Agenda

12:00 – 12:15 pm  Background and History of NSF I-Corps
12:15 – 12:45 pm  Business Model Canvas Basics
12:45 – 1:00 pm   Developing & Testing Hypotheses
1:00 – 2:00 pm    Team Presentations / Q&A
BACKGROUND AND HISTORY OF I-CORPS
Goal of I-Corps

Commercialize more NSF-funded research by teaching inventors to identify and understand customer needs

$7.5 billion (NSF budget in 2019) Measurable Outcomes
Teams

- $50,000 grant
- 7-week program, 15-20 hours/week
- Increases SBIR/STTR success

Nodes

- Regional Consortiums
- Feeders for Teams Program
- 1-week crash course

Sites

- ~70 sites across US
- Independently functioning
- Up to $3,000 team grants
Expectations

• 15-20 Customer Interviews
• Informed Value Proposition
• Understanding
  o Market size
  o Competitive products
  o Value/supply chain
Expectations

• 20-30 Customer Interviews
• Informed Value Proposition
• Understanding
  o Market size
  o Competitive products
  o Value/supply chain

“DO. OR DO NOT. THERE IS NO TRY.”
–Yoda
Pre-Class Assignments

- Watch “How to Build a Startup” on Udacity
  - Sections 1-6 in Lesson 3 on Business Models
  - Sections 1-10 in Lesson 4 on Customer Development
- Prepare 2-slide presentation
Tenets of the I-Corps Philosophy

1. Business model canvas hypotheses
2. Customer interviews
3. Honest (unbiased) feedback
Customer Discovery

Focused on “Learning vs Knowing”
Temper the Ego

Fears what people will say

Compares to others

Knows everything
Build Confidence

Ability to learn from anyone

Okay being vulnerable

Respect yourself, and others
Reality
Can you solve my Problems…?

Can you help me with the specific tasks I need to get done…?

Can you satisfy my Needs…?
Program Philosophy

This program embraces an “Open Culture”

Our guidance will embrace Radical Candor

Startup culture has no hierarchy – *in this class, everyone on your team is an entrepreneur* – not a CEO, Professor or Researcher
BUSINESS MODEL CANVAS BASICS
Who Cares?

Why do they care?

Product Market Fit

Customer Relationships

Customer Segments

Who Cares?
Value Proposition
Value Proposition
What Matters to Customers

Customers do **not** care about your technology
they care how the product creates value to them

Customers do **not** exist to buy your product
you exist for your customers
Keys to a good Value Proposition

• Direct benefit to customer
• Concise
• Specific and quantitative
• Uniquely delivered by your team
• In words your customer would actually say
Customer Hierarchy of Needs

1. Avoiding risk
2. Avoiding hassle
3. Gaining praise
4. Gaining power
5. Having fun
6. Making a profit
Value Proposition Example

Your Technology:
A More Reliable Electric Motor
Value Proposition Example

**Good:** An electric motor that is less likely to fail in electric vehicles

**Better:** An electric motor that lowers failures in haul trucks and reduce significant unplanned downtime and lost production

**Best:** Save mining companies $720,000 per day by preventing lost production from unplanned haul truck down time
Value Proposition
Product Market Fit

Who Cares?

Value Propositions

Customer Relationships

Customer Segments

Why do they care?
Customer Segments
What makes a good Customer Segment

- They are PEOPLE
- Specific and well-defined group of people
- Very few people who fit the **specific** description **won’t** buy your product
- Have willingness and ability to pay
- Their performance or pay is judged on a metric that you can improve
Customer Segment Example

Your Technology:
Releasable Medical Adhesives
Customer Segment Example

Good: Hospitals and wound care facilities

Better: Wound care nurses

Best: Certified wound care nurses who work at nursing homes
Understanding the BMC Relationships
Illustrates how a company (or product line) intends to make money!

