

FEDTECH[®]



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Addressing Key Valleys in Commercialization

Ben Solomon, Founder, FedTech



About me: your deep tech venture "cruise director" for the next 45 minutes

- Founder and CEO of FedTech; former founder of a robotic control system developer
- Taught on tech commercialization at University of Maryland
- BA Princeton; MBA University of Maryland
- Proud dad of two (three if you count our dog)
- Craft beer; tennis; Cleveland sports are where you'll find me



Agenda for today

1. About FedTech
2. The "Four Valleys of Death" in Deep Tech Venture Building
3. How the Manufacturing Institutes Can Help Hurdle These Valleys



Goals for this talk

Please make this interactive: ask questions or give comments throughout!



1) Share what we've learned about tech commercialization

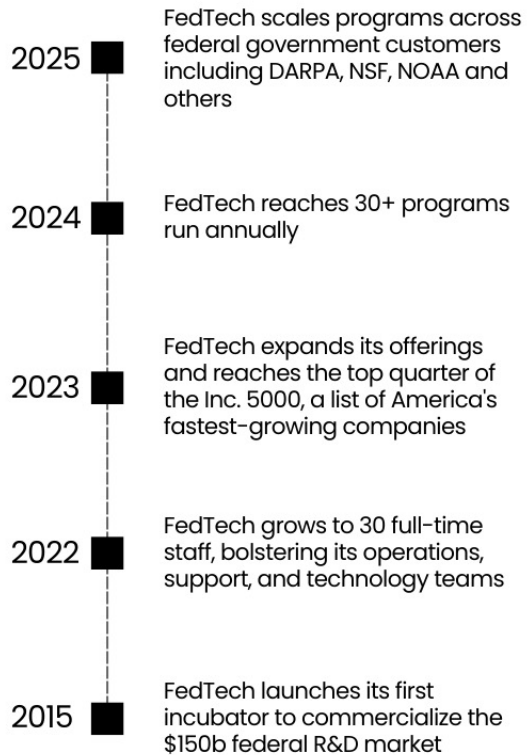


2) Learn how you approach these challenges



3) Develop a common understanding of how the Institutes can help ventures

FEDTECH OVERVIEW: WHO WE ARE



We build and scale

deep tech

through **a custom solutions-oriented platform** designed for builders and innovators in industry and government.

FedTech: An Introduction

We catalyze deep tech innovation through custom programs and services



Internal Innovation

Activate intrapreneurship to solve clear and present challenges within large organizations through bespoke workshops covering a wide range of topics



Startup Studios

Spin out early-stage startups by matching entrepreneurs to science-backed technologies from federal and university labs and executing proven programs that allow them to thrive



Accelerators

Scale later-stage startups, operating accelerators in partnership with mission-driven organizations focusing on technology fields of strategic interest



Professional Services

Support organizations to be on the cutting edge of innovation. Consulting, research, analysis, technology diligence, and other services to inform strategy and deliver value



A Holistic Deep-Tech Innovation Platform

We partner with agencies, industry, and R&D institutions across the world to guide them through every stage of the innovation lifecycle, from idea inception to scaling, emphasizing our unwavering commitment to deep-tech entrepreneurship through internal innovation, venture building out of R&D, venture acceleration, and bespoke innovation ecosystem building support.

