

2005 JCOTS Nanotechnology Advisory Committee

Discussion Points for Possible Recommendations to JCOTS

This document summarizes various recommendations & ideas proposed by the citizen members of the Nanotechnology Advisory Committee for recommendation to JCOTS. This document can perhaps serve as a guide for discussion of concrete proposals at the September and October nanotechnology meetings.

Ideas & Recommendations Submitted by Advisory Committee Members:

- Direct state support (i.e. a budget item) for the FIRST [For Inspiration and Recognition of Science & Technology] Robotics Competition. Support could be provided through the Department of Education, SCHEV, CIT, or the Secretary of Technology] (B. Stolle).
- Create a Nanotechnology Training Center in the Commonwealth. Such an academy would allow technical staff at companies and students at universities to get quick training with hands-on experience (Huff).
- Formation of the Virginia Nanotechnology Users Network to enable collaboration between research, education, and commercial entities. (Friedersdorf).
- Better transfer of academic research advances through to commercialization. Pennsylvania may serve as example. See <http://www.benfranklin.org> (Friedersdorf).
- K12 educational initiatives focused to a general student audience. This might be accomplished by the funding curricula that would be integrated into existing courses or presented as stand-alone courses. An example might be the SkillTek program at Norfolk State University, which develops simulation-based courses through their computer science department. However, this program is focused on at-risk students; this recommendation would be to bring a program to the student mass (Mastaglio).
- Convene a stakeholder meeting with the Virginia Department of Education Superintendent and science officials, higher education

- nanotechnology faculty, and industry representatives to discuss K12 science content (Cooley).
- Fund outreach efforts to K12 school districts, perhaps with teams of university faculty meeting with K12 curriculum directors and science teachers (Cooley).
 - Provide graduate student assistantship funds to support their work with teams of faculty researchers and K12 science teachers to integrate nanotechnology in developmentally-appropriate ways (Cooley).
 - Exposure each year of children in grades 4-6 of a science activity, such as a field trip, science fair, etc (Danziger). A related suggestion would be to promote in-school high school science fairs (Nelson).
 - Have engineering schools at state universities give the same credit for high school Advanced Placement classes that is given by the high school when evaluating the students for admission. For example, a high school may had half a percentage point to a student's grade if the class is AP; an engineering school strips out this increase in considering the student's application, which causes their GPA to fall (Nelson).
 - Adopt some of the approaches used at the Thomas Jefferson High School in Northern Virginia (Smith).
 - Ensure that there is a trained workforce to keep pace with emerging and evolving technology sectors (Jaffan).
 - Develop proposals to stimulate business investment (Swenson).

During the 2004 Interim, the Advisory Committee touched on a few other issues that may warrant further discussion & development. These ideas included:

- Creating new tax incentives to attract industry
- Providing seed money to support the development of nanomanufacturing (much like the Commonwealth Technology Research Fund)
- Provide matching funds for Small Business Innovation Research (SBIR), a federal funding program administered by the Small Business Administration (note: Michigan has established such a program)
- Integrate CIT into the Virginia Economic Development Partnership
- Establish a state nanotechnology commission, similar to the Virginia Biotechnology Initiative