### Sponsored Program Summary 1st Quarter FY17 December, 2016

David Reed
Vice President for Research

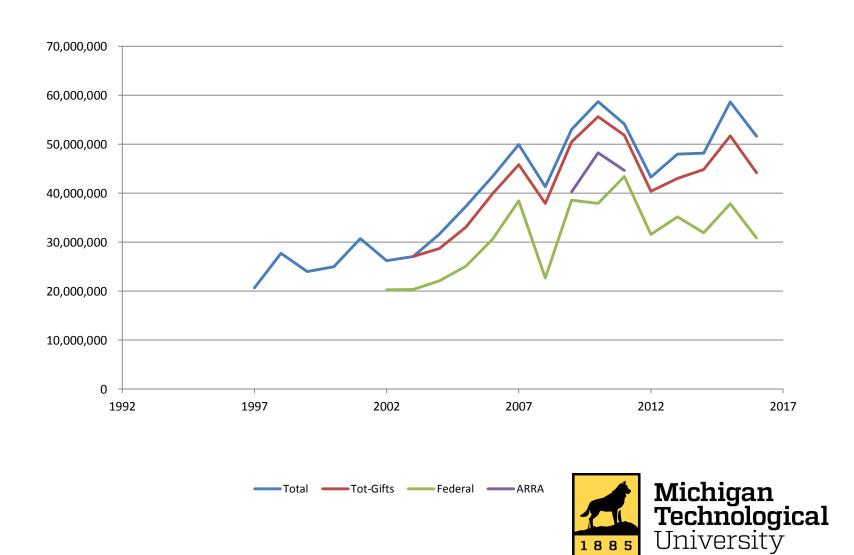


#### Outline

- Sponsored Awards, 1<sup>st</sup> Quarter FY17
- Research Expenditures, 1<sup>st</sup> Quarter FY17
- Intellectual Property/Commercialization, 1<sup>st</sup> Quarter FY17
- Corporate Sponsorship, 1<sup>st</sup> Quarter FY17
- Federal Funding Trends
- MTRI 10<sup>th</sup> Anniversary



### Sponsored Awards, Unaudited FY16



### Sponsored Awards, 1st Quarter FY17

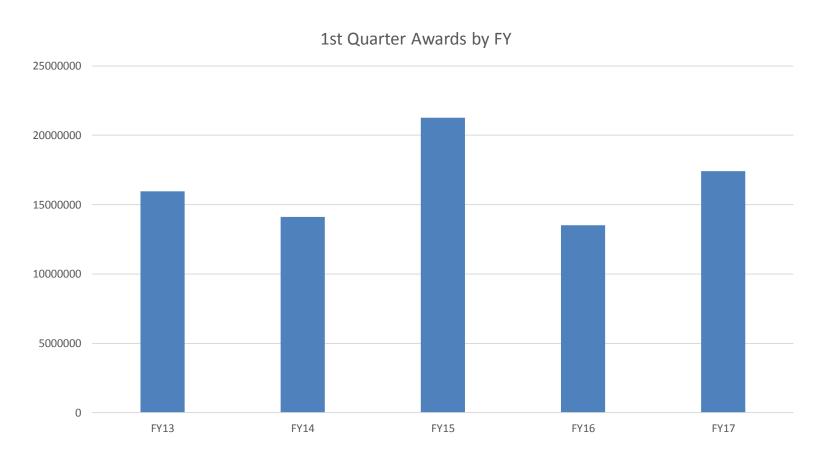
|                              | Proposals Submitted |             | Awards Received |             | Awards Received (\$) |             |             |          |
|------------------------------|---------------------|-------------|-----------------|-------------|----------------------|-------------|-------------|----------|
|                              | FY '17              | FY '16      | FY '17          | FY '16      | FY '17               | FY '16      | Variance    | Variance |
| Sponsor                      | as of 09/30         | as of 09/30 | as of 09/30     | as of 09/30 | as of 09/30          | as of 09/30 | \$          | %        |
| NASA                         | 13                  | 2           | 14              | 4           | 1,083,828            | 339,117     | 744,711     | 219.6%   |
| National Science Foundation  | 33                  | 43          | 23              | 31          | 4,341,502            | 4,121,183   | 220,319     | 5.3%     |
| US Department of Agriculture | 35                  | 25          | 22              | 10          | 1,996,085            | 989,427     | 1,006,658   | 101.7%   |
| US Department of Defense     | 25                  | 17          | 27              | 17          | 2,961,704            | 2,657,682   | 304,022     | 11.4%    |
| US Department of Education   | -                   | 1           | 1               | 1           | 59,720               | 92,155      | -32,435     | -35.2%   |
| US Department of Energy      | 7                   | 11          | 6               | 9           | 1,314,156            | 540,689     | 773,467     | 143.1%   |
| US Department of HHS         | 3                   | 3           | 5               | 4           | 1,168,077            | 1,015,049   | 153,028     | 15.1%    |
| US Department of             |                     |             |                 |             |                      |             |             |          |
| Transportation               | 3                   | 5           | 7               | 4           | 929,629              | 273,535     | 656,094     | 239.9%   |
| Other Federal Agencies*      | 12                  | 20          | 10              | 8           | 961,216              | 552,301     | 408,915     | 74.0%    |
| Federal Agency Total         | 131                 | 127         | (115            | 88          | 14,815,917           | 10,581,138  | 4,234,779   | 40.0%    |
| State of Michigan            | 12                  | 11          | 6               |             | 441,099              | 459,673     | -18,574     | -4.0%    |
| Industrial                   | 66                  | 68          | 41              | 50          | 488,219              | 1,454,598   | -966,379    | -66.4%   |
| Foreign                      | 4                   | 7           | 5               | 5           | 585,296              | 184,516     | 400,780     | 217.2%   |
| All Other Sponsors           | 21                  | 15          | 16              | 7           | 316,761              | 189,152     | 127,609     | 67.5%    |
| Subtotal                     | 234                 | 228         | 183             | 153         | 16,647,292           | 12,869,077  | 3,778,215   | 29.4%    |
| Gifts**                      | N/A                 | N/A         | 76              | 77          | 758,417              | 637,343     | 121,074     | 19.0%    |
| Crowd Funding                | N/A                 | N/A         | 3               | 7           | 2,210                | 6,378       | -4,168      | -65.4%   |
| Grand Total                  | 234                 | 228         | 259             | 237         | 17,407,919           | 13,512,798  | \$3,895,121 | 28.8%    |

