



Team iRobot

Product Opportunity Assessment (POA) Presentation

November 14, 2022

Our Team



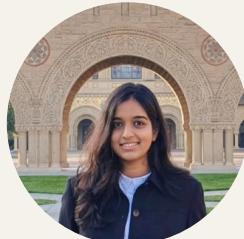
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Outline



Product Vision



Defining Jobs to be Done



Value Propositions



Technical Feasibility



Competitive Analysis



Market Investigation



Risk Identification



Next Steps



Appendix

Product Vision



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Next Steps

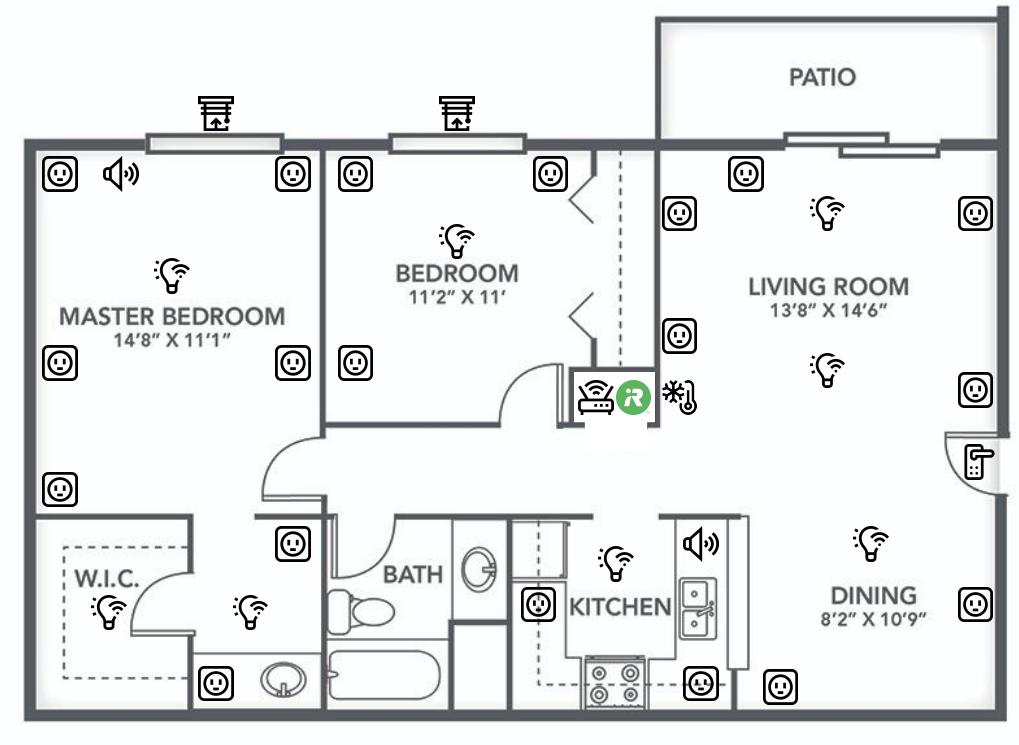


Appendix

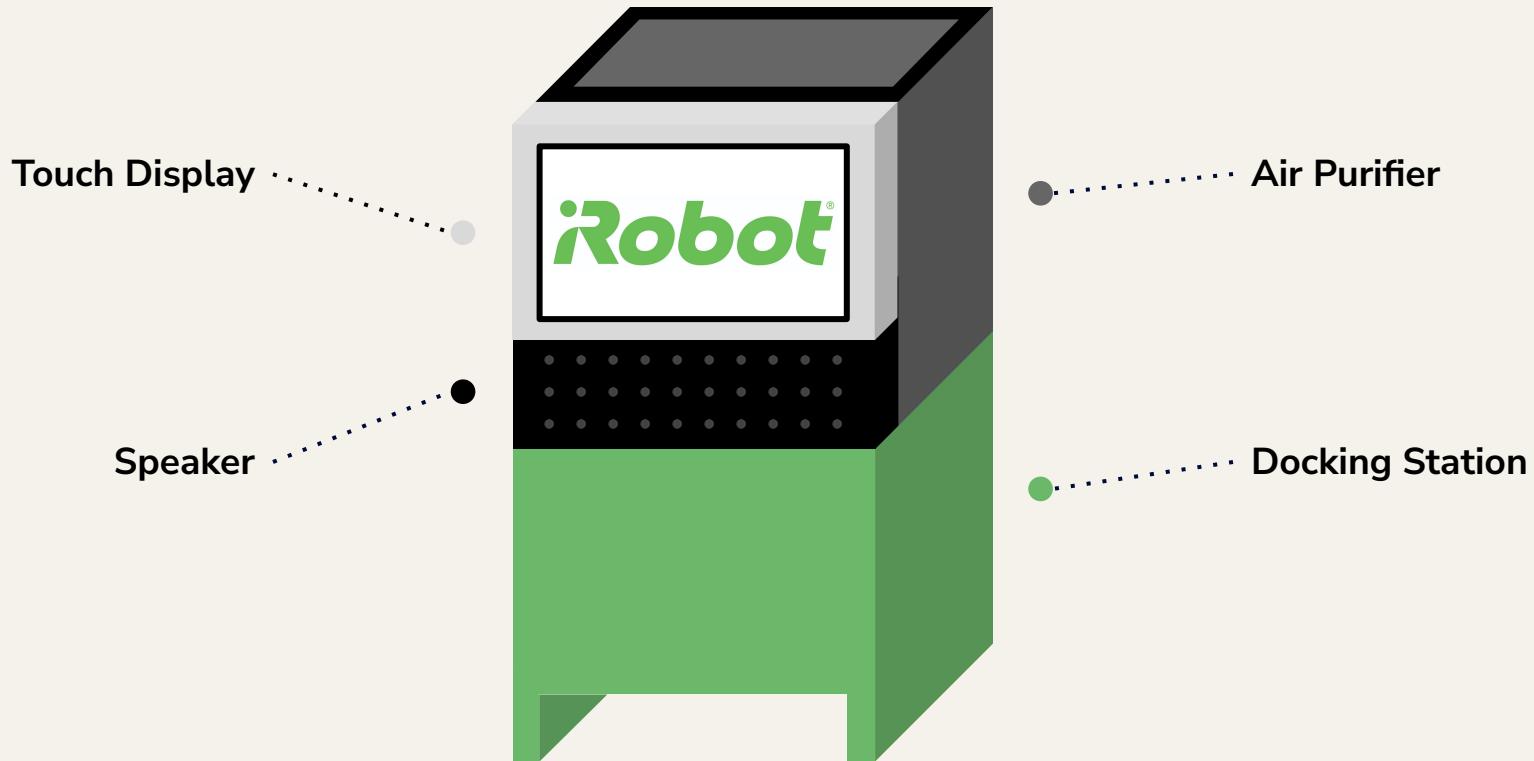
Smart Apartment

Smart Device Key:

