

TAB 1

All planned and actual
revenue and expenditures
along with funding sources

CENTER FOR INNOVATIVE TECHNOLOGY
 BUDGET ANALYSIS
 For Twelve Months Ending June 30, 2015

Operations Funded by VA Appropriation & Other Revenue

Revenue	In thousands		
	Fiscal Year 2015		
	Actual	Budget	Variance
Transfer from IEIA - Virginia Appropriation	\$ 5,746	\$ 8,317	\$ (2,571)
Interest & Miscellaneous Revenue	803	238	365
Total Revenue	6,349	8,555	(2,206)
Program Expenses			
R&D - Commonwealth R&T Strategic Roadmap	\$ 53	\$ 96	\$ (43)
R&D - CRCF	270	232	38
R&D - Innovative Metrics	82	89	(7)
Entrepreneur - Federal Proposal Assistance	160	276	(116)
Entrepreneur - GAP	3,767	6,700	(2,933)
Connect - Commonwealth Consulting & Education	33	45	(12)
Broadband - Office of Telework Promotion & BB Deployment	6	2	4
Broadband Planning and Assistance	302	500	(198)
Commonwealth Support - Cyber Security, Regional Growth, Mod & Sim	1,165	1,347	(182)
Commonwealth Support - MACH37	1,536	1,547	(11)
Other Activities - Innovation Center	114	12	102
Total Program Expenses	7,468	10,826	(3,358)
Other Expenses			
Business Development, Marketing, Advocacy, Fundraising, Miscellaneous	\$ 1,582	\$ 1,899	\$ (317)
Indirects Unapplied (Over-applied) to Projects and Transfer out	(289)	(185)	(84)
Total Other Expenses	1,313	1,714	(401)
Net Operations Funded by VA Appropriation & Other Revenue	(2,432)	(3,985)	1,553

Operations Funded by Contracts & Grants

<i>R&D</i>			
Program Revenue - 2014 Virginia Energy Plan	\$ 11	\$ -	\$ 11
Program Expense	28	-	28
Profit/(Loss)	(17)	-	(17)
Program Revenue - Rutgers - Mid-Atlantic Reg Coastal Observing System	\$ 52	\$ 15	\$ 37
Program Expense	52	15	37
Profit/(Loss)	-	-	-
Entrepreneur			
Program Revenue - State Small Business Credit Initiative Fund	\$ 1,978	\$ 780	\$ 1,218
Program Expense	2,464	925	1,539
Profit/(Loss)	(486)	(165)	(321)
Program Revenue - SBA FAST V	\$ 92	\$ -	\$ 92
Program Expense	119	-	119
Profit/(Loss)	(27)	-	(27)
Program Revenue - DMME Commonwealth Energy Fund	\$ 176	\$ 415	\$ (239)
Program Expense	176	415	(239)
Profit/(Loss)	-	-	-
Connect			
Program Revenue - Virginia Department of Education	\$ 877	\$ 330	\$ 347
Program Expense	641	360	281
Profit/(Loss)	36	(30)	66
Program Revenue - Virginia Community College System	\$ 59	\$ -	\$ 59
Program Expense	59	-	59
Profit/(Loss)	-	-	-
Program Revenue - Virginia Million Hearts	\$ 4	\$ -	\$ 4
Program Expense	4	-	4
Profit/(Loss)	-	-	-
Program Revenue - Alaska Answers Public Website	\$ 6	\$ -	\$ 6
Program Expense	6	-	6
Profit/(Loss)	-	-	-
Program Revenue - VHQC - Electronic Medical Health Records	\$ 14	\$ 12	\$ 2
Program Expense	14	12	2
Profit/(Loss)	-	-	-
Program Revenue - Airforce Analytical Discovery	\$ 791	\$ 472	\$ 319
Program Expense	793	472	321
Profit/(Loss)	(2)	-	(2)
Program Revenue - Nevada SLDS Implementation	\$ 1,591	\$ 1,628	\$ (37)
Program Expense	1,477	1,628	(151)
Profit/(Loss)	114	-	114
Broadband			
Program Revenue - NTIA Broadband Mapping and Planning	\$ 942	\$ 990	\$ (48)
Program Expense	942	990	(48)
Profit/(Loss)	-	-	-
Total Program Revenue	\$ 6,393	\$ 4,822	\$ 1,765
Total Program Expenses	\$ 8,775	\$ 4,817	\$ 1,952
Net Operations Funded by Contracts & Grants	\$ (382)	\$ (195)	\$ (187)

CONSOLIDATED REVENUE & EXPENSES

Revenue	12,742	13,177	(441)
Expenses	15,556	17,357	(1,807)
Change in Net Position	(2,814)	(4,180)	1,366

CHANGE IN NET POSITION

Change in Net Position	(2,814)	(4,180)	1,366
Beginning Net Position at July 1, 2014	7,308	6,994	314
Ending Net Position at June 30, 2015	\$ 4,494	\$ 2,814	\$ 1,680

INNOVATION AND ENTREPRENEURSHIP INVESTMENT AUTHORITY
BUDGET ANALYSIS FOR BUILDING OPERATIONS ONLY
 For Twelve Months Ending June 30, 2015

<i>BUILDING ANALYSIS</i>	In thousands		
	<i>Fiscal Year 2015</i>		
	<u>Actual</u>	<u>Budget</u>	<u>Variance</u>
<u>REVENUE</u>			
Rental Income - lease revenue	\$ 1,997	\$ 1,640	\$ 357
Total Revenue	\$ 1,997	\$ 1,640	\$ 357
<u>BUILDING EXPENSES</u>			
Payroll	282	300	(18)
Utilities	443	409	34
Administrative	138	138	-
Operating & Maintenance	126	146	(20)
Contracts	402	390	12
Insurance	100	100	-
Food Service Subsidy	44	34	10
Leasing Commission and Miscellaneous	149	41	108
Total Expenses	\$ 1,684	\$ 1,558	\$ 126
Net Income	\$ 313	\$ 82	\$ 231

TAB 2

A listing of the salaries,
bonuses, and benefits of all
employees

TAB 3 – GAP PROGRAM

By program, total grants made and investments awarded for each grant and investment program to include CRCF

GAP Investments made in FY2015

	Total investment
First Time GAP	
Nvite Inc.	\$ 100,000
Phosimmune, Inc.	125,000
Biotherapeutics, Inc	125,000
Cargosense, Inc.	100,000
Bloompop, Inc.	100,000
Blue Triangle Technologies, Inc.	100,000
Ostendio, Inc.	100,000
Neoantigenics, Inc.	12,951
Loop88, Inc.	100,000
Threatquotient, Inc.	100,000
Riff Digital, inc.	5,000
Ekare, Inc.	50,000
Ovastatis, LLC	25,000
TypeZero Technologies, LLC	125,000
Sensewear, Inc.	100,000
Follow on GAP	
Clearedge3D, Inc.	1,285
Fitnet Corporation	74,912
Urgent.ly, Inc.	16,667
Triblio, inc.	25
Cavion LLC	32,961
Sunnovations, Inc.	100,000
Sunnovations, Inc.	50,849
Sunnovations, Inc.	100,000
Bloompop, Inc.	100,000
Livesafe, Inc.	17,619
Archemedx, Inc.	100,000
Urgent.ly, Inc.	16,667
CargoSense, Inc.	100,000
Neoantigenics, Inc.	99,999
Loop88, Inc.	2,203
Brazen Careerist, Inc.	7,590
Urgent.ly, Inc.	16,667
Blue Triangle Technologies, Inc.	100,000
Power Supply Collective, Inc.	100,000
Threatquotient, Inc.	100,000
ID ME, Inc.	200,000
Divvy Cloud Corporation	100,000
PerformYard, Inc.	100,001
First Time MACH37	
Opplio Security, Inc.	25,000
Virgil Security, Inc.	50,000
FireDrillMe, Inc.	50,000
Bijoti, Inc.	50,000
Cyph, Inc.	50,000
SecureDB, Inc.	50,000
Syscurity Corporation	50,000
Iaspire, LLC	50,000
Jekudo Privacy Company	50,000
Eunomics, Inc.	50,000
Atomic Corporate Industries, Inc.	50,000
Anatropo, Inc.	50,000
Shevirah, Inc.	50,000
Follow on MACH37	
Vthreat, Inc.	100,001
Bijoti, Inc.	62,500
SecureDB, Inc.	100,000
Total July 2014 - June 2015	\$ 3,642,897



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CIT Invests in Ostendio, Inc.

Startup enters a \$5 billion marketplace to help digital health companies demonstrate better Information Security Compliance and Risk Management

February 3, 2015 (HERNDON, Va.) – The Center for Innovative Technology announced today that its CIT GAP Funds invested in Ostendio, Inc., an Arlington-based startup that delivers affordable information security & privacy compliance solutions to digital health companies.

Over \$30 billion a year is spent in the U.S. on information security compliance, about 10% of which is spent on eGRC (Government, Risk Management, and Compliance) tools. This segment is growing at over 14% a year, and regulatory changes stemming from new laws have led to heightened awareness of cyber security vulnerabilities and put greater focus on regulatory compliance. In 2014, over \$7 billion was invested in the digital health space alone.

Ostendio's MyVirtualComplianceManager™ (MyVCM™) is a cloud-based security and compliance management platform that delivers an easy to use, cost-effective way for companies to improve their Information Security posture. The platform enables the management and distribution of security policies and training, demonstrates employee compliance and facilitates effective vendor risk management. Ostendio's MyVCM was recently selected by MedStar Health, the largest not-for-profit health system in Maryland and the Washington, D.C., regions, to ensure its Health IT vendors are managing their compliance effectively.

Pete Jobse, CIT President and CEO, said, "The digital economy brings many challenges, such as new regulations, but far more opportunities. The team at Ostendio is seizing an opportunity that helps digital health companies simplify their administrative requirements so they can focus on their customers."

The \$2-3 billion a year spent on eGRC tools in the U.S. is primarily in the enterprise market. However, the need for it in the small and medium business space is growing. The digital health space, Ostendio's initial target market, is estimated at \$300 million, but when extended across other regulated segments, such as finance, utilities and government, the market potential expands to nearly \$1 billion. As Ostendio enhances its services to address more general enterprise needs such as training, document management and infrastructure support, the opportunity grows to approximately \$5 billion annually.

Ostendio CEO Grant Elliott said, “We have already demonstrated there is a significant demand for the functionality that MyVCM provides. We will use the GAP Funds investment to help us increase our distribution and sales channels.”

CIT GAP Funds is a family of seed- and early-stage investment funds placing near-equity and equity investments in Virginia-based high-growth technology, life science and clean technology companies.

Tom Weithman, CIT Vice President and GAP Funds Managing Director, said, “We are proud to invest in both Ostendio’s innovative technology and their strong team. As seed funds remain hard to find for these startups, CIT GAP Funds assists them with a proven public-private leveraged investment model that is helping create the new Virginia economy.”

Since its 2005 launch, CIT GAP Funds has invested in over 128 companies across the Commonwealth of Virginia, deploying more than \$16 million of public funds and attracting over \$257 million more in private funding.

