

# **BINF6399 - Principles of Team Science**



**UNC CHARLOTTE**

**Richard Allen White III, PhD**

**RAW Lab**

**Lecture 8 - Tuesday March 16<sup>th</sup>, 2021**

# Learning Objectives

- Customer Segments/archetype
- Petal diagram review
- Ecosystem review
- SWOT Analysis
- TAM/SAM/SOM (market research)

# Customer segments



John

- Profile

- Probably the biggest segment of mobile users
- Wants simple: reliable calling, easy to use
- Doesn't care about anything other than the phone being a phone (for now)

- Scenario

- I didn't get my first phone until 2001...

The Greenhorn



Emily

- Profile

- Takes advantage of most smartphone features, but not all
- Uses the phone to make calls, send texts, take pictures
- Mobile is always with her

- Scenario

- My phone has to look nice and have long battery life
- I sometimes drop my phone, so a strong case/screen is a big plus...

The Casual User



Akiko

- Profile

- Texting is far more important than calling
- Sends thousands of text messages per month
- Rarely uses phones for calls
- Wants a clean texting interface with the fastest possible input

- Scenario

- I prefer texting over calling
- Sorting/searching texts is important to me

The Texter



Stephan

- Profile

- Wants a phone that is simple, but functions as an integrated smart device
- Wants to read email and call back the sender with the least amount of effort
- Needs "Popular" mail server integration like Blackberry/Exchange

- Scenario

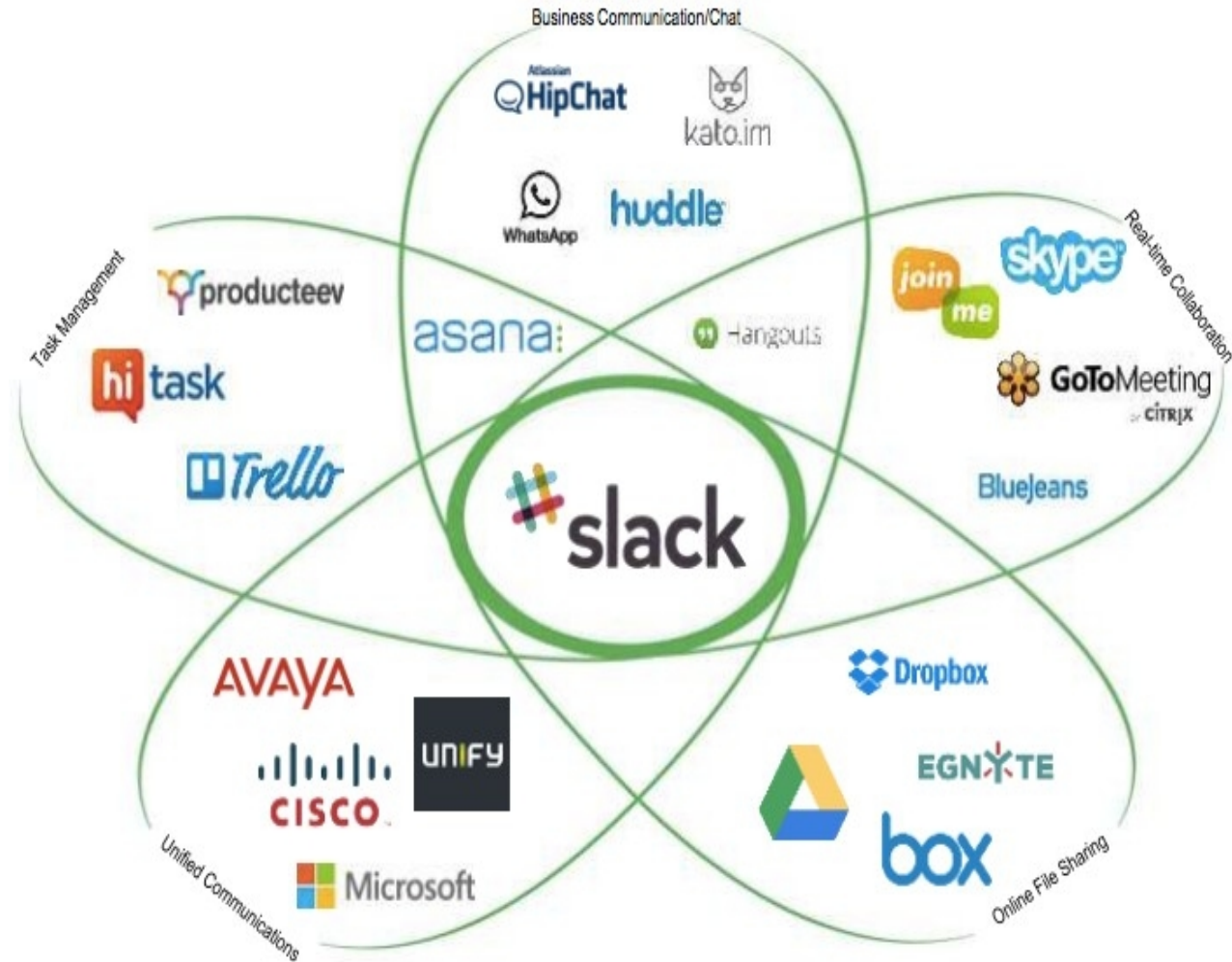
- My mobile is my life
- Devices that let me reply back to messages, emails, phone calls using my preferred method are what I want.