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



iRobot Hub



Defining Jobs to be Done

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iRobot Business Model

Current

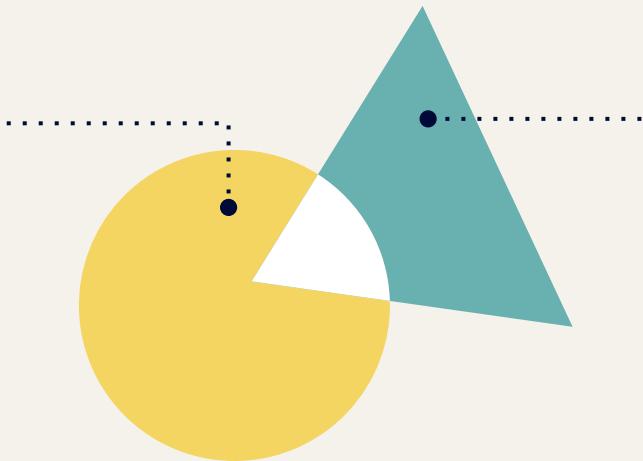
B2C

Direct to consumer
online and retail

Expansion

B2B2C

Get to consumers
through business
sales



83 INTERVIEWS

48

CONSUMERS

13

BUILDERS

5

NON-CONSUMER

4

COMPETITOR
CONSUMER

11

APARTMENT
SALES

2

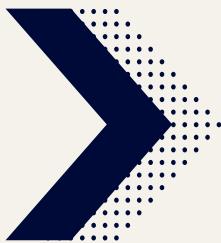
REAL ESTATE
AGENTS



Hypothesis Journey

Initial Hypothesis

A new product market for iRobot is in B2B sales (home builders and new home integration)