About the Center for Innovative Technology, www.cit.org

Since 1985, CIT, a nonprofit corporation, has been Virginia’s primary driver of innovation and entrepreneurship. CIT accelerates the next generation of technology and technology companies through commercialization, capital formation, market development and revenue generation services. To facilitate national innovation leadership and accelerate the rate of technology adoption, CIT creates partnerships between innovative technology start-up companies and advanced technology consumers. CIT’s CAGE Code is 1UP71. To learn more, please visit www.cit.org. Follow CIT on Twitter [@CITorg](https://twitter.com/CITorg) and add the Center for Innovative Technology on [LinkedIn](#) and [Facebook](#).

About the CIT GAP Funds, www.citgapfunds.org

CIT GAP Funds makes seed-stage equity investments in Virginia-based technology, clean tech and life science companies with a high potential for achieving rapid growth and generating significant economic return for entrepreneurs, co-investors and the Commonwealth of Virginia. CIT GAP Funds investments are overseen by the CIT GAP Funds Investment Advisory Board (IAB). This independent, third-party panel consists of leading regional entrepreneurs, angel and strategic investors, and venture capital firms such as: New Enterprise Associates, Grotech Ventures, Valhalla Partners, Harbert Venture Partners HIG Ventures, Edison Ventures, In-Q-Tel, Intersouth Partners, SJF Ventures, Carilion Clinic, Johnson & Johnson, General Electric and Alpha Natural Resources.

About Ostendio, www.ostendio.com

Ostendio delivers affordable compliance solutions to digital health companies. Ostendio’s MyVirtualComplianceManager™ (MyVCM™) is a cloud based compliance management platform that delivers an easy to use, cost-effective way for companies to improve their Information Security posture. MyVCM™ allows businesses to: assess risk; create and manage critical policies and procedures; educate and assess employees on their security awareness; and monitor continuous compliance against industry regulations. Visit us at www.ostendio.com

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CIT GAP Funds Invests in nvite

Startup Provides Interactive Experience with Online Event Invitations

August 19, 2014 (HERNDON, Va.) – The Center for Innovative Technology (CIT) announced today that its CIT GAP Funds closed an investment in nvite, an Arlington-based startup that provides customers with an improved and interactive experience with online event invitations.

Nvite offers a unique experience for customers creating online invitations, providing a combination of socially intuitive mechanisms for increased engagement prior to, during, and after an event. Other online invitation services focus on RSVPs, while Nvite focuses on making events more engaging, with increased personalization, social share curation, mobile consideration, and promotional integration and support.

CIT President and CEO Pete Jobse said, “The team at nvite offers an improved experience to customers using online invitation services. Their innovative idea is what we look for when making CIT GAP Funds investments.”

Nvite CEO Martin Ringlein said, “We will use the investment from CIT GAP Funds to grow our core engineering team and user base, and to execute our go-to-market strategy.”

CIT GAP Funds is a family of seed- and early-stage investment funds placing near-equity and equity investments in Virginia-based high-growth technology, life science and clean technology companies.

Vice President of CIT Entrepreneur and Managing Director of the CIT GAP Funds Tom Weithman said, “CIT GAP Funds provides the early-stage funding that companies like nvite need to grow. CIT GAP Funds looks for startups that provide innovative services like nvite.”

Since its 2005 launch, CIT GAP Funds has invested in over 100 companies across the Commonwealth of Virginia, deploying more than \$13 million of public funds and attracting over \$200 million more in private funding.

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CIT GAP Funds Invests in TypeZero Technologies

Charlottesville startup and U.Va. licensee has patented software platform to manage and treat diabetes

June 26, 2015 (HERNDON, Va.) – The Center for Innovative Technology (CIT) announced today that its CIT GAP Funds has invested in TypeZero Technologies, LLC, an early-stage medical technology company with a proprietary intelligent control system that improves the safety, outcomes and quality of life for patients with Type 1 and Type 2 diabetes. CIT GAP Funds led TypeZero’s seed round, which included several other investors.

TypeZero’s core technology is a proprietary software platform that integrates data from approved medical devices in an intelligent, interoperable network for safer, more effective blood glucose management. This system, often known as an “artificial pancreas,” transforms the patient’s role in managing his or her blood glucose from hour-to-hour, active decision making and modification to periodic supervision of a trustworthy, automated, intelligent system.

“TypeZero is led by a management and scientific team that is commercializing the pioneering inventions created at the University of Virginia’s (U.Va.) Center for Diabetes Technology and bringing them to market as quickly as possible,” said Pete Jobse, CIT President and CEO. “These are the types of companies and people that are leading innovation in Virginia.”

In addition to its artificial pancreas software platform, TypeZero is developing a suite of cloud based applications and analytical services, which utilize its core algorithms to provide risk analysis, prediction, clinician advice, patient support and training for patients, caregivers, clinicians and insurers. In the U.S., an estimated 29 million people (9.3 percent of the population) have been diagnosed with diabetes and it is estimated that more than 86 million Americans have pre-diabetes. Of the 29 million, there are more than 1.5 million individuals who have been diagnosed with Type 1 diabetes and more than 4.5 million patients have insulin-dependent Type 2 diabetes. In 2012 alone, the U.S. spent \$176 billion in direct healthcare expenses related to the management of diabetes and diabetes complications. TypeZero’s artificial pancreas technology can virtually eliminate hypoglycemia and prevent long-term complications from diabetes by keeping blood glucose close to normal range.

“While there are many companies trying to address the management of diabetes care, TypeZero and U.Va. have created a powerful software platform that provides real-time, actionable intervention to

patients in a way that is easily integrated into current mobile devices, thus reducing the significant device burden already present in the state of the art treatment in diabetes management,” said Chad Rogers, TypeZero CEO.

TypeZero is one of many startup companies that have licensed technologies from the University of Virginia’s Licensing and Ventures Group (LVG). “These companies are advancing critical research and medical discoveries to global markets and to patients in need,” said Michael P. Straightiff, LVG’s executive director. “TypeZero has the potential to reshape how Type 1 and Type 2 diabetes are treated and holds the promise of giving patients more control over the management of their disease. CIT’s investments in U.Va. technologies are helping to ensure that companies like TypeZero have the resources needed to bring creative solutions to market.”

The CIT GAP Funds has invested over \$16 million to help develop nearly 130 high-growth new startups, which were then able to attract an additional \$286 million in private equity investments. For more information on the CIT GAP Funds, click [here](#).

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About TypeZero Technologies, www.typezero.com

TypeZero Technologies is a Charlottesville based healthcare technology company that is dedicated to revolutionizing the way the world manages and treats Type 1 and Type 2 diabetes. TypeZero is developing the inControl Diabetes Intelligence Platform, which is a patented software solution designed to integrate a universe of medical devices, services, and applications, transforming raw data into powerful control solutions.

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CIT Invests in Blue Triangle Technologies, Inc.

SaaS-based data analytics tool helps online retailers increase revenue

November 12, 2014 (HERNDON, Va.) – The Center for Innovative Technology (CIT) announced today that its CIT GAP Funds closed an investment in Blue Triangle Technologies, Inc. (BTT), a Richmond-based company that provides a data analytics platform that helps online retailers optimize web pages to achieve maximum performance, close transactions and increase revenue.

BTT offers a SaaS-based predictive analytics platform that combines application monitoring, business intelligence and web analytics. It allows online retailers to identify existing revenue “leakage” on their web sites and to understand how to optimize web pages to maximize revenue. BTT does this by unobtrusively gathering data from visitors, analyzing page speeds and cart abandonment rates, which help produce recommendations for each web page. This enables customers to prioritize resources to remediate issues on their sites, ultimately optimizing the ROI of web site re-engineering, network infrastructure spend, and marketing efforts.

Blue Triangle Technologies, Inc. CEO Donald E. Foss said, “Most online retailers have between 10-15% in revenue leakage that they are failing to capture; leakage that equates to significant unrealized revenue that merchants can otherwise be earning. Our platform allows these retailers to identify the location of the leakage to ultimately increase revenues. The investment from CIT GAP Funds allows us to continue our proof of concept trials and provide us with the ability to expand our marketing and engineering efforts.”

CIT President and CEO Pete Jobse said, “Blue Triangle Technologies’ experienced management team has developed an impressive analytics platform that can provide immense value to online and mobile retailers looking for ways to improve performance. BTT epitomizes what we look for in a company when making CIT GAP Funds investments.”

CIT GAP Funds is a family of seed- and early-stage investment funds placing near-equity and equity investments in Virginia-based high-growth technology, life science and clean technology companies.

Vice President of CIT Entrepreneur and Managing Director of the CIT GAP Funds Tom Weithman said, "Donald Foss and the BTT team are able to use their business and technical expertise to produce tools that helps organizations improve their online performance. BTT is an outstanding example of the emerging technology companies that we have in the Commonwealth."

Since its 2005 launch, CIT GAP Funds has invested in over 110 companies across the Commonwealth of Virginia, deploying more than \$15 million of public funds and attracting over \$230 million more in private funding.

About the Center for Innovative Technology, www.cit.org

Since 1985, CIT, a nonprofit corporation, has been the Commonwealth's primary driver in developing innovation-based economic development strategies and opportunities. CIT accelerates the next generation of technology and technology companies through commercialization, capital formation, market development and revenue generation services. To facilitate national innovation leadership and accelerate the rate of technology adoption, CIT creates partnerships between innovative technology startup companies and advanced technology consumers. Follow CIT on Twitter [@CITorg](https://twitter.com/CITorg) and add the Center for Innovative Technology on [LinkedIn](#) and [Facebook](#).

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CIT GAP Funds Invests in CargoSense

Startup offers data analytics to healthcare logistics providers

August 13, 2014 (HERNDON, Va.) – The Center for Innovative Technology (CIT) announced today that its CIT GAP Funds closed an investment in CargoSense, a Reston-based startup offering a big data and analytics product to healthcare logistics providers. New Dominion Angels, a Virginia-based angel investment group, invested alongside CIT.

Every year more than 80 million climate-sensitive pharmaceutical shipments are made, and the pharmaceutical industry incurs \$35 billion in losses resulting from damage that occurs during shipping. CargoSense's technology helps decrease this loss by collecting data such as light, temperature, pressure, humidity, shock and tilt using advanced sensor technology, and then providing intuitive data analysis to pharmaceutical logistics groups. Clients use the insights from CargoSense to reduce loss and ensure compliance for sensitive shipments.

CIT President and CEO Pete Jobse said, "CargoSense uses data analytics to reduce waste in the pharmaceutical supply chain, meeting a need to optimize the supply chain and save money. Innovative solutions like this one are what we look for when making CIT GAP Funds investments."

CargoSense was founded in 2012 by an impressive management team led by the founder of InfoEther and serial entrepreneur, Rich Kilmer. Kilmer is joined on the executive team by other notable InfoEther alums and successful career entrepreneurs.

CargoSense CEO Rich Kilmer said, "We will use the investment from CIT GAP Funds to extend key product features, including our reporting and analytics. The investment will also help us grow sales within our existing customer segments. While we are initially focused on life sciences, we are also actively pursuing partnerships in food, restaurants, grocery chains and other market segments with sensitive supply chains."

CIT GAP Funds is a family of seed- and early-stage investment funds placing near-equity and equity investments in Virginia-based high-growth technology, life science and clean technology companies.

Tom Weithman, CIT Vice President and GAP Funds Managing Director, said, "Companies like CargoSense provide valuable, innovative solutions, but often find it difficult to obtain the early-stage

funding they need to grow their business. CIT GAP Funds help plug that funding gap, giving Virginia startups the funding they need to contribute to the innovation economy.”

