CIT Funding Sources: SBIR/STTR, CRCF, and GAP

October 2019
CIT Support for Innovation

- **CIT GAP Funds** | Place equity investments in Virginia-based technology, life science, and clean tech companies.

- **Virginia Founders Fund** | Serves underserved populations, creating 6 startups since April 2018 with 22 more in the pipeline.

- **Commonwealth Research Commercialization Fund** | Provides grants to university and private company researchers and innovators

- **SBIR/STTR Support** | Provides guidance, training and valuable resources to enhance the competitiveness of your SBIR/STTR proposal strategy.

- **Cybersecurity** | Provides funding and mentorship to promising Commonwealth companies through its GAP Fund and MACH37 accelerator.

- **Smart Communities** | Co-founded the Smart City Works accelerator, leads the Smart Communities Working Group, and funds smart cities and IOT startups.

- **Unmanned Systems** | Leads the Commonwealth’s ‘Unmanned Systems Center of Excellence’ to attract startups and companies to Virginia.
CIT’s Federal Funding Assistance Program
For Virginia based co’s and researchers

• Assists Virginia-based tech firms in SBIR/STTR
• SBIR strategy consultation and mentoring
• Low cost proposal training and review courses
• Discounts with expert proposal consultants
• VC/Angel Capital “Readiness” review and consideration for CIT GAP Fund
• Phase “0” and “00” awards of $500-$2500 to qualified Phase I & Phase II applicants to help pay for proposal development resources.
• CRCF SBIR/STTR Matching Grant Program

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www.cit.org/programs/cit-entrepreneur
Goal of SBIR/STTR Programs

• Provide critical early stage funding for projects that have high commercial potential but are too early to be attractive to other sources of funding (Banks, Angel Investors, Venture Capital, Strategic Partner Funding).

• Helps to lower the risk for these other funding sources.

• “Come back when”… you have a working prototype, beta testing with customers, etc…
What is SBIR and STTR?

- **SBIR**: Small Business Innovation Research
  - 3.2% of extramural research budgets
- **STTR**: Small Business Technology Transfer
  - 0.45% of extramural research budgets
- $3.7 Billion (annually) of Federal Funding to:
  - Support **small business** to:
    - Stimulate *technological innovation* to
      - Develop **products** with **commercial merit**
Basics

- Agencies use program to help serve their mission
- Small awards to vet high risk, high pay-off research that can be commercialized.
- $3+ Billion available each year. If budgets increase, SBIR/STTR budgets increase.
- Gated funding process
- This is a Commercialization Focused Program with a product or services resulting from research.
- Not “research for the sake of research”
- 1-3 times per year by each agency.
- 4500+ projects funded annually
- Approx. 25% of all seed capital in US.
### Agencies with SBIR and STTR Programs

<table>
<thead>
<tr>
<th>Agency</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Defense (DOD)</td>
<td>$1.8 B</td>
</tr>
<tr>
<td>Department of Health and Human Services (HHS), including the National Institutes of Health (NIH)*</td>
<td>$1.15 B</td>
</tr>
<tr>
<td>Department of Energy (DOE), including Advanced Research Projects Agency – Energy (ARPA-E)</td>
<td>$308M</td>
</tr>
<tr>
<td>National Aeronautics and Space Administration (NASA)</td>
<td>$183M</td>
</tr>
<tr>
<td>National Science Foundation (NSF)</td>
<td>$212 M</td>
</tr>
</tbody>
</table>

### Agencies with SBIR Programs

<table>
<thead>
<tr>
<th>Agency</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Department of Agriculture (USDA)</td>
<td>$30M</td>
</tr>
<tr>
<td>Department of Homeland Security (DHS): Science and Technology Directorate (S&amp;T) and Domestic Nuclear Detection Office (DNDO)</td>
<td>$17M</td>
</tr>
<tr>
<td>Department of Commerce: National Oceanic and Atmospheric Administration (NOAA) and National Institute of Standards and Technology (NIST)*</td>
<td>$13M</td>
</tr>
<tr>
<td>Department of Transportation (DOT)</td>
<td>$5.2 M</td>
</tr>
<tr>
<td>Department of Education (ED)</td>
<td>$7.5 M</td>
</tr>
<tr>
<td>Environmental Protection Agency (EPA)</td>
<td>$3.6 M</td>
</tr>
</tbody>
</table>
Where does SBIR/STTR Fit?

