Congressional Authorization
of the
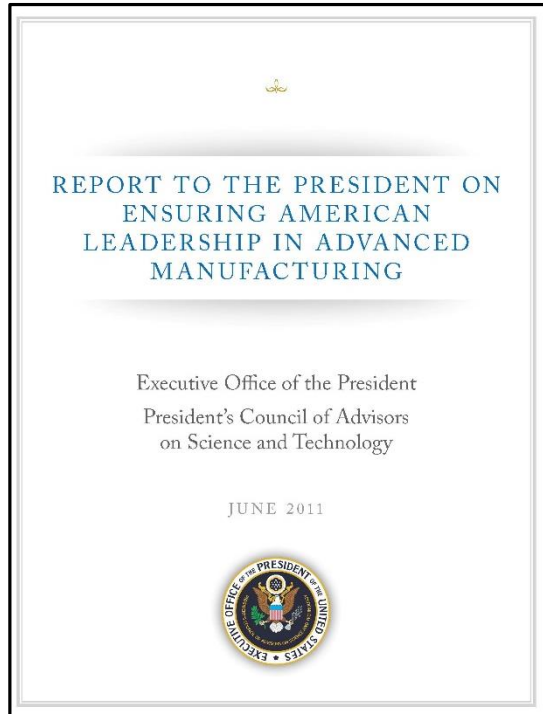# National Network for Manufacturing Innovation

Requirements & Implications for NIST

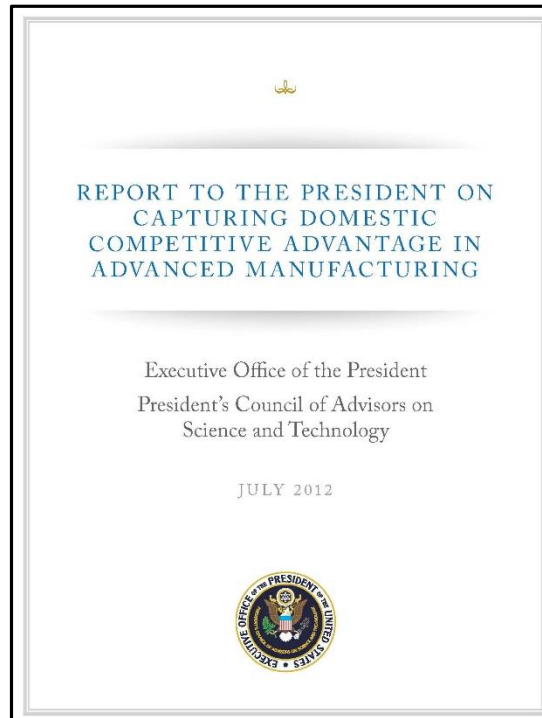*Visiting Committee on Advanced Technology*
February 4, 2015

Mike Molnar
Advanced Manufacturing National Program Office
National Institute of Standards and Technology

PCAST 2011
Recommends Advanced Manufacturing Initiative as national innovation policy

PCAST 2012
Recommends Manufacturing Innovation Institutes to address key market failure

PCAST 2014
Recommends strong, collaborative network of Manufacturing Innovation Institutes

The President's Vision – 45 Institutes

AP Photo/Susan Walsh

"In my State of the Union Address, I 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

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NNMI Authorized: Revitalize American Manufacturing & Innovation Act

118 bipartisan RAMI Bill Sponsors

Rep. Tom Reed
R NY-23

Rep. Joe Kennedy
D MA-4

Sen. Sherrod Brown
D Ohio

Sen. Roy Blunt
R Missouri

September 15, 2014 – Passed House
100 Cosponsors (51D, 49R)

December 11, 2014 – Passed Senate with 2015 Appropriations
18 Cosponsors (10D, 7R, 1I)