Since its 2005 launch, CIT GAP Funds has invested in over 100 companies across the Commonwealth of Virginia, deploying more than \$13 million of public funds and attracting over \$200 million more in private funding.

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About CargoSense, Inc., www.cargosense.com & www.fridgesense.com

CargoSense is a big-data and analytics Software-as-a-Service (SaaS) company founded to create solutions that optimize logistics networks – in healthcare, food, medical devices and other industries with complex supply chains. The company has created the first collaborative supply chain software that operates using tablet, Web and mobile devices, collecting data with the newest generation of sensor technologies. Founded by serial entrepreneurs with a history of building successful software services using agile languages and customer-focused design, the company is based in Reston, Virginia.

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CIT GAP Funds Invests in e-Kare

Telehealth startup has patented service to assess, monitor chronic wounds

May 6, 2015 (HERNDON, Va.) – The Center for Innovative Technology (CIT) announced today that its CIT GAP Funds has invested in e-Kare, Inc. of Fairfax, VA, a digital health company that greatly speeds the assessment and monitoring of chronic wounds.

Chronic wounds include pressure, venous, and diabetic ulcers, severe burn, and complex surgical wounds that affect over 6.5 million U.S. patients, costing over \$25 billion. Founded in 2013 as a spin-off enterprise from the Children's National Medical Center (CNMC), e-Kare has developed a proprietary point-of-care subscription service that enables comprehensive 3-dimensional wound assessment on a mobile device. It also provides a HIPAA-compliant cloud management platform to support the front-end device, allowing clinicians to easily archive, access and analyze the clinical images and informatics generated from the e-Kare sensor. The management platform can also interface with the clinicians' existing electronic health record to further streamline care delivery.

Pete Jobse, President and CEO of CIT, said, "Healthcare reform is driving innovation, and companies like e-Kare are providing innovative solutions to improve service delivery and lower costs. We are always excited to find and invest in teams and companies like e-Kare."

Led by Patrick Cheng, the e-Kare team consists of experts in the fields of surgery, computer vision and mobile technology. e-Kare is also supported by a panel of advisors that include some of the leaders in the healthcare, IT and private equity industries.

Patrick Cheng, e-Kare CEO, said, "We are honored to work with CIT and will use this investment round to enhance our technologies and team so that we can aggressively capture share in the growing wound care market."

Tom Weithman, CIT GAP Funds Managing Director, said, "The timing of our CIT GAP Funds investment comes at a crucial point to help innovative entrepreneurs like Patrick Cheng launch startups that are driving Virginia's new economy."

The CIT GAP Funds has invested \$16 million to help develop nearly 130 high-growth new startups, which were then able to attract an additional \$275 million in private equity investments. For more information on the CIT GAP Funds, click [here](#).

About the Center for Innovative Technology, www.cit.org

Since 1985, CIT, a nonprofit corporation, has been Virginia's primary driver of innovation and entrepreneurship. CIT accelerates the next generation of technology and technology companies through commercialization, capital formation, market development and revenue generation services. To facilitate national innovation leadership and accelerate the rate of technology adoption, CIT creates partnerships between innovative technology start-up companies and advanced technology consumers. CIT's CAGE Code is 1UP71. To learn more, please visit www.cit.org. Follow CIT on Twitter [@CITorg](#) and add the Center for Innovative Technology on [LinkedIn](#) and [Facebook](#).

About the CIT GAP Funds, www.citgapfunds.org

CIT GAP Funds makes seed-stage equity investments in Virginia-based technology, clean tech and life science companies with a high potential for achieving rapid growth and generating significant economic return for entrepreneurs, co-investors and the Commonwealth of Virginia. CIT GAP Funds investments are overseen by the CIT GAP Funds Investment Advisory Board (IAB). This independent, third-party panel consists of leading regional entrepreneurs, angel and strategic investors, and venture capital firms such as: New Enterprise Associates, Grotech Ventures, Valhalla Partners, Harbert Venture Partners HIG Ventures, Edison Ventures, In-Q-Tel, Intersouth Partners, SJF Ventures, Carilion Health Systems, Johnson & Johnson, General Electric, and Alpha Natural Resources.

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CIT GAP Funds Invests in Biotherapeutics, Inc.

Pre-clinical stage company developing treatments for inflammation and diabetes

September 23, 2014 (HERNDON, Va.) – The Center for Innovative Technology (CIT) announced today that its CIT GAP Funds closed an investment in Biotherapeutics, Inc., a Blacksburg-based company advancing therapeutics to treat inflammation and diabetes.

Biotherapeutics, Inc. (BTI) is a pre-clinical stage company that has established an innovative platform for developing safer and more effective small-molecule drugs to treat inflammation associated with autoimmune related disorders and diabetes by targeting novel therapeutic targets.

CIT President and CEO Pete Jobse said, “The experienced team at Biotherapeutics is developing an innovative means to satisfy an unmet need in the treatment of inflammatory disease. Current treatment options available in the market are often costly and come with significant side effects. Our investment reflects our confidence in their plans to develop a new more effective and economic solution.”

Biotherapeutics’ lead candidate bridges the gap between oral steroid therapy and other treatments available via IV or injection, requiring frequent visits to clinics and monitoring. BTI’s lead candidate has a unique mechanism of action, and it is based on a novel signaling pathway, which the company has exclusively licensed from Virginia Tech.

Josep Bassaganya-Riera, PhD, Biotherapeutics President and CEO, said, “The investment from the CIT GAP Funds will be utilized to perform additional safety and efficacy studies for BTI’s top lead compounds and advance them along the regulatory pipeline towards investigational new drug (IND) approval. This is a vital step in the process of developing an alternative that is orally active, efficacious, safe, and easy to administer.”

CIT GAP Funds is a family of seed- and early-stage investment funds placing near-equity and equity investments in Virginia-based high-growth technology, life science and clean technology companies.

Tom Weithman, CIT Vice President and GAP Funds Managing Director, said, “We look for entrepreneurs who can find new ways to solve our complicated problems. The BTI team epitomizes what

we search for throughout our process. The investments allow these companies to grow and contribute to Virginia's innovation economy while providing solutions that meet important needs.”

Since its 2005 launch, CIT GAP Funds has invested in over 100 companies across the Commonwealth of Virginia, deploying more than \$13 million of public funds and attracting over \$200 million more in private funding.

About Biotherapeutics, www.biotherapeuticsinc.com

A pre-clinical stage, small-molecule company advancing therapeutics for inflammation and diabetes. BioTherapeutics was established in 2008 with the mission to develop safer and more effective treatments for human diseases. The company holds numerous patents on innovative mechanisms of anti-inflammatory and anti-diabetic action. The technology was validated with numerous pre-clinical studies resulting in 12 peer-reviewed publications elucidating a novel pathway and showing the compounds to be both safe and effective. Currently Biotherapeutics is expanding rapidly to support additional pre-clinical studies with the goal of submitting an IND application to the Food and Drug Administration.

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CIT GAP Funds Invests in PhosImmune

Biotech Company Develops High-Quality Tumor Antigens for Cancer Vaccines

August 12, 2014 (HERNDON, Va.) – The Center for Innovative Technology (CIT) announced today that it closed an investment in PhosImmune, a Charlottesville-based clinical-stage biotechnology company developing therapeutic cancer vaccines.

PhosImmune controls a library of unique, aberrantly phosphorylated tumor antigens (PTAs) that are directly implicated in metastasis, meeting a pressing need for high quality tumor antigens for use in new and more effective cancer vaccines. PhosImmune's PTAs are superior to conventional tumor antigens because they are derived from proteins associated with the process that drives cancer, and they target multiple forms of cancer, including leukemia, melanoma, and breast cancer. The Company's lead candidate, PxM-01, is currently in Phase I testing to treat melanoma. This technology stemmed from research at the University of Virginia.

CIT President and CEO Pete Jobse said, "The team at PhosImmune has developed PTAs that meet an important need in cancer treatment and will enable a variety of targeted immunotherapy approaches. Innovative solutions like this one are what we look for in making CIT GAP Funds investments."

PhosImmune President Donald Hunt said, "We will use the investment from CIT GAP Funds to expand and continue our current trials, and to develop an additional PTA-based immunotherapy."

CIT GAP Funds is a family of seed- and early-stage investment funds placing near-equity and equity investments in Virginia-based high-growth technology, life science and clean technology companies.

Tom Weithman, CIT Vice President and GAP Funds Managing Director, said, "Companies with important and innovative solutions like PhosImmune often find it difficult to obtain the early-stage funding they need to continue to grow and develop their products. CIT GAP Funds looks to plug this funding gap, creating opportunities for Virginia-based startups that can contribute significantly to the Commonwealth's innovation economy."

Since its 2005 launch, CIT GAP Funds has invested in over 100 companies across the Commonwealth of Virginia, deploying more than \$13 million of public funds and attracting over \$200 million more in private funding.

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TAB 3 – CRCF PROGRAM

By program, total grants made and investments awarded for each grant and investment program to include CRCF

FY2015 Award Details

Award Recipient	Project Title	Project Description	Period of Performance	Principal Investigator	CRCF Award	Match
COMMERCIALIZATION PROGRAM						
AxonAI, Inc.	<i>Echosight Modeling and Prediction Software</i>	The Echosight software toolkit allows users to model, simulate, and predict behavior of complex systems and the entities that comprise them. CRCF funding will be used to conduct pilot projects to help commercialize this software.	6/16/2015 – 4/01/2016	Sven Brueckner	\$50,000	\$50,000
AxonAI, Inc.	<i>Internet-of-Things Security</i>	AxonAI has developed a swarm intelligence methodology, which, combined with advanced peer-to-peer technology, can protect the Internet-of-Things (IoT). CRCF funding will allow AxonAI to create a prototype IoT security product.	6/16/2015-4/01/2016	Michael Markulec	\$50,000	\$50,000
CyberRock Inc.	<i>CyberTrack: Automated Attack Attribution across Large-Scale Networks in Real-Time</i>	CyberRock seeks to build a prototype product which, in collaboration with intrusion detection and prevention systems, has the capability to automatically identify hidden attack paths and track detected attacks to their sources.	6/16/2015-6/15/2016	Xinyuan Wang	\$50,000	\$50,451
DialySensors LLC	<i>Dialysensing™: Improving the Efficacy and Patient Outcomes of Hemodialysis and Peritoneal Dialysis through the Use of Raman Spectroscopy and Multivariate Statistical Analysis</i>	This project seeks to commercialize a new technology for assessing, in near/real-time, dialysis efficacy by measuring patient metabolic molecule signatures in dialysate waste to allow individualized therapy to improve the outcomes of hemodialysis and peritoneal dialysis.	6/16/2015-6/15/2016	John Robertson	\$50,000	\$58,000
eTrans2020, Inc	<i>Connected Vehicle Validation and Security</i>	eTrans will build a proof-of-concept system to test connected vehicle systems for cyber security vulnerabilities.	6/16/2015-12/16/2015	Manual Villar	\$50,000	\$126,150

