TEDCO

LEADING INNOVATION TO MARKET

Perspective on Federal Labs

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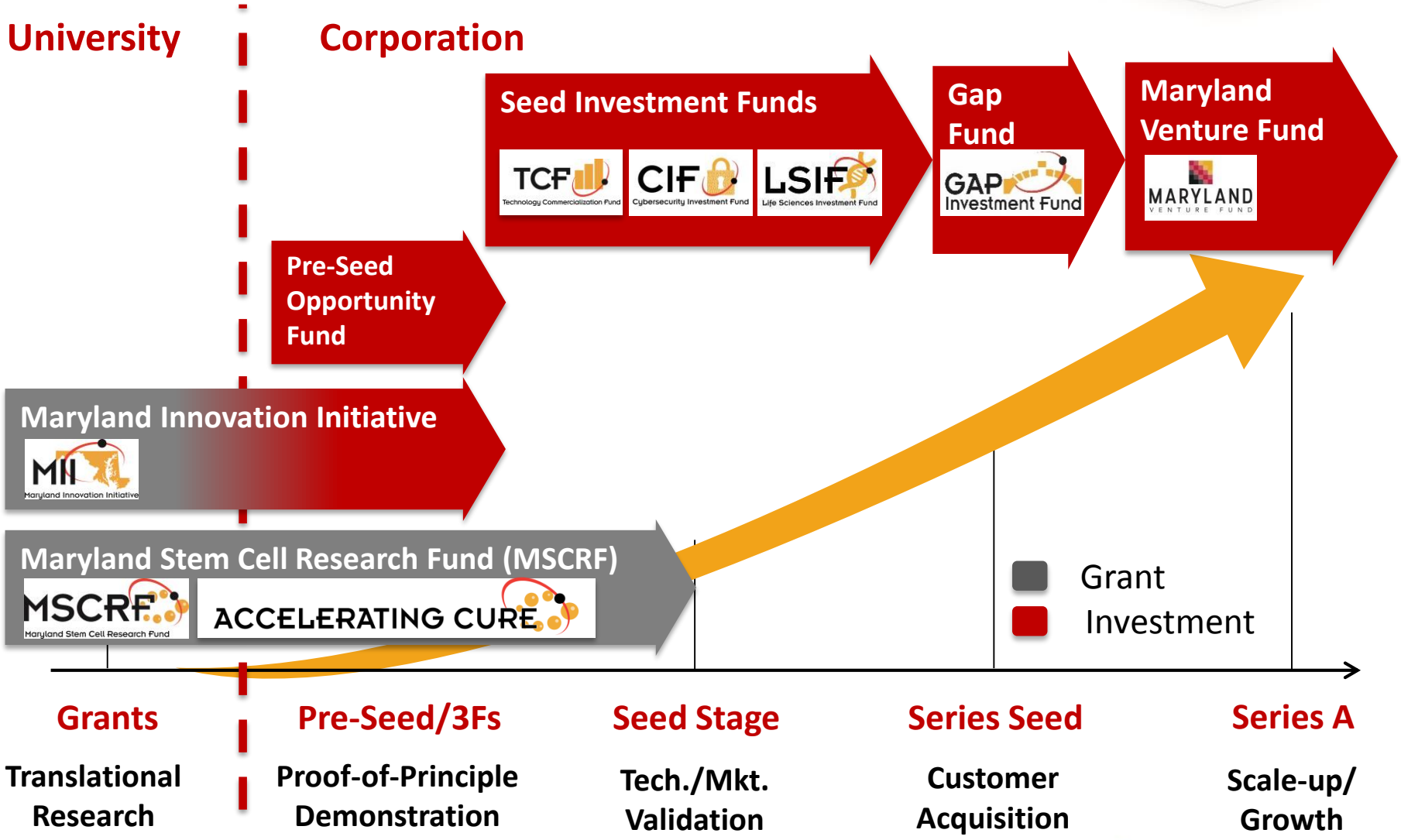
Purpose & Mission

TEDCO's Purpose & Mission

Foster the **commercialization of research and development** conducted by colleges, universities, and the private sector to **create and sustain businesses** throughout **all regions of the State**.

Discover, **invest in**, and **help build** **great, Maryland-based, technology companies**.

Funding Programs



Gateway and Other Services

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TECH TRANSFER

Moving innovations from the research lab **to the commercial sector** to create new ventures and to make new products and cures available to the public

MSCRF
Maryland Stem Cell Research Fund

NAVAIR

MII
Maryland Innovation Initiative

N-STEP

BUS DEV SERVICES

Supporting entrepreneurs with the the creation and growth of their ventures through the availability of valuable **information and resources**

Market Search
Advisory Services

Gateway Concierge

MBPF
Minority Business Pre-Seed Fund

MENTORING

Providing **human expertise** to support entrepreneurs at all stages of their venture development and throughout all regions of the State.

MERL
Maryland Entrepreneur Resource List

RBI²
Rural Business Innovation Initiative

EE
Executive Exchange

md PACE
Product Acceleration & Commercialization by Executives

CONNECTIONS

Fostering an **interconnected business community** in Maryland by bringing together entrepreneurs, start-ups, and the greater corporate community.