December 16, 2014 – Signed By President Obama
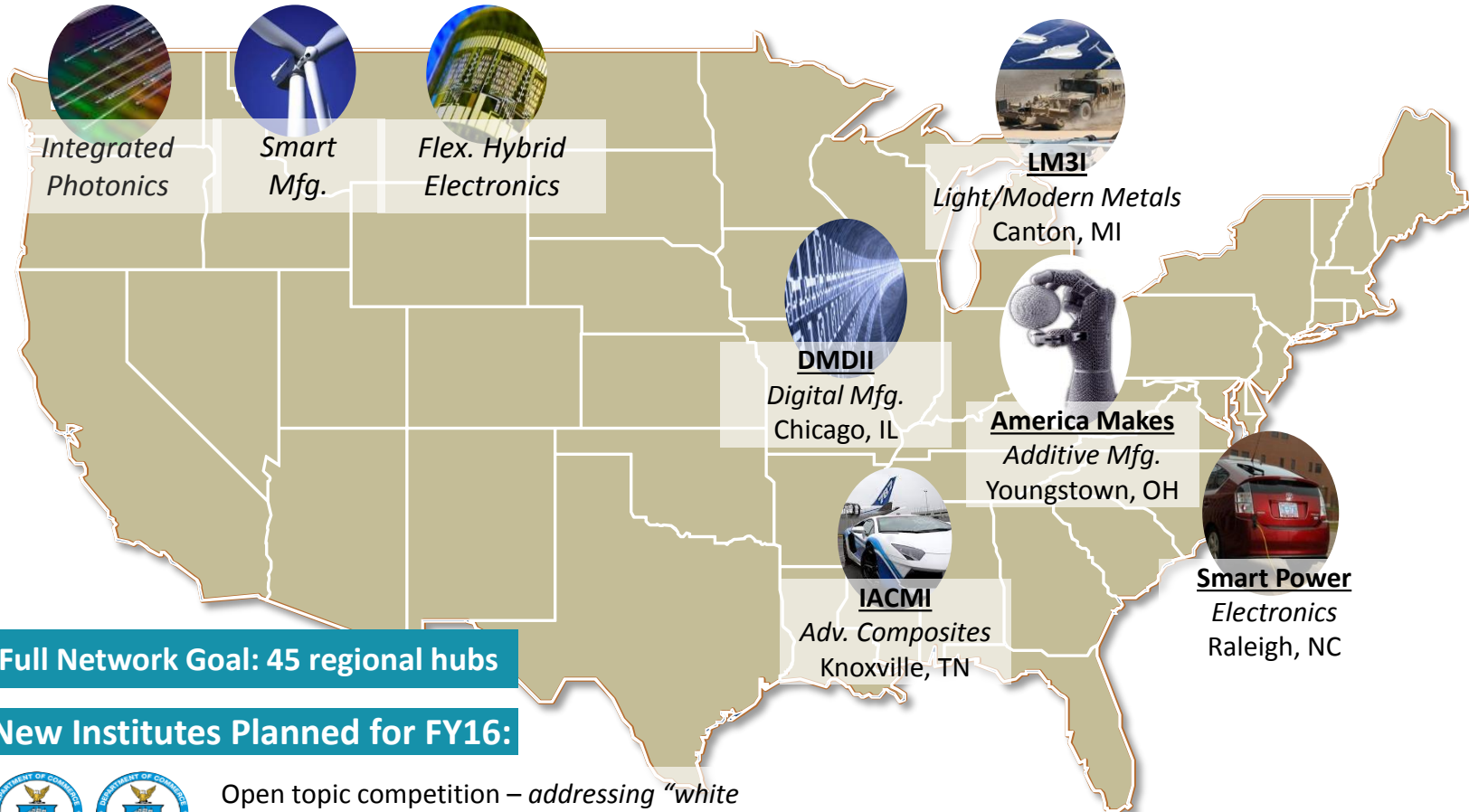
Bipartisan Momentum Supporting NNMI Passage

Call to Action: RAMI calls upon the U.S. Secretary of Commerce and NIST to **establish**:

1. **The "Network for Manufacturing Innovation Program"** *(Network function)* - to convene and support a network of Institutes

2. **New "Centers for Manufacturing Innovation"** *(Institutes)* - using an <u>open topic</u>, open competition process

3. **The National Program Office** at NIST - to oversee and carry out the program *(coordination, network support, and reporting)*

1) Establish/Convene the Network:
Current Institute Status

FORTHCOMING FY15

Integrated Photonics

Smart Mfg.