Internal Innovation

Training researchers



3000+ R&D Personnel Trained



6000+ IP Screened

Venture Building

Spinout Early Stage Startups



120+ Partner R&D Labs



200+ Spin-out Startups

Accelerators

Supercharge Growth Journey



800+ startups accelerated



\$5 billion+ raised by alumni

Trusted Partners

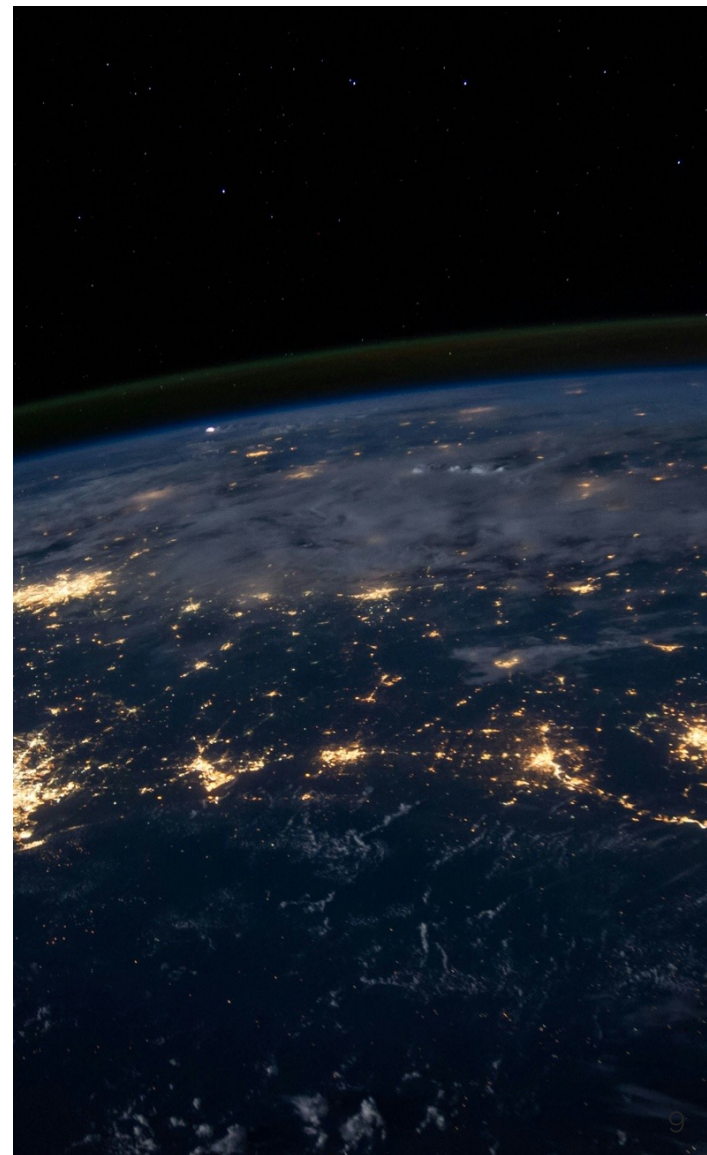


Question to the group?

**What are your experiences
supporting early stage
companies?**

Why Commercialization of Technology is so Hard

- 5-10 years to get to market versus 12-18 months for SAS companies
- 2-3x more capital required than SAS
- 63% failure rate for tech startups
- Incongruity between 10 year VC fund structures and much longer deep tech timelines
- Challenges with IP management and licensing



The "Four Valleys" of Death



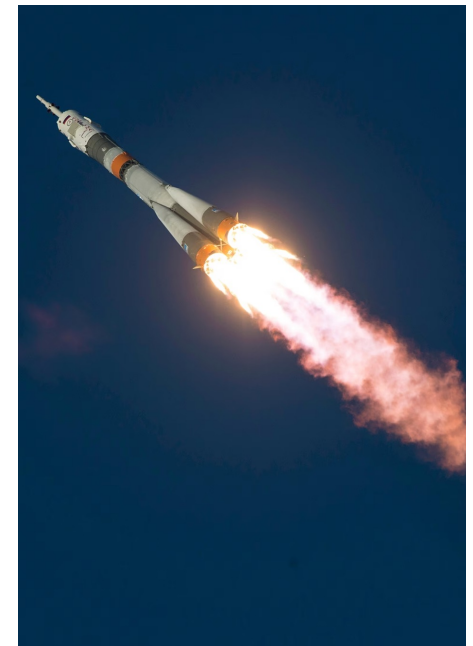
1) Research to prototype



2) Prototype to startup



3) Startup to first customer



4) First customer to scalable business



Valley #1

Research to Prototype

What Creates the Valley?

