

Fiber Reinforced Polymer Composite Manufacturing Workshop
Crystal City
January 13, 2014

Private-Public Partnerships for U.S. Advanced Manufacturing

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Advanced Manufacturing National Program Office
www.manufacturing.gov

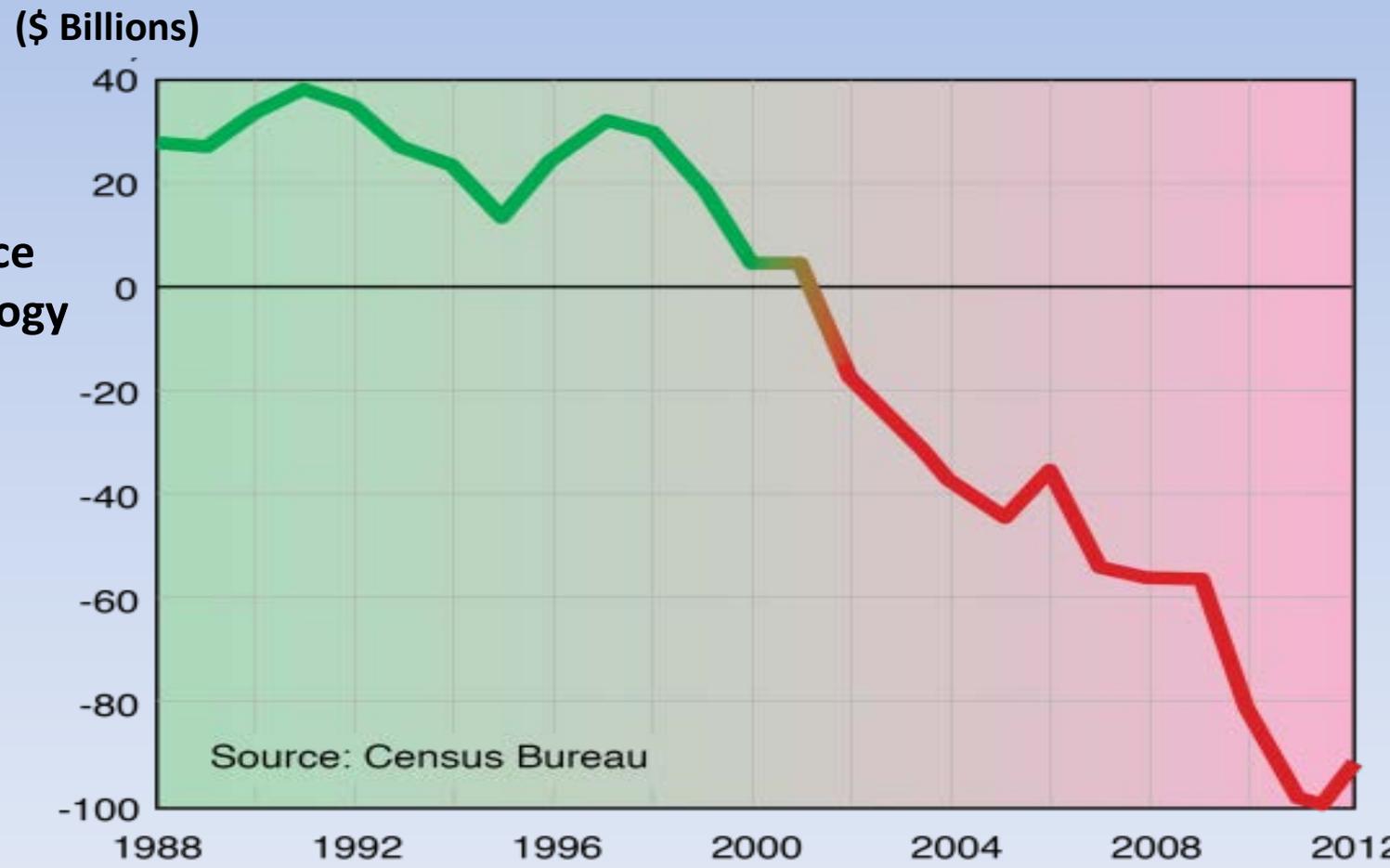


BACKGROUND

U.S. Trade Balance of Advanced Technology

11% of U.S. GDP 12 million U.S. jobs • ~ half of U.S. Exports

**U.S. Trade Balance
Advanced Technology
Manufacturing
Products**



AMNPO

Advanced Manufacturing National Program Office

A White House chartered Interagency Team, hosted by NIST

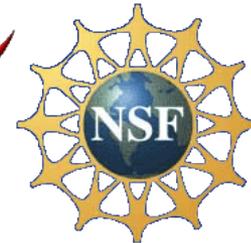
Two key AMNPO initiatives are

- NNMI – National Network for Manufacturing Innovation
- AMP – Advanced Manufacturing Partnership

Interagency Advanced Manufacturing National Program Office (AMNPO)



Executive Office of the President



Advanced Manufacturing Partnership
(AMP / PCAST)

Advanced Manufacturing National Program Office
(housed at DOC - NIST)

