

Aligning Virginia's Research Investments with Commonwealth Priorities

presented to the

Higher Education Advisory Committee

by

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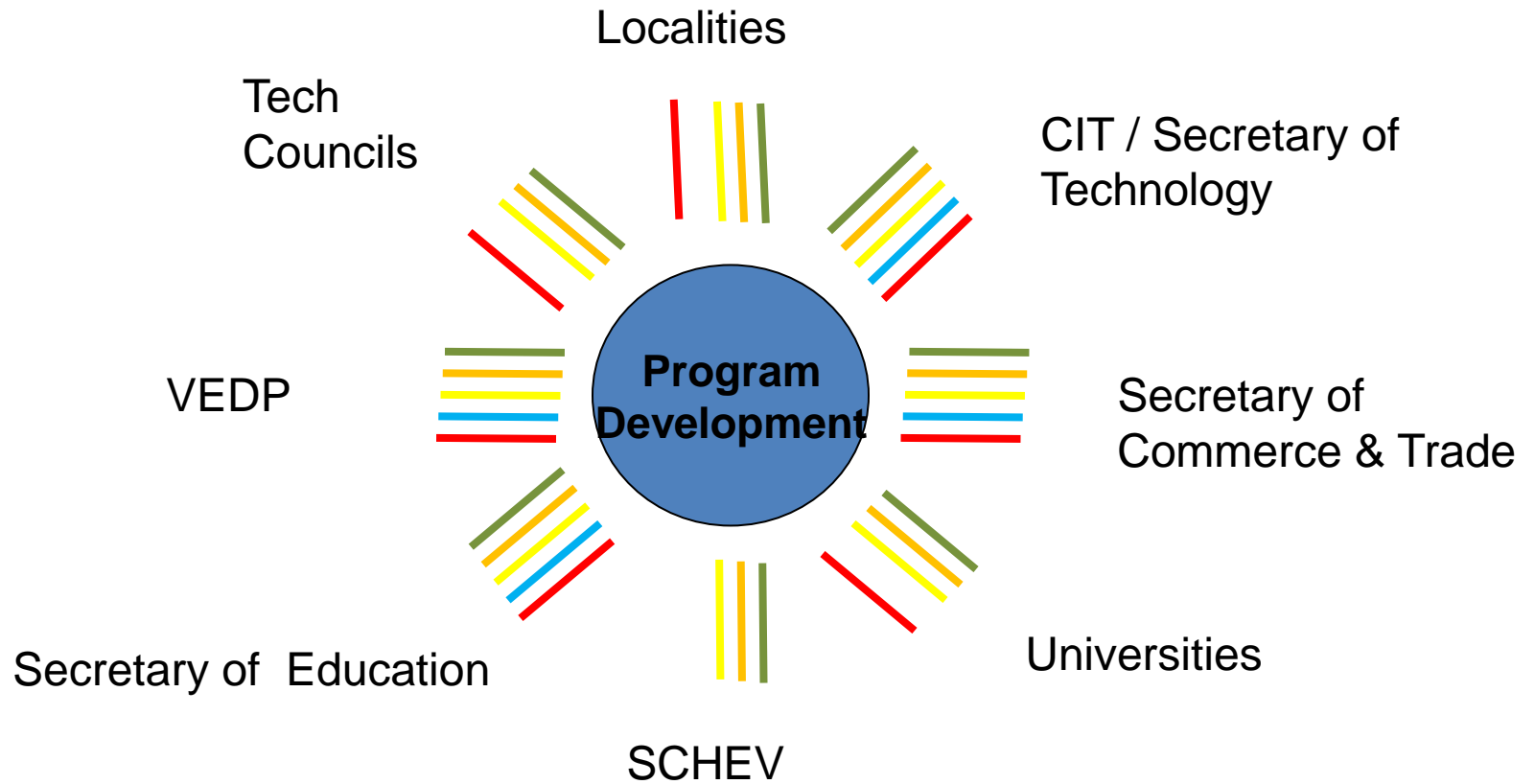
October 22, 2012


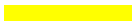



Agenda



- Commonwealth R&T Strategic Roadmap
- Commonwealth Research Commercialization Fund (CRCF)
- Key Program Drivers

