

# TE 250: Week 10

## Market Segment Sizing and Entity Formation

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# Technology Entrepreneur Center



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## An Evening with Martin Eberhard

Special **Illinois Leadership Center** event! Martin Eberhard is a UIUC alum, inventor, and co-founder of Tesla Motors. *No RSVP required.*

Tues | Apr 4 | 7pm

Lincoln Hall Theater

# Agenda

- Review rest of semester
- Homework feedback
- Customer segment sizing with breakout
- Guest speaker: Landon Campbell

# Looking at the rest of the semester...

- Should be accumulating interviews and documenting them on the tracker. How are they impacting your vision for a solution?
- Topics still to be covered:
  - Week 10: Market segmentation and sizing with breakout (10pts)
  - Week 11: Venture formation, IP, etc with breakout (10pts)
  - Week 12: Making a pitch with breakout
  - Week 13: Alternate activity – combined with TE360/460 – 1 hr class (10pts)
  - Week 14/15: Pitching
- Final Presentations (2): 4/26 & 5/3
- Attendance mandatory for both final presentation sessions
  - Failure to attend without excused absence results in loss of significant participation points



# Homework Feedback

- Only one version of the right side of the VP Canvas.
- Compare your potential solutions and the associated pain relievers and gain creators to the pains and desired gains.
- The solution the relieves the most pains and creates the most desired gains should be you selected solution.
- Should be able to draw a line from pain relievers to pains and gain creators to desired gains.

## Idea 3: A marketplace for all means of transportation

### Gain Creator:

- Shows all the options at the same time with information on price and ETA
- Availability to book in advance
- Customers can limit share their private info

### Product/Service:

- A platform as a marketplace for all ridesharing companies/buses/trains/rent cars, all in the one app.
- Subscription service for daily users
- Advertisement/SEO services for ridesharing companies (B2B)

### Pain Relievers:

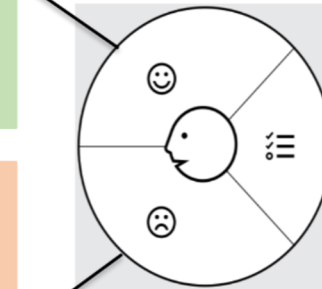
- Competition of ridesharing companies in the marketplace prevents high costs
- Book now-travel later feature eliminates uncertainty.
- Double background checked (1: in their ridesharing app; 2: in our marketplace platform) verified drivers.

#### Gains:

- Reduce travel time
- Increases option for people
  - environmentally friendly
- Flexible Timings
- Increased Privacy

#### Pains:

- High costs
- High anxiety and uncertainty during the peak holiday season
- Safety
  - Traffic and delays



