Board of Directors
Joint Meeting
October 30, 2023

VIPA | VIRGINIA INNOVATION PARTNERSHIP AUTHORITY

VIPC | VIRGINIA INNOVATION PARTNERSHIP CORPORATION

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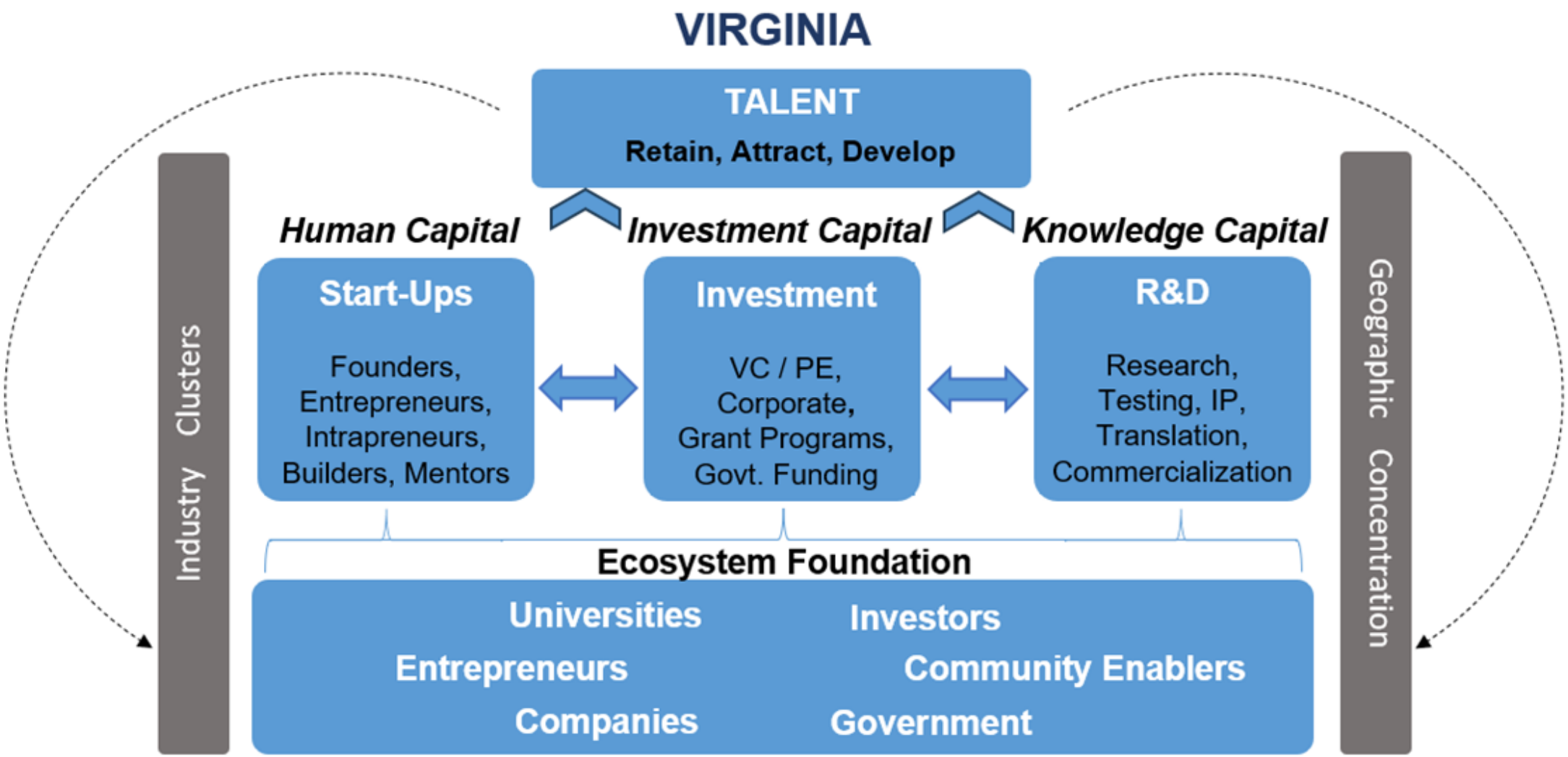
CEO Remarks

Illustrative Framework



Startup Continuum → Economic Growth

VIPC | VIRGINIA INNOVATION PARTNERSHIP CORPORATION

VIPC helps connect entrepreneur/start-up with VA ecosystem & opportunities including Virginia Accelerator Network (VAN), mentor networks, higher ed, first customer, sources of funding (many programs and initiatives of which are supported via VIPC)

Entrepreneur participates in Mentorship or Accelerator program, which further validates innovation idea and startup formation, and is then connected with VIPC's CCF grant funding opportunities to further development

Startup seeks opportunities to access greater early-stage funding and is connected to VIPC's VVP investment team as well as external capital providers and funding sources

VIPC's investment team evaluates initial equity investment and/or follow-on equity investment to support ongoing growth

VIPC can help facilitate connections with broader VA opportunities as startup company scales, expands, re-invests, creates jobs (e.g., VEDP)

Accelerators / Incubators

757 COLLAB
CVILLE BIOHUB
DOMINION ENERGY INNOVATION CENTER
the Launch place
STARTUP VIRGINIA
Lighthouse Labs
ACTIVATION CAPITAL
From start to phenomenal
RAMP
THE REGIONAL ACCELERATOR

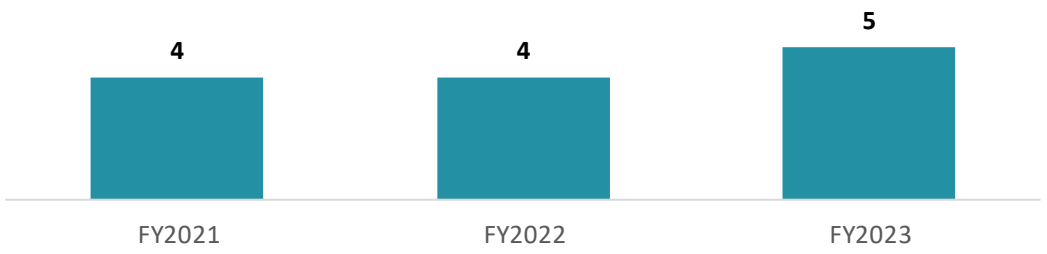
Economic Growth Opportunities

COMMISSION TOBACCO REGION REVITALIZATION
VEDP | Virginia Economic Development Partnership
GREATER RICHMOND PARTNERSHIP
FAIRFAX COUNTY ECONOMIC DEVELOPMENT AUTHORITY
HAMPTONROADS WORKFORCECOUNCIL

CCF → VVP Continuum Funding Activity

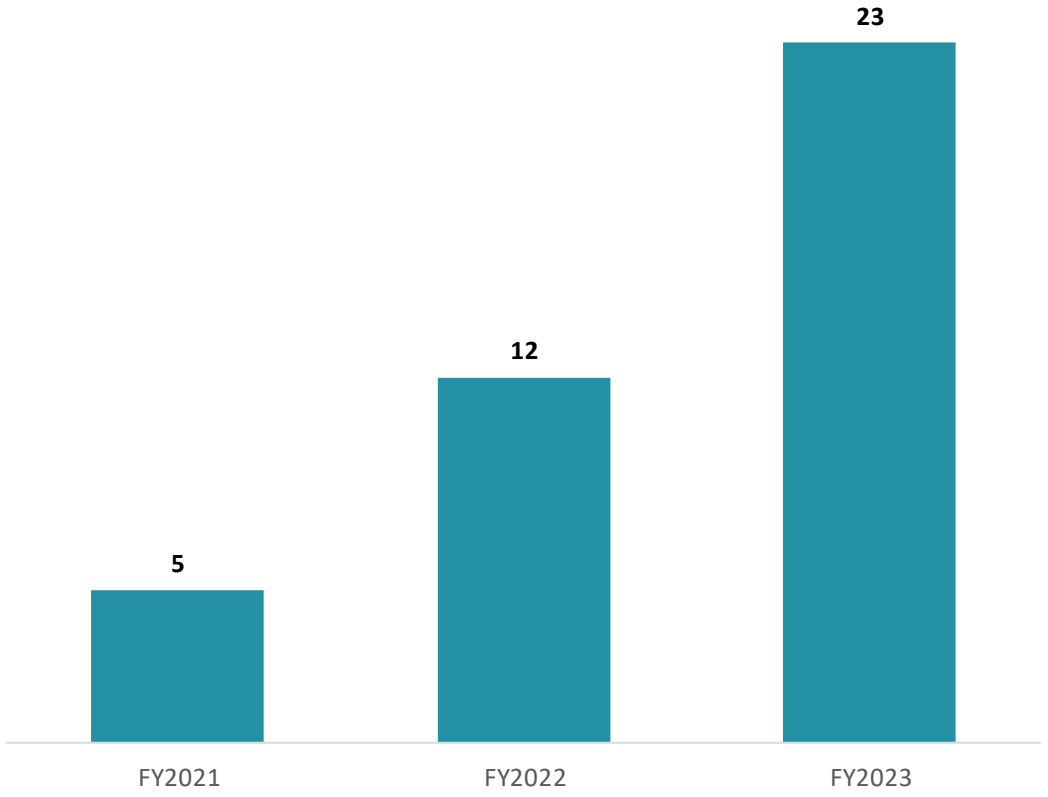
CCF Grant Recipients That Subsequently Received VVP Investment

Grants (Private):	34	39	100
Conversion:	12%	10%	5%



CCF Grants Recipients That Previously Received VVP Investment

Grants:	34	39	100
Conversion:	15%	31%	23%

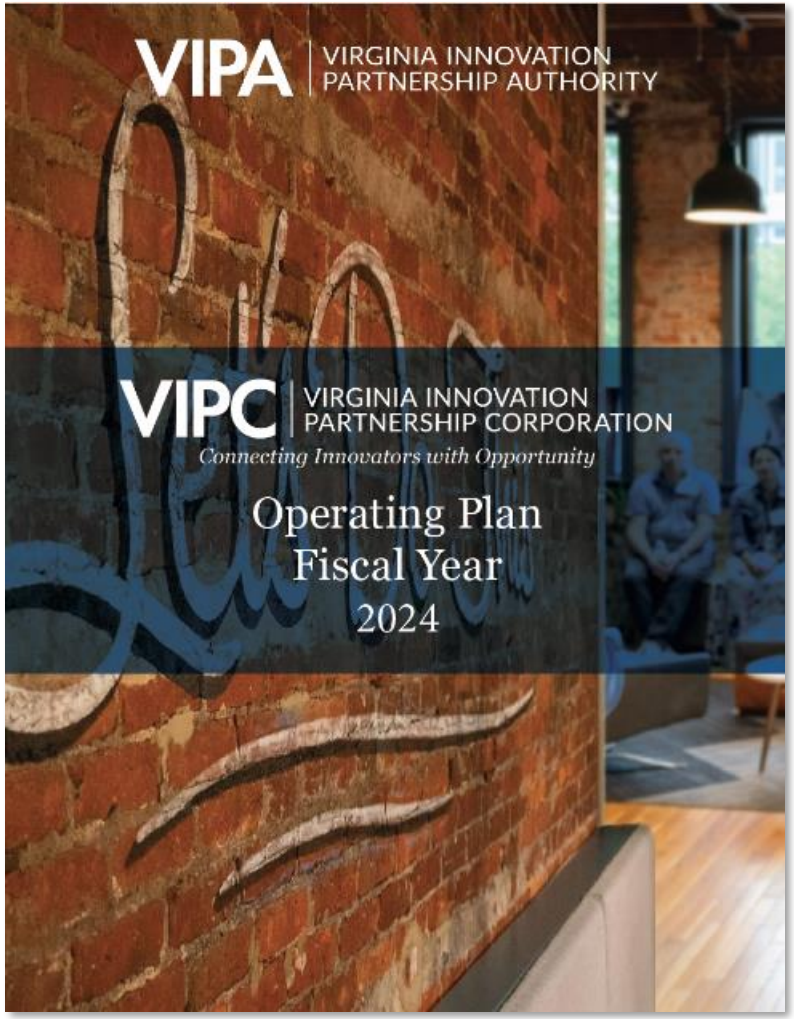


FY23 Scorecard Performance

Scorecard Performance Assessment made by CEO as of 6/30/23 with Recommendation of "On Plan+"

Division	Above Plan		On Plan		Deferred		Below Plan		Total	
	Objectives within Range	% of Total	Objectives within Range	% of Total	Objectives within Range	% of Total	Objectives within Range	% of Total	Total Objectives	% of Total
Investment	4	44%	4	44%	1	11%	0	–	9	100%
Commercialization	5	83%	1	17%	0	–	0	–	6	100%
Entrepreneurial Ecosystems	6	60%	3	30%	0	–	1	10%	10	100%
Strategic Initiatives	8	62%	5	38%	0	–	0	–	13	100%
Marketing and Communications	0	–	3	100%	0	–	0	–	3	100%
Finance and Administration	0	–	3	100%	0	–	0	–	3	100%
Human Resources	0	–	4	100%	0	–	0	–	4	100%
Total Objectives	23	48%	23	48%	1	2%	1	2%	48	100%

