



Team iRobot

MVP Presentation

December 9th, 2022

Our Team



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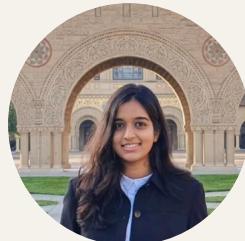
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(EE 205 alum)

Outline



Our MVP



POA Review



Pricing



Market, Research and
Ecosystem



Product Opportunity and
Roadmap



Summary

Our MVP



Our MVP



POA Review



Pricing



Market, Research and
Ecosystem



Product Opportunity and
Roadmap



Summary

Our MVP - iRobot Service Select

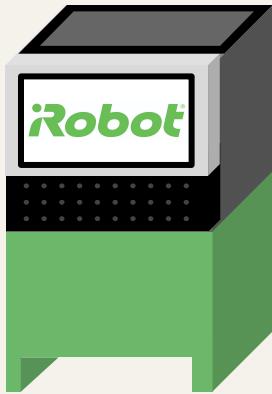


Phase I - Provide existing iRobot products as a service or amenity through luxury apartments as a B2B2C model

Phase II - Leverage Amazon resources to provide comprehensive service and software integration with Amazon suite of smart products



Beyond MVP -iRobot Smart Select

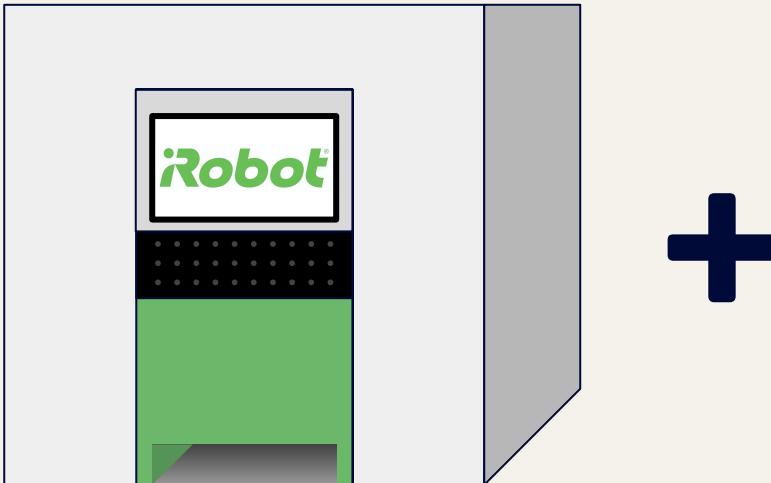


Phase III - Develop new hardware products that centers the smart apartment around iRobot, the “iRobot Hub”

Phase IV - Work with apartment partners to physically integrate the iRobot Hub and Amazon smart suite of products into new apartment construction



Beyond MVP -iRobot Home Select



Phase V - Provide iRobot Hub and Amazon smart suite of products to tract home and new housing development builders



POA Review

Our MVP

POA Review

Pricing

Market Research and
Ecosystem

Product Opportunity and
Roadmap

Summary

iRobot Business Model

Current

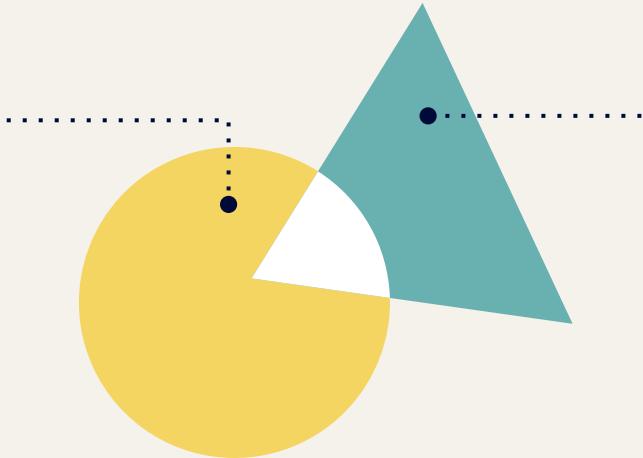
B2C

Direct to consumer
online and retail

Expansion

B2B2C

Get to consumers
through business
sales



92 INTERVIEWS

23

ROOMBA USER

13

BUILDERS

29

NON-USER

10

COMPETITOR
USER

15

APARTMENT
COMPANIES

2

REAL ESTATE
AGENTS



Consumer Interviews

23

ROOMBA USER

10

COMPETITOR
USER

29

NON-USER

"The biggest barrier to buying me getting a Roomba is **cost**."

-Nick, Apartment Tenant

"I haven't bought one even though my place might be perfect for one, because I'm **skeptical of how well they work**."

-Judy, Apartment Tenant



Builder Interviews

13

BUILDERS

“Mid-tier and first time homebuyers don’t care about appliance options as much as other features. We rarely sell our upper-tier appliance packages, and have never **sold our smart-home package.**”

-Cassandra, Sales Manager
for new home development

2

REAL ESTATE
AGENTS

“People would opt for a built-in Roomba system, but it’s not like they would have to have it. **Builders would not want to put it in,** they are very set in their ways.”

-Josh, Custom Home-Builder



Apartment Companies

Alta Locale Palo Alto, CA

Includes:

Nest, smart washers, smart dishwashers, car lift in garage



Willing to try out new technologies

“It is definitely something we would consider, but we’d **want to be able to test it** as a concept with tenants first-hand.”

-Ericka, Apartment Manager

Landsby Apartments Mountain View, CA



A Greystar Apartments Property

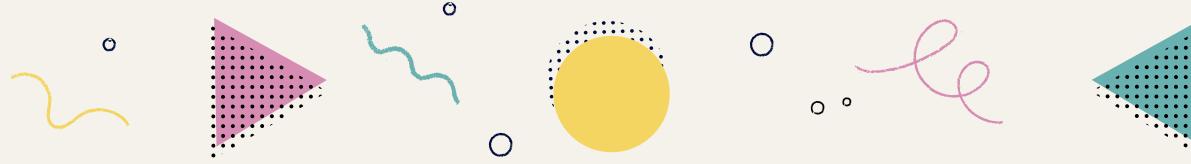
“We’ve already bought 30 Roombas as gifts for new tenants, we’d be very interested in a potential program like yours.”

-Sandy, Apartment Manager

Includes:
Nest learning thermostat,
Dormakaba smart locks



Value Propositions - Luxury Apartments



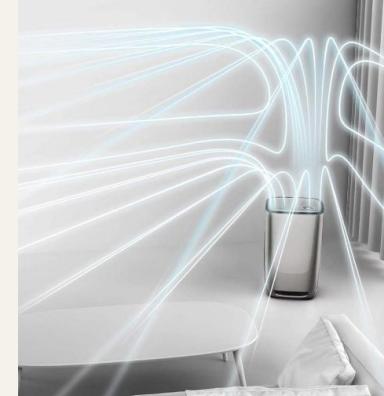
Cleaning as a service without the cost



Smart apartment integration without “integrating”



Provide the services that tenants care about



Value Propositions - Renters/End Users

Keep your apartment clean without wasting time or money



Easy access to smart apartment convenience



Get the functionality you want and nothing you don't



Value Propositions - iRobot



Provide desired services to a difficult to reach market



A gateway to Roomba



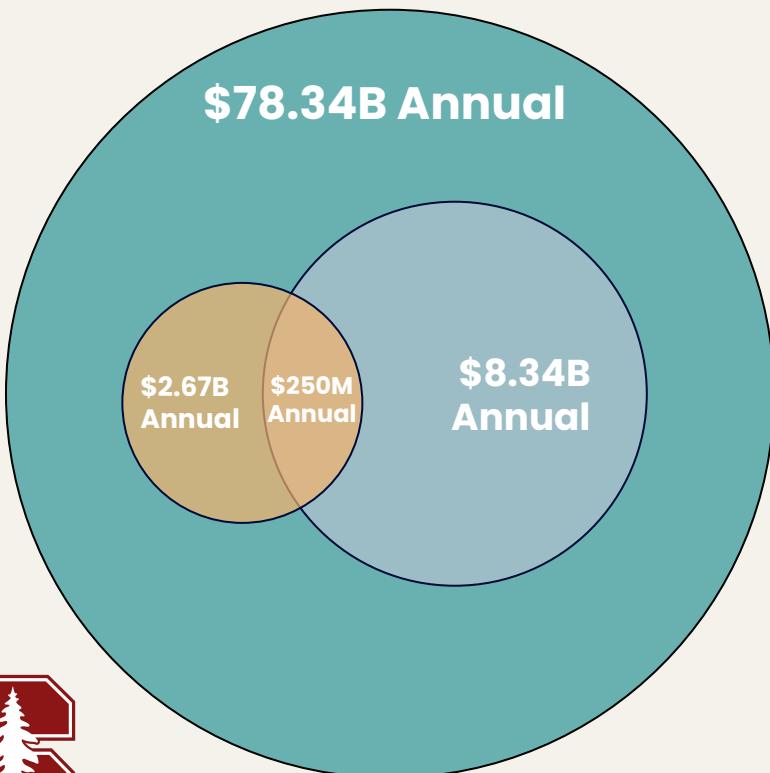
An avenue for iRobot smart apartment integration



Market Research and Ecosystem



Target Market & Market Sizing



Smart home devices space (ex: lights, temp, camera, etc.)



"Expected to show a good amount of growth...with market penetration of home automation"



Smart Apartment Market (apts with built-in IoT features)



Competitive Analysis

Single-Purpose Devices



neato



dyson



roborock



eufy
by Anker



Shark



iRobot Service Select
+ Amazon integration

Smart Ecosystem of Devices



Google Home



Honeywell
Home



Integrated Smart-Home Devices

SAMSUNG



Competitive Landscape for RoboVacs



Industry Expert Feedback



Jonathan Rivera
President & Founder,
smart apt
management system
based in Florida

Smart Homes

- No management
- Users pickier on consumer brands
- More customization per house and/or per owner
- Harder to satisfy a large group

Smart Apts

- Owner has control over choices
- Users do NOT have say on brands
- Easier market to enter because of owners, operators, & managers control

Ways to Attract Apt Complexes

- Net Operating Income (NOI) calculations
- Create the demand - show necessity
- Explain to them how we are quantifying their operation efficiencies & reducing their operating costs

Partnerships

SmartRent & iQuue



500K units,
nationwide



22K units,
east coast

I can see iQuue management software working well to automate Roombas in vacant units and other similar uses.