“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*



Hypothesis Journey

Next Hypothesis

Roomba integration for high-end custom homes & luxury apartments would increase exposure to and capability of iRobot products

“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



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

Users Stories



COST

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

-Nick, Apartment Tenant



LACK OF AUTONOMY

“I just want to be able to **press the start button and let it go.**”

-Jonathan, Former Roomba User



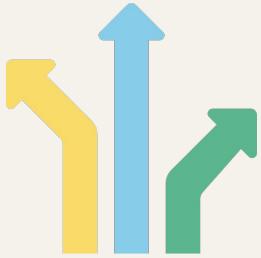
SKEPTICISM

“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



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



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



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

Product Vision

Defining Jobs to be Done

Value Propositions

Technical Feasibility

Competitive Analysis

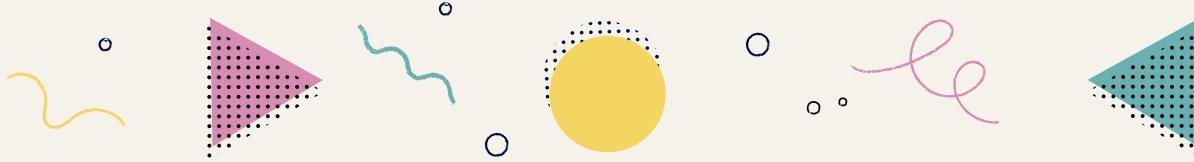
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Value Propositions - Luxury Apartments



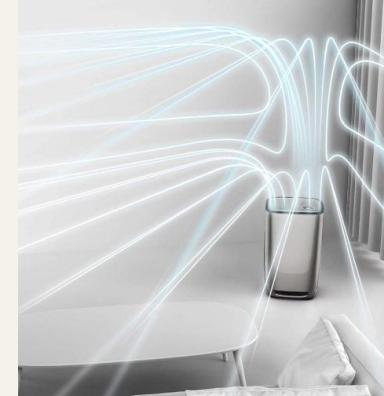
Cleaning as a service without the cost



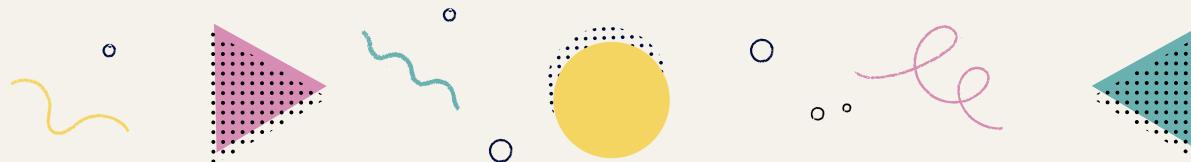
Smart apartment integration without “integrating”



Provide the services that tenants care about



Value Propositions - 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



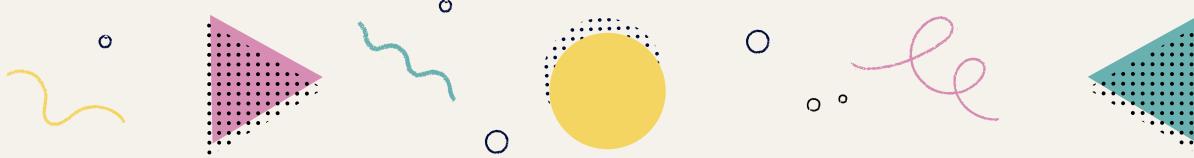
Easy access to smart apartment convenience



