



Virginia's Technology Future

Business Leaders Roundtable on Virginia's Economic Future

June 22, 2015

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Virginia is a National Technology Business Leader

- 1st in concentration of IT jobs in non-IT industries
- 2nd in concentration of high-tech employees
- 2nd in concentration of scientists and engineers (5.4%)
- 3rd in fast growing firms (Inc. 500 and Tech Fast 500)
- 4th in tech companies as percent of all businesses
- 5th in high-tech payroll
- 6th in total tech employment
- 6th in number high-tech establishments

Sources:

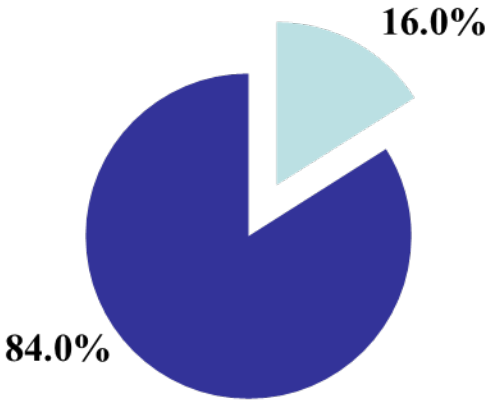
COMPTIA, *Cyberstates 2015*
The 2014 State New Economy Index,
Innovation Technology and Innovation
Foundation



Statewide High-Tech Employment

Statewide Employment

- High-Tech Employment: 575,952
- Non-Tech Employment: 3,017,489



Statewide Wages and Salaries

- High-Tech Wages: \$15,914,692
- Non-Tech Wages: \$33,154,584



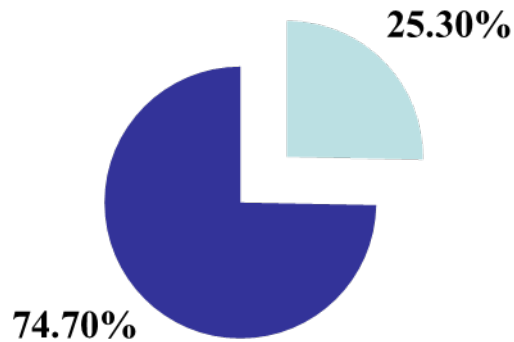
Source:
Chmura Economics & Analytics,
Virginia Economic Trends, 4th Quarter
2014



Northern Virginia High-Tech Employment

NOVA Employment

- High-Tech Employment: 323,737
- Non-Tech Employment: 954,530



NOVA Wages and Salaries

- High-Tech Wages: \$10,308,241
- Non-Tech Wages: \$12,445,840





Virginia has a Strong and Diverse Technology Industry

- Aerospace
- Big Data/Data Analytics
- Bioinformatics
- Biotech/Life Sciences
- Cyber
- Data Centers
- Education IT
- Green IT
- Health IT
- Internet
- Modeling and Simulation
- Nanotechnology
- Professional Services/Government Contracts
- Semiconductors
- Software
- Systems Integration
- Telecommunications



Virginia is a National Technology Business Leader

- Total Employment Rankings By Tech Sector:
 - 3rd in Computer Systems Design and Related Services (141K)
 - 3rd in IT Services (152K)
 - 5th in Engineering Services (44k)
 - 7th in Computer and Software Wholesalers (7.7k)
 - 9th in Internet Services (12.7K)
 - 10th in Telecommunications (27.5K)
 - 10th in R&D Testing Services (24.2)
 - 15th in Semiconductor Manufacturing (2.1K)
 - 18th in Software Publishing (4.8K)
 - 26th in Tech Manufacturing (11.5K)



Challenges

1. Federal spending levels are new normal
2. Ongoing consolidation in professional services/government contracting market
3. Virginia is shedding tech jobs as 38 states grow tech employment
 - i. Virginia Ranked 51st in Tech employment change from 2013-2014 as a percentage (-3.1%) and in total numbers (8,937 jobs)

Source:

The Information Technology &
Innovation Foundation, The
2014 State New Economy Index



Opportunities

- Federal spending will continue to grow in key sectors that track Virginia's competitive capabilities:
 - Cyber
 - Big Data/Data Analytics
 - Healthcare IT
 - Cloud Services/Data Centers
- Some government contractors are diversifying from federal customers/revenues and new business models are evolving
- Virginia has a healthy, growing commercial tech sector
- Opportunity to leverage Virginia's workforce/expertise to grow commercial base in:
 - Cyber
 - Big Data/Data Analytics
 - Healthcare IT
 - Life Sciences/Personalized Medicine
 - Other Areas



