

BINF6399 - Principles of Team Science

Course Introduction



UNC CHARLOTTE

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RAW Lab

Lecture 3 - Tuesday Feb 2nd, 2021

Learning Objectives

- Customer Discovery 101
- Lean canvas model
- How to pitch? (elevator speech)
- Team formation documents (TAM/SAM/SOM)
- Group discussions

Customer Discovery 101 – value proposition

Value proposition

An innovation, service, or feature intended to make a company or product attractive to customers.

Uber – The Smartest Way to Get Around

Apple iPhone – The Experience IS the Product

Unbounce – A/B Testing Without Tech Headaches

Slack – Be More Productive at Work with Less Effort

Digit – Save Money Without Thinking About It

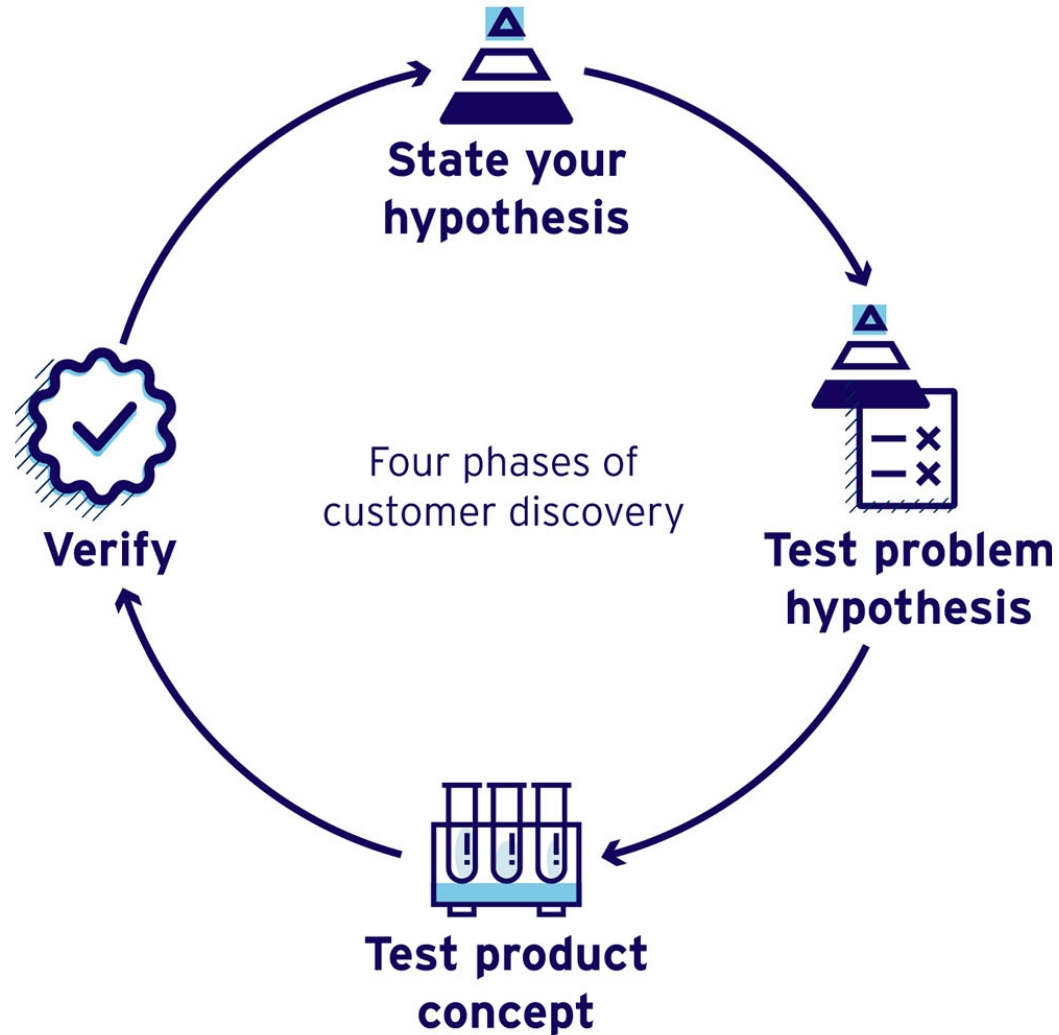
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You Try – in Group

