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# **Transforming from a Manufacturing to a Knowledge Economy**

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# Michigan Economic Trends

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- **Manufacturing no longer economic driver**
  - Result: Unemployment in MI highest in US
    - US: 4.6%
    - MI: 7.4%; OH: 5.8%
    - Midwest average: 5.2%
  - Result: Large out migration of population
- **US economic growth resulting from knowledge**
  - Leaders: CA, WA, NY, MA (e.g. 35% in NY vs. 19% MI)
  - Michigan households among *least* likely to encourage college education
- **Michigan not keeping pace with US trends**

***Michigan business and academic communities are risk averse***

# The Great Lakes Region is not alone...

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- **Industrial dominance of US hinges on health of industrial Midwest**
  - 2/3 of US population in center, not on coasts
  - Michigan is a “leading indicator” of larger regional trends
  - Trends are permanent, not transitory
- **We live in a global, not national economy**
  - Talent and skills are not a monopoly of any country or region
  - Productivity is mobile
  - Every economic advantage is portable

# Building the new economy

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- **All significant innovation centers in US (NE, West Coast) have leveraged their university resources**
  - Universities are the primary source of research infrastructure in US since 1945 (Vannevar Bush)
  - Leadership shown by Stanford, Berkeley, MIT...
  - “If the companies founded by MIT graduates and faculty formed an independent nation, the revenues produced by the companies would make that nation the 24<sup>th</sup> largest economy in the world”  
BankBoston study, 1997

# **The Future of Michigan IS Bright!**

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- **Solution requires “all hands on deck”**
  - Academia
  - Industry and investment communities
  - Government (both Federal and State)
  - Foundations
- **Solution requires inclusiveness and openness to new ideas and people**
- **Solution requires exploitation of regional strengths & infrastructure**
  - Building industries from “green fields” takes too long
- **We must learn to compete on a global, not a local, stage**
  - We can't wait for laws to adjust imbalances

# Michigan's Ecology of Entrepreneurialism

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- **University Research, Teaching, Technology Transfer, Outreach**
  - More than 90% of university R&D at UM, MSU and WSU (approx. \$1.4B annually)
  - Large knowledge-base generation
  - Spin offs at a regular, *but not high*, rate
- **Private Capital & Investment**
- **State Funds and Policy Support**
  - SmartZones & Accelerators (e.g. SW Michigan First; The Right Place; Ann Arbor SPARK)
  - MEDC & 21st Century Jobs Fund

# **Building on Existing Strengths**

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- **Advanced Manufacturing**
- **Health Sciences**
- **Energy**
- **IT**
- **.....**

