Public/Private Partnerships & Multi-party Collaboration

THE FOURTH INDUSTRIAL REVOLUTION

October 2016

ManufacturingUSA℠

AIM photonics

AFFOA

America Makes

DMDII

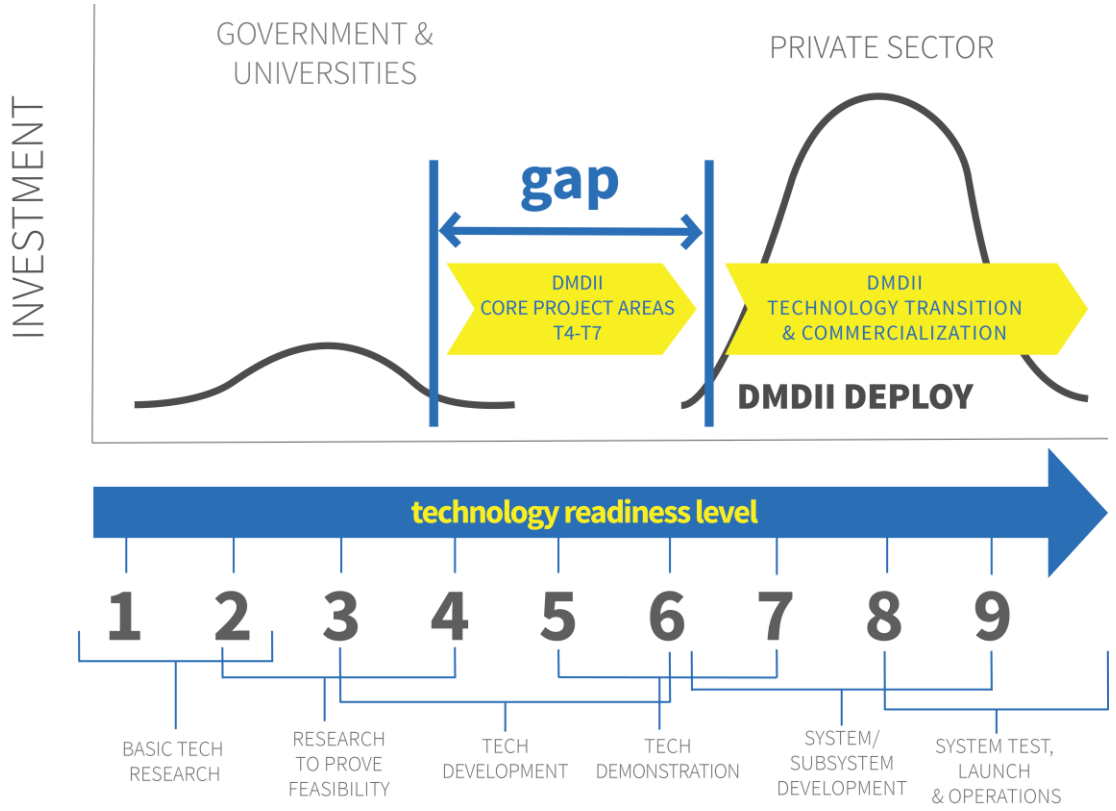
The Composites iacmi Institute

NEXTFLEX

ALIFT

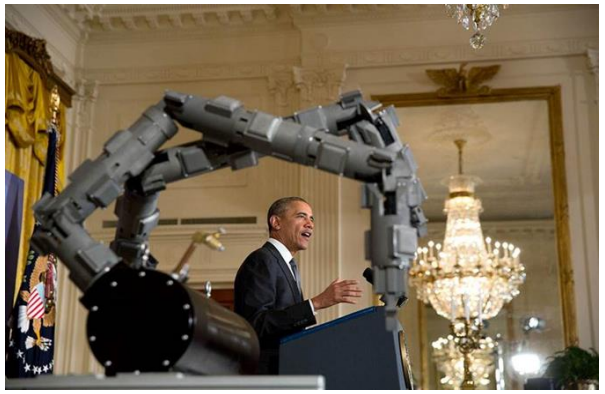
PowerAmerica

DMDII is a public/private partnership charged with increasing the competitiveness of U.S. manufacturing through digital technologies