FY24 Look Ahead



Investment Division

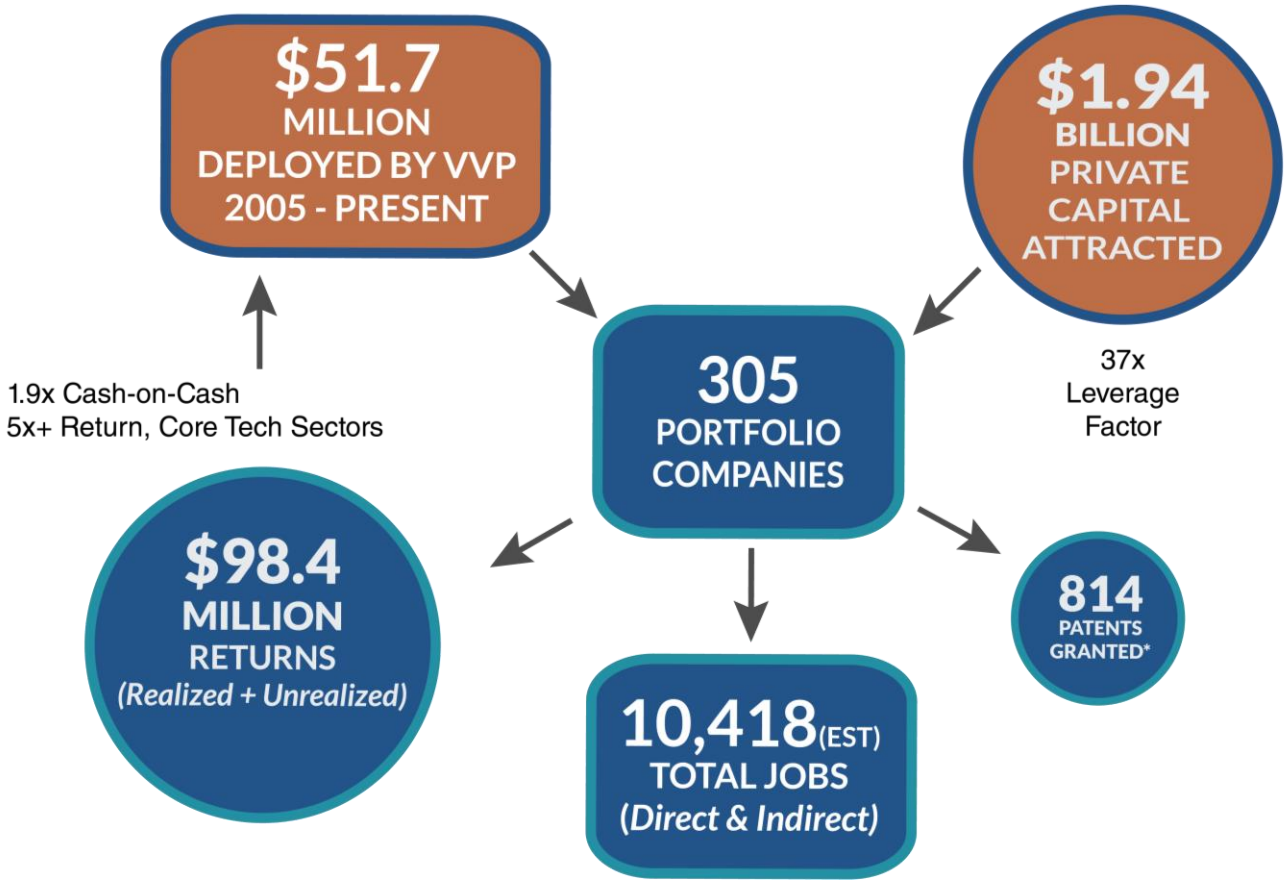
Overview

Virginia Venture Partners ("VVP") is VIPC's equity investment program that leverages private capital into Virginia's tech and scalable non-tech start-ups through a family of seed and early-stage investment funds.

Representative Investments

BLACKBOILER
ELECTRA
BRAINBOX
BABYLON MICRO-FARMS®
True Algae
LUMINOAH
wellthi
RunSafe SECURITY
electrotempo

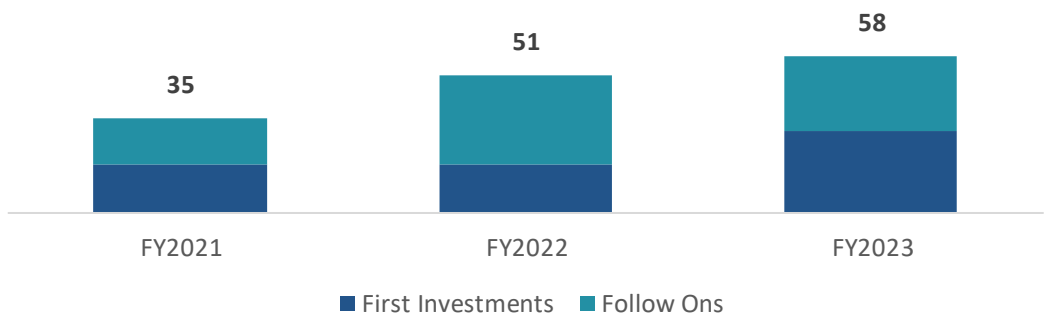
Since Inception of Investment Program (2005)



Investment Activity

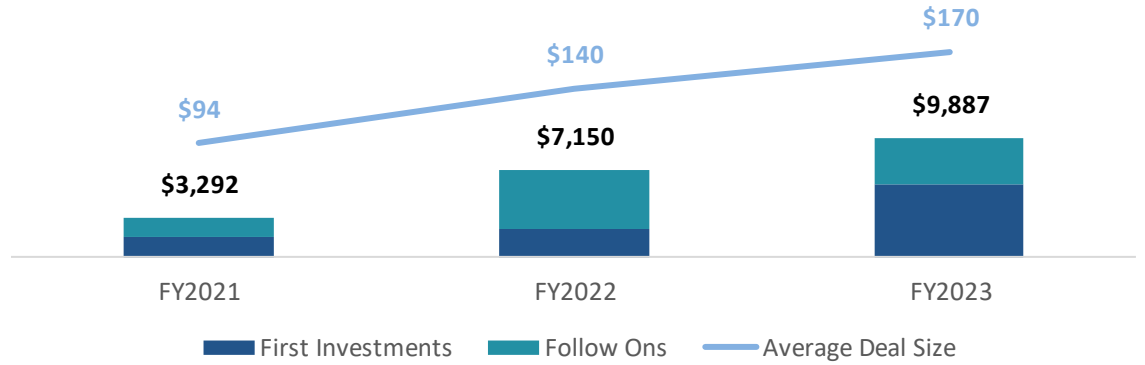
Total # of Investments

Applications:	**145**	**288 (+5 In Process)**	**265 (+76 In Process)**
Acceptance Rate:	**24%**	**18%**	**22%**



Total $ of Investments and Average Deal Size

($ in thousands)



Industry Concentration

($ in thousands)

Industry	FY2021		FY2022		FY2023	
	#	$	#	$	#	$
IT	16	$1,575	27	$3,177	30	$4,936
Life and health sciences	8	$876	11	$1,250	13	$2,450
Cybersecurity	4	$341	7	$1,273	6	$901
Aerospace	2	$100	3	$1,050	2	$750
Communications	0	$0	0	$0	2	$350
Other	0	$0	0	$0	3	$250
Agriculture	2	$200	1	$100	1	$150
Advanced manufacturing	0	$0	0	$0	1	$100
Other	3	$200	2	$300	0	$0
Total	**35**	**$3,292**	**51**	**$7,150**	**58**	**$9,887**

Investments by Region

($ in thousands)

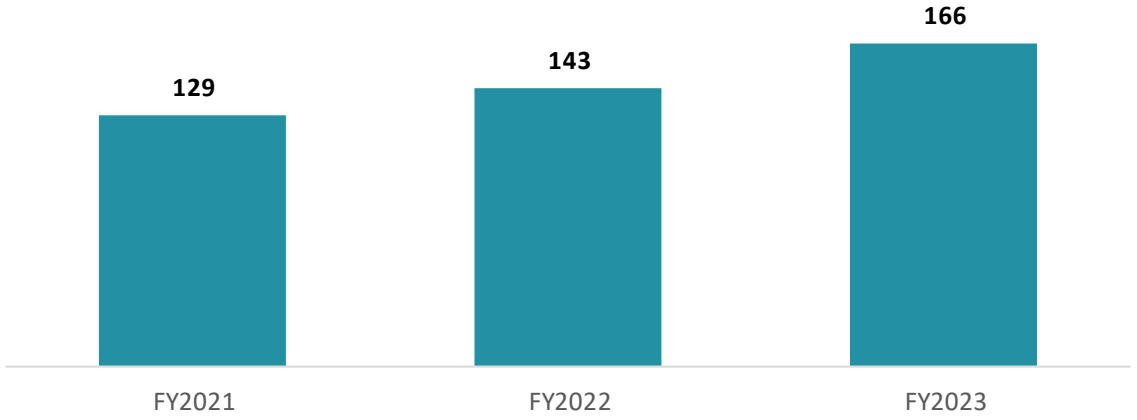
Region (GO VA #)	FY2021		FY2022		FY2023	
	#	$	#	$	#	$
NOVA (7)	14	$1,041	25	$4,393	34	$5,622
Richmond (4)	10	$975	9	$1,107	11	$2,040
Charlottesville (9)	2	$250	5	$625	7	$1,350
Roanoke/Blacksburg (2)	2	$150	2	$150	3	$550
Hampton Roads (5)	5	$676	8	$725	3	$325
Southwest (1)	1	$100	1	$100	0	$0
Southern (3)	1	$100	0	$0	0	$0
Fredregion (6)	0	$0	1	$50	0	$0
Shenandoah Valley (8)	0	$0	0	$0	0	$0
Total	**35**	**$3,292**	**51**	**$7,150**	**58**	**$9,887**

Note: IT encompasses various sub-categories including FinTech, Apps, Cybersecurity, SaaS, Artificial Intelligence, and Software.

Note: Refer to appendix for map of GO Virginia regions.

Investment Portfolio

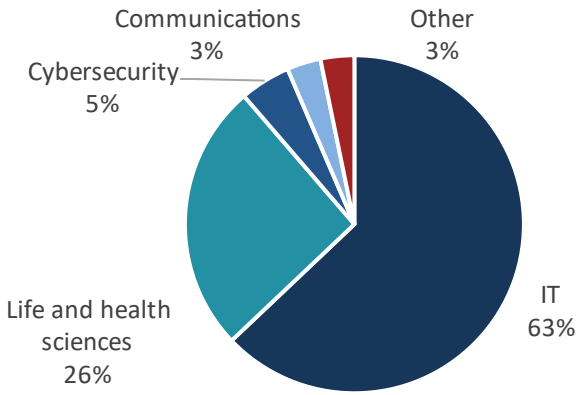
VVP Portfolio Size



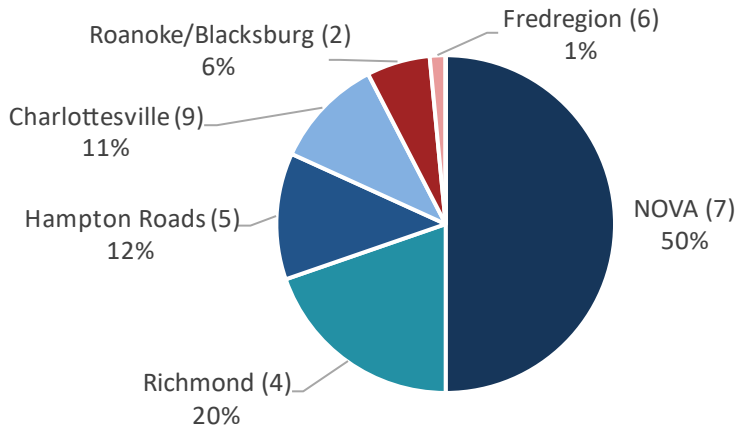
VVP Investment Exits (FY2021 – FY2023)

Company	Entry Date	Total Investments #	Total Investments $	Gross Proceeds	Exit Year	MOIC
Company 1	Nov-19	1	$50,000	$78,863	FY21	1.6x
Company 2	Mar-14	2	$117,618	$225,314	FY21	1.9x
Company 3	Dec-11	2	$200,000	$1,121,245	FY21	5.6x
Company 4	Aug-17	2	$200,000	$746,553	FY21	3.7x
Company 5	Sep-17	1	$50,000	$169,560	FY21	3.4x
Company 6	Apr-14	2	$50,000	$54,603	FY21	1.1x
Company 7	Mar-17	4	$288,353	$297,901	FY22	1.0x
Company 8	Jul-15	1	$75,000	$1,036,720	FY22	13.8x
Company 9	Feb-19	2	$100,000	$300,000	FY22	3.0x
Company 10	Jun-18	1	$100,000	$248,112	FY22	2.5x
Company 11	Jul-18	5	$720,000	$1,856,996	FY23	2.6x
Company 12	Jun-18	3	$200,000	$242,427	FY23	1.2x
Company 13	Oct-20	1	$1,519	$1,519	FY23	1.0x
Total		**27**	**$2,152,490**	**$6,379,812**		**3.0x**

New Investments FY2021 – FY2023 Industry Concentration



New Investments FY2021 – FY2023 Region Concentration[1]



VIPC | VIRGINIA INNOVATION PARTNERSHIP CORPORATION
Connecting Innovators with Opportunity

Note: IT encompasses various sub-categories including FinTech, Apps, Cybersecurity, SaaS, Artificial Intelligence, and Software.