Customer Discovery 101

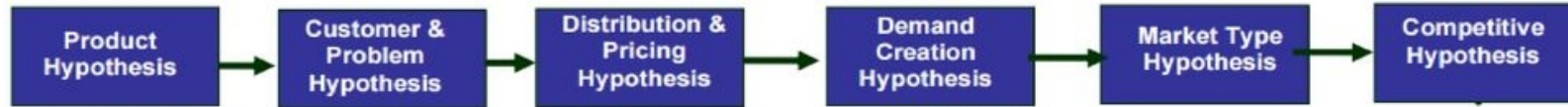


Customer Discovery 101

Phase	Goals	Deliverables
0. Get Buy-in	Investors/founders agree on customer development, key hires and values.	Buy-in, Core Values
1. State Hypothesis	Set product specs, develop detailed hypotheses of product, first customers, channels and pricing, demand, market and competition.	Hypothesis Briefs
A. Product Hypothesis	Get agreement on product features, benefits, and release schedules.	Product Brief
B. Customer Hypotheses	Describe customers, their problems, and why they will use the product.	Customer Brief
C. Channel & Pricing Hypothesis	Develop a channel strategy and pricing model.	Channel & Brief Pricing
D. Demand Creation Hypothesis	Identify demand creation strategy, influencers, and trends.	Demand Creation Brief
E. Market Type Hypothesis	Describe what market you are in (new, existing, resegmented).	Market Type Brief
F. Competitive Hypothesis	Develop competitive analysis that fits your market type.	Competitive Brief
2. Treat & Qualify Hypotheses	Test hypotheses from phase 1. Understand customers' "day in the life"	Validate
A. First Customer Contacts	Create customer list and schedule the first customer contacts.	Customer List
B. Problem Presentation	Develop presentation of problems, current solutions, product solution.	Problem Presentation
C. In-Depth Customer Understanding	Understand how customers work, their problems and who else influences their decisions.	Customer Brief
D. Market Knowledge	Understand the market: meet with analysts and media, trade shows, research.	Positioning Brief
3. Test & Qualify Product Concept	Test product concept. Do customers' needs match the product?	Hypotheses
A. First Reality Check	Review customer/product feedback and test Phase 1 customer problem assumptions.	Revise Product Customer Briefs
B. Product Presentation	Create product presentation on how product solves customers' problems.	Product Presentation
C. More Customer Visits	Expand customer list to include five new potential customers.	Customer List
D. Second Reality Check	Review product feature feedback and test.	Updated Feature List
E. First Advisory Board Members	Spot and recruit first advisory board members.	Advisors on Board
4. Verify	Found the right market? Have a profitable business?	Validate
A. Problem Verification	Verify that you have identified a problem that a customer wants solved.	Problem Statement
B. Product Verification	Verify that the product solves customers' needs and its ROI.	Product Rqts Doc
C. Business Model Verification	Verify that you have a profitable business model.	Updated Revenue/Sales Plan
D. Iterate or Exit	Decide whether you have learned enough to go sell.	Business/Product Plan

Customer Discovery 101

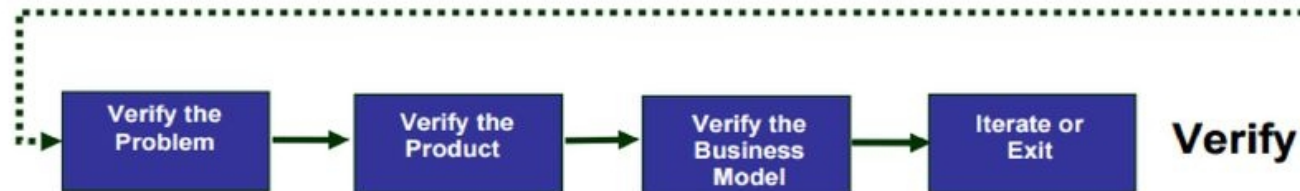
State Your Hypotheses



Test “Problem” Hypothesis



Test “Product” Hypothesis



Customer segment

	Customer 1 DOD Field Medic	Customer 2 TSA Screening Agent	Customer 3 Prison guard	Customer 4 Driver	Customer 5 At home
Description	18-35, Tactically motivated	25-65, Large Veteran Population, Likely Married	18-55 Focus on guard safety, riot control	18-70 Focus Safety, obtaining lots of rides	18-90 General health
Jobs	Infection Control Sterilization Humanitarian Missions	Security Screening Crowd Control Incident Response Management	Infection Control Safety	Transportation	Many
Pains	Limited Resources	Manpower Shortages (illness) Repetitive Work Fear of Unknown	Manpower Shortages (illness) Limited rapid testing capabilities	Illness - lost wages Higher health costs	Illness - lost wages Higher health costs
Gains	Proactive Containment of Pathogens Conservation of Manpower Resource	Allows Contagion Isolation/Containment Reduce Spread of Threat Designer Pathogen Detection	Proactive Containment of Pathogens Conservation of Manpower Resource	Less sick days Healthier life Better will being	Less sick days Healthier life Better will being