#### Target Customer:

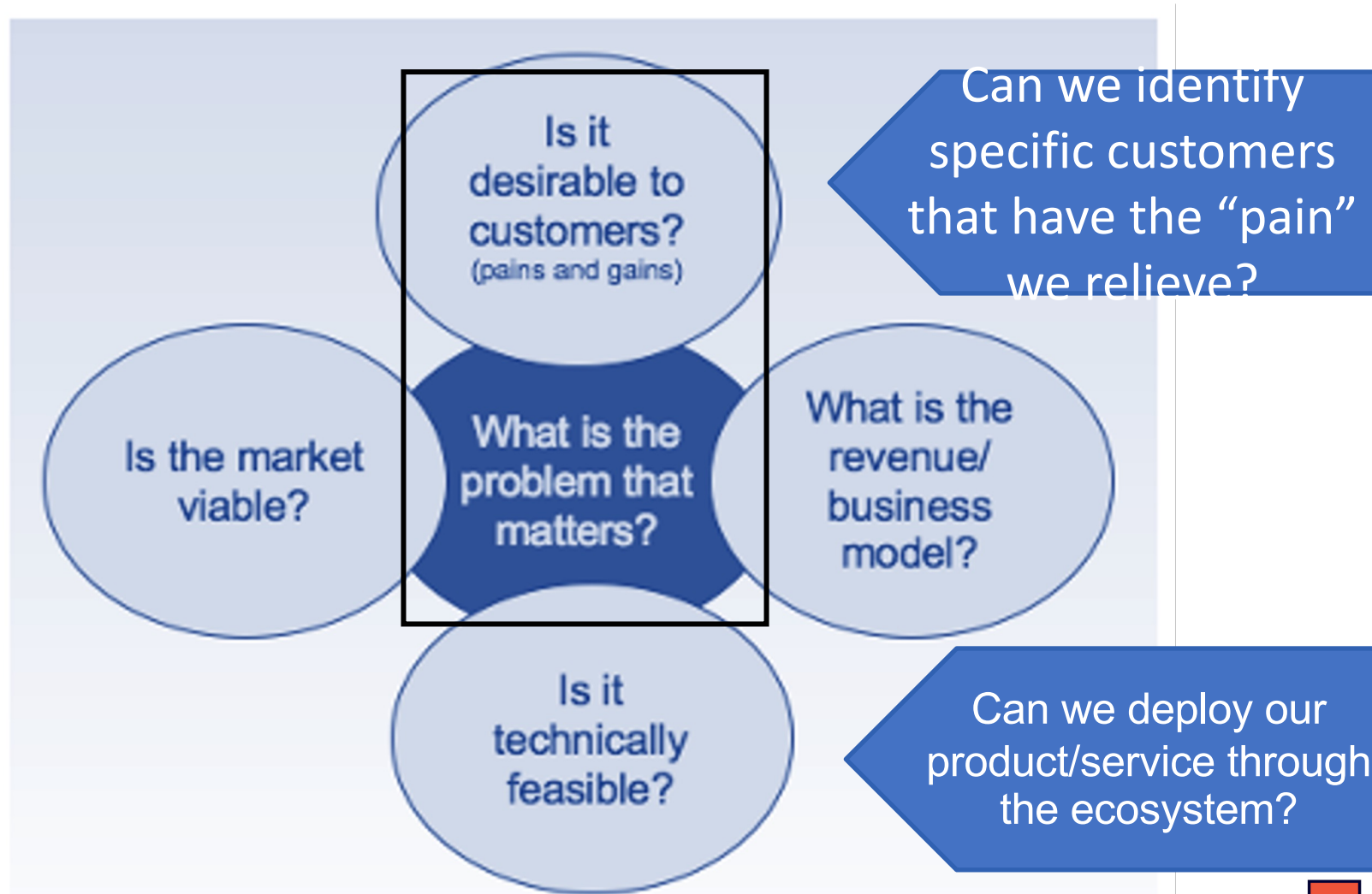
Youngsters, presumably college students aged 18-30 with middle-low income, have no car and want to travel between college towns and nearby big cities for a reasonable price.

#### Jobs To Be Done:

- Travel economically, safer, and consistently over medium and long distances.
- An easy way to access carpools with common origin points and destinations