Roadmap Development



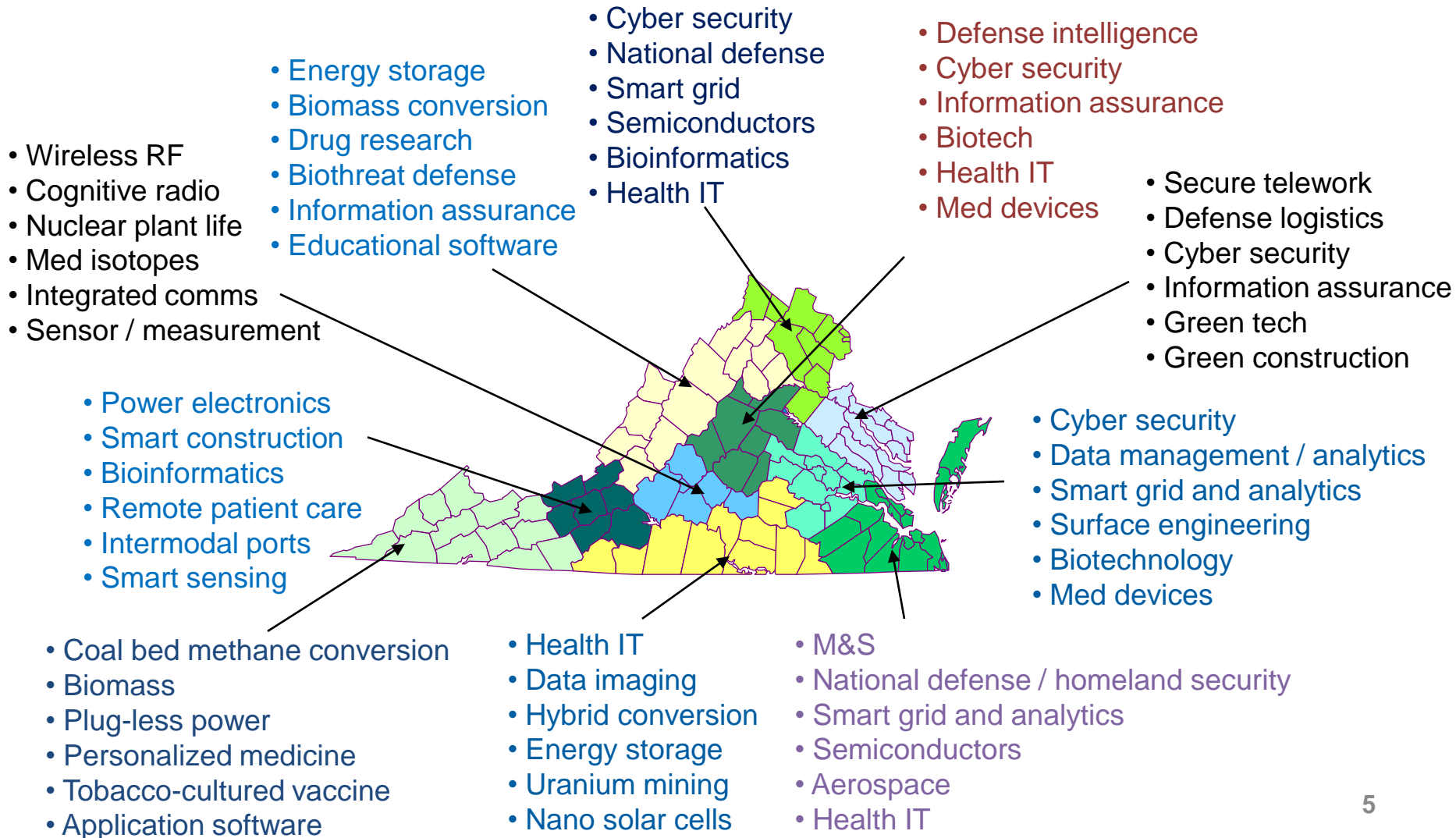
RTIAC		CRCF Structure		RFI	
Schedule		Roadmap			

R&T Roadmap

<i>Table of Contents</i>	
Executive Summary	
Key Industries <ul style="list-style-type: none">• Industry Priorities: Innovation Index• Economic Data: Chmura• VEDP Priorities	→ <i>Identify critical statewide industry sectors based on supportable capabilities and projections</i>
Academia	→ <i>Identify common research focus areas in academia to guide commercialization investments</i>
Other R&D Assets	→ <i>Identify core capabilities and priorities of key research institutes in Virginia</i>
Intellectual Property	→ <i>Develop a CRCF standard IP commercialization agreement</i>
Assessment & Recommendations	→ <i>Position Virginia for strategic, targeted and new R&D initiatives and funding</i>

R&T Roadmap Objective: Identify research areas worthy of institutional focus and Commonwealth investment

