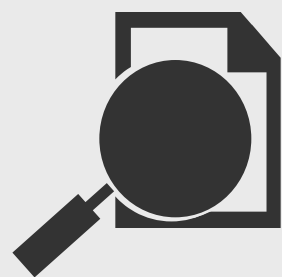




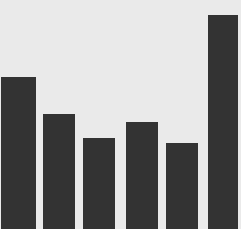
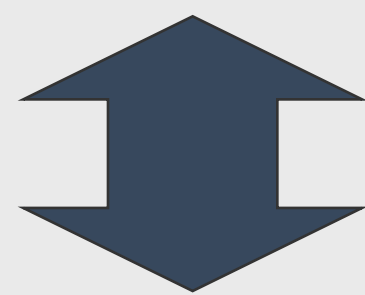
Freedom from Cancer Startup Challenge

Overview & Approach

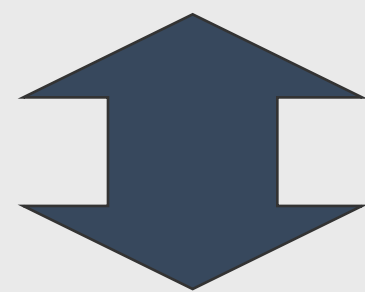
Center for Advancing Innovation – Mission



Due Diligence – Select the Best
Federally Funded Inventions



Commercialization Strategy
Startups & Industry



Maximize Commercial Potential
Operators & Management Talent

CAI Overview



Core team of 20. Leader 24+ yrs of experience.
Evaluated 175K+ inventions; 120+ high profile
engagements resulting in \$210B profit



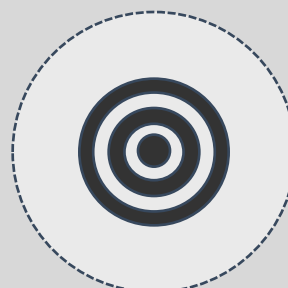
Key Assets: Due diligence trade secrets;
Award-winning Challenge-Accelerator



Established: 21 federal labs partnerships; 24K
inventions; first-of-a-kind startup challenge model



RESULTS: Launched 80 companies; 2000+ jobs
Unprecedented media attention/recognition;
Numerous Keynotes and Panels on innovation



Prestigious Awards from HHS, FLC, Challenge.gov

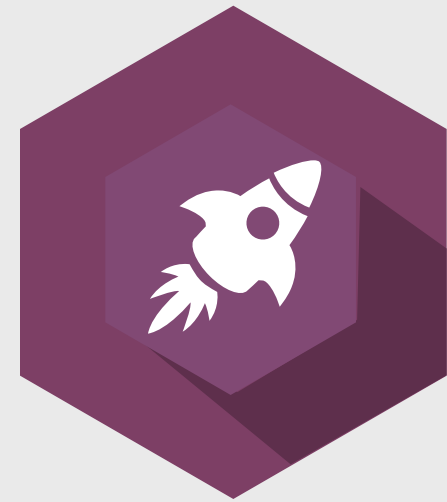


FCSC Challenge Overview

Creating 100 Startups to Drive Innovation in Cancer



What is it? A start-up challenge featuring *cancer* prognostics, vaccines, diagnostics, therapeutics, and devices developed by federal labs, hospitals, and universities



Challenge Goal: Reduce the burden of illnesses that have the highest economic cost and the most negative impact to quality-of-life to cancer patients. Lower the cost of current treatments and discover novel ways to manage cancer-related illnesses



Challenge End Point: 100 new startups launched with seed funding and licenses in the field of cancer

Organization Partners



The Laura and John Arnold Foundation’s core objective is to improve the lives of individuals by strengthening our social, governmental, and economic systems. **LJAF is providing \$1.2 million in funding for the orchestration of the challenge**



MedImmune/AstraZeneca partnered with CAI to provide additional funding and advisory. Exceptional startups could be targets for funding, invitations to a MedImmune pitch day, and advisory support



NCI partnered with CAI to launch the Neuro, Breast Cancer, and Nano Startup Challenges and **are one organization out of many providing inventions**

Judges and Advisors (Cumulative Challenges)




