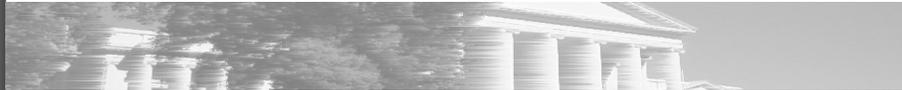




Office of the Secretary of Technology

Research Initiative ~ Remarks to Senate Finance Education Subcommittee



The Honorable Aneesh P. Chopra
Secretary of Technology

February 5, 2008



Office of the Secretary of Technology

A Troubling Indicator

America's Competitiveness in the Global Economy on the Decline

A National Imperative
Global Competitiveness Index

R&D: Sweden and Finland spent 3.9% and 3.5% of GDP on R&D respectively in 2006; US ranks 7th in the world with 2.6%

| Country/Economy | GCI 2006 Rank | GCI 2006 Score | GCI 2005 Rank |
|-----------------|---------------|----------------|---------------|
| Switzerland | 1 | 5.81 | 4 |
| Finland | 2 | 5.76 | 2 |
| Sweden | 3 | 5.74 | 7 |
| Denmark | 4 | 5.70 | 3 |
| Singapore | 5 | 5.63 | 5 |
| United States | 6 | 5.61 | 1 |

High Tech Exports: In 1990, US global market share reached 23%; after several decades in decline, by 2003, US share fell to 16%, swapping places with Asia

The Innovation Agenda

Linking R&D to Jobs

“Our hope is that there will be **full employment**, and that the production of goods and services will serve to **raise our standard of living**... Surely we will not get there by standing still, merely by making the same things we made before and selling them at the same or higher prices. We will **not get ahead** in international trade **unless** we offer new and more attractive and cheaper products... There must be a stream of **new scientific knowledge** to turn the wheels of private and public enterprise.”

-Vannevar Bush, 1945



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Virginia's IT Industry

Thriving Technology Sector a Key Pillar of America's Competitiveness

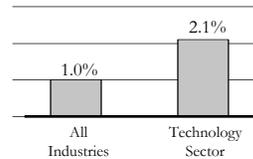
Virginia Atop the Nation's States

- In 2007 American Electronics Association noted Virginia has the **highest** concentration of tech workers in the nation
- Sixth** lowest unemployment rate in the nation (**3.1%** as of **July 2007**)
- Kaine Administration: **41,500 new jobs** and **\$5.7 Billion** in new investment

A Burgeoning Tech Engine

- 32%** of all new jobs statewide created in the technology sector (year ending **June 2007**)
- Wages in the technology sector represent **29%** of all Virginia salaries (year ending **June 2007**)

Employment Growth 2Q06 vs. 2Q07



A Strong R&D Base

- 3rd** in **Federal R&D spending & SBIR awards** (NSF 2004)
- 13th** in **Total R&D** –\$7.3 billion (NSF 2004)
- 14th** in **University R&D** – \$914 million (NSF 2005)

Source: Virginia Economic Trends 2Q2007, Chmura and Virginia Employment commission; AEA Cyberstates 2006 Report

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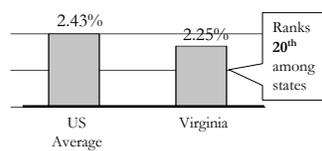


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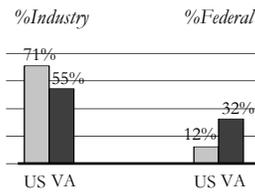
An Over-Reliance on Federal R&D

Virginia's Strength Masks Weak Performance in Industry R&D

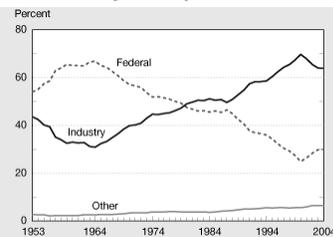
Total R&D Expenditures % GDP/GSP (2004)



Source of R&D Funds

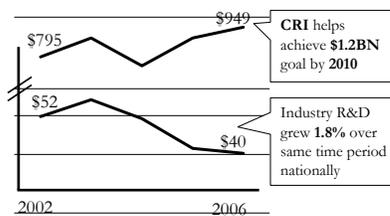


By Source of Funds



SOURCE: National Science Foundation, Division of Science

University R&D Expenditures –Virginia Total and Industry-Sponsored R&D (\$MM)



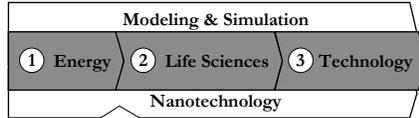
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The Path Forward

Public Sector Incentives a Strategic Lever to Align University/Industry

Building the R&D Agenda
2007 VRTAC Priorities



Priorities selected by reviewing existing strengths, revenue growth potential, and alignment to industry

2008 CTRF Awards

- Life Sciences (3): \$882,610
 - Technology (2): \$511,555
 - Modeling and Simulation (1): \$451,013
-
- 117% matched; 52% by private industry
 - 75% involve university collaboration
 - 80+ jobs attracted with growth potential

“Mega”-R&D Deals
Missed Opportunities

- \$500M partnership with UC-Berkeley, U. of IL, BP-Amoco to create the Energy Biosciences Institute; BP invited 5 universities to bid (none in VA); \$70M in state incentives
- \$435M public-private partnership to seed INDEX with SUNY-Albany, Harvard, Yale, MIT, AMD, Freescale, IBM, Intel, Micron, TI to focus on “Bell Labs for Semiconductors”; \$80M in state incentives

2009-10 Research Initiative

Governor proposes \$1.6BN bond package, continues CRI at \$29M; introduces \$40.5M competitive grant program to encourage collaboration, private sector investment, and support for economically-distressed areas