1) Southwest (1), Southern (3), and Harrisonburg (8) excluded due to 0 new investments.

SSBCI Equity Program

VVP Direct

Company Investments

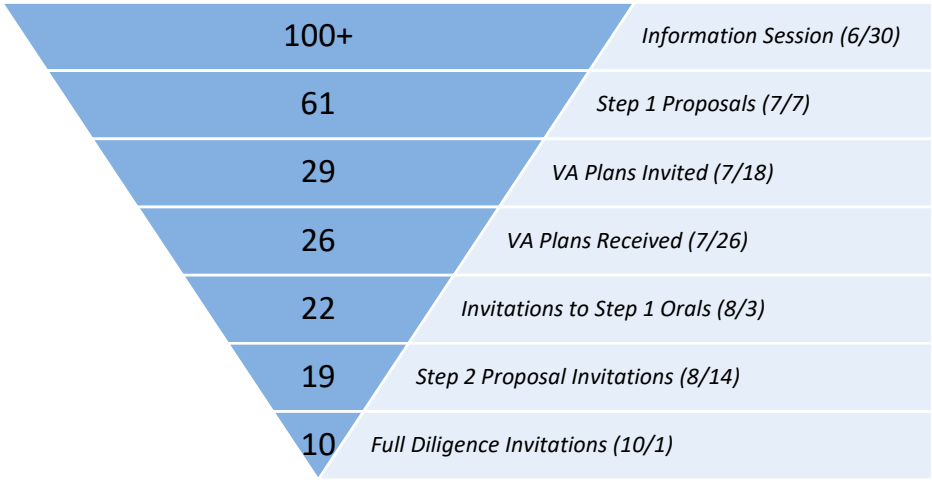
8Myles, AtWork, Babylon Micro-Farms, Bear Analytics, BrainBox, brandefy., Chippin, Electra.aero, electrotempo, Kinometrix, OpsCanvas, RunSafe Security, SLATEBIO, True Algae, wellthi

Inception to date: Key Stats

- **Capital deployed:** $7.1M
- **GoVA regions:** 7 (Regions 1, 2, 4, 5, 7, 8, and 9)
- **Sectors invested:** IT, Cybersecurity, Energy, Life Science, Aerospace, Agriculture, Autonomous Systems, Advanced Manufacturing, CPG
- **SEDI capital:** $2.7M (38%)
- **Companies:** 38
- **Pending close:** $3.7M term sheets issued to 21 companies
- **Pipeline value:** $25M sought by 70 companies

VVP Fund of Funds

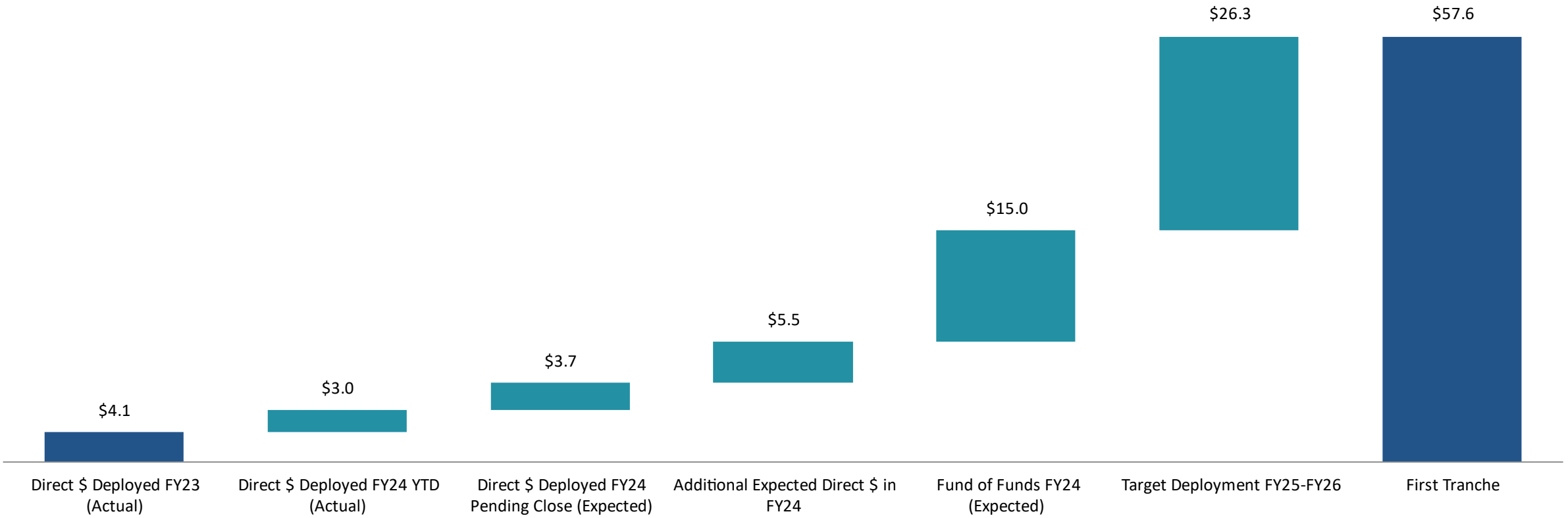
Process Update and Timeline



Solicitation Process Update

- **Target allocation:** $15.0M
- **GoVa regions covered:** 6 (Regions 2, 3, 5, 6, 7, 9)
- **Sectors:** IT, Aerospace, Space, Cleantech, DefenseTech, Healthcare, Software, Cybersecurity
- 10/10 remaining invitees are new or emerging funds
- 10/10 remaining invitees have underrepresented minority managing partner
- **Next steps:**
  - 12/05/23 – Initial Manager Recommendations
  - 4Q23-1Q24 – LPA Execution

SSBCI Equity Program



Investment Division – FY23 Scorecard Performance

Program	Success Metric	FY2023 Measure	FY2023 Result	Assessment
Growth Acceleration Program ("GAP")	Number of investments placed	12-16 GAP invesments	36 investments placed	Above Plan
	Leverage Cash	At least $25M in initial and follow-on capital from non-commonwealth sources	$237M leveraged cash	Above Plan
	Rate of Return	1x rate of return	1.9x rate of return	Above Plan
Virginia Founders Fund II ("VFF II")	Number of investments placed	10 VFF investments placed	12 VFF investments placed	Above Plan
Virginia Partners Fund ("VPF")	Number of investments placed	10 VPF investments placed	10 VFF investments placed	On Plan
SSBCI Venture Capital Program	Formulate Investment Strategy Target Date	9/15/2022	Achieved, in cooperation with VIPC Board SSBCI Task Force	On Plan
	Implement Direct Program Target Date	4Q22	Achieved, Direct Program deployment ready 4Q22. VSBFA MOA signed on December 23, 2022; funds received January 2023	On Plan
	Implement Indirect Investment Program Target Date	2Q22	Achieved, Indirect Program completed concept paper phase and launched RFP soliciting Fund Managers	On Plan
Opportunity Fund	Pilot Implementation	Continue pilot of one or more Seed Stage III investments by 4Q22	Three Investments in Pipeline; None Placed	Deferred
	Model Definition	Define implementation model 1Q23	Implementation Model Defined: 1/23	
	Model Implementation	Initiate implementation by 3Q23	Implementation Deferred; Continue to Monitor Progress by Other States	

Commercialization Division

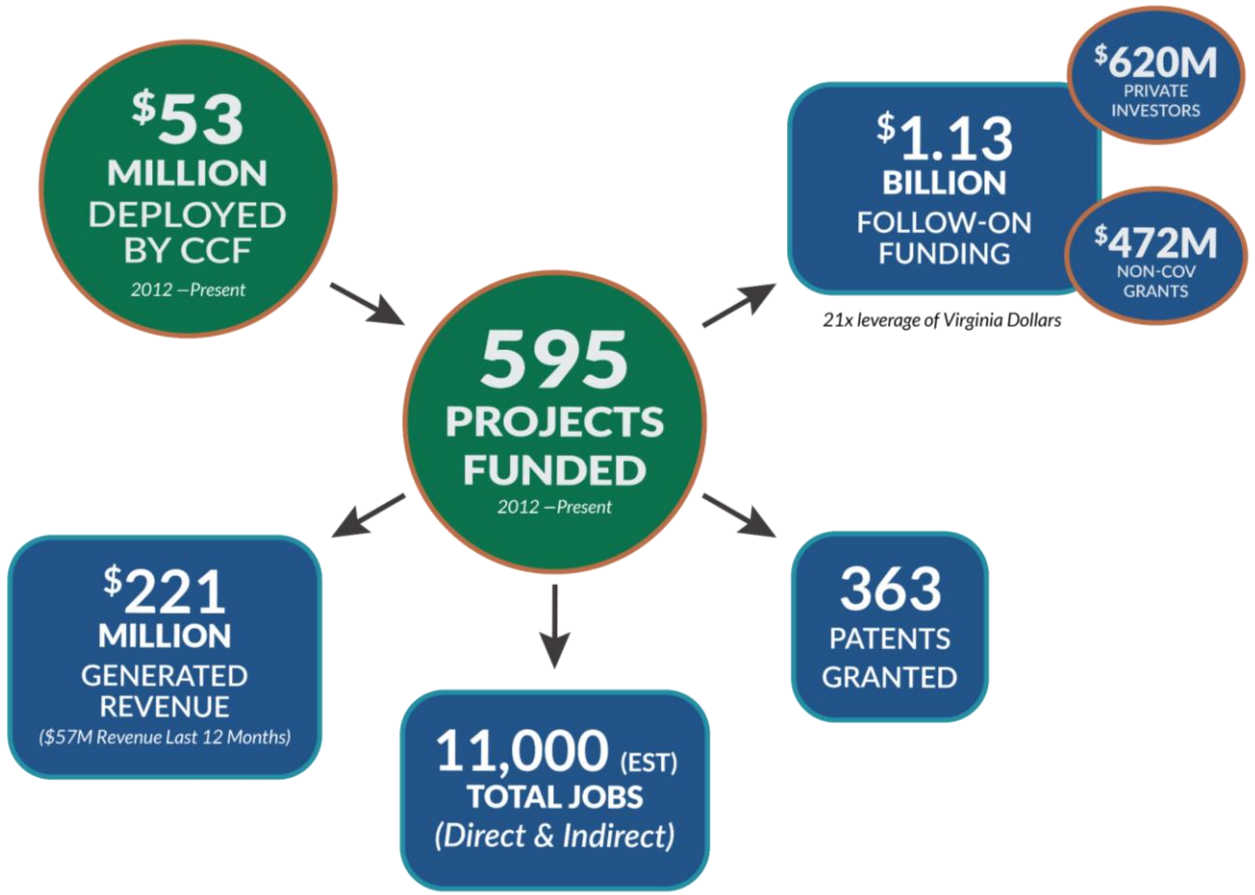
Overview

Commercialization seeks technologies with a high potential for economic development and job creation that position the Commonwealth as a national leader in science- and technology-based research, development, and commercialization and is funded through Commonwealth Commercialization Fund ("CCF").