Feasible

DESIRABLE

Viable
Focus on **Customer Value**: Meeting a significant need –

**To create and capture value:**
- What do YOU need to do?

**What partners do you need?**
- Technology?
- Supply Chain?
- Market Access?
- Regulatory?

**What people, time, $$$ will it take?**

**Evaluating opportunity size vs. required investment**

**Focusing on defendable competitive advantage**

**Change is hard, so understanding Customer ecosystem is KEY**

**Leveraging strategic early adopters**
This is where you start!

What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

For whom are we creating value?
Who are our most important customers?
What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?

What value do we deliver to the customer?
Which one of our customer’s problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?
What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue streams?

Who are our Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?
What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships? Revenue Streams?

Step 1
Product – Market – Fit

Cost Structure
- What are the most important costs inherent in our business model?
- Which Key Resources are most expensive?

Revenue Streams
- To what value are our customers really willing to pay?
- How much does each Revenue Stream contribute to overall revenues?
What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?
Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?
For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?
For whom are we creating value?
Who are our most important customers?
What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?
What value do we deliver to the customer?
Which one of our customer’s problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?
What Key Activities do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?
Who are our Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?
What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?
## Key Partners
- Who are our key partners?
- Who are our key suppliers?
- Which Key Resources are we acquiring from partners?
- Which Key Activities do partners perform?

## Key Resources
- What are the most important costs inherent in our business model?
- Which Key Resources are most expensive?

## Key Activities
- What do our activities do to create value?
- Which Key Activities are most expensive?
- How are our channels integrated?
- Which ones work best?
- Which ones are most cost-efficient?

## Value Propositions
- What value do we deliver to the customer?
- Which Key Activities are we performing to create this value?
- Which customer needs are we satisfying?
- What bundles of products and services are we offering?

## Customer Relationships
- Which relationships do we establish and maintain with each Customer Segment?
- Which Customer Segments are we developing relationships with?

## Customer Segments
- Who are our key customers?
- What value do we deliver to them?
- Which of our customer’s problems are we helping to solve?
- Which customer needs are we satisfying?

## Channels
- Through which Channels are our Customer Segments reached and transacted with?
- How are our Channels integrated?

## Revenue Streams
- For what value are our customers really willing to pay?
- For what do they currently pay?
- How are they currently paying?

## Cost Structure
- What are the most important costs inherent in our business model?
- Which Key Resources are most expensive?

## Step 3
**Don’t go it alone**

---

This work is licensed under the Creative Commons Attribution-Share Alike 3.0 Unported License. To view a copy of this license, visit http://creativecommons.org/licenses/by-sa/3.0/ or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.
What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?
Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?
For whom are we creating value?
Who are our most important customers?
What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?
What value do we deliver to the customer?
Which one of our customer’s problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?
What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue streams?
Who are our Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?
What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?
Step 4
Don’t Be Foolish

Cost Structure
 Revenue Streams

This work is licensed under the Creative Commons Attribution-Share Alike 3.0 Unported License. To view a copy of this license, visit http://creativecommons.org/licenses/by-sa/3.0/ or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.
Is this a Business Worth Pursuing?
DEVELOPING AND TESTING HYPOTHESES
Developing Hypotheses

• Hypotheses = guesses
• Business Model Canvas will help you to organize your thinking
• Prioritize – you cannot test every hypothesis at once
Why do hypotheses matter?

• Determine what you test
• Help prioritize interview questions
• Know when you are right or wrong
  o Trust the data
• Allow for strategy
Testing Hypotheses

Experiments = Customer Interviews

Goal: *change theories into facts*

- Hypothesize – **Guess**
- Test – Interviews – **Ask**
- Assess & Analyze – **Listen**
- Adjust & Pivot – **Guess Again**
Pivoting & Iterating

• Pivoting
  o Significant change to your hypothesized business model
  o What you do when your hypotheses don’t meet reality

• Iterating
  o Refining your approach
  o Small deviations
Assignments for Next Week

• Business Model Canvas with value proposition and customer segments portions completed
• Watch “How to Build a Startup” on Innovation Within Platform
  o Lesson 6 on Customer Segments
• Complete the Customer Interview Form based on 3 interviews with potential customers and end users
• Prepare Presentation for Week 2

Next Class: Thursday, August 19, 2021