- Jonathan Rivera, iQuue

Amazon



Acquisition of iRobot by Amazon (pending deal)

Alexa for Residential: allows residential communities to deploy + manage Alexa-enabled devices - API

***Note:** Team size will be dependent on the resources available through the Amazon acquisition; Skills include: software developers, designers, & partnership sales managers to name a few



Pricing

Our MVP

POA Review

Pricing

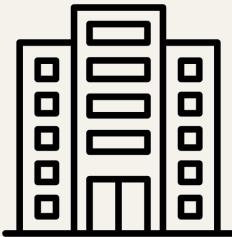
Market Research and
Ecosystem

Product Opportunity and
Roadmap

Summary

Pricing Strategies

Apartment Companies selling to Renters/End Users



Included in Rent

(Amenity)

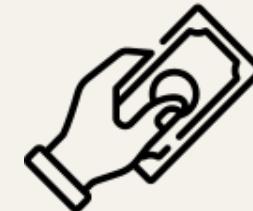
The price associated with the robotic vacuum cleaner is absorbed into the rent of the unit



Subscription

(Service)

Renters and tenants subscribe to the cleaning service and pay a monthly fee



Pay Per Use

(Utility)

Renters and tenants pay a cost based on the usage of the cleaning robots



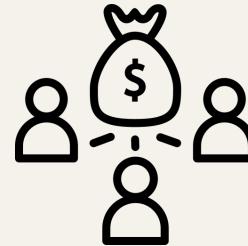
Pricing Strategies

iRobot selling to Apartment Companies



Buy and Own Outright

Apartment companies purchase and own the cleaning robots for their apartment units or common areas



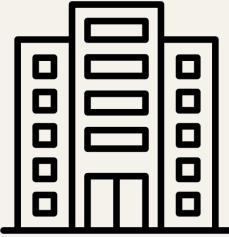
Revenue Sharing

iRobot provides cleaning robots to the apartment companies for little or no cost and splits the revenues



Pricing Strategies - Our Recommendation

Selling to Renters/End Users



Included in Rent

- Most popular existing pricing model
- No additional costs or fees (less barriers to adoption)
- More consistent and predictable revenue stream
- Easily transferable to later phases of the product roadmap (physical integration)

Selling to Apartment Companies



Buy and Own Outright

- Existing pricing model for iRobot
- More compatible with the “included in rent” pricing model compared to revenue sharing
- Apartment companies already make large upfront investments for construction and other amenities



Revenue, Profit, and Income Estimates

Apartment Companies

Key Assumptions:

Average smart apartment rent	\$1,500
Rent Premium	\$15
Apartment vacancy rate	10%
Robot(s) per apartment unit	1
Robot price	\$320
Robot lifespan	5 years
Additional operating expenses	\$0

Key Estimates:

Number of Units	1	100	250	500
Revenue Generated	\$162	\$1,620	\$40,500	\$81,000
Additional Cost	\$64	\$640	\$16,000	\$32,000
NOI Increase	\$98	\$980	\$24,500	\$49,000

Sources, calculations, and justifications of assumptions can be found in the appendix



Revenue, Profit, and Income Estimates

iRobot

Key Assumptions:

Smart apartment units in 2023	1M
Robot(s) per apartment unit	1
iRobot profit margin	40%
Additional R&D	\$1M
Selling and Marketing / Revenue	20%
General and Administrative / Revenue	10%

Key Estimates:

Number of Units	50,000	100,000	250,000	500,000
Revenue Generated	\$16M	\$32M	\$80M	\$160M
Gross Profit	\$6.4M	\$12.8M	\$32M	\$64M
Net Income	\$0.6M	\$2.2M	\$7M	\$15M

Sources, calculations, and justifications of assumptions can be found in the appendix



Product Opportunity and Roadmap

Our MVP

POA Review

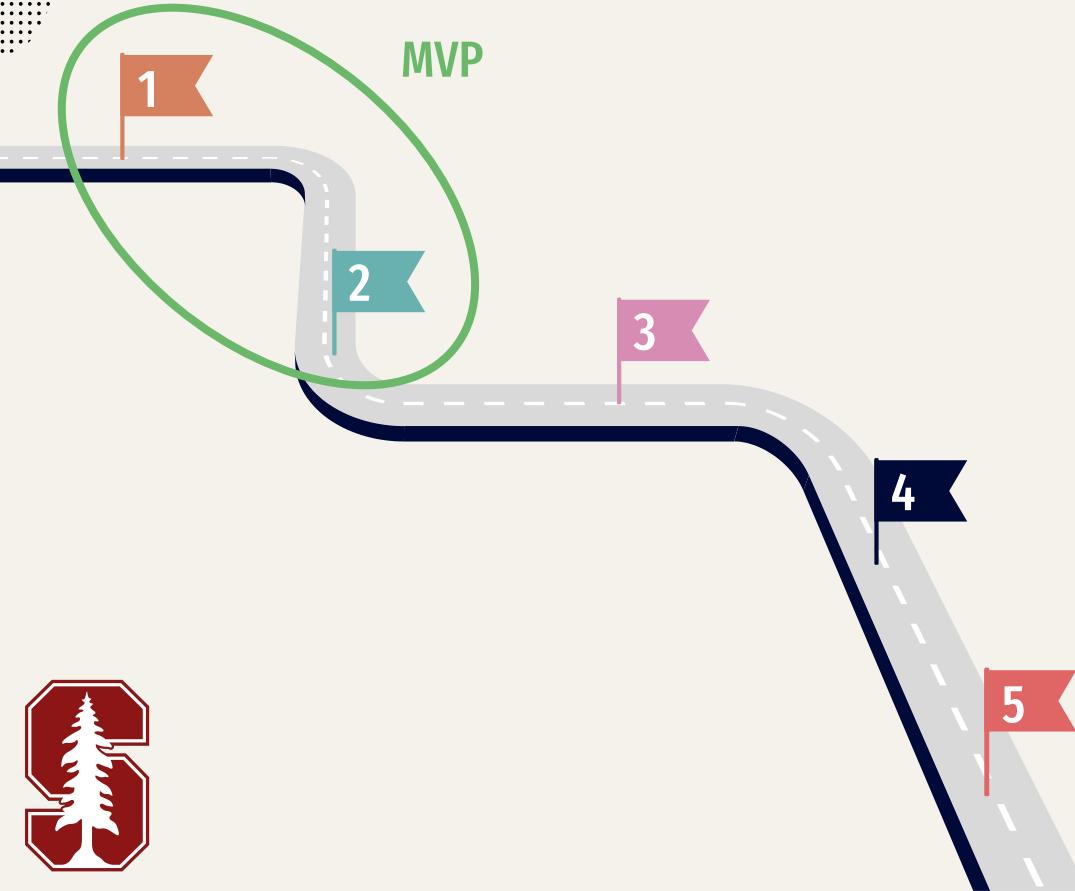
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iRobot Service Select Product Roadmap



1. Get iRobot products into apartments

2. Software Integration

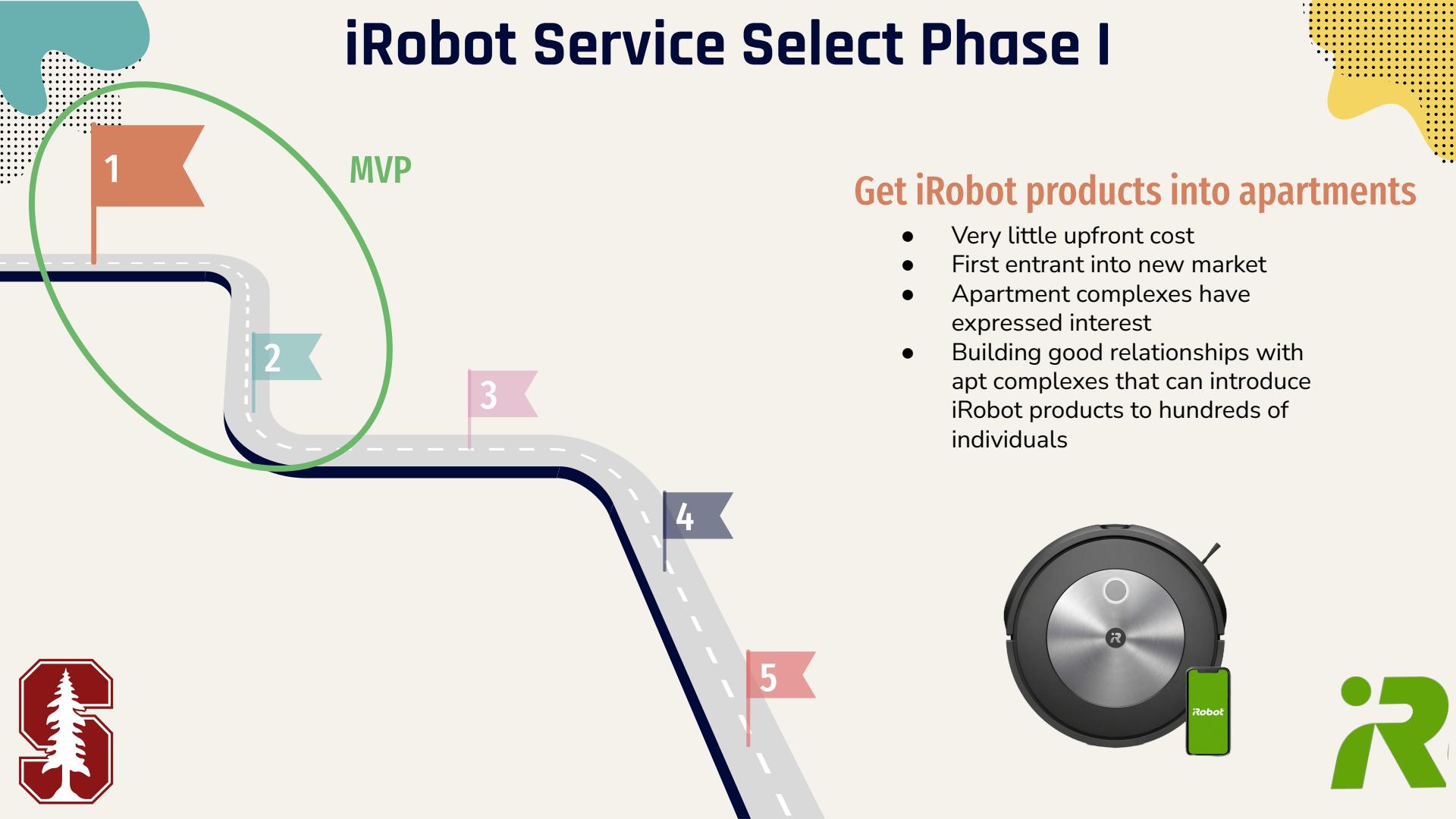
3. Hardware Integration

4. Physical integration into apartments

5. Physical integration into homes



iRobot Service Select Phase I



Get iRobot products into apartments

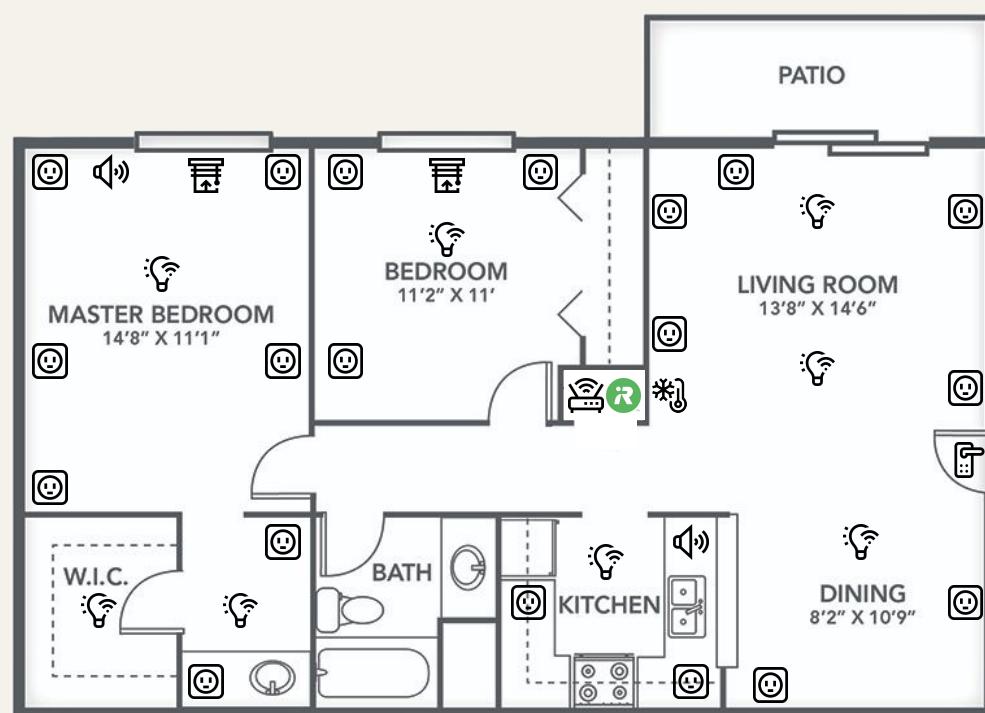
- Very little upfront cost
- First entrant into new market
- Apartment complexes have expressed interest
- Building good relationships with apt complexes that can introduce iRobot products to hundreds of individuals