Flex. Hybrid Electronics

LM3I
Light/Modern Metals
Canton, MI

DMDII
Digital Mfg.
Chicago, IL

America Makes
Additive Mfg.
Youngstown, OH

IACMI
Adv. Composites
Knoxville, TN

Smart Power
Electronics
Raleigh, NC

Full Network Goal: 45 regional hubs
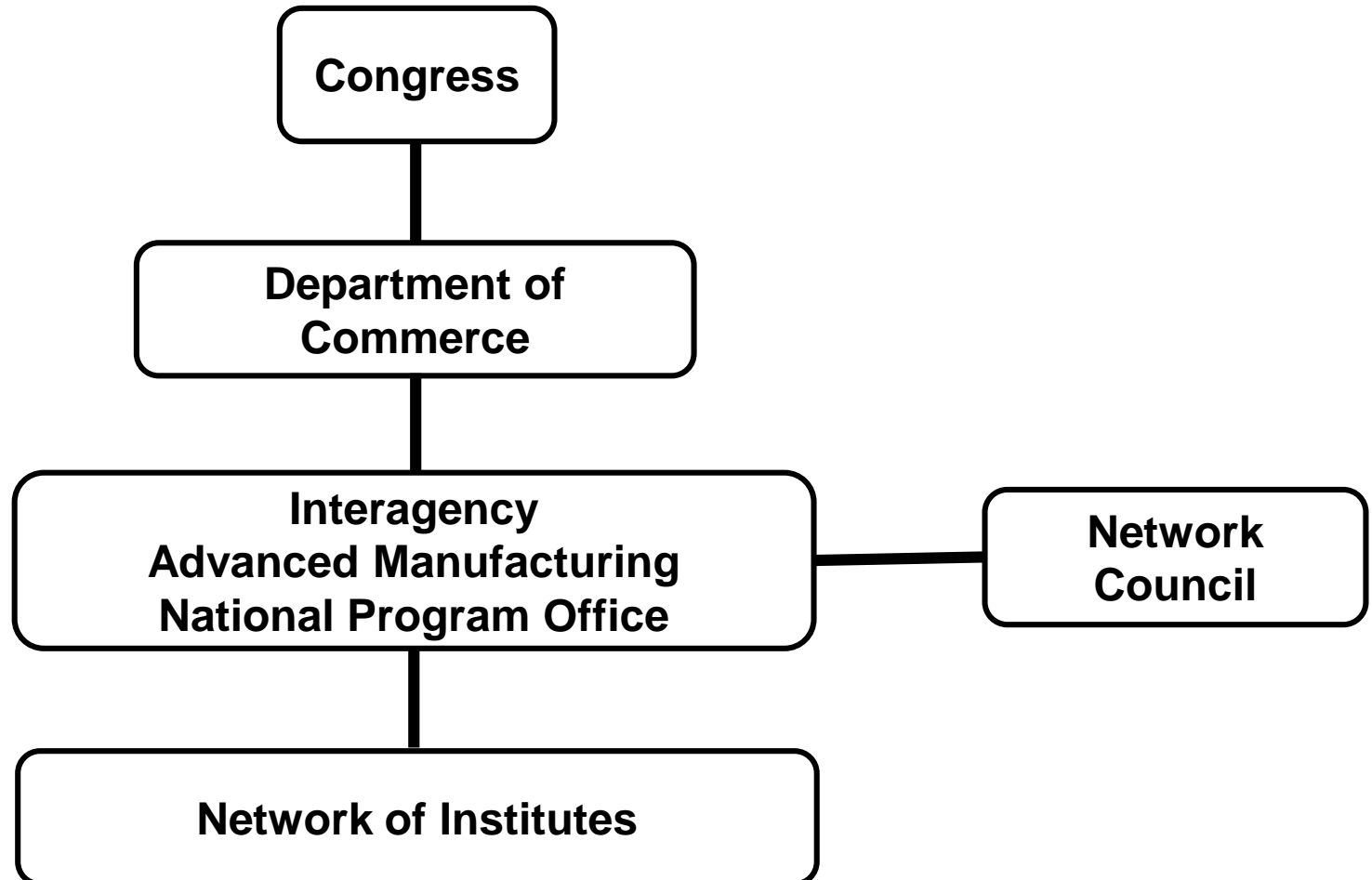
New Institutes Planned for FY16:

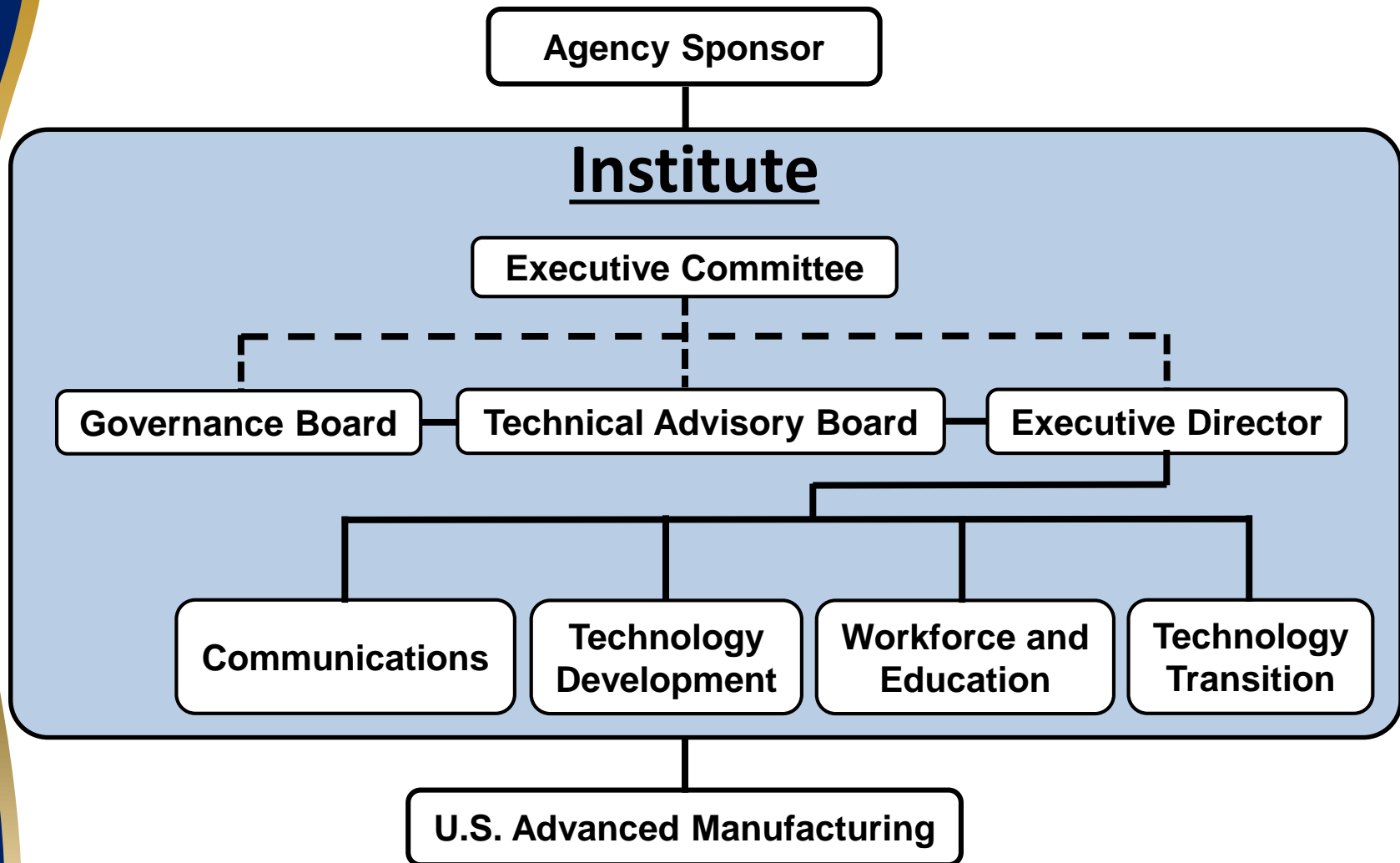Open topic competition – *addressing "white space" between mission agency topics*