Findings – 2011 Roadmap



Roadmap Application



Value Add	VEDP	CRCF	Tobacco Comm.	Universities	Industry	Localities	CIT
Strategic planning	●	●	●	●	●	●	●
Investment vetting	●	●	●	●		●	●
Company recruiting	●		●			●	●
Research recruiting	●	●	●	●	●	●	●
Scholar recruiting		●	●	●			●
Investor recruiting	●		●	●		●	●
NewCo formation		●	●	●	●	●	●
Fed program dev	●	●	●	●	●		●

Accelerating Commercialization

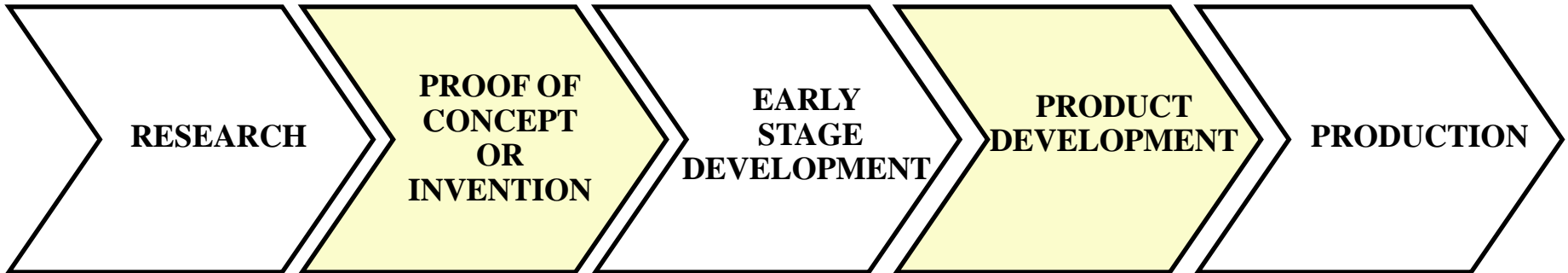


Commonwealth Research & Technology Strategic Roadmap

Eminent Researcher Recruitment Fund*

Research Matching Fund*

SBIR Matching Fund*



GAP Fund

Commercialization Fund*

Facility Enhancement Loan Fund*

*FY12 CRCF Programs shown with U.S. Dept. of Commerce Innovation Continuum

CRCF Performance



CRCF Profile

Eligible industry sectors

- Advanced Manufacturing
- Aerospace
- Communications
- Cyber Security
- Energy
- Environment
- Information Technology
- Life Sciences
- Modeling and Simulation
- Nuclear Physics
- Transportation

Eligible awards

- Research match
- Researcher recruitment
- Facility enhancement
- Commercialization
- SBIR grant match

2012 Program Performance Metrics

- ✓ 181 eligible proposals were received
- ✓ \$35.5M in funding was requested
- ✓ 47 proposals were awarded
- ✓ \$5.8M funding was provided
- ✓ Funding was 100% matched by recipient