Smart Apartment

Smart Device Key:

-  iRobot Hub
-  WiFi Router
-  Smart Lock
-  Smart Thermostat
-  Smart Speaker
-  Smart Outlets
-  Smart Lights
-  Smart Shades



Key Activities for iRobot Service Select Phase I

START

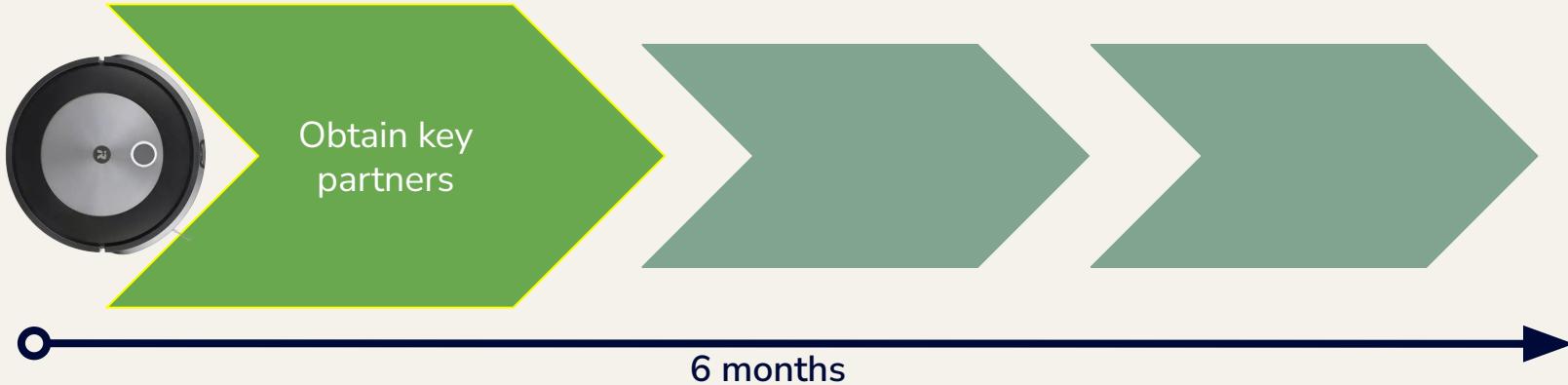


6 months

FULL DEPLOYMENT

Key Activities for iRobot Service Select Phase I

START



FULL DEPLOYMENT

Key Activities for iRobot Service Select Phase I

START



FULL DEPLOYMENT

Key Activities for iRobot Service Select Phase I

START



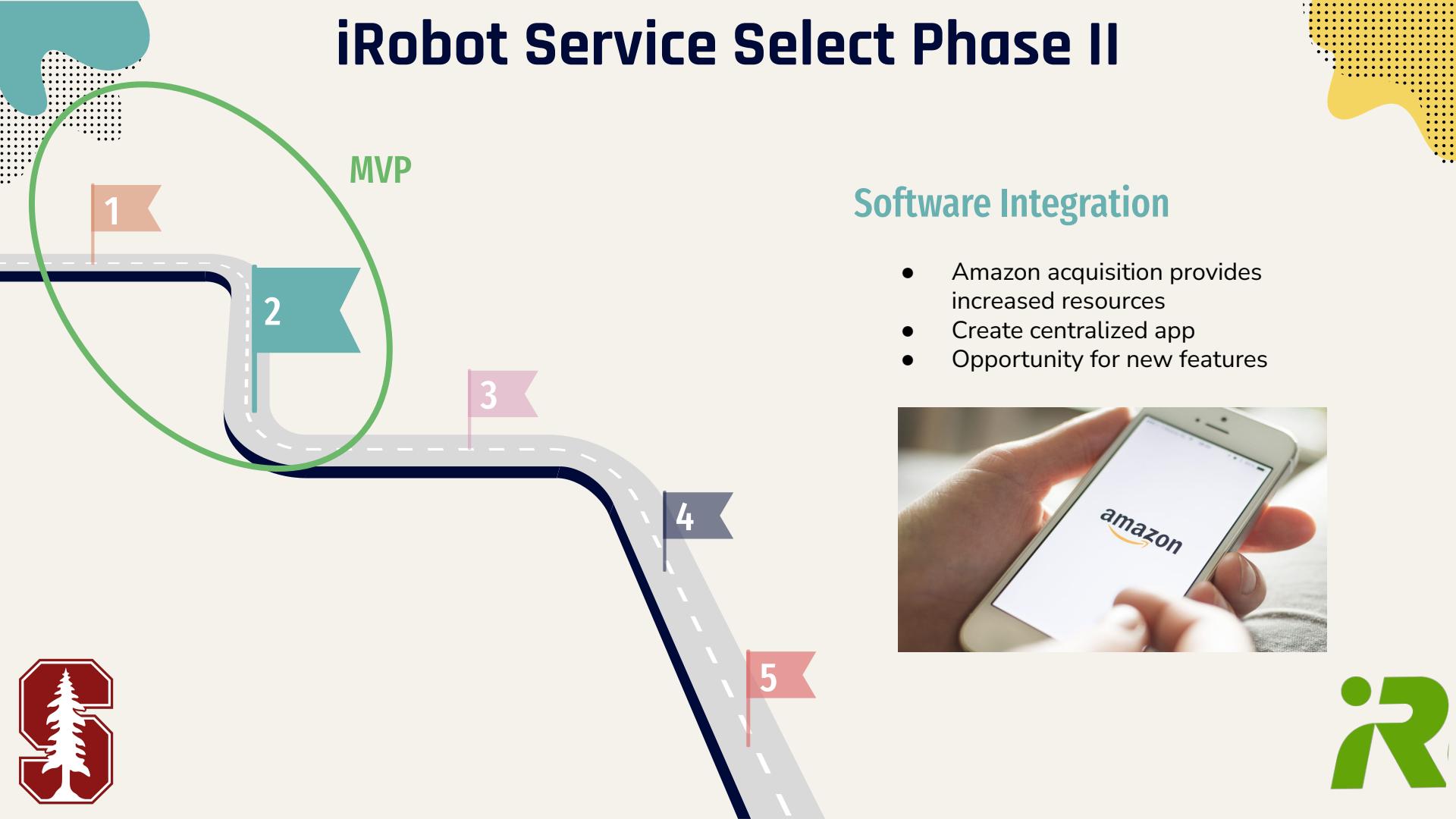
FULL DEPLOYMENT

Key Activities for iRobot Service Select Phase I

START



iRobot Service Select Phase II



Software Integration

- Amazon acquisition provides increased resources
- Create centralized app
- Opportunity for new features



New Feature Ideas



Live Video

- Users can see what their Roomba sees from anywhere



Remote Control

- Ability to control Roomba via remote or app



Voice Interaction

- Users can talk directly to Roomba



Personality

- Give Roomba a customizable personality



Find Lost Items

- Roomba locates lost items and notifies user



Benefits from Integration



WiFi Router

- Internet Connection
- Control through mobile app



Smart Speaker

- Enhanced HCI
- Voice control
- Auditory cleaning updates



Smart Lock

- Better information of occupancy (nobody is home)



Smart Thermostat

- Better information of occupancy (nobody is home)



Smart Lights

- Visibility for the robot's camera in low light scenarios



Apartment Complex

- Preloaded maps from apartment floor plans



Key Activities for iRobot Service Select Phase II

START



FULL DEPLOYMENT

Key Activities for iRobot Service Select Phase II

START



Get feedback
for service
improvement
and features

6 months

FULL DEPLOYMENT

Key Activities for iRobot Service Select Phase II

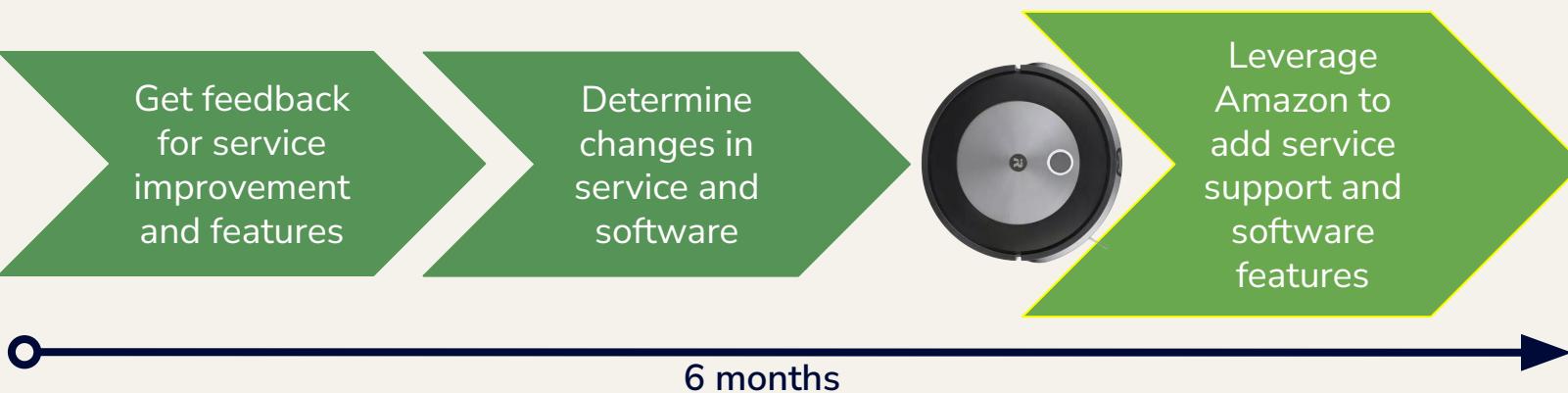
START



FULL DEPLOYMENT

Key Activities for iRobot Service Select Phase II

START



FULL DEPLOYMENT

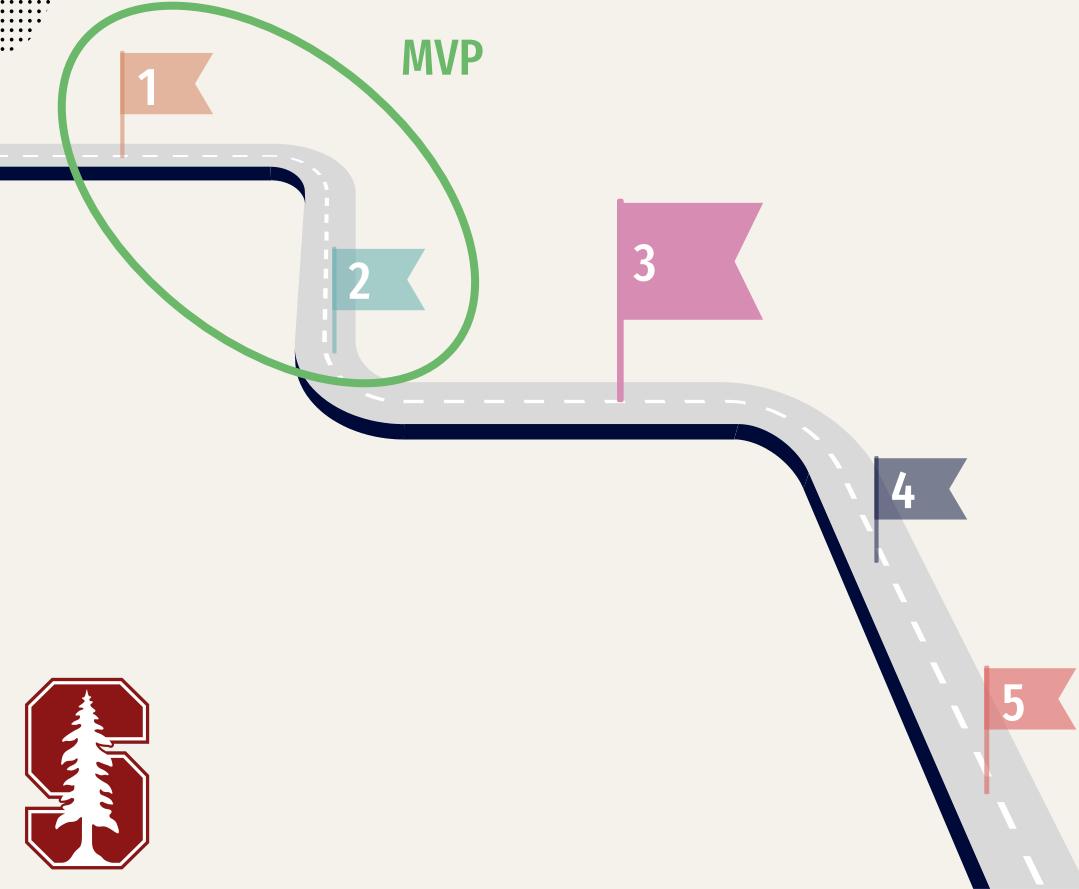
Key Activities for iRobot Service Select Phase II