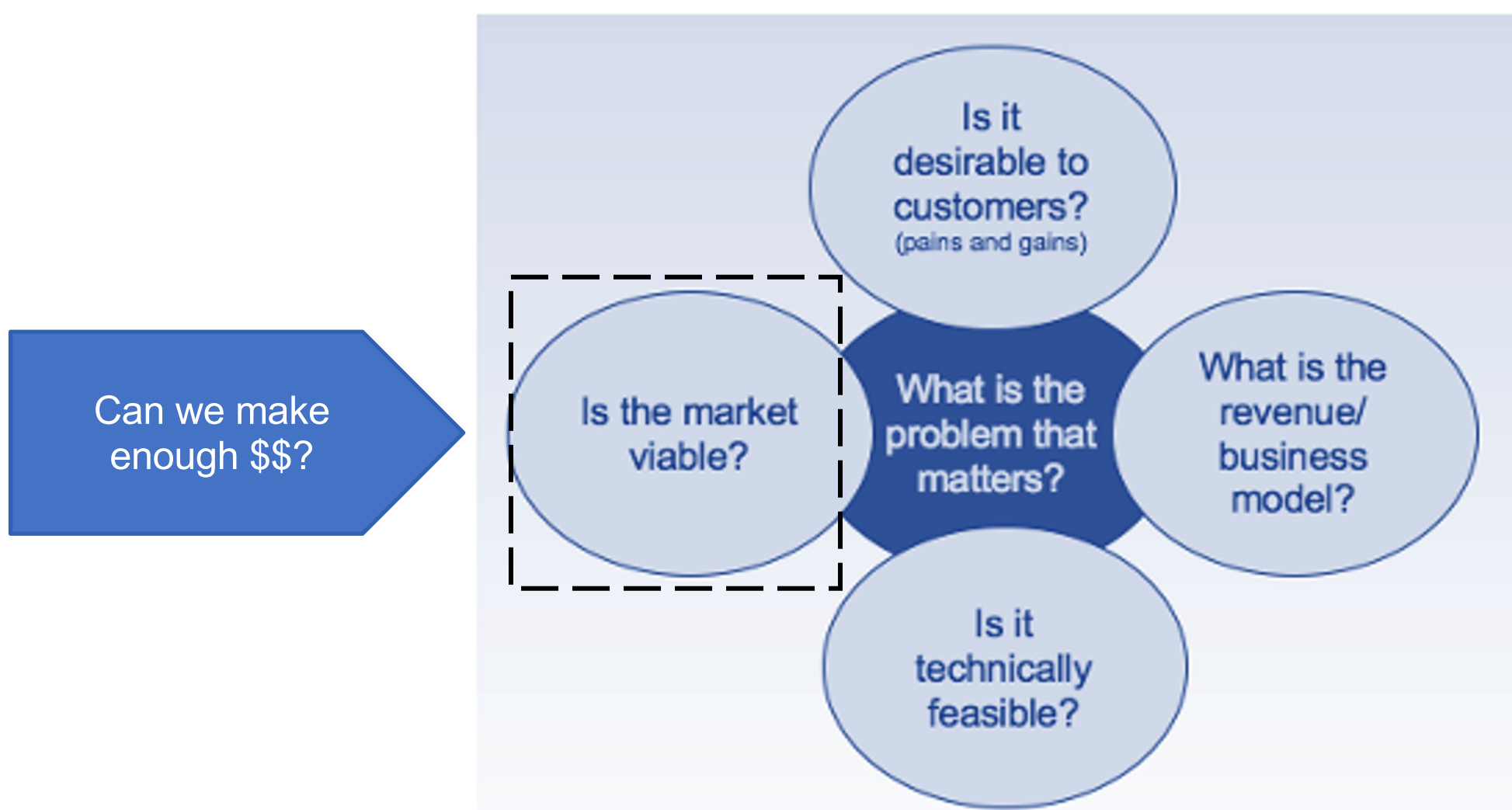
# Customer Segment Sizing

# What Have We Done So Far?

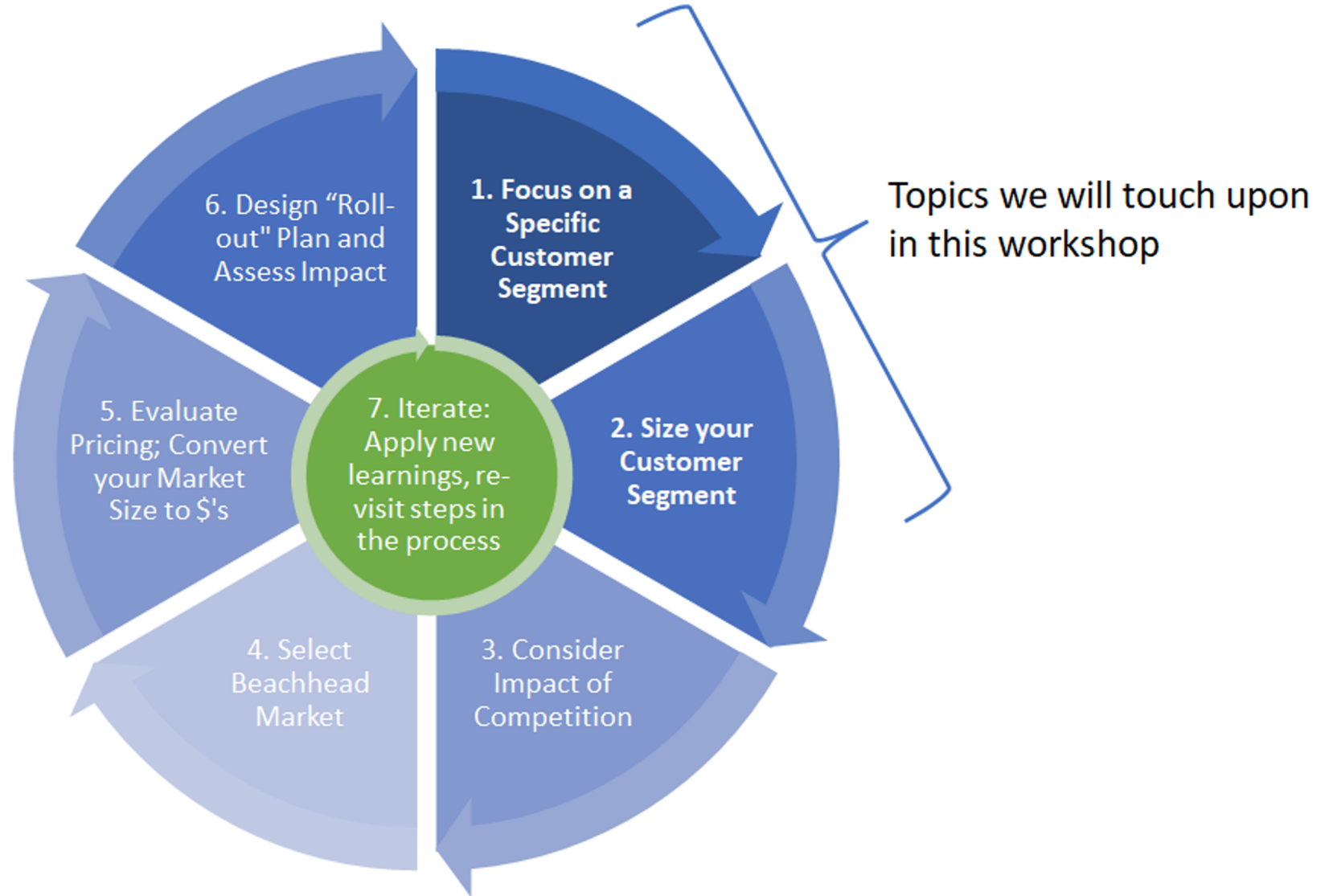




# Now We Assess The Market



# Market Assessment Process



# Focus on a Specific Customer Segment

“...subdividing customers along some commonality, similarity, or kinship...”

**Customers in a given customer segment should be:**

- 1. Strongly attracted to a similar value proposition,  
and**
- 2. Reachable with a similar business model**

**WHO?** *Specific!*

**WHY?** *Specific!*

# Common Segmentation Types

**GEOGRAPHIC** - a restricted geographic area.

**DISTRIBUTION** - based on the different channels of distribution that will best reach a customer segment(s). Examples: direct sales force, third-party distributors, direct-to-consumer channel (catalog or internet).

**PRICE - Consumer:** ultra-luxury, luxury, mainstream, and economy brands. **B2B:** Linked to quality levels, precision, or performance (but not always).