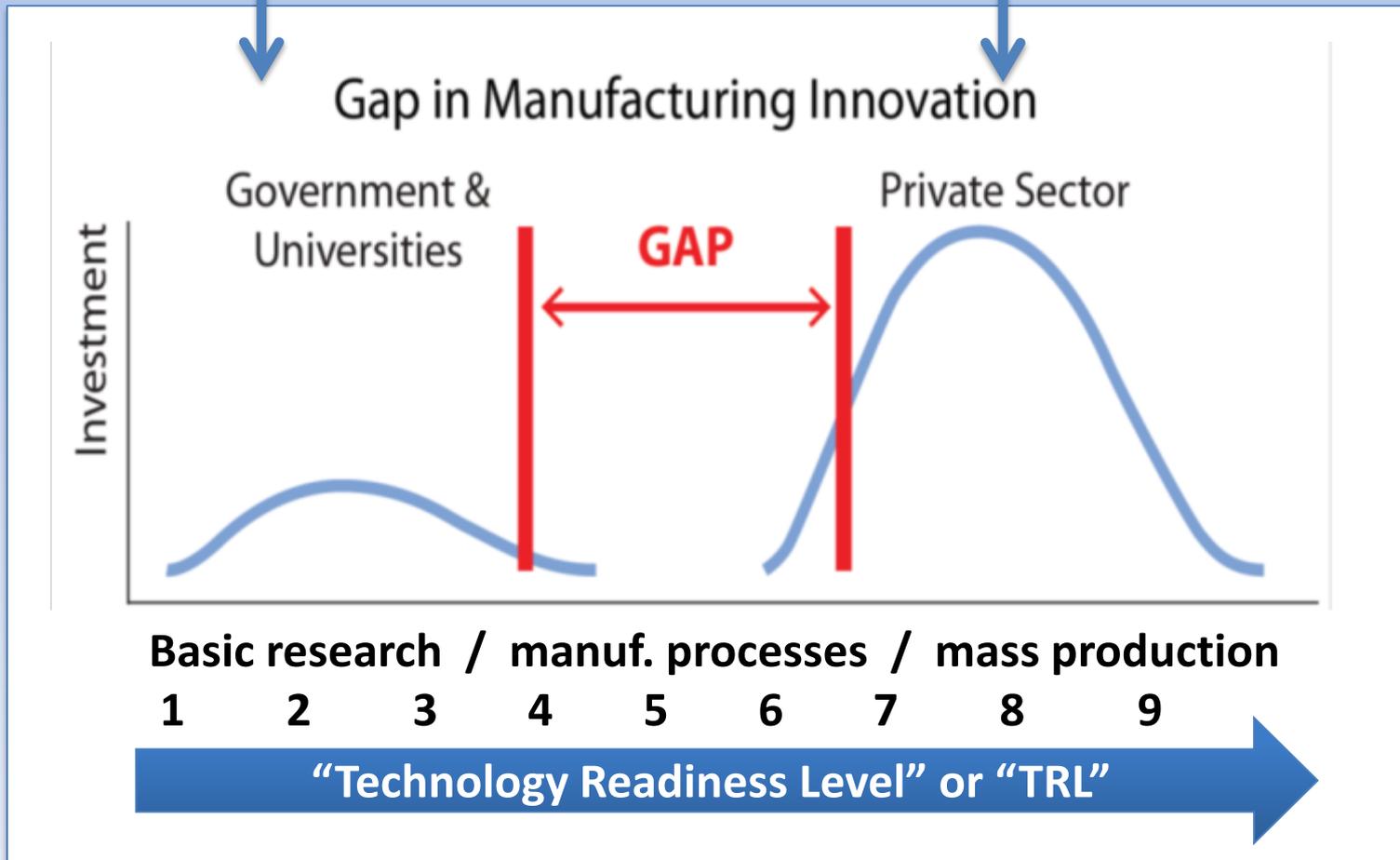
NNMI

National Network for Manufacturing Innovation