Example of Opportunity: Big Data/Data Analytics

- Nationwide, data occupations account for **31% of total private sector job growth** over the past decade.
- Data occupations currently account for **7.8% of all employment nationally** and are growing.
- Wages: On average, data workers earn **68% higher salaries** than non-data workers.
- Industry Concentration: Together, DC, Virginia and Maryland are among the top five states for data industry concentration with DC ranking first, **Virginia ranking second** and Maryland ranking third.
- Workforce:
 - McKinsey & Company ranks **Virginia number one in the nation** in terms of the percentage of big data workers within our workforce.
 - **Virginia ranks #7** and accounts for **4.4 percent of the nation's private sector employment** in data-intensive industries.
- Big Data and Analytics firms in Northern Virginia expect to add more than **16,700 jobs** over the next three years.



Dual Emphasis on Economic Development Strategy is Key

- **Emphasis 1: Enhance Tools To Attract Companies Seeking To Relocate, Expand, Establish R&D Operations**
 - Includes:
 - Commonwealth Opportunity Fund
 - Virginia Jobs Investment Program
 - Virginia Investment Partnership Act
 - Virginia Economic Development Incentive Grants
 - VEDP Marketing and Overseas Offices
 - Worker Training Incentives
 - Department of Business Assistance Program Activity