<sup>\*</sup> US Dept of the Interior, US Dept of Commerce, National Endowments for the Arts & Humanities, US Environmental Protection Agency, US Dept of Labor



<sup>\*\*</sup>Gifts represent non-contractual funding from corporations, foundations, associations and societies in support of academic programs, scholarships/fellowships, student design & enterprise, research, youth programs and special programs.

### Sponsored Awards, 1st Quarter FY17





#### Research Expenditures, 1<sup>st</sup> Quarter FY17

## Michigan Technological University Total Research Expenditures by College/School/Division Fiscal Year 2017 & 2016 As of September 30, 2016 and September 30, 2015

| College/School/Division                            | FY2017     | FY2016     | Variance    | %      |
|--|------------|------------|-------------|--------|
| Administration*                                    | 1,269,691  | 2,285,243  | (1,015,552) | -44.4% |
| College of Engineering                             | 5,103,130  | 4,679,646  | 423,484     | 9.0%   |
| College of Science & Arts                          | 3,133,304  | 2,762,858  | 370,446     | 13.4%  |
| Great Lakes Research Center                        | 24,541     | -          | 24,541      | -      |
| Pavlis Honors College                              | 46,513     | 49,352     | (2,839)     | -5.8%  |
| Keweenaw Research Center (KRC)                     | 1,362,642  | 1,392,772  | (30,130)    | -2.2%  |
| Michigan Tech Research Institute (MTRI)            | 1,882,565  | 1,956,154  | (73,589)    | -3.8%  |
| School of Business & Economics                     | 245,940    | 173,151    | 72,789      | 42.0%  |
| School of Forest Resources & Environmental Science | 1,259,145  | 956,705    | 302,440     | 31.6%  |
| School of Technology                               | 133,658    | 132,988    | 670         | 0.5%   |
| Total  | 14,461,129 | 14,388,869 | 72,260      | 0.5%   |
|  |            |            | •           |        |



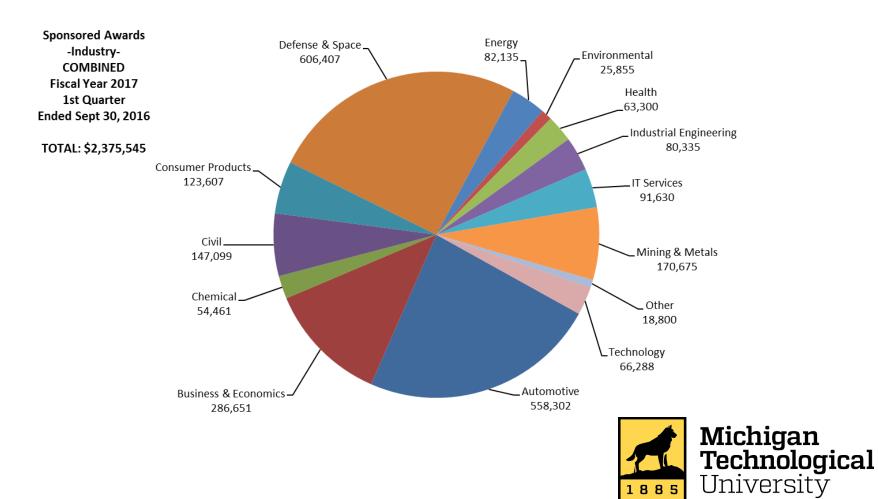
<sup>\*</sup>Includes the Vice Presidents, Provost, CIO, Exec Director Financial Services & Operations and others who report to a VP, Provost or the President. Except for the research institutes that report to the VPR.