Example CRCF Project Profile and Impact

Project

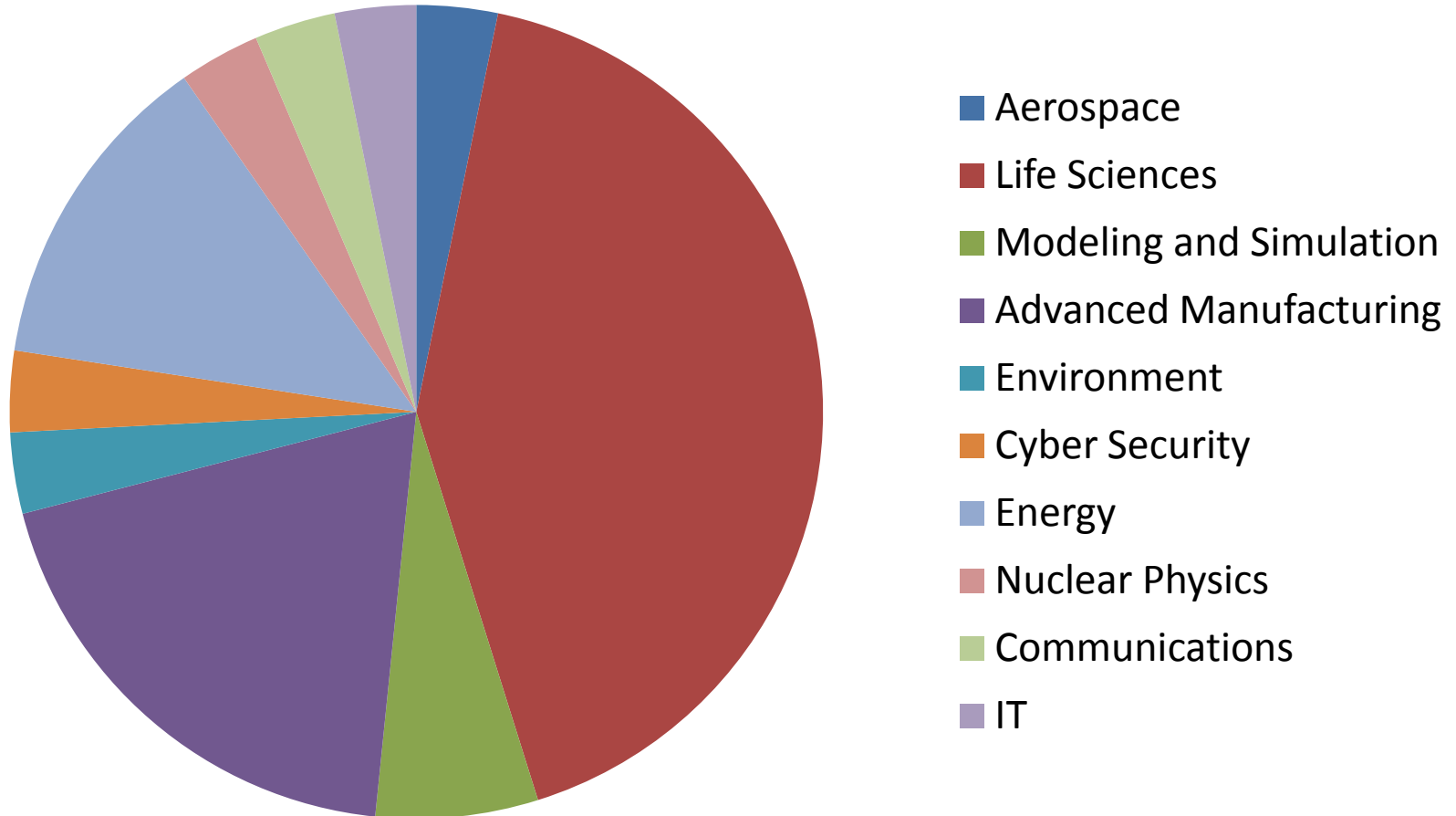
- Pancreatic cancer detection
- Brain tumor pharmaceutical
- Portable device for bone imaging
- Simulation software

Impact

- Early detection and analysis technology
- Therapy for brain cancer cell destruction
- Battlefield and emergency trauma analysis
- 3D modeling for homeland security

