**LEADING DISCOVERY:**

**URC’s Contribution to the Life, Medical & Health Sciences (LMHS)**

Report documents the URC’s contributions to this important sector and measures their collective activities and outcomes today, and looks to the future impact these universities will have.

### DISCOVERY

The URC is one of the few places in the nation with the capability & capacity to contribute to the next great scientific discovery that will change human health for the better.

### THE ECONOMY

**IN 2015**

1 in 8 Michigan jobs were in the LMHS sector

**SINCE 2000, LMHS SECTOR**

EMPLOYMENT GROWTH 18.9% while overall employment is down 9.3%

### TALENT

**From 2011-2015 URC prepared**

- 5,254 NURSES (all levels)
- 1,049 PSYCHOLOGISTS & THERAPISTS (masters and up)
- 559 DENTISTS (all types)
- 4,379 DOCTORS (all types)
- 820 PHARMACISTS
- 529 VETS

The URC ranks 1st among its peer clusters in LMHS degrees awarded 44,422 from 2011-2015

### MEDICAL CARE

- 42% of the state’s PRACTICING PHYSICIANS have more than 3 MILLION patient care visits each year including everything from annual checkups TO ER VISITS & SPECIALIZED CARE

### RESEARCH

The URC institutions conducted $1.2 BILLION in academic R&D in the LMHS in 2015

ACCOUNTING FOR 95% of all LMHS R&D in the state

### TECHNOLOGY COMMERCIALIZATION

- From 2012-2016 URC Launched 32 NEW LMHS startup companies

ACCOUNTING FOR 40% of all URC startup and $142 million in royalties, over 80% of all royalty income earned.

URCMICH.ORG
Since 2008, Michigan’s University Research Corridor (URC) – an alliance between Michigan State University, the University of Michigan and Wayne State University – has commissioned a series of reports examining its contributions toward key sectors of Michigan’s economy, including entrepreneurship. Key findings include:

**SECTOR REPORTS**

- **ALTERNATIVE ENERGY RESEARCH AND DEVELOPMENT**
  - Michigan has a comparative advantage in biomass and wind compared to the energy potential in the other 49 states.
  - URC universities spent more than $79.5 million on R&D related to alternative energy in 2007.
  - More than 50% of all alternative energy R&D supported the auto industry.

- **ADVANCED MANUFACTURING**
  - URC universities spent $101 million on advanced manufacturing R&D in 2009.
  - URC universities are educating more than 14,000 students in engineering.
  - In 2007, Michigan’s advanced manufacturing industry employed 381,351 workers, 10.3% of all employment. One-third of the Midwest’s advanced manufacturing jobs are in Michigan, paying an average wage of $64,122.

- **AUTOMOTIVE INNOVATION**
  - The URC universities confer more than 3,600 degrees annually in auto-ready disciplines, supplying the industry with talent.
  - Between FY 2007 and 2011, the URC universities spent $300 million ($60 million annually) on more than 1,400 auto projects. Over 28% of the research was funded by private industry – nine times the average share of industry funding for all university R&D at these institutions.
  - URC researchers have helped automakers improve vehicle quality, safety, engine efficiency and performance, and reduce fossil fuel use.

- **BLUE ECONOMY**
  - From 2009-2013, URC universities received 2,100 awards totaling nearly $300 million and supporting 341 researchers from dozens of departments for water-related research and outreach.
  - Each year, URC universities produce more than 3,400 graduates prepared to analyze and find solutions to water-related issues in academia, government and the private sector.
  - One in five Michigan jobs (718,700) is associated with water-enabled or water-related industries.

- **ENTREPRENEURSHIP**
  - A 2013 survey of URC alumni found 19.1% of respondents had founded or co-founded a business.
  - Nearly half of the businesses started by URC alumni entrepreneurs began in Michigan.
  - URC alumni-started firms were nearly 1.5 times more likely to stay in business versus the national average.
  - URC alumni entrepreneurs started or acquired businesses at double the national average rate among college graduates between 1996 and 2012, and many of these companies were in fields outside their major area of study.
  - URC alumni entrepreneurs have started businesses in every state, and over 100 countries.

- **INFORMATION AND COMMUNICATION TECHNOLOGY**
  - The URC universities spent nearly $74 million on research projects with a strong IT focus in FY 2010.
  - Nearly 40% of the approximately 150 URC-assisted start-ups between 2001 to 2011 had an ICT component.
  - Information technology employs about 3.5% of the state’s workforce (135,000 workers) – a significant stand-alone sector and the underpinning for much of the major industry activity and growth represented in previous sector reports.