Innovation Connect

ICE AWARDS

2018 ENTREPRENEUR EXPO & STEM CELL SYMPOSIUM

Federal Laboratory Programs

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Earmark Era (2000 – 2014)

- Agreements with **15 federal labs**
- **~ $17 million** earmarks/competitive grants
- Federal **technology transfer initiative** programs:
  - NASA
  - Naval Air Warfare Center Aircraft Division
  - DoD & Aberdeen Proving Ground
  - **USAMRMC, Fort Detrick**
  - MRASC & USAMRMC
  - DHS & USAMRMC
- **90+ projects** funded
- **35+** Technology **showcase events**

USAMRMC Ft. Detrick (FDTTI)

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Example Program Outcome

FDTTI (2005 – 2010) $50K awards to 26 life science companies

- **Employees** – Avg. **+4** per company
- **Revenues** [final year] – **$ 883K** per company
- **Avg. Salary** – **$77.5K**
- **TRL** Change – **~ +3** levels

Federal Laboratory Programs

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Post-Earmark Era (2014 – Present)

N-STEP

NIST

md PACE
Product Acceleration & Commercialization by Executives

DEPARTMENT OF COMMERCE
UNITED STATES OF AMERICA

NAWC
Aircraft Division
NAVAL AIR WARFARE CENTER

Entrepreneurial development program for graduating post docs

Assist entrepreneurs to navigate the FDA **medical device commercialization** process, resulting in 510(k) cleared technology

Spin-in/spin-out **tech scouting** and tech incubator

Challenge for Federal Labs

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It is a challenge for TEDCO to get state money support federal technology transfer programs.

It is believed that the federal labs should fund this activity [in Maryland].

What Does TEDCO Want?

- Create new **jobs/revenue** [tax base] . . .
- Through the creation of **companies** . . .
- Based on the **transfer of technology** from research institutions [in the state].

Comparison

Fed. Labs

- **74** Federal Labs in MD
- **$16 Billion** federal research obligations
- **??** Start-up companies

Universities

- **5** major research institutions in MD
- **$3.9 Billion** research expenditures
- **52** Start-up companies

Looking at University T2

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What makes one university more successful at spinning out companies than another?

- **Culture** (Stanford/MIT vs. University of MD)
- **Research** – Quality and nature
- **Incentives** – Promotion & tenure, royalty/equity distribution
- **Conflict of Commitment** issues (time flexibility)
- **Conflict of Interest** issues (philosophy)

Looking at University T2

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What makes one university more successful at spinning out companies than another?

- **Entrepreneurial programs** – Leave policies, resources, etc.
- **Venture development** – Staff focused on supporting start-ups
- **Proof-of-principle funding** – De-risking technologies
- **Corporate engagement** – Corporate sponsored research
- **Ease of Licensing** – Collaborative approach, efficiency

Extrapolating to the Federal Labs

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- **Culture**
  - Requires top-down leadership
  - Personnel turnover and time
- **Research**
  - Dictated by mission – not something to change
  - A strength of the labs – quality & application
- **Incentives**
  - Policy changes – opportunity for change
- **Conflict of Commitment** issues (time flexibility)
  - Challenge for labs, but critical for success

Extrapolating to the Federal Labs

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- **Conflict of Interest**
  - Policy changes required – more flexibility, COI management approach
- **Entrepreneurial programs**
  - Entrepreneurial leave
  - Innovation spaces
- **Venture Development**
  - Dedicated staff with entrepreneurial experience
- **Proof-of-principle funding**
  - Competitive intramural grants
  - Time flexibility for commercialization activities

Extrapolating to the Federal Labs

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- **Corporate Engagement**
  - CRADA activity – currently a focus of the labs
  - Facilitate access to unique facilities, equipment, etc.
- **Ease of Licensing**
  - Start-up License approach
  - Exclusivity
  - No Federal Register publication requirement
  - Business development office outside of the “fence”

Other Thoughts

- **Philosophical Change**
  - Move from ‘protecting IP’ to ‘transferring IP’
  - Think broader than primary mission
  - Longer-term impact vs. short-term gains – emphasis on licensing vs. CRADAs
- **Focus on supporting small business**
  - Job creation engine
  - Legislative mandate

Other Thoughts

- **Double bottom line for labs**
  - Mission & economic dev.
  - Focus on local region – your own backyard
- **Review of current incentive programs**
  - Quantity vs. quality of disclosures, patents, etc.
- **Direct to Phase II SBIR/STTR programs**
  - Make it worthwhile to pursue SBIR/STTR grants
  - Incentives for federally licensed technologies
- **Funding to support T2 activities beyond the scope of the technology transfer office**

Thank You

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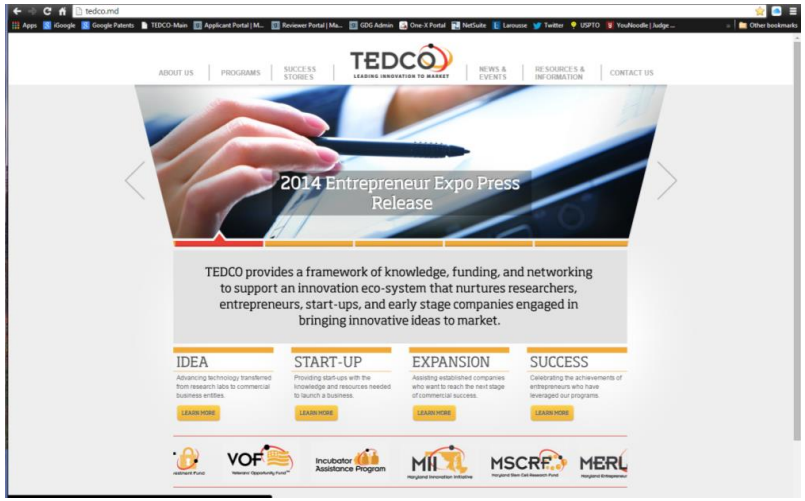

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