FY23 Key Stats

Private Sector (PS)	Higher Ed (HE)	Entrepreneur in Residence (EIR)	Eminent Researcher Recruitment & Retention (ERR)
212 PS Grant Applications Attracted & Reviewed	25 HE Grants Awarded	4 EIR Grants Awarded	4 ERR Grants Awarded
100 PS Grants Awarded	$1.9M in Commitments	$666,000 in Commitments	$2.4M in Commitments
$6.5M in Commitments		JMU, VCU, University of Virginia, William & Mary	$2M Bond Funded
			JMU, University of Virginia, Virginia Tech

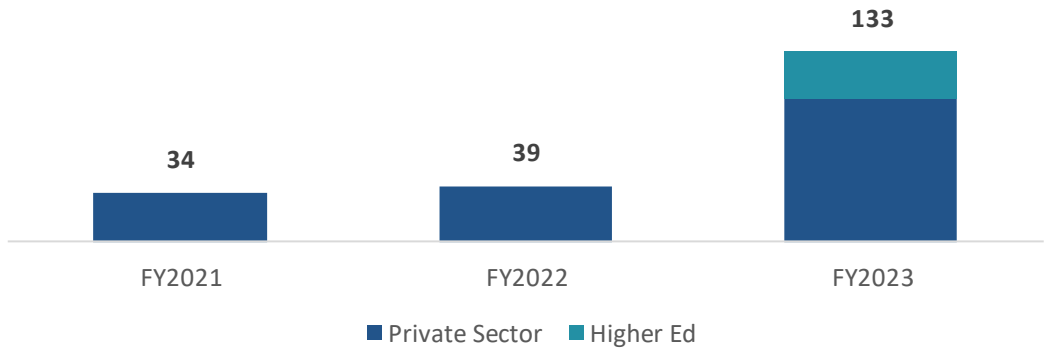
Division Stats Since Inception in 2012



CCF Activity

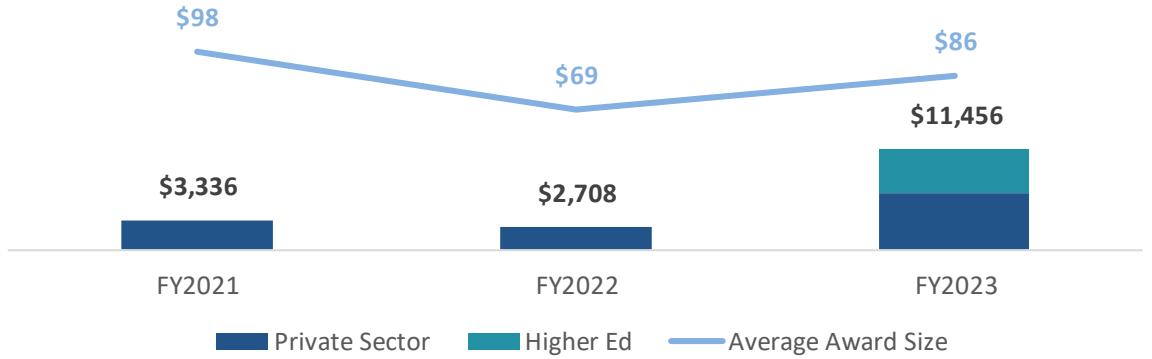
Total # of Awards

Applications:	61	63	250
Acceptance Rate:	56%	62%	53%



Total $ of Awards and Average Award Size

($ in thousands)



Industry Concentration

($ in thousands)

Industry	FY2021		FY2022		FY2023	
	#	$	#	$	#	$
IT	10	$942	18	$1,246	40	$3,646
Life and health sciences	10	$996	9	$675	35	$2,455
Energy	2	$200	1	$75	6	$1,570
Cybersecurity	4	$400	2	$150	11	$945
Aerospace	2	$200	1	$75	7	$665
Advanced manufacturing	0	$0	2	$95	10	$610
Agriculture	4	$398	0	$0	7	$470
Transportation	2	$200	3	$170	6	$328
Other	0	$0	3	$223	11	$768
Total	**34**	**$3,336**	**39**	**$2,708**	**133**	**$11,456**

Note: IT encompasses various sub-categories including FinTech, Apps, Cybersecurity, SaaS, Artificial Intelligence, and Software.

Awards by Region

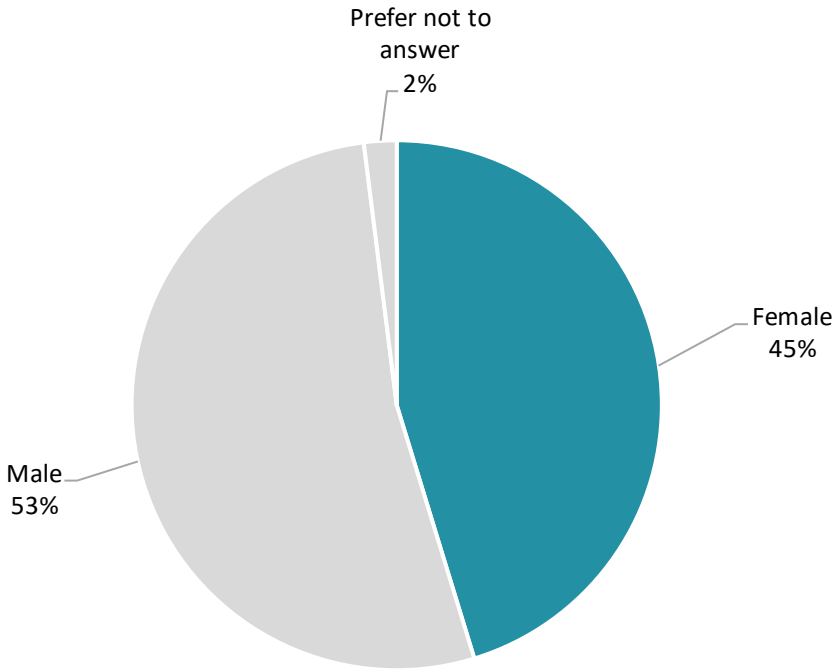
($ in thousands)

Region (GO VA #)	FY2021		FY2022		FY2023	
	#	$	#	$	#	$
NOVA (7)	12	$1,195	18	$1,191	43	$3,059
Roanoke/Blacksburg (2)	5	$500	7	$525	26	$2,404
Charlottesville (9)	11	$1,046	2	$95	14	$2,345
Richmond (4)	4	$396	8	$598	26	$2,015
Hampton Roads (5)	2	$200	4	$300	17	$1,204
Shenandoah Valley (8)	0	$0	0	$0	5	$280
Southwest (1)	0	$0	0	$0	2	$150
Southern (3)	0	$0	0	$0	0	$0
Fredregion (6)	0	$0	0	$0	0	$0
Total	**34**	**$3,336**	**39**	**$2,708**	**133**	**$11,456**

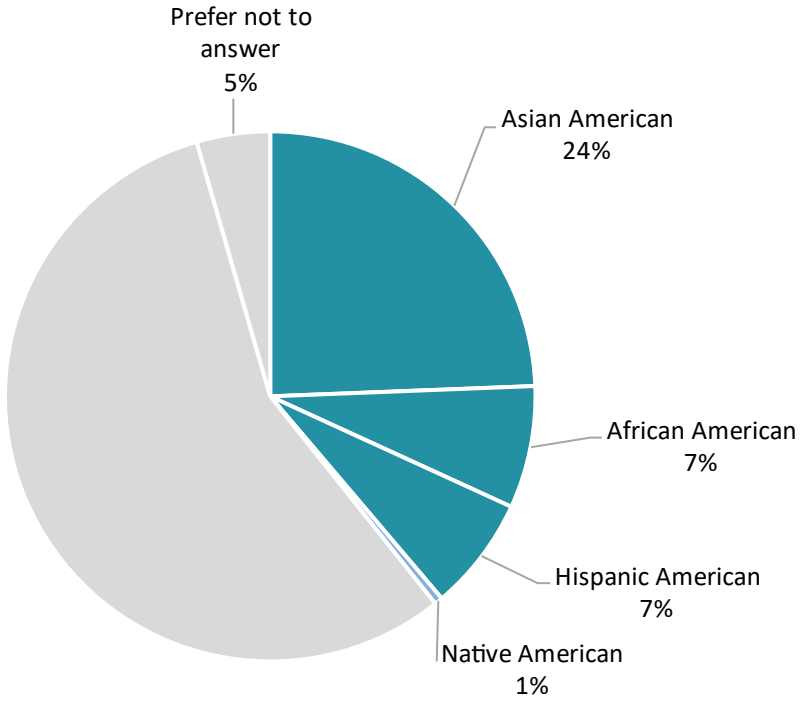
Note: Refer to appendix for map of GO Virginia regions.

CCF Activity (cont.)

Female Founders (FY2021 – FY2023)



Ethnically Diverse Founders (FY2021 – FY2023)



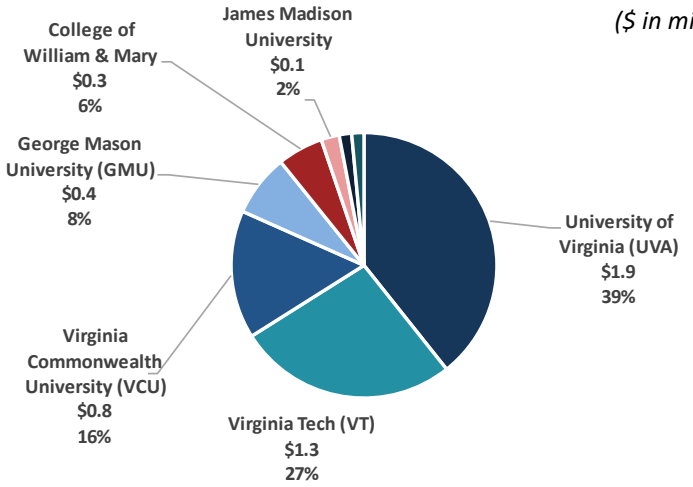
CCF – Higher Education

Top 15 Largest Higher Ed (HE) Awards in FY2023

Rank	University / Organization	Grant Program	Amount Awarded	Primary Industry	Project Description
1	University of Virginia (UVA)	ERR	$1,250,000	Energy	Retention of Eminent Researcher in Clean Energy at UVA
2	Virginia Tech (VT)	ERR	$1,000,000	IT	Retention of Eminent Researcher in Information Technology - Quantum Information Science and Engineering
3	University of Virginia (UVA)	EIR	$250,000	Aerospace	Support for Entrepreneur-in-Residence Program at UVA LVG (FY23)
4	Virginia Commonwealth University (VCU)	EIR	$249,874	Cybersecurity	Support for Entrepreneur-in-Residence Program at VCU (FY23)
5	College of William & Mary	EIR	$126,000	IT	Support for Entrepreneur-in-Residence Program at W&M (FY23)
6	Virginia Tech (VT)	ERR	$100,000	Advanced manufacturing	Retention of Eminent Researcher in Smart Manufacturing
7	Virginia Commonwealth University (VCU)	HE	$75,000	Modeling and simulation	Machine Intelligence for Automation of Pharmaceutical Data Analysis
8	Virginia Commonwealth University (VCU)	HE	$75,000	Life and health sciences	Developing Decellularized Skeletal Muscle to Treat Rotator Cuff Injuries
9	Virginia Tech (VT)	HE	$75,000	Agriculture	Technical Validation of Commercial Biofertilizers to Enhance Soybean Yield
10	Virginia Commonwealth University (VCU)	HE	$75,000	Life and health sciences	Personalized Human Brain Phantom and Individualized Rat Brain Phantom for Neuromodulation Procedure Research and Training
11	College of William & Mary	HE	$75,000	Life and health sciences	A Minimum Viable Product for Real-Time FoG Detection and Intervention
12	Virginia Commonwealth University (VCU)	HE	$75,000	Life and health sciences	Home-Use Electrochemical Sensors for Blood Electrolyte Monitoring
13	Virginia Commonwealth University (VCU)	HE	$75,000	Life and health sciences	A Novel Targeted Antibody Therapy for Triple-Negative Breast Cancer
14	George Mason University (GMU)	HE	$75,000	Life and health sciences	Ergonomic Collapsible Urigami Cup: An Affinity-Capture Transfer Medium for Ultrasensitive Urinary Pathogen Cultures
15	Virginia Commonwealth University (VCU)	HE	$75,000	Life and health sciences	Point-of-Care Devices for Veterinary Diagnostics

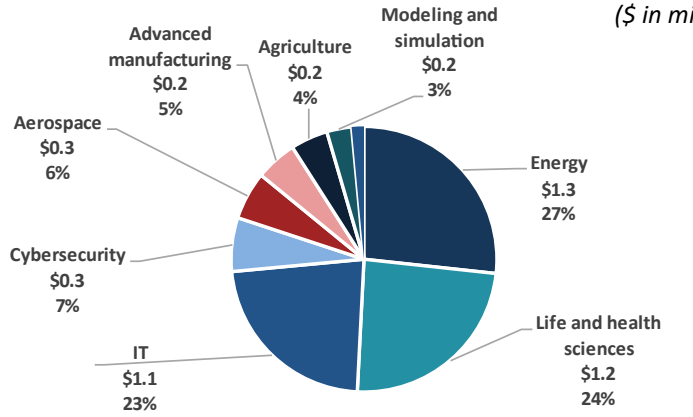
HE Awards in FY2023 by University/Organization

($ in millions)



HE Awards in FY2023 by Industry

($ in millions)



Case Study: The Gourdie Lab at Virginia Tech

Recruitment and Retention

- In 2012, Virginia Tech hired Robert Gourdie, PhD from the Medical University of South Carolina (MUSC)
- **VIPC Role**
  - VIPC awarded Virginia Tech a $250,000 CRCF Eminent Researcher Recruitment (ERR) grant to assist in recruitment efforts