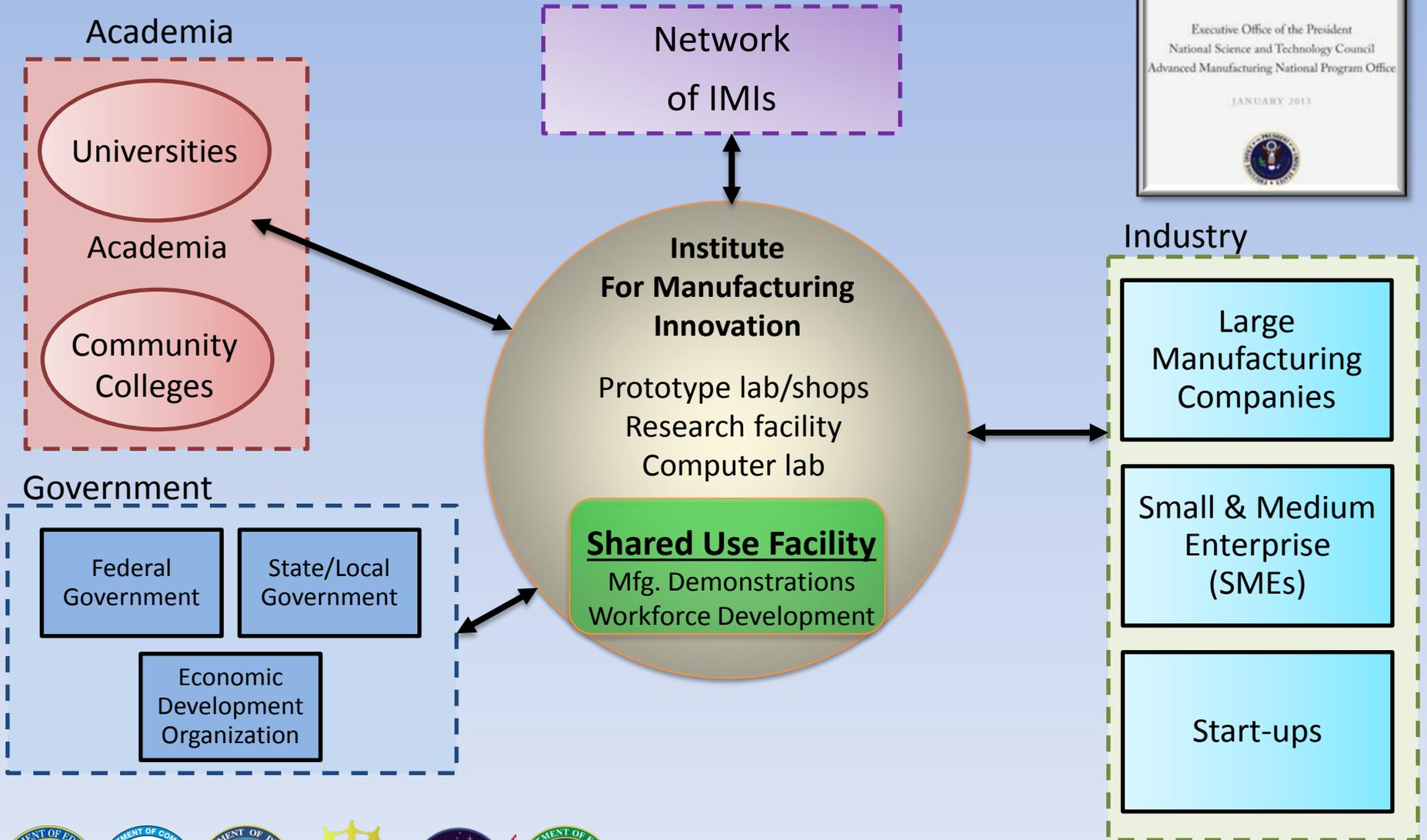
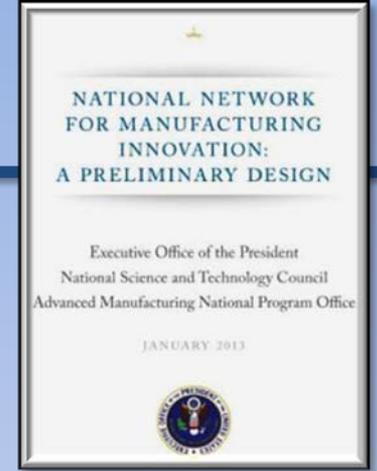
The Missing Middle, or the “Valley of Death”

