



## Report on MnDRIVE initiative to Minnesota state legislature

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### Background

MnDRIVE – Minnesota’s Discovery, Research, and InnoVation Economy – is a landmark partnership between the University of Minnesota and the State of Minnesota that aligns areas of University research strength with the state’s key and emerging industries to address grand challenges. Beginning in FY 2014, the state began investing approximately \$18 million annually in four research areas identified by University faculty and deans and corporate partners as the most promising areas for partnership: Robotics, sensors and advanced manufacturing; Global food ventures; Advancing industry, conserving our environment; and Discoveries and treatments for brain conditions. The University of Minnesota Informatics Institute (UMII), which fosters and accelerates data-intensive research, receives partial funding from MnDRIVE and provides key support to these projects.

MnDRIVE represents a unique, collaborative research model involving interdisciplinary research projects across the University that address grand challenges and include industry partnerships as a key component. Funding proposals for the four areas of research undergo a rigorous peer review process by a strategic advisory board consisting of representatives from academia, industry and the broader community. The University of Minnesota’s Office of the Vice President for Research (OVPR) provides accountability measures for the initiative and serves as an advocate for the program at the Legislature. Each of the four research areas have committees and advisory boards to oversee project implementation and outreach.

In addition to funding research and collaborative activities for each of the four areas, the OVPR initiated a Transdisciplinary Research Program intended to inspire creativity and encourage transdisciplinary research to address the University’s Grand Challenges. The twelve projects ranged from creating wearable electronics to reducing sulfate in Minnesota watersheds, and each principal investigator reports to OVPR every six months as well.

### Metrics & Results

During the first biennium of MnDRIVE funding (July 1, 2013 through June 30, 2015 covering fiscal years 2014-2015) the OVPR worked with principal investigators of each of the four MnDRIVE areas and the 12 Transdisciplinary projects to gather data every six months. The OVPR requested information on:

1. Number of people hired
2. MnDRIVE project titles
3. Invention disclosures to the Office of Technology and Commercialization
4. Funding acquired from external grants (e.g., NSF, NIH, USDA, corporate funding)
5. Number of students graduated
6. Success stories resulting from MnDRIVE research and participation

MnDRIVE funded 210 projects during this time, involving 629 researchers in 103 departments, 21 colleges and three campuses (Twin Cities, Duluth and Morris). To conduct this research, MnDRIVE



researchers hired 321 people, including 28 new faculty and 64 staff and technicians necessary to carry out the work. MnDRIVE researchers acquired more than \$57 million in external funding, submitted 41 disclosures for inventions to OTC and during this period 11 MnDRIVE students graduated, with 100 percent employment after graduation.

MnDRIVE researchers created three start-up companies or non-profits and engaged with more than 140 external partners including corporations like 3M, Boston Scientific, Syngenta, and Toro. More than 80 participants have enrolled in neuromodulation clinical trials, and more than 50 patients have been treated with non-pharmaceutical therapies, and surgeries for brain conditions. A team of undergraduate students won the national iGEM (International Genetically Engineered Machines) competition for a project that focused on bioremediation of mercury from contaminated water.