START



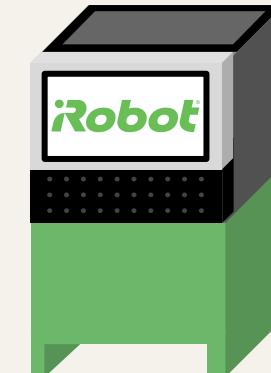
FULL DEPLOYMENT

iRobot Smart Select Phase III

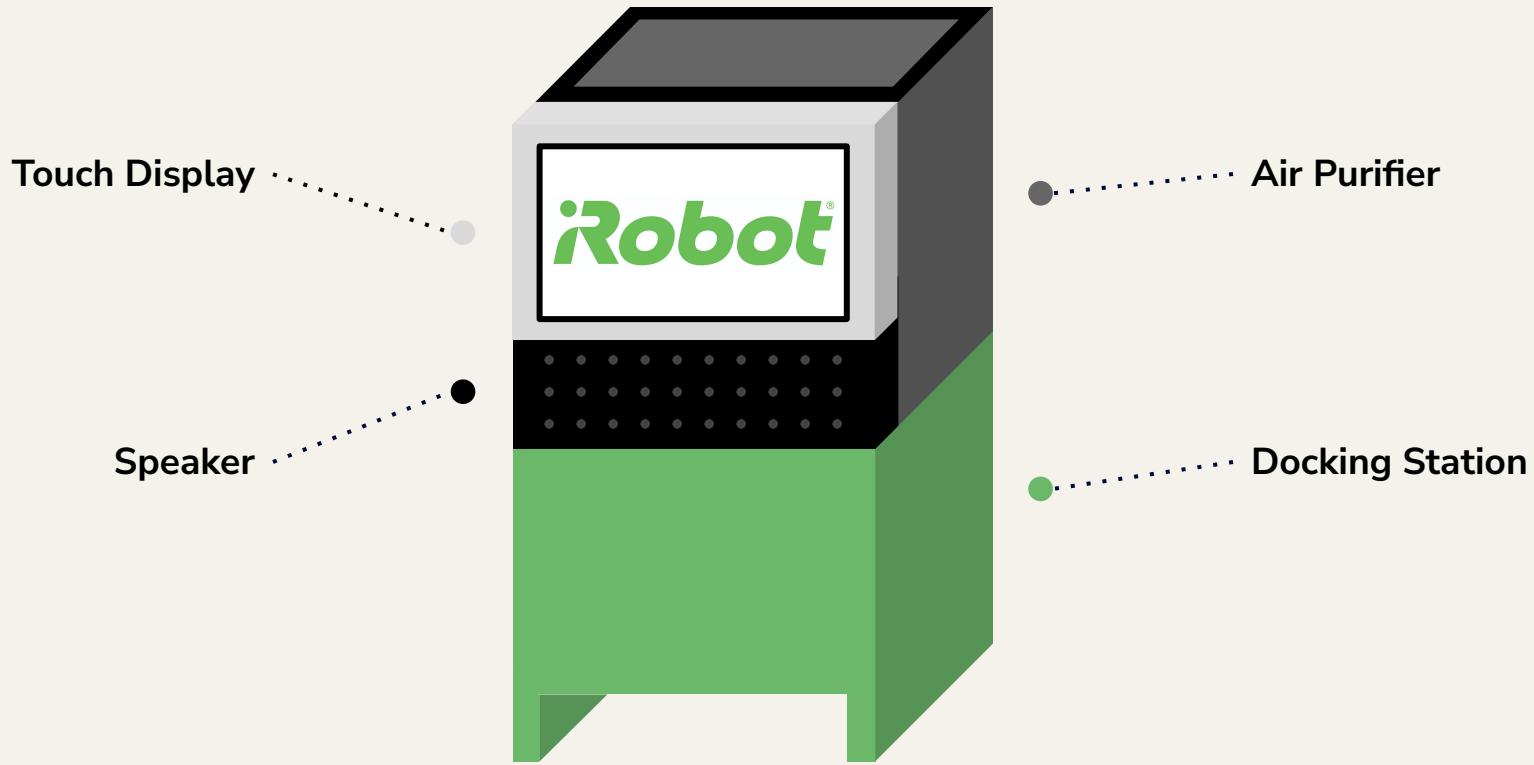


Hardware Integration

- Seamless user experience
- Develop new smart hub as center of smart apt ecosystem



Beyond MVP - iRobot Hub



Beyond MVP - iRobot Hub

Touch Display

Speaker

Air Purifier

Docking Station



Key Activities for iRobot Smart Select Phase III

START



FULL DEPLOYMENT

Key Activities for iRobot Smart Select Phase III

START



Determine hardware features

12 months

FULL DEPLOYMENT

Key Activities for iRobot Smart Select Phase III

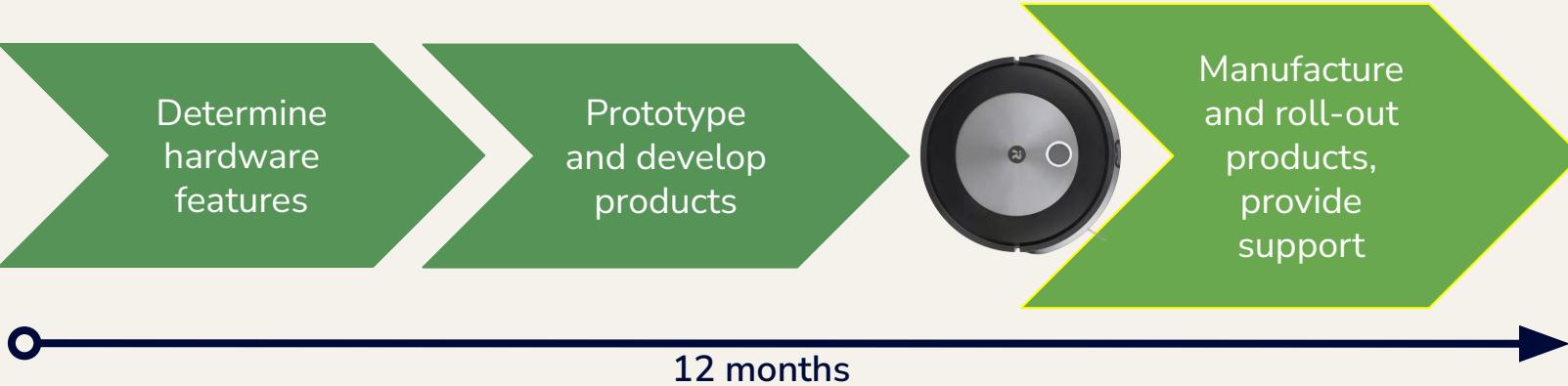
START



FULL DEPLOYMENT

Key Activities for iRobot Smart Select Phase III

START



FULL DEPLOYMENT

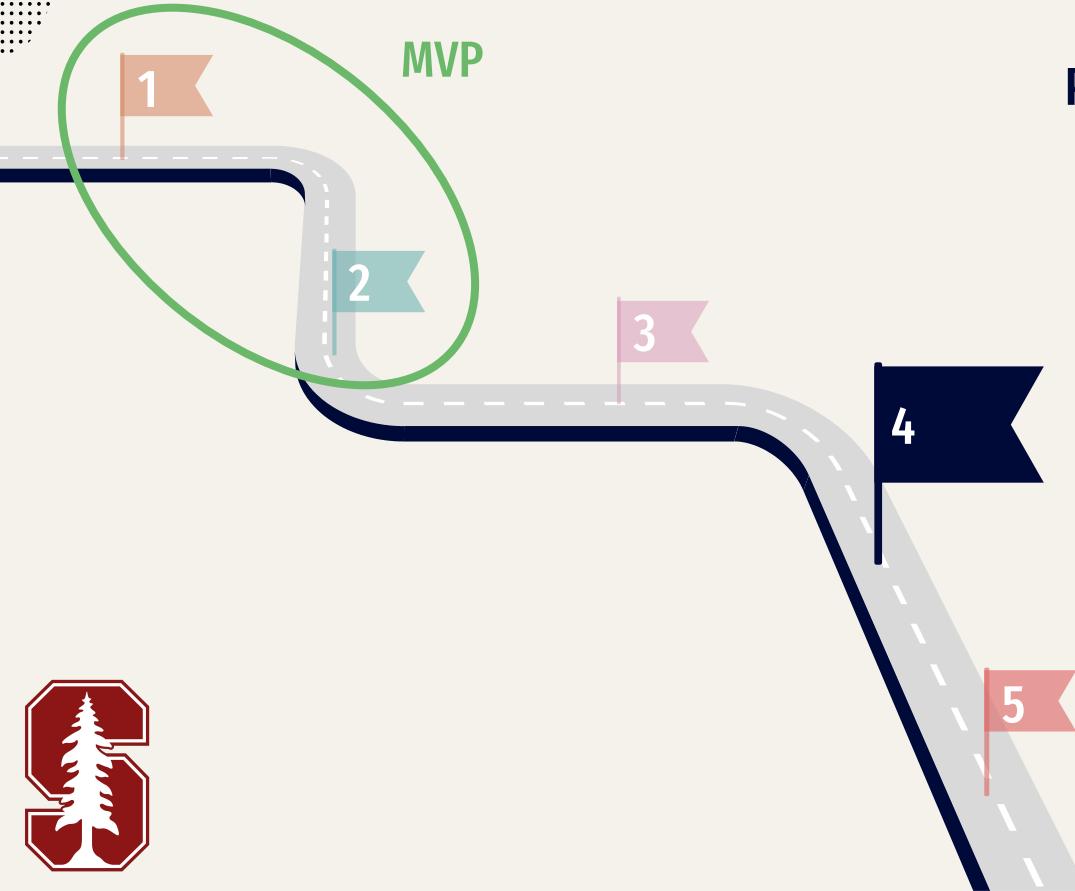
Key Activities for iRobot Smart Select Phase III

START



FULL DEPLOYMENT

iRobot Smart Select Phase IV



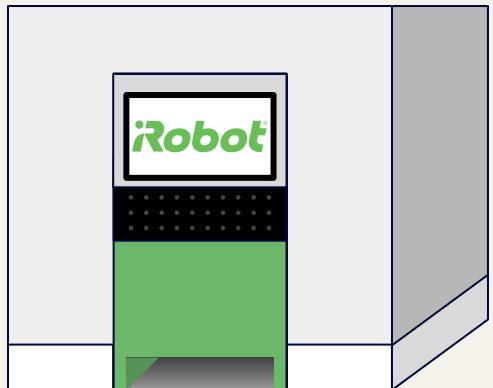
Physically integrate into new apartments