The Business User

# Customer Archetypes and Segment (example)

	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

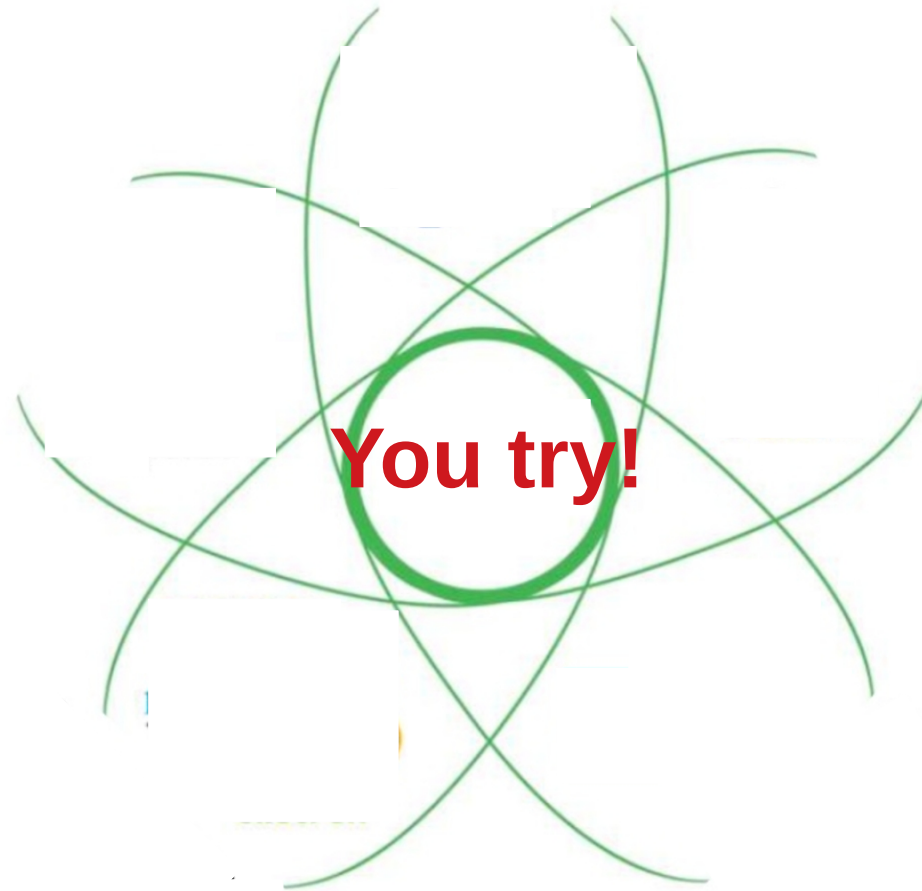
# Competition petal diagram (SLACK)



