Market Validation:
Justifying The Decision To Start A New Venture

UNIVERSITY STARTUP DEVELOPMENT
WEBINAR SERIES
SPEAKERS

Tony Stanco, JD, LL.M.
NCET2 Executive Director
Former U.S. Securities and Exchange Commission Senior Attorney

Adam Greenspan
NCET2 Startup Development Officer and
Former Director of Business Incubation University City Science Center
BACKGROUND ON THE STARTUP DEVELOPMENT PROGRAM
Congress seeks to understand commercialization of SB137 annual R&D in Fed Labs / Universities

NCET2 Congressional Commercialization Summit – Corporate Sub-committee Formed

First Model Proposed

Model Vetting Roadshows: CA; PA; NY

Congressional Briefs

(Pilot) First Demo Day

Second Demo Day

Startup Development Officers Pgm Announced

IP2 Startup Pgm Announced

2015

2016

2017
CORPORATE COMMERCIALIZATION CENTER (CCC)

FEDERALLY FUNDED R&D AT UNIVERSITIES ($37 Billion)
FEDERALLY FUNDED R&D AT FEDERAL LABS ($93 Billion)
OUTBOUND CORPORATE R&D

RESEARCHER-ENTREPRENEURS (UNIVERSITY STARTUP CREATION)

GLOBAL 1000 CORPORATE COMMERCIALIZATION COUNCIL (NCET2 CORPORATE MEMBERS) (COORDINATION CENTER)

GAP FUNDING
SBIR FUNDING
STARTUP R&D TAX CREDITS

PRIVATE FUNDING
UNIVERSITY MENTORING-ANGELS
CVCs
VCs
ANGELS

IPO / CORPORATE BUSINESS UNITS

This chart, the CCC, and the information presented here are the property of NCET2.
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Startup Development Program

• Congress funds $137 billion in federal funded research at universities and federal labs

• Excellent opportunity for researchers and entrepreneurs to build a university startup around that IP
  – Universities have programs to help you

• NCET2 Fortune 500 members and SDOs who will partner with university startups to help develop and fund those startups
Startup Development Program

• NCET2 Startup Development Officer will also help university entrepreneurs, faculty, researchers, and students create, develop and fund market aligned university startups (http://ncet2.org/sdo)
SDO SERVICES

- Early management teams of university entrepreneurs, graduating students, faculty, and researchers
  - Business plan
  - proof-of-concept
  - prototyping
  - early product development
  - SBIR, Angel, and VC funding
- “Commercialization Experiments”
  - Get to work with Fortune 500 companies, angels, VCs, and serial entrepreneurs to help commercialize university and Federal Lab technologies
Benefits

• Startups/Entrepreneurs/Faculty/Researchers/Students
  – Access to professional SDO talent to help create, develop, and fund your startup

• Universities
  – Moving IP to market for significant market impacts
  – Graduating students into startups and working with Fortune 500 and SDOs
Interested?

• If you are interested in creating a startup and have the SDOs help you, contact us at support@ncet2.org
SPEAKERS

Adam Greenspan
NCET2 Startup Development Officer and Former Director of Business Incubation
University City Science Center
STARTUP MARKET VALIDATION

Justifying the decision to start a new venture
NCET2
Speaker: Adam Greenspan
9.13.2017
Personal Background

- NCET2 Startup Development Officer
- Previous Director of Business Incubation, Science Center
- Principal Consultant, BluePoint Innovation
- MS Biomed @ Drexel; BS Biomed/Mat. Sci. @ JHU
- Work experience
  - Lab research @ Hopkins, UF, Mayo Clinic, Synthes
  - Technology Transfer @ Hopkins, Sc QED
  - Entrepreneurship: Aries Medical Textiles, Sc Incubators
- Lean LaunchPad business trainer
- Registered Patent Agent
Introduction

**BASIC COMMERCIALIZATION SCHEME**

- **Idea Conception**: ~5-15 years for research-based innovations, May cost over $100 million
- **Product Development**
- **Market Launch**
- **Market Stability**

**Perform Market Validation Early** to justify investment of time and money
Elements of market validation

NCET2 SDOs can provide valuable guidance!

- Establishing Value Proposition
- Showing Market Demand
- Finding Competitive Advantages
- Proving Funding Credibility
Elements of market validation

- Establishing Value Proposition
- Showing Market Demand
- Finding Competitive Advantages
- Proving Funding Credibility
Establishing value proposition

<table>
<thead>
<tr>
<th>Characterize the problem</th>
<th>Consider the impact</th>
<th>Conceptualize a solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is it?</td>
<td>What are the implications?</td>
<td>Develop a specific product/service</td>
</tr>
<tr>
<td>Who experiences the pain?</td>
<td>What is the severity?</td>
<td>Determine mode of delivery</td>
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KEY INDICATOR: Problem-Solution Fit achieved
Get to know the customer