- Proof of concept for moving into homes
- Partner with new apartment builders
- Integrate smart hub into new apts
 - Self emptying vacuum
 - Self emptying mop

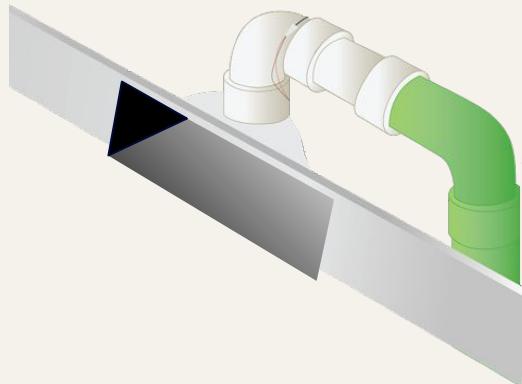


Physical Integration

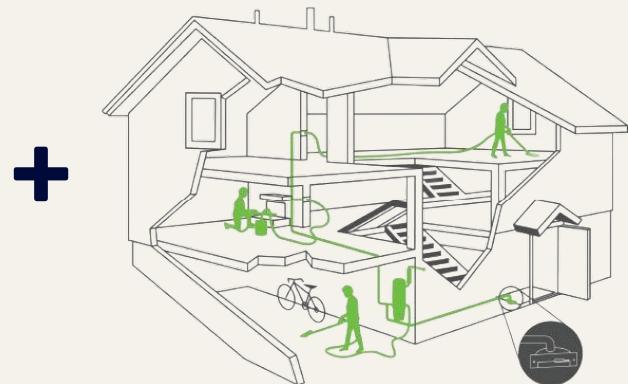
Built In iRobot Hub



In-Wall Connection



Apartment
Central Vacuum System



Key Activities for iRobot Smart Select Phase IV

START



24 months

FULL DEPLOYMENT

Key Activities for iRobot Smart Select Phase IV

START



Work with
partners to
determine
methods

24 months

FULL DEPLOYMENT

Key Activities for iRobot Smart Select Phase IV

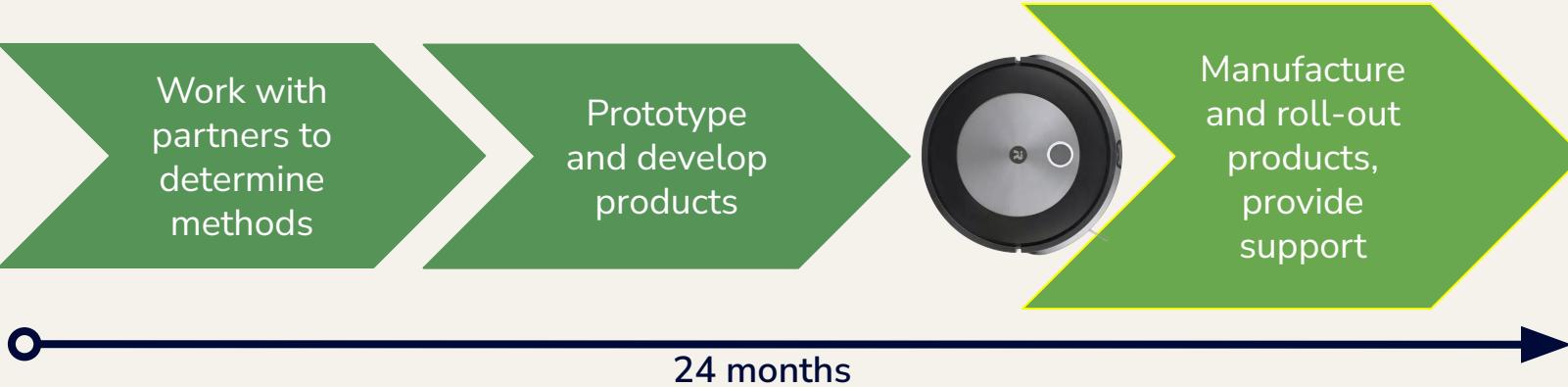
START



FULL DEPLOYMENT

Key Activities for iRobot Smart Select Phase IV

START



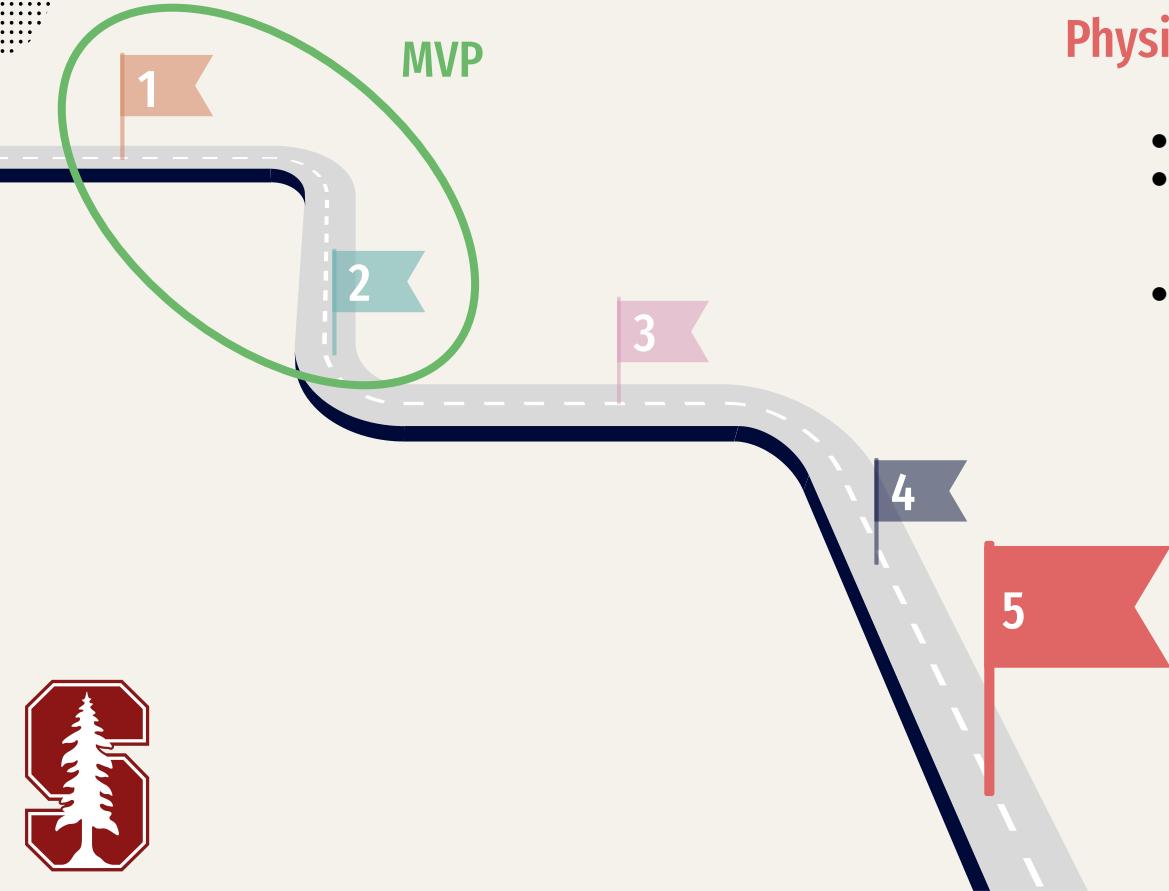
FULL DEPLOYMENT

Key Activities for iRobot Smart Select Phase IV

START



iRobot Home Select Phase V



Physically integrate into new homes

- Proven success in apartment context
- Partnership with track home builders would lead to thousands of purchases per partnership
- Seamless user experience
 - Self emptying vacuum
 - Self emptying mop



Summary

Our MVP

POA Review

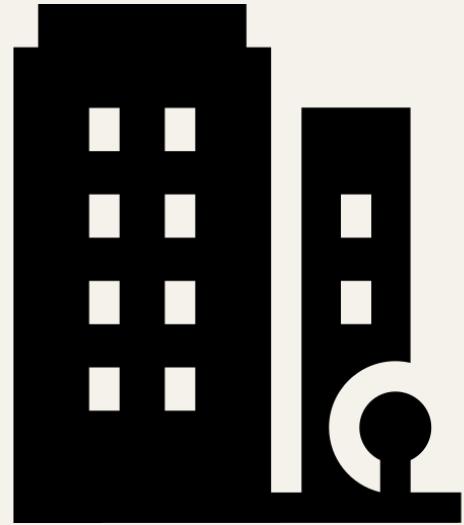
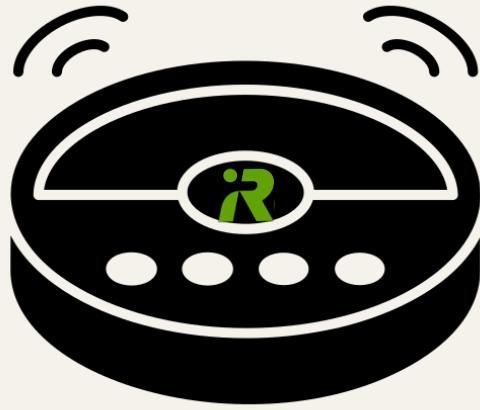
Pricing

Market Research and
Ecosystem

Product Opportunity and
Roadmap

Summary

MVP Summary



Enter the luxury apartment space via B2B2C
channels to enhance the future of smart
apartments and open new product opportunities



Thank You!

Our MVP

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Appendix



JTBDs

Luxury Apartments

Gain market advantage through offering amenities without adding complexity or risking significant capital

Users (Renters)

Minimize effort for apartment cleaning without inflating costs



Hypothesis Journey

Current Hypothesis

B2B sales to luxury apartments is a way iRobot could introduce Roombas to future home buyers and test smart home integration

UX Stories and Interviews



TESTING

“It is definitely something we would consider, but we'd **want to be able to test it** as a concept with tenants first-hand”

-Ericka, Apartment Manager at Alta Locale



LOGISTICS

“I think this is a great idea, but you would need to really **figure out how servicing, pricing, and logistics would work.**”

-Brendan, Apartment Manager at The Dean



ACCEPTANCE

“We've already bought **30 Roombas** as gifts for new tenants, we'd be very interested in a potential program like yours”

-Sandy , Apartment Manager at The Landsby



Market Research

87%

U.S. large-scale rental developments that were high-end apts

16.4%

Compound Annual Growth Rate of Global Smart Apts Market from 2021 to 2022

83%

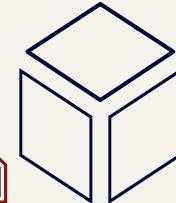
of iRobot's total sales from robots, Q2 2022

Early-Stage Business Model

Key Partners

Roomba users and luxury apt residents

3rd party apartment automation integration companies



Target population: luxury apartments & Roomba users

Key Activities

Pairing design with air purifiers, etc.

Service (instead of feature)



Trial period → gain & retain customers

Customer Relationships

How does iRobot market current products?

How do they keep existing customers?



