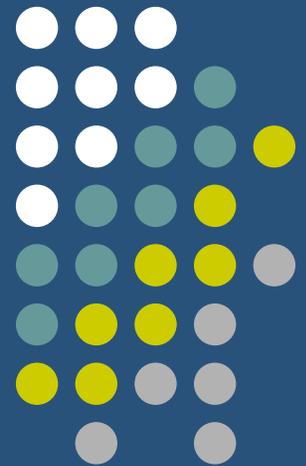


Virginia Joint Commission on Technology and Science

Advisory Committee Introduction and Overview





What is JCOTS?

- JCOTS is a permanent legislative commission, established by the General Assembly in 1997 to...

“...study all aspects of technology and science and endeavor to *stimulate, encourage, promote, and assist* in the development of technology and science in the Commonwealth and sound public policies related thereto...”

(§ 30-85 of the Code of Virginia)

JCOTS Membership



| | |
|-------------------------------|-------------------------------------|
| Delegate Joe T. May, Chair | Senator John C. Watkins, Vice Chair |
| | |
| Delegate Kenneth C. Alexander | Senator Janet D. Howell |
| Delegate John A. Cosgrove | Senator Stephen D. Newman |
| Delegate Sam A. Nixon, Jr. | Senator Kenneth W. Stolle |
| Delegate Kenneth R. Plum | Senator William C. Wampler, Jr. |
| Delegate Harry R. Purkey | |
| Delegate Thomas D. Rust | |

About JCOTS Advisory Committees



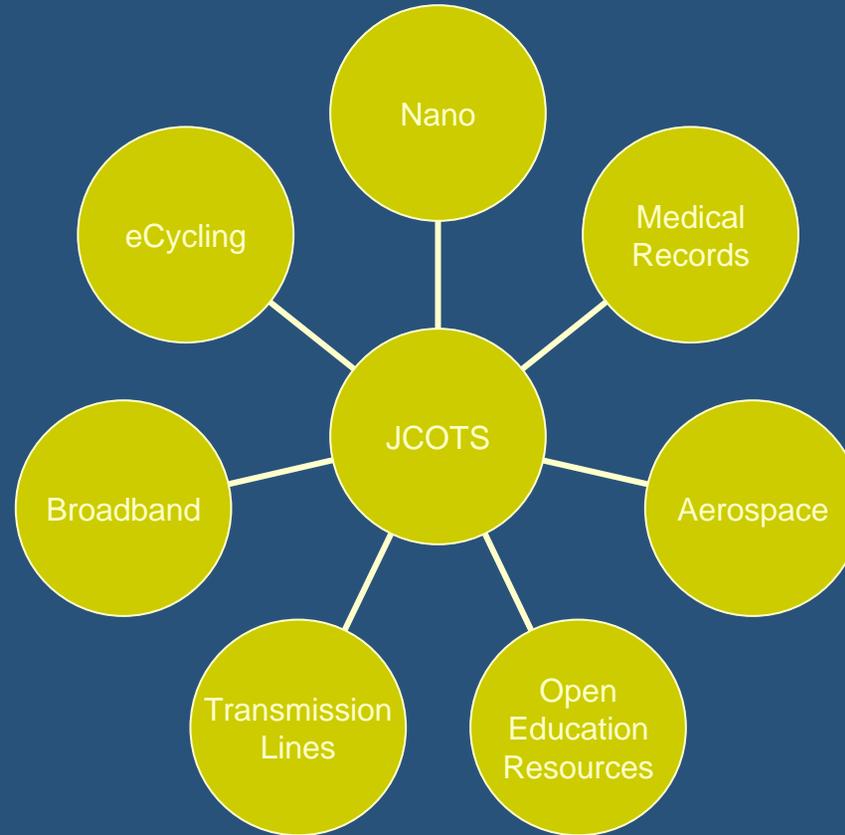
- Each year JCOTS forms new advisory committees to examine policies that will help the Commonwealth keep pace with emerging industries and advancements in technology.
- Advisory committees consist of private and government professionals in substantive areas of technology, policy, and law.
- Each advisory committee is chaired by a legislative member.

What is the Role of an Advisory Committee?



- Assist JCOTS members in understanding complex technologies and policy perspectives;
- Collaborate in the development of sound public policy in a variety of scientific and technology related fields;
- Develop, review and discuss technology related legislation for recommendation to & consideration by JCOTS; and
- Gather experts from across the Commonwealth to foster an open discussion of issues among industry and government leaders.

2007 JCOTS Advisory Committees



JCOTS Website



Information, reports, agendas, meeting materials, etc. can be found on the JCOTS website:

<http://jcots.state.va.us>

How does JCOTS Interact with the Advisory Committees?



1. Advisory committees meet throughout the Interim.
2. The advisory committees report their findings, recommendations, and legislative proposals to JCOTS.
3. JCOTS relies heavily on the work of the advisory committees in setting sound science and technology related policy in the Commonwealth, and in deciding whether or not to recommend legislation to the General Assembly.

Advisory Committee Housekeeping



- If you wish to receive reimbursement or expenses, a citizen member information sheet must be completed and returned to staff to keep on file.
- For each meeting that reimbursement or expenses are requested: (1) fill out white travel worksheet, and (2) sign and fill in address on top portion of green voucher.

Thank you!



Each member of this advisory committee was appointed because of the expertise and perspective that you bring to the table.

Thank you for your contributions to JCOTS, and to the Commonwealth.

