National Nanotechnology Advisory Panel: Update on NNAP Nanotechnology Report

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NNAP responsibilities under the 21st Century Nanotechnology R&D Act

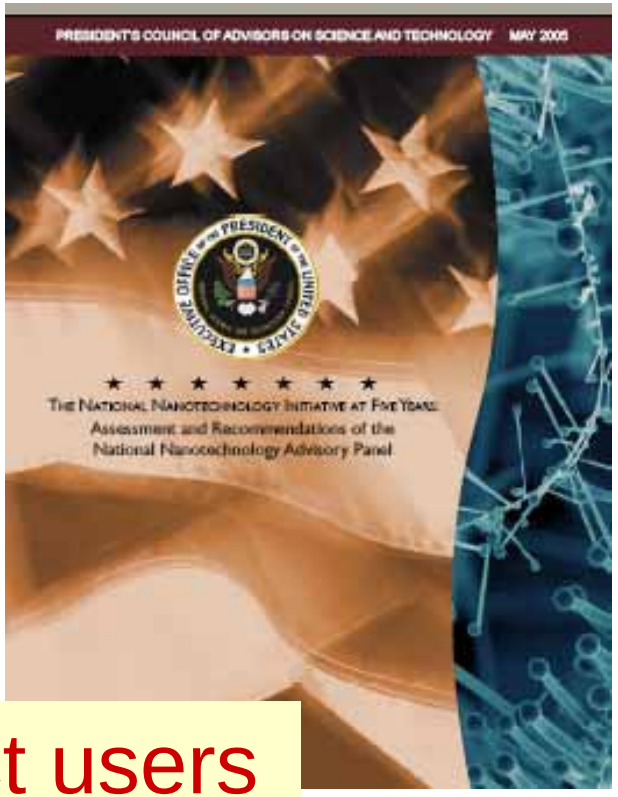
Assess:

- Trends and developments in nanotechnology.
- Progress in implementing the program.
- Need to revise the program.
- Balance among the component areas of the program, including funding levels.
- Whether program component areas, priorities, and technical goals developed by the NSET are helping to maintain US leadership.
- Management, coordination, implementation, and activities of the program.
- Whether social, ethical, legal, environmental, and workforce concerns are adequately addressed by the program.

Report and make recommendations every 2 years

PCAST/NNAP report (May 2005)

- How are we doing?
- Is the money well spent and the program well managed?
- Are we addressing societal concerns and potential risks?
- How can we do better?



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Related Congressional activities

- **March 23:** Briefed Congressional staff on draft PCAST/NNAP nano report
- **May 18:** House Science Committee Research Subcommittee hearing on nano-technology transfer (see charter)
- **June 29:** House Science Committee Research Subcommittee hearing on U.S. competitiveness (see charter & Floyd's testimony)

PCAST/NNAP Conclusions

- US is leading, but is being challenged
  - Govt (Federal + State) investment
  - Private sector investment
  - Number of publications (esp. high-impact)
  - Number of patents

PCAST/NNAP Conclusions

- US is leading, but is being challenged
- NNI generally is on the right track
  - Balance of funding is appropriate
  - Interagency management is sound

PCAST/NNAP Conclusions

- US is leading, but is being challenged
- NNI is on the right track
- Primary Federal role in nanotechnology is to fund basic research and to educate/train scientists and engineers

PCAST/NNAP Recommendations

- Identify research targets
- Increase Federal-State interaction
- Expand liaison activities with industry
- Use SBIR/STTR programs
- Coordinate with agencies responsible for protecting health and environment
- Build public awareness and trust

PCAST/NNAP Recommendations

- ✓ Identify research targets

  Interagency subcommittee is developing
- Increase Federal-State interaction
- Expand liaison activities with industry
- Use SBIR/STTR programs
- Coordinate with agencies responsible for protecting health and environment
- Build public awareness and trust

PCAST/NNAP Recommendations

- ✓ Identify research targets
- ✓ Increase Federal-State interaction

  2nd Regional, State, and Local Nanotech Initiatives Workshop—Oct 31 in Chicago, preceding NanoCommerce/SEMI NanoForum

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PCAST/NNAP Recommendations

- ✓ Identify research targets
- ✓ Increase Federal-State interaction
- ✓ Expand liaison activities with industry

  Activities are underway or under development with interested industry sectors

- Use SBIR/STTR programs
- Coordinate with agencies responsible for protecting health and environment
- Build public awareness and trust

PCAST/NNAP Recommendations

- ✓ Identify research targets
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Taking place on an agency-by-agency basis

- Coordinate with agencies responsible for protecting health and environment
- Build public awareness and trust

PCAST/NNAP Recommendations

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  Taking place via Nanotechnology Environmental and Health Implications Working Group

- Build public awareness and trust

PCAST/NNAP Recommendations

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Nanotechnology Public Engagement Group is developing appropriate & effective mechanisms

NNI Update- New interagency WG

- Formed informal Global Issues in Nanotechnology Working Group
  - Led by State Dept
  - Engaging additional entities with international interests (e.g., USTR, Dept of Commerce Bureau of Industry & Security)
  - Provides input on & coordinates U.S. international activities on nano; monitors international programs; identifies opportunities for international coordination & communication
  - In communication with U.S. delegates/reps to OECD, APEC, Wassenaar Arrangement, PECSEA

NNI Update- Standards

- NNI supports the various nanotechnology standards activities underway
  - Clayton Teague (Director, National Nanotechnology Coordination Office) chairs the ANSI-accredited ISO Technical Advisory Group
  - Agencies also participating in SDO-led activities (ASTM, IEEE, etc.)

Future PCAST nano topics

- Environmental, health, and safety—national & international coordination
- Ethical & societal implications
- Commercialization and technology transfer
- Nanotechnology R&D impact on national needs—national security and economic growth
- International benchmarking
- Tracking nano-technology transfer