Startup Challenge Journey



COMMERCIALIZE TOP 1% OF INVENTIONS 06

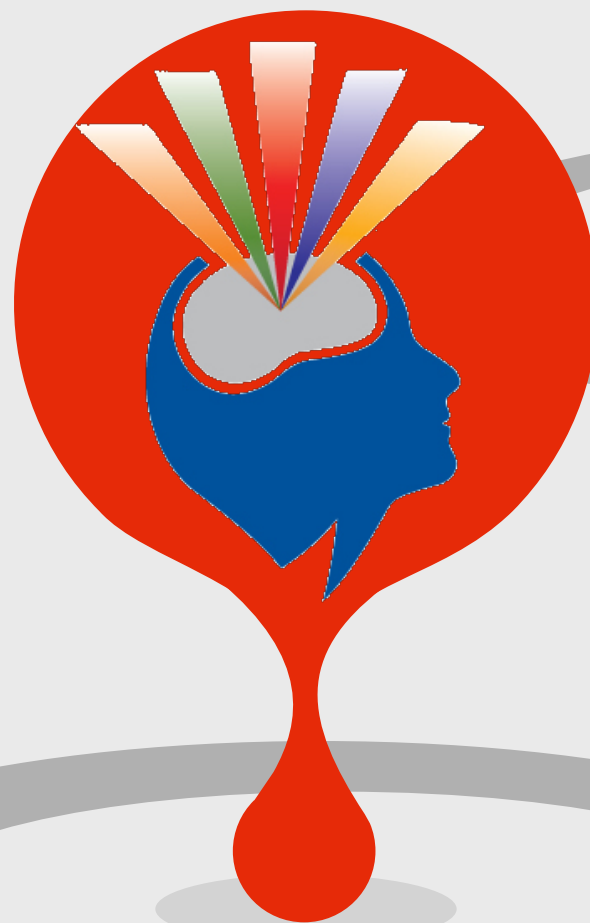
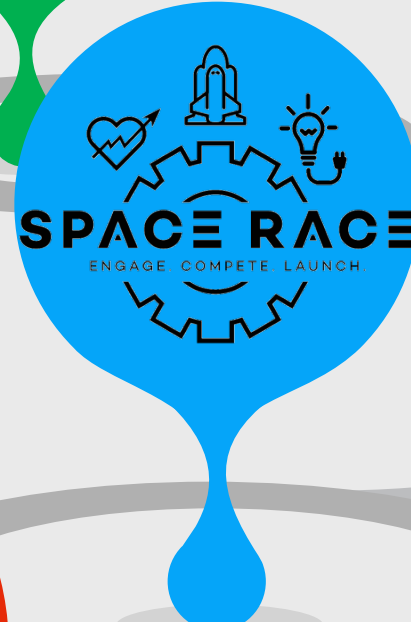
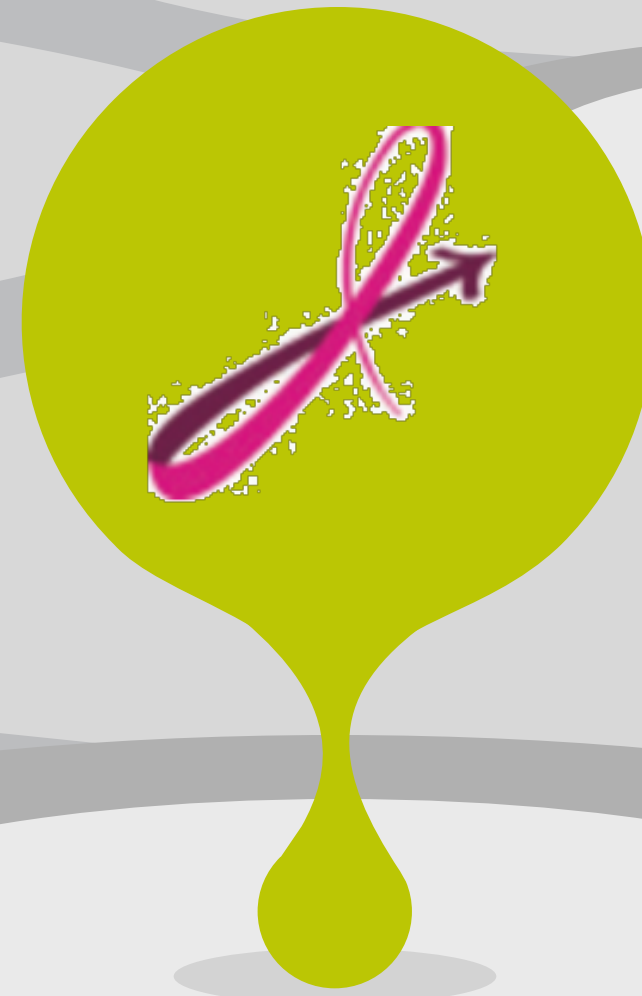
BOLT ON FUND 05