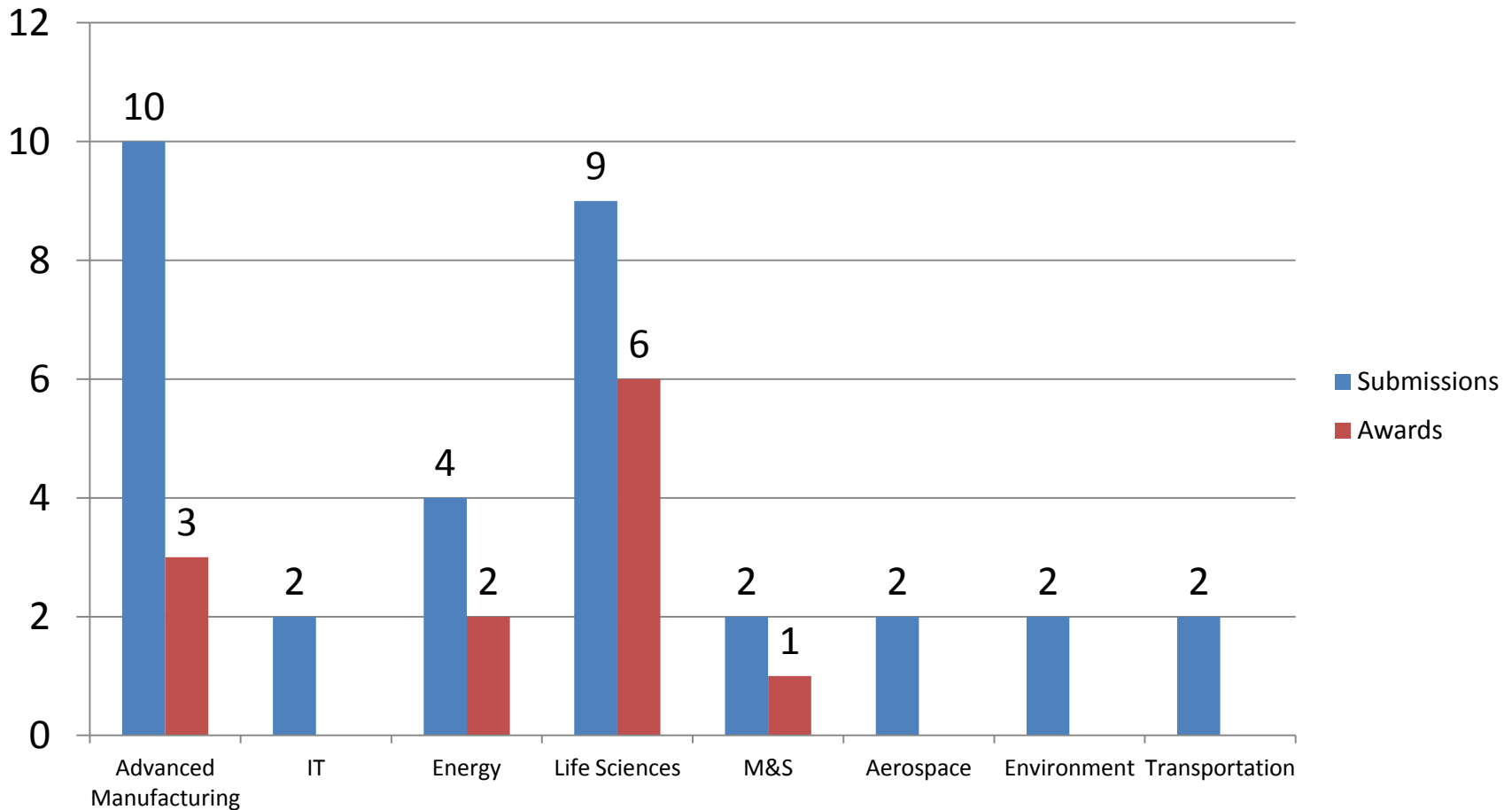
On track to accelerate 100 high potential research efforts from 2012 - 2014

FY2012 Awards* – by Technology Sector



*Exclusive of SBIR Matching Program

FY2012 University Submissions & Awards by Tech Sector



FY2012 University Submissions by Program / Tech Sector*



UNIVERSITY	Commercialization Program	Eminent Researcher Recruitment Program	Facilities Enhancement Loan Program	Matching Funds Program
Eastern Virginia Medical School	1 – Life Sciences 1 – Modeling & Simulation			1 – Life Sciences
George Mason University				1 – Modeling & Simulation
James Madison University	1 – Energy			1 – Adv. Mfg.
Liberty University				2 – Information Technology
Old Dominion University	1 – Transportation	1 – Life Sciences	1 – Life Sciences	2 – Life Sciences 2 – Energy
University of Virginia	1 – Aerospace			1 – Aerospace 1 – Environment 1 – Life Sciences 1 – Adv. Mfg.
Virginia Institute of Marine Science (W&M)	2 – Advanced Manufacturing			1 – Life Sciences 1 – Environment
Virginia Tech	1 – Advanced Manufacturing	1 – Life Sciences		5 – Adv. Mfg. 1 – Energy 1 – Transportation
TOTAL – 33	8	2	1	22

*Primary tech sector

FY2012 University Awards by Program and Tech Sector*



UNIVERSITY	Commercialization Program	Eminent Researcher Recruitment Program	Facilities Enhancement Loan Program	Matching Funds Program
Eastern Virginia Medical School <i>(1 award)</i>	1 – M&S			
Old Dominion University <i>(4 awards)</i>		1 – Life Sciences		2 – Life Sciences 1 – Energy / Environment
University of Virginia <i>(2 awards)</i>				1 – Life Sciences 1 – Advanced Manufacturing / Energy
Virginia Institute of Marine Sciences (W&M)				1 – Life Sciences
Virginia Tech <i>(4 awards)</i>	1 – Advanced Manufacturing	1 – Life Sciences		1 – Advanced Manufacturing / Energy 1 - Energy
TOTAL – 12	2	2	0	8

*Primary tech sector

Key Program Drivers



- Roadmap – long-term focus eliminates trend-based expenditures
- Roadmap – community owned & developed
- Roadmap – CIT facilitated Reinforced Roadmap priorities
- Investments – linked to Roadmap
- Investments – support broad tech community
- Continuity – \$4.8M appropriated each for FY13, FY14