Award Recipient	Project Title	Project Description	Period of Performance	Principal Investigator	CRCF Award	Match
Ischemalert, LLC	<i>Point-of-Care Device for Detection of Acute Cardiac Ischemia</i>	Ischemalert is developing a proof-of-concept portable point-of-care device to enable near real-time detection of acute cardiac ischemia, allowing for earlier treatment to limit or prevent myocardial infarction.	6/30/2015-12/30/2015	Gerard Eldering	\$49,776	\$49,816
Key Cybersecurity, Inc.	<i>CyberMerlin – Illicit File Activity Detection Solution</i>	Key Cybersecurity's product proactively identifies illicit file activity and associated "bad actor" activity – modified files or patterns and heuristics of malicious activity. CRCF funding enables the company to apply their technology to additional types of files.	6/16/2015-6/16/2016	Shawn Key	\$50,000	\$50,000
RioGin	<i>In Vivo Validation of PYY Antiobesity Drug with Weekly Administration</i>	This project seeks to validate that RioGin's PYY compounds have desirable properties for a weekly anti-obesity drug through in vivo studies.	7/01/2015-6/30/2016	Cyrille Gineste	\$50,000	\$50,000
RioGin	<i>Long-Lasting HIV Entry Inhibitors</i>	This project seeks to create a modified version of Fuzeon, an entry inhibitor drug for HIV, which is costly to prescribe due to 2x daily injections.	7/01/2015-12/31/2016	Cyrille Gineste	\$50,000	\$50,000
Syncurity Corporation	<i>Syncurity Forensic Artifact Collection</i>	This CRCF project will allow Syncurity to add functionality to its existing incident response management platform to automate live-host forensic artifact collection, to better provide analysts with details needed to remotely determine a course of action.	6/16/2015-10/31/2015	Jean Bourget	\$50,000	\$61,000
Tympanogen	<i>A Novel Gel patch for Nonsurgical Treatment of Eardrum Perforations</i>	Tympanogen has developed a light-curable gel patch to repair eardrum perforations with a nonsurgical procedure. This project supports research and development necessary for obtaining FDA approval.	6/16/2015-2/29/2016	Elaine Horn-Ranney	\$49,489	\$206,692
TOTAL COMMERCIALIZATION PROGRAM AWARDS:					\$549,265	
TOTAL COMMERCIALIZATION PROGRAM MATCHING FUNDS:					\$802,109	

Award Recipient	Project Title	Project Description	Period of Performance	Principal Investigator	CRCF Award	Match
EMINENT RESEARCHER RECRUITMENT PROGRAM						
Eastern Virginia Medical School	<i>Recruitment of Eminent Investigator in HealthCare Science and Discovery Research</i>	EVMS seeks to recruit a nationally recognized health services and analytics researcher to lead research using Big Data from electronic medical records and public health databases. The researcher will be located in a new Center for Health Analytics and Discover at EVMS, comprised of a team of biostatisticians and epidemiologists.	7/1/2015 – 6/30/2017	Jerry Nadler	\$250,000	\$250,000
TOTAL EMINENT RESEARCHER RECRUITMENT PROGRAM AWARDS:					\$250,000	
TOTAL EMINENT RESEARCHER RECRUITMENT PROGRAM MATCHING FUNDS:					\$250,000	
MATCHING FUNDS PROGRAM						
College of William and Mary	<i>Reducing Smartphone Application Delay through Read/Write Isolation</i>	This W&M team is designing and implementing a system prototype to reduce application delay. CRCF funding will allow the team to incorporate the solution to mobile devices.	6/16/2015-6/15/2016	Gang Zhou	\$99,998	\$99,998
Commonwealth Center for Advanced Logistics Systems	<i>Aviation Drop-In Biofuels: Sustainable Supply Chain in Virginia in Support of Farm-to-Fly 2.0 and State Agricultural/Economic Objectives</i>	The objective of this project is to analyze various aviation biofuel pathways to determine commercial viability within the Commonwealth and to implement a Farm-to-Fly 2.0 program in Virginia.	6/16/2015 – 6/15/2016	James Lambert	\$99,988	\$100,001
Commonwealth Center for Advanced Manufacturing	<i>High Speed Telemetry for Machining</i>	Researchers at CCAM are seeking to solve the problem of unpredictable tool wear through the development of intelligent tools that connect machine tools to the machine controllers to provide quantified information on what happens to a tool or insert during the cutting process.	7/1/2015 – 7/1/2016	Benjamin Zimmerman	\$100,000	\$261,968
Eastern Virginia Eye Institute	<i>Corneal Endothelial Allograft Transport and Transplant Device</i>	EVEI has developed an instrument that can be used to transport the corneal allograft from the laboratory to the operating room, facilitates accurate placement of the grafts	6/16/2015-6/16/2016	Sandeep Samudre	\$100,000	\$129,500

Award Recipient	Project Title	Project Description	Period of Performance	Principal Investigator	CRCF Award	Match
		to improve surgical outcomes, and allows for allograft storage. This funding will allow EVEI to design and fabricate a prototype instrument, perform in vitro testing, and apply for FDA approval.				
Old Dominion University Research Foundation*	<i>Real-Time Fusion of Medical Images for Personalized Image Guided Diagnosis and Theory</i>	This funding will be used for translational R&D of existing software used for medical image fusion to be used in image-guided neurosurgery and emerging medical simulators.	6/16/2015-6/15/2016	Nicolaos Chrisochoides	\$100,000	\$100,000
Old Dominion University Research Foundation	<i>Development of Hybrid Boron Nitride/Carbon Nanotubes Supercapacitors for High-Density Energy Storage</i>	This team seeks to develop hybrid boron nitride/carbon nanotube supercapacitors for energy storage as a response to the increasing demand for efficient, robust, and compact energy storage devices.	7/01/2015-6/30/2016	Gon Namkoong	\$100,000	\$100,000
The George Washington University	<i>A Wireless Wearable Electrocardiogram Sensor on Ring Finger</i>	GWU researchers are developing a finger-ring-shaped wearable ECG sensor, which can be activated on-demand and wirelessly send multi-lead signals to a smartphone or a remote-authorized physician.	7/01/2015-6/30/2016	Zhenyu Li	\$100,000	\$100,000
University of Virginia	<i>Insulin-ORAL Renewal Application</i>	This group aims to develop a room temperature stable, oral insulin product to increase the convenience and safety of administering peptide and protein therapeutics.	7/1/2015 -- 6/30/2016	Mark Kester	\$100,000	\$100,000
University of Virginia	<i>Accelerating Data Analytics (Bioinformatics) Applications using the Automata Processor</i>	UVA researchers seek to accelerate several key bioinformatics applications by using the Micron Automata Processor and develop marketable accelerator software and hardware solutions.	7/1/2015 -- 6/30/2016	Mircea Stan	\$100,000	\$100,000
Virginia Commonwealth University	<i>Rehab Fingerprint – A Patient Centered System to Measure the Impact of Physical Rehabilitation</i>	This VCU team has developed a wearable device for physical therapy patients that transmits performance data wirelessly to a central database, allowing for improved patient care and more efficient use of	7/1/2015 – 6/30/2016	Peter Pidcoe	\$29,263	\$44,626

Award Recipient	Project Title	Project Description	Period of Performance	Principal Investigator	CRCF Award	Match
		therapists. CRCF funding supports refinement of the algorithm and additional testing and validation of the system.				
Virginia Commonwealth University	<i>Rapid Measurement of Plasma Antithrombin</i>	CRCF funding supports R&D and development of a prototype point-of-care device that allows clinicians to quickly and accurately measure plasma antithrombin levels to ensure that patients receive the correct clinically effective dose of the drug.	7/1/2015 – 6/30/2016	Umesh Desai	\$100,000	\$100,078
Virginia Commonwealth University	<i>A Modeling and Simulation Hub for Straintronic Logic and Memory Technology</i>	VCU researchers seek to build a M&S hub for design and analysis of straintronic logic and memory systems for ultralow-energy next-generation computing and signal processing. This funding will allow the team to develop simulators and to test the predictions of the simulations.	6/16/2015 – 6/15/2016	Supriyo Bandyopadhyay	\$100,000	\$100,000
Virginia Commonwealth University	<i>Nano-Inspired Electrolytes and Cathode materials for a New Generation of Li and Na-Ion Batteries</i>	This project will advance the development of a new generation of lithium and sodium ion batteries that are more safe, efficient, and durable than those currently used.	7/1/2015 – 6/30/2016	Puru Jena	\$100,000	\$100,000
Virginia Institute of Marine Science, College of William & Mary	<i>Eliminating Plastic Shotgun Wads as a Source of Harmful Aquatic Debris</i>	VIMS researchers aim to develop a cost-effective, high-performance solution to eliminating shotgun wads as harmful aquatic debris.	7/01/2015-6/30/2016	Kirk Havens	\$83,971	\$83,973
Virginia Tech	<i>Novel Coatings to Prevent Bacterial Colonization of Medical Implants</i>	This VT team is proposing a new technology to delay the chain of events in an infection arising from a medical implant using thin films of colloidal crystals.	7/01/2015-6/30/2016	William Ducker	\$99,704	\$99,705
Virginia Tech	<i>Energy-Harvesting Vehicle Suspensions</i>	VT researchers are creating a retrofittable, efficient, reliable regenerative shock absorber to intelligently utilize the harvested energy for vibration control of the vehicle.	7/01/2015-12/31/2016	Lei Zuo	\$100,000	\$100,000
TOTAL MATCHING FUNDS PROGRAM AWARDS:					\$1,512,924	
TOTAL MATCHING FUNDS PROGRAM MATCHING FUNDS:					\$1,719,849	

Award Recipient	Project Title	Project Description	Period of Performance	Principal Investigator	CRCF Award	Match
SBIR MATCHING FUNDS PROGRAM						
BlueTherm Corporation*	<i>Thermal Management for Energy Efficient Computing</i>	This technology enables high-end computer chips and electronics to operate cooler, faster, and with more energy efficiency; it also has the potential to allow for energy recovery.	06/16/2015-12/15/2015	Carl Bailey	\$50,000	\$150,000**
Cell Free Bioinnovations Inc.	<i>Developing a Sugar Biobattery Prototype with High-Power and High-Energy-Density</i>	CFB will develop a sugar biobattery prototype with high-power and high-energy-density that will be similar in size to a current Li-ion based power bank, but with more than 10 fold energy storage density.	7/01/2015-12/31/2015	Zhiguang Zhu	\$50,000	\$677,746**
D-Tech, LLC	<i>A Dynamic and Scalable Identity Federator for Enhanced and Cloud Security</i>	D-Tech is developing an innovative solution to streamline and automate the identity and access management system configuration process by enabling cloud consumers to provision and set up their own IAM services with the same ease and convenience of setting up virtual machines.	6/22/2015-12/22/2015	Nick Duan	\$50,000	\$728,705**
Ghodousi, LLC	<i>Assistive Digital Vision for the Blind</i>	Ghodousi is manufacturing a device that can provide remote sensing for the blind and low-vision population by integrating sonar and a camera in a device that can be worn like glasses.	7/01/2015 – 12/31/2015	Arman Ghodousi	\$50,000	\$172,500**
PaneraTech, Inc	<i>IMECSFab for Inline Inspection of Touch Sensors</i>	PaneraTech is developing a sensor for non-contact evaluation of nanofiber and specialty touch films to provide the capability to rapidly assess the electrical and physical properties of these films during the manufacturing process.	8/01/2015-4/30/2016	Yakup Bayram	\$49,963	\$299,972**
SoundPipe LLC*	<i>Co-injection Drug Delivery with Contrast-Enhanced Intravascular Ultrasound</i>	SoundPipe is developing an ultrasound imaging and therapy catheter system for ultrasound and microbubble enhanced drug delivery to prevent neointimal hyperplasia following angioplasty.	8/16/2015-11/16/2015	Joseph Kilroy	\$50,000	\$50,000***