1) Lab level challenges:

- Funding cycles are designed to support discovery
- Researchers lack product development perspective and are less incentivized to commercialize

2) Tech transfer challenges:

- Tech transfer operations are often lightly staffed and focus more on legal agreements than on outreach to industry
- Entrepreneurs don't understand value of technology in labs and experience confusion on how to engage



Mission: Transition Program



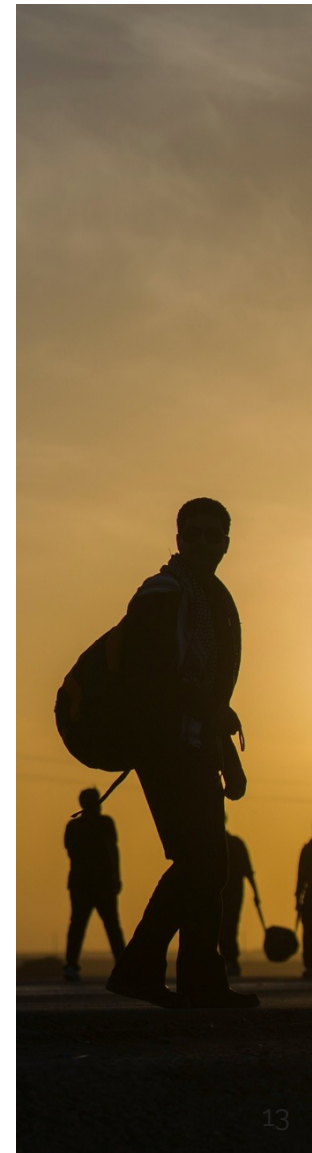
Mission: Transition is a program designed to accelerate innovation and technology transition within the Army Research Laboratory (ARL). As part of this initiative, FedTech delivers a range of activities, including accelerators, webinars, and tailored support to advance promising solutions.