The Gourdie Lab

THE GOURDIE LAB

- Led by principal investigator Robert Gourdie, Ph.D., FAHA, AIMBE, the Gourdie Lab studies subunit proteins called connexins, located in gap junctions. Connexins are the channels that enable direct communication between cells
- **VIPC Role**
  - Awarded $100,000 grant in 2014 for “Advanced Manufacture and Testing of a Brain Cancer Treatment ”
  - Awarded $100,000 grant in 2019 Precision Medicine Exosomal Drug Delivery Medtech for Heart Attack

Two Separate Spinouts Launched by Prof. Gourdie and His Students

ACOMHAL RESEARCH

- Acomhal Research provides novel and effective therapeutic approaches to prevent tumor recurrence and metastasis
- CEO Samy Lamouille co-founded Acomhal with CSO Rob Gourdie
- **VIPC Role**
  - $50,000 CCF grant in 2017
  - $100,000 VVP investment in 2021

The Tiny Cargo Company

- Tiny Cargo Company has innovated a novel drug delivery system based on non-immunogenic bovine milk derived exosomes for protected oral or IV based delivery of potent therapeutics
- CEO Spencer Marsh co-founded Tiny Cargo with Rob Gourdie
- **VIPC Role**
  - $75,000 CCF grant in 2022
  - $200,000 potential VVP investment is currently pending

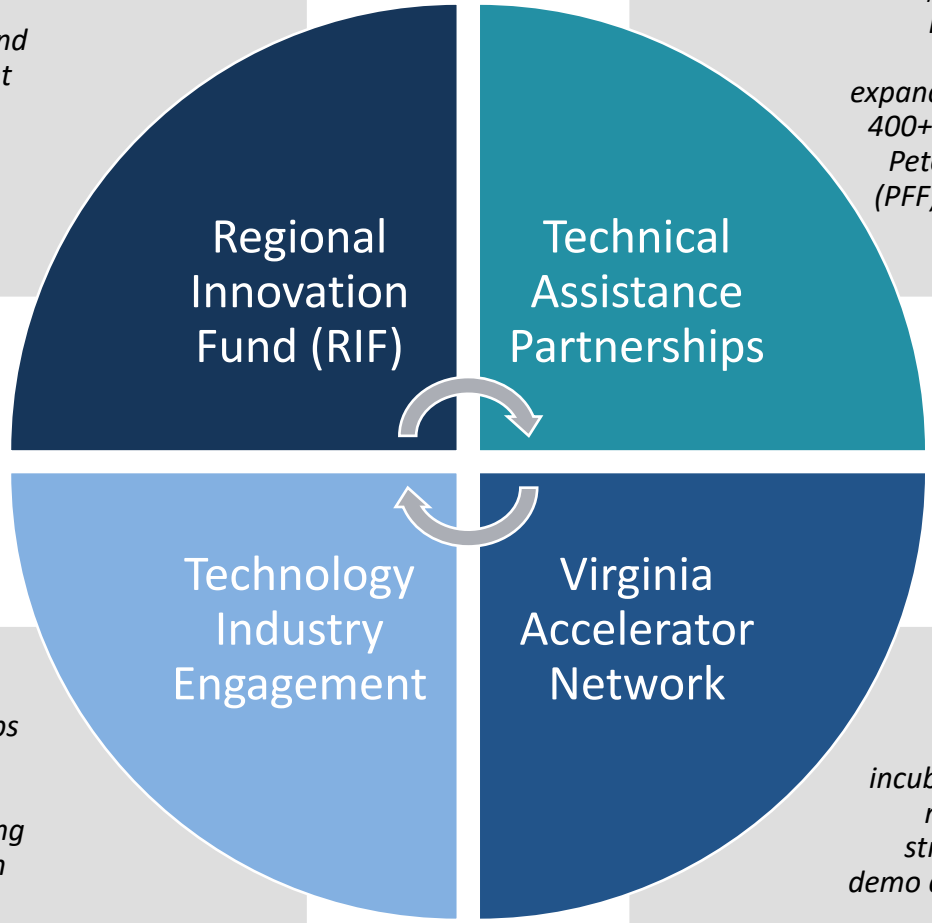
Commercialization Division – FY23 Scorecard Performance

Program	Success Metric	FY2023 Measure	FY2023 Result	Assessment
Commonwealth Commercialization Fund ("CCF")	Leverage Cash	Minimum 20:1 leveraged cash ratio	22.5 leveraged cash ratio	Above Plan
Private Sector	Private sector grants awarded	Attract and review 150 applications, and commit $4.6M in awards	216 applications received Committed $6.5 across 100 awards	Above Plan
Higher Ed	Higher ed grants awarded	Attract and review 30 applications, and commit $1.6M in awards	33 applications received Committed $1.9M across 25 awards	Above Plan
Eminent Researcher Recruitment & Retention (“ERR”)	ERR grants awarded	Commit $2.0M to Virginia colleges and universities through the ERR program	Committed $2.4M across 4 awards	Above Plan
Entrepreneur-in-Residence (“EIR”)	EIR grants awarded	Commit at least $600k to Virginia colleges and universities through the EIR program	Committed $666k across 4 awards	On Plan
Federal Funding Assistance Program	Number of companies mentored and trained	350 companies mentored and trained	435 companies mentored and trained	Above Plan

Entrepreneurial Ecosystems Division

Overview

Acts as a supporter, connector, and convener for entrepreneurial ecosystems and stakeholders throughout Virginia.



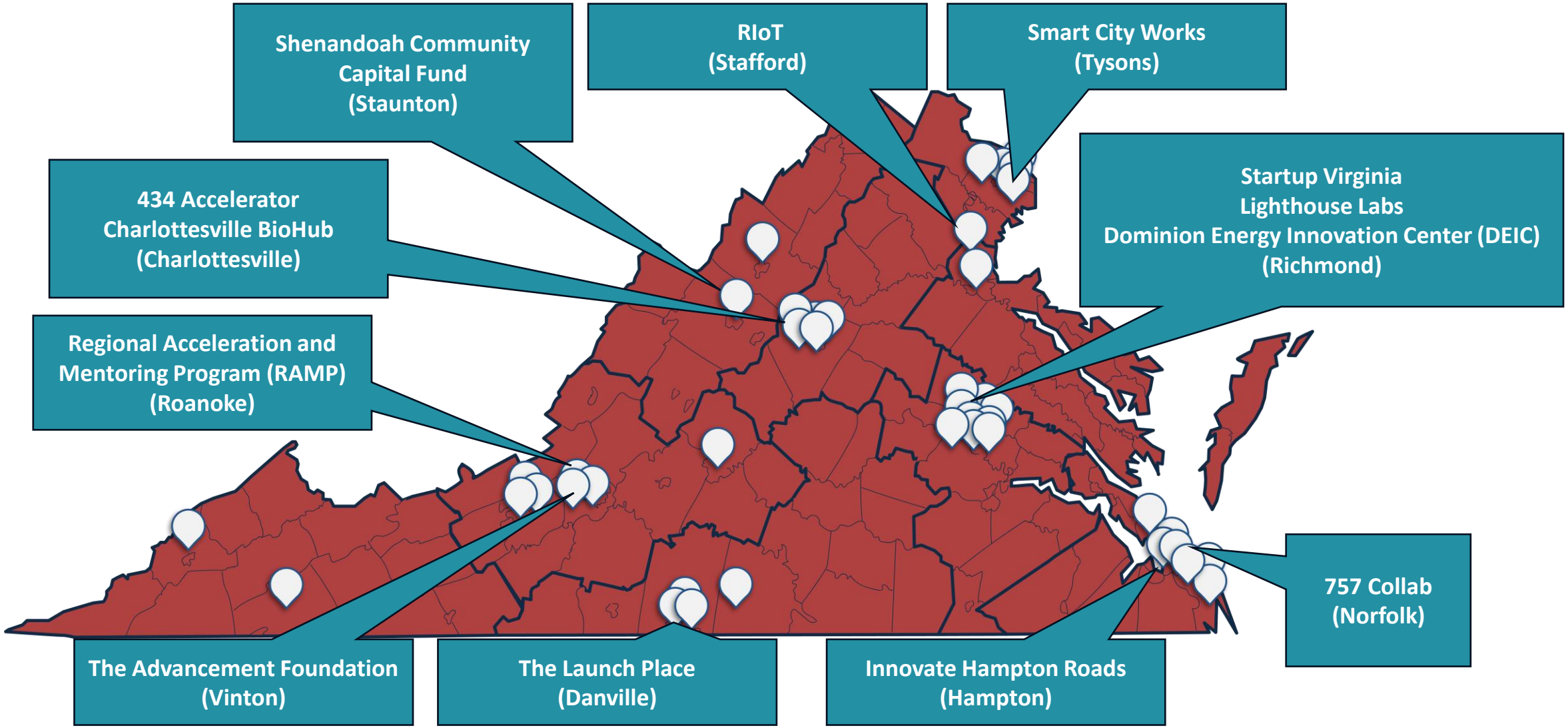
Over $1.65M in competitive grants to date to ecosystem and entrepreneurship development programs in Charlottesville, Hampton Roads, Richmond, Roanoke Blacksburg & Shenandoah Valley

$200K annually to the Virginia Innovation Commercialization Assistance Program (ICAP) to expand pre-acceleration services for 400+ founders statewide. $500K in Petersburg Founders Fund grants (PFF) provided to 20 local startups and small businesses.

Annual corporate memberships and active board service for state and regional technology industry organizations including VA Bio and the 9 regional Tech Councils.

Connects 10+ Virginia-based, nonprofit accelerators and incubators for shared learning and new collaborations. $200K+ in strategic mini-grants to support demo days, pitch nights, etc. Annual Conference in Charlottesville

Regional Ecosystems



Ecosystem Partner Program Funding

RIF Key Stats

RIF activities funded in FY23 have led to the following cumulative outcomes for entrepreneurs

385
Pre-accelerated

25
Accelerated

177
Incubated

2,000
Mentorship Hours

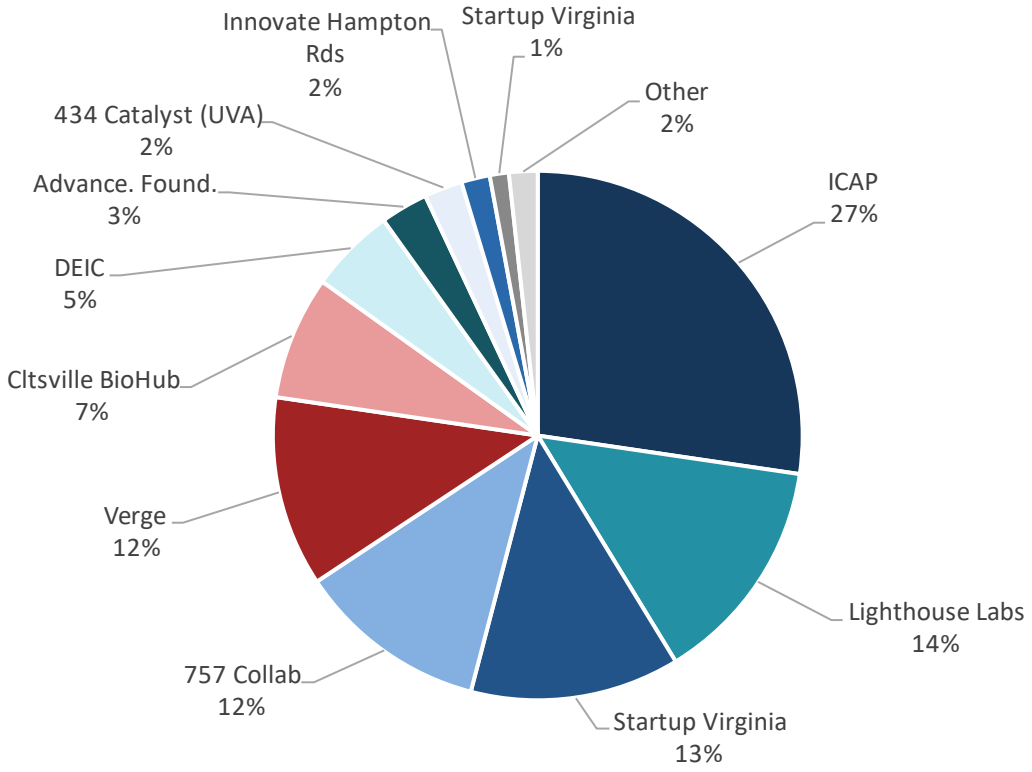
Ecosystem Grant Awards

Ecosystem Partner	Region (GO VA #)	FY2021	FY2022	FY2023	Total
Verge (RAMP)	Roanoke/Blacksburg (2)	$220,000	$20,000	$200,000	$440,000
Charlottesville BioHub	Charlottesville (9)	$0	$200,000	$200,000	$400,000
Innovation Commercialization Assistance Program (ICAP)[1]	NOVA (7)	$200,000	$0	$200,000	$400,000
757 Collab	Hampton Roads (5)	$20,000	$220,000	$0	$240,000
Lighthouse Labs	Richmond (4)	$220,000	$20,000	$0	$240,000
Shenandoah Community Capital Fund (SCCF)	Shenandoah Valley (8)	$20,000	$20,000	$150,000	$190,000
Startup Virginia	Richmond (4)	$20,000	$0	$120,000	$140,000
Innovate Hampton Roads	Hampton Roads (5)	$0	$0	$20,000	$20,000
The Launch Place	Southern (3)	$0	$0	$20,000	$20,000
Wireless Research Center (RIoT Accelerator)	Fredregion (6)	$0	$0	$20,000	$20,000
Dominion Energy Innovation Center (DEIC)	Richmond (4)	$0	$20,000	$0	$20,000
Smart City Works Innovation Hub	NOVA (7)	$0	$20,000	$0	$20,000
Total		**$700,000**	**$520,000**	**$930,000**	**$2,150,000**