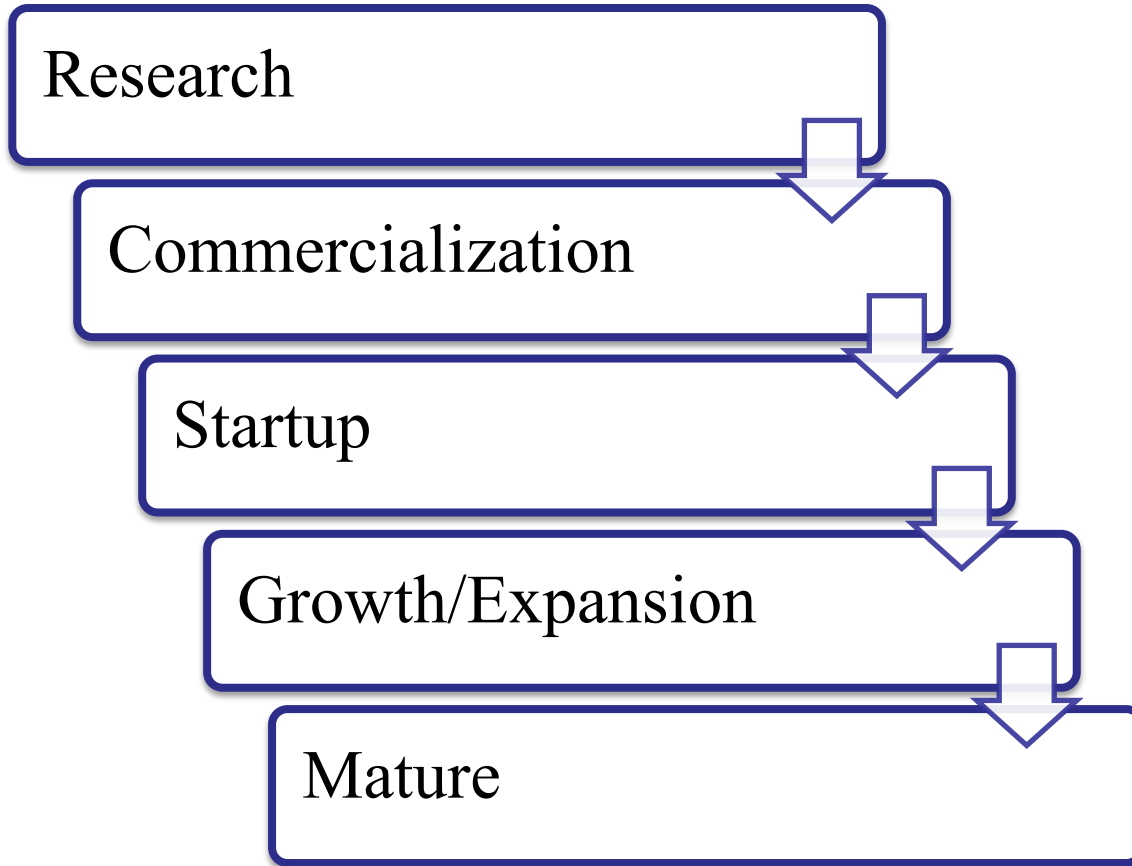


Dual Emphasis on Economic Development Strategy is Key

- **Emphasis 2: Employ Comprehensive “Grow Your Own”/New Company Formation Strategy**
 - Position Virginia as:
 - A leader in next-generation tech company formation and innovation
 - Top destination for entrepreneurs, early stage investors, innovators



IP-Based Tech Businesses





Selected Virginia Rankings

- 3rd in SBIR Awards: *total awards in 2013*
- 6th in Non-Industry R&D: *as share of gross state product*
- 15th in Academic R&D: *Total Expenditures in 2012*
- 22nd in Industry Investment in R&D: *as percentage of worker earnings*
- 11th in Tech Exits: *acquisitions and IPOs*
- 13th in Venture Capital: *total dollars*
- 16th in Tech Patents: *total number granted*
- 46th in Entrepreneurial Activity: *the number of individuals starting new businesses as a percentage of the population*

Sources:

COMPTIA, *Cyberstates 2015*

The 2014 State New Economy Index, Innovation Technology and Innovation Foundation

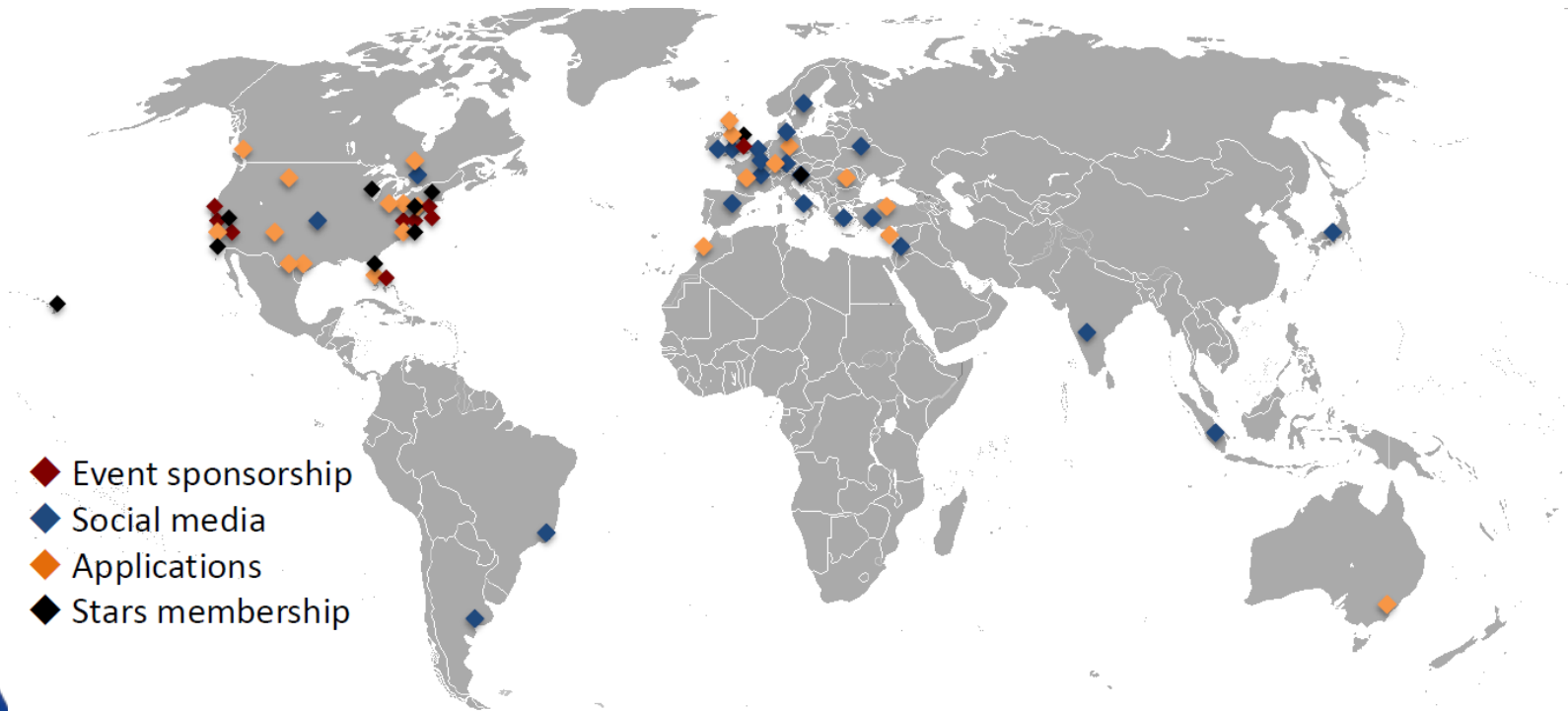
2014 Global Tech Exits Report, CB Insights