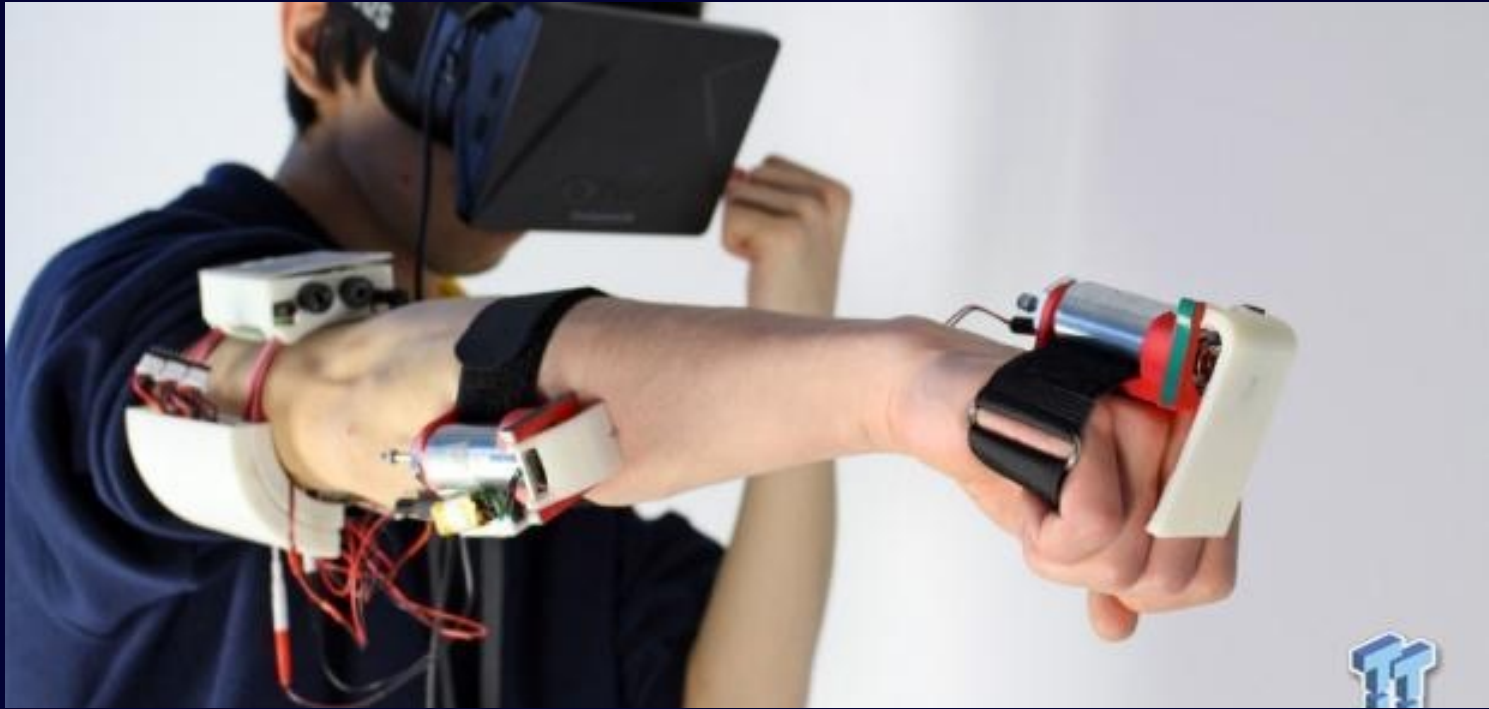
Flagship Initiatives

- **Deep Dive Inventor Cohort** – A 10-week accelerator supporting ARL scientists in advancing the transition prospects of high-potential technologies.
- **Entrepreneur-in-Residence Program** – Tailored coaching to develop commercialization strategies, partnerships, and transition pathways.
- **Webinar Series** – Expert sessions linking ARL researchers with leaders in innovation and technology transition.

Testimonials

- "Mission: Transition reframed how we think about technology transfer — it's not just about patents, it's about stakeholders and deployment pathways." — **Jose Wippold, Biological Sciences Competency**
- "Mission: Transition dispelled assumptions around research funding and commercialization. It confirmed the need to foster trust, avoid siloing, and be aware of active (or previous) work in an area before pursuing transition." — **Jeffrey Veals, Weapons Propulsion Sciences Branch**





Valley #2

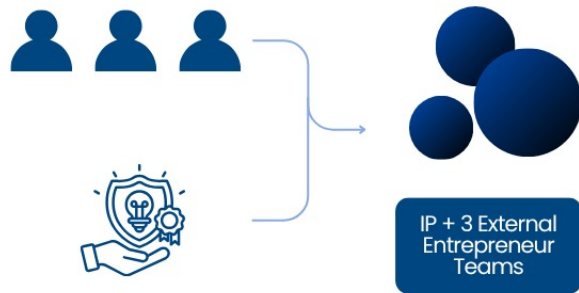
Prototype to startup

Startup Studio Process

Our startup studios are designed to create deep tech startups, matching entrepreneurs with cutting-edge federal and university technologies. We provide intensive education, mentorship, consulting, and a unique network of industry experts to help companies develop market-ready solutions.

FedTech and clients work to define mission areas, technology verticals, program outcomes, and begin working with T2 offices to begin the IP vetting process. In parallel the entrepreneurs are recruited, interviewed, and selected for teams.

Technology & Entrepreneur Selection



Phase I

- 
1 Diligence Process
 IP Evaluation & Market Assessment
- 
2 Preparation
 Tech, Inventors, Entrepreneurs, Mentors, Logistics
- 
3 Bootcamp
 Sessions on team building, setting expectations, and basic commercialization concepts.
- 
4 Phase I Workshops
 Validate Business Model Hypotheses
 - Intensive Education
 - Mentorship
 - Consulting




