### A Roadmap to Commercialization:

**Meeting Investor Needs With Discovery & Validation** 



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University of San Diego, the Brink SBDC
October 18, 2018









### 4th in a Four-Part Series

Winning SBIR & STTR Grants: The Basics

SBIR & STTR Grant – Phase II (Beyond the Basics)

**Funding Your Innovation** 

Roadmap to Commercialization (Investor Needs)

### Where I'm Coming From . . .

- 1) National Science Foundation I-Corps Adjunct Faculty
- 2) Six Launches; Two Exits
  - RegeneMed
  - InSilicoMed
  - SpyFinder (Sold)
  - Sal-Flex (Sold)
  - + RefluxMD, Blast Resolve





I-Corps™ at NIH

USC, Caltech, U C Irvine, Georgia Tech, Ohio State, U C Riverside

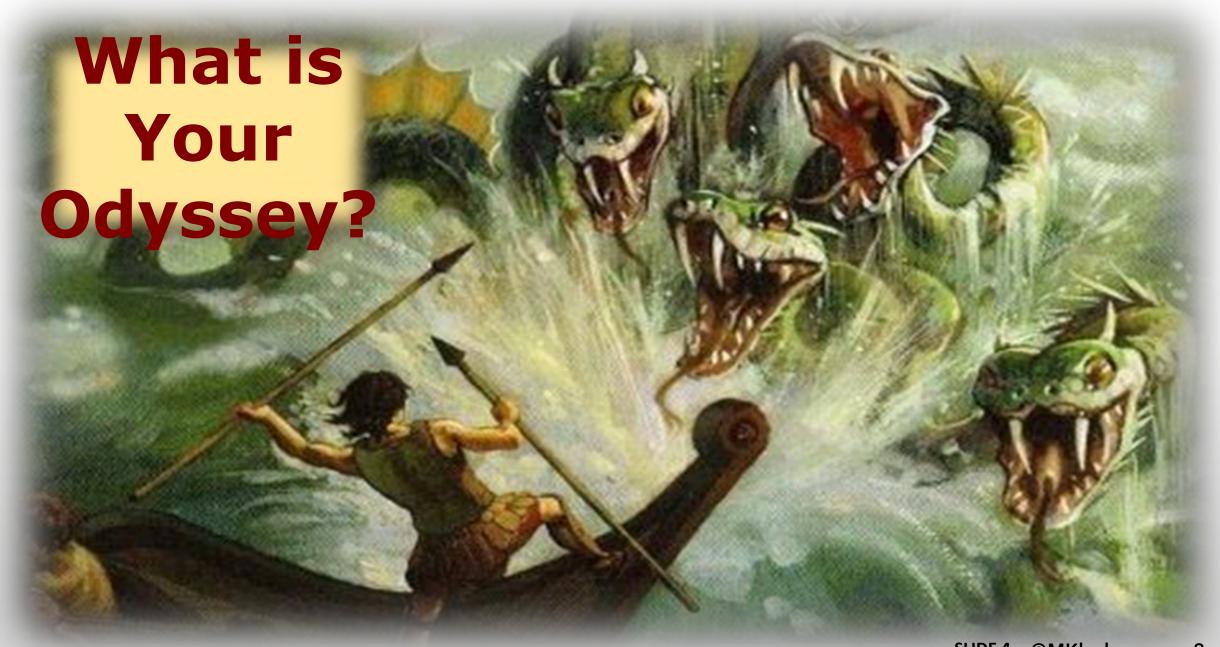
- 3) Also: Not-For-Profit 501 (c) 3 Venture Philanthropy
- 4) SBIR/STTR: NSF, NIH, DoD, DOE, Coulter, Drexel; University of California
- 5) Times Mirror, American Healthcare Systems, General Electric, Roche Diagnostics, Toshiba America Medical Systems
- 6) \$44.3 MM in Capital & Grants 2016 Q3 2018

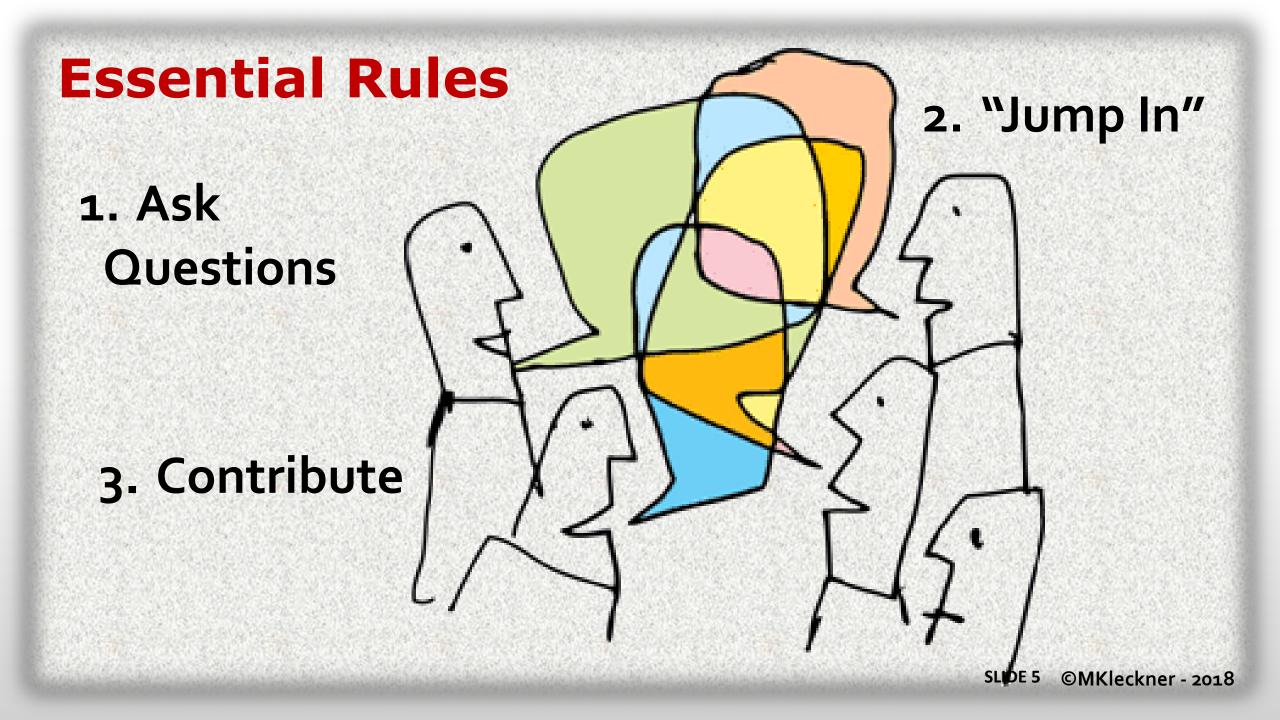
### . . . Where We're Going

Seed Fund – Accelerator Cohort – Fall 2019 National Science Foundation I-Corps









### Different Perspectives/ Comparable Needs

SBIR/STTR Agencies

Customers ("Early-vangelist")

Strategic Partners

Investors
(Angel Groups,
Corporate, Venture
Philanthropy)



## "The Great Uncertainty"

(followed the Great Recession, 2008, & the dot.com burst, 2000)

Disruptive
(or "Discontinuous")
Innovation or
Creative Destruction:
What is unknown may be
a barrier



Downsizing,
Unemployment,
M & A,
Intense
Competition
Failed Ventures

"Power Laws"

Makes gaining
"Market Traction" a
tough door to go
through

SLIDE 8 ©MKleckner - 2018

### (1) What is your [Evidence-Based] Business Model?

- (2) How was your Model developed?
  - (3) What Traction have you gained?

### Why I Stopped Investing (And You Should Never Start)

Tucker Max – August 11, 2015 http://observer.com

- 1) There are not enough good people: "There is a huge number of people starting companies who have no business at all doing (it)."
- 2) (They cannot actually execute effectively in a start-up environment.)



### The Angel (VC) Conundrum

[Power Laws]: "It's common to make money from your single best angel investment than all the rest put together. The consequence of this is that the real risk is missing out on that outstanding investment."

Sam Altman (March 25, 2013) http://blog.samaltman.com/upside-risk

### What Angel Investors Value Most When Choosing What to Fund

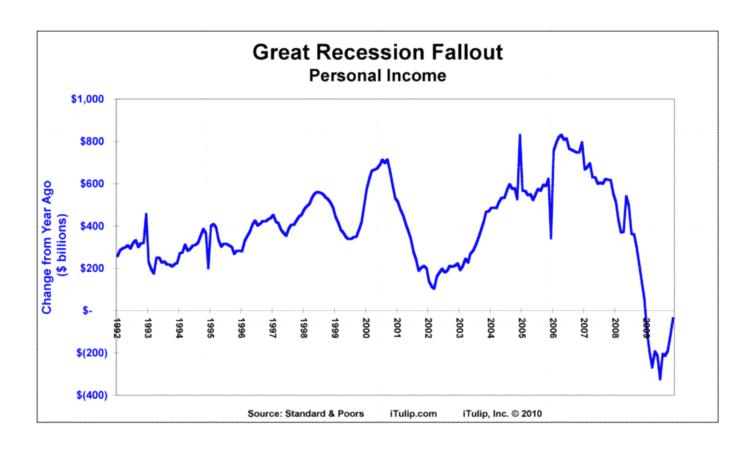
Nicole Torres, Harvard Business Review – August 6, 2015 https://hbr.org/2015/08/what-angel-investors-value-most-when-choosing-what-to-fund

Angel List Experiment: Three Factors: (1) The Founding Team, (2) Traction, & (3) Existing Lead Investors

## The (Not So) Puzzling Behavior of Angel Investors<sup>1</sup>

- 1. Angel investing is not necessarily a purely financial exercise
- 2. Angels "usually develop an emotional attachment to the business venture
- 3. Motivators: the chance to participate; to be active in the venture; "psychic income", "for-profit philanthropy"<sup>2</sup>
- 1. Darian M. Ibrahim, William & Mary Law School, http://scholarship.law.wm.edu/facpubs/1685
- 2. Feld Thoughts, Is it Angel Investing or For-Profit Philanthropy?, http://www.feld.com/blog/archives/002013.html (Oct. 23, 2006, 18:42 EST).