National Science Foundation, Science and Engineering State Profiles



Growing Global Footprint

Within 20 month of operations, MACH37 has demonstrated increased global reach through event sponsorship, social media activity, applications and STARS Network membership.



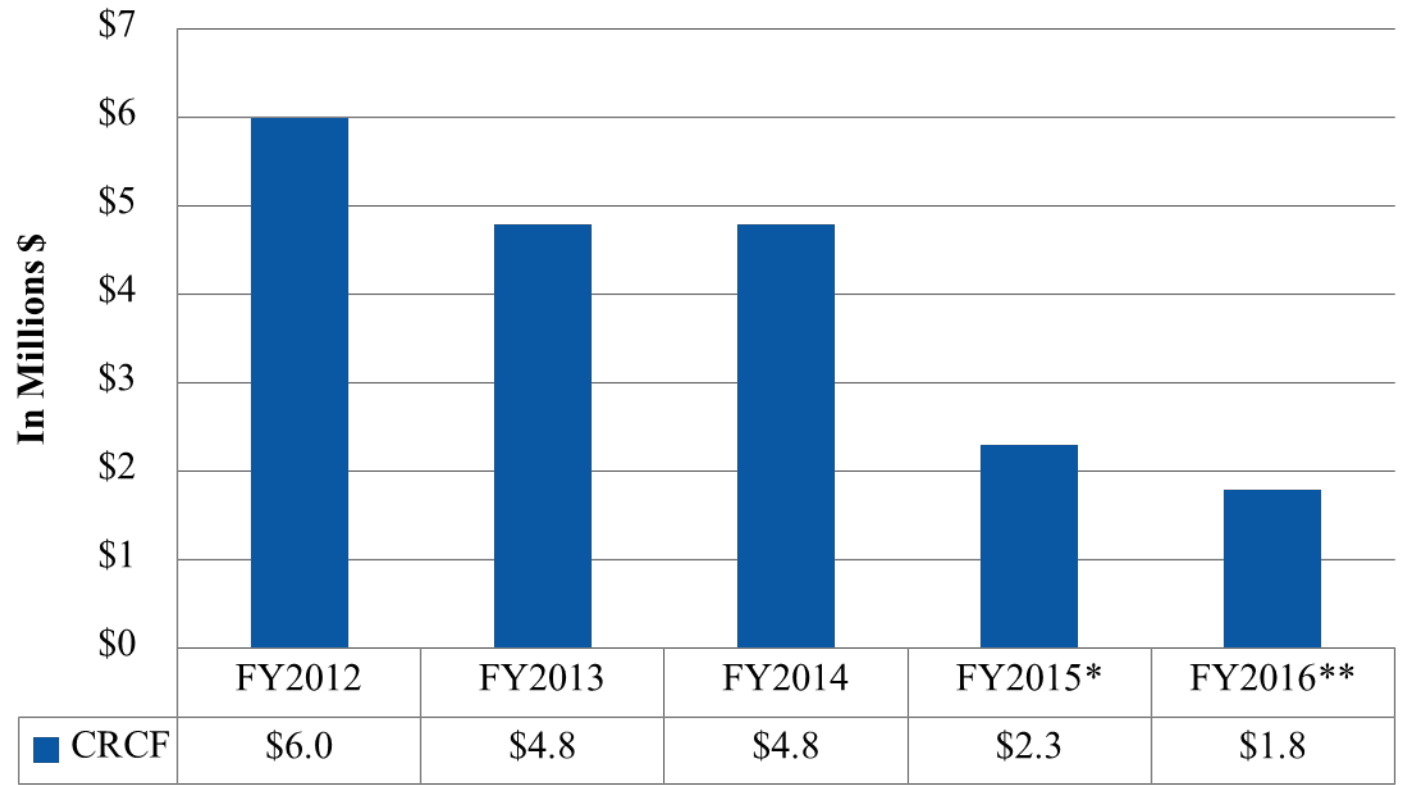


Commonwealth Research Commercialization Fund (CRCF)