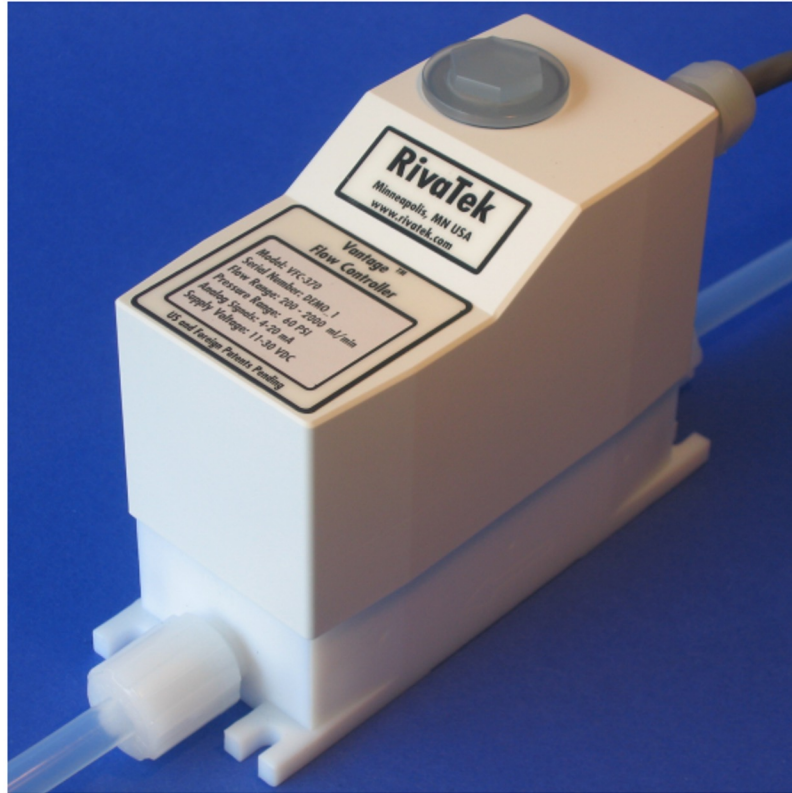
**DEMOGRAPHIC - Consumer:** Gender, age, income, housing type, and education level. **B2B:** Company size, company role in the supply chain, role (department or title) within a company, industry served, company capabilities, required level of quality or service, government/regulatory requirements.

**PSYCHOGRAPHIC - Consumer:** lifestyle segmentation based upon multivariate analyses of consumer attitudes, values, behaviors, emotions, perceptions, beliefs, and interests. **B2B:** attitudes about risk, loyalty to existing vendors, willingness to modify designs, and shared goals.

**COMBINATIONS** of the above (and more) result in a “**Persona**”, “**Archetype**”, “**User profile**”, “**Avatar**”

Be careful to avoid Stereotypes

# Customer Segments: Let's Practice



**VFC-370™ Flow Controller**  
with Vantage™ Technology

“The Rivatek VFC-370 is a valuable add-on component to processing equipment and process plant infrastructure where high precision and high purity (zero contamination) liquid flow control is required. The wetted parts on this device are made of materials that resist corrosion by aggressive process chemicals (Teflon, or Sapphire).. The device utilizes Rivatek’s proprietary Vantage™ variable orifice technology.

**Target Users** are in the semiconductor liquid process markets. Accurately controlling the flow of chemicals used in semiconductor wafer processing is pivotal to increasing yields, reducing waste, and enabling next generation designs. **Typical buyers** include process engineers (semiconductor plants) and process tool designers (semiconductor equipment suppliers).

**Secondary (“growth”) markets** include biological therapeutic and pharmaceutical manufacturing, food and beverage processing, as well as general industrial process control markets.



# Guesstimates are a part of Market Sizing



# Two Approaches Market Sizing

## Top Down

- Secondary Research Anchored
- Most applicable to existing (similar), re-segmented, clone products/markets
- Similar or adjacent market data available
- Process – Guess/Assume
  - Smallest addressable segment matching product attributes
  - Market share and growth rate (how many?)
  - Pricing relative to available competition (how much?)
  - Market growth rate
  - Resource constraints

**Often Misused**

## Bottom Up

- Primary Research Anchored
- Only option for new products/markets
- Limited or no specific market data available
- Process
  - Starts (and ends) w/ Customer Discovery
  - Defining your Archetypes Demographics, Psychographics, Behaviors & Reqt's
  - Insights into how to define segments
  - Enables identification of beachhead market - “must have” reason to buy
  - Validates value pricing, full product offering, competitive differentiation
  - Allows for better assumptions on market sizing (how many) and financial model (how much)

**Often ONLY and best option**

# Market Validation Example

# What is the problem?

- A lot of garages are too messy to use for a car
- The mess is overwhelming and frustrating for homeowners
- They can't find what they want when they need it
- There are a lot of options for shelving and cabinets available
- Homeowners don't have the expertise to organize their "stuff" even if they get shelves and cabinets
- They can hire an organization consultant to help
  - Expensive
  - It gets messy again quickly

# Customer interview insights

- Female homeowners are more frustrated in general than male homeowners with messy garages
- Middle and upper middle-class homeowners want to have shelving and/or cabinets in their garage
- Upper middle class suburban homeowners are more likely to pay for help organizing their garage
- Homeowners want a way to keep the garage organized over the long term
- Upper middle-class homeowners have and use smart phones and tablets
- Upper middle-class homeowners have multiple app subscriptions



Team Name GarageVana

### Business Thesis:

GarageVana helps upper middle class suburban homeowners overcome the pain and frustration of a messy, disorganized garage by giving them a tool to plan and complete their organization project so that they can find what they need when they need it and put it back in the right place when they are done.