SoundPipe LLC	<i>Patient Tailored 3D Drug Delivery with Intravascular Ultrasound</i>	This funding enables SoundPipe to develop tools to provide patient-tailored 3D drug delivery, using their ultrasound imaging and therapy catheter system.	8/16/2015-11/16/2015	Joseph Kilroy	\$50,000	\$50,000***
StemCellLife LLC	<i>Highly Bioactive, Synthetic Peptides Coated Cultureware for the Culture of Human Pluripotent Stem Cells</i>	This project aims to develop low-cost and xeno-free, highly active pure synthetic coatings that are applicable to regular cell culturewares. These sequences will support the survival, adhesion, growth, and long-term culture of human induced pluripotent stem cells.	8/01/2015-7/31/2016	Xiaoyan Liu	\$50,000	\$224,879**
TOTAL SBIR MATCHING FUNDS PROGRAM AWARDS:					\$399,963	
TOTAL SBIR MATCHING FUNDS PROGRAM MATCHING FUNDS:					\$2,353,802	
STTR MATCHING FUNDS PROGRAM						
Cambrian Design and Development LLC	<i>Objective Tremor Detection System for Continuous Monitoring, Assessment, and Treatment Planning for Neonatal Abstinence Syndrome</i>	CRCF funds support customer discovery efforts, business model validation, and relationship-building with strategic partners – steps critical to commercialization. Cambrian's technology objectively captures indicators of Neonatal Abstinence Syndrome to enable more accurate, safer, and patient-centric treatment plans.	8/01/2015-6/30/2016	Michael Abbott	\$49,992	\$224,944**
VoltMed Inc.	<i>Minimally Invasive Surgical Platform for H-FIRE and Chemotherapy Treatment</i>	VoltMed seeks to develop an impedance monitoring probe that can monitor drug intake during pancreatic cancer treatments combining high-frequency irreversible electroporation (H-FIRE) and chemotherapeutic agents.	7/1/2015 – 12/31/2015	Paulo Garcia	\$50,000	\$225,000**
TOTAL STTR MATCHING FUNDS PROGRAM AWARDS:					\$99,992	
TOTAL STTR MATCHING FUNDS PROGRAM MATCHING FUNDS:					\$449,944	
TOTAL CRCF FY2015 AWARDS:					\$2,812,144	
TOTAL CRCF FY2015 MATCHING FUNDS:					\$5,575,704	

FY2015 Funding Totals

PROGRAM	FY2015 AWARD TOTAL	FY2015 MATCHING FUNDS TOTAL
Commercialization Program	\$549,265	\$802,109
Eminent Researcher Recruitment Program	\$250,000	\$250,000
Matching Funds Program	\$1,512,924	\$1,719,849
SBIR Matching Funds Program	\$399,963	\$2,353,802
STTR Matching Funds Program	\$99,992	\$449,944
ALL PROGRAMS	\$2,812,144	\$5,575,704

* Indicates declined award

** Matching funds provided toward the CRCF project are the federal SBIR / STTR awards

*** Federal SBIR award amount not known, but totals at least \$50,000, the amount of the CRCF award

TAB 4

By program, a report of the projected economic impact on the Commonwealth

In accordance with Item 419.D.1.d. of the 2015 Appropriations Act, the Center for Innovative Technology is pleased to submit the following report on behalf of Innovation and Entrepreneurship Investment Authority (IEIA). This item requires: Within 3 months after the end of each fiscal year, a report of the projected economic impact on the Commonwealth and recoveries of previous grants or investment and sales of equity positions.

1. Broadband

During FY2015 CIT's Broadband program was funded through a US Department of Commerce's National Telecommunications and Information Administration (NTIA) grant designed to expand access to broadband services in the United States. Funding through the NITA grant ended in February 2015, and CIT received its first Commonwealth's appropriation of \$500,000 for FY2015. The state funded program is designed to accelerate the socio-economic growth of Virginia's rural and underserved areas through the application and use of broadband telecommunications.

CIT's Broadband program is responsible for developing a statewide broadband strategy and working with communities and local governments to expand access and improve adoption and utilization. CIT coordinates with other state entities including; Department of Housing and Community Development (DHCD), Virginia Resources Authority (VRA), Virginia Information Technologies Agency (VITA), Virginia Tech, Virginia Geographic Information Network (VGIN), Virginia Planning District Commissions and others to further assist localities to identify support for broadband planning and infrastructure projects. Additionally, CIT works with service providers in the Commonwealth to collect data and map assets and coverage. This information is critical in developing public policy and strategic plans that facilitate broadband deployments to adequately support economic development, education, healthcare, public safety and overall quality of life. CIT is very focused in their work with the Broadband Advisory Council to identify and prepare the council to introduce legislation that will expedite broadband infrastructure investments to expand service and capacity across the Commonwealth.

The FY2015 activity summarized below in response to Section 419.N.1 of the Appropriation Act was funded partly through the NTIA grant, and state funded activity.

I. The number of localities assisted by the state and other broadband funding sources:

- a) CIT assisted 61 localities and 8 Planning District Commissions (PDCs) in broadband assessment and planning in addition to fielding 40+ citizen inquiries to the Governor's office related to broadband. Additionally CIT coordinated 3 regional Broadband Advisory Council meetings during the year and presented broadband information at 9 local, regional and state events

- b)CIT Developed the Commonwealth’s broadband map to identify and assist localities in underserved areas based on data collected from 40 broadband providers including one update completed after the NTIA funding ended
- c)CIT developed resources and tools used by localities in assessing needs, planning broadband deployments, and raising awareness to increase adoption and utilization including the development of the Strategic Broadband Roadmap infographic and associated white-paper to guide localities in assessing broadband needs and defining strategic broadband goals

II. The estimated number of households and localities with populations lacking wired broadband access:

- a) Based on April 2014 data Virginia has 62 localities with a significant percentage of households that have no fixed broadband access (please see <https://citorg.box.com/s/devkqrayecog6qsih3jipjbu0b8jyljcg> for a map of those localities reporting 20% or more households without fixed broadband service) based on the FCC’s new definition (as of January 2015) of 25Mbps download speed and 3Mbps upload speed. Over 10% of Virginia citizens have no access to even basic (at least 3Mbps) fixed Internet service.

2. The Growth Accelerator Program (GAP)

The GAP Fund was established to meet the early stage capital demands challenging the Commonwealth’s most promising science and technology-based start-ups whose funding requirements could not be met by traditional financing means. GAP Fund investments are governed by the goal of developing the next generation of Virginia’s science and technology economy and the entrepreneurial ecosystem required to support that economy. To this end, the GAP Fund places equity and convertible debt investments in tech, clean-tech and life science companies at the earliest stages of company formation, in a manner conducive to stimulating significant private investment or “leverage cash” as a result of CIT’s deployment of public dollars.

Fundamental to CIT’s ability to successfully deliver private capital is that, unlike grant programs, CIT holds an ownership position in the investee company and maintains that ownership for a multi-year holding period of indeterminate length while the company grows in scope of operations and value. CIT recovers GAP Program investments only upon a liquidity event such as a public offering or change of control for the company.

Underwritten in part by an annual appropriation from the Virginia General Assembly, the GAP

Fund Program functions as a double-bottom-line investment fund focused on creating significant economic outcomes for the Commonwealth, entrepreneurs and co-investors, with the goal of recovering investment capital for redeployment. Since inception, the GAP Fund Program has considered investing in over 3,500 companies and has invested \$17.97M in 138ⁱ seed and early stage technology, life science, and energy companies across the Commonwealth of Virginia.

Over the 10-year life of the program, CIT has found that the following metrics most closely align with program objectives:

- **Venture and Angel Capital Attracted** - Venture and angel capital dollars invested in the GAP Fund Program's portfolio companies as a result of CIT investing dollars appropriated to Innovation and Entrepreneurship Investment Authority (IEIA) and obtained from federal and private sources. CIT calculates its annual leverage factor by dividing the total of venture and angel capital by all GAP Fund Program portfolio companies in a given year by the dollars deployed in new investments in that year.
- **GAP Fund Program Return** - The ratio of capital returned and anticipated to return to CIT, as a result of portfolio companies being acquired, divided by total GAP Fund Program dollars deployed.

Venture and Angel Capital Attracted - For the period FY15 and inception-to-date, the GAP Fund Program achieved the following leverage cash totals:

- **FY15** – During FY15, CIT GAP Funds invested \$3.6M. In FY15, CIT had attracted \$93M in angel and venture dollars - from both FY15 and pre-existing investments, for an annual leverage factor of 25.9.
- **Inception-to-Date** – Since inception, CIT GAP Funds has invested \$17.9M. CIT has attracted \$331M in angel and venture dollars, for an inception-to-date leverage factor of 18.5.

Important to note in these ratios is the impact of economic conditions with respect to the ability of GAP portfolio companies to attract leverage capital. Poor economic conditions may result in a lower capital attraction ratio due to investor withdraw from the early stage asset class which is not a direct reflection of changes or performance in the GAP program structure and operations.

GAP Fund Program Return. By the end of FY15, CIT had secured and invested a total of \$17,971,287.29, program inception-to-date and had a projected capital return of \$23,880,010.17 on invested funds, resulting in a capital return factor of 1.3. This number indicates that CIT is

managing Virginia's GAP Funds Program appropriation consistent with its goal to return funds to preserve the base of funds for future investment in Virginia's early stage companies.

Company Residency Requirements - CIT GAP Funds requires that all companies be headquartered and have substantial business operations in Virginia at the time of investment and for a minimum three-year period thereafter. MACH37 requires that all companies establish a significant presence in the Commonwealth within a 24-month period of graduation from the MACH37 Accelerator. Significant economic penalties – discussed below - apply to companies in breach of these requirements.

CIT Enforcement of GAP Portfolio Company Residency - Over the life of the GAP Program, CIT's policy and practice regarding remedies that invoked as a result of an investee company's departure from the state has evolved, matured and become more specific:

In FY05, with the start of the GAP Fund program, CIT established its initial policy regarding company residency requirements. As at that time all CIT's investments were in the form of a convertible debenture, our loan covenants explicitly addressed this issue. Under that policy, if a portfolio company were to relocate to another state, CIT -- at its option -- could invoke one of two remedies: (1) CIT could demand the immediate payback of all principal and interest; or, (2) upon note conversion to equity, CIT could invoke a deeper discount percentage (50% v the 20% of the initial note).