SOURCE: NATIONAL NETWORK FOR MANUFACTURING INNOVATION

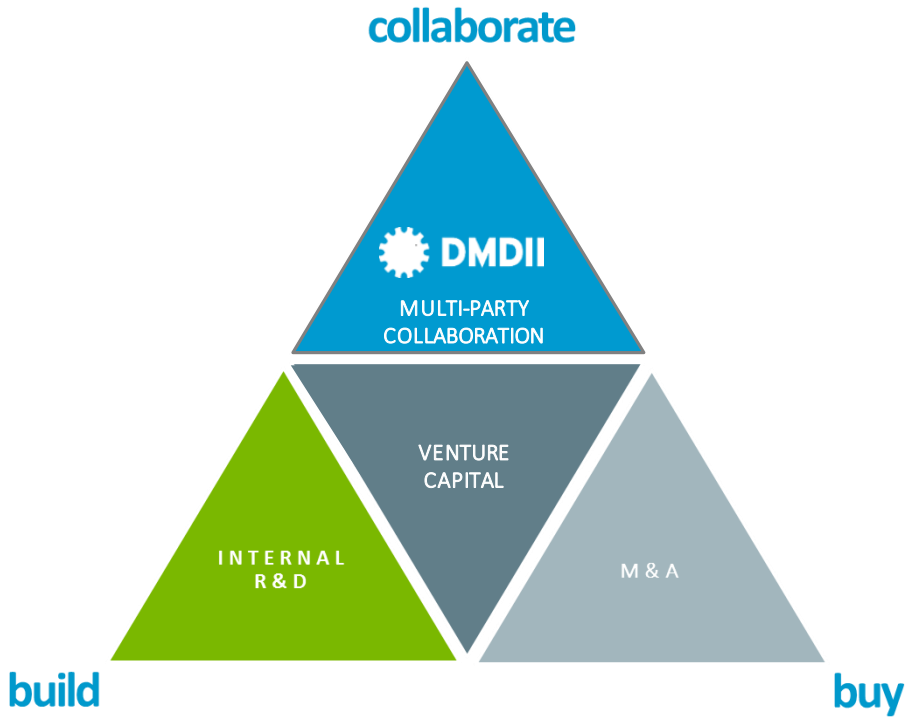
DMDII
a UI LABS Collaboration



"I'm here to announce that we're building Iron Man… Not really. Maybe. It's classified."

— President Barack Obama, February 25, 2014

DMDII brings together leading institutions in multi-party collaboration to solve intractable digital manufacturing problems