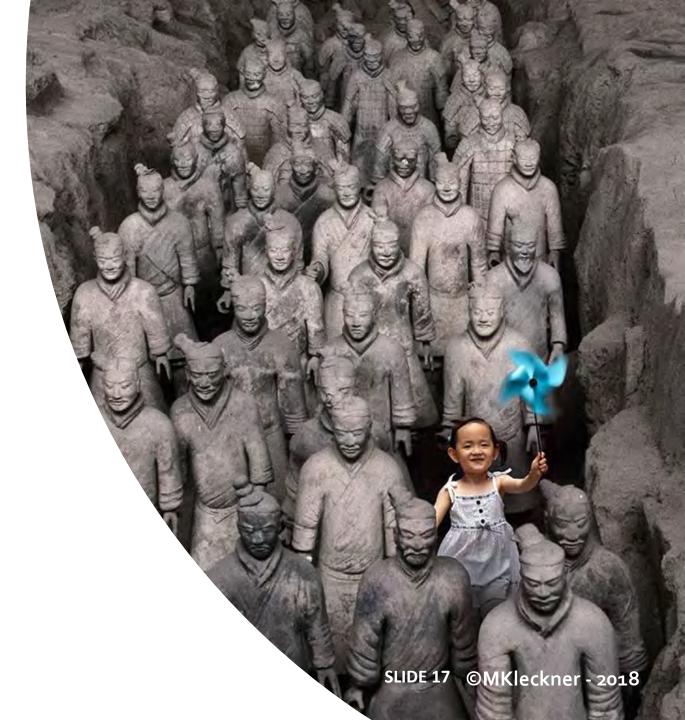
### Investors Lost Also



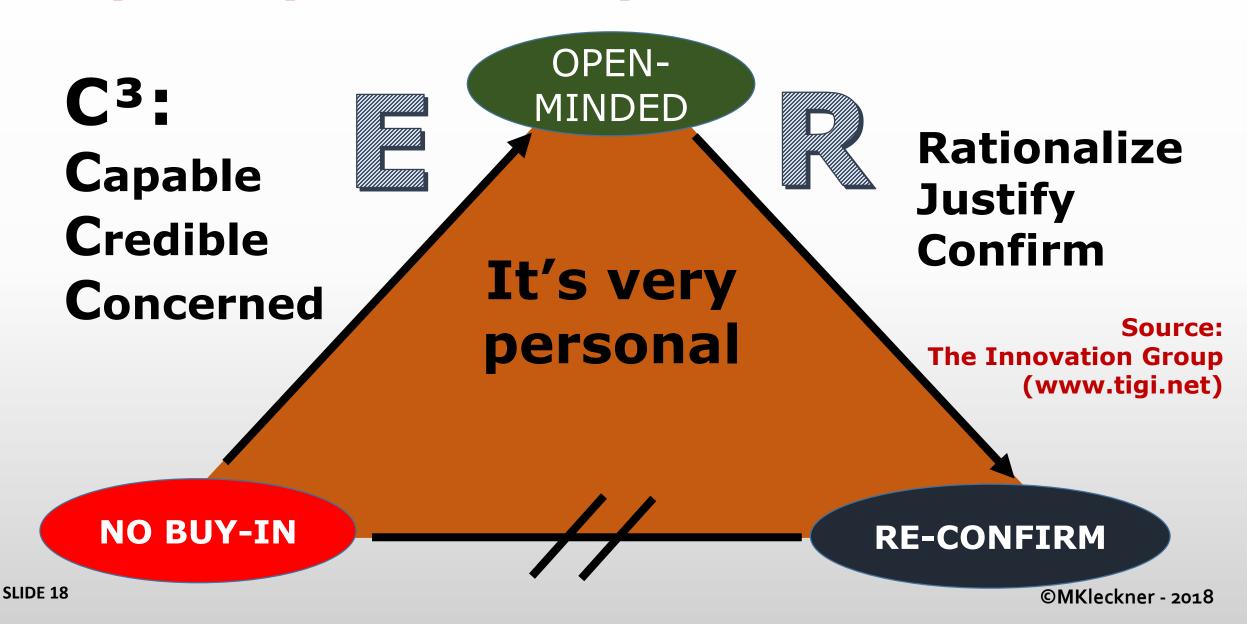


NO DISRUPTORS ALLOWED! THIS MEANS YOU!

## OK, well maybe we do like some disrupters

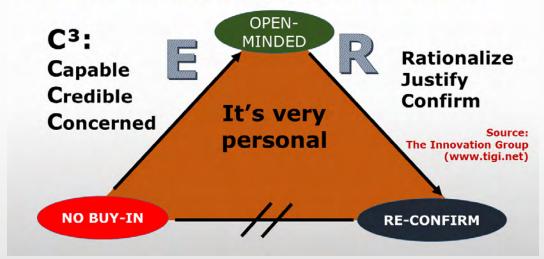


#### People Buy Emotionally, Rationalize After



## How Decisions Are Made

**People Buy Emotionally, Rationalize After** 



How Well Do You Understand (know) Me?

- Decisions typically occur in precise, psychological order
  - About you
  - About your company
  - About your product or service
  - About your ask/price
  - About the time to invest/buy
- 2) Two Key Issues: (a) Your Integrity, (b) Your Judgment
  - How well does your product knowledge match your understanding of my needs?
  - You Will Be Assessed



# Can Your Dog Hunt?

[Can You?]



### What We Used To Believe

## Startups are a Smaller Version of a Large Company

#### **What We Now Know**

## Startups Search Companies Execute

Memo: Larry Bossidy, Execution – The Discipline of Getting Things Done (2002) "Execution is a systematic way of exposing reality and acting on it."

### What We Used to Believe

### Strategy

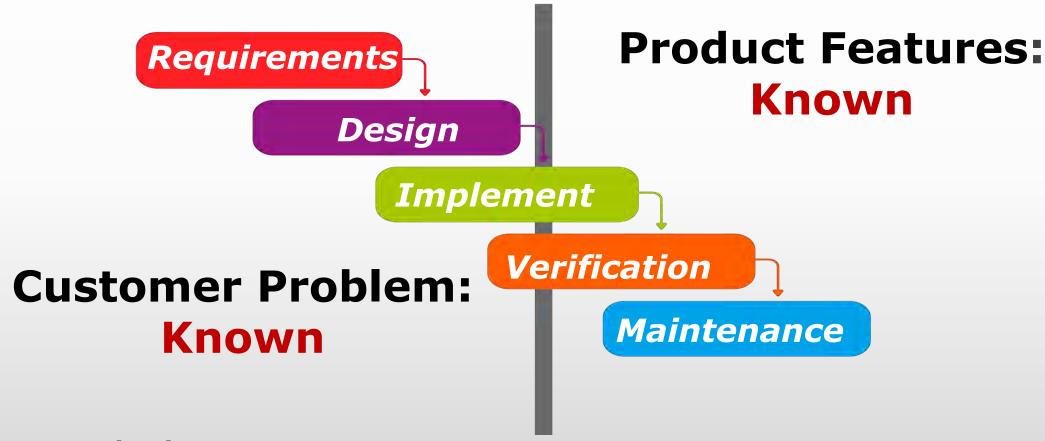
Concept/Seed

Product Development

Alpha/Beta Test Launch 1<sup>st</sup> Shipment

**NEW PRODUCT INTRODUCTION MODEL** 

### Waterfall / Product Management Execution on Two "Knowns"



**Source: Eric Ries** 

http://startuplessonslearned.blogspot.com

#### What We Now Know

### It's a Process (of Discovery & Learning)

### What We Used to Believe

### Education

## Entrepreneurial Education was About Execution

#### What We Now Know

## Entrepreneurial Education Begins with the Search for a Business Model

## Putting Search First is a Radical Change

## It's Not Just One More Methodology

### **Experiential Immersion**



Total Customers Contacted: 86

127 Interviews ("Experiments")

Spoke to: firms covering 60%-80% of the global radiopharmaceutical market, 15 clinical PET users, and 7 GMP PET manufacturers, 5 officials of state

economic development (>90 people total)

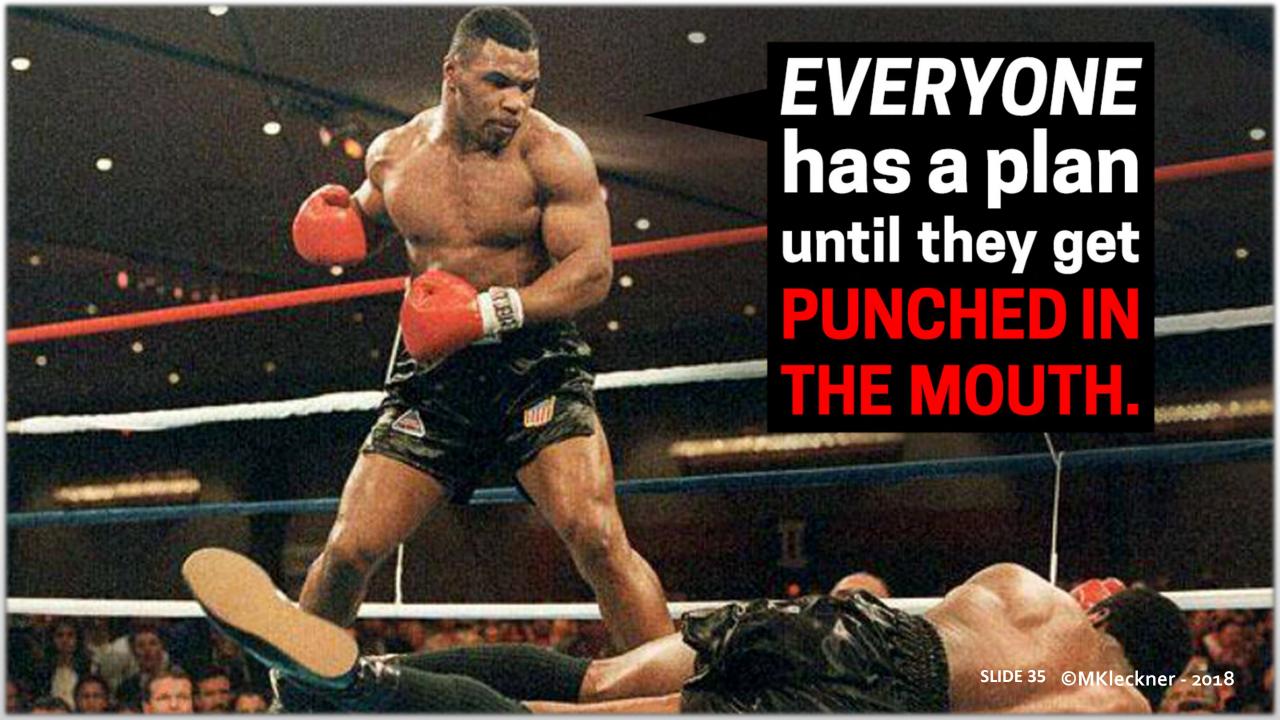
# of customers: ~85 people

We talked to >60 physicians, patients, entrepreneurs, potential OEM partners, and many others

Investors
Want
Evidence

### What We Used to Believe

### Start With a Business Plan and Financial Model



#### No battle plan survives first contact with the enemy.

- Helmuth von Moltke<sup>1</sup>

No Business Plan survives first contact w/ customers.
- Steve Blank<sup>2</sup>

We haven't read a business plan in over twenty years.
- Brad Feld/Jason Mendelson<sup>3</sup>



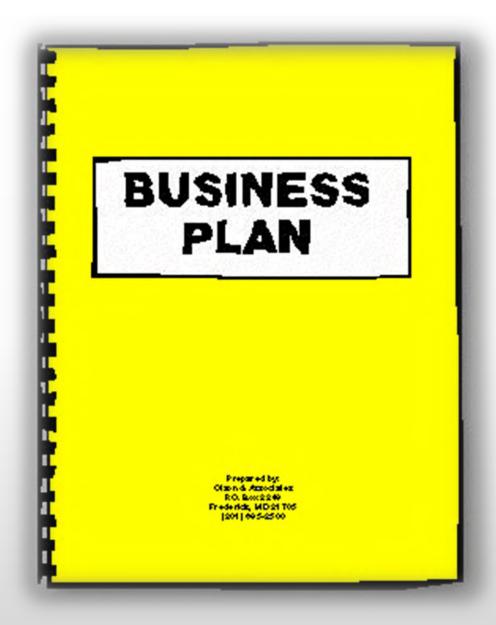
(1) 19th-century head of the Prussian army; (2) Stanford & U C Berkeley (I-Corps); (3) Foundry Group, Boulder, CO

