driven economy capable of providing prosperity, security, and social well-being in a hypercompetitive global economy.

### Key Vision:

To invest more adequately, strategically, and intelligently, with investments in people as the highest

### Investment Goals:

- ...human capital (lifelong learning)
- ...new knowledge (research, innovation, entrepreneurship)
- ...infrastructure (institutions, labs, cyber)
- ...policy (tax, investment, intellectual property)

### The Elements:

1. All K-12 students will graduate college ready.
2. Priority will be given to the social infrastructure for learning.
3. Create clearer pathways among learning institutions.
4. Higher education will become more engaged with K-12 schools.
5. Increase participation of all citizens in higher education.
6. Move Michigan into top quartile in higher ed investments.
7. Targeted state investment in science and engineering.
8. Stress alliances among Michigan's colleges and universities.
9. Increase state investments in university research infrastructure.
10. Universities should become more engaged in tech transfer.
11. Incentives to stimulate private sector R&D and innovation.
12. Public investment in infrastructure such as broadband is critical.
13. Michigan should invest more in need-based financial aid.
14. State funds should be used to leverage private and federal funds.
15. Universities should be provided with agility to adapt to markets.
16. A recommitment to equity and social inclusion.

## The Longer Term

Tomorrow's Challenge: To provide all of Michigan's citizens with the education and training they need, throughout their lives, whenever, wherever, and however they desire it, at high quality, and affordable cost.

Key Vision: To develop a society of learning capable of responding to the imperatives of a 21st century, global, knowledge-driven society.

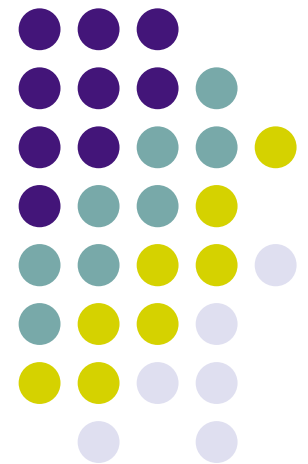
Goal: A society of learning, capable of adapting and evolving rapidly to provide learning opportunities, knowledge, and innovation during a period of extraordinary change.

### The Elements:

1. Michigan must develop a more systemic and strategic approach to its knowledge resources.
2. The state should encourage more diversity in institutions.
3. New paradigms for K-16 education should be explored.
4. UM and MSU should be encouraged to stress advanced education and research.
5. UM and MSU should be encouraged to develop capacity to access global markets.
6. Michigan's universities should explore bolder models of tech transfer, spinoffs, and startup activities.
7. Michigan should consider bolder models for producing human capital such as a 21st century version of the G.I. Bill that guarantees lifelong educational opportunities for all citizens.

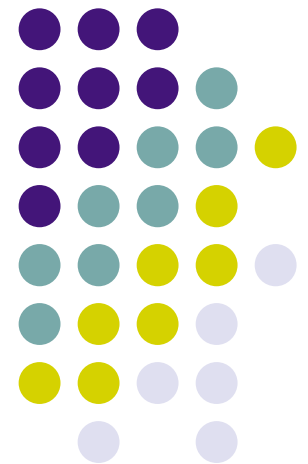
# The Michigan Roadmap

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# Recommendations (Near Term)

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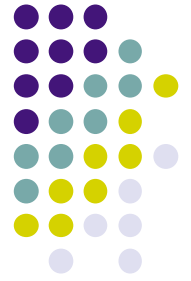


# Human Capital



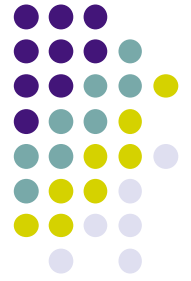
*1. The State of Michigan will set as its goal that **all students will graduate from its K-12 system with a high school degree that signifies they are college ready.** Both state government and local communities will provide both the resources and mandate to achieve these goals*

# Human Capital



2. *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 Michigan workforce will require a strong social infrastructure of families and local communities, particularly during times of economic stress. To this end, **state government and local government must take action both to re-establish the quality of Michigan'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.***

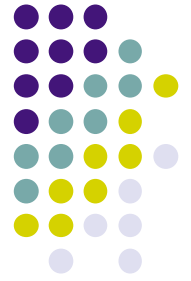
# Human Capital



3. Michigan must create *clearer pathways among educational levels and institutions and removing barriers to student mobility* and promoting new learning paradigms (e.g., distance education, lifelong learning, workplace programs) to accommodate a far more diverse student cohort.