Customer Discovery 101 - example

Hypothesis 1: We believe that DOD field medics want to add the viralyzer to their screening process to help reduce the likelihood of a CBRNE event occurring in their workspace.

Interview (5) Field medics

Result: It has been repeatedly and unanimously verified that the DOD is incurring incredible costs due to COVID-19.

Identified 20 minutes as target test time, which would allow for near painless integration into existing workflows.

System would need to produce a printed result for inclusion or transcription into member's service treatment record, indicating a need to support CAC reader and mobile printer.

Lean canvas model - example

PROBLEM - Deadly airborne viruses being undetected (during COVID) - Illness what is It? flu, covid, etc? (post-COVID)	SOLUTION Rapid detection of airborne viruses Detection of common cold/flu viruses	UNIQUE VALUE PROPOSITION Handheld Rapid Single breath Disposable cartridges High throughput Inexpensive <i>Denovo</i> discovery	UNFAIR ADVANTAGE Single breath USB plug in 25 years of R&D Wet-ware	CUSTOMER SEGMENTS Military Prisons Airports Drivers Home-use Schools Rapid detection removes pain of treatment and pandemics In powers customer with knowledge of their health
	KEY METRICS Cost of chip Cost of cpu		CHANNELS Website TSA Social media ads Military contacts	
COST STRUCTURE Direct from buyer - Contracts They don't own device - license device (lease) Pay for chips			REVENUE STREAMS Assistant living, Home-use, Prisons Airports, Drivers, Schools, Military	

Lean canvas model

PROBLEM	SOLUTION	UNIQUE VALUE PROPOSITION	UNFAIR ADVANTAGE	CUSTOMER SEGMENTS
	KEY METRICS		CHANNELS	
COST STRUCTURE			REVENUE STREAMS	

You Try – in Group

Elevator pitch

THE SIMPLE ELEVATOR PITCH TEMPLATE

Answer the following questions:



What does your company do?



Who are your customers?



What key benefits do you offer your customers?



Why is your company better than competitors?



What information gives your firm more credibility?



Is there a clear and clean business sector that your company fits?

Elevator pitch

SENTENCE 1

For **w** *customers*,

with **x** *problem*:

we have
developed **y**
solution,

that provides **z**
benefits/value
proposition.

SENTENCE 2

Our *special sauce* is
w.

which results in a
solution that is
superior to **x**
competitors for **y**
reasons

in the **z** *market*
(which is x size.