In FY13, CIT revisited this policy and added redemption language to address all equity agreements. In FY14, CIT further refined this language. The current policy and practice, memorialized in CIT GAP Funds transaction covenants, is as follows:

- Equity Investments: If a company relocates its primary business from the Commonwealth within 36-months of CIT investment, CIT retains its equity position in the company and is repaid a penalty fee equal to two times CIT's investment. Also within 36-months of CIT's investment, if the Company accepts any direct or indirect funding from a publicly funded economic development or company attraction entity requiring temporary or permanent relocation of the Company's headquarters or any member of the Company's senior management outside of the Commonwealth of Virginia, Company shall be required to pay CIT a penalty equal to two times (2x) CIT's principal investment.
- Convertible Debt Investments: If a company relocates its primary business from the Commonwealth within 36-months of CIT investment, CIT can convert into common shares at a 50% discount or elect to be paid back principle plus interest. If the note has previously been converted, than CIT will be paid a penalty fee equal to CIT's principle

investment. Also within 36-months of CIT's investment, if the Company accepts any direct or indirect funding from a publicly funded economic development or company attraction entity requiring temporary or permanent relocation of the Company's headquarters or any member of the Company's senior management outside of the Commonwealth of Virginia, Company shall be required to pay CIT a penalty equal to two times (2x) CIT's principal investment, regardless of whether CIT holds debt or equity in the Company.

All MACH37 Accelerator investments are transacted as \$50K common stock equity investments designed to attract or retain cyber startups in Virginia. All companies receiving investments from MACH37 are located at CIT's offices in Herndon, VA for the three months duration of their acceleration period and then have 24 months to establish a significant presence in Virginia. If they do not establish a significant presence in Virginia then there is a full redemption of CIT's investment. Also within 36-months of CIT's investment, if the Company accepts any direct or indirect funding from a publicly funded economic development or company attraction entity requiring temporary or permanent relocation of the Company's headquarters or any member of the Company's senior management outside of the Commonwealth of Virginia, Company shall be required to pay CIT a penalty equal to two times (2x) CIT's principal investment.

The FY2015 activity below is provided in response to Section 419.N.2 of the Appropriation Act. Since GAP investments are, by design, seed stage and intended to leverage private investment and stimulate the next generation of new technology companies, job creation and tax revenue impact are longer term objectives. Twelve of these companies were formed during FY15 to participate in MACH37 cyber security accelerator.

I. The number of companies receiving investment from the fund:

- a. FY15: 46 investments in 37ⁱⁱ companies
- b. Inception-to-date: 138ⁱⁱⁱ companies

II. The state investment and amount of privately leveraged investments per company:

- a. FY15: CIT invested \$3.6M and leveraged \$30.3M in privately invested angel and venture dollars. In FY15, CIT had attracted \$93M in angel and venture dollars - from both FY15 and pre-existing investments, for an annual leverage factor of 25.9.
- b. Inception-to-date: CIT invested \$17.9M and leveraged \$331M in privately invested angel and venture dollars

III. The estimated number of jobs created in Virginia:

- a. FY15: 215 jobs in companies invested in by CIT in FY15
- b. Inception-to-date: Not available

IV. The estimated tax revenue generated:

- a. FY15 investments:
 - i. Estimated corporate income tax: \$452,924.66^{iv}
 - ii. Estimated personal income tax on jobs: \$1,489,950^v
- b. Inception-to-date: Not available

V. The number of companies who have received investments from the GAP fund still operating in Virginia

- a. FY15 investments: 37 out of 37
- b. Inception-to-date: 105 out of 138 (7 have moved from the Commonwealth, 11 have failed, 15 have been acquired or paid back CIT)
- c. 7 Relocated Companies: Four of the seven companies that are currently not located in Virginia are MACH37 portfolio companies and have not surpassed the 24 month mark since graduation from MACH37 (see below for MACH37 residency requirements). One of the four has moved from Germany to Virginia since the time of our last reporting. CIT maintains a high level of visibility into those companies, including frequent interaction with the CEO and team, Board of Director observation rights and receipt of a required quarterly status report. Privacy agreements prevent CIT from providing names of the remaining three companies outlined below:
 - i. Company A moved from Virginia to Connecticut. This company had received a \$100K convertible note from CIT - \$50K from Commonwealth-appropriated funds and \$50K resulting from a grant to CIT by Johnson & Johnson. In June of 2009, CIT elected to be paid back the \$50,000 Commonwealth-appropriated funds plus interest and to convert Johnson & Johnson grant-sourced \$50,000 principal and interest at a 50% discount.
 - ii. Company B moved from Virginia to Maryland. The company did not have the ability to pay CIT back, so CIT has tentatively elected to convert into equity at a 50% discount at the next financing round.
 - iii. Company C moved from Virginia to Maryland in April of 2014. CIT's initial investment was in the form of equity and did not have a redemption clause. In response to this event, CIT revised its covenants to build redemption language into all equity agreements, as noted above. CIT continued to have a high level of visibility into the company.

VI. Return on investment

- a. FY15 investments:\$0
- b. Inception-to-date: \$2,331,982.70

VII. The number of state investment that failed:

- a. FY15 investments: 0
- b. Inception-to-date: 11 failures, \$1,376,100 invested

VIII. Number of companies created or expanded and the number of patents filed:

- a. FY15:
 - i. Companies created of expanded: 37
 - ii. Number of Patents filed: 45
- b. Inception-to-date:
 - i. Companies created of expanded: 138
 - ii. Number of Patents filed: Not available

3. Cyber Security Accelerator (MACH37)

MACH37 is the premier accelerator for cybersecurity entrepreneurs and startups nationally. This unique program goes beyond the traditional model of typical business accelerators by providing innovators with focused mentoring and support from an extensive network of visionaries, practitioners, and successful entrepreneurs in cybersecurity. The Spring and Fall sessions of MACH37's 90-day program are designed to propel graduating companies into the marketplace with validated cyber security concepts and pipelines for accelerated growth.

The program emphasizes the validation of cohort company product concepts and the development of relationships to attract an initial customer base and investment capital. MACH37 employs a tailored approach to address the priority needs of each company, based on their individual strengths and weaknesses.

MACH37 was championed by the Commonwealth's technology community and launched on September 12, 2013 and started its first cohort that same month. Companies selected for the program typically constitute a team of 2 to 4 entrepreneurs and a technical co-founder working to build alpha or prototype cyber security solutions that address the drivers of a demand for innovations in cybersecurity, including:

- New mainstream demand for advanced capabilities;
- Porous network perimeters that are making traditional solutions less relevant;
- Opportunities created from software defined networking; and
- Challenges of a hyper-connected world with an Internet-of-everything.

At the close of the Spring 2015 cohort class, the list of successful graduates includes 22 new cyber companies that have been attracted from around the country to grow these critical businesses in Virginia. Mach37 has also attracted applications from companies desiring to launch from the Herndon-based accelerator from 11 countries beyond the United States and Canada.

The FY2015 activity below is provided in response to Section 419.N.3 of the Appropriation Act. As in the case of the GAP Fund, MACH37 companies are very early stage and the program is designed to leverage private investment and stimulate the growth of the cyber industry in Virginia. Therefore, there is not sufficient operating history to develop meaningful job creation data or to anticipate equity returns.

- I. The number of companies assisted and the number of startups successful launched through the cyber accelerator program in:
 - a. FY15: 12
 - b. Inception-to-date: 22

- II. The number of companies operating in Virginia as a result of the program in:
 - a. FY15: 11 of the 12
 - b. Inception-to-date: 18 of the 22

- III. The estimated number of jobs created:
 - a. FY15: 25 jobs in companies invested in by MACH37 in FY15
 - b. Inception-to-date: 43

- IV. The value of proceeds from the sale of equity in companies that received capital support from the program:
 - a. No MACH37 graduate company has been acquired or become publicly traded since inception of this program.

- V. The number of state investments that failed and the state investment associated with failed investments:
 - a. No MACH37 graduate companies have failed since inception of this program

- VI. Number of new companies created or expanded and the number of patents filed:
 - a. FY15:
 - Companies created or expanded: 12
 - Number of Patents filed: 15
 - b. Inception-to-date:
 - Companies created or expanded: 22
 - Number of Patents filed by inception-to-date by FY15 portfolio: 28

4. Commonwealth Research Commercialization Fund (CRCF)

In FY2015, CIT issued one solicitation resulting in \$2.8 million invested in 38 projects^{vi} and leveraging the Commonwealth's investment with approximately \$5.6 million in matching funds. These CRCF projects are being performed by companies, universities, and research institutes across the state and align with Virginia's key strategic technology priorities as outlined in the Commonwealth Research and Technology Strategic Roadmap.

\$2.3 million was made available to CRCF for FY2015 for the purpose of advancing science- and technology-based R&D and commercialization activities to drive economic growth in Virginia. CRCF's funding capabilities were expanded by an additional \$2.4 million as a result of carryover monies and grants that had not been fully expended or had been declined.

CRCF awards seek to solve current and longstanding global challenges in industries such as life sciences, cyber security, advanced manufacturing, and energy. CRCF awards, for instance, hold promise in biosciences for innovative early detection and analysis technologies for pancreatic cancer, prevention technologies and therapeutics for diabetes, and pharmaceutical therapies for brain cancer cell destruction. Cyber security continues to be a critical focus of CRCF projects, from products performing cyber security assessments and identifying malicious intrusions and activity to solutions that secure networks and establish patterns to speed up incident remediation and prevent future attacks. Additional technologies, such as 3D modeling and simulation software for homeland security and high-efficiency solar energy devices, show the reach of Commonwealth innovation. These and other CRCF projects have the potential to have a profound and lasting benefit to citizens of the Commonwealth and to society at large by enhancing quality of life and economic development.

Program Impact

CRCF awards have, primarily, supported technology development at the proof-of-concept stage or earlier, setting the technology on a commercialization path and making it attractive for further investment and/or licensing. Milestones along what can be a multi-year path include clinical trials; FDA approval; investment from federal, private, or other sources; and beta product releases. Already, however, Fund investments have resulted in companies created, expanded, or acquired; products launched; revenue generated; intellectual property developed and licensed; key personnel recruited; and other outcomes beneficial to Virginia and beyond. FY2015 reports submitted by award recipients identified early returns on the Commonwealth's investment.

- **Regulatory applications and approvals.** In FY2015, at least nine clinical trials were completed, underway, or recently approved for CRCF-funded technologies. Two award recipients

reported their device or drug had received FDA approval. Additionally, at least four awardees are engaged in pre-clinical research and investigational studies.

- **Products/services introduced to market.** At least five new products and/or services were brought to market, two additional products and/or services are anticipated for near-term release, and one platform has been developed for internal use that enables product development and commercialization. CRCF award recipients also reported numerous products in the beta phase. At least 150 licenses for CRCF-funded software have been sold. Nine companies have reported sales revenue, with four of those companies each recording sales over \$1 million.
- **Company growth.** At least two new companies, both of which are university spin-outs in life sciences, were formed during FY2015 in the Commonwealth. Several companies have expanded their operations, including through the establishment of satellite facilities. At least 115 new hires were reported by CRCF award recipients; hires range from part-time to full-time and from students to senior-level executives.
- **Additional funding leveraged.** CRCF award recipients reported nearly \$60 million in additional investments made in research and technology work after the conclusion of the CRCF projects. Two companies associated with CRCF projects received approximately \$15 million combined in supplementary funding, as reported by CRCF awardees.
- **Intellectual property created and licensed.** In FY2015, CRCF recipients reported 28 issued patents, more than 90 patents pending, and more than 30 patents under development, including provisional applications. Two organizations reported having licensed their intellectual property to other entities, and several additional organizations are engaged in active licensing discussions.
- **Publications prepared and accepted.** Articles by CRCF award recipients appear in respected industry journals, and recipients have given numerous presentations domestically and internationally about their novel technology. Fund awardees reported more than 200 total publications and presentations. Of these, publications that have been accepted and published and presentations that have been delivered total more than 160 in FY2015; an additional 25 publications have been submitted and are awaiting publication, and at least 15 publications are in preparation.

