U.S. Small Business Administration

Funding Innovative Research

Small Business Innovation Research (SBIR)
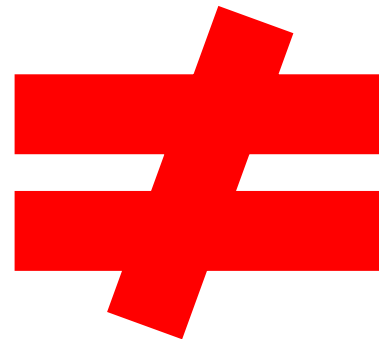## Small Business Technology Transfer (STTR)

SBIR · STTR
America's Seed Fund™
POWERED BY SBA

SBIR – Innovation & Commercialization

EXECUTE

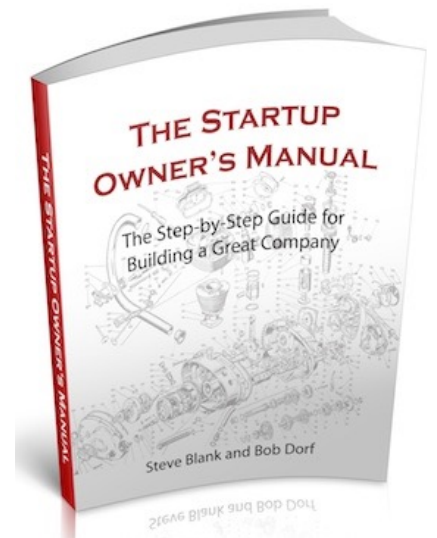**SEARCH**

≠

Large Co.

Startup

A start-up is not a small business
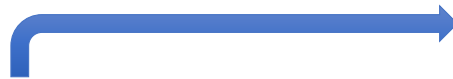
A start-up is an enterprise in search of a scalable and repeatable business model
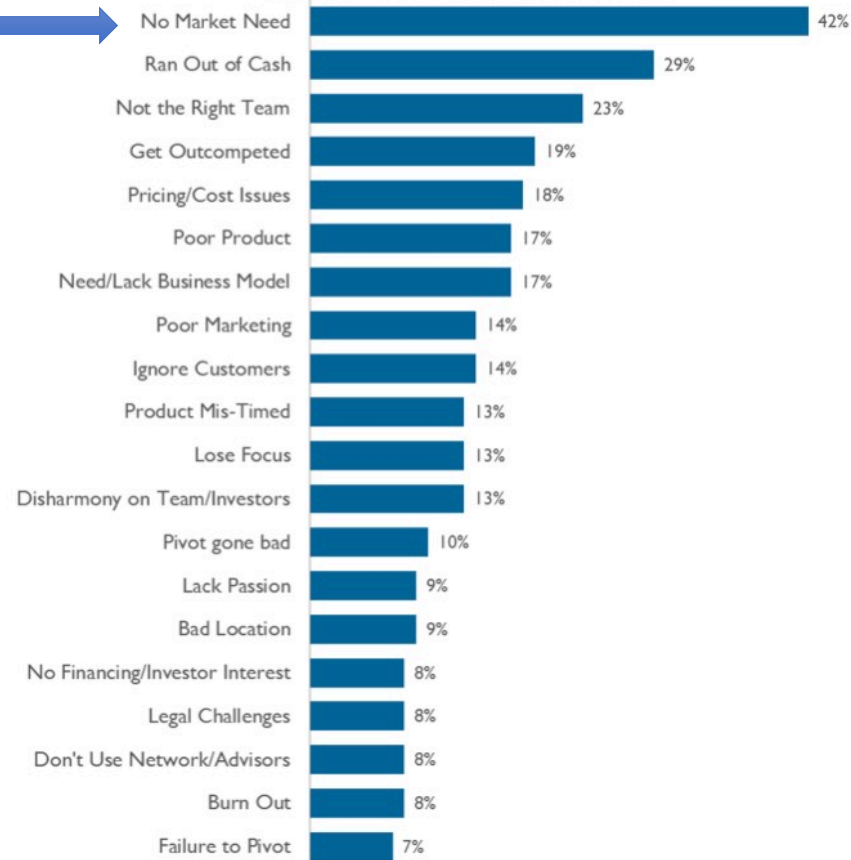   -Steve Blank

(dumb reasons) why startups fail?