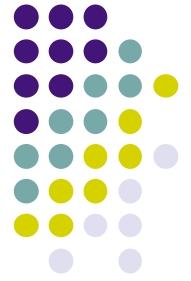


# Human Capital



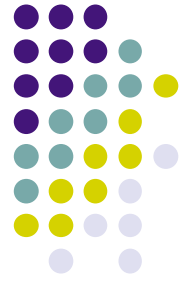
4. *Higher education must become significantly more engaged with K-12 education, accepting the challenge of improving the quality of our primary and secondary schools as one of its highest priorities with the corresponding commitment of faculty, staff, and financial resources. Each Michigan college and university should be challenged to develop a strategic plan for such engagement, along with measurable performance goals.*

# Human Capital



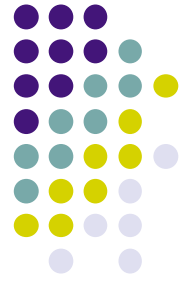
*5. Michigan simply must increase the participation of its citizens in higher education at all levels—community college, baccalaureate, and graduate and professional degrees. This will require a substantial increase in the funding of higher education from both public and private sources as well as significant changes in public policy.*

# Human Capital



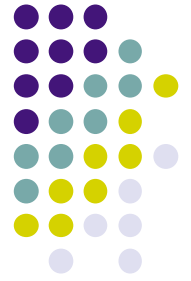
6. *To achieve and sustain the quality of and access to educational opportunities, Michigan needs to move into the top quartile of states in its higher education appropriations (on a per student basis) to its public universities. To achieve this objective, state government should set a target of increasing by 30% (beyond inflation) its appropriations to its public colleges and universities over the next five years.*

# Human Capital



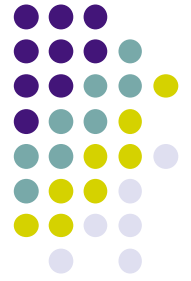
7. Michigan must place a much higher priority on providing *targeted funding for educational programs and facilities support in science and technology*. In addition, more effort should be directed toward K-12 to encourage and adequately prepare students for science and engineering studies. State government should strongly encourage public universities to *recruit science and engineering students from other states and nations*, particularly at the graduate level.

# Human Capital



8. *Colleges and universities should place far greater emphasis on **building alliances that will allow them to focus on unique core competencies while joining with other institutions in both the public and private sector to address the broad and diverse needs of society in the face of today's social, economic, and technological challenges while addressing the broad and diverse needs of society..***

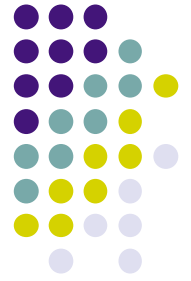
# New Knowledge



9. *State government should strongly support the role of its public research universities as sources of advanced studies and research by dramatically increasing public support of research infrastructure, analogous to the highly successful Research Excellence Fund of the 1980s. Also key will be enhanced support of the efforts of regional colleges and universities to integrate this new knowledge into academic programs capable of providing lifelong learning opportunities of world-class quality while supporting their surrounding communities in the transition to knowledge economies.*

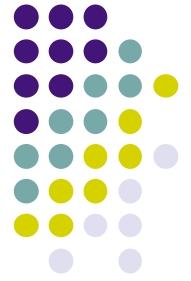


# New Knowledge



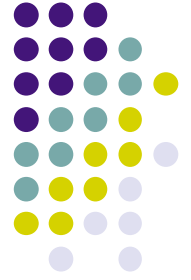
*10. Michigan's universities must become more strategically engaged in both regional and statewide economic development activities. Intellectual property policies should be simplified and standardized; faculty and staff should be encouraged to participate in the startup and spinoff of high-tech business; and universities should be willing to invest some of their own assets (e.g., endowment funds) in state- and region-based venture capital activities.*

# New Knowledge



*11. Michigan must also invest additional public and private resources in private-sector 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 Michigan Congressional delegation to attract major federal research funding to the state.***