Date March 27, 2022










Mark Leader  
Expert in AI, Image  
Recognition and  
Machine Learning

Joe Engineer  
10 yrs  
backend dev  
exp



Jane Developer  
5 yrs UX dev  
experience

<p>Key Partners </p> <p>Garage storage manufacturers</p> <p>Storage system installers</p>	<p>Key Activities </p> <p>Build backend video recognition/AI algorithm</p> <p>Build user friendly app</p> <p>Identify storage suppliers and installers</p>	<p>Value Propositions </p> <p>Assess of all the stuff in the garage and create a plan to organize and arrange it efficiently</p> <p>Provide a plan for what and how many storage systems are needed.</p> <p>Prove tool to keep garage organized.</p>	<p>Customer Relationships </p> <p>Facebook presence</p> <p>Home org bloggers</p>	<p>Customer Segments </p> <p>Upper middle class suburban homeowners in high-cost urban areas where real estate is very expensive.</p>
<p>Cost Structure </p> <p>AWS server costs</p> <p>Developer/designer costs</p> <p>Promotional costs for regional home shows</p> <p>Facebook/Google placement/ad costs</p> <p>App store fees</p>			<p>Revenue Streams </p> <p>Paid app for tablet or phone.</p> <p>Sell storage systems recommended in app.</p> <p>Referral fee from installers who install storage.</p>	

# Who Has The Problem?



**For: the upper middle-class homeowner**

**[target customer]**

**Who has: a disorganized, cluttered garage**

**[significant problem/need]**

**My solution provides: a fast, effective tool to quickly plan and complete a garage organization project.**

**[key benefit]**

**Unlike: hiring a garage organization consultant which is expensive and time consuming.**

**[how customer solves today]**



# Customer Archetype Profile

## Instructions

Fill in the spaces in the worksheet to build out a sample customer archetype, based on the business you discussed earlier. Your archetype should be as complete and focused as you would hope your students' will be. As you work through this exercise, think about the questions that would help your students understand who makes the buying decision.



## Describe the person: name, age, relevant personal info

John (42) and Joyce (40) Smith

College graduates

Both work full time

Combined annual earnings \$200k

2 kids – Jim (10) and Sue (8)

Active family with a lot of “toys”

## Jobs to be done

Organized garage

Find what they need when they need it and put it back in right place when they are done

Park cars in the garage

## Existing solutions

Organize garage themselves

Hire a garage org consultant

## How they buy

Shop online

Google

Facebook ads

Find specialists online

## Pains

Overwhelmed by job of organizing garage

Not sure who to hire and what to buy

## Gains

Park cars in garage

Feel good about garage

Find things they need

when they need them

## Influencers

Home organization bloggers

Friends/neighbors

Co-workers

## Barriers

Mess overwhelming

Work a lot of hours

Less confident in DIY skills

What data would you look for?