All you've gotta do is ask

Top 20 Reasons Startups Fail
Based on an Analysis of 101 Startup Post-Mortems

Reason	%
No Market Need	42%
Ran Out of Cash	29%
Not the Right Team	23%
Get Outcompeted	19%
Pricing/Cost Issues	18%
Poor Product	17%
Need/Lack Business Model	17%
Poor Marketing	14%
Ignore Customers	14%
Product Mis-Timed	13%
Lose Focus	13%
Disharmony on Team/Investors	13%
Pivot gone bad	10%
Lack Passion	9%
Bad Location	9%
No Financing/Investor Interest	8%
Legal Challenges	8%
Don't Use Network/Advisors	8%
Burn Out	8%
Failure to Pivot	7%

CBINSIGHTS

www.cbinsights.com

Interview
Potential
Customers.

Who plays a **KEY ROLE** in the adoption of your product?

Decision Maker:
Individual Doctor

Decision Maker: Committee

End User or Influencer
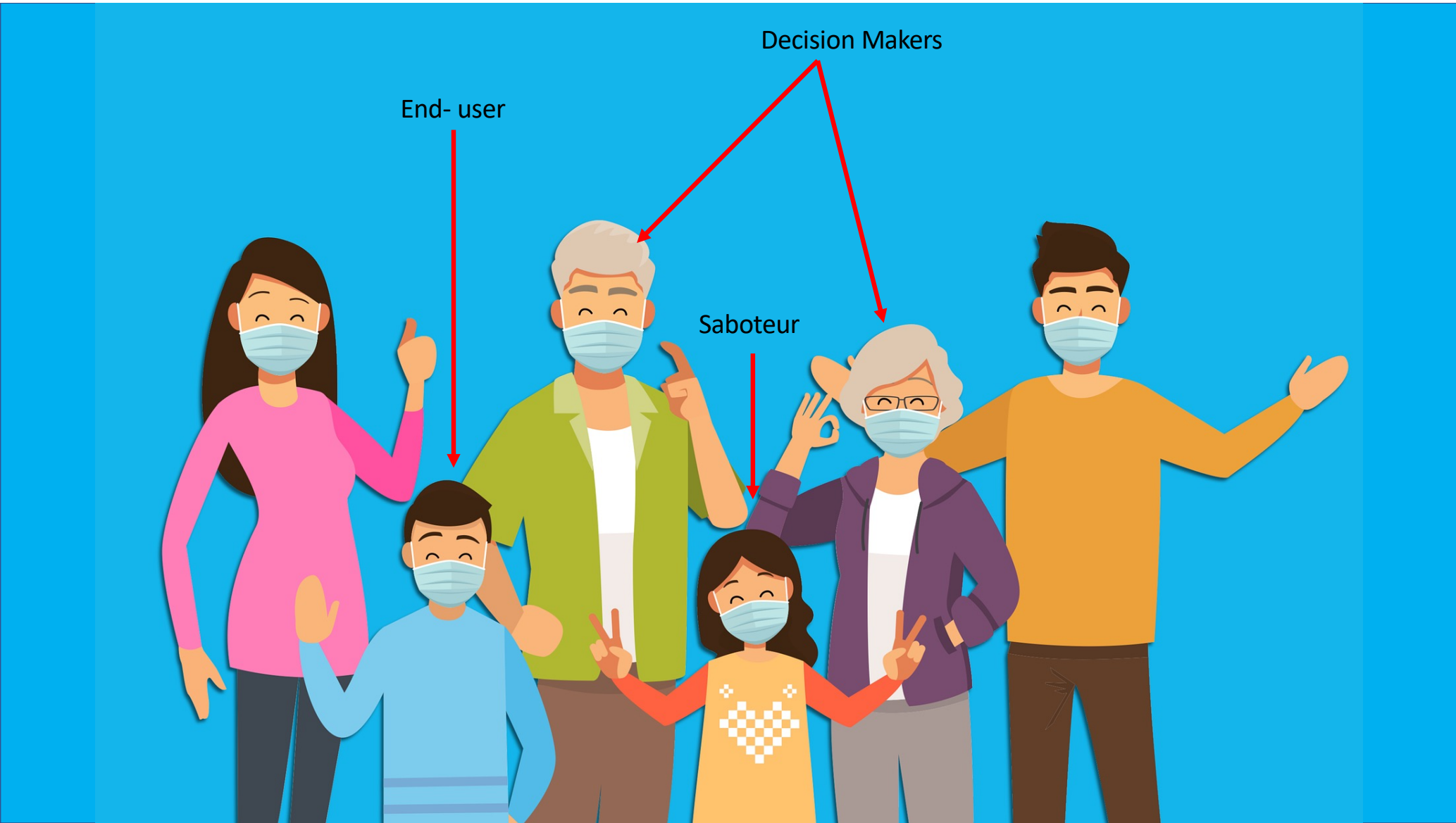
~~Decision Maker~~:
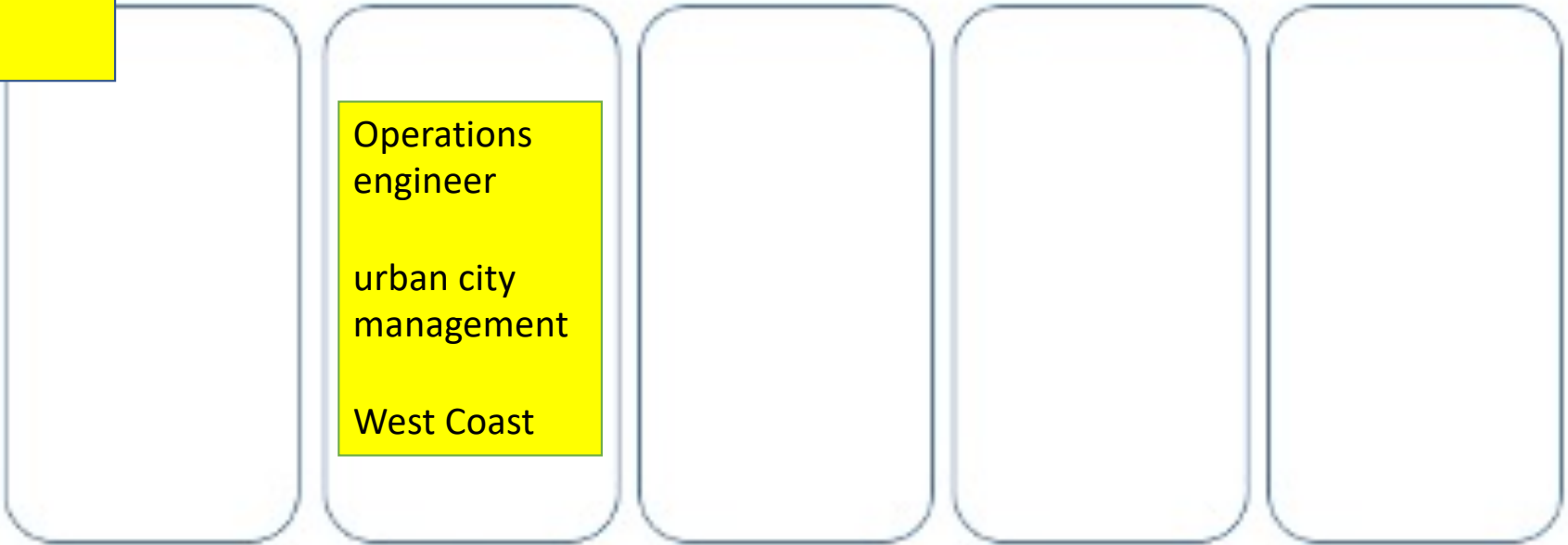Individual Doctor