IP & Market Exploration

Basic Commercialization Foundation

Validated Business Model

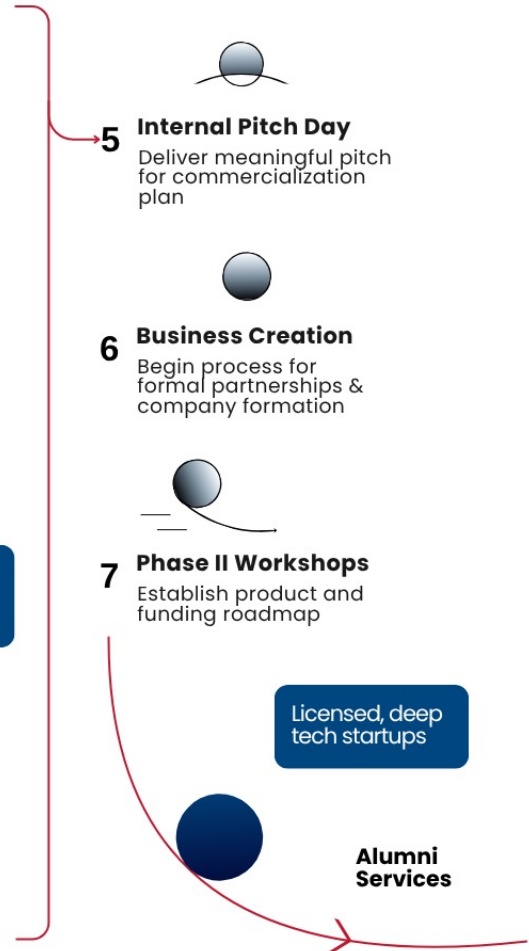
Pre-seed deep tech startups

Phase II

- 
5 Internal Pitch Day
 Deliver meaningful pitch for commercialization plan
- 
6 Business Creation
 Begin process for formal partnerships & company formation
- 
7 Phase II Workshops
 Establish product and funding roadmap

Licensed, deep tech startups

Alumni Services



Wearable Dose

CEO and Founder, John Sanwo

[Wearable Dose Testimonial](#)

**What advice would you give
John from Wearable Dose?**

Valley #3

Startup to first customer



What Creates the Valley?

1) Finding first customer:

1. Tradeoff between using resources (time and funding) to develop product versus sell
2. Challenges finding pilot partners willing to take on risk
3. Limited resources and, typically, knowledge about sales

2) Capital Challenges:

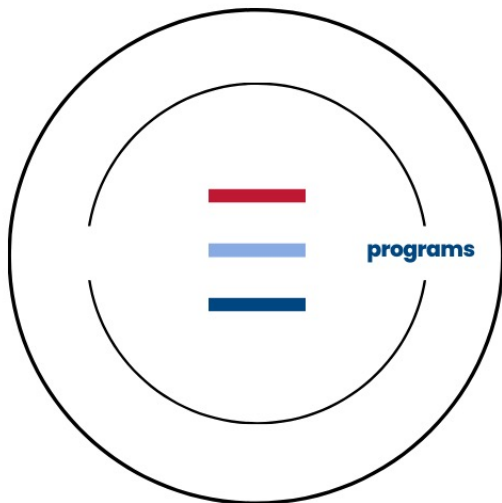
4. Chicken and egg effect in that firms can't raise capital without traction and can't get traction without capital
5. Lack of capital creates struggle to attract early employees



PLATFORM: PROGRAMS

Our custom programs are designed to foster deep entrepreneurship and collaboration: whether between corporate business units seeking to partner with or acquire startups, or government agencies aiming to supercharge regional innovation.