- Accelerates entrance of **new products and services** to the market.
- **Incentivizes collaboration** between institutions of higher education and companies engaged in research in high-growth, emerging industries.
- Provides new resources to attract and retain **eminent researchers** at Virginia universities.
- Provides **matching SBIR Grants for life sciences companies**.
- In FY2014:
 - **52 CRCF awards** to startups, universities and research institutes
 - **Leveraged the Commonwealth's \$4.8 million investment with approximately \$7.4 million in matching funds**



Commonwealth Research Commercialization Fund (CRCF)



* Reflects Governor's \$1.5M reallocation to other areas of budget, \$1M from COF

** Originally \$2.8M; now reflects \$2M reallocation to MACH37, \$1M from COF

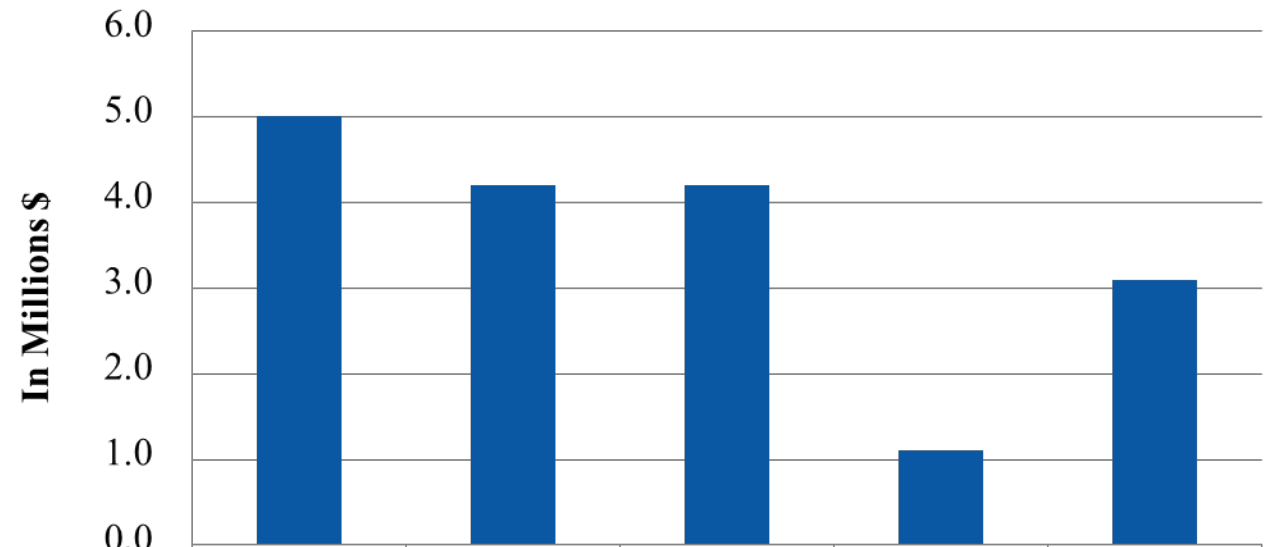


CIT GAP Funds

- Provides **seed-stage equity investments** in high-potential Virginia-based technology companies
- The GAP Funds' search areas include:
 - Software
 - Telecommunications
 - Semi-conductors
 - Media and Entertainment
 - E-commerce
 - Networking and Equipment
 - Electronics/Instrumentation
 - Industrial/Energy
 - Computers and Peripherals
 - Biomedical Life Science Applications
- **3,000+ entrepreneurs have applied** for seed investments over 10 years.
- Since 2005, CIT GAP Funds have **invested in more than 120 companies**.
- Through the CIT GAP Funds, **\$15 million in public funds have leveraged \$233 million of private funding or 16.2X**.



CIT GAP Funds



	FY2012	FY2013	FY2014	FY2015	FY2016
■ CIT GAP Funds	\$5.0	\$4.2	\$4.2	\$1.1	\$3.1



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