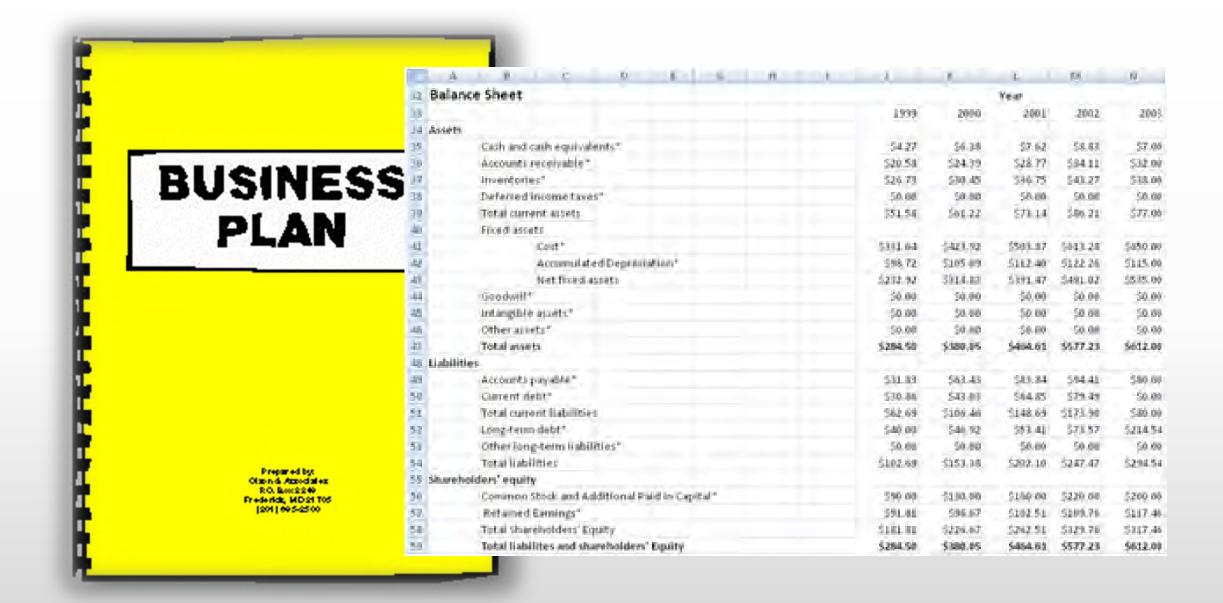
#### Five - Year Plans

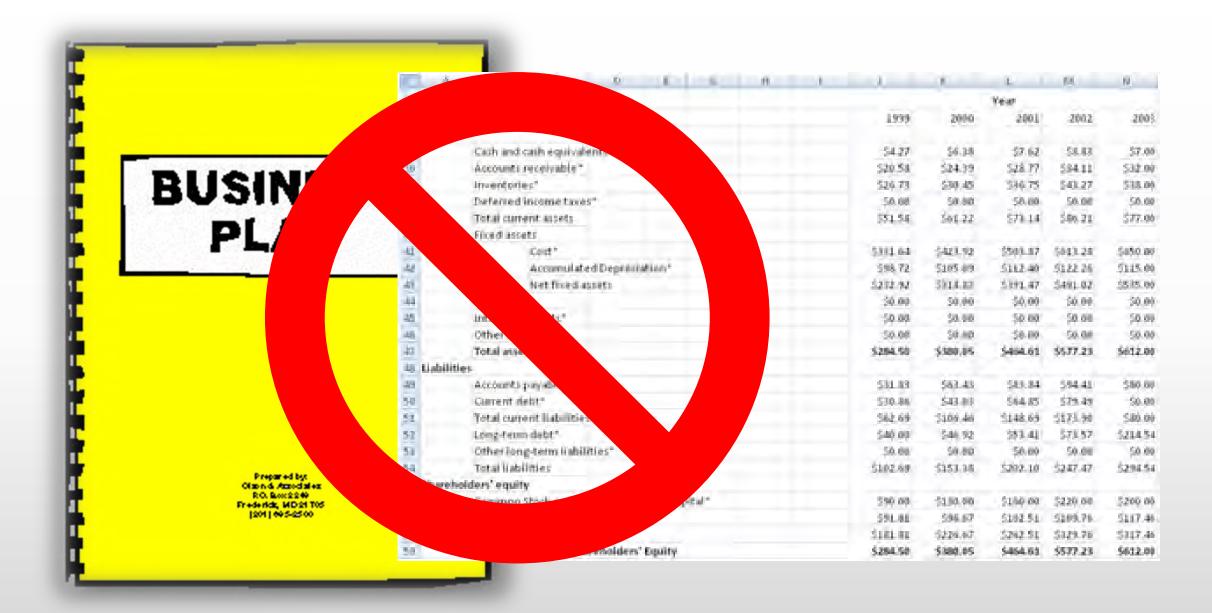
**Venture Capitalists** 

**Soviet Union** 









## Plans are worthless, but planning is everything.\*

#### - Dwight D. Eisenhower

\* National Defense Executive Reserve Conference, Washington DC, November 14, 1957

## Instead of creating business plans...

## Today we discover business models.



"Excellent strategy, General...Though I fear the enemy might be full size..."

Through Discovery We Engage so that we can develop an understanding of (their) needs, desires, behaviors, characteristics, beliefs, influences, motivations, (dimensions)...

#### What we Used to Believe

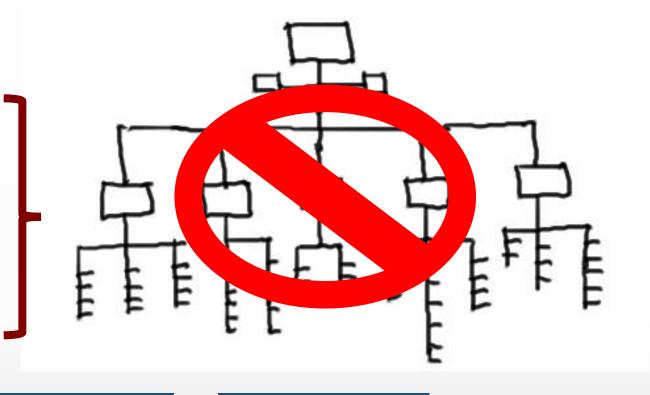
#### Organizations

## A founder does not run sales, marketing or business development...

A founder runs a customer development team.

#### **Organizations**

Classical Company



Team Member Team Member

Mentor

Startups operate as teams, not as hierarchies.

#### Companies vs. startups

A company is a business organization that sells a product or service in exchange for revenue & profit.

A startup is a *temporary* organization designed to search for a repeatable and scalable business model.

### Organizations & Business Models

A company is organized to deliver value via its business model.

A startup organizes itself to discover opportunities and create a business model.

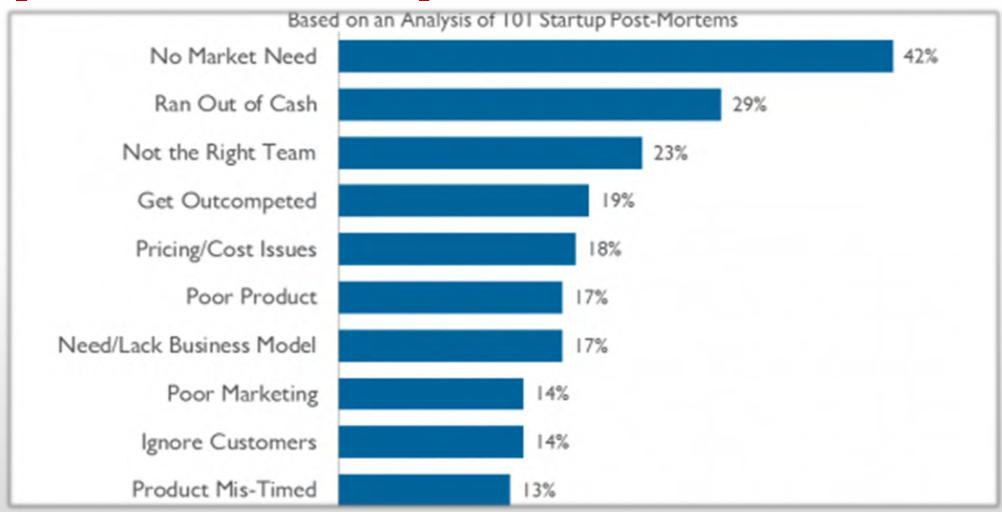
#### Startup's Goal

#### To become a company!

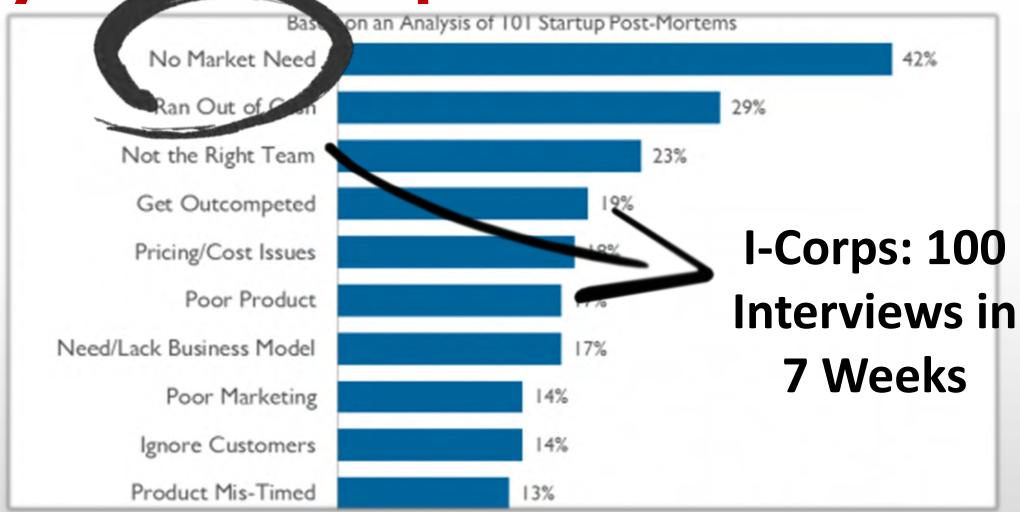
A startup becomes a company AFTER its customer discovery leads to a repeatable, scalable, and profitable business model.

