

The President's Manufacturing Initiative

Roadmap Workshop on Manufacturing R&D for the Hydrogen Economy

*Washington, D.C.
July 13, 2005*

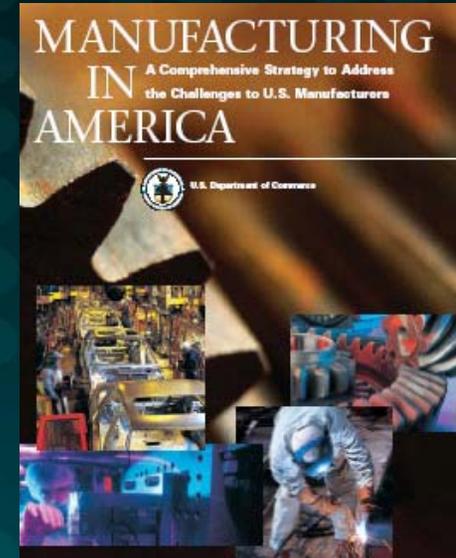
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National Science and Technology Council
and

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U.S. Department of Commerce

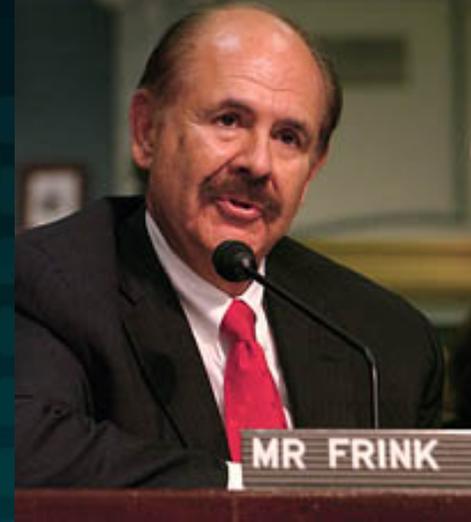
Background

- **March 2003:** Commerce Secretary Evans announced President's Manufacturing Initiative during National Manufacturing Week speech.
 - Ordered comprehensive review of issues influencing long-term competitiveness of U.S. manufacturing.
- Manufacturing Initiative contains 63 recommendations resulting from 23 public roundtables held by Commerce Department, April-September 2003.
 - Summarized in *Manufacturing in America*, released January 2004.



Manufacturing Initiative Focus

- The Manufacturing Initiative sets out to:
 - reduce cost and complexity of the tax code
 - make tax relief permanent
 - lower health care, regulatory, energy and legal costs
 - implement global supply chain initiative
 - promote global use of U.S. technical standards
 - modernize export control laws
 - consolidate export promotion functions.
- Creates new Asst. Secretary for Manufacturing and Services.
 - The Honorable Albert A. Frink confirmed in 2004.
 - Chief advocate for the U.S. manufacturing sector within the Federal government, responsible for advocating, coordinating, and implementing policies to help U.S. manufacturers compete globally



Advisory and Coordinating Bodies Created by Initiative

- **The Manufacturing Council**
 - National council of industrial leaders that advises the Government on challenges facing U.S. manufacturers.
 - Chair: Don Wainwright, Wainwright Industries
 - Reports to Secretary of Commerce through Asst. Secretary Frink
- **National Science and Technology Council (NSTC) Interagency Working Group (IWG) on Manufacturing Research and Development (R&D)**
 - Focal point for manufacturing technology discussions among federal agencies

IWG Functions



EXECUTIVE OFFICE OF THE PRESIDENT
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL
WASHINGTON, D.C. 20502

CHARTER
of the
INTERAGENCY WORKING GROUP
on
MANUFACTURING RESEARCH AND DEVELOPMENT

COMMITTEE ON TECHNOLOGY
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

Forum within NSTC to:

- Propose policy recommendations for manufacturing R&D.
- Facilitate interagency program planning and budgeting, collaboration, coordination, and leverage.
- Review agency priorities and technical issues for Federally-funded manufacturing R&D.
- Promote communications among the government, private sector, and academia on R&D requirements and programs.
- Report to Committee on Technology and OSTP.

Per DOC Manufacturing Report:

- Interfaces with President's Manufacturing Council and Secretary of Commerce, coordinating with Assistant Secretary of Commerce for Manufacturing and Services

IWG Participating Agencies

- Department of Agriculture
- Department of Commerce / National Institute of Standards and Technology*
- Department of Defense
- Department of Education
- Department of Energy
- Department of Health and Human Services / National Institutes of Health
- Department of Homeland Security
- Department of Labor
- Department of Transportation
- National Aeronautics and Space Administration
- National Science Foundation
- Small Business Administration
- White House Office of Management and Budget
- White House Office of Science and Technology Policy

Focus on broad coverage of manufacturing technology issues: technology development/transfer, measurements and standards, workforce training, regulatory concerns, etc.

IWG Technical Priorities

- Three technical topics selected based on future importance to Nation, member agency missions, value of interagency synergies
- Topics form the basis for a coordinated, multi-agency focus:
 - **Intelligent and Integrated Manufacturing Systems**
 - **Manufacturing for the Hydrogen Economy**
 - **Nanomanufacturing**



Model-Based control of machining processes for munitions mfg. (images from NIST and U.S. Army Picatinny Arsenal)



Energy Secretary Abraham and a fuel cell-powered vehicle (photo from U.S. DOE)



Self-assembly of gold-polymer nanorods results in a curved structure. (image from NSF and the Northwestern University)

IWG Technical Priorities

- **Goals**

- To lead development and promote implementation of advanced manufacturing technologies for the benefit of the U.S. economy and the U.S. manufacturing sector in particular.
- To improve planning, coordination, and collaboration among Federal agencies in these key technology areas
- To increase the effectiveness and visibility of the overall Federal manufacturing effort.

- **Held Public Forum in Washington, DC, in March 2005 to receive feedback on priorities**

IWG Priority: Manufacturing for the Hydrogen Economy

- IWG task team developed white paper in 2005 to:
 - scope the area
 - summarize key needs and challenges
 - review current federal efforts
 - begin to ID gaps
 - define potential benefits of addressing the area
 - recommend next steps for the federal role.
- Agencies self-selected representation on task team:
 - DOE (lead agency), DOC/NIST, DOD, DOT, NASA, NSF, OMB, OSTP, USDA

Why Are We Here?

- This Workshop extends the opportunity to gather info and ideas from the Hydrogen Technology community
- Results of this Workshop will significantly influence the IWG's future focus in this area, including future interagency efforts