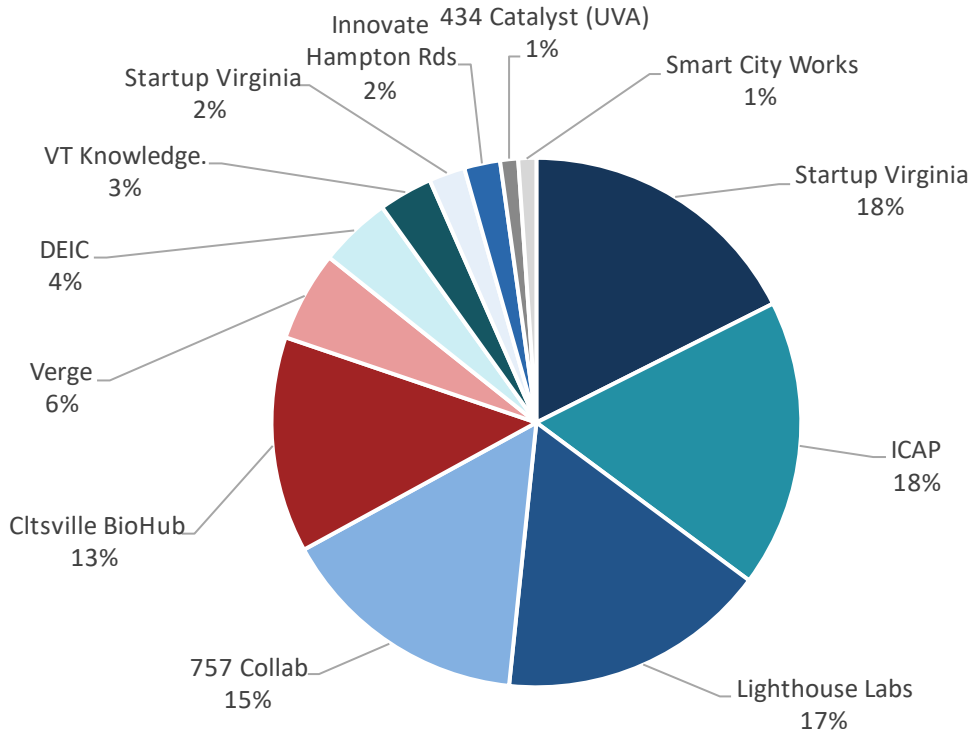
1) ICAP program operates statewide.

Ecosystem Partner Startup Funding

New CCF Awardees FY2021 – FY2023



New VVP Investments FY2021 – FY2023

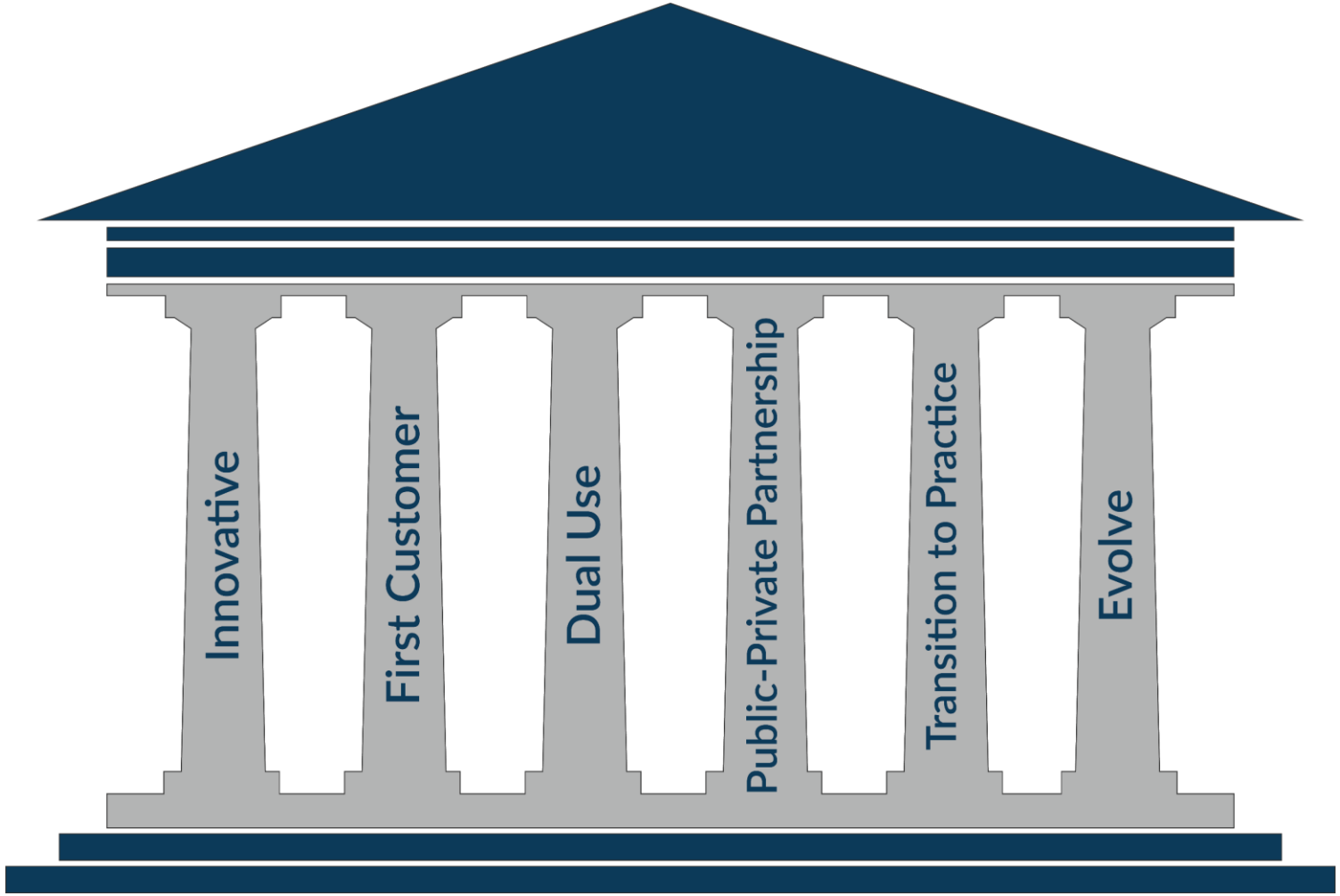


FY23 Scorecard Performance

Program	Success Metric	FY2023 Measure	FY2023 Result	Assessment
Innovation Ecosystem Development	Strengthen Virginia's technology-based entrepreneur support organizations and ecosystem builders through technical assistance, peer network development, and flexible funding support.	Co-host one statewide stakeholders conference	Assumed leadership of the Virginia Accelerator Network ("VAN") and hosted a statewide Summit in Charlottesville. Co-hosted 2 statewide meetings of Virginia's 9 regional technology councils with CODEVA	Above Plan
		Host 6 statewide networking and educational meetings	Hosted 9 monthly virtual VAN meetings.	Above Plan
		Sponsor 12 regional ecosystem stakeholder activities	VIPC sponsored and attended 20+ regional ecosystem stakeholder activities	Above Plan
		Create a new program to help ecosystems access external funding opportunities	Launched and executed $500k in Petersburg Founders Fund grants. Provided technical assistance to multiple ESOs seeking federal grants	Above Plan
		Partner with the GMU ICAP program by providing $200K in funding to support customer discovery activities	Services provided to 166 new early-stage clients and 239 existing early-stage clients. 171 companies completed ICAP introductory course	Above Plan
Regional Innovation Fund (RIF)	Administer the Regional Innovation Fund ("RIF") to provide sustaining state funding to regional ecosystem builders and entrepreneur support organizations.	Deploy up to $2M in RIF grant funding	Received 4 grant proposals seeking $650K in funding, and awarded 4 grants for $650K to ESOs	Below Plan
		350 founders pre-accelerated	385 founders pre-accelerated	Above Plan, Combined
		75 startups accelerated	25 startups accelerated, more ESOs shifted to pre-acceleration and incubation support	
		100 startups incubated	177 startups incubated	
		4,000 mentoring hours provided	1,928 mentoring hours provided - due to rolling award window, data reflects mid-performance period interim reports	On Plan
		2,500 ecosystem event attendees engaged	2,387 ecosystem event attendees engaged	
Customer Development Pilot Initiative	Expand availability of training and technical assistance resources provided to Virginia technology startups including, but not limited to, first customer programming, government procurement training, and corporate matchmaking services.	Deliver gap analysis of ecosystem resources available to startups for customer development and collaboratively design solutions with partner organizations.	Delivered a gap analysis report to Ecosystems Committee providing an overview of the ecosystem resources available to startups for customer development.	On Plan
			Responsibility for Customer Development Pilot Initiative follow-on activities transitioned to the Strategic Initiatives Division.	On Plan

Strategic Initiatives Division

Guiding Principles



Innovate: Actively engage partners to design, lead, validate and adopt leading edge solutions to pressing public needs

First Customer: Engage entrepreneurs on a deliverable/contract basis as a "first customer"

Dual Use: "Commercial First" technologies that also serve national or homeland security needs

Public-Private Partnership: Align and interact with Federal, State, Local and Industry partners

Transition to Practice: Pilot technologies in operational settings

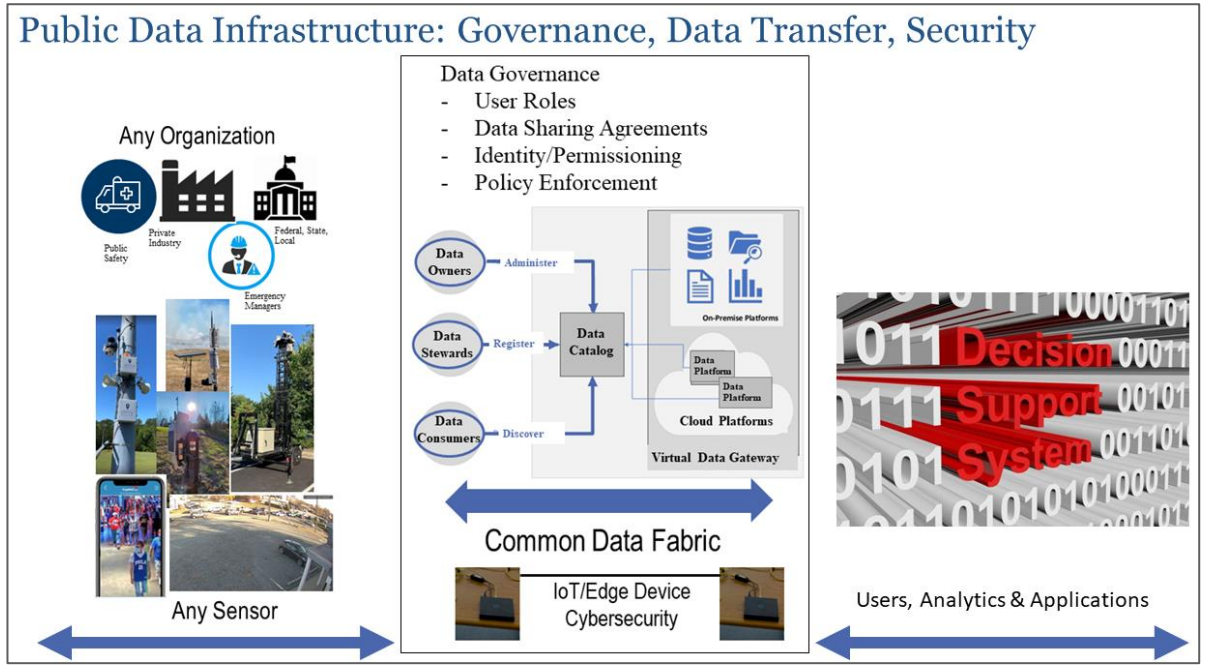
Evolve: Continually explore emerging technologies for industry sector development potential

Focus Characteristics and Strategy/Vision

Economic Development Focus Characteristics

- World class technologies/national and global collaborators
- Large emerging markets
- Local end user Communities
- Local high-paying job creation potential
- Locally affordable implementation and sustainment enable equitable access
- Widely accessible opportunities with limited educational background
- Virginia Leadership Position with current demonstrable outcomes
- Dual use and national security opportunities and implications

Strategy and Vision



Use Cases:

- Public Safety (awareness, warnings, resilience, response)
- Advanced Air Mobility
- Critical Infrastructure Protection
- Community Development

Overview

Partner Organization Overview

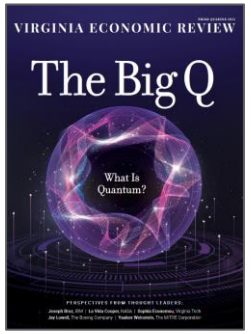
Organization	VIPC Responsibilities
Virginia PUBLIC SAFETY Innovation Center at VIPC	*Assist with the development and implementation of new and/or improved technology for use by public safety emergency responders at the local, state, and federal level*
SCITI LABS	*Continued execution against the defined Program Plan and customer technology interests including detection of environmental threats and smart buildings/communities*
VIRGINIA SMART COMMUNITY TESTBED STAFFORD, VA	*Continued support of early stages of initiatives that develop capabilities identified and desired by the communities involved, including pilot projects with a diverse set of communities*
Virginia Unmanned Systems Center at VIPC	*Maintain collaboration between businesses, investors, universities, entrepreneurs, and government organizations to support the rapid growth of the UxS industries in Virginia*

Focus Areas

- **Trusted Data Sharing Environment**
- **Advanced Air Mobility/ Autonomous Systems**
- **Internet of Things and Critical Infrastructure Cybersecurity**
- **Digital Transformation of Infrastructure**
- **Virtual Reality/ Workforce Development**

Key Emerging Projects

- A Maritime Center of Excellence centered around Hampton Roads, continuing work with VISA around the Port of Virginia and with Virginia Sea Grant around sea level rise and waterways impact
- Workforce of the Future efforts including STEM Camps and Clubs with middle/high schools, and Augmented Reality/Virtual Reality (AR/VR), including law enforcement and crisis intervention training
- Quantum computing, focused specifically on the development of quantum computing-based software solutions for areas such as Advanced Logistics



[Virginia Economic Review: Third Quarter 2023 by vedpvirginia - Issuu]

Projects Summary

DHS Key Stats

DHS reports the following nationwide results

$18.5M
Total S&T funding to 20 tech companies

$190M
Total private investment attracted

10.3x
Funding leverage factor

1,808
Direct and indirect funding of new jobs

Department of Homeland Security (DHS):

- Wildfire at the Urban Interface *(US Fire Administrator)*
- In-Building Sensors *(US Secret Service)*
- Immersive Learning Programs *(Federal Law Enforcement Training Center, DHS S&T for AI and Scientific Integrity)*
- Airspace Awareness/Counter-UAS *(DHS Mission Partners)*
- Advanced/Border Sensors *(CBP)*
- Airport/Critical Infrastructure Cybersecurity *(CISA, FEMA)*

Smart Communities:

- Locality implementations *(Stafford, Winchester, Chester, Roanoke, Virginia Beach)*
- Emergency Management *(VDEM)*
- Advanced Technologies *(AI, Quantum)*

Uncrewed Aerial Systems (UAS):

- Riverside Health, Port Security (*Pilots)*
- Stafford-Warrenton-Winchester AAM *(Pilot Operational Area)*
- Industry Growth Activities *(AUVSI, Xponential)*

Case Studies

Organization	Description and Outcome
VIRGINIA SMART COMMUNITY TESTBED STAFFORD, VA	• The Virginia Smart Community Testbed in Stafford County, Virginia, is the home to developing smart technology for the Commonwealth • First Smart City Testbed involving an IoT platform, fully integrated with 5G and other new and emerging technologies for Smart Cities around the country • The testbed is a “shared knowledge platform” to develop practical and relevant smart technologies solutions • The program has received national and international recognition and visits
AccessVR	• Developing Immersive Learning curriculum for medical and law enforcement communities • Early successes with three nursing schools and Federal Law Enforcement Training Center for 4th Amendment and Crisis Intervention Training • Apple has previously been engaged indicating potential for an Immersive Learning app for Apple Vision
N5 Sensors	• Industrial gas sensors adapted for DHS to “smell” wildfire ignition • Wildfire sensors now in Oakland, Colorado, Canada elsewhere with some available for Virginia • In the field, sensors can provide up to 30 minutes early warning ahead of 911 calls for wildfire response • US Fire Administrator allocating FEMA funding, briefing N5 solutions to DHS and White House

FY23 Scorecard Performance

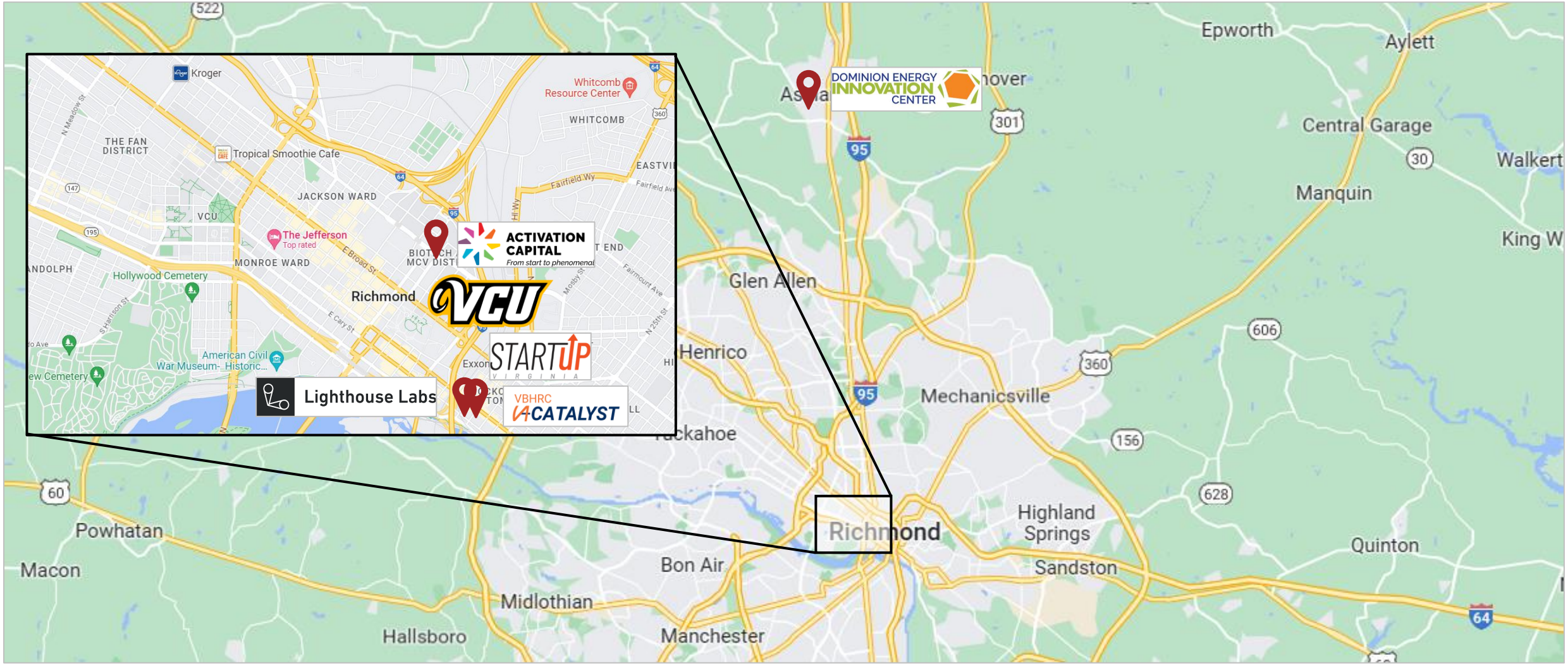
Program	Success Metric	FY2023 Measure	FY2023 Result	Assessment
Unmanned Systems	At least 2 Steering Committee meetings to advance this goal, and at least one larger Stakeholder meeting to engage the broader community	Continued strong industry engagement supporting the growth of this industry in Virginia	2 steering group meetings for UAS	Above Plan
	Two workgroup meeings by December 2022, and a recommendation package to the Legislature outlining desired investment and support for this sector	Substantial growth in the existing UxS infrastructure for AAM, to eventually create jobs and business opportunities in this emerging area.	Multiple VAAMA Workgroup meetings and Economic Impact study included legislative and funding recommendations. Workgroups continue in 2023, moving rapidly towards definition of Minimum Viable Infrastructure for AAM	Above Plan
	At least one new pilot project employing UxS capabilities	Creation of new market opportunities for Virginia UxS companies	Planning completed and support for demonstration of drone delivery of medications in conjunction with ODU and Riverside Health. Successful search and rescue missions conducted by VDEM at Apple Blossom Festival	Above Plan
Smart Communities	Active engagement with a minimum of 6 geographically diverse communities in the Commonwealth	Community expertise and engagement around new technology capabilities that can help drive local job growth and opportunities	Successfully engaged with Stafford (various), Chesterfield (microweather), Staunton (flood sensors), Roanoke (connected ambulance), Dahlgren/King George (data sharing), Richmond (CUAS)	On Plan
	Introduction of at least 3 entrepreneurial companies to market opportunities related to smart communities	"First Customer" market development in this growth sector	Introduced the following: AccessVR (training), Smart Community STEM Camps, Inc (training), Onclave Networks (cybersecurity)	On Plan
Public Safety Innovation Center	One new pilot project around emergency response data sharing	Position Virginia as the national leader in defining a new generation of data sharing mechanisms	Supported FEMA IPAWS demo (emergency notification). Now building on that to demonstrate a secure Public Data Infrastructure	Above Plan
Augmented Reality/Virtual Reality ("AR/VR")	Initiation of training operations in FY23	40 new jobs and a platform that supports new company formation	Via Winchester company, AccessVR, VR platform and jobs target achieved, company raising venture funds. Training initiated at nursing schools and with Federal Law Enforcement (FLETC)	Above Plan

FY23 Scorecard Performance (cont.)

Program	Success Metric	FY2023 Measure	FY2023 Result	Assessment
Maritime Center of Excellence	One new award and implementation	Define job growth opportunites in maritime industry	Awarded/Executed 5 demo pilots for Port Security. Explored potential job growth opportunities for this use case	On Plan
Quantum Computing	Demonstration of a commercially-viable quantum-based capability by FY23	Defined set of objectives for growth of the initial capability and coordination with university partners about emerging workforce needs	Demonstrated constrained UAV routing problem around Winchester, classic computer unable to solve it, photonic (quantum) computer did so. Coordinating with CCALS on new strategy to support advanced logistics	On Plan
Virginia Innovation Index	Deliver by December 1, 2022	Upon delivery, transition VII ownership to Commercialization Division	Delivererd and Transitioned to Commercialization Division per Legislation designation	On Plan
DHS SCITI Labs	Successful deployment of DHS provided flood sensors to communities throughout Virginia	A robust set of environmental sensors that can be applied to a variety of public safety use cases	120 flood sensors deployed; experimental deployment of a few wildfire sensors that are now nearing beta deployments with US Fire Administration; microweather sensors; indoor sensors being used by Secret Service	Above Plan
	Use of a network of "Living Laboratories" in communities to pilot new capabilities that can improve public safety and government services	Infrastructure protection against a range of threats, including cybersecurity, chemical/biological release threats, and other traditional threats, as well as job opportunities related to mitigating these threats	New cybersecurity architecture being deployed in Stafford; VDEM emergency operations drone oversight of public events (Apple Blossom); chemical/biological sensors in Capital One Arena; airspace awareness sensor stacks (airports)	Above Plan
	Initial demonstration of DHS conducted C-UAS experiments "in the wild" in Richmond	Virginia leadership for use of these capabilities in protecting critical infrastructure	Initial demonstration complete; expanded area being planned for second iteration in Spring 2024; active discussions on connecting Virginia civilian airspace awareness data to various Federal user groups	Above Plan

Richmond Ecosystem

Richmond Ecosystem

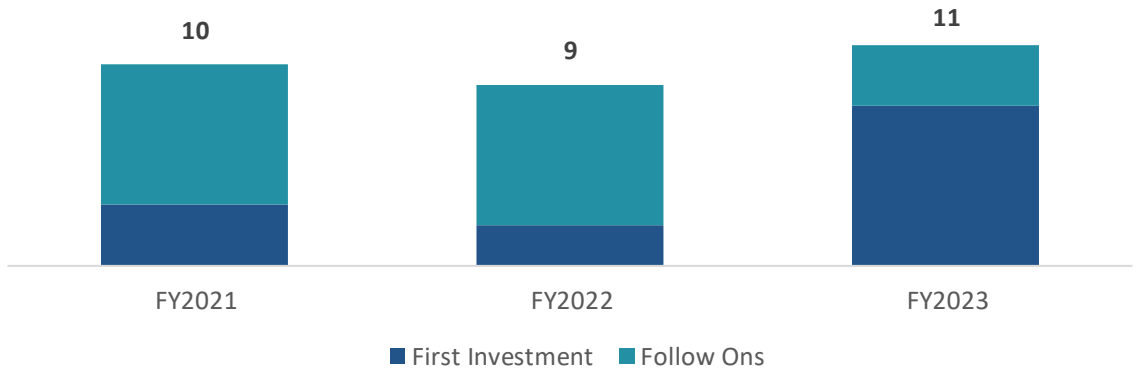


Note: VA Catalyst program operates statewide.