#### Why Do Start-Ups Fail?

#### Why Do Start-Ups Fail?



#### Why Do Start-Ups Fail?

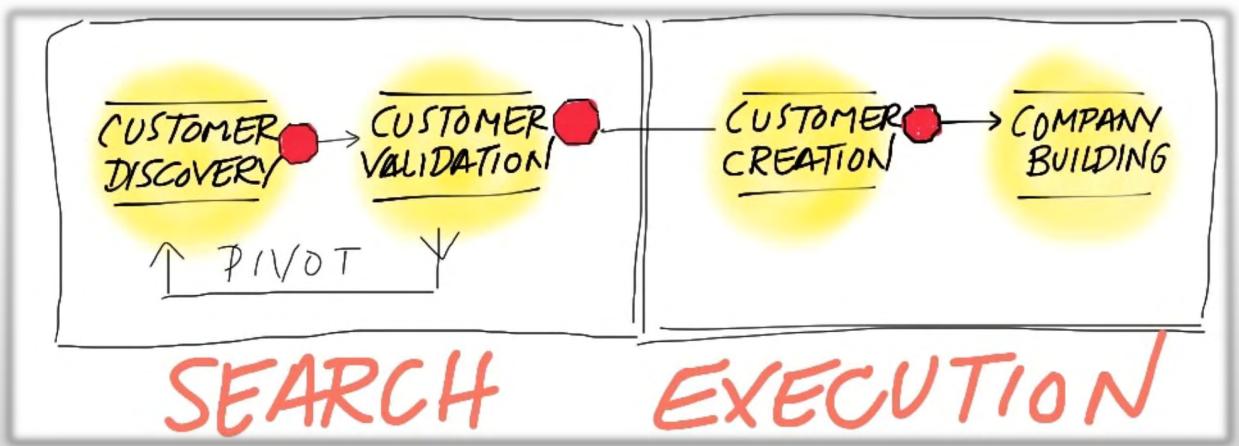


## More startups fail from a lack of customers than from a failure of product development

# Therefore, Investors, SBIR Reviewers And Our Customers Need Us To

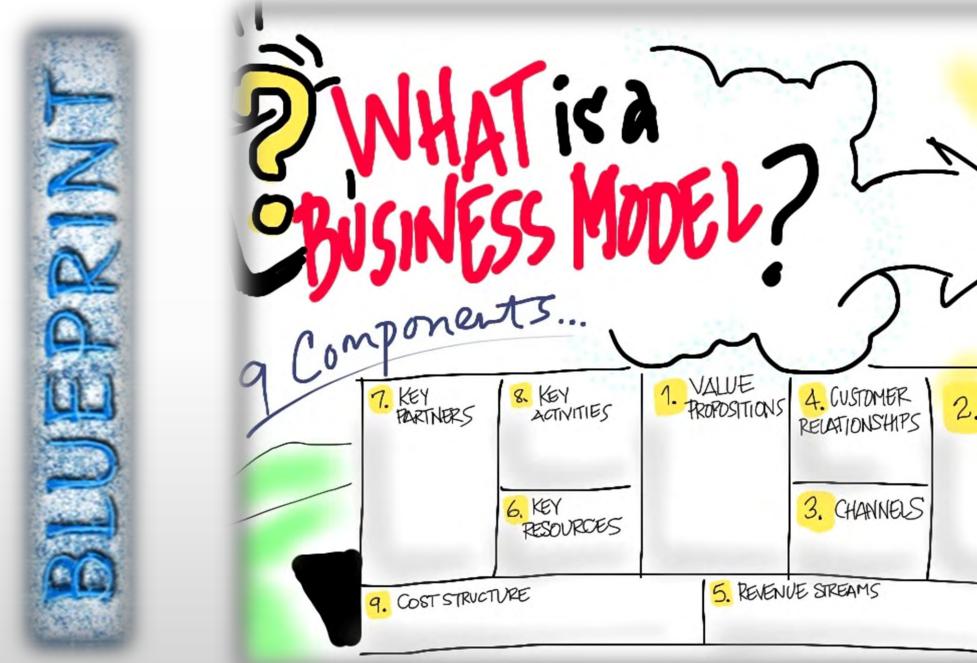
**DISCOVER & VALIDATE** 

## Before Trying to Sell . . . Customer Development

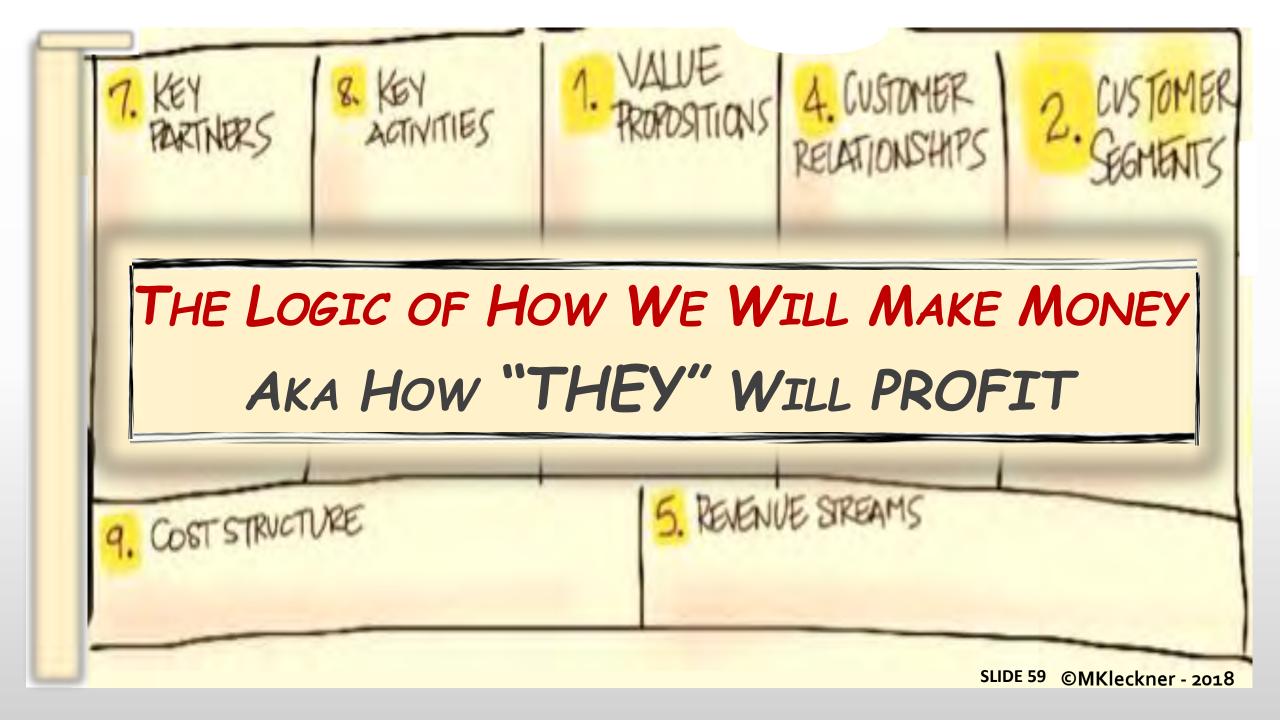


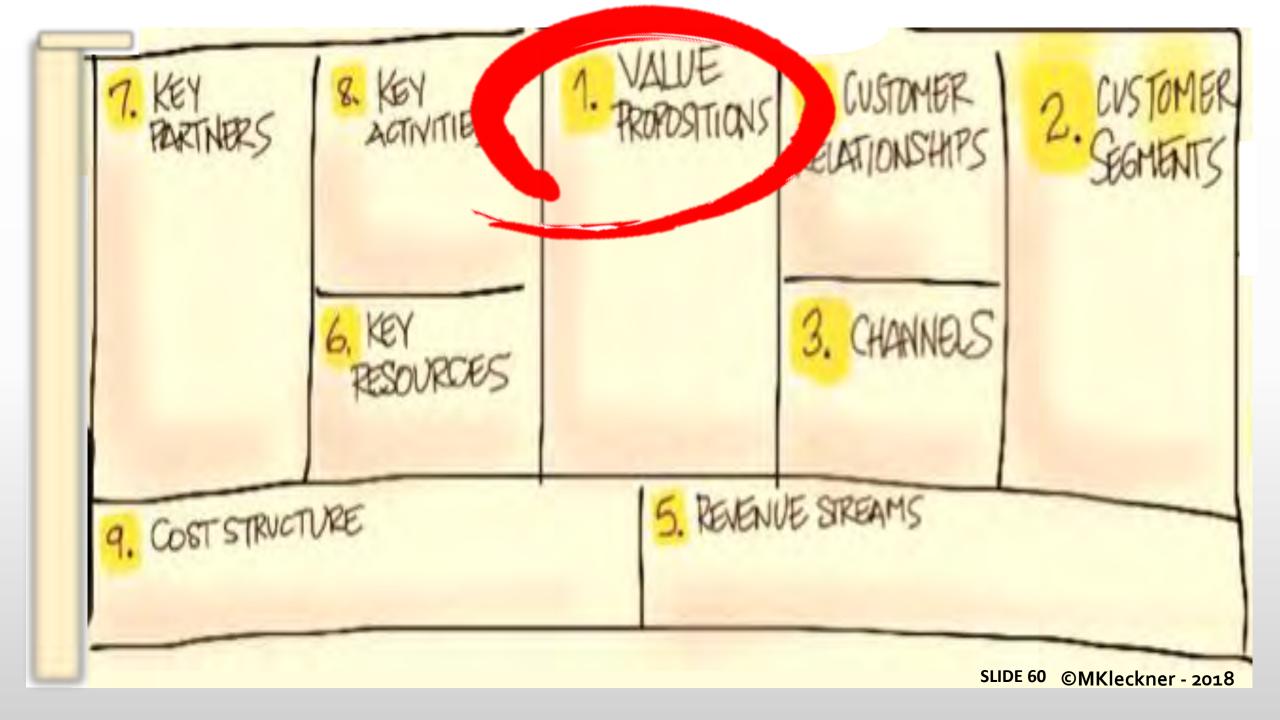
## **Business Model Generation** (Customer Discovery & Validation)