PARTNER WITH ASTRAZENECA NANOTECH CANCER CHALLENGE 13 STARTUPS 03

 EXTEND MODEL TO NASA - SPACE RACE 15-20 STARTUPS 04

SCALE CHALLENGE MODEL 2X NEURO STARTUP CHALLENGE 22 STARTUPS 02

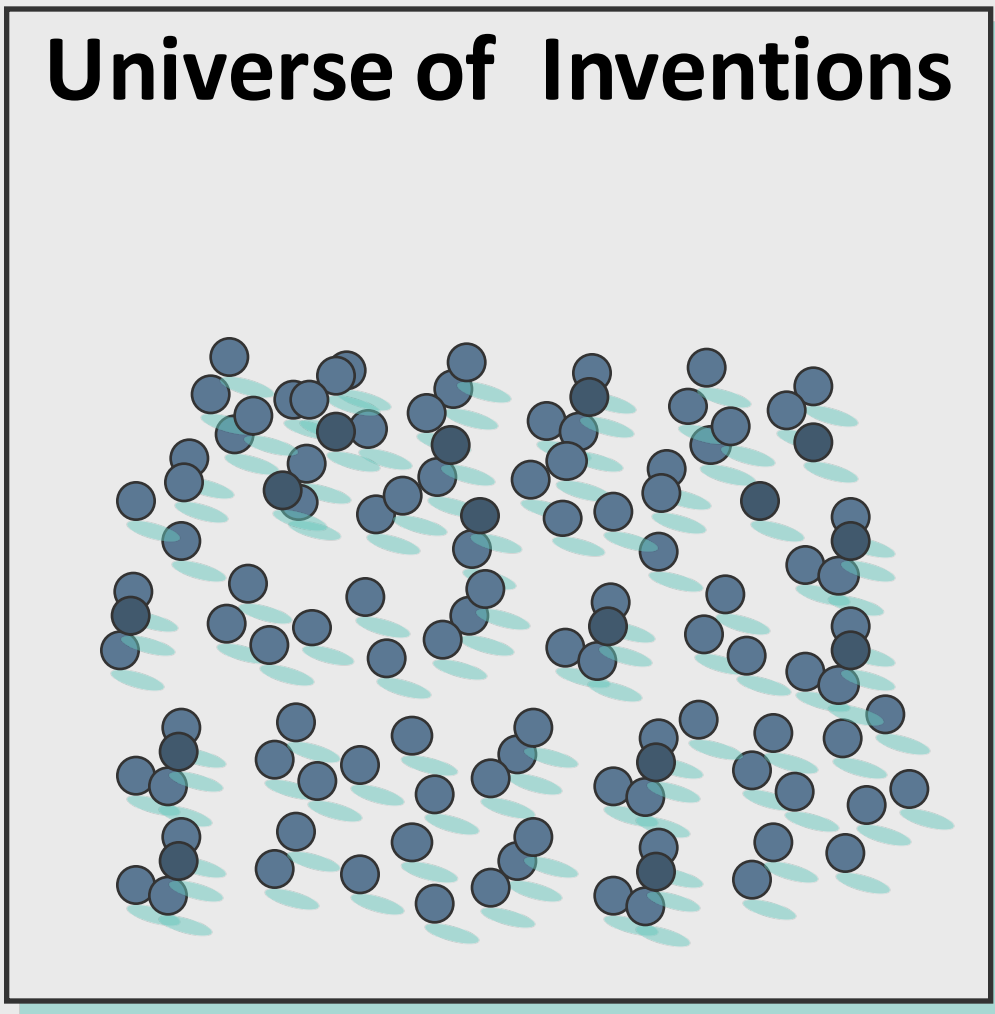
BREAST CANCER CHALLENGE 11 STARTUPS 01



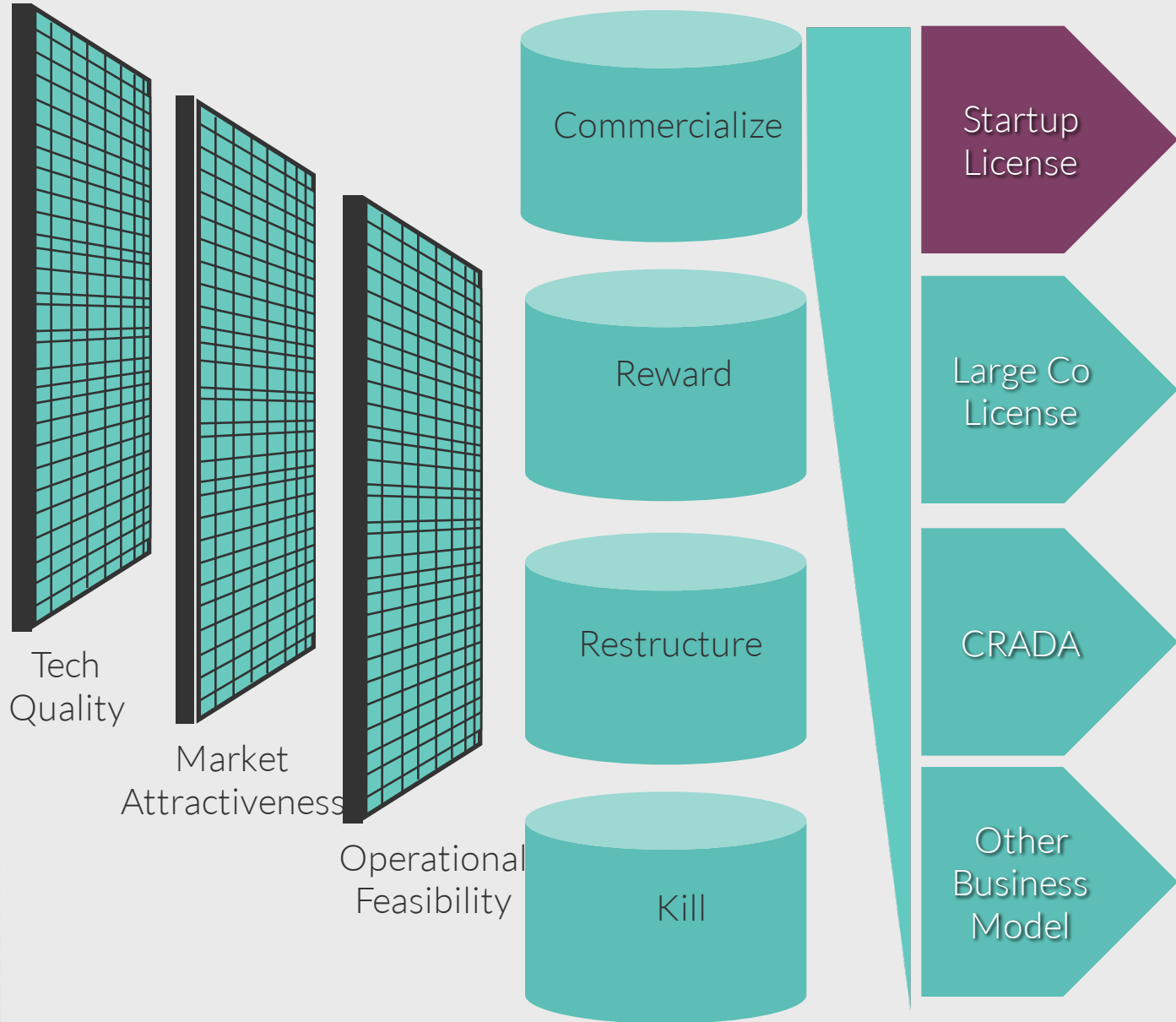
CAI Accelerator Impact – *Process Flow*