Cleaning service for apt complex

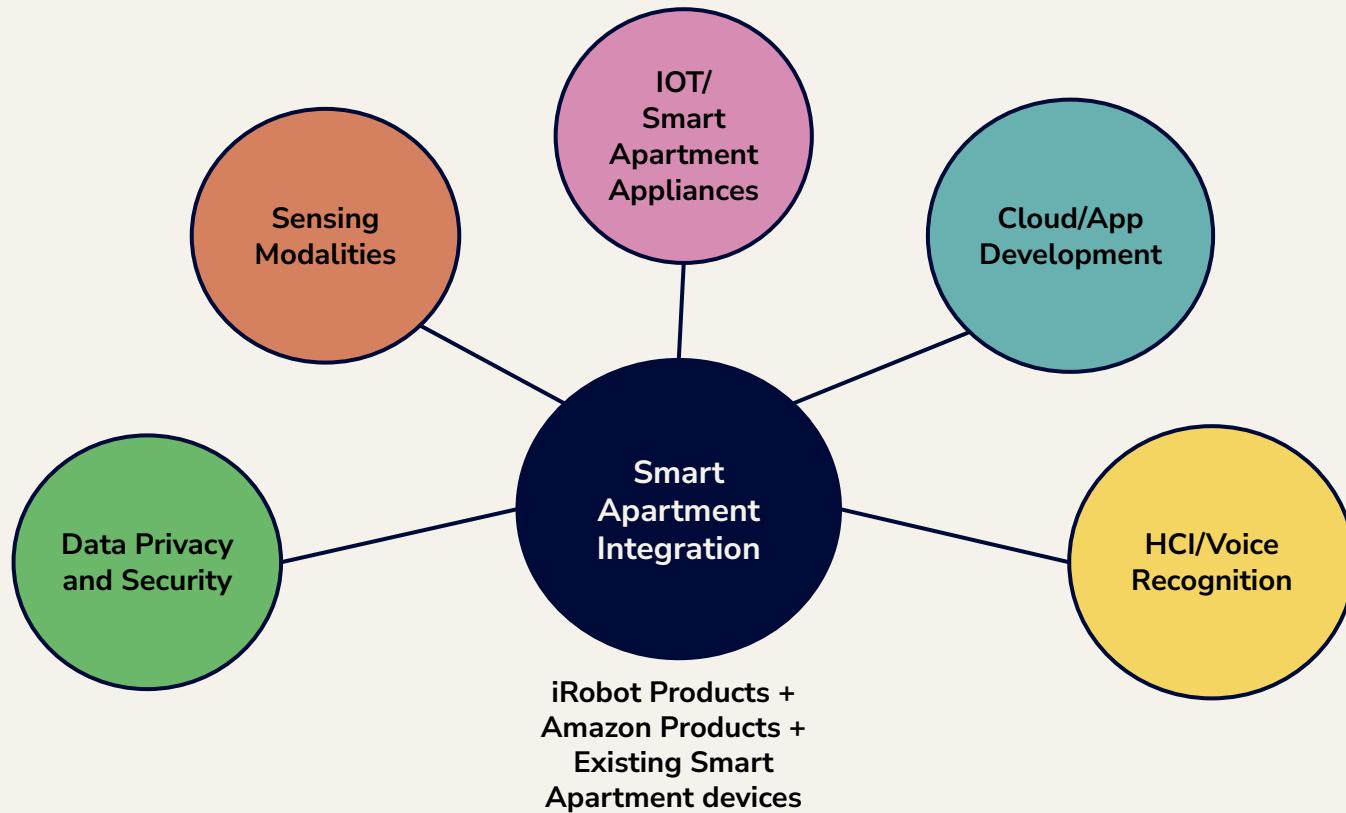
Channels

Current Channel: B2C (directly to consumer)

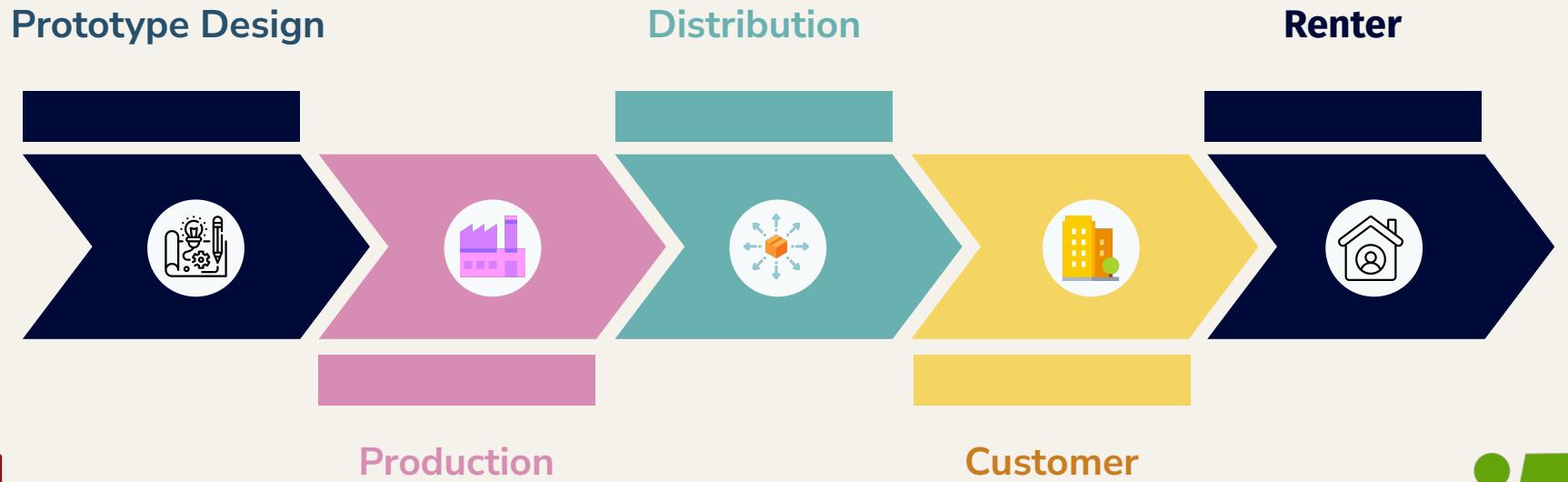
New Channel: B2B2C (directly to apt complexes & users)



Technology Overview



Product Value Chain



Development Cost Breakdown

Prototype Design

IOT App Development:
\$50-150/hr
R&D Cost: \$30,000



Distribution

Marketing cost: ~\$21Mn
Sales/distribution channels
Transportation



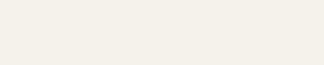
Renter

Service costs: installation,
maintenance, repair, after sales



Production

Raw materials
Operations

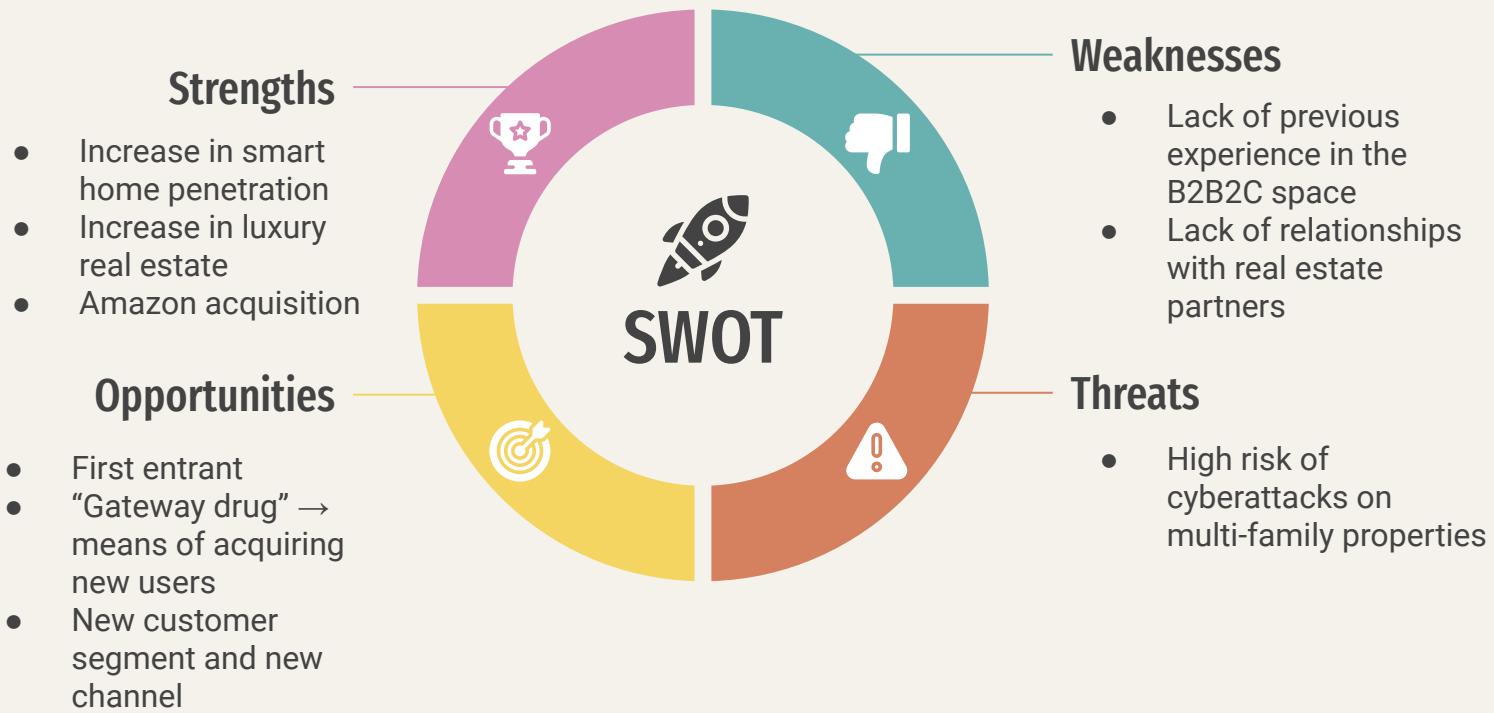


Customer

Partnership cost

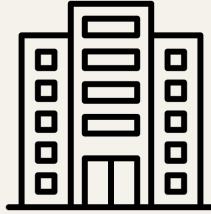


Service Select SWOT Analysis





Service Select Key Dependencies



Apartment Companies

Showcase value added to apt through iRobot products

Secure early partner complexes and run pilot tests of Service Select

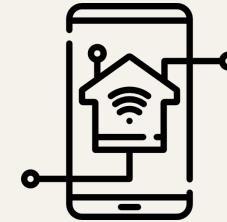
Expand to more complexes and maintain relationships



Renters

Market this new opportunity for iRobot products in apartments

Conduct interviews to better characterize “jobs to be done” and attitude towards Service Select



Other Smart Apartment Appliances

Select other services (i.e. Ring) that should be integrated

Designate teams of engineers for each integration task

Perform user testing on new integrations

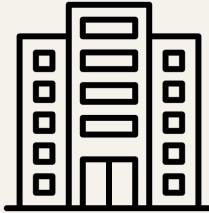


Service Select Risks and Mitigation

	Risk	Mitigation
Technology	Potential loss of integration with other companies due to Amazon acquisition could inhibit adoption	<ul style="list-style-type: none">• Provide a generic API to enable integration with other IOT and smart apartment devices• Develop fully integrated home smart hub that defines smart home
	Incompatibility with other smart apartment products could lead to bad customer experience	<ul style="list-style-type: none">• Provide a generic API to enable integration with other IOT and smart apartment devices
Apartment Companies	There's uncertainty in the level of demand for this product	<ul style="list-style-type: none">• Undergo further market research• Implement hypothesis testing (pilot programs)
	Apartment companies bear the burden of selling the product/service to renters/tenants	<ul style="list-style-type: none">• Develop a well defined marketing and adoption strategy• Implement a pricing structure that is attractive to both apartment companies and renters/tenants
	Apartment companies will likely have concerns about how to maintain the robots	<ul style="list-style-type: none">• Maintenance training courses• Provide a maintenance service
Renters/Tenants	Renters and Tenants might not be made aware of this product/service	<ul style="list-style-type: none">• Develop a well defined marketing strategy• Provide training or educational resources for apartment marketing/sales teams
	Renters and Tenants might not see the need for this product/service or might not be willing to pay for it	<ul style="list-style-type: none">• Develop a well defined marketing strategy• Implement a pricing structure that is attractive to both apartment companies and renters/tenants
Ethical	This product/service might introduce a lack of privacy, data ownership issues, and end user consent issues.	<ul style="list-style-type: none">• Data protection and security tools• End user education
	The number of cleaning jobs will decrease as robotic cleaning becomes more popular	<ul style="list-style-type: none">• Labor market studies to estimate the number of new jobs created