Contact Information

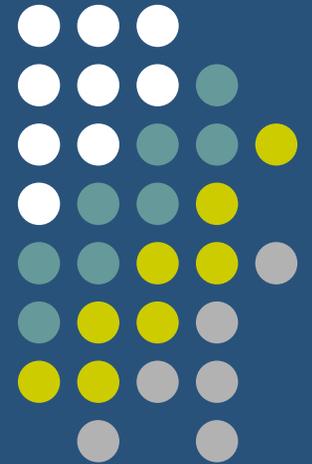


Please do not hesitate to contact staff with any questions, suggestions, or comments:

Lisa Wallmeyer, Executive Director
Patrick Cushing, Staff Attorney

910 Capitol Street
General Assembly Building, 2d Floor
Richmond, VA 23219
(804) 786-3591
jcots@leg.state.va.us

Nanotechnology 2007 Workplan



State Research Priorities



- Strategic research and development areas:
 - Energy, Conservation and the Environment
 - Future Microelectronics
 - Lifespan Biology and Medicine
- Cross-cutting research areas:
 - Modeling and Simulation
 - ***Nanotechnology***
 - Public Health and Safety

2007 Legislation



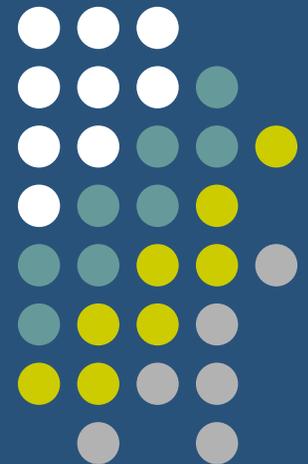
- **Passed-** HJ 611; Study science and technology education in business, law, and policy graduate programs at the Commonwealth's institutions of higher education.
- **Passed-** HJ 647; Requests Secretary of Technology and VRTAC to develop a Nanotechnology Users Network.
- **Failed-** HB 1939; Creates the Virginia Technology and Biotechnology Research and Development Fund to attract technology or biotechnology companies to, or assist those companies located in, the Commonwealth.
- **Failed-** HB 2275; Virginia Nanotechnology Authority

2007 Legislation



- **Failed-** HB 2238: Establishes a non-stock corporation under SCHEV:
 - Support academic research in Virginia;
 - Encourage research initiatives, with emphasis on biological systems and nanotechnology, to support Virginia industry;
 - Direct the disbursement of funds for such research initiatives based on established scientific criteria from the Academic Research Initiative Fund created pursuant to subsection C; and
 - Conduct or undertake other activities useful in carrying out the provisions of this section.

State Sponsored Nanotechnology/Technology Organizations





New York

- SUNY-Albany College of Nanoscale Science and Engineering: \$3.5 billion dollar facility
 - Ranked world's #1 college for nanotechnology and microtechnology (SmallTimes)
 - Government, university, and private industry effort.
 - 450,000 square feet
 - 1,700 jobs

Oklahoma



- Center for the Advancement of Science and Technology (OCAST)
 - Works in partnership with the private sector, higher education, and the Oklahoma Department of Commerce.
 - OCAST is the state's only agency whose sole focus is development, transfer and commercialization of technology.
 - Newly created \$150 million Economic Development Generating Excellence trust fund (EDGE Fund), created for the purpose of increasing private and public applied research and development, technology transfer and technology commercialization in Oklahoma.

Pennsylvania



- Department of Community and Economic Development
- Ben Franklin Technology Development Authority
 - Corresponding Fund for grants/loans
 - Does not have the authority to issue bonds
- Pennsylvania has dedicated \$56 million in public funds to the development of its Pennsylvania Initiative for Nanotechnology (PIN).

Virginia



- JCOTS Nanotechnology Advisory Committee
- VRTAC
- CIT
 - Virginia Nanotechnology Initiative (VNI)
 - CTRF
 - GAP Fund
- Chesapeake Nanotechnology Initiative
- NVTC Nanotechnology Committee

CIT- CTRF



- **Matching Funds Program** to leverage federal and private research dollars.
- **Strategic Enhancement Program** to upgrade the research capacity of those academic departments that have demonstrated the ability to perform innovative research in technology fields that has strong potential to contribute to economic development in the Commonwealth;
- **Industry Inducement Program** to upgrade research capacity in key departments of the institutions in order to attract specific companies to locate or expand in Virginia; and
- **Technology Commercialization Program** to enhance the capability of the institutions of higher education to commercialize technologies developed through their research.

CIT- GAP Fund



- **GAP Fund** – CIT’s GAP Fund closes the funding gap between “friends and family” and early-stage equity investment for Virginia-based technology companies. CIT’s GAP Fund identifies and makes funds available to seed-stage technology firms with a high potential for commercialization, rapid growth and downstream private-equity financing.

CIT- GAP Fund (cont.)



- **GAP will invest up to \$100,000 in early-stage technology companies in the form of convertible notes with outstanding principal and interest converting to a CIT equity position in the firm at the time of a qualifying financing event.**
- **GAP Guidelines**
 - In order to qualify for CIT's GAP Fund, the early-stage technology company must:
 - Have headquarters and significant portion of operations located in Virginia, or must agree to relocate to Virginia.
 - Be involved in one or more of the following sectors: IT, communications, biotechnology, nanotechnology, materials or sensors.
 - Have a high-potential prospect for commercialization and follow-on funding.
 - Have a complete business plan.
 - Provide evidence of a one-to-one match to requested GAP funding.

Justification: What is missing?



- Federal/State grant opportunities?
- Collaborative opportunities?
- Attracting private businesses?
- University research?
- Publicity/Advertising?
- Other?



Justification: Financing

- Where is money best invested?
 - Universities
 - CIT
 - CTRF
 - GAP Fund
 - Alternative Fund?
 - Independent Authority
 - Non-stock corporation
- How do we finance an independent authority?

Open Discussion...