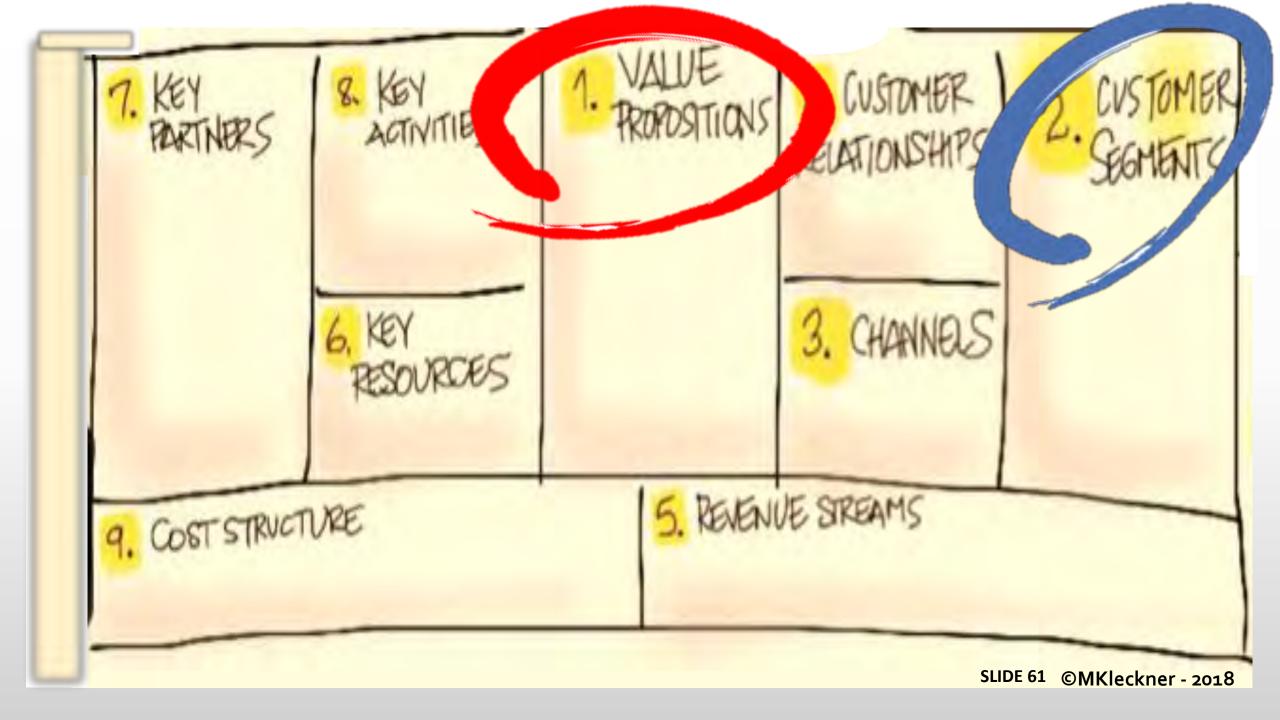


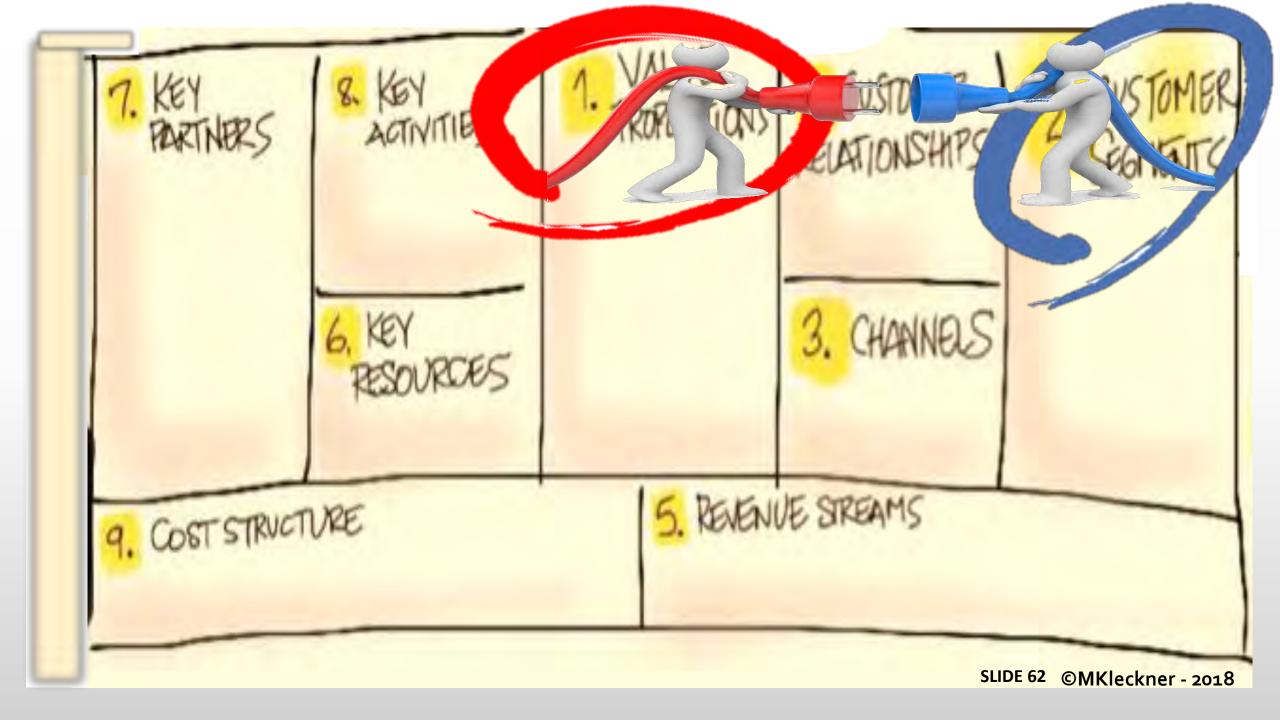


How a delivering produc or services for customers. 2. CUSTOMER SEGMENTS











### **Customer Segments and Customer Types**

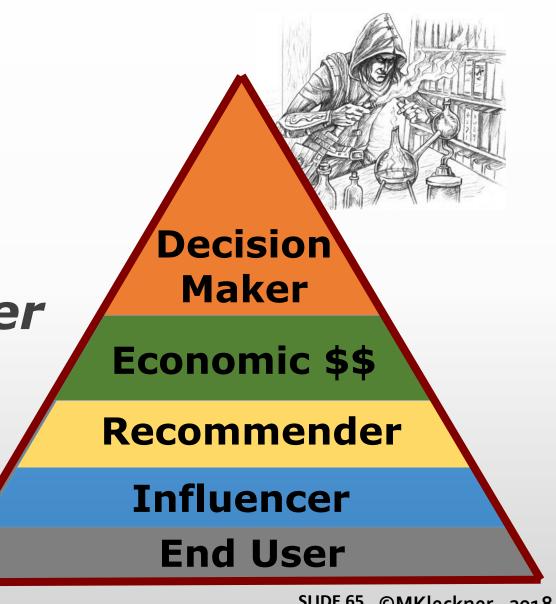
A <u>Customer Segment</u> is a subset of the marketplace that makes decisions in a defined way.

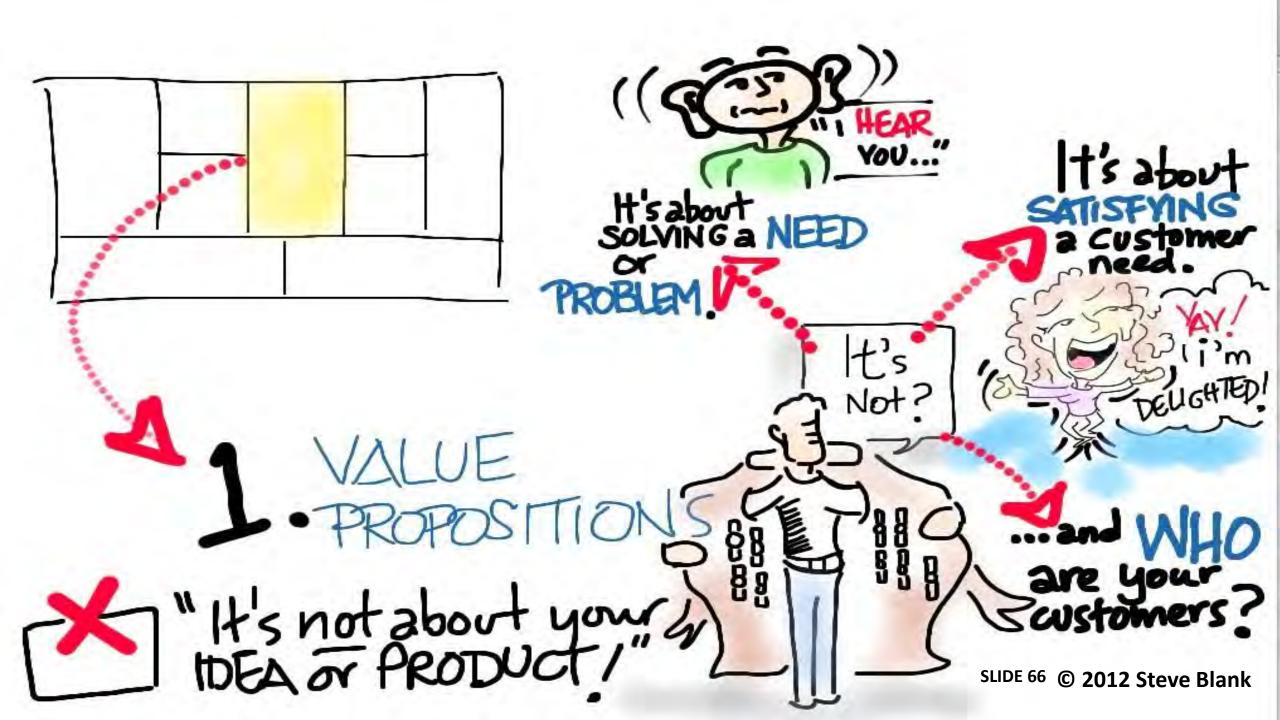
A <u>Customer Type</u> defines a role within the customer segment.

#### **Customer Types**

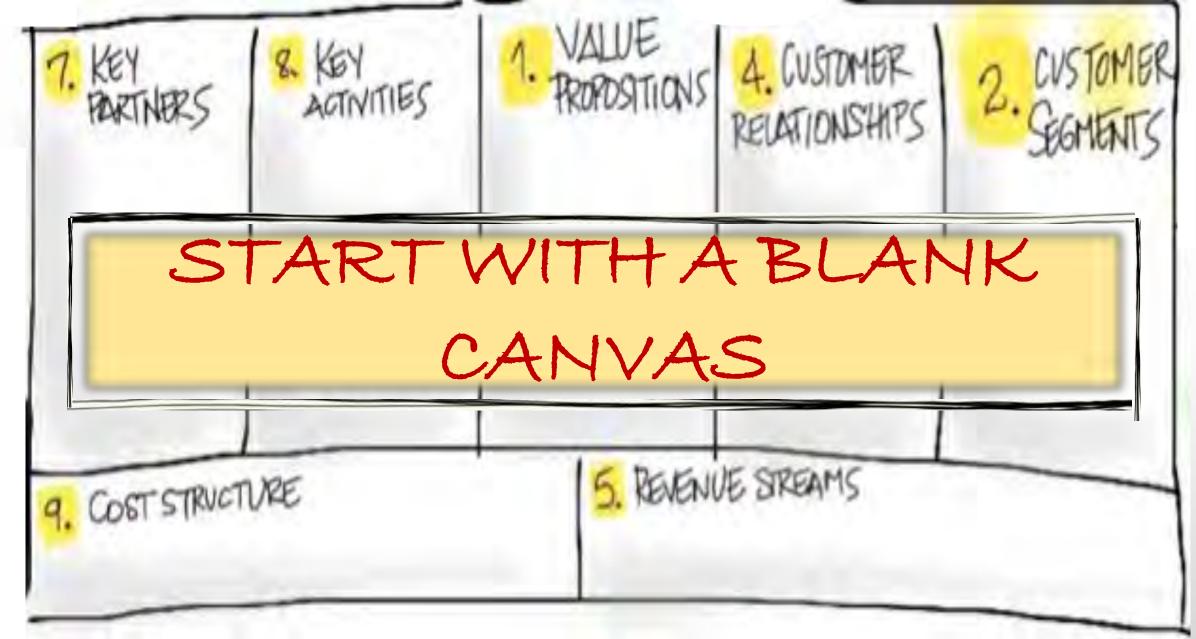
- End User
- Influencer\*
- Recommender
- · Economic Buyer/Payer
- Decision Maker
- · Saboteur

\* Remember William Dawes?