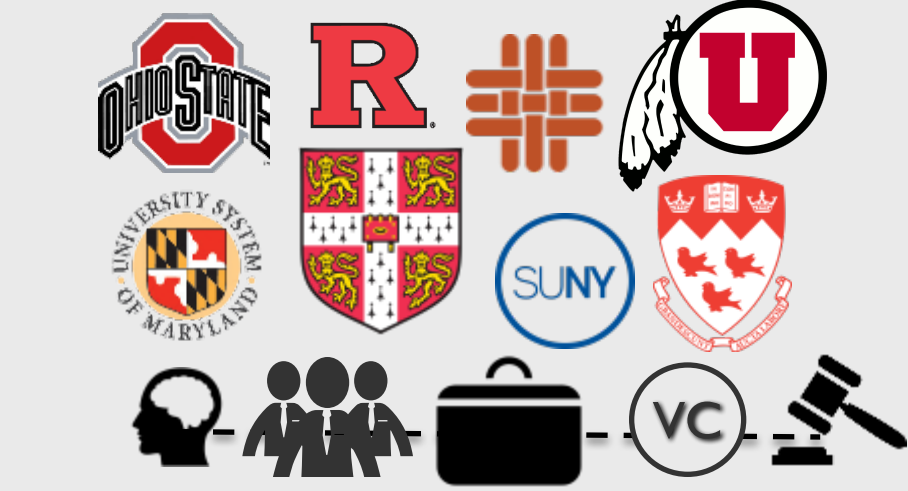
Step 1:
Find the Best Inventions



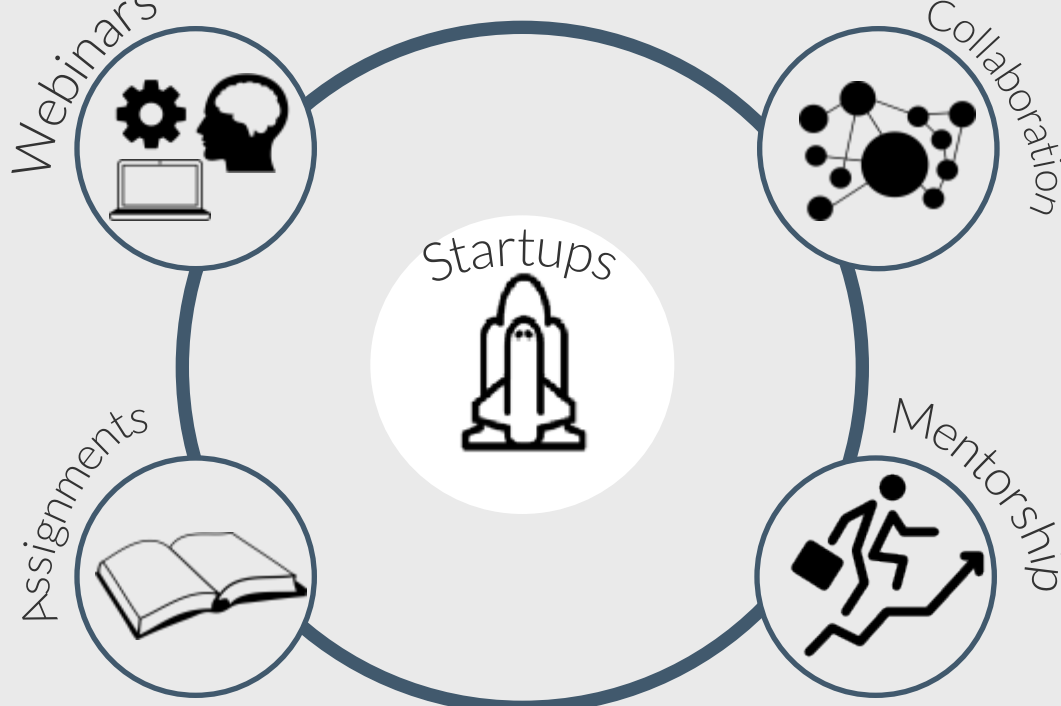
Step 2:
Perform Due Diligence on Portfolio



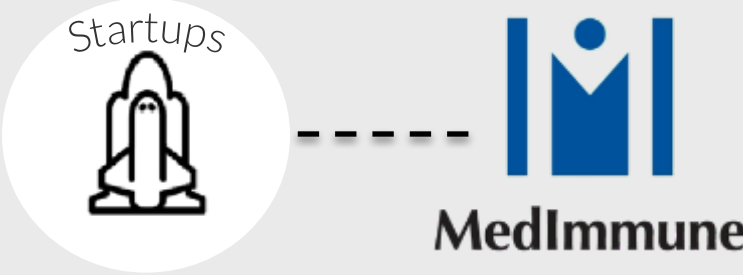
Steps 3 & 4:
Crowdsource Multi-Disciplinary Teams around Inventions; Create Entrepreneur Support Ecosystem