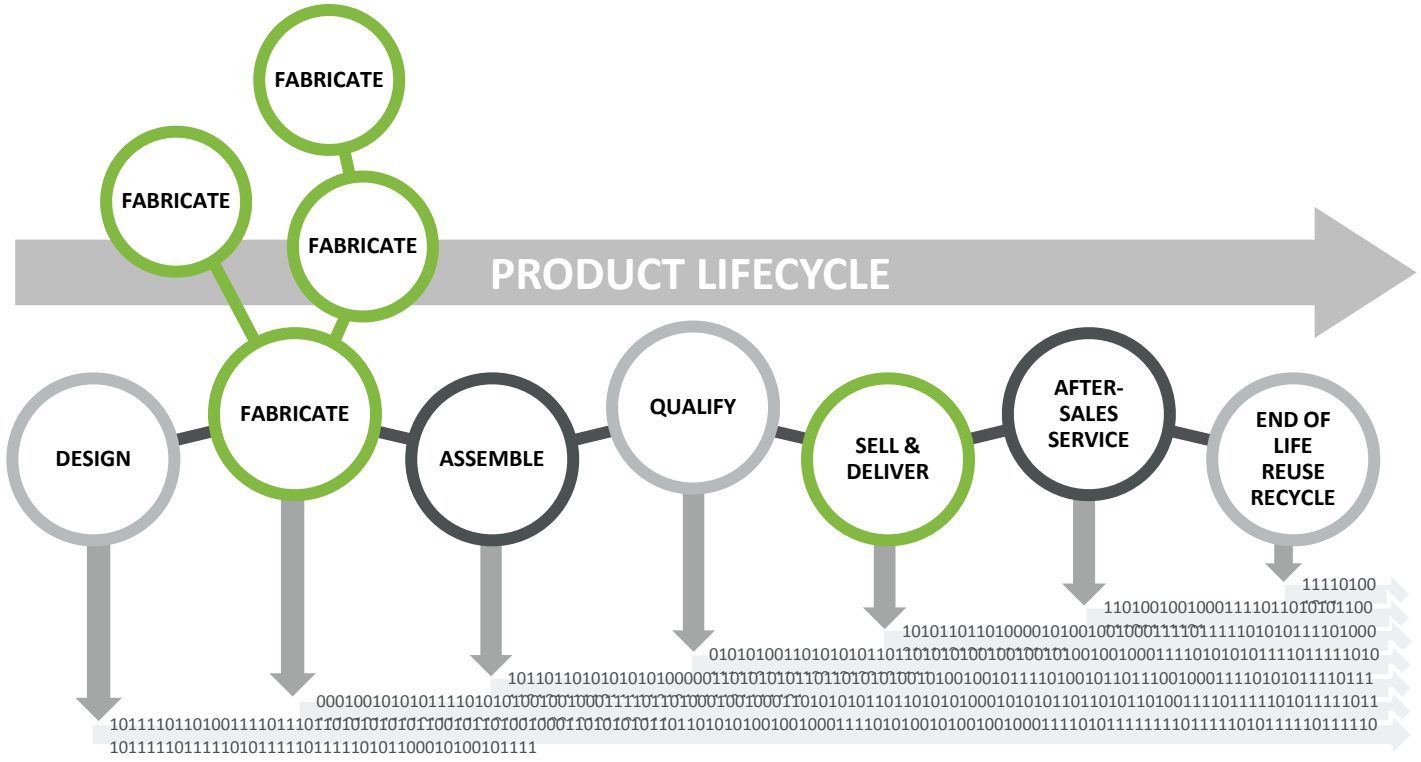
World Class Industry Leaders

Leading Universities

Government and Agencies

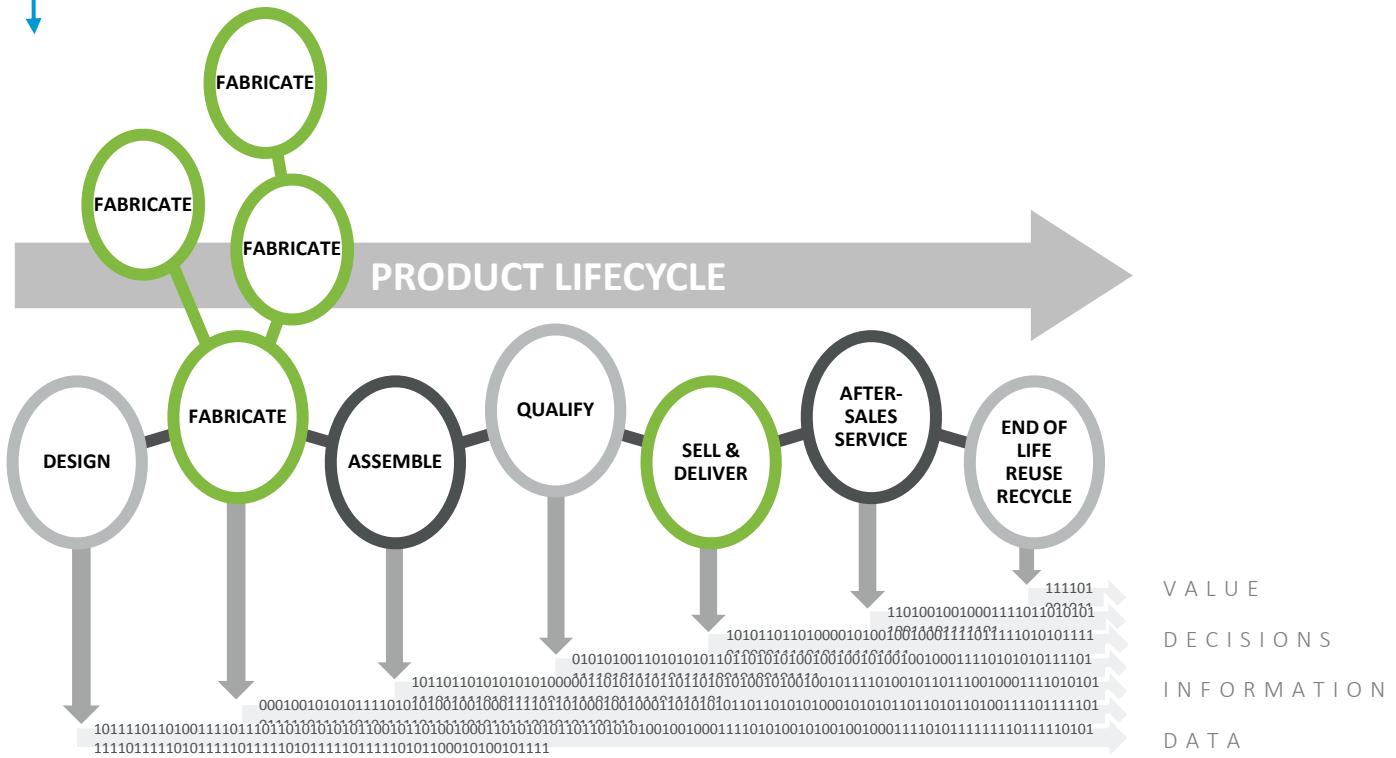
- *$500B in annual industry revenues*
- *$25B in annual R&D spending by industry partners*
- *100+ small & mid-size manufacturing & technology companies*
- *Many dozens of nationally recognized subject matter experts*
- *~$75+ million in project co-investment*

DMDII is focused on integrating data and driving insights across the product lifecycle



- *50+ research and development projects selected*
- *~60% in-flight*
- *Heavy initial focus on:*
  - *Product design, systems engineering*
  - *Future Factory*
- *Focusing upcoming investments in:*
  - *Future Factory*
  - *Supply Chain*
  - *Cybersecurity*