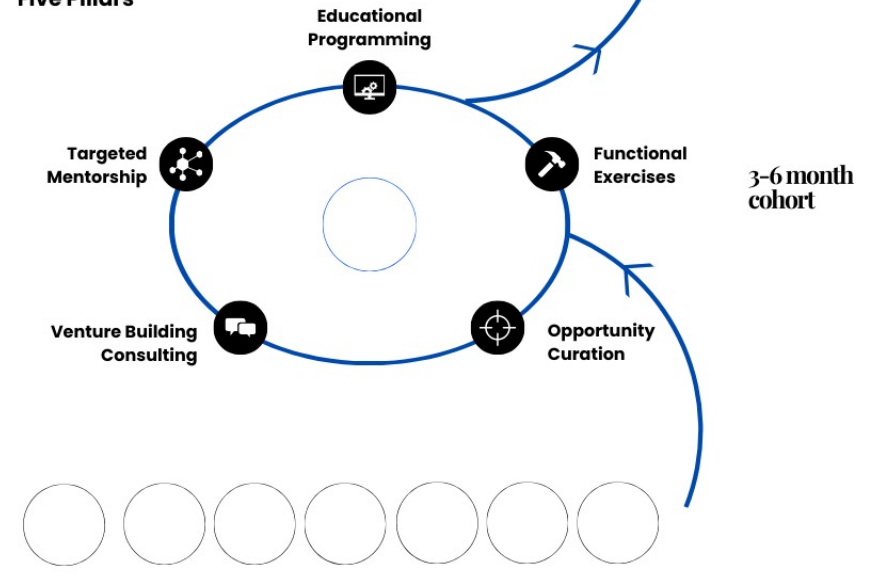
With proven vetting and derisking methods, we aim to create product pathways, healthy companies, and meaningful partnerships - not innovation theater.



Example Program: Accelerator

Leveraging resources from both FedTech and the partner, startups enter a program built to deepen relationships and synergy.

An All-in Approach: Five Pillars



partner alignment, vetting, and startup selection

Through a paired technology discovery/vetting service, a public solicitation, or both, partners have ultimate flexibility in choosing the startups and technologies that enter their accelerator.

Embedded Entrepreneur Initiative (EEI) DARPA Commercial Strategy



FedTech is part of DARPA's Accelerator consortium helping DARPA-funded companies commercialize their technologies. We match these startups with vetted industry advisors, helping them de-risk the commercialization process by developing a structured due diligence assessment.

Once approved by DARPA's Investment Committee, performers advance to the year-long Embedded Entrepreneur Initiative (EEI).

The Commercial Accelerator Model

Phase 0

DARPA Program Managers nominate top performers needing commercialization support.

FedTech matches each with a Senior Commercialization Advisor (SCA) from a vetted network of 100+ executives, investors, and entrepreneurs trained in dual-use commercialization and small business mentorship.

Phase I

The SCA leads a structured commercialization assessment covering market fit, differentiation, competition, and team readiness.

Findings are reviewed by DARPA's Investment Committee to determine advancement to the Embedded Entrepreneur Initiative (EEI).

Phase II

A 12-month program providing funding to embed a full-time team lead within the performer's organization, dedicated to drive commercialization goals.

Throughout the program, the SCA offers ongoing coaching and strategic guidance, acting as an advisory board.

In parallel, FedTech delivers tailored commercialization services to accelerate progress for market readiness.

Valley #4

First customer to scalable business



What Creates the Valley?

1) Moving from first sales:

1. Initial clients hold leverage and can be demanding, unprofitable and restrictive to growth
2. Sustainable sales channels can remain elusive even after first sale

2) Business Realities:

3. Founding team moves from a small group of doers to a group of managers
4. Overhead costs dramatically increase with need to install sustainable financial, sales/marketing, IT and operational systems
5. Growth creates capital requirement that pulls focus from other aspects of the company.





Crucible Afterburner

Last-mile commercialization for late-stage defense tech companies

How it works

- 4-6 month bespoke engagements: DoW market intelligence, expert advisors, prime/program office connections, CMMC support
- Follow on integration sprint to field cUAS capability

Pilot results

- Signed teaming agreement between teams
- Engaged Northrop Grumman around integration into existing capability
- Selected for JIFX 26-2 field experiment
- Initial engagement from other services and primes

Hybron

Business Development Manager, Jacob Minnema

[Hybron Testimonial](#)

**What advice would
you give Hybron?**

Summary of key points

1. Growing a tech startup is hard. There are at least four Valleys of Death founders can fall into
2. Challenges can broadly be grouped into:
 - Finding sustainable customers
 - Raising capital
 - Building a team
 - Create backend processes for scale
3. The Institutes can play a critical role in helping ventures at each of these stages



We'd love to
support your
mission!
Please be in
touch

Ben.Solomon@fedtech.io

m: 216-470-4895

Offices in VA, MA, CA, TX