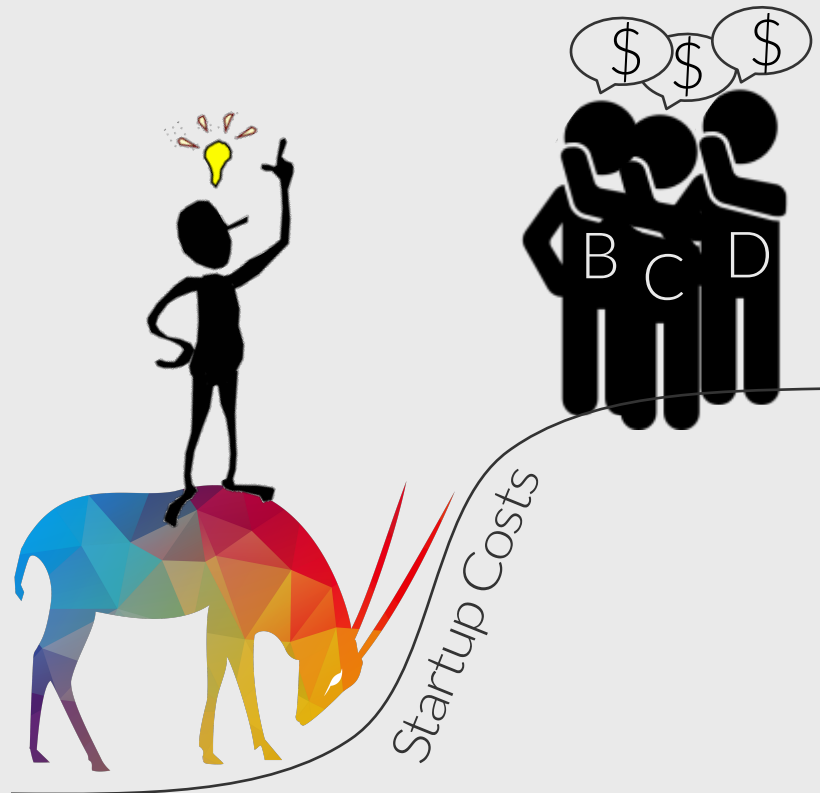
Step 5:
CAI Accelerator Training Model



Step 6:
Accelerator Spin-Outs Aligned with Industry Partnerships

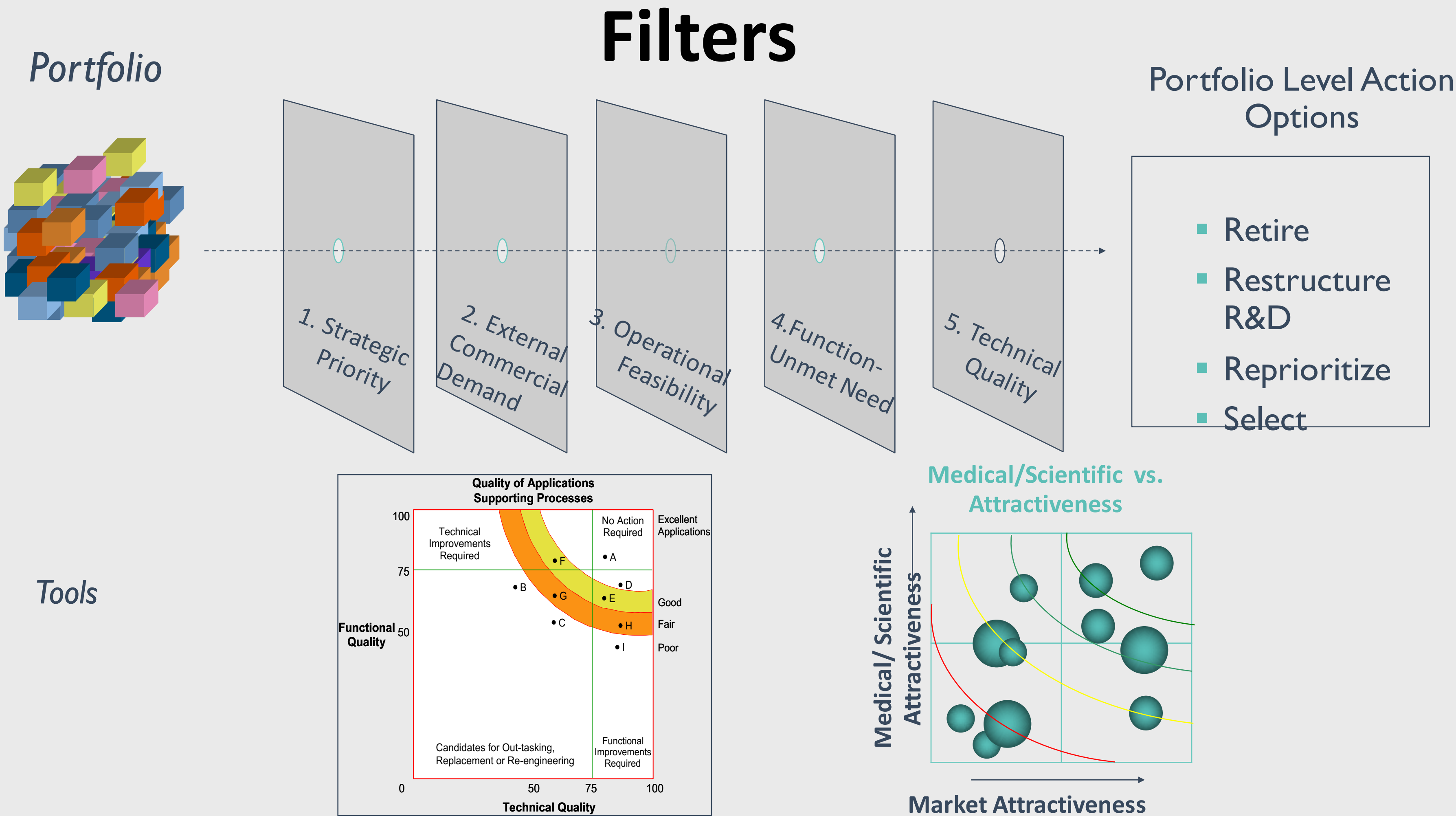


Step 7:
Inject Seed Funding



Step 8:
Support Startups into Late Stage Investing

Trade Secret Due Diligence Models



Cancer Technology Requirements

- **Scope of the Challenge:** Inventions must have an application in the field of cancer (therapeutics, diagnostics, devices, prognostics, et al.)
- **Invention Status:** Invention must be unencumbered by other licensing agreements and co-ownership; technologies should be made available exclusively for licensing
- **Patent Protection*:** There must be some kind of patent protection; there should be no major patent risks
- **Development Stage*:** The Challenge expects any inventions to at least have a valid proof-of-concept or be in a pre-IND stage
- **Inventor:** Must be willing to have their invention licensed

*Exceptions to the above concerning Patent Protection and Development Stage can be made with a strong recommendation from the TTO

How Does our Challenge-Accelerator Work?



CAI identifies commercially-viable inventions and crowdsources talent from around the world



Letter of Intent – Teams form and select inventions. Teams apply to enter challenge



Elevator Speech - Teams deliver elevator speech and executive summary



Business Plan - Teams write business plans and pitch to world class panel of judges



Winning Teams become founders of startup, negotiate license & raise seed funding

12 Month Intensive & Disciplined Training



Challenge Launch

Planning

Engage Stakeholders, plan approach and identify key objectives



Invention Selection

Form Team and Select Invention

Form multi-disciplinary teams and select invention



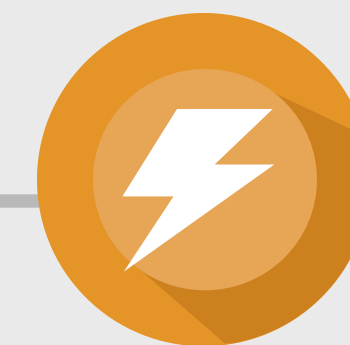
Tailored Training Curriculum

Mentorship

Paired with seasoned exec level industry, business/technical experts



Teams Enter through Letter of Intent, Resumes, etc.



Business Plan and Live Pitch

Elevator Speech

2 minute video with executive summary

Winners and Finalists Selected



STARTUPS

Challenge Accelerator Design



Invention Topics: Commercially viable cancer inventions, all therapeutic areas, and all technology types (diagnostics, therapeutics, devices, vaccines, *etc.*) – aligned with industry and investor research focus

Cross-Research Institutes: Federal labs (NIH, DOD, *etc.*), universities, hospitals, cancer research institutes *etc.*

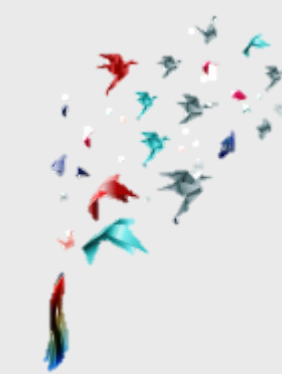
Location: Challenge is orchestrated virtually, anywhere in the world

Participants:

- Team: Global; participants must be 18 years of age and must represent of one following disciplines: business, scientific/medical, entrepreneurship, legal, engineering, and/or computer science
- Mentors, Judges and experts from industry, academia, foundations, investor groups: 80+ mentors, 80+ advisory experts, 300 judges
- Inventors provide two webinar sessions

What Do Teams Get:

- License with startup friendly agreements: no/lowered upfront payments, deferred or reduced milestone and patent reimbursement; royalties to be set per invention
- Prize Money of \$2K – Potential of additional seed funds (pending partnerships)
- Access to world-class mentors and accelerator training

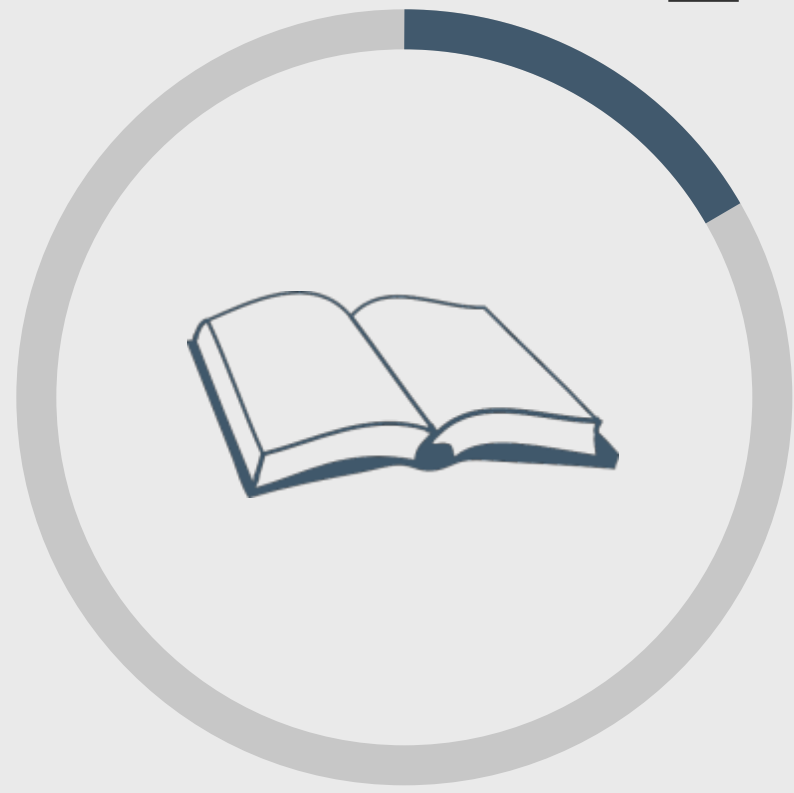


Challenge Timeline

FCSC Opens for Entry August 1st!



Value Proposition for Teams



ACCELERATOR TRAINING

Learn about business planning and strategy from our world class consulting experts



EXPAND YOUR NETWORK

Network with participants from various branches and communities of the industry



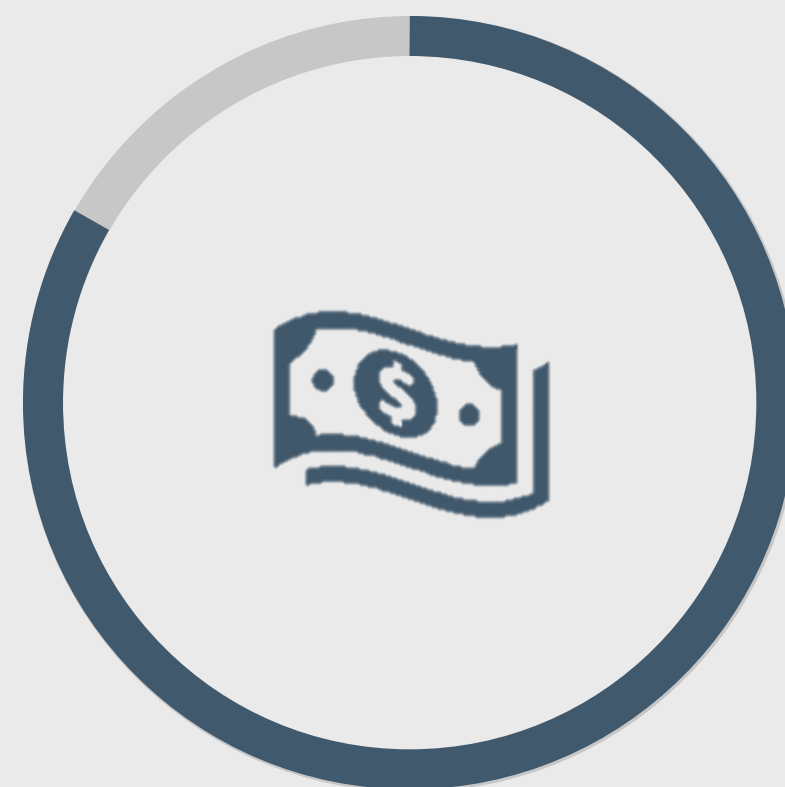
SUPPORT AND MENTORS

Receive personalized feedback, advice, and guidance from our advisors and mentors



MEDIA COVERAGE

Receive unprecedented media attention from news outlets, journals, and the Whitehouse



PRIZES AND FUNDING

Win thousands in Cash Prizes and potential to pitch for additional startup seed funding



STARTUP A COMPANY

Start a new career and join the ranks of the next generation of technology entrepreneurs

Testimonials

Startups from Prior Challenges



*Participating in the Neuro-Startup Challenge these past few months has broadened the horizons of each team member of NeuroCognetix, and inspired new goals and desires for commercializing new technologies through successful startup businesses. **The Challenge provided an interesting learning experience and a compelling opportunity to interact with accomplished business leaders,** NeuroCognetix*

*The Neuro Startup Challenge originally offered us an avenue to learn about Biotechnology and Small Businesses through a hands-on experience. We were able to apply our different backgrounds to start a business. **However, by the end, the challenge offered us something so much more. With their mentoring and relationships, the Neuro Startup Challenge gives EncepHeal Therapeutics the opportunity to help over 22 million people** affected by substance abuse, many of which, do not have options when it comes to FDA treatments, EncepHeal*

*The Breast Cancer Startup Challenge (BCSC) has truly been the greatest experience of my academic and professional career. I have been successful in many academic competitions in the past, however **the BCSC has set up teams for success unlike any other competition... Going forward, we should all look forward to the foundation of many great startups from similar CAI and NIH Startup Challenges.** OncoLinx*