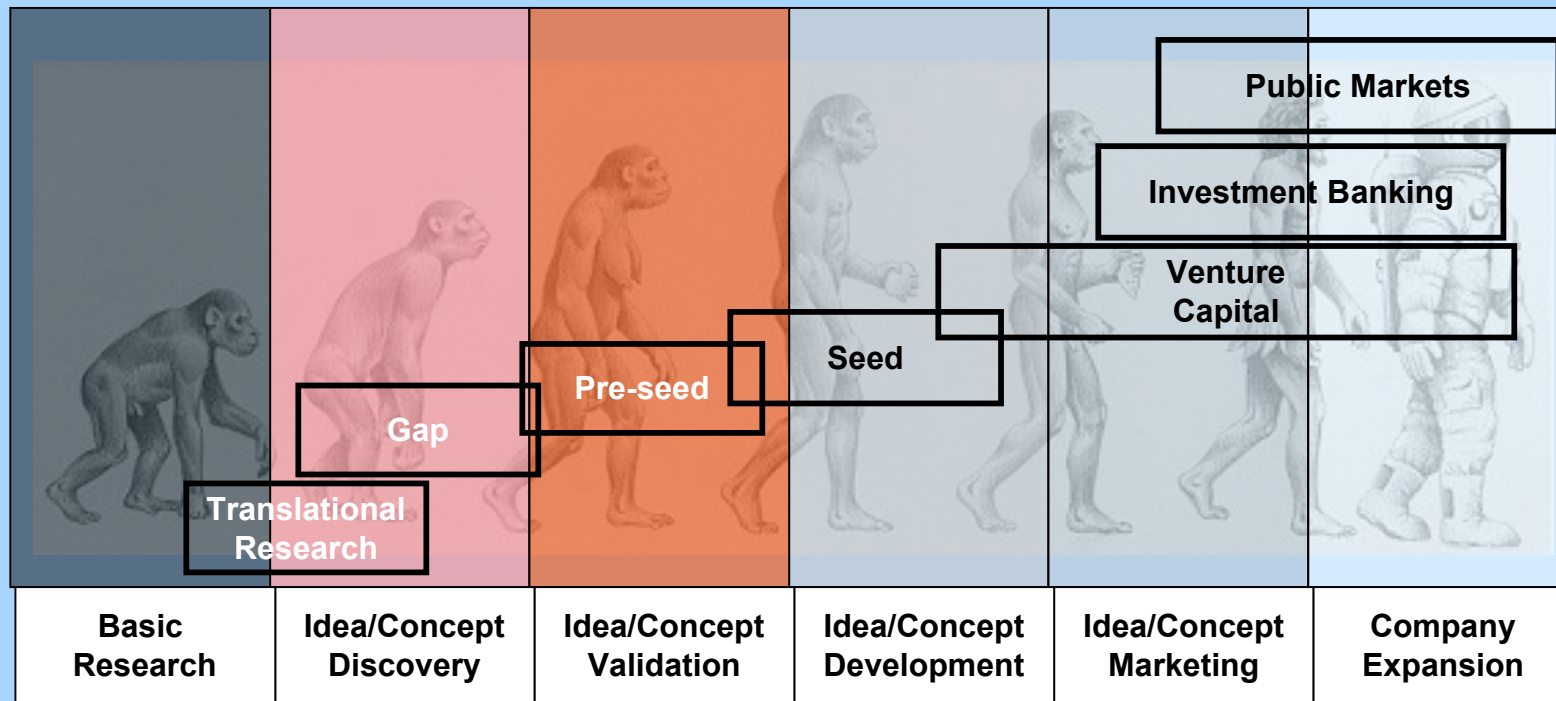
# A New Model for University Engagement

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***“Partner or perish!” -Mary Sue Coleman, Pres., UM***

- **Create campuses that integrate *in their core* entrepreneurial activity**
  - To include the non-academic sector
- **Drive entrepreneurial activity that**
  - Builds capacity for innovation
  - Attracts a critical mass of companies and talent
- **Build a campus culture that encourages students and faculty to pursue their entrepreneurial interests in Michigan**
- **Encourage intellectual risk-taking**

# Stages of Capital Investment



Highest Risk,  
Lowest Valuation

⇐ The critical "Gap" ⇒

Lowest Risk,  
Highest Valuation

# The Role of Foundations

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- **Create “Gap Funds” for universities to advance discoveries to commercialization**
  - Create substantial opportunities to increase the innovation **deal flow**
- **Initiate campus-based “Engagement and Talent Retention Funds” to enhance interactions with industry, VC**
  - Provide mentoring, example-setting opportunities (**“Spread the virus”!**)
- **Provide “Entrepreneurial Education Funds” for training the next generation of MI entrepreneurs**
  - Develop integrated education of the disciplines and business
- **Collaborate on a *significant* “Co-investment Seed Fund” to invest in promising Michigan companies**
  - Establish funds with a Michigan focus, bottom line is high ROI

# The Role of Government

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- **Federal government**

**Michigan's problem is not local, or regional. It is a national problem.**

- Establish opportunities for regional economic recovery
- National Laboratories and DII's
- Fund the American Competitiveness Initiative: Strongly support education at all levels

- **State government**

**The only solution to our economic problems (short- and long-term) is knowledge and innovation.**

- Reverse the decline in support for education (appropriations to URC have decreased by 15% from 2002-06)
- Provide incentives and assistance for new companies to establish or locate in Michigan
- Provide a *welcoming* environment for businesses & people

# Concluding Thoughts

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## **Michigan and the Great Lakes Region are at a crossroads**

- **We can choose the past, but...**
  - The industrial powerhouse that built the region is not suited to compete on the global scale
  - Failure to adapt will result in continued decline in prosperity, loss of population, and marginalization
- **Or we can choose the future...**
  - Structural and cultural changes needed to enter the knowledge age
  - Education of the population is highest priority
  - Adapting to risk and change represent a fundamental break from the past

**Rapid transformation requires all sectors to work together to achieve the same result: An attractive region of innovation and knowledge**