## **Business Model Generation**

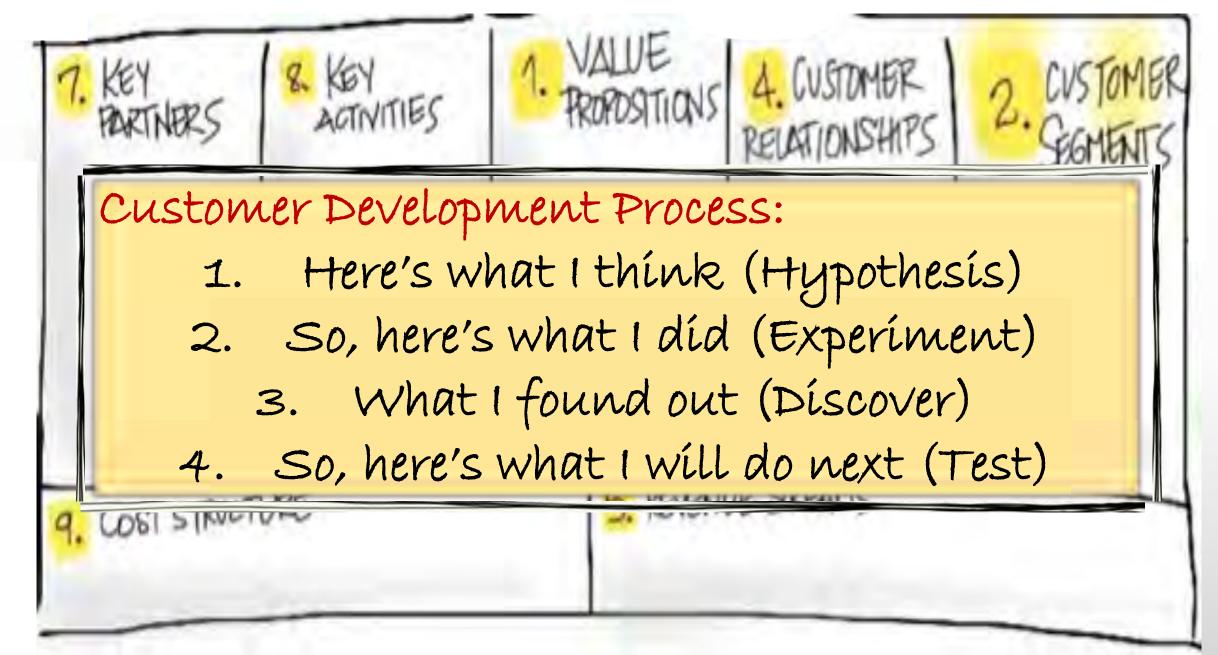


#### Launching the Canvas

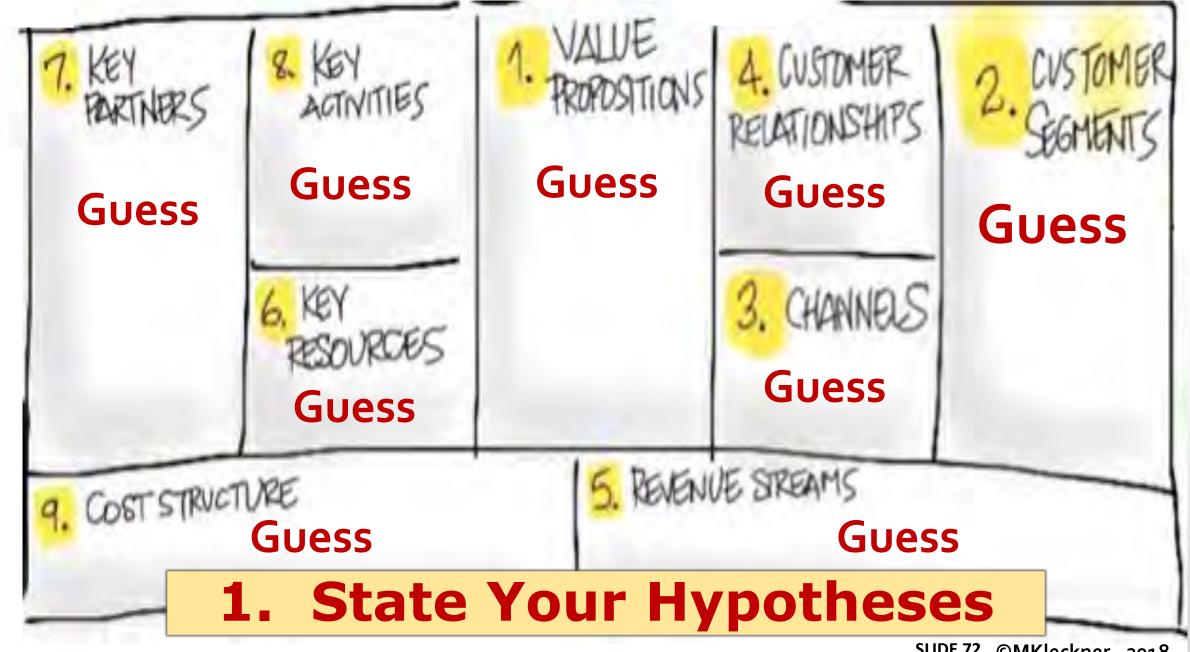
We begin with <u>Hypotheses</u>

Also known as <u>Educated Guesses</u>

We urgently need Facts



## Customer Discovery: Four (Easy?) Steps



# 2. Test Your Hypotheses

Value Propositions

Customer Segments

Identify Customer

Problems & Needs

Test hypotheses about CS

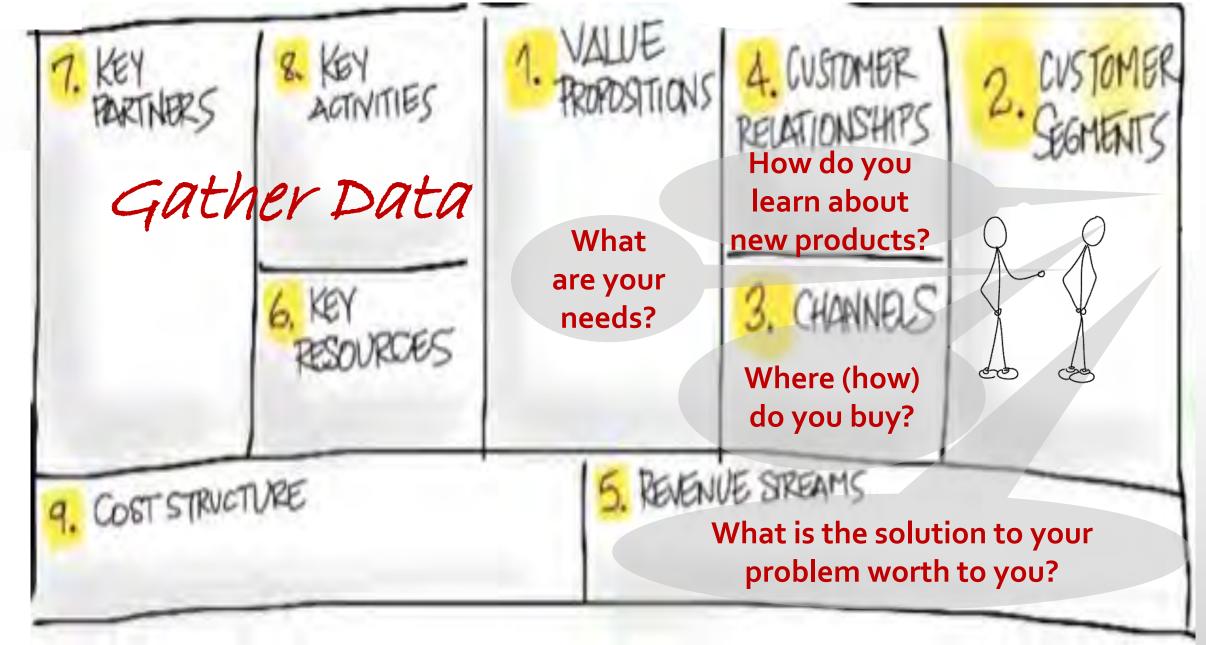
Customer Segments

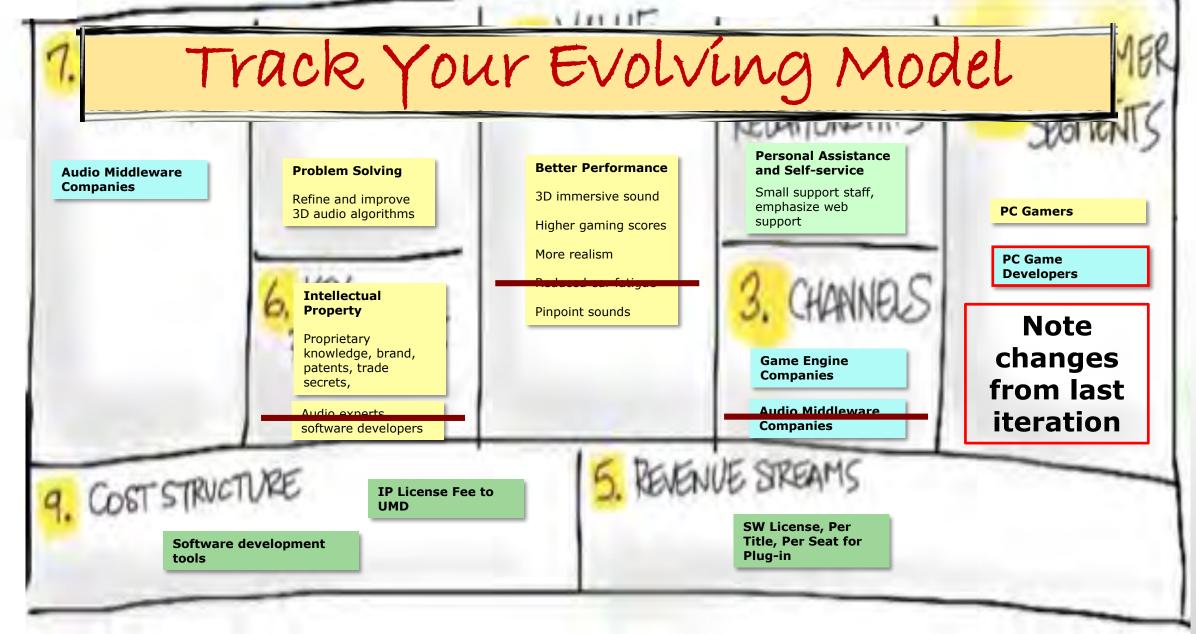
Line Segments

Line

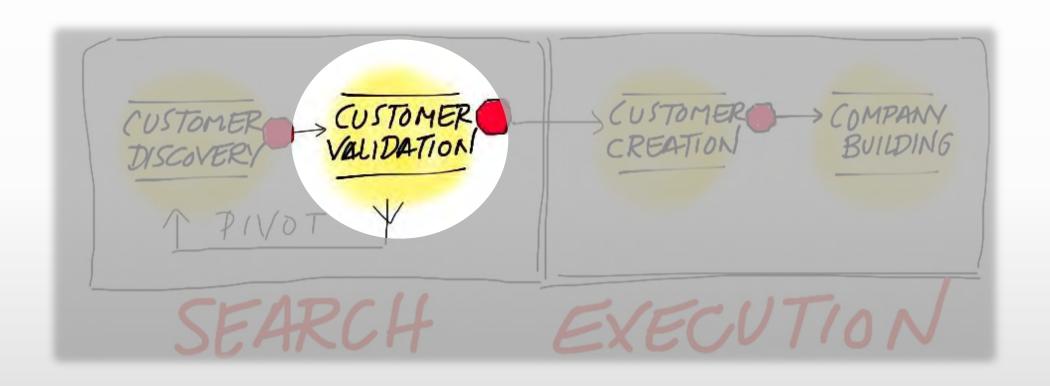
NO SELLING! EXPLORE & DISCOVER ONLY

and VPs...