- **Interview and profile your customers and user groups**

<table>
<thead>
<tr>
<th>Outline their</th>
<th>Rank by</th>
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<tbody>
<tr>
<td>Jobs to be done</td>
<td>Importance</td>
</tr>
<tr>
<td>Pains experienced</td>
<td>Severity</td>
</tr>
<tr>
<td>Gains wanted</td>
<td>Necessity</td>
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*Refer to Lean Startup/Business Model Canvas [http://www.businessmodelgeneration.com/canvas/bmc](http://www.businessmodelgeneration.com/canvas/bmc)*
Elements of market validation

- Establishing Value Proposition
- Showing Market Demand
- Finding Competitive Advantages
- Proving Funding Credibility
Showing market demand

Review the competitive landscape

• Identify other solutions, both direct and indirect competition
• Determine adoption rates
• Characterize their suitability

Appeal to target market with your value proposition

• Identify target groups and benefits offered to each
• Vet with potential customers and users via interviews

KEY INDICATORS:
• Targets perform a Call to Action
• Addressable market greatly exceeds current adoption rate
Elements of market validation

- Establishing Value Proposition
- Showing Market Demand
- Finding Competitive Advantages
- Proving Funding Credibility
Finding Competitive Advantages

• **Innovation**
  - Unique attributes that distinguish from others in the market
    - Cost
    - Differential
    - Focus

• **IP Protection**
  - No blocking patents
  - Sufficient protection attainable

*KEY INDICATOR:* Attraction of capable management
Elements of market validation

- Establishing Value Proposition
- Showing Market Demand
- Finding Competitive Advantages
- Proving Funding Credibility
Proving Funding Credibility

No Logical Licensee
  • Too early in development
  • Not currently aligned

Drawing investment interest
  • NCET2 corporate feedback
  • Discussions with funders

**KEY INDICATOR:**
Informed plan - Milestones and budget compatible with funders’ interest
Elements of market validation

Establishing Value Proposition
- **Problem-Solution Fit**

Showing Market Demand
- **Call to Action,**
- **Unmet need**

Finding Competitive Advantages
- **Management team**

Proving Funding Credibility
- **Viable plan**
Example case

Antimicrobial textiles to prevent the spread of infection
## Establishing value proposition

### Characterize the problem

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<th>What is it?</th>
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<td>Textile surfaces harbor bacteria</td>
<td>Patients acquire infections</td>
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### Consider the impact

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<th>Who experiences the pain?</th>
<th>What is the severity?</th>
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<tr>
<td>Patients, healthcare providers, payers</td>
<td>5% infection rate, $15K per occurrence</td>
</tr>
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</table>

### Conceptualize a solution

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<tr>
<th>Develop a specific product/service</th>
<th>Determine mode of delivery</th>
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<tr>
<td>Textiles treated with antimicrobial solution</td>
<td>Bioactive garments for providers and patients</td>
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**KEY INDICATOR:** Problem-Solution Fit achieved
Get to know the customer

• Interview and profile your customers and user groups*

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<td>Prevent spread of bacteria</td>
</tr>
<tr>
<td>Pains experienced</td>
<td>Sanitizing devices costly</td>
</tr>
<tr>
<td></td>
<td>Handwashing takes time</td>
</tr>
<tr>
<td>Gains wanted</td>
<td>Convenience</td>
</tr>
<tr>
<td></td>
<td>Piece of mind</td>
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Showing market demand

Review the competitive landscape

- Identify other solutions, both direct and indirect competition
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Appeal to target market with your value proposition

- Identify target groups and benefits offered to each
- Vet with potential customers and users via interviews

Other textile treatments, radiation sanitizer systems
Secondary market data
Toxic chemical in other treatments; Sanitization devices costly

KEY INDICATORS:

Healthcare workers: Convenient, safe way to improve care delivery
Hospitals: Reduced infection rates
Collaborations on field tests
greatly exceed current adoption rate
Finding Competitive Advantages

• **Innovation**
  - Unique attributes that distinguish from others in the market
    - Cost
      - Regulatory exemption reduces R&D cost
    - Differential
      - Eco-friendly, plant-derived chemicals
    - Focus

• **IP Protection**
  - No blocking patents
  - Sufficient protection attainable

**KEY INDICATOR:** Attraction of capable management.
Proving Funding Credibility

No Logical Licensee
- Too early in development
- Not currently aligned

Drawing investment interest
- Feedback from market players
- Discussions with investors

No evidence in field setting
Regulatory clearance needed

**KEY INDICATOR:**
*Informed plan - Milestones and budget compatible with funders' interest*

Want to see data in field setting
Want to see customer engagement
Elements of market validation

- Establishing Value Proposition
  - Problem-Solution Fit

- Showing Market Demand
  - Call to Action,
  - Unmet need

- Finding Competitive Advantages
  - Management team

- Proving Funding Credibility
  - Viable plan