Project Samplings

CIT tracks projects during their period of performance and for five years after conclusion, as economic and technological outcomes are typically realized a few years or more after a project is completed. The majority of projects from FY2012, FY2013, and the first round of FY2014 have been completed, while most projects awarded in the second round of FY2014 and in FY2015 are underway. Projects showcasing the Fund's effectiveness in contributing to the economic, technological, and well-being of the Commonwealth follow.

- With the support of an FY2014 CRCF award, Virginia Tech has recruited Dr. Harald Sontheimer to jointly direct a university-wide neuroscience initiative and the new Virginia Tech Carilion Research Institute (VTCRI) Glial Biology in Health, Disease, and Cancer Center, as well as oversee his own laboratory and manage the research of additional new faculty recruits. Dr. Sontheimer is a nationally recognized neuroscientist and expert on the biology of glial cells, the brain's most abundant cell type, and is credited with making foundational discoveries on the functional properties of glial cells in the brain, including the localization and mechanisms of a range of receptors and ion channels that had previously been thought to exist only on nerve cells. His work on the fundamental properties of glial cells led to his discovery of a major new therapeutic approach for the treatment of glioblastoma, the deadliest and most prevalent primary brain tumor in humans. In his role with Virginia Tech's College of Science, Dr. Sontheimer will continue to develop new interventions and therapeutics and investigate the mechanisms underlying glial cell function in healthy, normal brain development, and disease, including brain tumors. Dr. Sontheimer has entrepreneurial as well as research experience; he founded a company which received several patents and led a series of clinical trials before the company was acquired.
- CRCF funding in FY2013 and FY2014 has supported the University of Virginia and Charlottesville-based Neoantigenics, Inc. in their research on SAS1B, a novel cell-surface protein normally expressed only in developing oocytes, but broadly expressed in various human cancers. The team is developing breakthrough monoclonal antibody-based drugs directed at this tumor surface marker as well as diagnostic tests that will guide personalized patient therapy decisions. Outcomes from the projects demonstrate that monoclonal antibody-drug complexes to SAS1B can cause in vitro killing of cancer cells from different types of human tumors. Testing is being conducted on mouse models bearing human tumors to provide proof-of-concept on this disease target. In FY2015, Dr. Eusebio Pires, the eminent researcher recruited to UVa through an FY2014 CRCF award, first-authored a publication in *OncoTarget*, a leading journal that covers novel drug targets. This publication effectively

opens the new oncology field of cancer-oocyte neoantigens and introduces SAS1B as a validated immunotherapeutic target. Neoantigenics and UVa combined have leveraged funds totaling more than \$5 million to advance this research and development, including an investment by the newly created Pfizer Seed Fund. Neoantigenics was its first recipient. The team continues to strengthen its relationship with Pfizer and engage with additional academic and commercial leaders in the oncology arena to advance its preclinical program.

- A team from the Virginia Institute of Marine Science (VIMS) Aquaculture Genetics and Breeding Technology Center (ABC) is contributing to the continued and advanced growth of oyster aquaculture in the Chesapeake Bay through the development of near-infrared reflectance spectroscopy (NIRS) for use in optimizing genetic characteristics of oysters to enhance the effectiveness of oyster breeding and production of superior brood stock; NIRS enables the rapid determination of critical physiological parameters for oysters that are essential quantitative characteristics for breeding. CRCF funding enabled the team to incorporate NIRS technology for the testing of triploid varieties. Licenses for tetraploid technology advanced through the CRCF-funded project are executed with a dozen hatcheries along the east coast, from Maine to North Carolina, as growers have adopted the use of improved strains to optimize growth rates, disease resistance, and meat quality. As reported in the Virginia Shellfish Aquaculture Situation and Outlook Report from March 2015, sales of cultured oysters by Virginia growers made the Commonwealth of Virginia a leader in east coast productivity in 2014; there has been a 20% increase in sales of oysters produced by aquaculture from 2013 to 2014, 90% of which is triploid. While the CRCF project alone is not responsible for this increase, the quality assurance of the triploids is related to the data obtained during this study. Oyster aquaculture contributes to the economy of the Chesapeake Bay with sustainable farming practices and jobs for rural areas, including working waterfronts. Through additional outside funding, including follow-on CRCF funding, the team continues to build on the technology and advance new tetraploid breeding initiatives.
- Cavion LLC, a Charlottesville-based company that delivers first-in-class T-type calcium channel therapies for the treatment of oncologic and neurologic diseases, is the offspring of two Virginia small businesses, Tau Therapeutics, an FY2012 CRCF award recipient, and Xdynia. CRCF funding has assisted Tau, now Cavion, in advancing treatment for glioblastoma, the most common and deadly type of brain cancer, through the development of mibefradil. Mibefradil is a unique, safe, adjunctive therapy that enhances conventional chemotherapies and radiation with the high potential to dramatically improve the standard of cancer care. In the last year, progress towards commercialization has been furthered by multiple activities, including a clinical dose finding and safety trial sponsored in part by the National Cancer Institute Adult Brain Tumor Consortium with promising early results, and a Phase I clinical

trial sponsored in part by the Yale Cancer Center to assess the safety and determine the maximum tolerated dose of mibefradil plus radiation in recurrent brain cancer patients. The Yale sponsorship was worth approximately \$2 million. As of September 2015, Cavion had closed \$5 million of bridge financing and continues to discuss partnerships with large pharmaceutical companies that could include options and/or equity investments; additional discussions have been held with venture capital and biopharma firms. Drug development work continues as the team performs on a \$200,000 Virginia Biosciences Health Research Corporation award, researchers pursue use of mibefradil as treatment for other cancers, and through investigation of a potential back-up series of T-type calcium channel inhibitors.

- Charlottesville-based Rivanna Medical has developed the smartphone-sized handheld imaging device, Accuro™, designed to guide a clinician using a needle or probe to a target within the human anatomy. The Accuro™ provides 3D navigation to an anatomical target so a clinician may avoid “guessing” where the target is. The first FDA-cleared application of the device is for spinal anesthesia needle guidance; spinal anesthesia often fails due to reliance on “blind” needle guidance. There are 20+ million neuraxial anesthesia-related (epidural and spinal) procedures per year in the U.S. and 20-80% of all needle placements fail, depending on operator skill and patient age and obesity; the obese and elderly are growing demographics. Enabled by four CRCF awards supplementing federal SBIR Phase I and II project funding and a complementary award to the University of Virginia, the first-of-its-kind Accuro™ device has received FDA clearance, allowing Rivanna to market the device in the U.S.; manufacturing will take place in Charlottesville, and first sales are expected in October 2015. Additionally, in part through CRCF funding, Rivanna is exploring a new opportunity for its automated imaging technology related to the orthopedic market for safe, low-cost guidance of joint injection procedures. Rivanna Medical is garnering considerable attention in social and traditional media, such as the June 20, 2015 front-page story about the company in Thompson Reuters’ *Medical Device Daily*™, a major source of news and information for the worldwide medtech industry.
- Manassas-based 3D modeling and data analysis company, ClearEdge3D, Inc., has received two CRCF awards to advance automated modeling software development. The company’s core technology, the EdgeWise™ software, creates highly detailed, fully 3D building models of cities and provides officials from the Department of Defense, Department of Homeland Security, municipal governments, and others near-instantaneous access to this accurate and mission-critical data for training, simulation, and operational planning. The latest version automatically extracts gridded structural steel and concrete from LiDAR datasets, dramatically increasing the speed to model the existing as-built condition of facilities. In FY2015, the suite of EdgeWise™ products was repositioned into a single, unified brand;

approximately 150 software licenses have been sold this year. ClearEdge reported rapidly growing revenue, posting more than \$1.2 million in sales over the last year and giving the company a \$2.1 million run rate. ClearEdge continues to raise additional financing rounds and is involved in serious discussions with several important players in the market.

- The Frank Reidy Research Center for Bioelectrics (CBE) at Old Dominion University in Norfolk has spearheaded the new field of bioelectrics, and FY2012 CRCF funding helped the Center develop a novel cancer therapeutic strategy using pulsed power technology, a cornerstone capability of that field. Pulsed power technology was initially developed for military purposes, to store energy and release it instantaneously to produce immediate power. CBE's technology delivers ultrashort bursts – nanosecond pulsed electric fields, or nsPEFs – to treat cancer. nsPEF treatment is efficient at killing tumor cells through a natural cell death process that can reduce or eliminate adverse side effects of traditional cancer treatments and restore immune surveillance, which can potentially limit tissue invasion / metastasis. Further research indicates that tumor ablation using this technology appears to block new tumor growth. New intellectual property has been created and ODU has licensed this technology. Clinical trials are scheduled to start later in 2015, spearheaded by a company formed around nsPEF technology; the company, which has raised \$8 million in private investment, will provide research support to the Center to continue this project.
- HemoSonics, a Charlottesville-based medical device company founded to develop and bring to market innovative instruments to diagnose and guide treatment of pathological clotting and excessive bleeding, is a three-time CRCF award recipient. CRCF FY2012 funding advanced the design, development, and testing of their Quantra platform, which can quickly and accurately quantify specific clotting defects, inform appropriate therapy, avoid unnecessary treatment, and improve patient care. The diagnostic device is designed to provide clinical personnel with data necessary to identify defects of coagulation affecting their patients and guide the appropriate treatment. HemoSonics' outcomes in FY2015 include the initiation of a multi-center study at the University of Virginia and Virginia Commonwealth University to assess the technology's clinical potential and correlation with predicate devices; opening a satellite facility in Durham, NC; filing one patent and being issued one patent from the USPTO; and receiving \$2 million in funding from the National Institutes of Health for a Phase IIB project and \$1 million from the Air Force for a Phase II project.
- In FY2012, PocketSonics, a Charlottesville-based medical device start-up received CRCF funding to advance its Sonic Window handheld ultrasound device from prototype to commercialization. The device received FDA clearance in 2014 and was successfully

launched into the market. CRCF supported experiments that helped PocketSonics make design changes to improve manufacturing yields of a core sub-assembly in the ultrasound device, which assists clinicians in visualizing veins and arteries to guide needle insertion for improved “first attempt success” in placing IVs and catheters in patients. PocketSonics was acquired by Boston-based Analogic Corporation in 2013 to become the basis of a new handheld ultrasound group, providing a lucrative exit for PocketSonics’ shareholders, most of whom were Virginia residents. The former PocketSonics team continues to operate from Charlottesville as Analogic’s handheld ultrasound engineering group.

One year after the acquisition, Jeff Pompeo, the former CEO of PocketSonics, left Analogic to launch CareTaker Medical, a new medical device start-up to commercialize a wireless vital signs monitor for remote patient monitoring, continuous beat-by-beat blood pressure measurement, and internal bleeding detection. Since its formation in 2015, the company raised \$1 million of seed funding from local investors and has six employees working from its Charlottesville headquarters; plans for raising a Series B round of financing before year-end are underway.

Program Overview

Since the inception of the CRCF program in FY2012, 468 applications were submitted from all of the Commonwealth’s ten technology regions and, from these submissions, 184^{vii} awarded projects were announced. CRCF projects cover the following technology sectors: advanced manufacturing, aerospace, communications, cyber security, energy, environment, information technology – including data analytics, life sciences, modeling and simulation, nuclear physics, and transportation.