Smart Select Key Dependencies



Apartment Companies

Leverage existing relationships to develop partnerships with new apt builders

Brand smart hub as the way of the future for smart apartments



Renters

Market the new smart hub and seamless integration opportunity

Conduct interviews to better characterize “jobs to be done” and attitude towards Smart Select



Smart Select Risks and Mitigation

	Risk	Mitigation
Technology	Engineering a completely new hardware product is costly and can be time consuming	<ul style="list-style-type: none"> Work with engineering teams from the get-go to inform design decisions, project deadlines, and needed resources Extensive testing to ensure product is ready for being built-in
	When physically integrated into apartments, it will be difficult to remove/upgrade the hub without physically disassembling	<ul style="list-style-type: none"> Create an easy-to-detach and fix system
Apartment Companies	Apartment companies may be hesitant to “put all of their eggs in one basket” and cut off partnerships with other smart home product companies	<ul style="list-style-type: none"> Create new brand of being leader in the smart home ecosystem Implement hypothesis testing (pilot programs)
	Apartment companies may be hesitant to redesign apartment layout and central vacuum system to incorporate extra space for physically integration of hub permanently	<ul style="list-style-type: none"> Utilise existing vacuum disposal system for self emptying feature instead of redesigning new space for hub. Design detachable and easy-to-restore hub
Renters/Tenants	Renters and Tenants might not be made aware of this product/service and may not use it	<ul style="list-style-type: none"> Develop a well defined marketing strategy Provide training or educational resources for apartment marketing/sales teams
	Renters and Tenants might not see the need for this product/service or might not be willing to pay for it	<ul style="list-style-type: none"> Develop a well defined marketing strategy Implement a pricing structure that is attractive to both apartment companies and renters/tenants
Ethical	This product/service might introduce a lack of privacy, data ownership issues, and end user consent issues.	<ul style="list-style-type: none"> Data protection and security tools End user education
	The number of cleaning jobs will decrease as robotic cleaning becomes more popular	<ul style="list-style-type: none"> Labor market studies to estimate the number of new jobs created



Home Select Key Dependencies



Home Building Companies

Demonstrate success of Service and Smart Select to home builders

Characterize target regions

Secure early partnerships for pilot testing

Expand to more complexes and maintain relationships

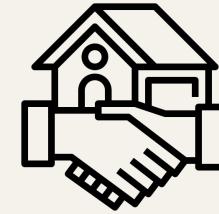


Home Buyers

Market this new opportunity for iRobot products to be built in to new homes

Conduct interviews to better characterize “jobs to be done” and attitude towards Home Select

Brand iRobot as the leader in smart home ecosystem



Real Estate Agents

Educate about product and how to sell to home buyers

Understand how real estate agents communicate about Home Select to buyers



Home Select Risks and Mitigation

	Risk	Mitigation
Technology	Building the smart hub into homes such that the robots can empty themselves, move between levels, etc. requires new methodologies and can be costly	<ul style="list-style-type: none"> Be in constant communication with the building companies and understand their timelines, resources, processes, and limitations
	Susceptible to potential cyberattacks	<ul style="list-style-type: none"> Create and deploy cybersecurity teams to fortify product against attacks that could lead to user data breach
Home Building Companies	There's uncertainty in the level of demand for this product	<ul style="list-style-type: none"> Undergo further market research Implement hypothesis testing (pilot programs)
	Builders bear the burden of selling the product/service to new home buyers and convincing them to purchase the smart home package	<ul style="list-style-type: none"> Develop a well defined marketing and adoption strategy Implement a pricing structure that is attractive to both apartment companies and renters/tenants
Home Buyers	Builders are set in their ways / methodologies and don't want to be forced into making major changes	<ul style="list-style-type: none"> Maintenance training courses Provide a maintenance service
	New home buyers might not be made aware of this product/service	<ul style="list-style-type: none"> Develop a well defined marketing strategy Provide training or educational resources for building companies as well as local real estate agents
Ethical	New home buyers might not see the need for this product/service or might not be willing to pay for it	<ul style="list-style-type: none"> Develop a well defined marketing strategy Implement a pricing structure that is attractive to both home building companies and new buyers
	This product/service might introduce a lack of privacy, data ownership issues, and end user consent issues.	<ul style="list-style-type: none"> Data protection and security tools End user education
	The number of cleaning jobs will decrease as robotic cleaning becomes more popular	<ul style="list-style-type: none"> Labor market studies to estimate the number of new jobs created

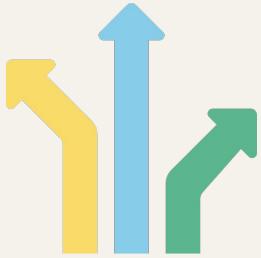
Apartment Company Revenue, Profit, and Income

Metric	Value	Justification/Formula	Sources
Vacancy rate	10%	Conservative estimate based on information from the source	[4]
Robot lifetime expectancy (years)	5	Estimate based on information from the source	[5], [6]
Average smart apartment monthly rent	\$1,500.00	Conservative estimate based on information from the source	[7]
Rent premium rate of smart apartments	3.00%	Conservative estimate based on information from the source	[8], [9]
Rent premium of smart apartments	\$45.00	(Rent) x (Rent premium rate)	[8], [9]
Rent premium rate of smart apartment with iRobot Service Select	4.00%	Conservative estimate based on smart apartment rent premium rate	
Rent premium of smart apartment with iRobot Service Select	\$60.00	(Rent) x (Rent premium rate with iRobot Service Select)	
Rent premium of iRobot Service Select	\$15.00	(Rent premium with iRobot Service Select) - (Rent premium)	
Annual revenue generated from iRobot Service Select rent premium per unit	\$162.00	(Rent premium rate with iRobot Service Select) x (12 months) x (1 - vacancy rate)	
Cost of iRobot Service Select per unit	\$320.00	Estimate based on iRobot historical quarterly results	[3]
Annual cost of iRobot Service Select per unit	\$64.00	(Cost of iRobot Service Select) / (Robot lifetime expectancy)	
Annual operating expense increase from iRobot Service Select per unit	\$0.00	iRobot or Amazon will service the robots at no cost	
Annual Net Operating Income (NOI) increase from iRobot Service Select per unit	\$98.00	(Generated revenue) - (Cost of iRobot Service Select) - (Operating expense increase)	

iRobot Revenue, Profit, and Income

Metric	Value	Justification/Formula	Sources
Number of smart apartment units in 2020	928,000		[1]
Number of smart apartment units in 2023	1,000,000	Conservative estimate based on number of smart apartments in 2020	
Percent of smart apartments captured	10%		[2]
Number of smart apartments captured	100,000	(smart apartments) x (% of smart apartments captured)	
Robot units shipped per apartment captured	1		
Average gross selling price for robot unit	320	Estimate based on iRobot historical quarterly results	[3]
New revenue generated	\$ 32,000,000	(smart apartments captured) x (Robot units per apartment) x (Avg price per robot unit)	
iRobot profit margin	40%	Estimate based on iRobot historical quarterly results	[3]
New gross profit generated	\$ 12,800,000	(New revenue generated) x (iRobot profit margin)	
Additional research and development	\$ 1,000,000	Most of the technology is already developed. Additional R&D would be used to pay the salary of 5-10 software engineers working on software integration and development.	
iRobot selling and marketing / revenue	20%	Estimate based on iRobot historical quarterly results	
Additional selling and marketing	\$ 6,400,000	(New revenue generated) x (iRobot selling and marketing / revenue)	[3]
iRobot general and administrative / revenue	10%	Estimate based on iRobot historical quarterly results	
Additional general and administrative (for support and maintenance)	\$ 3,200,000	(New revenue generated) x (iRobot general and administrative / revenue)	[3]
Additional operating expenses	\$ 10,600,000	(R&D) + (Selling and Marketing) + (G&A)	
Net (loss) income generated	\$ 2,200,000	(New gross profit generated) - (Additional operating expenses)	

Apartment Companies



Feature Differentiability

"We get and keep tenants by **finding ways to provide services that they would have to find themselves otherwise.** We provide amenities because they are well worth the cost to us."

-Fernando, Apartment Manager



Smart Apartment Adoption

"People renting apartments are interested in Roombas and other smart apartment devices, but don't want to purchase them because **they don't want to invest in a temporary space.**"

-Roger, Realtor



Meet the Stakeholders

Jessica & David – Luxury Apartment Renters



- Young working professionals
- Enjoy a certain standard of living
- A clean apartment is important
- Value their spare time
- Saving for a home or other expenses



Meet the Stakeholders

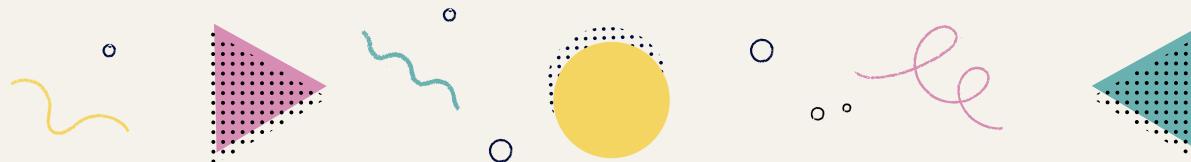
Monique - Luxury Apartment Marketer



- Works hard to keep units filled
- Struggles with a demanding market
- Offers many different amenities and packages
- Looking for other methods to keep tenants



Value Propositions - Luxury Apartments



Cleaning as a service without the cost

\$50 - \$150

typical cleaning service visit

Smart apartment integration without “integrating”

\$300 - \$4k

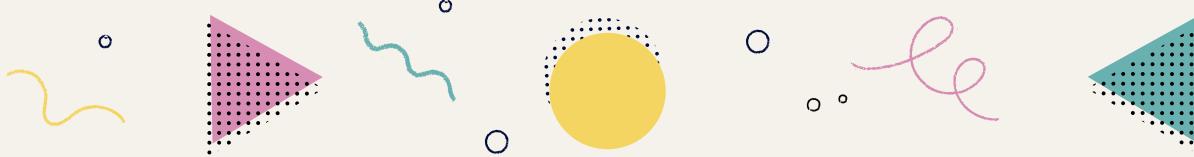
installation cost of smart-apartment ecosystem

Provide the services that tenants care about

10.1%

smart air purifier market growth

Value Propositions - Renters/End Users



Keep your apartment clean without wasting time or money

\$50 - \$150

typical cleaning service visit

Easy access to smart apartment convenience

\$300 - \$4k

installation cost of smart apartment ecosystem

Get the functionality you want and nothing you don't

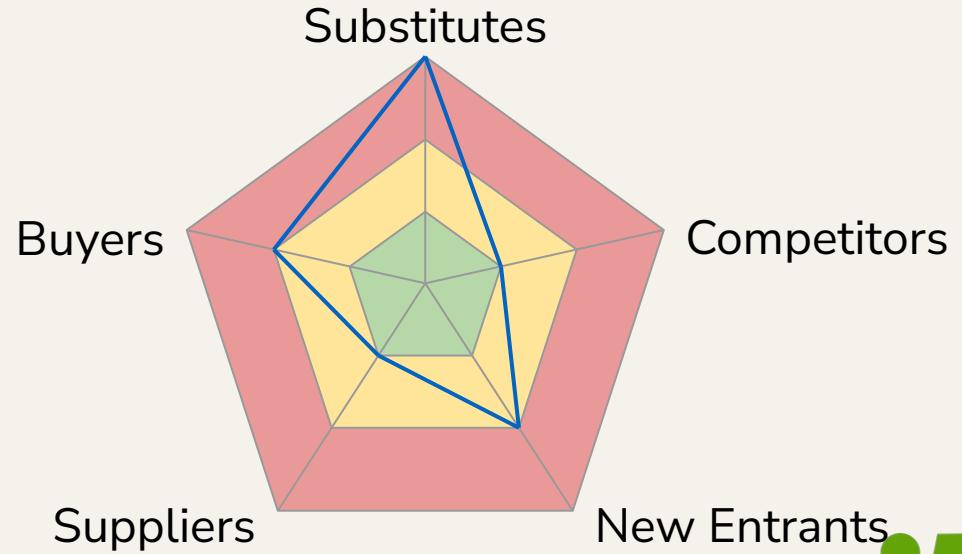
All current smart apartment amenities are built-in

Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

- Substitutes - High
- Competitors - Low
- New Entrants - Medium
- Suppliers - Low
- Buyers - Medium

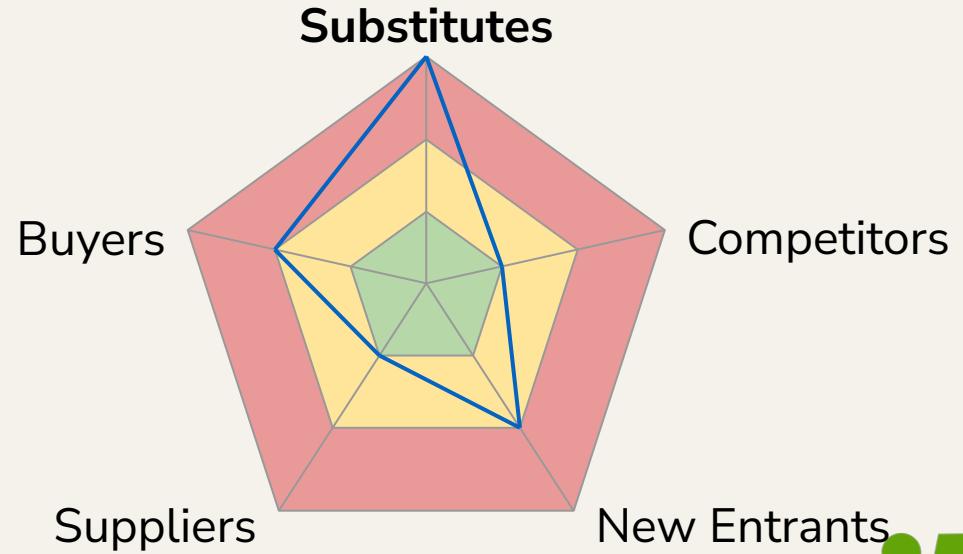


Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

- Substitutes - High
 - No cleaning service
 - Alternative cleaning services

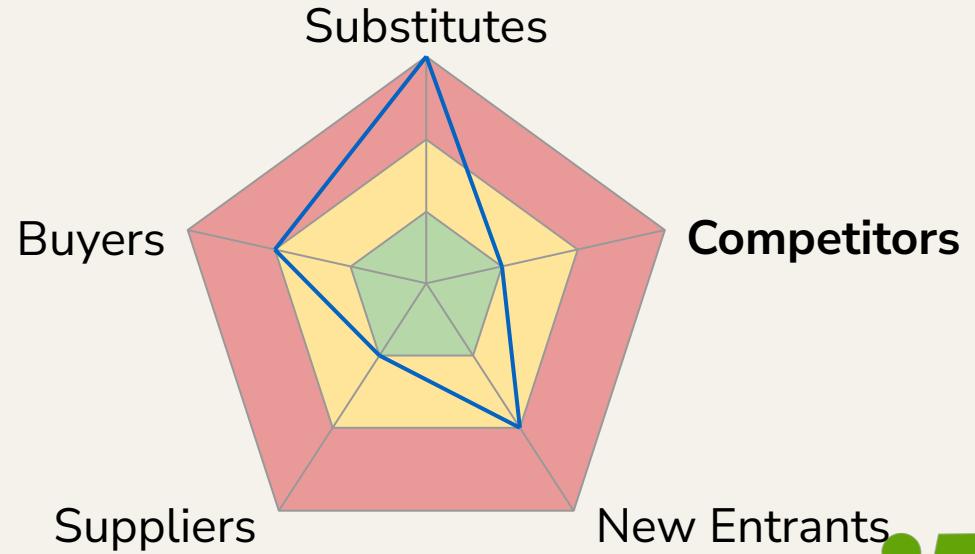


Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

- Substitutes - High
- Competitors - Low
 - New market opportunity
 - Few if any robotic vacuum manufacturers are utilizing a B2B2C approach

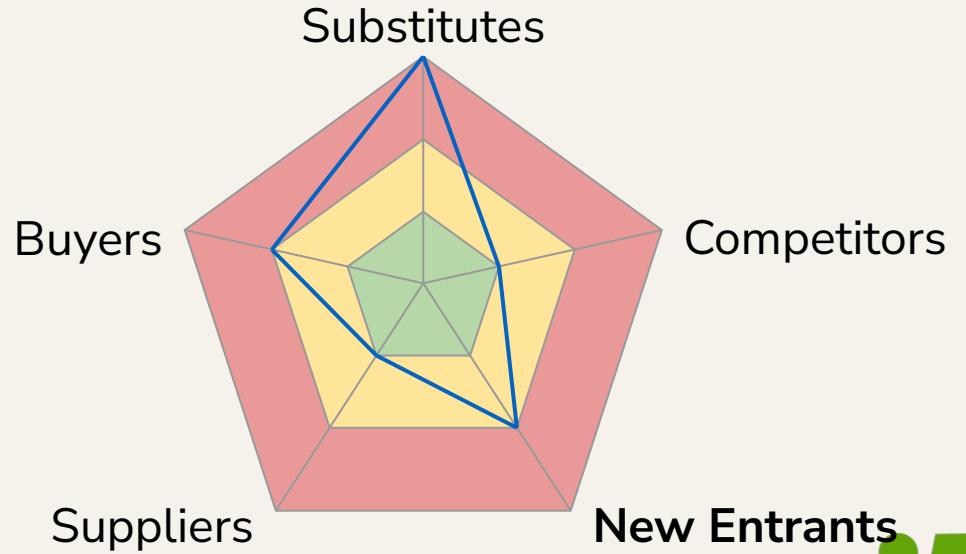


Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

- Substitutes - High
- Competitors - Low
- **New Entrants - Medium**
 - First-Mover advantage
 - Incumbent advantages
 - Need to establish distribution channels for B2B2C approach

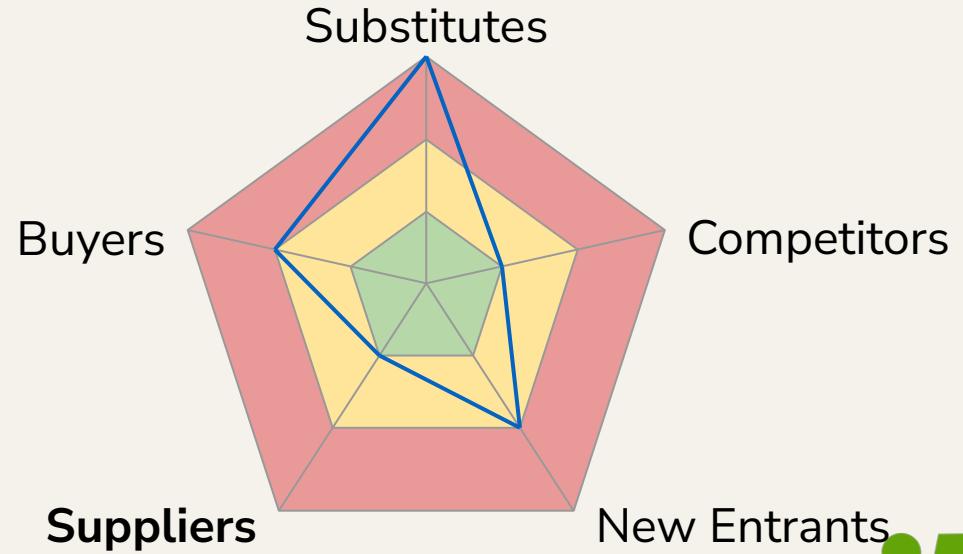


Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

- Substitutes - High
- Competitors - Low
- New Entrants - Medium
- **Suppliers - Low**
 - Consumer electronics components are fairly standardized

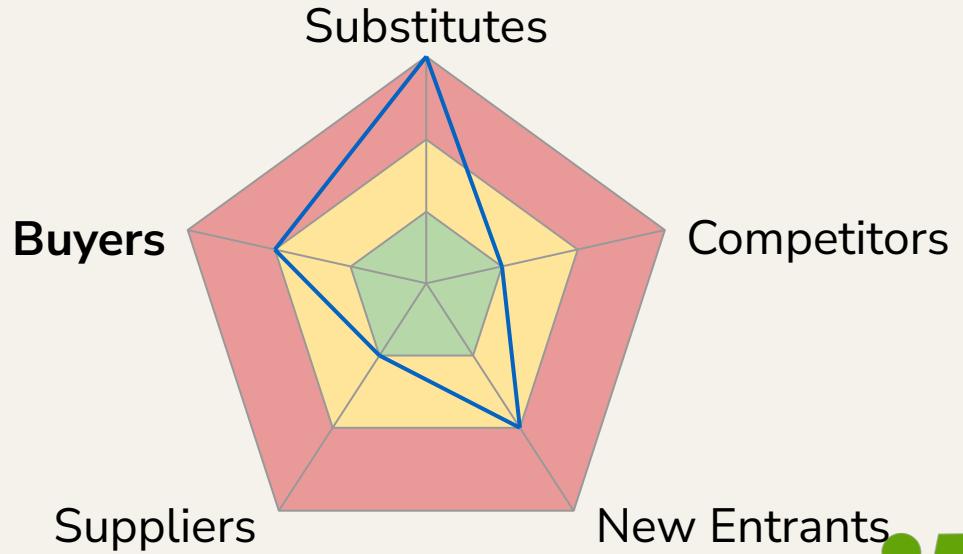


Competitive Analysis

Apartment Cleaning Robot Industry

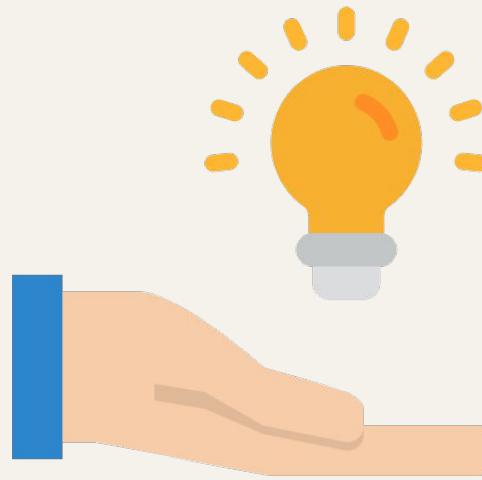
Five Forces

- Substitutes - High
- Competitors - Low
- New Entrants - Medium
- Suppliers - Low
- **Buyers - Medium**
 - Low switching costs
 - Offer a differentiated product
 - High volume and large contracts give buyers more bargaining power



Window of Opportunity

- Growing market
- Unsolved market
- Early Entrant



Go / No-Go Strategy



- First to the market
- Exciting timing with Amazon acquisition



- Apartment complexes are unwilling to buy-in
- More user research yields low demand





Potential Ethical Issues



Data

Lack of privacy, data ownership issues, end user consent



Less jobs

Cleaning jobs will decrease as robotic cleaning becomes more popular





Team Journal Link