beneficiary:
Patient

Customer Sub-segments

Exercise 1: Customer Roles

End user

Decision maker

Operations engineer

urban city management

West Coast

Influencer

Economic buyer

Saboteur

Customer Pains – what things are they trying to decrease or eliminate

Customer Gains – what things are they trying to increase or add

A Day in the Life of a Customer

Understanding customer's work

1. What are their jobs (e.g. duties, responsibilities)?

2. What products do they use?

3. How much time do they spend using them?

4. How would life change after they use your product?

Jobs Title

tellers at a bank

Customer Type:
✔ End-User
Decision Maker
Influencer
Economic Buyer
Saboteur

Pains / Gains

1. What are their biggest challenges with the current solution?
   -what's difficult?
   -what annoys them?

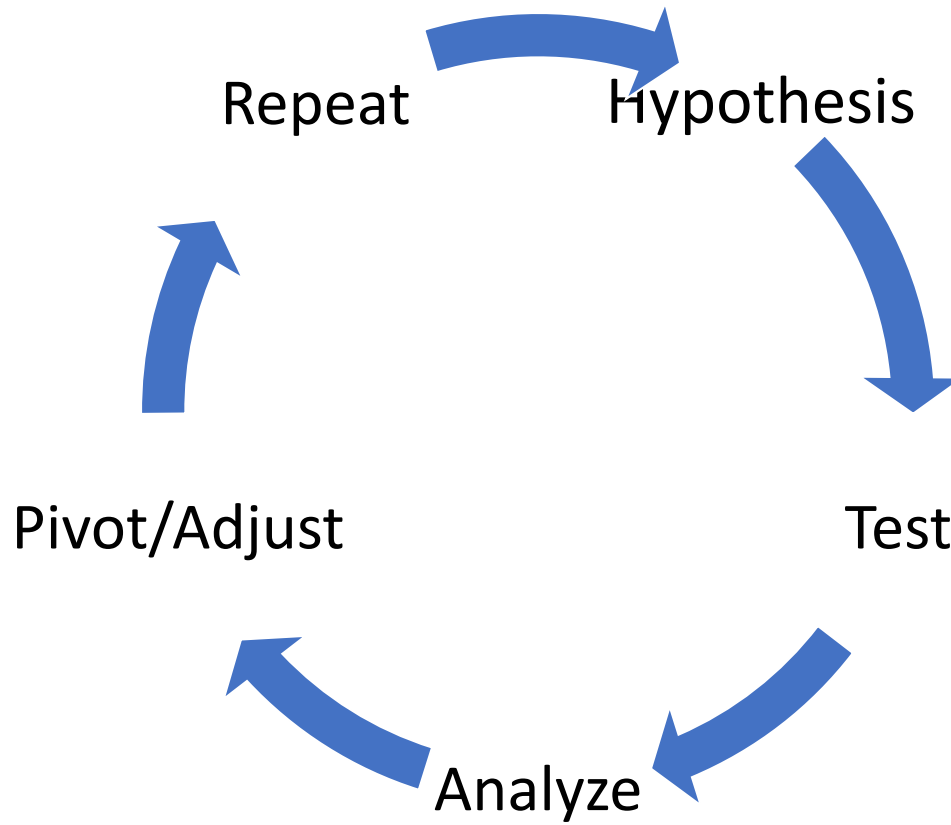2. What things are they trying to improve?

Banking Software Example

What are the trends in the banking industry?

Who are the industry analysts?

Are there bank software trade shows?

Is there a banking-industry software consortium?

Repeat → Hypothesis

Hypothesis

Test

Analyze

Pivot/Adjust

IS THERE A PATTERN?

Characteristics of Good Hypothesis

- It can be invalidated. The inverse can be tested!

- It is clear, focused, and short.

- It does not test your technology/ product

- It helps you learn something about your market or business you did not know

Hypothesis Framework

A [Specific Person] makes
[Decision] because of
a [Behavior/Belief].