# Competition petal diagram (SMARTGENT)



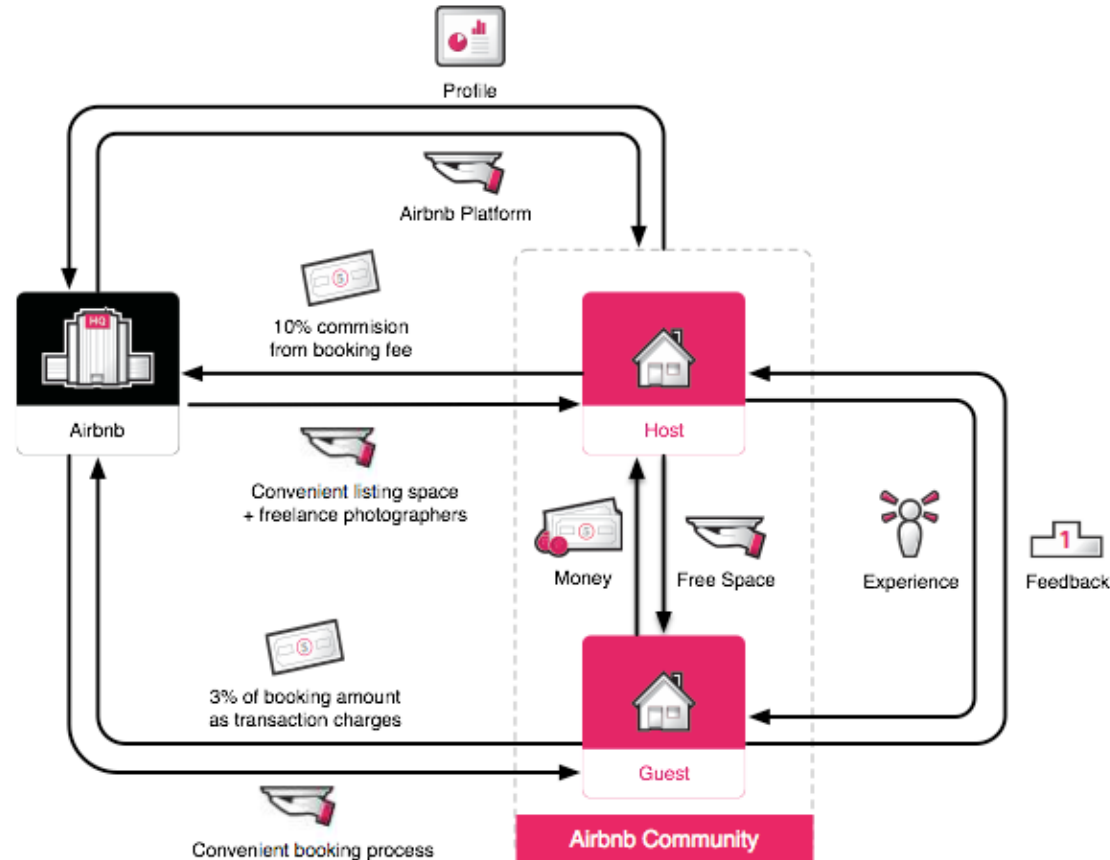
# *Competition petal diagram (Try your own)*



# Airbnb ecosystem - slide



Airbnb is an online service that provides a platform for individuals to rent out their lodging for travellers to stay. People can rent anything from a couch to a castle in 8000 cities around the world.