# Infrastructure



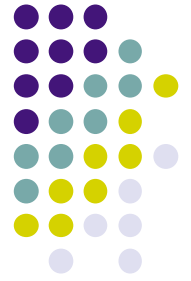
12. *Michigan must invest heavily to transform the current infrastructure designed for a 20<sup>th</sup>-century industrial economy into that required for a 21<sup>st</sup>-century knowledge economy. Of particular importance is a commitment by state government to **provide adequate annual appropriations for university capital facilities comparable to those of other leading states**. It is also important for both state and local government to play a more active role in **stimulating the development of pervasive high speed broadband networks**.*

# Policies



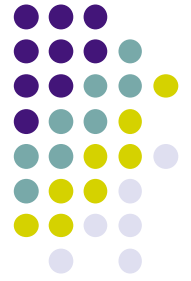
13. As powerful market forces increasingly dominate public policy, *Michigan's higher-education strategy should become market-smart, investing more public resources directly in the marketplace through programs such as vouchers, need-based financial aid, and competitive research grants, while enabling public colleges and universities to compete in this market through encouraging greater flexibility and differentiation in pricing, programs, and quality aspirations.*

# Policies



*14. Michigan should target its tax dollars more strategically to leverage both federal and private-sector investment in education and R&D. For example, a shift toward higher tuition/need-based financial aid policies in public universities not only leverages greater federal financial aid but also avoids unnecessary subsidy of high-income students. Furthermore greater state investment in university research capacity would leverage greater federal and industrial support of campus-based R&D.*

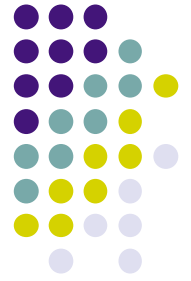
# Policies



15. Key to achieving the agility necessary to respond to market forces will be *a new social contract negotiated between the state government and Michigan's public colleges and universities, which provides enhanced market agility in return for greater (and more visible) public accountability* with respect to quantifiable deliverables such as graduation rates, student socioeconomic diversity, and intellectual property generated through research and transferred into the marketplace.



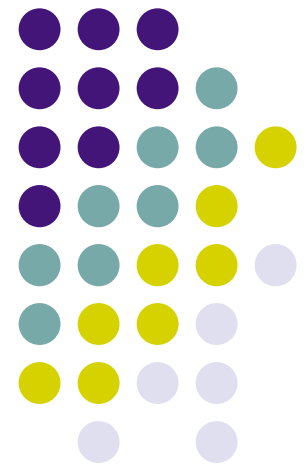
# Policies



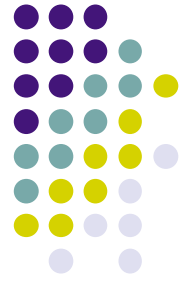
16. Michigan must recommit itself to the *fundamental principles of equal opportunity and social inclusion through the actions of its leaders, the education of its citizens, and the modification of restrictive policies*, if it is to enable an increasingly diverse population to compete for prosperity and security in a intensely competitive, diverse, and knowledge-driven global economy.

# Recommendations (LongerTerm)

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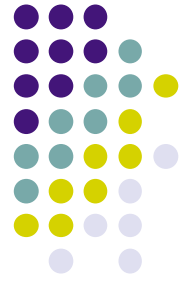


# Long Term Recommendations



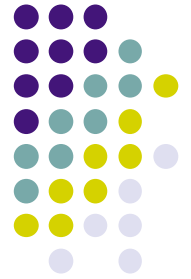
1. Michigan needs to develop *a more systemic and strategic perspective of its educational, research, and cultural institutions—both public and private, formal and informal—that views these knowledge resources as comprising a knowledge ecology that must be allowed and encouraged to adapt and evolve rapidly to serve the needs of the state in a change driven world, free from micromanagement by state government or intrusion by partisan politics.*

# Long Term Recommendations



2. Michigan 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 an knowledge infrastructure more resilient to the challenges presented by unpredictable futures.

# Long Term Recommendations



3. *Serious consideration should be given to **reconfiguring Michigan's educational enterprise by exploring new paradigms** based on the best practices of other regions and nations. For example, the current segmentation of learning by age (e.g., primary, secondary, collegiate, graduate-professional, workplace) is increasingly irrelevant in a competitive world that requires lifelong learning to keep pace with the exponential growth in new knowledge.*

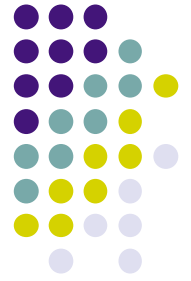
# Long Term Recommendations



4. Because of *importance of research and graduate education to the state's future*, Michigan's research universities should be encouraged to strike an appropriate balance between these activities, while undergraduate education remains the primary mission of Michigan's other colleges and universities.