### Intellectual Property, 1st Quarter FY17

|                             | 2017    | 2016   | +/- %  |
|-----------------------------|---------|--------|--------|
| Disclosures Received        | 5       | 4      | 25 %   |
| Nondisclosure<br>Agreements | 27      | 32     | - 16 % |
| Patents Filed or Issued     | 2       | 2      | 0 %    |
| License Agreements          | 5       | 4      | 25 %   |
| Gross Royalties             | 143,342 | 95,481 | 50 %   |

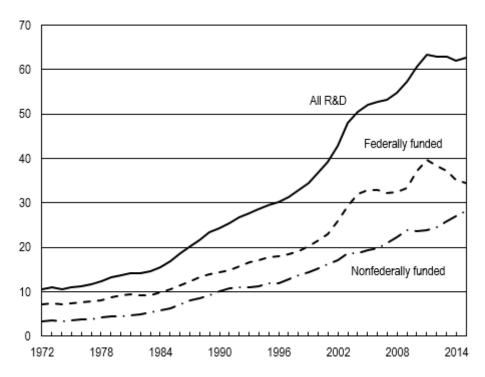


#### Corporate Sponsorship, 1st Quarter FY17



# National R&D Expenditures (Source: National Science Foundation)

Billions of constant 2009 dollars



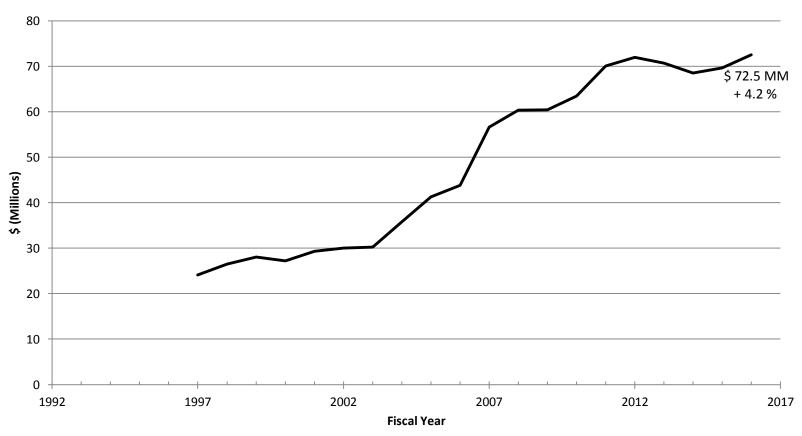


# National R&D Expenditures (Source: National Science Foundation)

- Federal funding dropped from 62.5% of total higher ed R&D in FY11 to 55.2% in FY15
- Only 3 federal agencies reported increases –
   Defense, NASA, and USDA; all others reported decreases.
- Medical science (\$21.3 B), biological science (\$11.7 B), and engineering (\$11.1 B) together account for 64.3 % of total higher ed R&D



# Research Expenditures, Unaudited FY16





### National Research Rankings FY15

- FY16 was an all time high for research expenditures at \$ 72.5 MM and our total research expenditures increased to \$ 69.6 MM in FY15 from \$ 68.5 MM in FY14, with an overall ranking of 164<sup>th</sup> among all institutions and 116<sup>th</sup> among public institutions.
- NSF reports research expenditures by discipline, so MTRI, KRC, and GLRC are combined with appropriate academic units for reporting purposes, and some academic units are split depending on disciplinary nature of the work.

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### National Research Rankings FY15

- One highlight Michigan Tech is the number 1 ranked Environmental Science research institution in the state with a national ranking of 53<sup>rd</sup>, followed by UMich at 57<sup>th</sup>, GVSU at 135<sup>th</sup>, and MSU at 146<sup>th</sup>
- Michigan Tech is number 1 in the state in both Atmospheric Science (39<sup>th</sup> nationally) and Oceanography (53<sup>rd</sup> nationally)



### MTRI 10<sup>th</sup> Anniversary

- MTRI joined Michigan Tech on October 1, 2006
- At that time they had 24 regular employees; today there are 60
- Cumulatively, over the 10 years MTRI has had over \$80 million in research expenditures



### MTRI 10<sup>th</sup> Anniversary





### MTRI 10<sup>th</sup> Anniversary