*I feel that the Breast Cancer Startup Challenge (BCSC) is one of the **most well-organized start-up challenges conducted.** Right from initial selection of participating teams until announcement of winners and subsequent start-up mentorship, at each step, Rosemarie and her team represent **clarity of vision, structured planning and near perfect implementation,** Heragen*

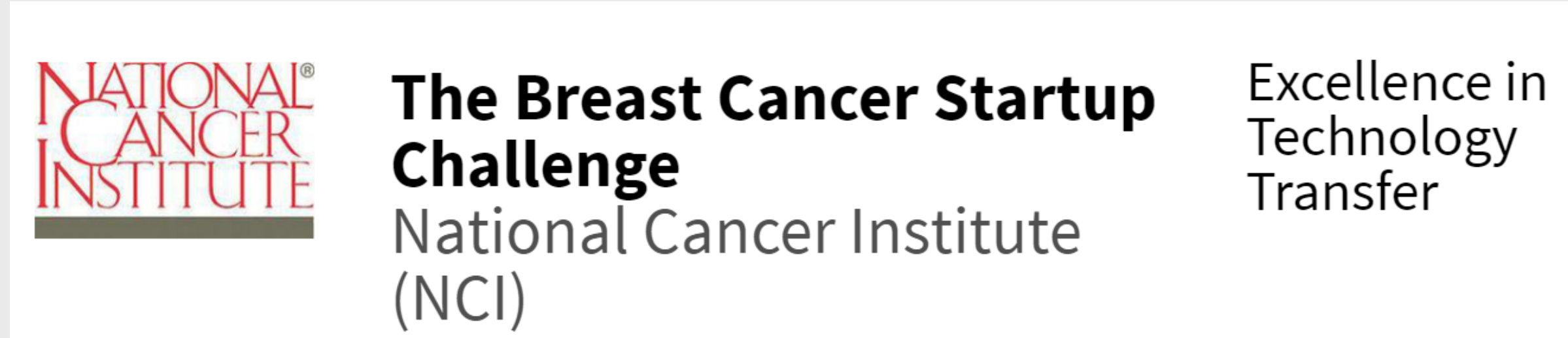
Awards and Notable Mentions



<https://www.challenge.gov/challenge-gov-celebrates-five-years-of-open-innovation/>



https://www.federallabs.org/index.php?tray=award_detail&cid=FLCawrd1221&tid=1FLtop38



https://www.federallabs.org/index.php?tray=award_detail&cid=FLCawrd1221&tid=1FLtop38

White House Articles

FACT SHEET: Celebrating President Obama's Top 10 Actions to Advance Entrepreneurship, and Announcing New Steps to Build on These Successes, recognizes the Breast Cancer Startup Challenge under #6

In celebration of National Entrepreneurship Month, the Administration released a Top 10 list of President Obama's most significant specific actions to promote American entrepreneurship, as well as announced new efforts to build on these successes.

IMPACT REPORT: 100 Examples of President Obama's Leadership in Science, Technology, and Innovation

The Breast Cancer Startup Challenge is recognized by the White House in "IMPACT REPORT: 100 Examples of President Obama's Leadership in Science, Technology, and Innovation" under **#36 of 100**.

White House Recognition










Three White House Briefings in 2016: Advancing innovation and updates on CAI challenges and startups.

White House Articles

- [Celebrating President Obama's Top 10 Actions to Advance Entrepreneurship - recognizes the Breast Cancer Startup Challenge](#)
- ["IMPACT REPORT: 100 Examples of President Obama's Leadership in Science, Technology, and Innovation"](#)
- [Applying the Innovation Toolkit to Bring Cancer Nanotechnology Inventions to Market](#)
Article about the recent Nanotechnology Startup Challenge in Cancer
- [Celebrating National Entrepreneurship Month](#)
Article features the White House's support of a number of activities focused on entrepreneurship and innovation; Features the Breast Cancer Startup Challenge and Neuro Startup Challenge
- [From Lab to Market: Accelerating Research Breakthroughs and Economic Growth](#)
Breast Cancer Startup Challenge Featured in an article highlighting the federal labs efforts and success in driving technology from Lab to Market
- [Startup America Going Strong at Three Years](#)
Presidential Memorandum directing all Federal agencies to accelerate high-growth entrepreneurship. CAI's Startup Challenges are featured

Media Attention & Articles



Publication	Keynote / Panel
	2016 Government Accountability Office Study <u>CAI and our challenge model was highlighted in a study to identify open innovation strategies to address complex and cross cutting challenges facing the federal government</u>
	2016 <i>Cancer Nanotechnology</i> (Springer Open) Article <u>Springer's <i>Cancer Nanotechnology</i> journal promoted the launch of the Nanotechnology Startup Challenge in Cancer by publishing a peer-reviewed article, authored by Rosemarie Truman and Dr. Cody Locke (CAI)</u>
	2016 National Nanotechnology Initiative Strategic Plan <u>CAI's Nanotechnology Startup Challenge in Cancer was outlined in the National Science and Technology Council Committee on Technology's Strategic Plan for the commercialization of government research</u>
	2016 Space.com Article <u>Space.com promoted CAI's SPACE RACE startup challenge with NASA in their article "To the Moon! NASA Contest Kick-Starts Innovative Space Tech"</u>
	2016 NASA.gov Article <u>NASA.gov promoted the launch of the SPACE RACE startup challenge with an article on their homepage</u>
	2015 <i>Washington Post</i> Article <u>Article about CAI bridging government and start-up community was featured in the Small Business Section</u>
	2014 <i>WIRED</i> Article <u>Article featuring CAI's first competition, the Avon Foundation-supported Breast Cancer Startup Challenge</u>

Bi-weekly Information Sessions

Learn More from CAI's Program Directors



Information Sessions:

Bi-weekly THURSDAYS,

5:00 PM EST

Second and Fourth Thursday of Every Month

Until September 1st 2017

<http://goo.gl/gTOLmg>

Roles you Can Play

Role Name	Responsibility	Time Commitment	Phase	Timeframe
Ambassador	Organize Regional Ecosystem - Receive Equity in Startups	4 Hours/Month	All Phases	July '17-May '18
Team Participant	Prepare Deliverables; Compete for Funding and License(s) to Invention(s)	20 Hours/Week	All Phases	Sept '17 – Aug '18
Invention Selection Committee Member	Help to Select Inventions to be Offered in Challenge	Variable	Phase 0	May '17 – Jun '17
Cheerleader	Help Spread the Word to Recruit Team Participants	Variable	Phase 0	May '17 – Jan '18
Mentor	Coach Teams Related to a Select Invention	2-4 Hours/Month	All Phases	Oct '17 – ongoing
Advisor	Coach All Teams Related to a Specific Topic	1-2 Hours Total	Phase 1 or 2	Sept '17 – Mar '18
Judge	Evaluate All Teams Related to Each Selected Invention	8 Hours/Invention	Phase 2	May '18
Sponsor	Sponsor Events	Variable	Phase 3	Aug '17 – Aug '18

Interested?