# Long Term Recommendations



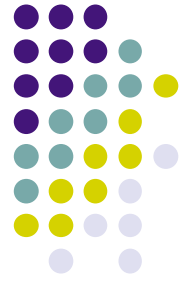
5. Michigan's research universities should *explore new models for the transfer of knowledge from the campus into the marketplace*, including the utilization of endowment capital (perhaps with state match) to stimulate spinoff and startup activities and exploring entirely new approaches such as “open source – open content paradigms”.

# Long Term Recommendations

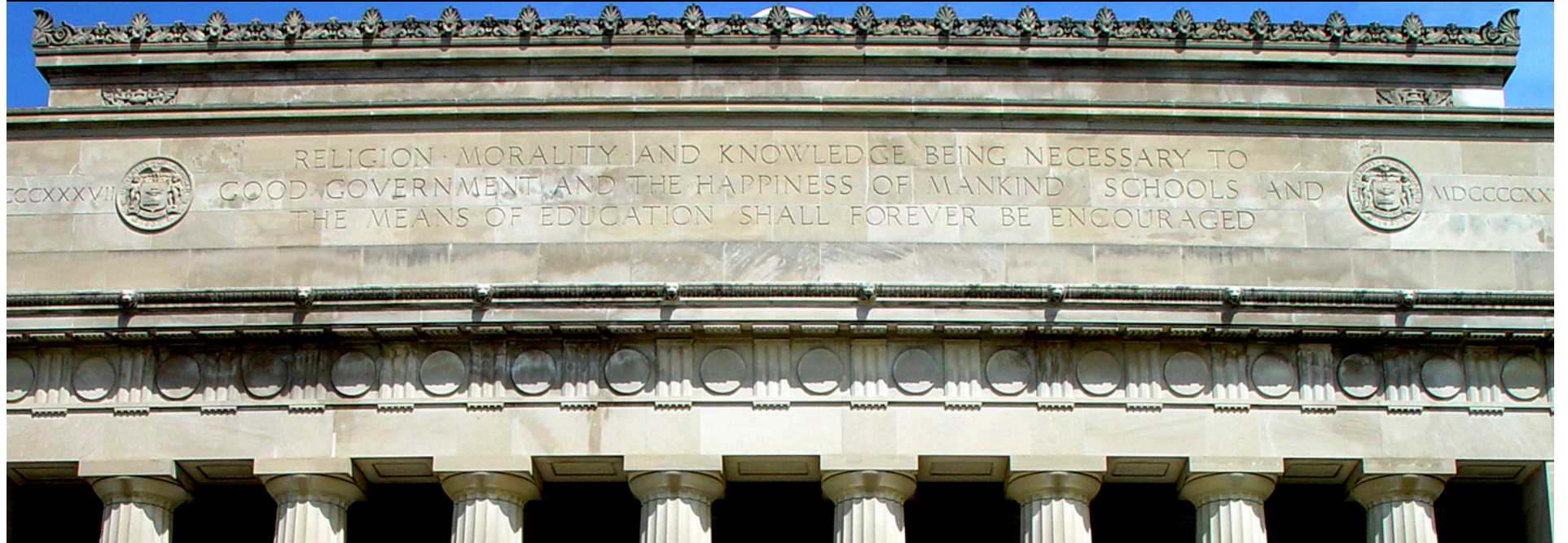


6. *While it is natural to confine state policy to state boundaries, in reality such geopolitical boundaries are of no more relevance to public policy than they are to corporate strategies in an ever more integrated and interdependent global society. Hence Michigan's strategies must broaden to include regional, national, and global elements, including the possibility of encouraging the state's two internationally prominent research universities, the University of Michigan and Michigan State University, to join together to create a true world university, capable of assisting the state to access global economic and human capital markets.*

# Long Term Recommendations



7. Michigan 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.

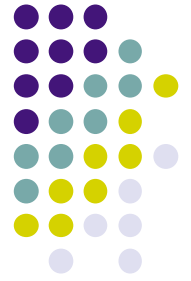


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RELIGION · MORALITY · AND KNOWLEDGE BEING NECESSARY TO  
GOOD GOVERNMENT AND THE HAPPINESS OF MANKIND · SCHOOLS AND  
THE MEANS OF EDUCATION SHALL FOREVER BE ENCOURAGED

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# Long Term Recommendations



8. Michigan should work *with other Great Lakes states* facing similar challenges and opportunities to develop a regional agenda both to facilitate cooperation and to influence national priorities.