- **LIFE SCIENCES**
  - In 2008, URC universities spent $887 million on life sciences research and development.
  - R&D expenditures grew 69% since the founding of the Life Sciences Corridor in 1999.
  - Michigan’s life sciences industry employed more than 79,000 workers (2.1% of all employment in 2006).
  - From 1999 to 2006, life sciences employment grew 10.7% while manufacturing employment dropped 24%.
  - Life sciences wages averaged $83,494 in 2006.

- **ATTRACTING, FOSTERING, AND INSPIRING TALENT**
  - Among top research university clusters in the U.S., the URC ranks first in medical degrees, total degrees awarded and enrollment, and second in advanced degrees in high-tech fields such as engineering and sciences.
  - Of the 32,000 URC graduates each year, more than a third earn degrees in high-demand fields such as medicine and engineering.
  - Ann Arbor, East Lansing and Midtown Detroit residents 25 and older are three times more likely to have a degree compared to other Michigan communities.

- **ENGAGING DETROIT**
  - The URC’s Detroit economic impact is $958 million (FY 2014).
  - The URC accounts for one in 20 jobs in Detroit.
  - The URC is engaged in more than 340 programs, projects, activities and events in Detroit focused on community building, economic revitalization, public education, and public health.

- **’16**
  - The URC’s Detroit economic impact is $958 million (FY 2014).
  - The URC accounts for one in 20 jobs in Detroit.
  - The URC is engaged in more than 340 programs, projects, activities and events in Detroit focused on community building, economic revitalization, public education, and public health.

- **’15**
  - Among top research university clusters in the U.S., the URC ranks first in medical degrees, total degrees awarded and enrollment, and second in advanced degrees in high-tech fields such as engineering and sciences.
  - Of the 32,000 URC graduates each year, more than a third earn degrees in high-demand fields such as medicine and engineering.
  - Ann Arbor, East Lansing and Midtown Detroit residents 25 and older are three times more likely to have a degree compared to other Michigan communities.

- **’14**
  - From 2009-2013, URC universities received 2,100 awards totaling nearly $300 million and supporting 341 researchers from dozens of departments for water-related research and outreach.
  - Each year, URC universities produce more than 3,400 graduates prepared to analyze and find solutions to water-related issues in academia, government and the private sector.
  - One in five Michigan jobs (718,700) is associated with water-enabled or water-related industries.

- **’13**
  - A 2013 survey of URC alumni found 19.1% of respondents had founded or co-founded a business.
  - Nearly half of the businesses started by URC alumni entrepreneurs began in Michigan.
  - URC alumni-started firms were nearly 1.5 times more likely to stay in business versus the national average.
  - URC alumni entrepreneurs started or acquired businesses at double the national average rate among college graduates between 1996 and 2012, and many of these companies were in fields outside their major area of study.
  - URC alumni entrepreneurs have started businesses in every state, and over 100 countries.

- **’12**
  - The URC universities confer more than 3,600 degrees annually in auto-ready disciplines, supplying the industry with talent.
  - Between FY 2007 and 2011, the URC universities spent $300 million ($60 million annually) on more than 1,400 auto projects. Over 28% of the research was funded by private industry – nine times the average share of industry funding for all university R&D at these institutions.
  - URC researchers have helped automakers improve vehicle quality, safety, engine efficiency and performance, and reduce fossil fuel use.

- **’11**
  - The URC universities spent nearly $74 million on research projects with a strong IT focus in FY 2010.
  - Nearly 40% of the approximately 150 URC-assisted start-ups between 2001 to 2011 had an ICT component.
  - Information technology employs about 3.5% of the state’s workforce (135,000 workers) – a significant stand-alone sector and the underpinning for much of the major industry activity and growth represented in previous sector reports.

- **’10**
  - The URC universities spent $101 million on advanced manufacturing R&D in 2009.
  - URC universities are educating more than 14,000 students in engineering.
  - In 2007, Michigan’s advanced manufacturing industry employed 381,351 workers, 10.3% of all employment. One-third of the Midwest’s advanced manufacturing jobs are in Michigan, paying an average wage of $64,122.

- **’09**
  - In 2008, URC universities spent $887 million on life sciences research and development.
  - R&D expenditures grew 69% since the founding of the Life Sciences Corridor in 1999.
  - Michigan’s life sciences industry employed more than 79,000 workers (2.1% of all employment in 2006).
  - From 1999 to 2006, life sciences employment grew 10.7% while manufacturing employment dropped 24%.
  - Life sciences wages averaged $83,494 in 2006.

- **’08**
  - Michigan has a comparative advantage in biomass and wind compared to the energy potential in the other 49 states.
  - URC universities spent more than $79.5 million on R&D related to alternative energy in 2007.
  - More than 50% of all alternative energy R&D supported the auto industry.

- **05.2017**

THESE SECTOR REPORTS CAN BE FOUND ON THE URC WEBSITE AT WWW.URCMIICH.ORG/REPORTS.