Generic Business Hypothesis

A [Battery Manufactures]

[prioritize performance characteristics]
over
[cost].

Refined Business Hypothesis

A [Lead Acid Battery Engineers] [prioritize charge acceptance] over [other performance criteria].

Measurable Business Hypothesis

A [Lead Acid Battery Manufacturing Engineers]

[require a 50% increase in charge acceptance] before considering

[adopting new technology].

Good or Bad? Example Hypothesis

- Chip makers want improved performance.

- Manufacturing managers at top tier tire plants are strong influencers, but don't make a purchasing decision.

- Line engineers at mobile carriers like to see data transfer defect detection increase by 35%.

- CFOs at large academic hospitals will need a 150% margin on Medicare procedures to pay costs.
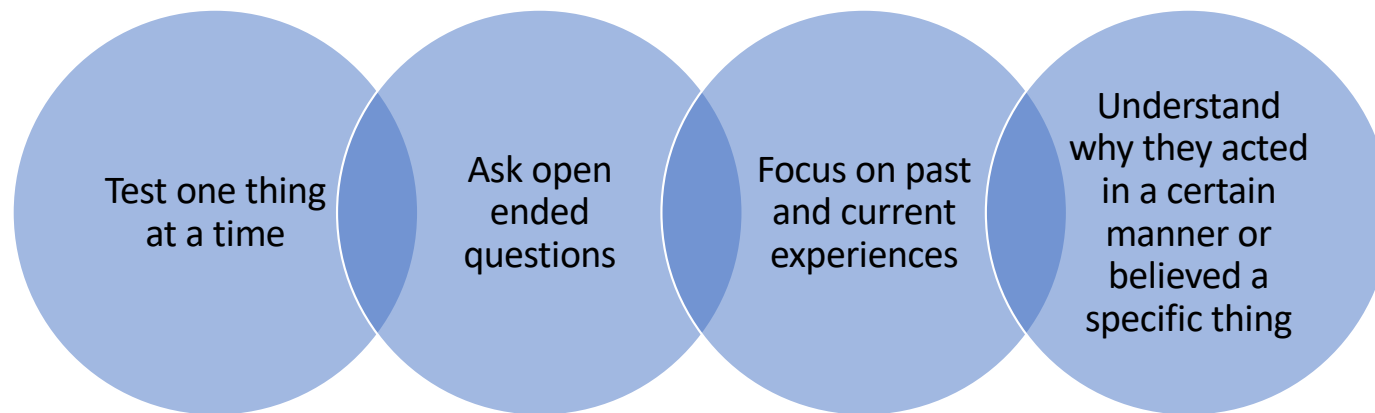
Exercise 2: Craft Strong Hypothesis

A [Specific Person] makes
[Decision] because of
a [Behavior/Belief].

Write 1-3 hypothesis statements based on your high level goals

Each Team has 4 minutes

Be prepared to share & review with the class!

Testing Your Hypothesis

Test one thing at a time

Ask open ended questions

Focus on past and current experiences

Understand why they acted in a certain manner or believed a specific thing

Questions for Validating/Invalidating Your Hypothesis

Example

General Hypothesis - [Quality plant managers] make [day-to-day operational decisions] based on [real time data]

Interview Questions:
- How do you make quality decisions for the plant?
  - Follow-up questions: How often does this occur?

- What type of information do you use to make decisions today

- Tell me about the last time you had to make a decision in the plant based on data?

Questions for Validating/Invalidating Your Hypothesis

Example

Measurable Hypothesis - [Quality plant managers] make [75% of their day-to-day operational decisions] based on [real time data]

Interview Questions:
- How do you make quality decisions for the plant?
  - Follow-up questions: How often does this occur?

- What type of information do you use to make decisions today

- Tell me about the last time you had to make a decision in the plant based on data?