*It’s a Component of a Funding Strategy*

- Debt
- Equity
- **Non-Dilutive**

Do you have a funding strategy?
Agency Differences—Grants vs. Contracts

GRANTS — Investigator Initiated Topics:

- HHS (95% of $), NSF, USDA, DOE, ED
- Broad Topic areas (Some have topic areas)
- Open communication
- External peer review
- Agency will not be the customer (most likely)

CONTRACTS — Investigator Initiated Topics:

- DOD, NASA, DHS, EPA, DOT, DOC, ED, HHS (5%)
- Must respond to topic
- Limited time to prepare (8-12 weeks)
- Limited communication during open period.
- Internal review
- Phase III Opportunities
Some cool perks

- No equity – *vs VC -- and*, not a loan
- IP retention – *vs “work for others”*
- Credibility from Federal Government’s evaluation
- Phase 3 “sole source” possibility to gain entry to fed acquisitions
SBIR and STTR Basics: 3 Phases

3 Year, ~1,150,000+

Phase I
6-12 Months, $150K-$225K
(varies by agency)

Phase II
2 Years, $750K-$1.5M
(varies by agency)

Phase I Goal: Prove FEASIBILITY
Feasibility for what? Whatever you hope to accomplish in Phase II.

Phase II Goal = Further R&D
How far? You decide based on…

Phase III is ULTIMATE GOAL = Commercialization (No SBIR/STTR $)
Eligibility for Funding

Small Business:
• For profit
• U.S. Owned and Controlled
• <500 employees
• Located in the US
• R&D must be performed in the U.S.
The Project: What Does SBIR/STTR Fund?

- **PRODUCT** Development

- Based on “technological innovation”
  - “high risk” – *risk level can depend on the agency and topic!*

- Credible Commercialization Strategy
<table>
<thead>
<tr>
<th><strong>Firm eligibility</strong></th>
<th><strong>SBIR</strong></th>
<th><strong>STTR</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Owned by American individuals, US-based research, for-profit, and fewer than 500 employees</td>
<td></td>
<td>Must have formal collaboration agreement with university, FFRDC or other non-profit research institution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Collaboration with research institution</strong></th>
<th>May subcontract</th>
<th><strong>Must</strong> have formal collaboration agreement with university, FFRDC or other non-profit research institution</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Principal Investigator</strong></th>
<th><strong>Must be &gt; 1/2 time employed by firm</strong></th>
<th>Not specified: could be employed by company or partner or there could be more than one PI</th>
</tr>
</thead>
</table>

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<thead>
<tr>
<th><strong>Work breakdown (maximum workload that may be subcontracted or used for consulting)</strong></th>
<th>Can contract out up to 1/3 of Phase 1 and 1/2 of Phase 2</th>
<th>Firm must perform &gt; 40% of work and the research institution &gt; 30% of work for both phases</th>
</tr>
</thead>
</table>

**ie. firm can contract out up to 60%**
3 Main Evaluation Areas

Evaluation Criteria Addresses:

• How well proposal addresses the topic area (technical approach)
• Skills of the PI and Team
• Potential to Commercialize the way that the agency wants you to
How to be Competitive in SBIR/STTR

- Understand the goals of the Agency
- Understand and address the agency’s review criteria
- Convene a strong team – outsource where needed
- Identify appropriate facilities and resources
- Develop and follow a strategic plan
- Follow the rules
- Complete your registrations—allow 6-8 weeks!
- Submit early!
- Take training courses
Where to Search

- SBIR/STTR Information: [SBIR.gov](http://SBIR.gov)
  - Links to all 11 agencies
  - Search past awards (see “awards” section)
  - Find Current/past solicitations
    - Past solicitations can help you understand what agencies may have future interest in your technology
  - Tutorials
• PRE-RECORDED SESSIONS:
  – SBIR/STTR Overview Webinar
  – Feasibility Project Scope Webinar
  – Eligibility Requirements Webinar
  – Building Teams for your Startup Webinar
  – SBIR/STTR Commercialization Plans Webinar
  – NSF/DOD SBIR Competitive Checklist Webinar
  – Quickbooks & Compliance Webinar
  – SBIR/STTR For PostDocs & Grad Students
  – Intellectual Property Protection & Licensing Strategies Webinar
  – Tips from SBIR/STTR Recipients
  – NIH – 5 part series
  – NSF – 4 part series
  – DOD – 4 part series
  – NASA SBIR Tips
  – Dept. of Energy SBIR tips