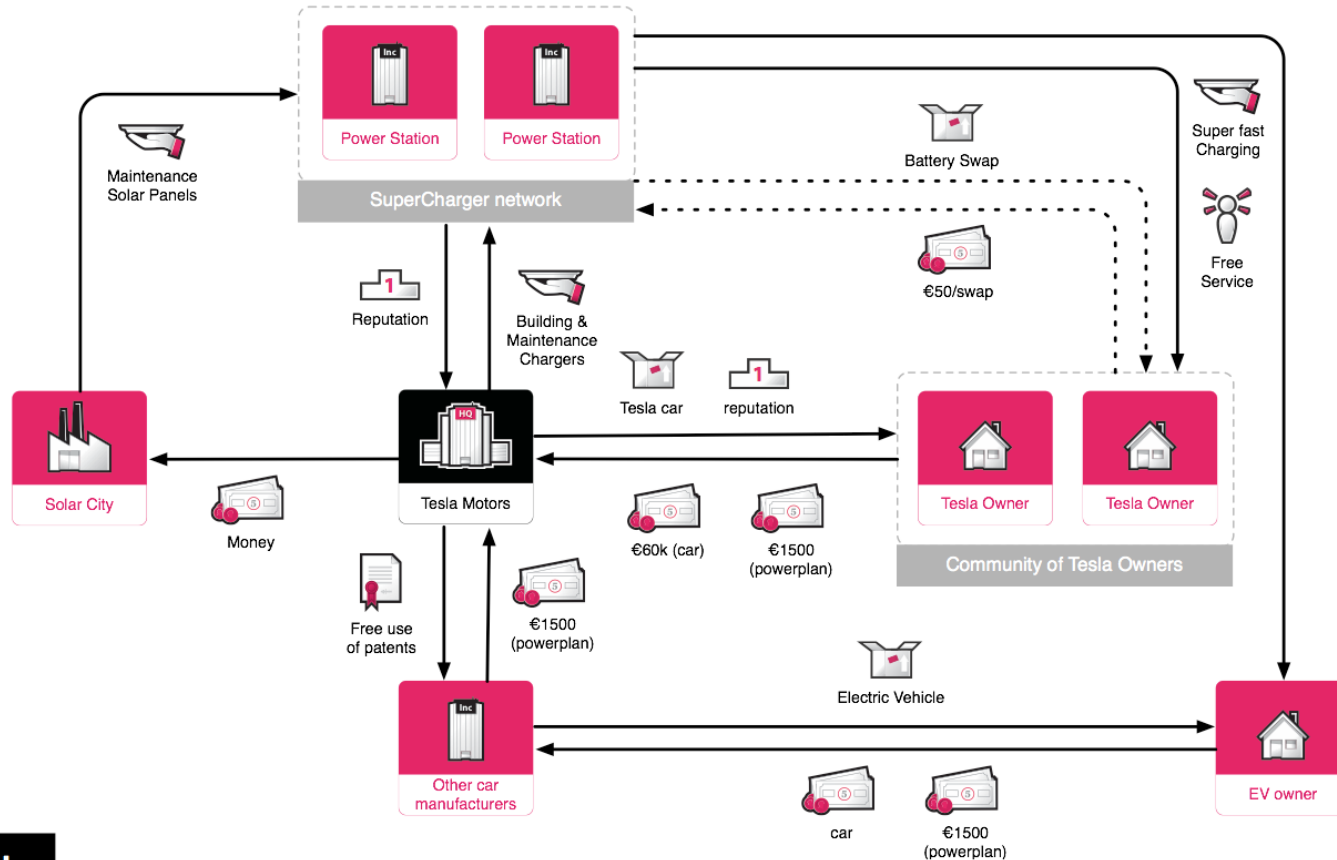




# Tesla ecosystem - slide



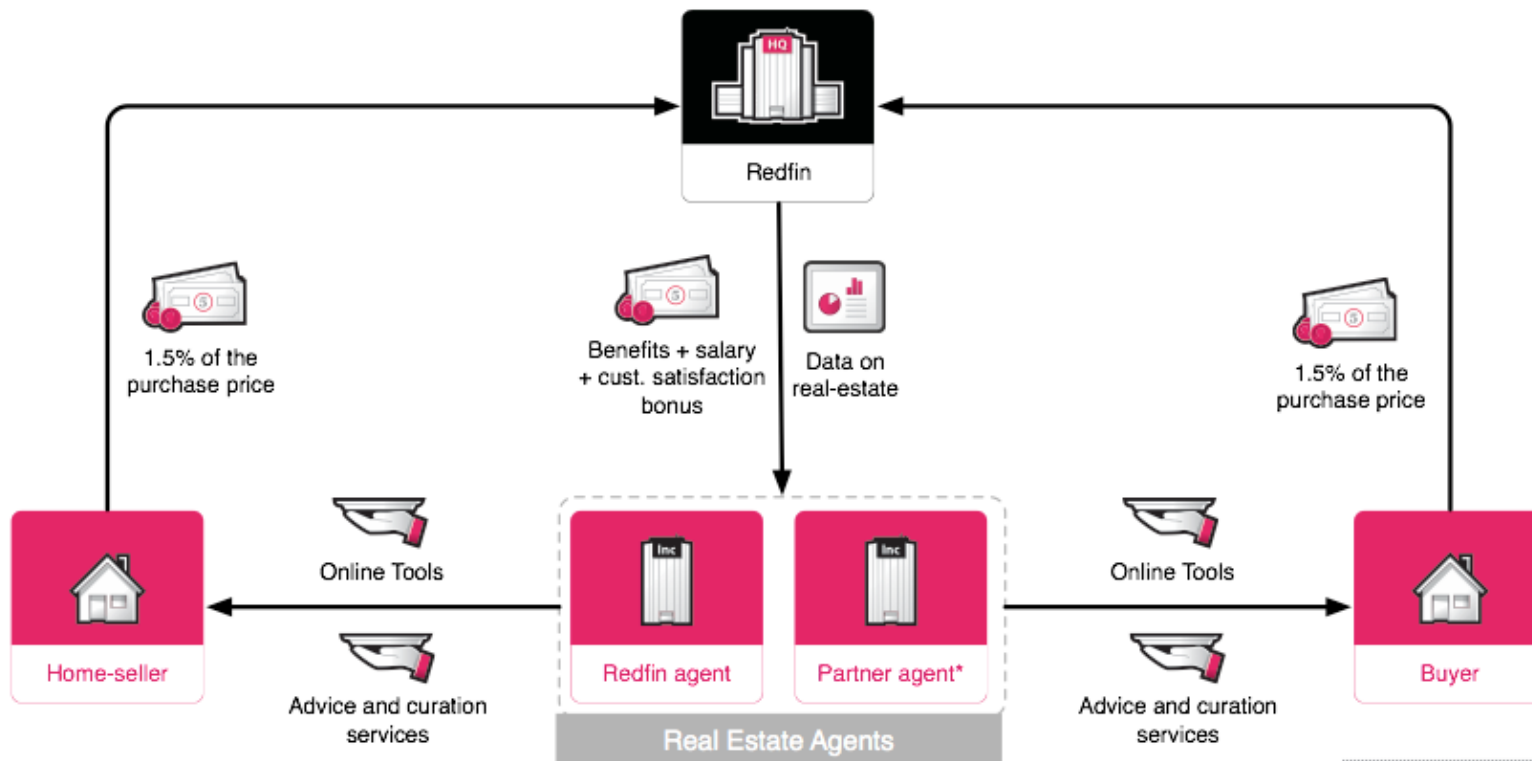
Tesla Motors designs, develops, manufactures and sells premium electric vehicles (EV's) to consumers and advanced electric vehicle power train components to manufacturers. This case focuses on Tesla's Supercharger network.