SENTENCE 3

We have achieved **w**
traction

And in the next **x**
months

We are focusing on **y**
milestones

after which we will be
positioned to do **z**

Sentence 4

We are now
looking for **w**
funding

to accomplish
x *objectives*

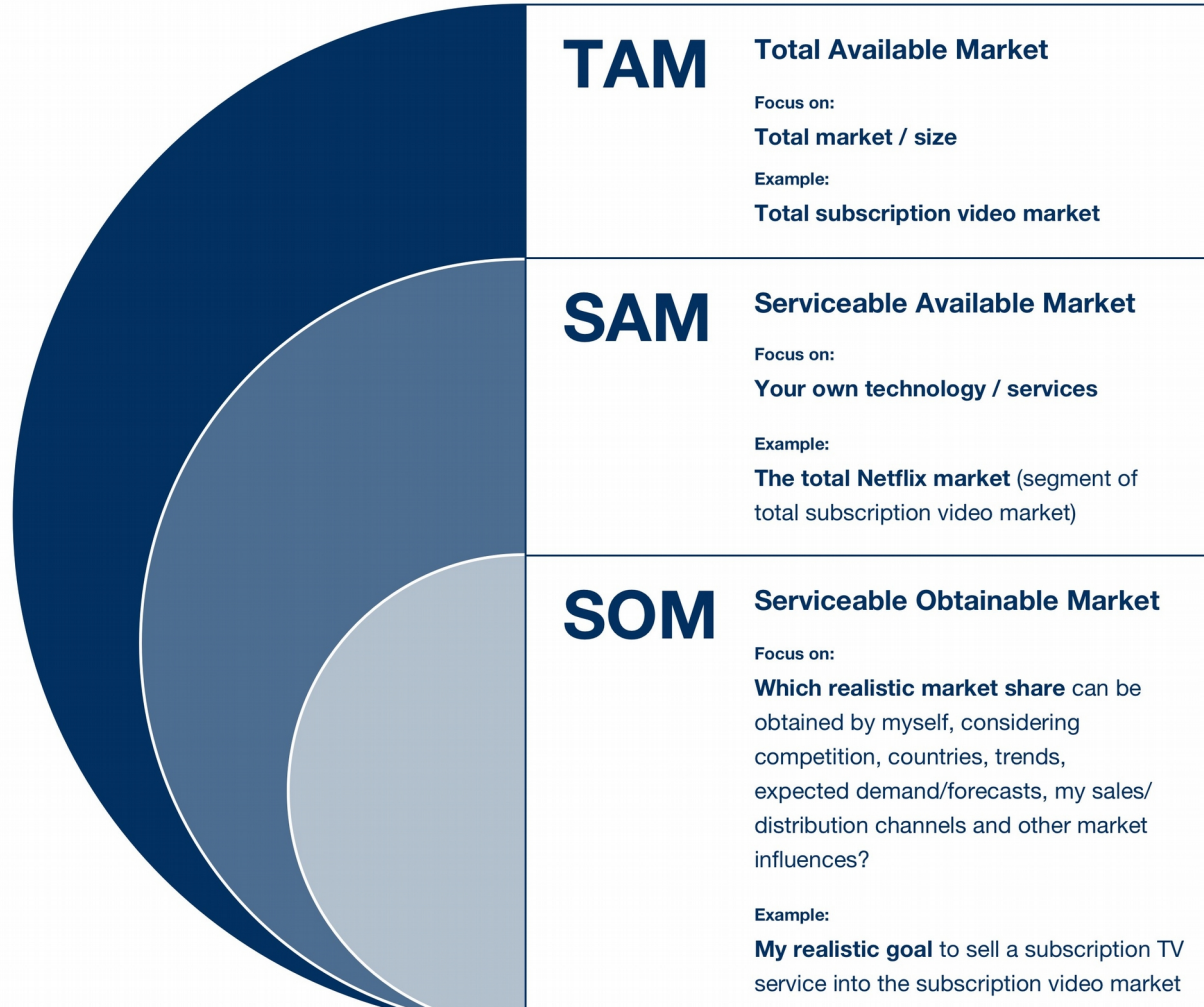
Elevator pitch

SENTENCE 1	SENTENCE 2	SENTENCE 3	Sentence 4
For first responders, health professionals, and at-risk individuals, Who are concerned with catching Covid-19,	Our <i>special sauce</i> is an innovative design and set of raw materials which unlike competitive offerings, results in a mask that can be quickly mass produced, cleaned and reused ---	We have confirmed the effectiveness of the masks, and in the next 3 months	We are now looking for \$250K in funding to hire 2 employees and purchase 3 additional 3D printers so we can produce 1M masks.
we have developed a 3D printed face mask, that provides cost effective and exceptional virus protection.	in a <i>market</i> for facemasks that has exploded to \$2B annually.	are focusing on locking in raw material suppliers and refining our manufacturing process after which we will be positioned to scale up production.	

Elevator pitch

You Try – in Group

A measure of your market (TAM/SAM/SOM)



A measure of your market (TAM/SAM/SOM)



Syllabus: Team formation documents

Requirements (need to produce these items):

- Product, service, tool related to bioinformatics, genomics, or computation
- Team name
- Team logo
- Team Github page (published page with readme and doc folder)
- Team formation structure (For-profit vs. Non-profit)
- Team corporate structure assignment (CEO, CTO, CFO assignment)
- Description of service, tool, or service (detailed)
- Roles of corporate officers and background information
- Problem/issue/pain your trying to solve
- Market predictions with TAM/SAM/SOM
- Competitors if available
- Operations
- HR/Benefit structures
- Investor profile

Due Tuesday - Feb 16th, 2020