FREE TO VIRGINIA BASED Companies and Univ. Researchers!
REGISTER for RECORDED WEBINARS
http://www.cit.org/service-lines/cit-entrepreneur-webinars/
Upcoming Training

• **Dec. 4-5, 2019** – DOD/NASA SBIR Phase I, II & Commercialization Conference, Herndon, VA

www.cit.org/events

• **40+ Recorded Webinars**
  https://www.cit.org/service-lines/cit-entrepreneur-webinars/
SBIR / STTR Support

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Center for Innovative Technology
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www.cit.org/events
COMMONWEALTH RESEARCH COMMERCIALIZATION FUND

FY2020 Funding Opportunities

Presented by:
Jennifer Hiltwine, Grants Manager

October 2019
Driving economic growth in Virginia by investing in technology commercialization

• ~$28 million awarded FY2012-19

• ~$2.5 million available for FY2020

• Single solicitation:
  • Letters of intent (LOIs)
  • Applications
AWARDEE SAMPLING

VCU

NIRSleep

CCAM

CCALS

algorithmRX

StemCellLife™

WynnVision, LLC

PEG LLC

MR Technologies

McGuire Research Institute

USProbe

Signaltape®
CRCF PROGRAMS/INNOVATION CONTINUUM

Pre-Company

Research

Proof-of-Concept or Invention

Early-Stage Development

Post-Company Formation

Product Development

Production

CRCF Matching Funds Program

CRCF Eminent Researcher Recruitment Program

CRCF Commercialization Program

CRCF SBIR/STTR Matching Funds Programs
IS CRCF A FIT?

- Clear, unmet market opportunity
- Specific technology development project
- Management team
- Vision and path to commercialization of the technology
- Thought-through and realistic picture of the CRCF project and commercialization strategy
- Potential economic benefit for Virginia
USES FOR CRCF FUNDING

• Technology development activities may include but aren’t limited to:
  • Labor (development, testing, scientific analysis, etc.) and fringe
  • Building prototypes
  • Materials/supplies
  • Protecting IP

• Acceptable, but limited costs:
  • Market validation activities
  • Equipment
  • Consultants/subcontractors
  • Travel
  • General costs of doing business (indirects)
ELIGIBLE INDUSTRY SECTORS

• Clean energy
• Cybersecurity
• Data analytics
• Life sciences
• Unmanned systems
PRIVATE SECTOR PROGRAMS

• Programs offered to for-profit technology businesses:
  • Commercialization
  • SBIR Matching Funds
  • STTR Matching Funds

• Applicants may submit one LOI/application under only one of these three programs

• Prior applicants eligible to apply again, provided they have received no more than two CRCF awards

• $75,000 request/award cap

• LOI requires a valid tax ID number (EIN)
• Programs offered to public and private colleges and universities, university research consortia, federal labs, and other nonprofit research institutions in Virginia:
  • Matching Funds
  • Eminent Researcher Recruitment

• Applicants may submit one LOI per Principal Investigator

• LOI must be approved by Office of Sponsored Programs or Office of Research (for public/private higher ed institutions)
LOI: FY2020 Approach

• Process:
  • Eligibility review – CRCF staff
  • Content review – external committee
  • Applicants notified – CRCF staff
    • Approved: invitation to submit a proposal
    • Declined: feedback on LOI

• Other considerations:
  • Character and page counts
  • Review before submitting
## SOLICITATION SCHEDULE

<table>
<thead>
<tr>
<th>FY2020 CRCF Activity</th>
<th>Key Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT issues preview</td>
<td>August 7, 2019</td>
</tr>
<tr>
<td>CIT issues information on LOI</td>
<td>August 29, 2019</td>
</tr>
<tr>
<td>CIT issues RFP</td>
<td>September 25, 2019</td>
</tr>
<tr>
<td>Letters of Intent (LOIs) deadline</td>
<td>November 6, 2019</td>
</tr>
<tr>
<td>Issue proposal invitations</td>
<td>December 13, 2019</td>
</tr>
<tr>
<td>Proposal deadline</td>
<td>February 7, 2020</td>
</tr>
<tr>
<td>Proposal review</td>
<td>February 8 – May 28, 2020</td>
</tr>
<tr>
<td>Award announcements</td>
<td>Early June, 2020</td>
</tr>
</tbody>
</table>
PROGRAM INFORMATION AND RESOURCES