## **Iterations: Pivot or Proceed**



#### 3. Test Your Potential Solution



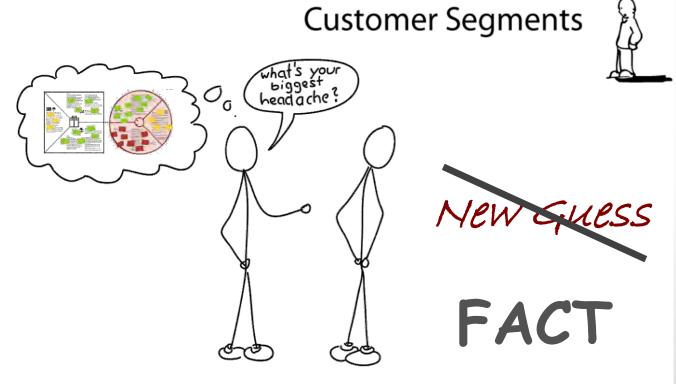
Test potential Minimum Viable Product features: Do they satisfy problems or needs?

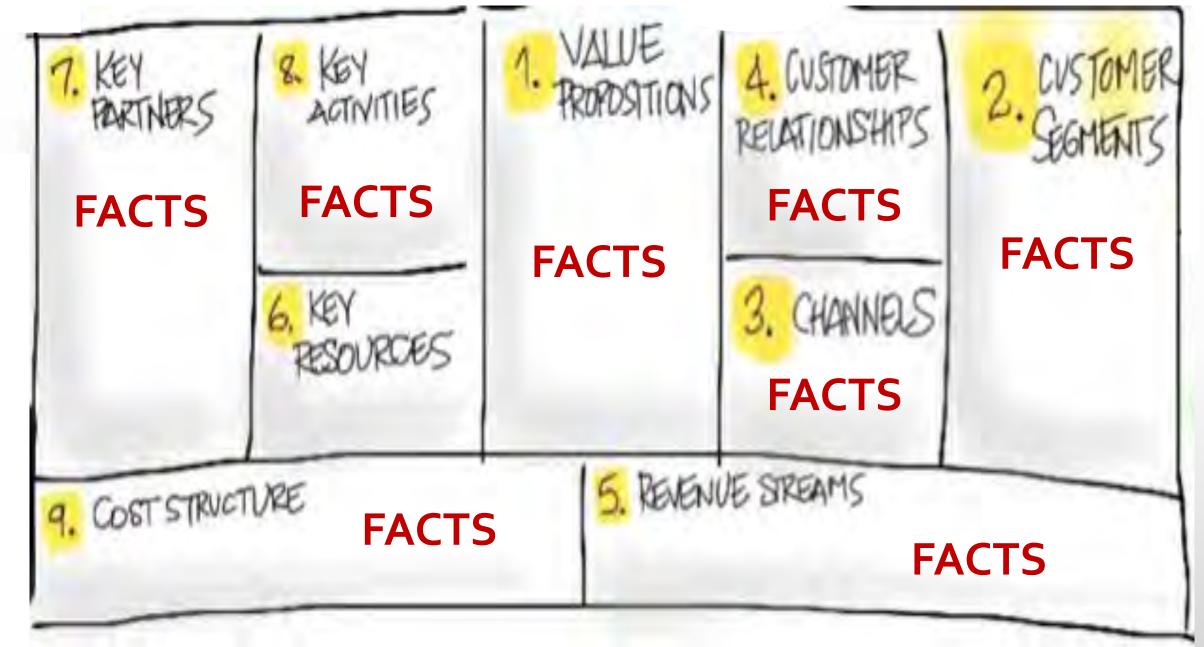
### 4. Pivot or Proceed

**Value Propositions** 



New Guess FACT





# Different customer segments have different needs & may require different Business Models to serve them.

# Customer Discovery . . . in a Nutshell

We are learning about Customer Needs...

... not asking them to define a product....

... or asking them to buy!

## The Most Important Skill

Your customers have needs . . .

They will be happy to tell you - if you give them the chance.



# **Interviewing Logistics**



- Interview efficiently –
   (Define an Archetype, Persona)
- Talk to strangers; go with your partner
- Ask for 10 minutes
- Be honest with yourself;
   Listen, don't talk

# Finding Archetypes





#### **Professional Societies**





#### **How Do I Make Contact?**

- Target second-rank companies
- Target mid-level management
- Email, then call; then email, then call
- Play the "student" card (No Company; No Product)
- Cold call? Research your target
- Network get a warm introduction

## Interviewing

- Make a goal: Test only 1-2 Hypotheses
- Group-Meet if possible: Face-to-Face > Skype > phone
- NO email interviews or surveys
- Focus on Their Pain Points, not yours
- Ask Open-Ended Questions
- Ask "Why?" (Listen and probe w/ a follow-up)
- Ask about current efforts (e. g. to solve the problem)
- Embrace bad news; Be humble and Ask for Help.
- **DO NOT SELL!!**
- DON'T TALK ABOUT YOUR TECHNOLOGY!!

# **Interview Questions**

- What are they currently experiencing?
- How are they doing things right now?
- What do they think about the way things are now?
- What would they like to see or do differently?
- In an ideal world, how would things be?
- Have you tried to "fix" the problem? If so, how?

**End User Story: "A Day in the Life"** 

# **Cute Baby?**





SLIDE 89 ©MKleckner - 2018

## The last two questions

-What haven't I asked you?

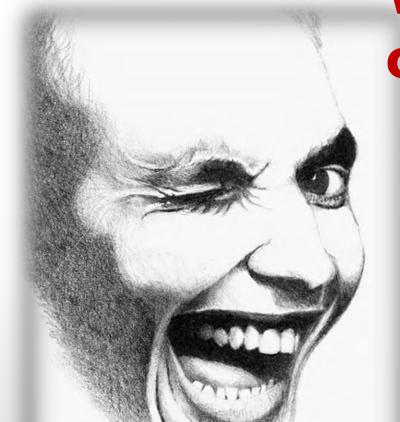
•Can you suggest another person for me to talk with?

