

National Nanotechnology Coordination Office Announces 2016 NNI Strategic Plan

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On November 1, 2016, the **National Nanotechnology Coordination Office (NNCO)** announced the release of the 2016 [National Nanotechnology Initiative Strategic Plan](#). The 21st Century Nanotechnology Research and Development Act of 2003 requires **National Nanotechnology Initiative (NNI)** agencies to develop an updated Strategic Plan every three years. The 2016 Strategic Plan represents a consensus among the NNI agencies on the high-level goals and priorities of the NNI and on specific objectives to be pursued over at least the next three years. The Strategic Plan provides the framework under which individual agencies conduct their own mission-specific nanotechnology programs, coordinate these activities with those of other NNI agencies, and collaborate. The Strategic Plan states that the focus of the NNI has broadened from investments in foundational research in nanomaterials and nanotechnology-enabled devices to include activities directed at how they can be incorporated into nanotechnology-enabled systems. The 2016 Strategic Plan reflects this change and addresses how the NNI agencies will collaborate with each other and the broader nanotechnology community “to expand the ecosystem that supports fundamental discovery, fosters innovation, and promotes the transfer of nanotechnology discoveries from lab to market.” The Strategic Plan includes the following goals:

- *Goal 1: Advance a world-class nanotechnology research and development program.* NNI agencies will foster research that exploits the convergence of nanotechnology, biotechnology, information technology, and cognitive science to lead to the next scientific breakthroughs and address key societal challenges. NNI agencies will also promote the integration of modeling and simulation together with data analytics across the research and development spectrum to accelerate nanotechnology discovery. NNI agencies will continue to support a “diverse and robust portfolio” of Nanotechnology Signature Initiatives intended to provide additional focus and collaboration to accelerate technology development in areas of strategic national interest.
- *Goal 2: Foster the transfer of new technologies into products for commercial and public benefit.* The Strategic Plan notes that funding for Small Business Innovation Research and Small Business Technology Transfer has been instrumental in the transfer of nanotechnology products from lab to market. NNI agencies will explore additional mechanisms to foster commercialization, innovation, and entrepreneurship. NNI agencies will continue to support

activities such as the National Science Foundation Innovation Corps, the National Institutes of Health Translation of Nanotechnology in Cancer Consortium, and the Air Force Research Laboratory-supported Nano-Bio Manufacturing Consortium to identify best practices that can be incorporated into new approaches to maximize the commercial benefit of NNI investments. NNI agencies will continue to engage with the international community in areas such as intellectual property, standards development, and the potential environmental, health, and safety implications of engineered nanomaterials and nanotechnology-enabled products. NNI agencies will also forge new partnerships to advance nanotechnology commercialization and other NNI goals.

- *Goal 3: Develop and sustain educational resources, a skilled workforce, and a dynamic infrastructure and toolset to advance nanotechnology.* NNI agencies will continue to promote the development of new experimental and computational tools to support advances in nanotechnology. The Strategic Plan states that NNI agencies will pursue an “evergreen” approach to physical infrastructure, continually supporting “workhorse” tools, in addition to providing support for the development of new tools and techniques and for workforce training to maintain these facilities.
- *Goal 4: Support responsible development of nanotechnology.* NNI agencies will continue to support collaborative fundamental research to refine the understanding of the environmental, health, and safety implications of engineered nanomaterials and nanotechnology-enabled products, as discussed in the 2011 NNI Environmental, Health, and Safety Research Strategy. According to the Strategic Report, the ethical, legal, and societal implications of nanotechnology continue to be important issues for the NNI. NNI agencies will pursue opportunities to collaborate with the nanotechnology community to share information and best practices. NNI agencies and NNCO will continue to collaborate internationally, such as the U.S.-European Union Communities of Research, to share information and coordinate activities, and look for new ways to promote global collaboration on the responsible development of nanotechnology.