Sign-up for More Information



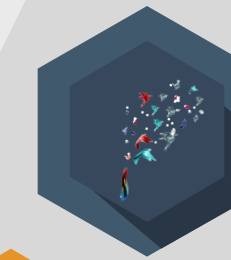
Visit our Website at:

<http://www.freedomfromcancerchallenge.org/interested.html>

Sign up for more info on our form: <http://goo.gl/gTOLmg>

What you can do now:

1. Visit our past challenges for more information (below)
2. Start planning your schedules for August
3. Tell your friends and colleagues about the Challenge
4. Start looking for teammates; seek industry, academic, and research advisors for your team



The Center for Advancing Innovation



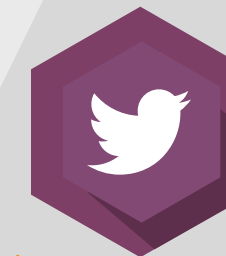
Rosemarie Truman | Founder and CEO
Jonathan Lui | Managing Director



Jonathan's Cell: (972) 740-3615



Jonathan@thecenterforadvancinginnovation.org



twitter.com/centerinnovate



<http://www.freedomfromcancerchallenge.org>



<http://www.neurostartupchallenge.org>






<http://www.nsquared.org>



<https://www.space-race.org>

Example Success Stories



Targeted Cancer Therapies	Batten's Disease Therapy	Cancer Diagnostic
		
Breast Cancer Startup Challenge Winner	Neuro Startup Challenge Winner	Neuro Startup Challenge Winner
\$20MM Valuation	\$5MM Valuation	\$20MM Valuation - First sale 2017
<ul style="list-style-type: none"> • Won MassBIO, MassChallenge & Rice Business Plan Competition • Received \$1 million in funding for winning 43North Competition • 18 agreements Pharma&Academia • Top 30 under 30, TEDMED • Products tested in space (ISS) 	<ul style="list-style-type: none"> • OxBridge/SR One OneStart Finalist • Received orphan drug indication • Expertise in medicine, toxicology (INDS), regulatory affairs • Recruited VP, Merck Veteran • Top 5 percentile SBIR Grant 	<ul style="list-style-type: none"> • “Best Pitch”, Healthcare Innovation • Top 6 “Startups to Watch” • Finalist, Wisconsin Governor’s Competition; WI Innovation Award • Non-dilutive financing raised • PoC: Human (Completed)

Oncolinx: Team Progress

- Winner of Breast Cancer Startup Challenge by the National Cancer Institute (NCI)
- Awarded grants from Avon Foundation for Women, NASA/Center for the Advancement of Science in Space (CASIS), and the Horizon 2020 Program (UK)
- Winner of 43North Competition, \$1 Million Grand Prize
- Winner of MassChallenge & MassBio 2014 Startup Accelerators
- Winner of the Rice Business Plan Competition
- Raised seed financing, currently raising a bridge round
- Partnered with 14 pharma partners all over the world
- Partnered with 6 academic labs all over the world
- Offices in Boston and London
- Closed Startup Exclusive Option License Agreement with the NCI
- Showcases: TEDMED, World ADC Summit, Engage Forum Tokyo, Protein & Antibody Engineering Summit (Shanghai & Boston '15)



Circumvent Pharma: Team Progress



the center for **advancing innovation**



- 2015: Received Orphan Drug Designation (FDA)
- 2015: Winner of the Neuro Startup Challenge (Heritage Provider Network, Center for Advancing Innovation, and NIH)
- 2016: Semi-Finalist in OneStart Accelerator
- 2016: Informal Pre-IND Meeting with FDA
- 2016: Submitted SBIR Application
- Recruited top medical expert as co-PI
- Recruited INDS (ex-Pfizer) toxicology specialists
- Recruited RareMoon regulatory consultants
- BDSRA (patient org) Letter of Support
- 2016: Recruited VP Chemistry, Merck Industry Veteran
- 2016: Conference Attendance
 - JP Morgan (SF)
 - World Symposium Lysosomal Storage Disease (San Diego)
 - CLN1/CLN2 Workshop (Bethesda)
 - BIO (upcoming, SF)

Angio360 Diagnostics: Team Progress



- Winner of the Neuro Startup Challenge by the National Cancer Institute (NCI)-2015
- Winner of the Best Pitch for the Healthcare Innovation Pitch event sponsored by Bridge to Cures-2015
- Phase 3 Finalist in the ongoing Wisconsin Governor's Business Plan competition-2016
- Nominated for the Wisconsin Innovation Award-2016
- Created partnerships with the University of Wisconsin-Madison School of Veterinary Medicine and the Froedtert/Medical College of Wisconsin Hospital System
- Raised pre-seed financing to complete proof of concept research
- Completed human proof of concept research
- Initiated veterinary canine proof of concept
- Negotiated Exclusive Evaluation License with the NCI



Expanded Challenges Every Year



Category	Metric	SPACE RACE 2016	Nano 2016	Neuro 2014-2015	Breast Cancer 2012-2013
Entries & Teams	Teams Accepted	54	29	71	46
	Winning Teams	N/A	N/A	16	12
Team Strength	# People	406+	509+	~1090+	460+
Mentors/Judges/Advisors		70+	60+	147+	17
Startups Created		15	10	22	11
Direct Job Creation		500+	300+	727	478
Valuations		TBD	TBD	\$5-25MM	\$2-20MM
Example Successes		TBD	TBD	Circumvent & Angio360: 3 Years to Exit	Oncolinx: 5 Years to Exit