US is envy of the world in invention and innovation

Private sector adept at commercialization



Institute Design



2013 State of the Union Announcement

National Network for Manufacturing Innovation

Our first priority is making America a magnet for new jobs and manufacturing.

And I ask this Congress to help create a network of fifteen of these hubs and guarantee that the next revolution in manufacturing is Made in America.



In the interim:

- DOE, DOD → Three institutes, awarded in early 2014
- \$200 M federal investment over five years

President Obama

State of the Union Address, February 13, 2013

NNMI Vision – 45 institutes



AP Photo/Susan Walsh

“In my State of the Union Address, I also asked Congress to build on a successful pilot program and create 15 manufacturing innovation institutes that connect businesses, universities, and federal agencies to turn communities left behind by global competition into global centers of high-tech jobs.

“Today, I’m asking Congress to build on the bipartisan support for this idea and triple that number to 45 – creating a network of these hubs and guaranteeing that the next revolution in manufacturing is Made in America.”

July 30, 2013

With Congressional Legislation

- Open competition on **ANY** topic proposed by Industry and Academia
- Selection of topics made on merit
 - let best proposals of greatest impact to US industry move ahead
 - Institutes by Administrative Action limited to topics Federal agencies need
- **Revitalize American Manufacturing & Innovation Act of 2013**

NNMI Bipartisan/Bicameral Legislation

Revitalize American Manufacturing & Innovation Act of 2013

Lead Sponsors



Sen. Sherrod Brown
D Ohio



Sen. Roy Blunt
R Missouri



Rep. Tom Reed
R NY-23



Rep. Joe Kennedy
D MA-4

Senate Commerce Committee Hearing Nov. 13, 2013

House Science Committee, Subcommittee on Research & Technology Hearing, Dec. 12 2013

