



# *Funding Innovation for Critical National Needs*

## **TECHNOLOGY INNOVATION PROGRAM**

The Technology Innovation Program ([TIP](#)) at the National Institute of Standards and Technology was established to assist U.S. businesses and institutions of higher education or other organizations, such as national laboratories and nonprofit research institutions, to support, promote, and accelerate innovation in the U.S. through high-risk, high-reward research in areas of critical national need. These areas need government attention because the magnitude of the problem is large and societal challenges are not being sufficiently addressed.

### **Key Features of TIP**

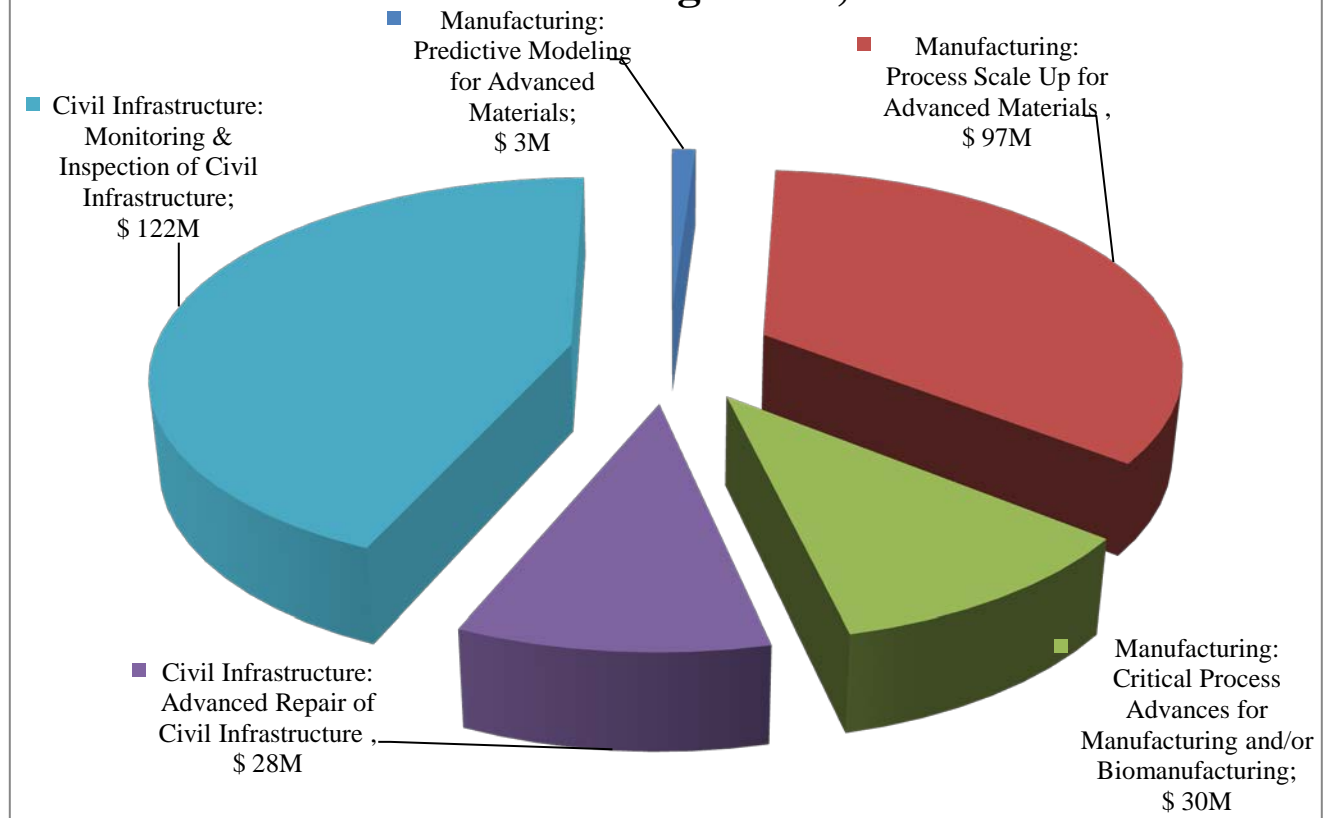
- **Novel Purpose:** addressing societal challenges not being addressed in areas of critical national need with benefits that extend significantly beyond proposers
- **Societal Challenges:** concentrating on those challenges that justify government attention
- **Scientific & Technical Merit:** supporting innovative high-risk, high-reward research
- **Transformational Results:** focusing on ideas with a strong potential to advance state-of-the-art and contribute to U.S. science and technology base
- **Rich Teaming:** funding small and medium-sized businesses, academia, national labs, nonprofit research institutions, and other organizations
- **Clear Government Need:** addressing problems that require government attention because the magnitude of the problem is large and no other sources of funding are reasonably available
- **Funding:** Single Company projects up to \$3M over a maximum of three years  
Joint Venture projects up to \$9M over a maximum of five years
- **Cost share:** requiring proposers to cover at least 50% of the yearly total project costs – direct plus indirect – which may be covered by both cash and in-kind contributions

### **TIP's Competitions**

Currently TIP has initiated approximately \$280 million in high-risk, cutting edge research addressing the critical national need areas of civil infrastructure and manufacturing. Civil infrastructure was the focus of TIP's first solicitation in June 2008 and the subsequent 2009 competition. The scope of TIP's solicitations in civil infrastructure is described in the TIP white paper entitled "[Advanced Sensing Technologies for the Infrastructure: Roads, Highways, Bridges and Water Systems.](#)" Manufacturing was added to TIP's 2009 competition and was the sole focus of the 2010 competition. The scope of that solicitation is described in TIP's white paper [entitled "Manufacturing and Biomanufacturing: Materials Advances and Critical Processes."](#) To date, TIP has made 17 awards in civil infrastructure totaling over \$150 million in research funds (with \$73 million in TIP funds), and 21 awards in manufacturing totaling over \$130 million in research funds (with \$63 million in TIP funds).

Awarded projects demonstrate TIP's commitment to encouraging innovative, multi-disciplinary research approaches and collaborative arrangements. Seventy-eight members are involved in these 38 projects. Seventeen of the 38 projects are joint ventures.

## TIP Research Funding Totals, 2008 - 2010



### Participation in TIP

TIP seeks white papers to help shape the program's collaborative outreach and future competitions. White papers in all areas of critical national need are encouraged. Beyond civil infrastructure and manufacturing, examples of other areas under evaluation include aspects of: complex networks and systems, energy, ensuring future water supply, robotics, nanotechnology, healthcare, and sustainability. White papers, along with the vision of the Administration, NIST, other government agencies, the technical communities, and other stakeholders, help TIP shape the scope of future competitions.

For detailed instructions on how to prepare and submit white papers please refer to [\*"A Guide for Preparing and Submitting White Papers on Areas of Critical National Need"\*](#).

### University Participation in TIP

TIP only provides funding through competitive processes. Universities may lead a joint venture when teamed up with at least one small or medium sized for-profit company or may participate as a member within a joint venture led by a small or medium sized company. Universities may also participate as a contractor within any TIP award. Title to intellectual property for single company awards is pursuant to the Bayh-Dole Act, and for joint ventures may vest in any participant in the joint venture as agreed to by its members. See the TIP website for a full discussion of the eligibility and application requirements.

**To stay informed about future TIP competitions and updates, Subscribe to TIP Updates at:**

[www.nist.gov/tip](http://www.nist.gov/tip)