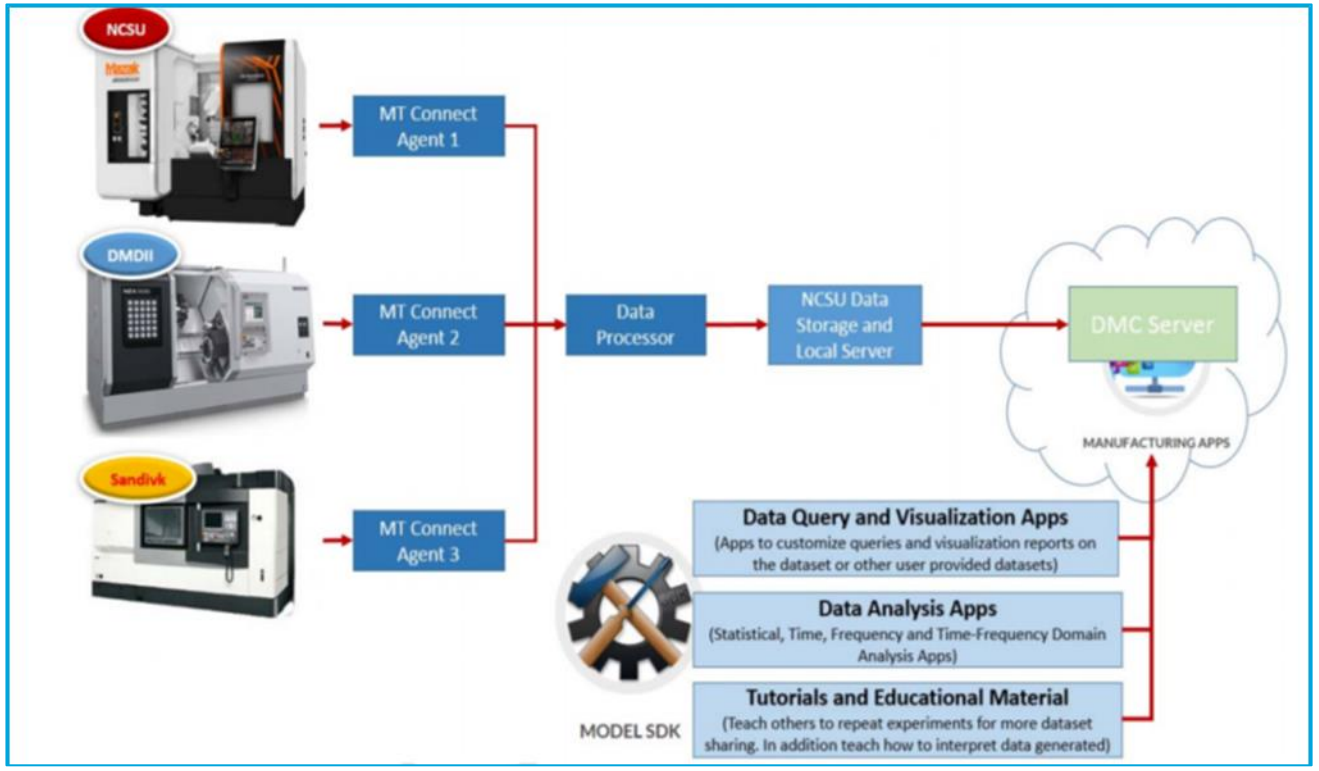
Example projects: DMDII projects span the product lifecycle



- *Automated Manufacturability Analysis*
- *Provides designers with summary data so that they can see the impact of their design iterations on manufacturability across multiple processes at any point during conceptual design.*
- *PSU, Univ. Alabama Birmingham, Deere & Co., MFG.com, Lucrum Group, Techsoft 3D, American Foundry Society of America, NA Die Casting Association*

- *Shop Floor Augmented Reality and Wearable Computing*
- *Augmented Reality Expert Demonstration Authoring (AREDA) product to provide a simple and intuitive method for rapidly authoring AR work instructions by tracking and recording the actual part manipulations of an expert using 3D cameras with advanced image processing and computer vision algorithms*
- *Purdue Univ., Deere & Co., Boeing, Design Mill, Daqri*

Current project example: Streaming in-process machine data to the Digital Manufacturing Commons for on-demand analytics



DMDII + Sandvik + N.C. State Univ.

- Sharing a large dataset generated from mill-turn based manufacturing machines in 3 separate locations – all making the same part with different materials and cutting tools
- Streaming in-process data to the DMC
- Creating apps on the DMC to query, visualize and analyze streamed data

Our vision is to create an open platform where the most advanced analytical tools can be developed, distributed and monetized for use in the industrial environment

For more information, please contact:

Thomas McDermott
Chief Program Officer & Acting Executive Director DMDII
Thomas.mcdermott@uilabs.org

Thank you!