FY2020 SOLICITATION:
www.cit.org/initiatives/crcf/fy2020/

• All resources available online:
  www.cit.org/initiatives/crcf/fy2020/resources/
  • FAQs
  • Webinars and topic-specific videos
  • Samples materials (budget and application)
  • CRCF team

• Some resources are coming soon!
QUESTIONS?
Contact the CRCF team at crcf@cit.org

JOIN OUR LISTSERV!
bit.ly/CRCFlistserv
DO YOU HAVE THE RIGHT STUFF?

CIT GAP Funds & Virginia Founders Fund
October 2019
TODAY’S CONVERSATION

Attributes of a High-Growth, High-Expectation Startup...and How To Get There

- CIT equity investment programs - long-term, active engagement
- What the journey is like from inception to exit
- What businesses are best suited for angel/venture capital...and which are not?
- Learn what professional investors really look for and why
- Discussion / Q&A
VALLEY OF DEATH: WHAT WE DO

220+ startup portfolio
100% Virginia-based
Equity $25K-$250K

Innovation-centric
High-growth
Return + Impact

Catalytic Equity Investor Driving Virginia’s Innovation Ecosystem
LEADING INVESTORS BY STATE

Alaska and North Dakota had no VCs meeting our criteria. VCs featured have the most unique tech investments into the state. When there was a tie across multiple VCs in one state, we used recency of deals, overall deal activity, and investor quality to select the most active tech startup investor for that state. Data is from 2014 – 2019 YTD (1/24/19).
SHOWCASING A CIT RISING STAR

Senseware CEO Serene Almomen "Crushing Tech"

50 Women-Led Startups That Are Crushing Tech

Congratulations to Senseware CEO Serene Almomen for being named by Forbes as one of 50 women that are "pushing the frontiers of innovation." Senseware's IoT Smart Building Solution is changing the industry by making real-time data from the built environment easily accessible. Read more about Forbes list of the Top 50 Women-Led Startups That Are Crushing Tech here.

Driving the Commonwealth's Innovation Economy

207
Community Engagements
142 outside NO VA since FY2018

$800M
in 3rd Party Investments

2,800
Jobs Created

220
Companies Launched
When is high-risk growth capital a fit?

*Hint:* From inception to exit, startups are a long-term proposition (often 10+ years)
CIT GAP FUNDS
CENTER FOR INNOVATIVE TECHNOLOGY

INVESTMENT CRITERIA

Management Team / Founder
• Full-Time Commitment
• Integrity, Passion, Creativity
• Coach-ability
• Record of High Achievement

Investment Stage
• Seed-Stage Focus
• Up to 36 Months Prior to Venture Capital
• Pre-prototype – Newly-Launched Tech

Proprietary Advantage
• Unique Technology
• Defensible Intellectual Property
• Difficult-to-Replicate

Scalability
• Markets with Big Buying Power
• Potential for Dominant Market Position

Returns
• Angel -VC Multiples
HIGH-GROWTH STARTUP MOLECULE

- MARKET
- TEAM
- IDEA/PRODUCT/SERVICE
- FUNDING
- BUSINESS MODEL
CIT GAP Funds

Goal: Accelerate the capital formation of Virginia’s S&T startups

• $200K tranched equity or convertible note
VIRGINIA FOUNDERS FUND

Goal: Increase access to capital for startups in traditionally underserved demographics and geographies

• Uses proceeds from CIT GAP Funds portfolio company exits
• $50K equity or convertible note
• Pre-GAP Funding
DISCUSSION / Q & A

• A high-growth, high-expectation startup DNA is unique ... unicorns even rarer

• No one-size-fits-all investment source or type exists

• High failure rate ... the lemons ripen first

• Outsized returns make it worthwhile requiring a decade before payout
CIT Investment Team

Tom Weithman
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Alex Euler
Investment Director
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Marco Rubin
Senior Investment Director
Marco.rubin@cit.org

Jen O’Daniel
Investment Director
Jennifer.odaniel@cit.org
Meet the GAP Team

- GAP Team will be in Roanoke on 10/30 and 10/31
- Email Jennifer.odaniel@cit.org to get one-on-one time with the team to learn more