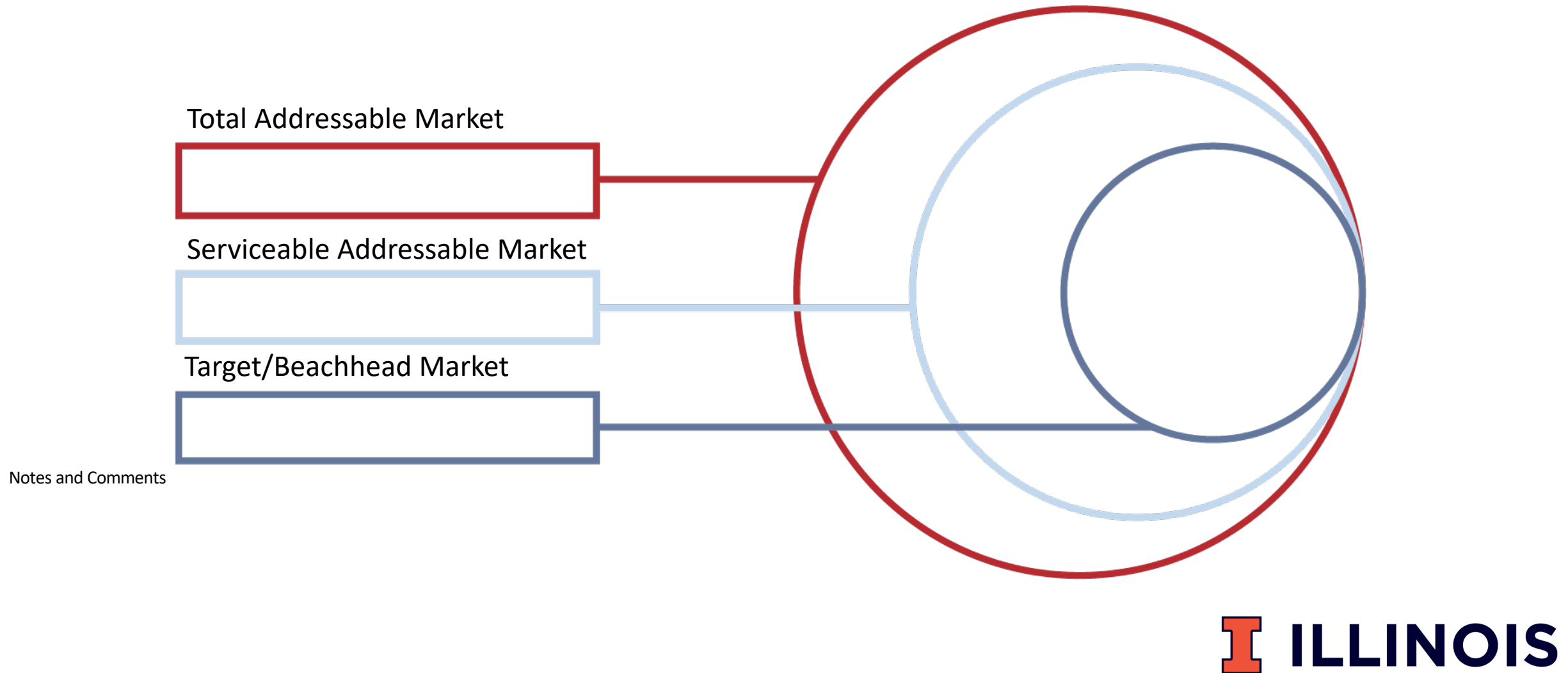
# How do we estimate the market?

- US homes with garages?
- How many homeowners are upper middle class?
- Upper middle-class homeowners in suburban regions?
- Annual number of garage storage projects?
- Average value of a garage storage project?
- What revenue per customer?
- One-time or recurring?

# How do we estimate the market?

- US single family homes? – 84M
- US homes with garages? – 65%
- How many homeowners are upper middle class? – 15%
- Upper middle-class homeowners in suburban regions?
- Annual number of garage storage projects? 1.6M
- Average value of a garage storage project? - \$1500
- What revenue per customer? – 2% referral fee from dealers
- One-time or recurring? – \$30/yr recurring revenue from homeowner

# Conduct a Bottom-up Target Market Estimate



# GarageVana

- Start with US homes with garages at 83M
- TAM calculation uses all suburban US home with garages (65%)
  - $83\text{M} \times 0.65 = 54\text{M}$  homes with garages
- SAM calculation uses upper middle-class suburban homes with garages (15%)
  - $54\text{M} \times 0.15 = 8.1\text{M}$  UMC homes with garages
- TM calculation uses number of current garage storage projects in US per year
  - 1.6M

# Conduct a Bottom-up Target Market Estimate

GarageVana market segment sizing

Start with US homes with garages at 83M

TAM represents all suburban US home with garages (65%)

SAM represents upper middle-class suburban homes with garages (15%)