VIPC Investment Activity (Richmond / Region 4)

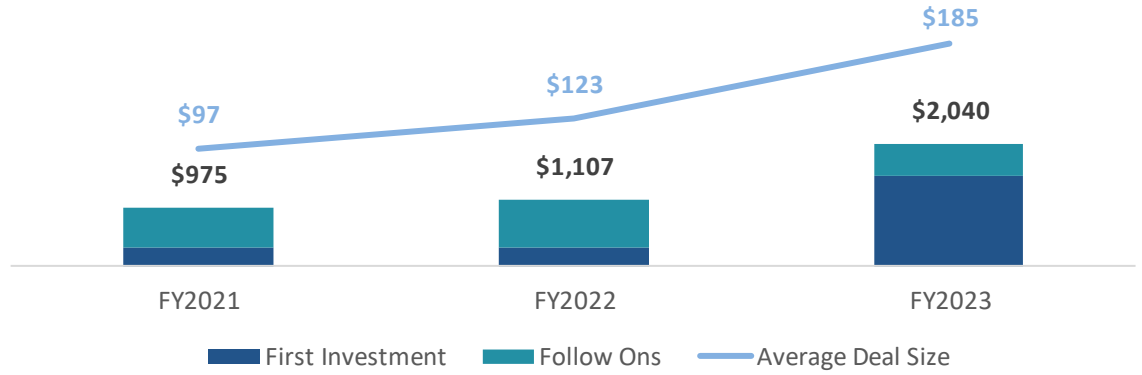
Total # of Investments

(Units in actuals)



Total $ of Investments and Average Deal Size

($ in thousands)



Industry Concentration

($ in thousands)

Industry	FY2021		FY2022		FY2023	
	#	$	#	$	#	$
IT	6	$525	5	$732	7	$1,240
Life and health sciences	1	$200	3	$275	2	$500
Communications	0	$0	0	$0	1	$150
Agriculture	2	$200	1	$100	1	$150
Transportation	1	$50	0	$0	0	$0
Total	**10**	**$975**	**9**	**$1,107**	**11**	**$2,040**

Recent Deals Summary

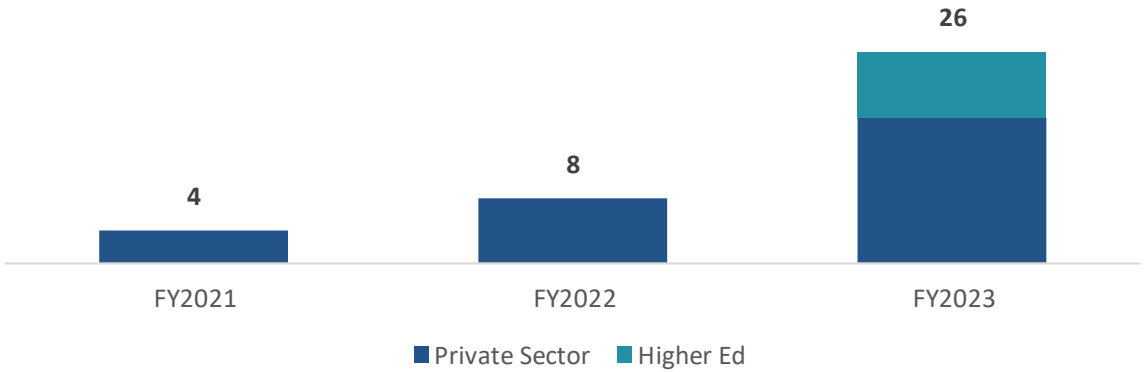
Company	Date	Round	Industry
Warehowz	Oct-23	Initial investment	IT
Joltz Rewards	Aug-23	1st Follow On	IT
Humanitru	Jun-23	1st Follow On	IT
Wrangld	Jun-23	Initial investment	IT
Liquet Medical Inc.	Apr-23	Initial investment	Life and health sciences
The Endowment Project	Apr-23	Initial investment	IT
BRAINBox Solutions	Mar-23	Initial investment	Life and health sciences
Babylon	Feb-23	4th Follow On	Agriculture
Brandefy	Dec-22	Initial investment	Communications
Llamawood	Oct-22	Initial investment	IT

Note: IT encompasses various sub-categories including FinTech, Apps, Cybersecurity, SaaS, Artificial Intelligence, and Software.

VIPC CCF Activity (Richmond / Region 4)

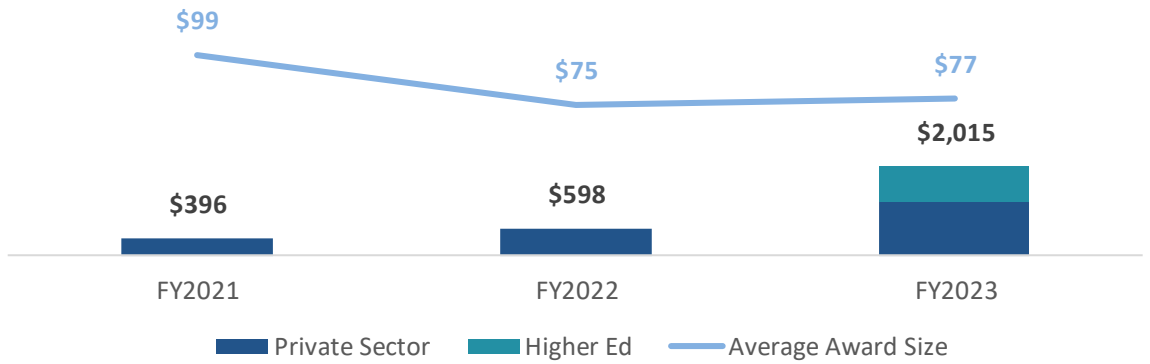
Total # of Awards

(Units in actuals)



Total $ of Awards and Average Award Size

($ in thousands)



Industry Concentration

($ in thousands)

Industry	FY2021		FY2022		FY2023	
	#	$	#	$	#	$
IT	3	$300	4	$300	10	$695
Life and health sciences	1	$96	2	$150	9	$675
Cybersecurity	0	$0	0	$0	1	$250
Modeling and simulation	0	$0	0	$0	2	$150
Advanced manufacturing	0	$0	0	$0	2	$95
Energy	0	$0	0	$0	1	$75
Communications	0	$0	0	$0	1	$75
Environment	0	$0	2	$148	0	$0
Total	**4**	**$396**	**8**	**$598**	**26**	**$2,015**

Recent Deals Summary

($ in thousands)

Company	Date	Investment	Industry	Program
VCU	Aug-23	$100	Life and health sciences	CCF HE
VCU	Aug-23	$75	Energy	CCF HE
Sherah	Jul-23	$20	IT	CCF PS
VCU	Jun-23	$75	Modeling and simulation	CCF HE
VCU	Jun-23	$75	Life and health sciences	CCF HE
HIO	May-23	$20	IT	CCF PS
ClearView Surgical	May-23	$75	Life and health sciences	CCF PS
VCU	May-23	$250	Cybersecurity	CCF EIR
Grantable	Apr-23	$75	IT	CCF PS
Schribble	Mar-23	$75	IT	CCF PS

Note: IT encompasses various sub-categories including FinTech, Apps, Cybersecurity, SaaS, Artificial Intelligence, and Software.

Case Study: Babylon Micro-Farms (EED/VVP/CCF)

Company Description

BABYLON MICRO-FARMS®

- Babylon Micro-Farms ("Babylon") builds its farms in-house at its facility in the Scott's Addition neighborhood of Richmond, VA
- Babylon has developed patented technology to power our indoor farms and farming service
- The service enables businesses and communities to have a year-round supply of ultra-fresh produce at the touch of a button
- Customer base includes global leaders like Aramark, Compass, Sodexo, along with many schools, hospitals, and senior care facilities

Virginia Competes to Win

VIPC | VIRGINIA INNOVATION PARTNERSHIP CORPORATION
Connecting Innovators with Opportunity

- VIPC introduced Babylon to Lighthouse Labs, made five separate investments totaling $500k since 2019, and awarded ~$175k from CCF programs across two grants since 2020
- In 2021, after discussion with VEDP, Babylon opened a new HQ in Richmond after considering options in several other states including Virginia and Arizona
- The company's relocation to Richmond brought 24 new jobs to the region
- The Virginia Department of Agriculture is working with Babylon to help grow both domestically and internationally

Private Capital Leveraged

CAV ANGELS
Harmonix
HULL STREET CAPITAL
New THEORY
VENTURESOUTH

Startup Continuum

2019

- ***5/3/19:*** *Participated in Lighthouse Labs accelerator program*
- ***6/20/19:*** *$100k invested by VVP in seed funding round*

2020

- ***6/4/20:*** *$75k grant awarded through CCF*
- ***12/23/20:*** *$100k invested by VVP in seed funding round*

2021

- ***2/3/21:*** *$100k invested by VVP in seed funding round*
- ***6/24/21:*** *~$100k grant awarded through CCF*
- ***2021:*** *VEDP HQ deal*

2022

- ***1/21/22:*** *$100k invested by VVP in bridge funding round*

2023

- ***2/2/23:*** *$150k invested by VVP in Series A funding as part of $8M total raise*

Appendix

Marketing and Communications – FY2023 Performance vs. Scorecard

Program	Success Metric	FY2023 Measure	FY2023 Result	Assessment
Maintain Effective Branding & Marketing Strategy	Increased marketing, communications, and social media interactions for each division and initiative Expand stakeholder and networking support opportunities via shared communication and messaging Continue to work with each Division to de-silo messaging to assure comprehensive representation of VIPC mission and purpose as a whole. Clarify "What does VIPC do" Daily updating of all social media, media, and web presence to maintain SEO and improve brand recognition	FY2023 Q2 Implemenation	Press Releases: 317 from July 1, 2022 to July 1,2023 This year we have seen an growth in search engine impressions by 11,600,000 via startup announcements, acknowledgments and connections to VIPC. Social Media Posting: 421 unique posts on LinkedIn, Facebook and X (Twitter) in support of StartUps. Followers have increased by 67% in the last year.	On Plan
Engage Across the Commonwealth	Work with division and initiative leaders to ensure that messaging is impactful, relevant and effective for educating and engaging their specific audience / stakeholders in a variety of modalities for VIPA and new brand opportunities. These efforts would include presentations, media outreach, social network engagement and in-person / virtual events	FY2023 Q2 Implemenation	Specific Marketing Plans for each initiative lead to an increase in VIPC Website traffic and engagement resulting in an increase of more than 200K from previous year to 274,573. These marketing efforts directly impacting each initiative. Examples include: Petersburg Founders Fund (240 Applications Received), VVP Fund of Funds (47 Applications Received), Virginia Unmanned Systems Center at VIPC (19 sponsors for Virginia Pavilion in Denver, CO)	On Plan
Communicate Connection	Embrace opportunities to highlight people, regions, and success stories regarding funding, technology, initiatives and workshops through video, imagery, social media, website, etc. A concerted effort to connect with people, companies, entrepreneurs, researchers, educators, and stakeholders who have been or could be assisted by VIPA/VIPC initiative or process	FY2023 Q2 Implemenation	Supported more than 243 events including National, Virginia (Statewide) and specific stakeholder engagements in FY23. Each event connected an unique group of stakeholders and required different levels of support, sponsorship, media engagement and creation. Some events merited Video production and recording. These resources dramatically impacted our ability to engage with large groups of stakeholders and impact narrative via follow-on presentations and media engagement.	On Plan

Finance and Administration – FY2023 Performance vs. Scorecard

Program	Success Metric	FY2023 Measure	FY2023 Result	Assessment
Operations	Maintain financially sound operations	Achieved	Higher FYE operating balance reflects reserve build-up	On Plan
Management Reports	Present to VIPC Financial Committee	Presented and approved	Quarterly reports presented to board as approved and per legislation.	On Plan
Documentation	Document and implement process for managing VIPC and the Centers of Excellence (pass-through entities) reporting to the VIPA Board	Center of Excellence committee created	Ongoing process	On Plan

Human Resources – FY2023 Performance vs. Scorecard

Program	Success Metric	FY2023 Measure	FY2023 Result	Assessment
Diversity, Opportunity & Inclusion	Align with Commonwealth's initiatives through internal and external programs	FY2023 Q2 implementation	Completed	On Plan
Evaluate Performance Management and Compensation Systems	Develop a process for employee promotions	FY2023 Q2 implementation	Completed	On Plan
Mission Ready	Evaluate and implement management development training	FY2023 Q2 implementation	Completed	On Plan
Review Performance	Recruit, hire, motivate, and retain high-performaning, diversified talent in a workforce that is geographically distributed throughout Virginia	FY2022 performance review	Completed	On Plan

GO Virginia Region Map