I-Corps™ Site @ Rutgers

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i-Jobs Meeting
September 19, 2017
Agenda

• I-Corps™ Mission/Goal
• National I-Corps™ versus I-Corps™ Site Programs
• Lean LaunchPad/Business Model Canvas
• I-Corps™ Teams
• Application/program details
• Success Stories/Why I-Corps™
• Questions
I-Corps™ Mission

“How can we increase the economic impact of the research dollars invested every year?”

$7 Billion
I-Corps Goals

• Aligns with NSF strategy
  – Increase the **impact** of basic research **investments**

• Increase **network** opportunities
  – National network of collaboration between scientists, engineers, innovators, business leaders and entrepreneurs

• **Decreases commercialization risk** by providing teams with skills and strategies to test concepts and products

• Overcome the **Valley of Death**
  – Helping entrepreneurs get over various hurdles
Commercialization “Valley of Death”

- Basic & Applied Research
- Discovery/Invention/IP Creation
- Business Model & Team Formation
- Prototype Development
- Venture Formation & Growth

- Customer/market validation
- Engineering/prototypes
- Mentors and advisors
- Collaborative spaces
- Business leadership
- Legal counsel
- Capital

The “valley of death”
NSF National I-Corps Program

• **$50,000 grants** to create prototypes & commercialization roadmaps

• **Eligibility:** *NSF grant within past 5 years;* Current technology must be related to grant-funded technology

• **7-week program;** On-site during weeks 1 and 7

• Curriculum emphasizes **Reaching out to 100 potential Customers** to test hypotheses about the need and market for the technology being developed

• Emphasizes **team** reliance and experiential learning
Rutgers I-Corps Site Program

- **$2k - $2,500 grants for** travel; training/education; or resources needed to directly advance the goals of transitioning project into the marketplace
- **Short course; Simple application process**
- Successful completion of program makes you **eligible to apply for National I-Corps**
- Emphasizes team reliance and experiential learning
- Curriculum includes understanding Value Proposition and Reaching out to Customers to test hypotheses about the need and market for your idea/technology
- Eligibility: Team of at least two; can have 1 or more students in Lead role, Professor/Ph.D., Mentor
Program Curriculum

• Lean Launchpad Methodology
  – Business-model discovery to **address market risk**
  – **Leverages scientific method** – form hypotheses, run experiments, iterate to search for repeatable & scalable business model
  – Learn how to secure substantial customer feedback **before building & launching** your product

• Flipped Classroom
  – **Online lectures**; “Classroom” time spent **reviewing progress**
  – **Interview** customers/others during the week
  – Weekly teaching team **office hours**
  – **Leverages scientific method** – form hypotheses, run experiments, iterate to search for repeatable & scalable business model
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<th>Key Partners</th>
<th>Key Activities</th>
<th>Value Propositions</th>
<th>Customer Relationships</th>
<th>Customer Segments</th>
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**Business Model Canvas**

- **Key Partners**: Who are our key partners?
- **Key Activities**: What key activities do our value propositions require?
- **Value Propositions**: What value do we deliver to the customer?
- **Customer Relationships**: What type of relationship does each of our customer segments expect to establish and maintain with us?
- **Customer Segments**: For whom are we creating value?

**Key Resources**: What key resources do our value propositions require?

**Channels**: Through which channels do our customer segments want to be reached?

**Revenue Streams**: For what price are our customers really willing to pay?
Value Proposition

What problem are you solving?
Customer Segments

Who Are They?

Why Would They Buy?
# Business Models

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<td>What key resources are we acquiring from partners?</td>
<td>Our distribution channels</td>
<td>Which of our customers' problems are we helping to solve?</td>
<td>Which ones have we established?</td>
<td>Who are our most important customers?</td>
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<td>What key activities do partners perform?</td>
<td>Revenue streams</td>
<td>What bundles of products and services are we offering to each customer segment?</td>
<td>How are they integrated with the rest of our business model?</td>
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<td>Through which channels do our customer segments want to be reached?</td>
<td>What are the most important costs in our business model?</td>
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<td>Our distribution channels</td>
<td>How are we reaching them now?</td>
<td>Our most expensive cost categories</td>
<td>For what do they currently pay?</td>
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<tr>
<td>Customer relationships</td>
<td>What are our channels integrated?</td>
<td>What are our most important cost categories</td>
<td>How much does each customer segment contribute to overall revenue?</td>
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<td>Revenue streams</td>
<td>Which ones are most cost effective?</td>
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<td>How are we integrating them with customer relationships?</td>
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<td>How much do our customers really care?</td>
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**Guess**
How do you turn guesses into facts?

Customer Discovery Interviews
10 – 25 over the course of the cohort
I-Corps Site Teams

**Entrepreneurial Lead (EL)**
Student, Team Lead; has entrepreneurial spirit; willing to commit the most amount of time

**Principal Investigator (PI)**
“Technology expert”
Wants to learn business aspects to be a better teacher; Interested in seeing research being commercialized, Can be PI for future grant (faculty or Ph.D.)

**Industry Mentor (IM)** — Someone who can help you make contacts; has business or entrepreneurial experience
Program “Details”

Timing: February 2018 is a goal

Teams: 8 -10 teams; teams of 3 people will receive higher consideration but 3 members are not required for application

Topics: All projects considered; Focus will be on STEM technologies but this is not a requirement

Application Process: Simple on-line summary of team and idea/technology; consider budget
Success Stories

Over all - National NSF Teams (As of May 2017)

- 1,000 national I-Corps Teams; 3,000 Individuals Trained
- 360 Companies Formed; 1,000 STEM Jobs Created
- $100mm Raised / $60M SBIR
- Expanded to 11 Federal Agencies

Rutgers Successes

- Prof. Daniel Murnick (Newark - Colleges of Arts and Sciences – Physics) In April 2015, Dr. Murnick was Awarded over $700k from the National Science Foundation to develop a Laser-Based Benchtop Radiocarbon Analyzer; directly related to his I-Corps project; He completed the July 2014 National I-Corps Cohort

- Prof. KiBum Lee (NB School of Arts and Sciences -Chemistry and Chemical Biology) – Participated in the April 2015 I-Corps; In February 2016, Dr. Lee received $175,000 from the University City Science Center’s QED Program. He is developing an innovative platform for programming human patient-derived stem cells for use in stem-cell therapies in people with incurable and debilitating diseases and disorders.
Why Should You Consider I-Corps

I-Corps Benefits:

• Learn what impact your technology can have in the market
• Career Development for you and faculty member
• Learn about the marketplace for your next grant/funding opportunity
• Increased success for other funding programs/Business Plan Competitions; Incubators, etc.
• Learn if customers are interested in your current idea or if it can be modified in a way to make them interested
• Takes you further along the path to forming a start-up
• Ability to pivot or “fail fast”
If you are interested in learning more, please go to our website and sign up to receive information.

Questions?

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FOR NSF PROGRAM ONLY:
Read solicitation 12-602