AMP

Advanced Manufacturing Partnership

PCAST Body, reports to the President, Staffed by AMNPO

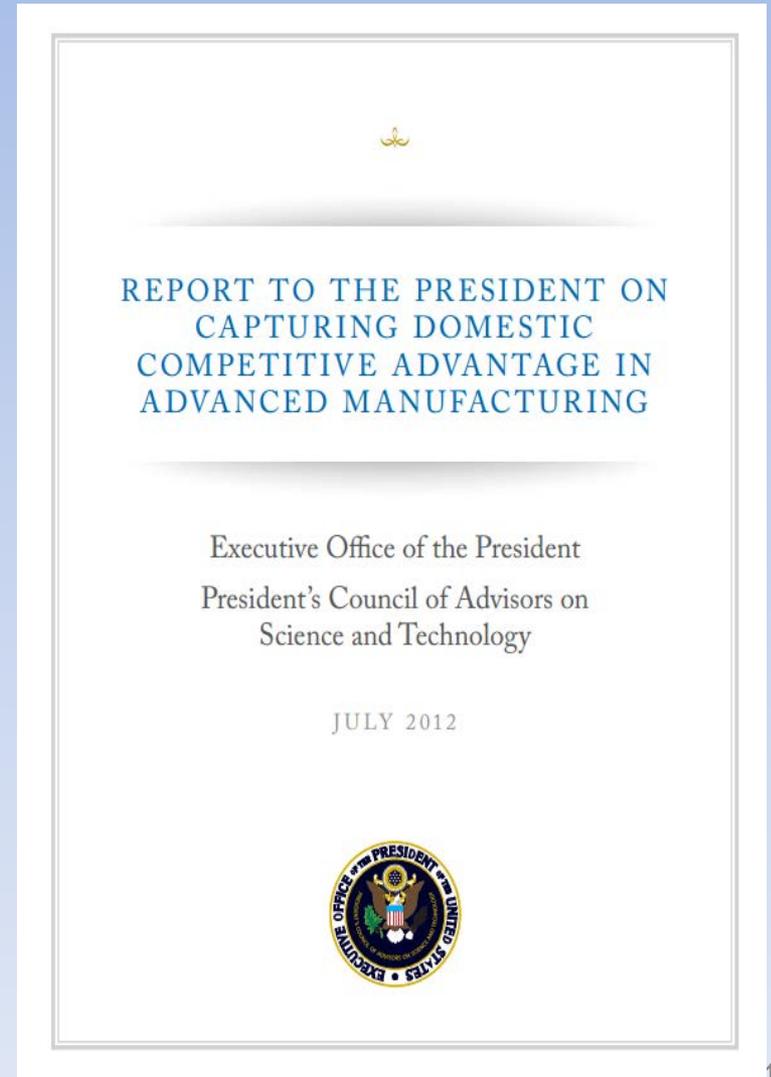
AMP Mission and Results

AMP Mission:

- Encourage approaches that sustain and grow U.S. leadership in advanced manufacturing, making the U.S. a magnet for jobs and investment; fostering broad, long-term collaboration among industry, academia, and government partners to drive advances in U.S. innovation and workforce capabilities.

Inaugural AMP achievements:

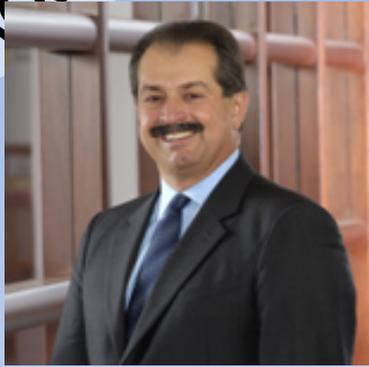
- Issued 16 recommendations across:
 - Enabling innovation
 - Securing the talent pipeline
 - Improving the business climate
- Spurred critical national initiatives, including the National Network for Manufacturing Innovation (NNMI)



BACKGROUND

President's Council of Advisors on Science and Technology

Advanced Manufacturing Partnership



AMP Co-chairs

Andrew Liveris
CEO, Dow Chemical

Susan Hockfield
President, MIT



PCAST / AMP report released July 17, 2012 on whitehouse.gov

- 16 Recommendations in three areas: innovation, talent, and policy

Two early actions announced by Administration:

- 1) Coordinated “whole of government” effort via **Advanced Manufacturing National Program Office**
- 2) Pursue the “missing middle” via **manufacturing innovation hubs**

