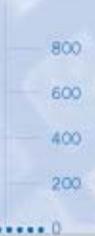




Blue Ribbon Task Force on
NANOTECHNOLOGY



THINKING BIG ABOUT THINKING SMALL
30 | viii
An Action Agenda for California



Blue Ribbon Task Force on

NANOTECHNOLOGY

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What is the BRTFN?

“The Blue Ribbon Task Force on Nanotechnology (BRTFN), a joint federal-state venture to benefit Silicon Valley and promote California as the national and worldwide center for research, development, and commercialization of the nascent nanotechnology industry.”



Congressman
Mike Honda



State Controller
Steve Westly



NASA Ames
Administrator
Scott Hubbard



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BRTFN Organization

Five subcommittees:

- R&D
- Commercialization
- Infrastructure & Assets
- Education
- Policy and Ethics





Build on California's Existing Strengths

-in semiconductors and biotechnology to assert state leadership in nanoelectronics and nanobiotechnology

- Develop a state response to:
 - Tax incentives and grants of foreign governments
 - Subsidies to manufacturers provided by other U.S. states
- Increase state funding for California universities to:
 - Compete for nationwide consortia research grants
- Provide essential funding for:
 - The semiconductor Focus Center Research Program
- Foster development and marketing of:
 - California's nanotechnology business clusters



Bridge the Innovation and Commercialization Gap

- Propose that the state :
 - Provide applied research matching funds to innovation centers in conjunction with private investment
 - Launch a state-based Small Business Innovation Research (SBIR) program
 - Influence state universities and California-based national labs to
 - Institute procedures simplifying and clarifying their
 - Licensing
 - Intellectual Property processes to accelerate the transition of ideas from the lab to the marketplace



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Promote and Market California's Nanotechnology Assets at the State level

- Actively promote California as a world nanotechnology leader by such things as hosting 'Nano Weeks' and sponsoring a California 'Nano Portal'
- Coordinate efforts at the state level to pursue federal funding
- Empower an entity with membership from across the spectrum of major California businesses, federal and state agencies, and academic institutions to lead strategic proactive promotion, marketing and coordination efforts



Launch a 'California Innovation Initiative'

-to take advantage of the powerful convergence of bio, info, and nanotechnology assets in California

- Provide funds to operate the California Institutes for Science and Innovation
- Explore ways to increase angel and early-stage investment in startups that are commercializing converging technologies
- Encourage state agencies to identify areas where California can be an 'early customer' of new technologies
- Take steps to expand California's bio, info and nano workforces
- Provide mid-career professionals with re-education assistance programs



Prepare a Globally Competitive Workforce

-to compete effectively in high-tech business

- Require at least one hour each of quality math and science instruction daily
 - For all of the state's K-12 students
- Prioritize
 - Much needed recruitment and training of new teachers
 - Professional development of existing teachers
- Provide new funds in:
 - Public university and community college system budgets for the creation of interdisciplinary courses in nanotechnology
- Encourage high-tech companies to assist in the creation of courses that support nanotechnology manufacturing
- Sponsor efforts to coordinate statewide collaboration of science museums and informal education venues



Understand and Communicate the Ethical, Environmental, and Societal Implications of Nanotechnology

- California Environmental Protection Agency (Cal/EPA) and the California Department of Health Services should:
 - Track health data about nanotechnology so that appropriate and timely actions can be taken before problems develop
 - Promote environmentally beneficial applications of nanotechnology through an active research / pilot projects
 - Negotiate an information-exchange and problem-solving agreement with nanotechnology manufacturers concerning responsible stewardship of nanotechnology products
 - Lead in the implementation of responsible environmental applications of nanotechnology



Address Business Climate Concerns in California

- Create income tax holidays and sales tax exemptions to level the playing field for state-based businesses relative to those in other states and countries
- Work with the federal government to alleviate the burden of excessive, costly and confusing business regulations
- Enlist California's federal legislative delegation to explore avenues to amend current SBIR regulations to permit venture capital-backed startups to qualify for SBIR awards



The state of California must Empower an Organization or Organizations to Continue the BRTFN Mission

- Accomplish through a centralized unit and function, or through one or more regional consortia
- Charge entity(s) with building partnerships and collaborations encompassing the breadth and diversity of California institutions involved in nanotechnology research and commercialization

The designation and empowerment of a responsible group is a critical step



Final Thoughts --we dare not be complacent!

- California is poised to be a world leader in nanotechnology.
 - Our state has an exceptional existing infrastructure, a history of technological success, and an entrepreneurial and innovation culture. We seem destined to lead, as we have in semiconductors and biotechnology.
- But we have intense competition – both domestic and foreign -- in a technological and economic battle
- We must quickly and effectively implement a strategic, action-oriented agenda to ensure California's lead
- If we do not act, another U.S. region or country will assume the leadership role in nanotechnology