# Long Term Recommendations



*9. Michigan should develop a leadership coalition— involving leaders from state government, industry, labor, education, and concerned citizens—with vision and courage sufficient to challenge and break the stranglehold of the past on Michigan’s future!*

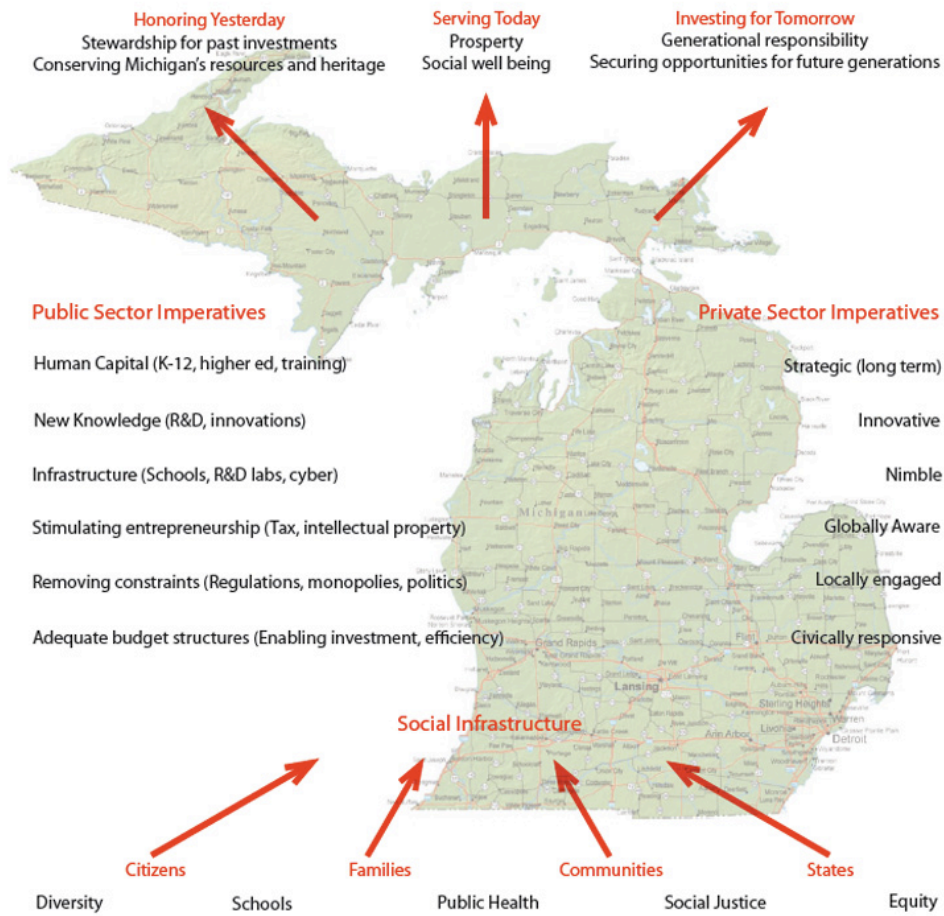




# The Michigan Roadmap *Redux*

## A Call for Leadership

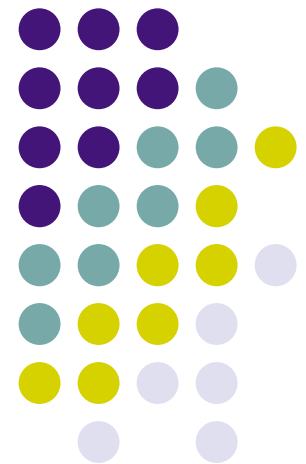
The Millennium Project  
The University of Michigan  
Spring, 2008



# A Roadmap to Michigan's Future

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A Call for Leadership



# A Roadmap to Michigan's Future

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**A Call for Leadership!**