Get the functionality you want and nothing you don't



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

Value Propositions - iRobot

A gateway to
Roomba



An avenue for
iRobot smart
apartment
integration



Provide desired
services to a
difficult to reach
market



Market Investigation

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Market Research

87%

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

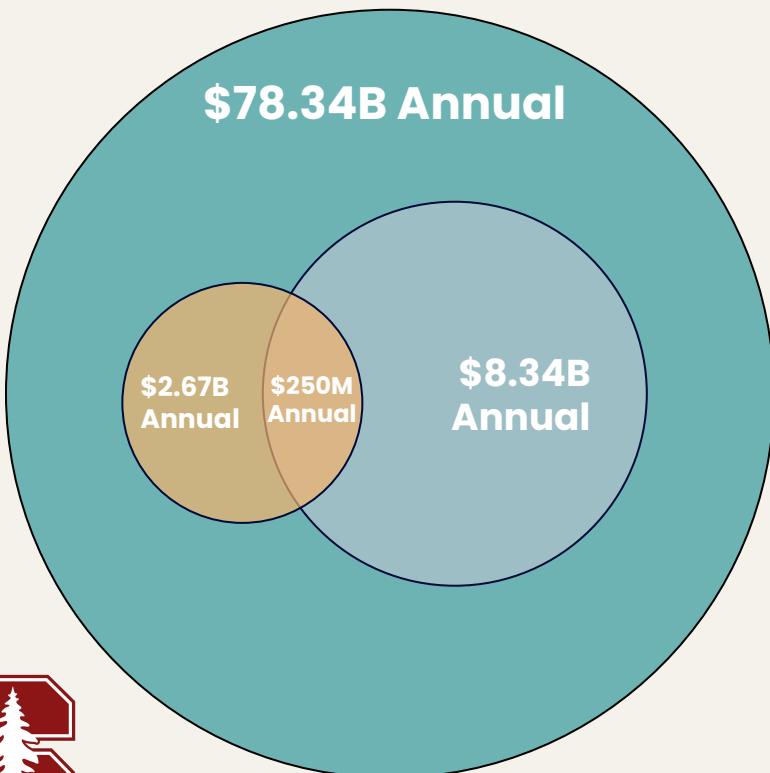
16.4%

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

83%

of iRobot's total sales from robots, Q2 2022

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)

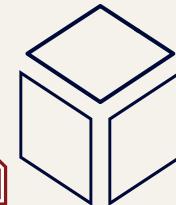


Early-Stage Business Model

Key Partners

Roomba users and luxury apt residents

3rd party apartment automation integration companies

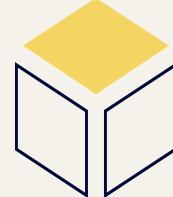


Target population: luxury apartments & Roomba users

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)



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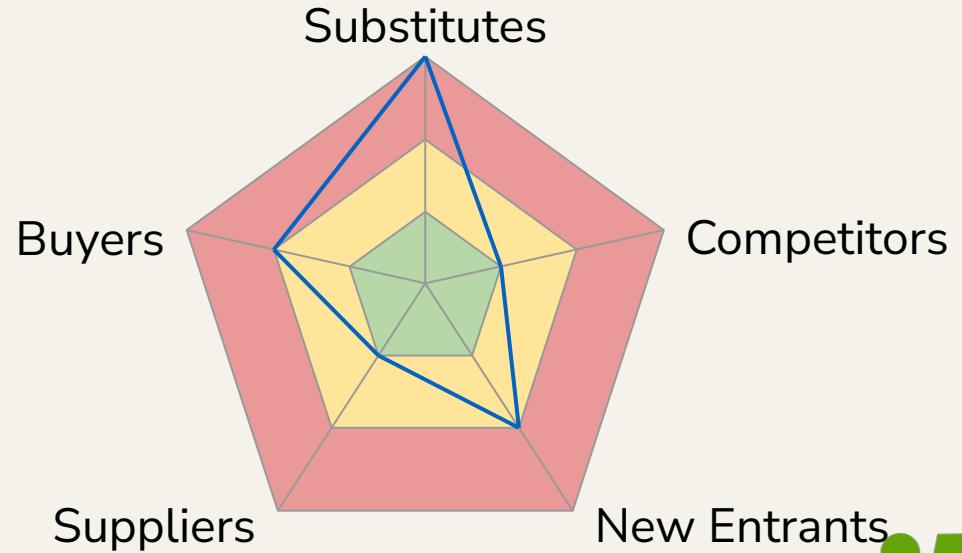
Appendix

Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

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

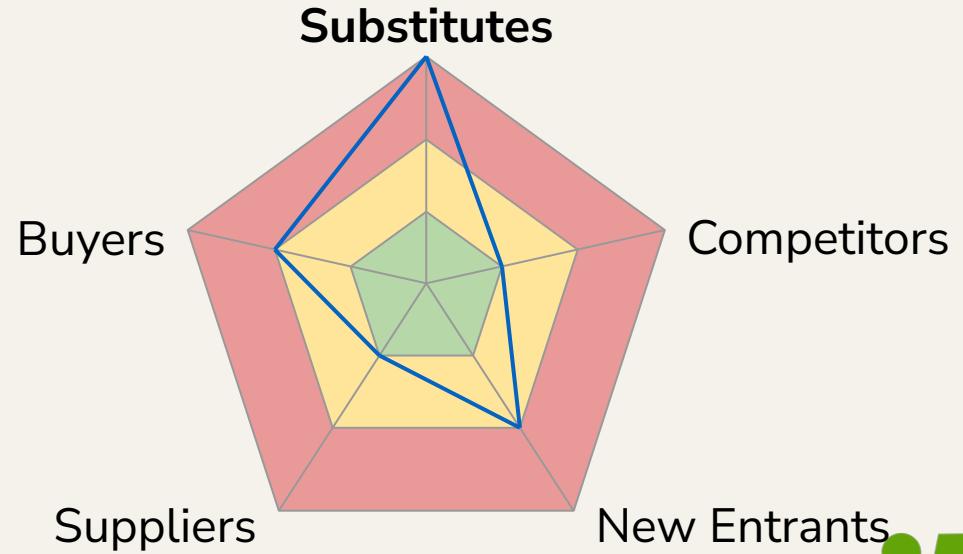


Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

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

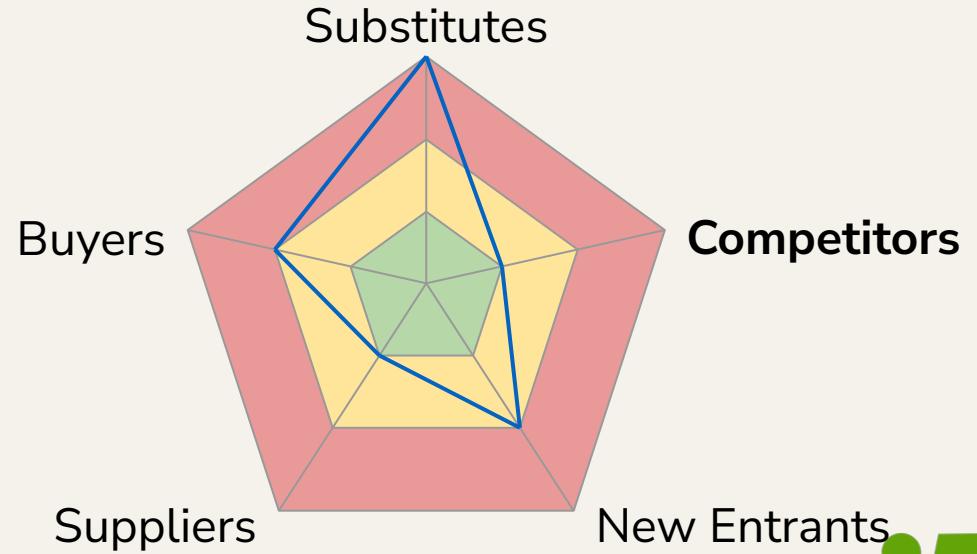


Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

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