Launch of AMP 2.0

Executive Office of the President
President's Council of Advisors on Science and Technology

STATEMENT OF WORK
ADVANCED MANUFACTURING PARTNERSHIP
STEERING COMMITTEE

SEPTEMBER 2013



- AMP 2.0 kickoff Sept 30, 2013
 - First face-to-face at White House – Nov 12 2013
 - Short “**letter-reports**” on implementation topics
 - **Regional engagement and outreach sessions** to source input and highlight
 - **Implementation** on national initiatives
- AMP Coordinating Group (DOW, MIT, WHO, AMNPO)
- **Five Working Teams established**

AMP 2.0 Steering Committee

Wesley Bush
CEO and President

NORTHROP GRUMMAN

Mary Sue Coleman
President



David Cote
Chairman and CEO

Honeywell

Nicholas Dirks
Chancellor



Kenneth Ender
President



Steering Committee Co-Chairs

Rafael Reif
President



Andrew Liveris
President, Chairman & CEO



Leo Gerard
International President



Hon. Shirley Ann Jackson
President



Eric Kelly
President and CEO



Klaus Kleinfeld
Chairman and CEO



Ajit Manocha
CEO



Douglas Oberhelman
Chairman and CEO



Annette Parker
President



G.P. "Bud" Peterson
President



*19 Leaders from
Industry, Academia
and Labor*

Luis Proenza
President



Eric Spiegel
President and CEO

SIEMENS

Mike Splinter
Executive Chairman of the Board



Christie Wong Barrett
CEO



AMP 2.0 Work Teams Focus

Team 1: Technologies



Launching public-private initiatives to advance transformative manufacturing technologies:

- Deploy small expert working teams against two to four of the technologies identified in the initial AMP SC report, with the goal of assessing actions and developing technology strategies for sustained U.S. leadership.

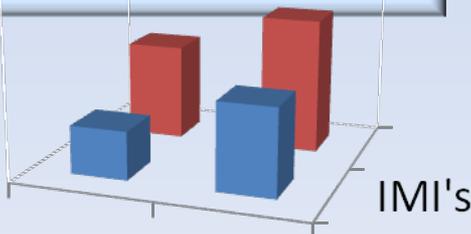
Team 2: Workforce



Scaling best-in-class demand-driven workforce solutions to develop technical skills:

- Identify the characteristics of successful partnerships and mechanisms to rapidly scale demand-driven workforce solutions in areas of critical skills need; and identify private sector and federal resources to leverage behind these solutions.

Team 3: NNMI

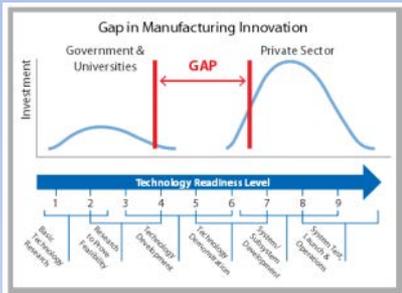


Supporting implementation of the National Network for Manufacturing Innovation (NNMI):

- Provide input on the implementation of the NNMI to ensure that the Institutes and the Network are appropriately geared towards industry needs and that core implementation issues are addressed.

AMP 2.0 Work Teams Focus (continued)

Team 4: Scale-up Policy



Addressing core advanced manufacturing policy questions related to new technologies:

- Core manufacturing questions have been identified that currently lack clear solutions. Investigate potential solutions to one to two of these central questions, for example:
 - Solutions to unique barriers that inhibit young firms from scaling new technologies in the U.S.
 - Challenges to rapidly deploying new technologies and processes across the U.S. supply chain

Team 5: Manufacturing Image



Driving excitement and engagement from the science and engineering community:

- Spearhead initiatives to implement the AMP 1.0 Manufacturing Image recommendations, which could include hosting a possible national advanced manufacturing innovation summit and public awareness campaign.

Advanced Manufacturing National Program Office

Thank you

www.manufacturing.gov