Projects funded by CRCF seek to positively impact Virginia’s technology future and, per legislative direction, awards made for CRCF projects must support technology sectors identified in the Commonwealth Research and Technology Strategic Roadmap. The Roadmap, a comprehensive planning tool Virginia leaders use to help determine research areas worthy of economic development and institutional focus, identifies technology sectors with the most commercial promise that will drive economic growth throughout the state. The Roadmap is developed through a consultative process that includes the Commonwealth’s private sector technology community, academia and other nonprofit research organizations, and economic development professionals.

CIT leverages its programs to facilitate company creation and growth. In relation to other CIT programs, CRCF is part of a pipeline, working closely with the Federal Funding Assistance Program (FFAP), the GAP family of funds, and the cyber security accelerator, MACH37™. CRCF also complements other funding programs in the Commonwealth, such as the Virginia Biosciences

Health Research Corporation (VBHRC), a translational human health research accelerator program targeting collaboration between Virginia research universities and industry.

One solicitation was offered in FY2015 and included six programs: Commercialization, Eminent Researcher Recruitment, Facilities Enhancement Loan, Matching Funds, SBIR Matching Funds, and STTR Matching Funds. Applications were invited from academia, research institutions, political subdivisions, and the private sector.

- **Commercialization Program**

Supported commercialization activities for products in the proof-of-concept phase that had a reasonable probability of enhancing the Commonwealth's national and global competitiveness; eligible firms were established between November 17, 2012 and November 17, 2014.

- **Eminent Researcher Recruitment Program**

Supported public colleges and universities seeking to acquire or enhance research superiority in qualified technologies through the recruitment of a top scholar to its faculty.

- **Facilities Enhancement Loan Program**

Enabled public and private universities and political subdivisions to establish and/or upgrade facilities used to commercialize qualified research or technologies, including those developed at the institutions and by Virginia's private sector.

- **Matching Funds Program**

Enabled public and private colleges, universities, other research institutes, and federal labs in Virginia to leverage federal and private funds designated for the commercialization of qualified research or technologies.

- **SBIR Matching Funds Program**

Advanced technology commercialization by Virginia-based technology businesses that had won a Phase I and/or Phase II Small Business Innovative Research (SBIR) award. Firms eligible for Phase I matching awards were established on or after November 17, 2011, while firms eligible for Phase II matching awards were established on or after November 17, 2009.

- **STTR Matching Funds Program**

Advanced technology commercialization by Virginia-based technology businesses that had won a Phase I and/or Phase II Small Business Technology Transfer (STTR) award. Firms eligible for Phase I matching awards were established on or after November 17, 2011, while firms eligible for Phase II matching awards were established on or after November 17, 2009.

CRCF's FY2015 funding was associated with multiple appropriations. The General Assembly appropriated \$2.8 million for FY2015. During the fiscal year, \$1.5 million was reallocated from CRCF to other economic development programs; this was followed by a \$1 million special appropriation made during the 2015 General Assembly session.

Seven technology sectors were eligible for funding in FY2015: advanced manufacturing, specifically robotics, additive manufacturing, and remote monitoring and sensing; communications, specifically next-generation broadband networks, wireless telecommunications, and next-generation 911 infrastructure; cyber security; energy; information technology, specifically data analytics; life sciences; and modeling and simulation.

In FY2015, CIT received 88 applications for five of the six available CRCF programs, totaling \$5.9 million; applications were not received for the Facilities Enhancement Loan Program. Applications represented seven of the Commonwealth's ten technology regions and covered all seven strategically important industry sectors. Applications in FY2015 exhibited a strong emphasis on the area of life sciences, though a significant number also focused on advanced manufacturing, energy, and cyber security. Thirty-eight awards were made, and 35 awardees accepted funding; three awards were declined. Awarded projects represented six of the ten regions and six industry sectors: advanced manufacturing, cyber security, energy, information technology, life sciences, and modeling and simulation.

FY2015 CRCF awards, along with awards made since the program's inception, address a breadth of critical research areas. Multiple FY2015 awards have the potential to make significant impact in healthcare, for example, through the development of improved drugs to treat diabetes, HIV, and obesity; wearable technology to improve the patient experience; and new methods of care to repair eardrum perforations, facilitate corneal transplants, and reduce bacterial infections resulting from medical implants. Cyber security remains a CRCF target; FY2015 technologies included those employing proprietary algorithms to detect intrusion and/or the source of malware. CRCF also funded technologies which may result in smaller, more energy efficient batteries, even technologies designed to harvest energy from their environment.

CRCF awards were selected by the CIT Board of Directors following a multi-step review process that included funding recommendations made by the Research and Technology Investment Advisory Committee (RTIAC). The RTIAC is a legislatively-established body that, in FY2015, was comprised of representatives drawn from higher education, economic development, research institutes, venture capital firms, and technology corporations.

FY2015 Program Administration

Administrative activities in FY2015 included overseeing the solicitation and RTIAC, outreach, and award management for projects funded in FY2012 through FY2014. CIT received \$270,185 for Fund management.

As Fund Administrator and with the support of the RTIAC, CIT developed the approach for the FY2015 solicitation, including program guidelines, review processes, and use of an online grants management system, CyberGrants, to facilitate application submissions and reporting. Following the review of more than 130 Letters of Intent (LOIs) and subsequent proposal submissions, CIT led a multi-step proposal review process. CIT performed an internal compliance review to determine which applications advanced to examination by subject matter experts. These subject matter experts, including individuals from industry, academia, government, and the venture capital community, evaluated and rated proposals. Those that advanced were reviewed by the RTIAC. The RTIAC assessed projects and recommended to the CIT Board of Directors those which should be funded. The CIT Board made final selection decisions, after which awards were announced.

CIT maintained information on the Fund, including solicitations and awards, on its website. Press releases announced the request for proposals and, subsequently, award recipients. Outreach and communications also included email announcements and speaking engagements. Outreach efforts were supplemented by the additional communication networks of Virginia's regional technology councils; individual colleges and universities, research organizations, and federal labs; the Virginia Biotechnology Association (VABIO); the State Council of Higher Education for Virginia (SCHEV); the Virginia Economic Development Partnership (VEDP); and the Administration.

Also as Fund Administrator, CIT managed awards and produced the FY2014 Annual Report. This included assessing project performance on an ongoing basis. Additionally, CIT provided support to external organizations, state agencies, and researchers from academia, industry, and other members of the technology community that desired information about the Fund and future solicitations. Lastly, throughout the year, CIT provided oversight to ensure compliance with the CRCF guidelines and other requirements.

ⁱ CIT has invested in 139 companies, two of which merged together, making the total number of companies invested in 138

ⁱⁱ Opleo is not considered in the company or investment count, because we consider the entire \$50K initial investment to be one transaction, which initially occurred during FY14

ⁱⁱⁱ CIT has invested in 139 companies, two of which merged together, making the total number of companies invested in 138

^{iv} Based on company actual revenue in CY2015 Q1 and Q2 and estimated revenue in Q3 and Q4, assumes a 25% profit

^v Assumes an average salary of \$125K per Virginia employee

^{vi} 38 projects were selected for funding; three organizations declined their awards

^{vii} 184 projects were selected for funding since CRCF's inception; ten awards have been declined

TAB 5

Available, Committed, & Projected Funds

CENTER FOR INNOVATIVE TECHNOLOGY
NET POSITION ANALYSIS
As of June 30, 2015

TYPE OF FUND	In thousands		
	Fiscal Year 2015		
	Actual	Budget	Variance
Operating			
Beginning balance	\$ 2,520	\$ 2,555	\$ (35)
FY15 revenue	\$ 7,864	\$ 7,402	\$ 462
FY15 expenses	\$ (8,489)	\$ (8,452)	\$ (37)
Transfer of DMME CEF beginning bal from designated for GAP	\$ 336	\$ 336	\$ -
Transfer to designated for GAP	\$ (2,000)	\$ -	\$ (2,000)
Total Operating	\$ 231	\$ 1,841	\$ (1,610)
Designated for Broadband Planning and Assistance			
Beginning balance	\$ -	\$ -	\$ -
FY15 appropriation	\$ 500	\$ 500	\$ -
FY15 expenses*	\$ (231)	\$ (500)	\$ 269
Total designated for Broadband Planning and Assistance	\$ 269	\$ -	\$ 269
Designated for Cyber Security			
Beginning balance	\$ 249	\$ 235	\$ 14
FY15 appropriation	\$ 560	\$ 500	\$ 60
FY15 expenses*	\$ (553)	\$ (619)	\$ 66
Total designated for Cyber Security	\$ 256	\$ 116	\$ 140
Designated for Modeling and Simulation			
Beginning balance	\$ 561	\$ 576	\$ (15)
FY15 appropriation	\$ -	\$ 500	\$ (500)
FY15 expenses*	\$ (178)	\$ (265)	\$ 87
Total designated for Modeling and Simulation	\$ 383	\$ 811	\$ (428)
Restricted for Cyber Security Accelerator			
Beginning balance	\$ 1,084	\$ 1,102	\$ (18)
FY15 appropriation	\$ -	\$ -	\$ -
FY15 expenses*	\$ (1,084)	\$ (1,097)	\$ 13
Total restricted for Cyber Security Accelerator	\$ -	\$ 5	\$ (5)
Designated for GAP			
Beginning balance	\$ 2,894	\$ 2,526	\$ 368
Transfer of DMME CEF beginning bal to Operating	\$ (336)	\$ (336)	\$ -
Transfer from Operating	\$ 2,000	\$ -	\$ 2,000
FY15 appropriation	\$ 1,100	\$ 3,100	\$ (2,000)
FY15 proceeds - GAP	\$ 565	\$ -	\$ 565
FY15 investments - GAP	\$ (1,624)	\$ (3,851)	\$ 2,227
FY15 other direct costs - GAP*	\$ (1,236)	\$ (1,398)	\$ 162
FY15 transfer to SSBCI	\$ (8)	\$ -	\$ (8)
Total designated for GAP	\$ 3,355	\$ 41	\$ 3,314
Designated for SSBCI - GAP			
Beginning balance	\$ -	\$ -	\$ -
FY15 proceeds - SSBCI	\$ 1,978	\$ 760	\$ 1,218
FY15 investments - SSBCI	\$ (1,918)	\$ (700)	\$ (1,218)
FY15 transfer from GAP	\$ 8	\$ -	\$ 8
FY15 other direct Costs - SSBCI non-billable labor and fringe	\$ (8)	\$ -	\$ (8)
FY15 other direct costs (total expenses) - SSBCI	\$ (60)	\$ (60)	\$ -
Total designated for SSBCI - GAP	\$ -	\$ -	\$ -
Designated for DMME CEF - GAP			
Beginning balance	\$ -	\$ -	\$ -
FY15 revenue - investment plus G&A	\$ 124	\$ 415	\$ (291)
FY15 proceeds - interest income	\$ 51	\$ -	\$ 51
FY15 investments - DMME CEF	\$ (151)	\$ (336)	\$ 185
FY15 DMME CEF G&A	\$ (24)	\$ (79)	\$ 55
Total designated for DMME CEF - GAP	\$ -	\$ -	\$ -
TOTAL NET POSITION	\$ 4,494	\$ 2,814	\$ 1,680

* Total expenses less Overhead and G&A