TM represents number of garage storage projects in US per year

TAM (US homes with garages)

$$54M * (\$30 + \$30) = \$6B+$$

SAM (Upper Mid Class homes with garages)

$$54M * .15 * (\$30 + \$30) = \$486M$$

TM (current # of garage storage projects)

$$1.6M * .15 * \$60 = \$14.4M$$

Notes and Comments

US suburban homes with garages =  $83M * .65 = 54M$ ,

Upper Middle-Class homes with garages =  $54M * 15\% = 8.1M$

Annual number of garage storage projs = 1.6M

Ave garage storage and installation: \$1,500 (2% referral fee), \$30 app cost, annual subscription \$19



# Customer Segment Sizing Tool

# FLEET

- Fast, reliable way to get the VIN for client in vehicle auction industry
- Standard bar code reader doesn't work because of environment of auction yards
- Solved that problem – realized others had same problem
- Formed FLEET as a startup
  - Automotive services companies
  - Capture VIN numbers for vehicles being serviced using mobile phone or table
- Consider multiple potential segments
  - Auto Repair, car Sales, Towing, Transportation
  - Salvage and Importing
  - Detailing and Car Wash

1. Describe your current view of who your customer including any updates you believe are justified based on comments you received or further customer discover interviews. Be specific with a goal of describing only customers who are likely to use your product, while excluding those with similar roles who will not. Totaling the number of these customers would result in sizing a "Customer Segment".

2. What information does your customer segment definition suggest you will need to size the market? Write these in a list. Hint: Each term you used to increase the specificity of your customer segment description may imply a new piece of information that will be valuable for sizing your customer segment.

Describe a rough model that will size your customer segment. Name the data or inputs to the model and show the rough calculation you will make. This is to be a “back of the napkin analysis” with a goal of ending up with a market size in units. Some things to consider: How many customers are in the above-described customer segment? How often will they use the product? How many units will they use? Note: you might have to get creative to make this calculation. As an example, you might not be able to find data on how many customers are in a segment, but rather you might be able to find data on how many companies are present and then must guesstimate how many customers might purchase your product at each company.

(Refer to Case Study company, FLEET)

FLEET's customers are owners, technicians, drivers, and intake personnel of small (< 10 employees) U.S. Detailing & Car Wash companies.

- 1) How many Detailing & Car Wash owners, technicians, drivers, and intake personnel are there in the U.S.?
- 2) How many of these work in small (<10 employees) companies?
- 3) How many of these employees would need to scan the VIN number from the car?
- 4) Would customers buy one unit per scanning employee or would they share the unit?

Back of Napkin calculation of initial market size in units

Using "EE's" as an abbreviation for "Employees"

# of Units:

(Total # of Detailing and Car Wash companies in the U.S.) x (average number of EE's per company) x (average % of company EE's who are owners, technicians, drivers, and intake personnel that need to scan) x (% who have <10 EE's) x (% of EE's who would scan VINs) x (# of units purchased per EE) = # of Units

# Project Breakout: Using the segment sizing tool

Fill in the first three boxes

1. Describe your current view of who your customer including any updates you believe are justified based on comments you received or further customer discover interviews. Be specific with a goal of describing only customers who are likely to use your product, while excluding those with similar roles who will not. Totaling the number of these customers would result in sizing a "Customer Segment".	(Refer to Exercise #1 for a description of our Case Study company, FLEET)
2. What information does your customer segment definition suggest you will need to size the market? Write these in a list. Hint: Each term you used to increase the specificity of your customer segment description may imply a new piece of information that will be valuable for sizing your customer segment.	<p>FLEET's customers are owners, technicians, drivers, and intake personnel of small (&lt; 10 employees) U.S. Detailing &amp; Car Wash companies.</p> <p>1) How many Detailing &amp; Car Wash owners, technicians, drivers, and intake personnel are there in the U.S.?  2) How many of these work in small (&lt;10 employees) companies?  3) How many of these employees would need to scan the VIN number from the car?  4) Would customers buy one unit per scanning employee or would they share the unit?</p>
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# Getting ready for Week 11

- Topics for next week: Venture formation, team building
- Team Presentations In-class: Petal diagrams
- Team Assignment: Use market segment sizing tool to estimate your target or beachhead market



# Guest Speaker: Landon Campbell

Chicago General Manager  
Drive Capital