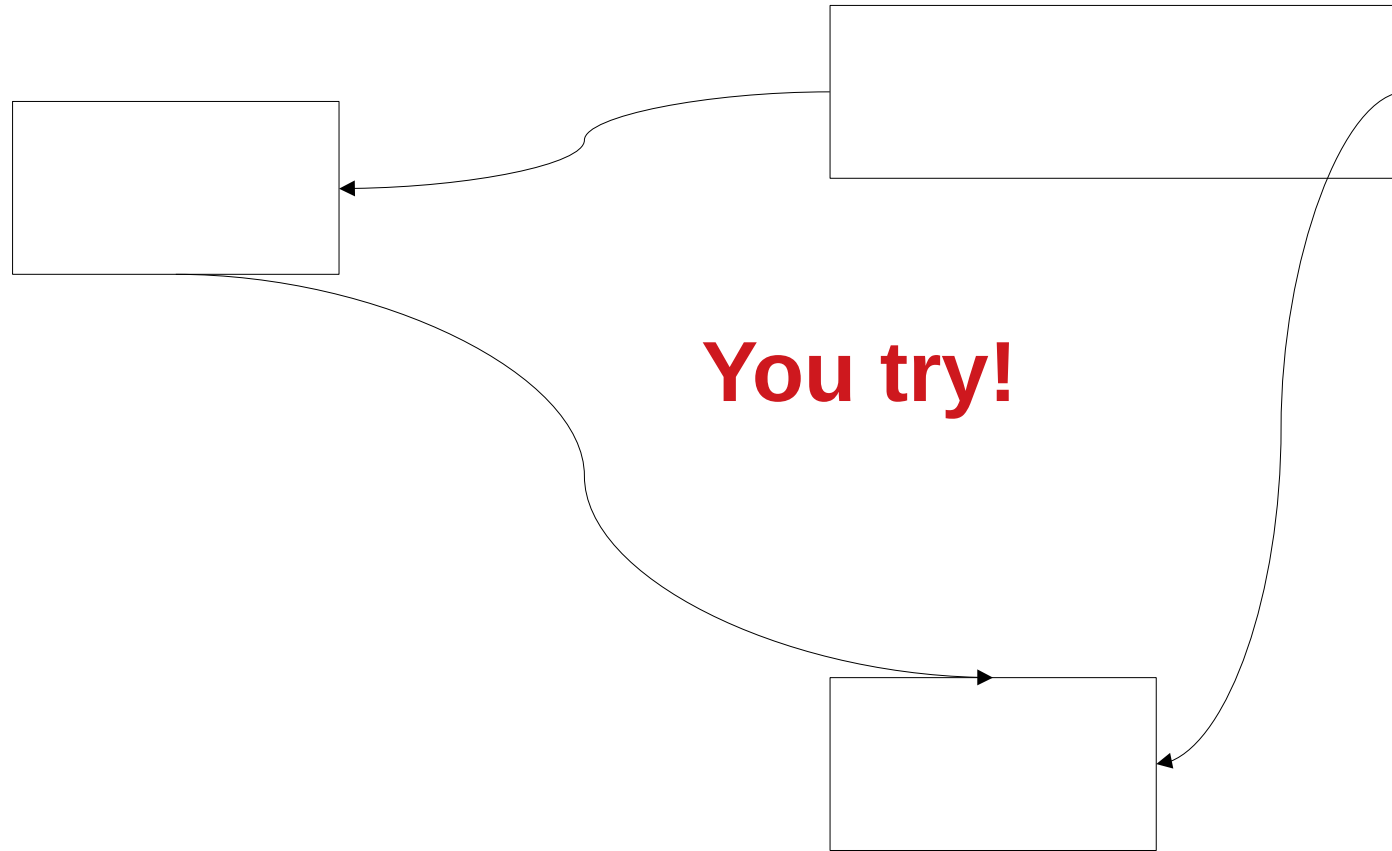
# Redfin ecosystem - slide

**REDFIN**

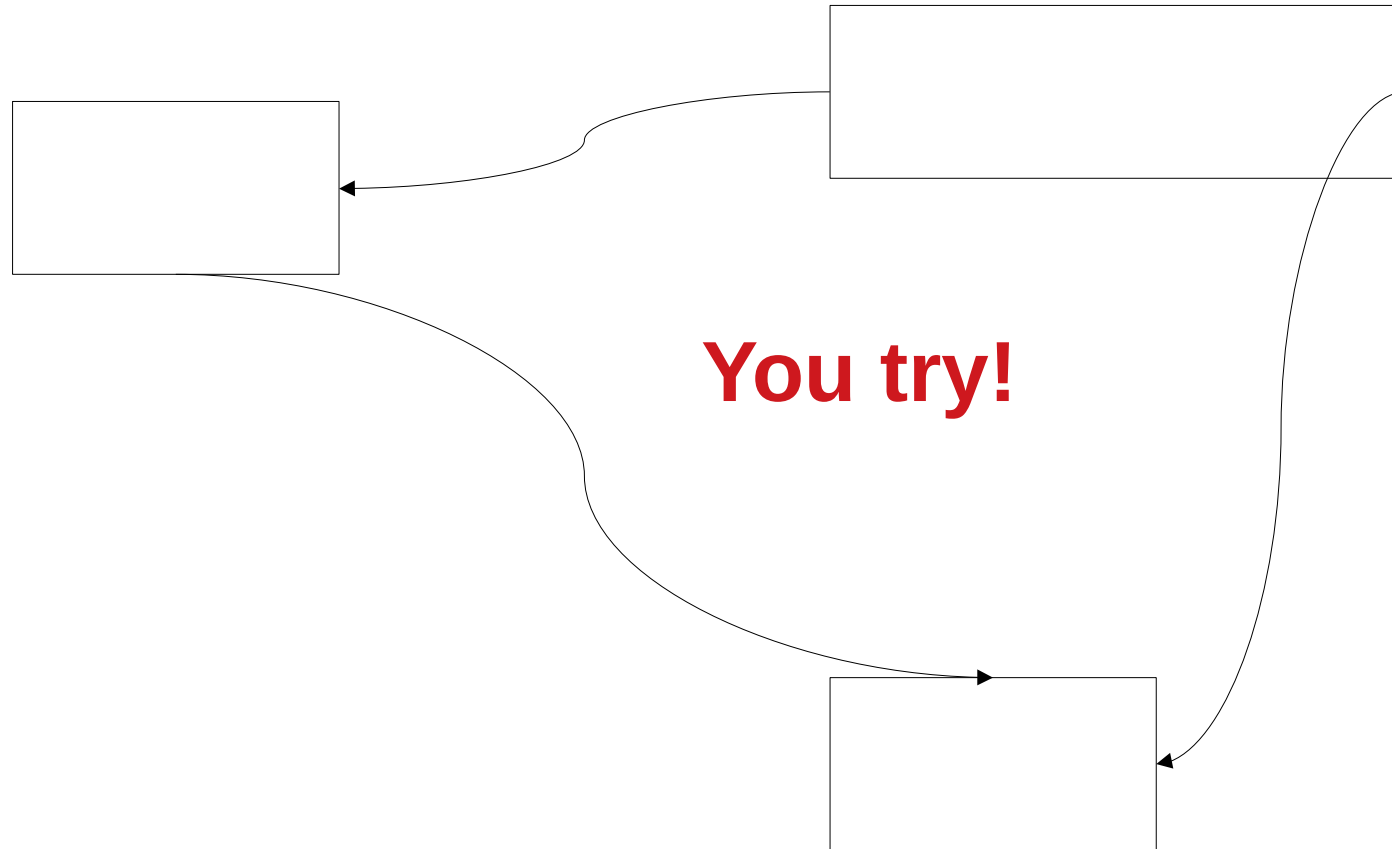
Redfin provides real estate search and brokerage services through a combination of an online real estate platform and access to local real estate agents



# *Your ecosystem - slide*



# Market size



# SWOT analysis

## STRENGTHS

- Engineers
- Molecular biology
- Technology
- Virology
- **START-up**

## WEAKNESSES

- Scale of Finances
- Early stage
- Experience
- **START-up**

## SWOT

- Rapid tests
- At home
- Prisons
- Individuals

- Giants (Thermo/Roche)
- DNA hudge
- VOCs
- Scales of Finances

## OPPORTUNITIES

## THREATS

# SWOT analysis – you try!

## STRENGTHS

-  
-  
-  
-  
-

## WEAKNESSES

-  
-  
-  
-  
-

SWOT

01

02

03

04



## OPPORTUNITIES

-  
-  
-  
-  
-

## THREATS

-  
-  
-  
-  
-

# Competitor example



## DNA nudge product

- **EXPENSIVE** (>\$500)
- **INVASIVE** (need swabs)
- **SLOW** (>90 mins)
- **LICENSE** (Non-FDA)
- **CLINIC ONLY**