GOOD

BAD

- Ask about Process

-Ask about actions

-Ask why

-Ask what and how

-Ask about how often the problem occurs

-Ask for opinions

-Ask customer to speculate

-Start with "Would you…"

-Lead customer to give you answer you want

Good Question/ Bad Question

How are you solving X now?   GOOD

What is your biggest challenge with X?   GOOD

Would you adopt a product which did Y?   BAD

What would your dream product do?   OK

Do you think my solution is a good idea?   BAD

Is there anything else that I should have asked?   GOOD

Who else should I talk to?   GOOD

Exercise 3:Draft Interview Questions

1. Draft questions that help validate/invalidate your hypothesis.

2. Draft follow up questions.

3. Don't draft leading questions.

Each Team has 3 minutes

Be prepared to share & review with the class!

Identify the customers

Interview them

Design a Value Proposition

Decision maker
Influencer
Buyers
End user
Saboteur

Quantifiable
Relevant
Specific
Testable

Customer Discovery Goals

1. Identify the biggest issues they have that your solution can address

2. How big (urgent) is the problem?

3. How often do they experience the problem?

4. How "good" does your solution have to be for them to consider changing?

What is Your Value Proposition?

1. What do you do?   Product or Service

2. How do you do it?   Features

3. Why is it important?   Value Proposition

0 Degree Sleeping Bag

PRICE: $359.95

Customer Segments

Person who likes the outdoors

Weekend Hiker

Snow Camper

Back Packer

Car Camper

WHAT

0 Degree Sleeping Bag

HOW

Key Features

- 5" baffle spacing and side wall baffles / helps to keep down from shifting keeping you warmer

- PFC-Free 800FP Dridown and 15d nylon fabrics / ultralight weight

- Patented Self Sealing foot vent / fast and easy ventilation

- Draft-dodger collar / helps prevent drafts

- Anti-snag zipper tracks / makes getting in and out easy

WHY

SURVIVAL

In-class Exercise – What, how, why?

Identify the following:

- What is that you do?
- How do you do it?
- Why is it important? ← Value Proposition

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Each team will have 3 minutes

Be prepared to share & review with the class!

What causes a customer to switch to a new solution?

Happy with current solution

Current Solution = OK
New Solution = Nice to HAVE
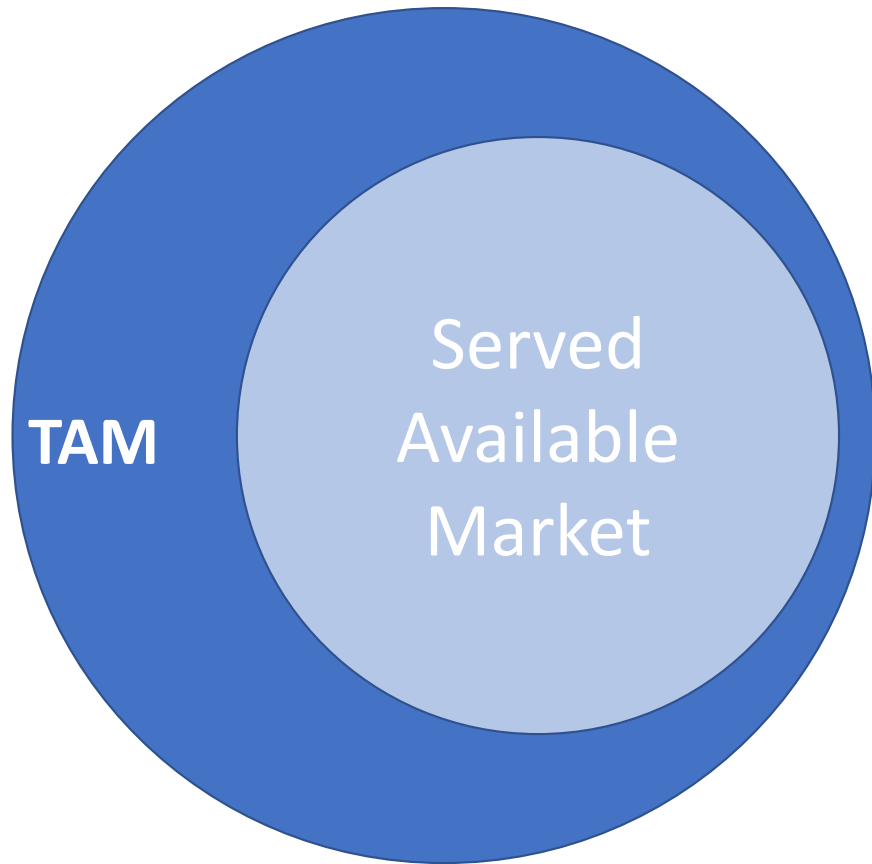
Current Solution = BAD
New Solution = Must Have

TAM: How big is the market?