Selected topic competitions supporting Agency mission – *using agency authorities and budgets*
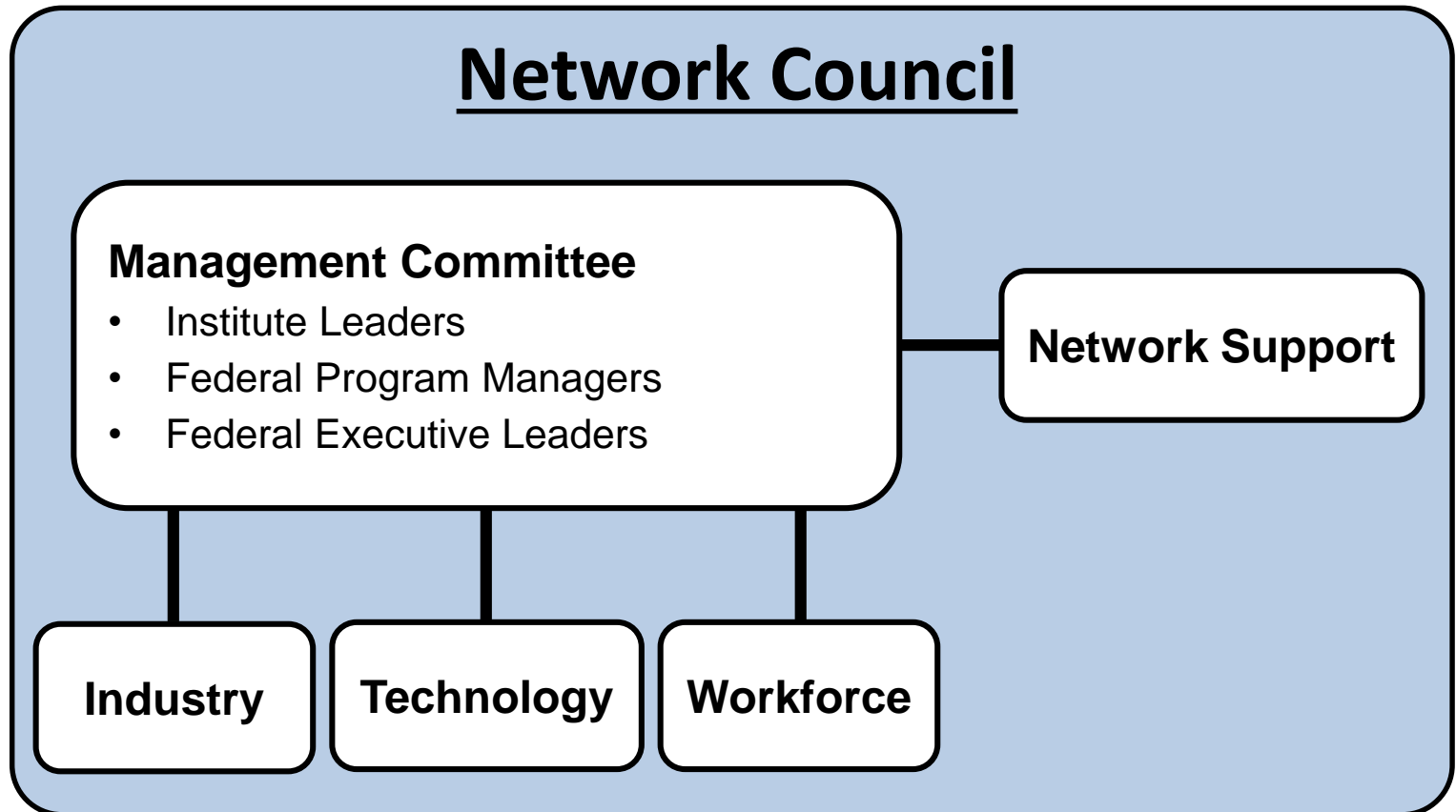
Network Structure

Network Parallels/Complements the **Typical Institute Structure**

2) Initiate Open Competitions: DRAFT *Dual-Stage "Kick Start" Strategy*

Stage I: Kick Start Applications FY15

Stage II: Institute Applications FY 16

President's FY 16 budget: $140 M for two DOC Institutes

All Potential Topics *(135 Identified By Public)*

Open Competition

- **Open to any group, any topic**
- **Evaluations with external experts**
- **$150-$250k Awards (>1:1 match)**

Stage I Awards (15 to 20)

Open Competition

- **Open to all Stage I awardees**
- **Evaluations with external experts**
- **$70M-$120M per Award (>1:1 match)**

New Institute

New Institute

FFO 1 to stimulate and ready the marketplace

FFO 2 to reward & select the best performers

Use this process for FY17+ (29 institutes proposed)

Dual-Stage "Kick Start" **Objectives:**
Industry Commitment/Ownership

— Catalyze robust industry-led consortia commitment and progress to establish an *Institute*, with greatest private-sector co-investment and industry owners.

— Maximize potential for successful, self-sustaining *Institutes* involving broad and diverse stakeholders.

— Establish *Institute* awards as early as possible.

— Learning from DoD and DoE, this process allows *Institute* Awardees to "hit the ground running".

Dual-Stage "Kick Start" **Opportunities:**
Open-Topic, Quality, Timely Competitions

— A two stage competition that uses full recommendation of RAMI to "… assist the organization in planning, establishing, or supporting a center of manufacturing innovation."

— Leverage "funneling effect" to allow proposals by industry consortia on any topic, with lowest stakeholder burden and highest quality.

— Quickly launch a FY 2015, "Stage I" competition that accelerates final Institute awards by 12 months.

Thank you

Questions?

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301-975-2830

The Secretary Shall…

1. **Financial:** "…award financial assistance to a person or group of persons to assist the organization in planning, establishing, or supporting a center for manufacturing innovation."

2. **Open Process:** "…ensure an open process that will allow for the consideration of all applications relevant to advanced manufacturing regardless of technology area."

3. **Outside Expertise:** "…use a competitive, merit review process that includes peer review by a diverse group of individuals with relevant expertise from both the private and public sectors."

4. **Transparency & Accountability:** "…implement a conflict of interest policy that ensures public transparency and accountability, and requires full disclosure of any real or potential conflicts of interest on the parts of individuals that participate in the merit selection process."

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