# The Trap

#### **CONFIRMATION BIAS**

#### **Confirmation Bias**

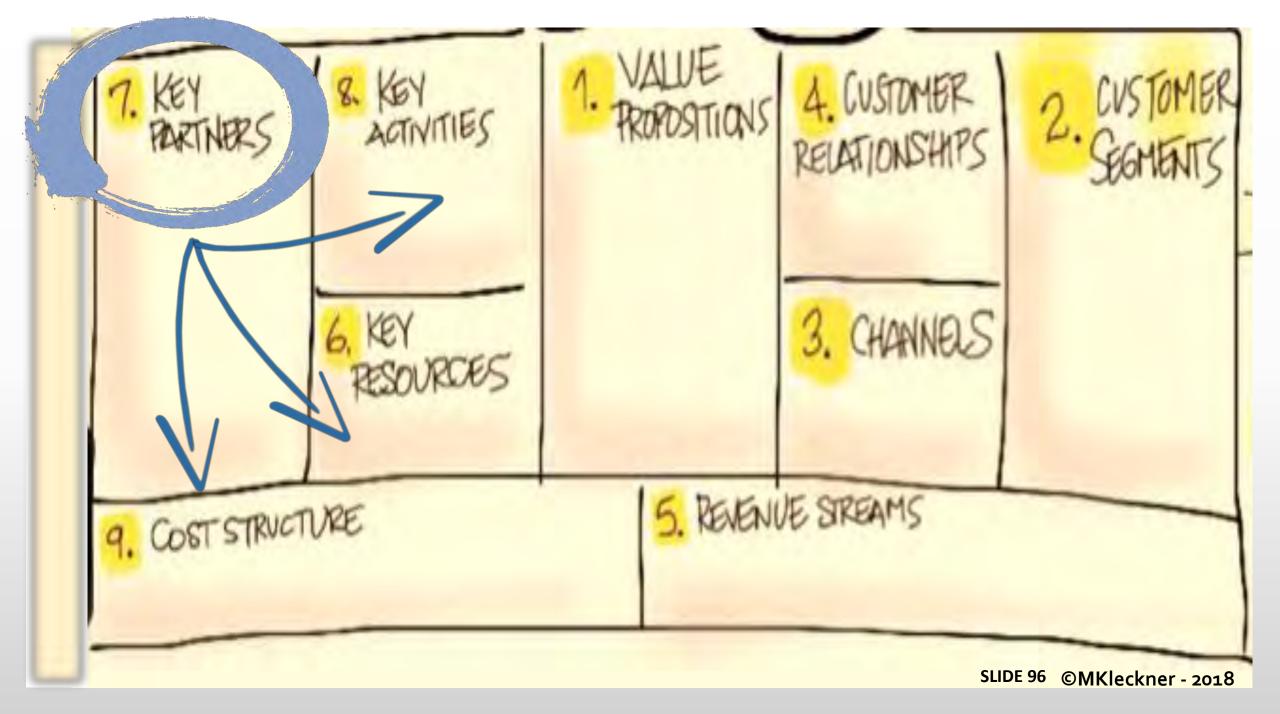


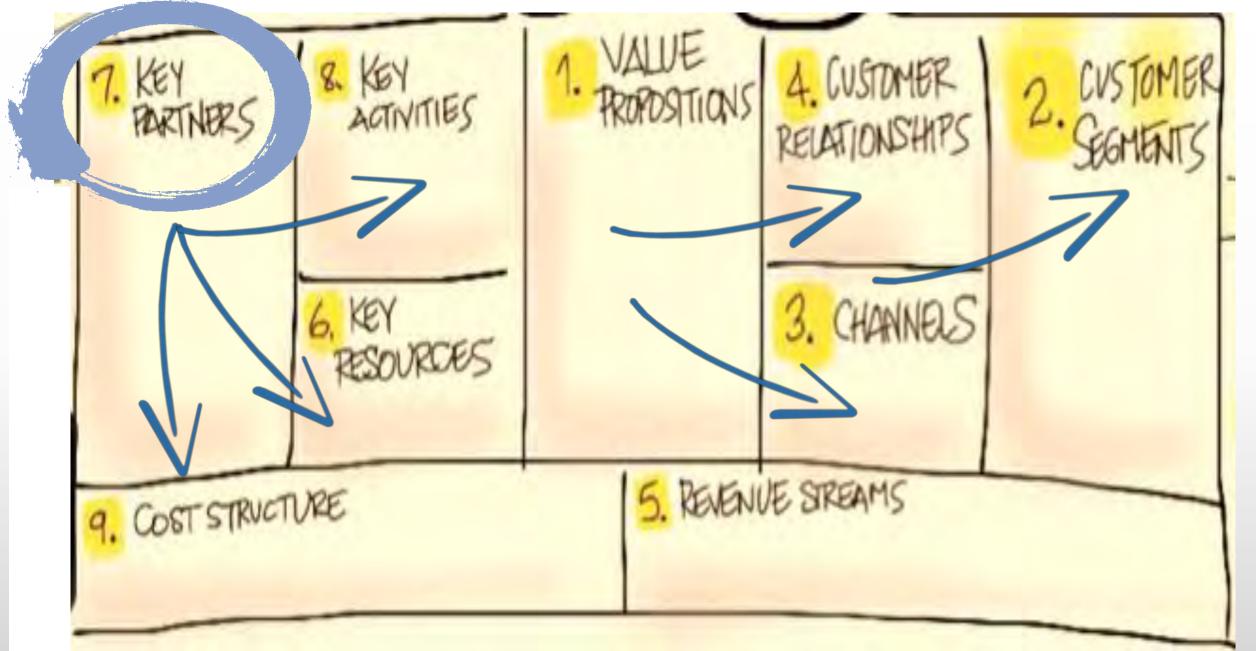


# Where may your first customers come from?



# Using Business Alliances as a Growth Strategy

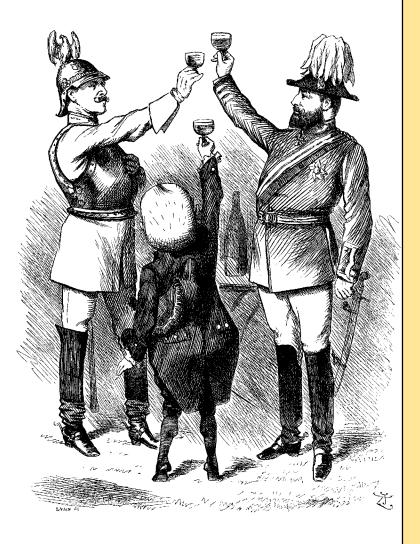




# Why?

Increased Cash
Keep Up w/ Market
Viable Solution
Fend off Competitor
Market Share
Cost

**Duration Varies** 



Disneyland Coca-Cola, Eastman Kodak

Wal-Mart Bristol Myers

KFC, Taco Bell, GrubHub

One World, Star Alliance

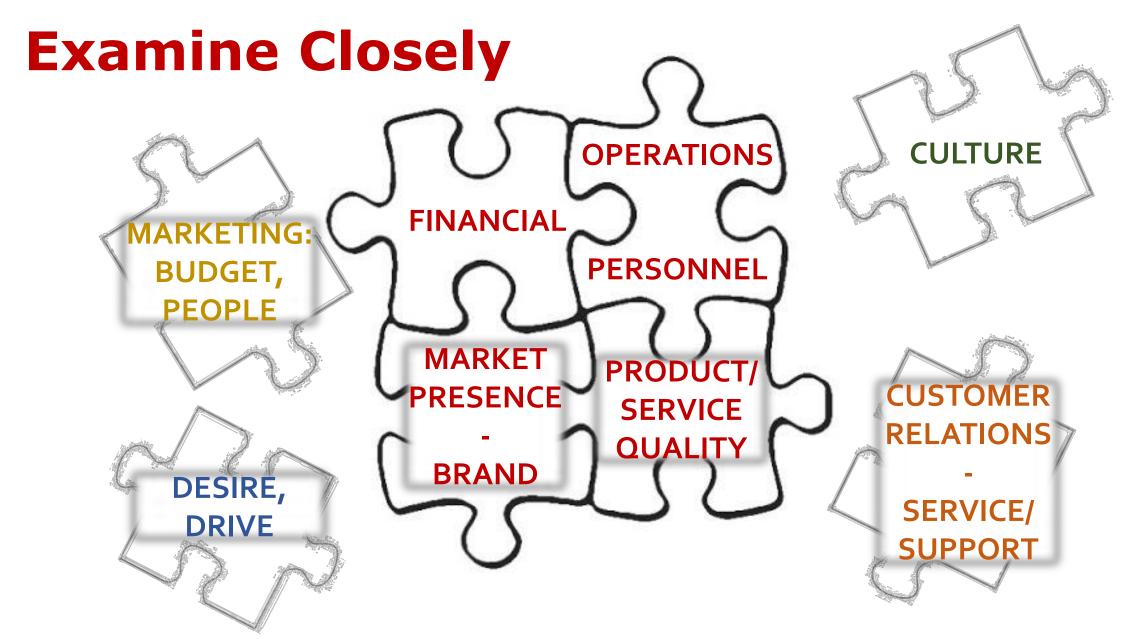
Paramount Pictures 20<sup>th</sup> Century Fox (*Titanic*)

AT & T, MCI Legislation, Regulatory Affairs

Sales, Distribution

Production, Manufacturing

**Co-Branding** 



#### Do I Fully Understand . . .

- 1) Financial Situation (Cash Flow, Balance Sheet)
- 2) Annual Revenue
- 3) Annual Growth
- 4) How the company is organized
- 5) Their experience and backgrounds

#### . . . And their

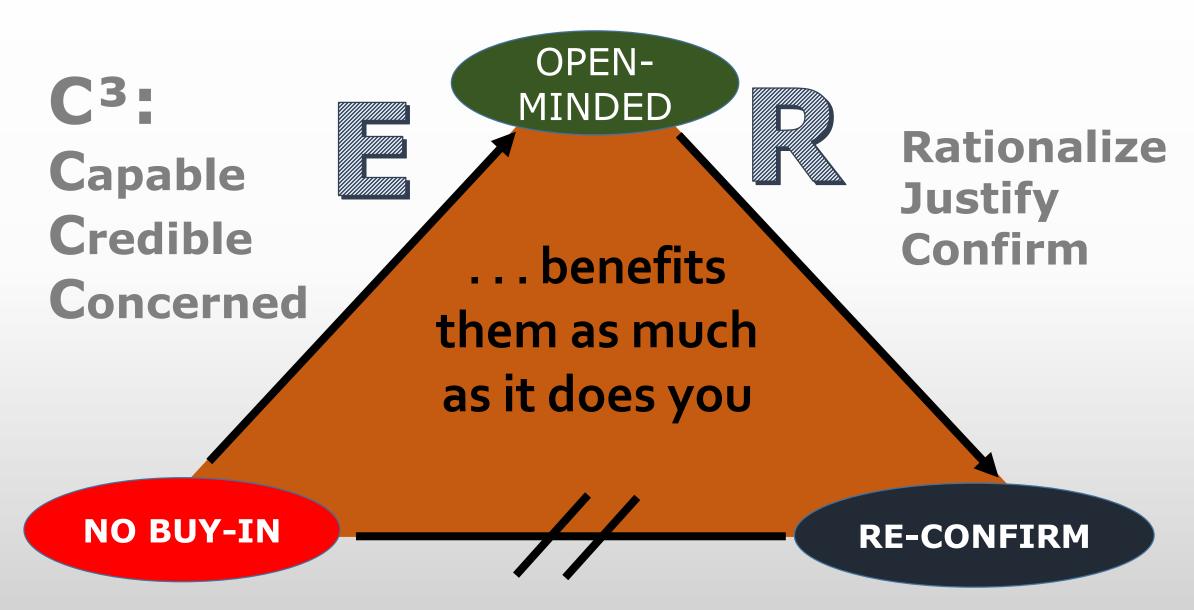
- 6) Market Presence
- 7) Their Markets (Beachhead, Niche, Brands)
- 8) Growth Opportunities
- 9) Quality Standards, Controls, Values
- 10) Customer (Archetypes), Feedback

#### ...Plus

- 11) Customer Relationships, Complaint Management
- 12) Marketing Process, Tactics
- 13) Prior Deals (with others)

Do you approve how they sell and develop their market(s); do they have the funds and personnel to handle this alliance; do they share your enthusiasm?

#### The Deal that you propose . . .



# **Preparation Checklist**

- Very Clear: Business Opportunity at Hand; Value Proposition
- Financial Resources & Responsibilities
- Specific Steps to get Alliance (Ops, Mktg, Sales) Moving
- Technology, Service: Specific Steps
- Who Supplies What People
- Long-Term Commitment v. Specific Product/Service
- Possible Future Products, Services





After 5, 10, Interviews: What's Your Story?

> **SLIDE 104** ©MKleckner - 2018



#### Why Do Stories Matter?

Osíris Prometheus Buddha Moses **Tension** Rises Jesus Luke Skywalker Woody Budweiser Puppy **Exposition** 

nsion

Used by:
Aristotle, Homer,
Chaucer, Tolkien,
CS Lewis, "Star
Wars", Disney,
Budweiser ...

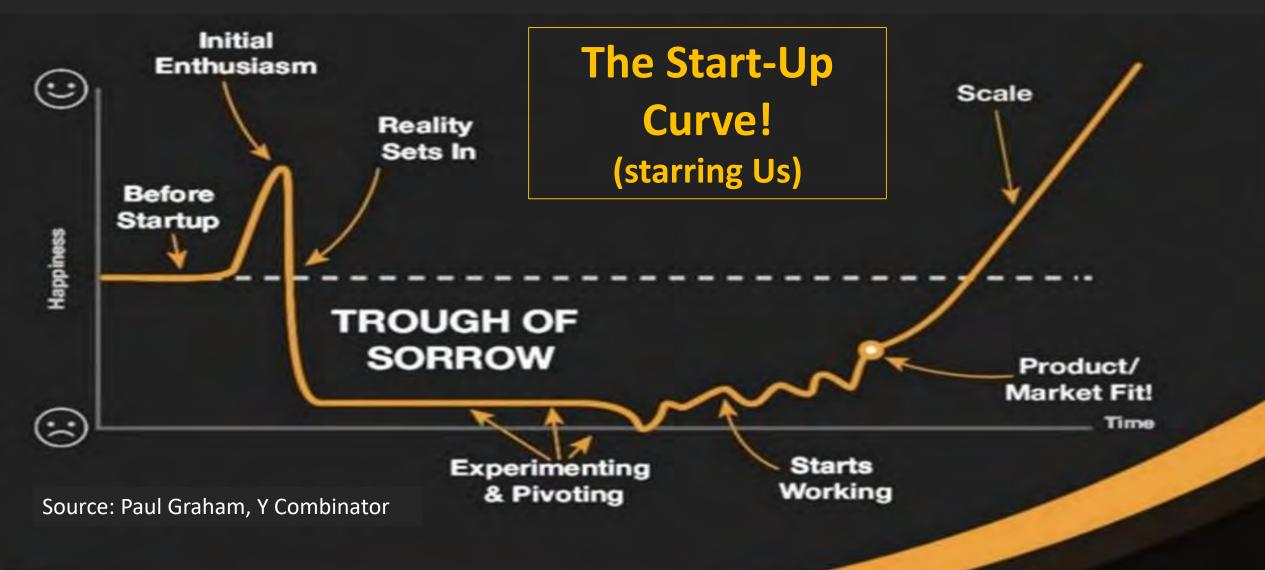
**Climax** 

Tension Falls

**Denouement** 

How important are those customer interviews?
SLIDE 106 ©MKleckner - 2018

#### **Behind Every Great Product is a Great Story**



# Get Out of the Building! Discover, Validate, Build!





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