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





# Provide data of your TAM/SAM/SOM

## Major Players - Point of Care Molecular Diagnostics Industry

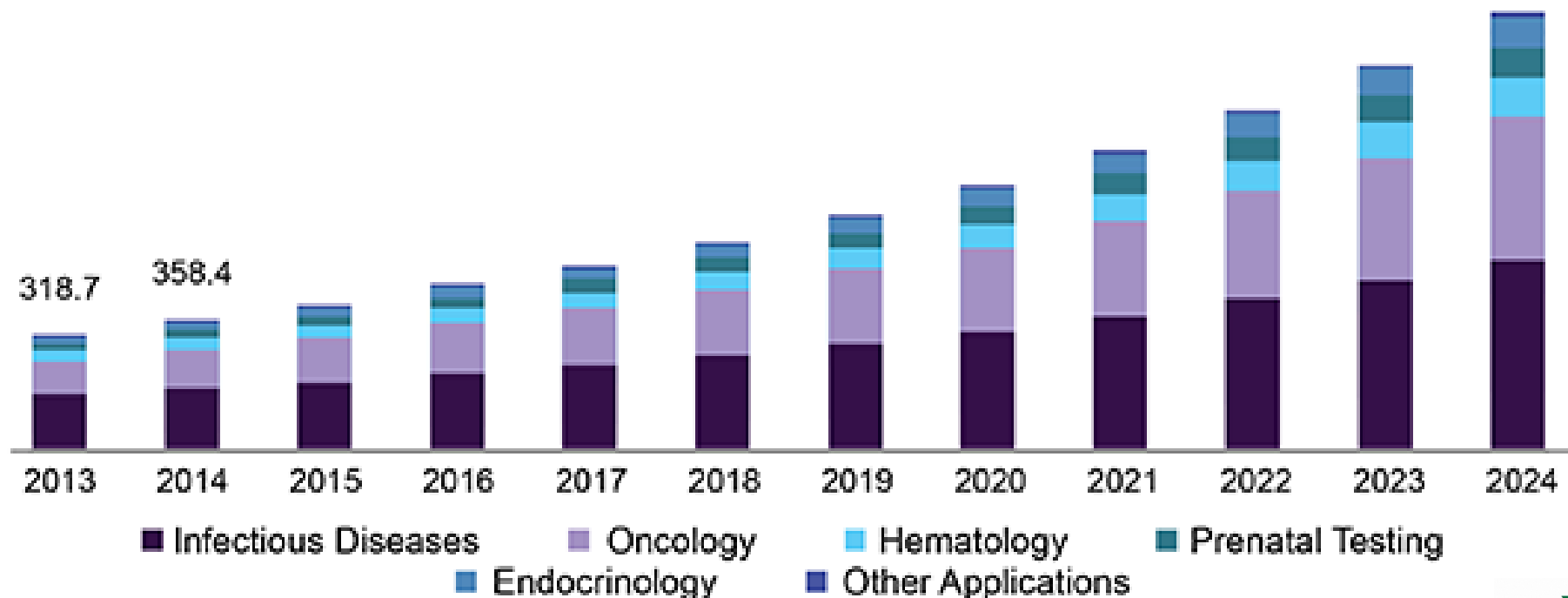
The Point of Care Molecular Diagnostics industry is made up of massive multinational medical device and health care companies. Listed below are the major companies that produce a molecular testing device ranked by 2019 Revenue.

Company	2019 Revenue
1. Roche Diagnostics	\$63.4 Billion
2. Thermo Fisher Scientific	\$25.5 Billion
3. Danaher Corp- Cepheid	\$17.9 Billion
4. Abbot Laboratories- Alere	\$31.9 Billion
5. BD Diagnostics	\$4.58 Billion
6. BioMerieux- Biofire	\$2.72 Billion
7. Qiagen	\$1.502 Billion
8. Quidel Corporation	\$534.9 Million
9. Biocartis Group	\$41.9 Million
10. Mesa Biotech	\$9.0 Million

*Table 2: Point of Care Molecular Diagnostic Companies by 2019 Revenue. Source: Multiple.*

# Provide data of your TAM/SAM/SOM

U.S. point-of-care molecular diagnostics market size,  
by application, 2013 - 2024 (USD Million)



# ***Market plan - example***

**Market research** - Research SBA

**Target market** - In-home care

**Positioning** - Just us (USA)

**Competitive analysis** - SWOT Analysis

**Market strategy** - Target Prisons

**Budget** - \$250k STTR, VCs

**Metrics** - \$500k+ in 6 months