Total Available Market

How big is the market if 100% of relevant customers purchased my product or service?

SAM: How big is my segment?
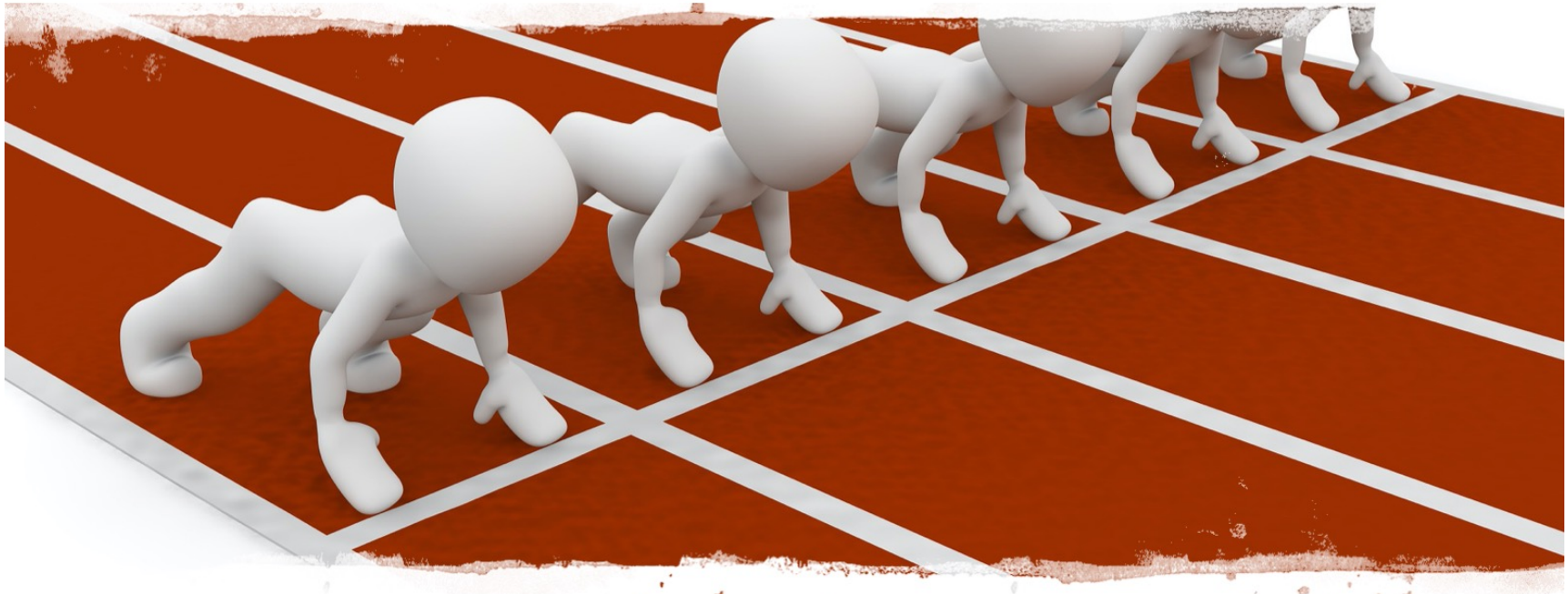
TAM

Served Available Market

How many people want and can pay for my product or service?

TM: What is my target?

TAM SAM Target Market

How large is my target market (in $)?

How many customers can I expect?

Know Your Competition

How will you make money?