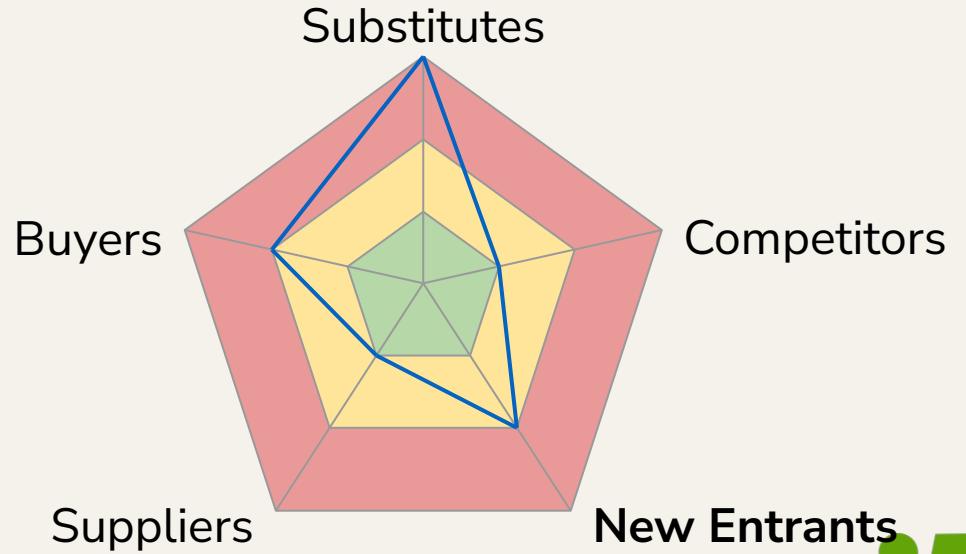


Competitive Analysis

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

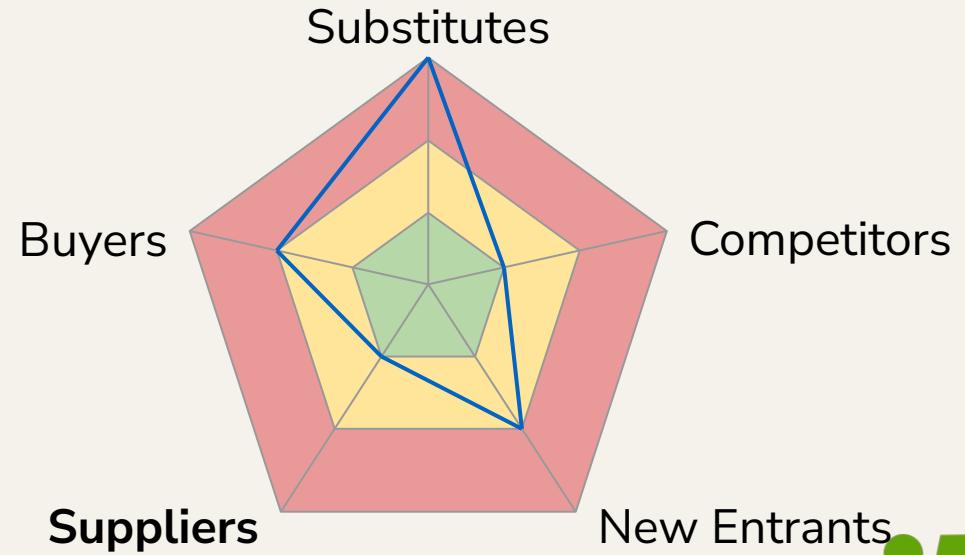


Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

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

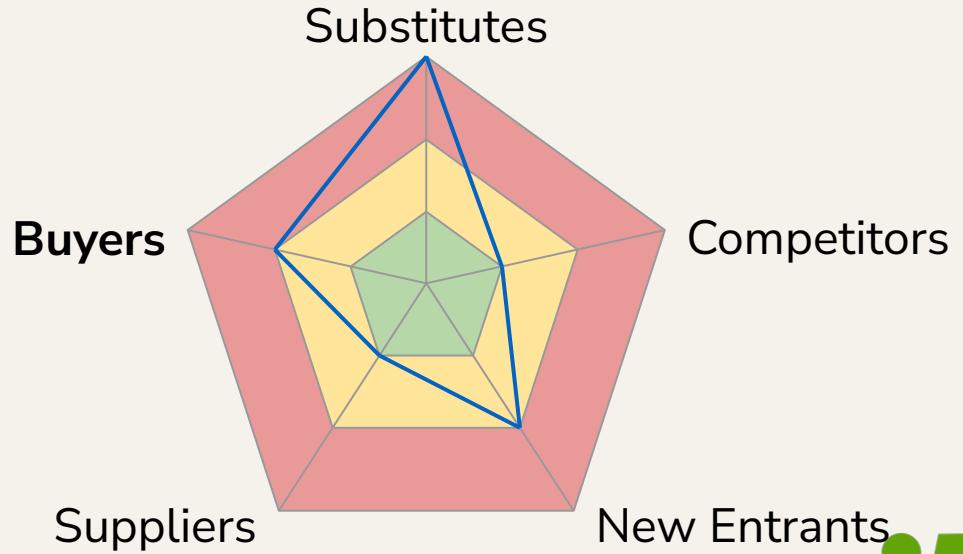


Competitive Analysis

Apartment Cleaning Robot Industry

Five Forces

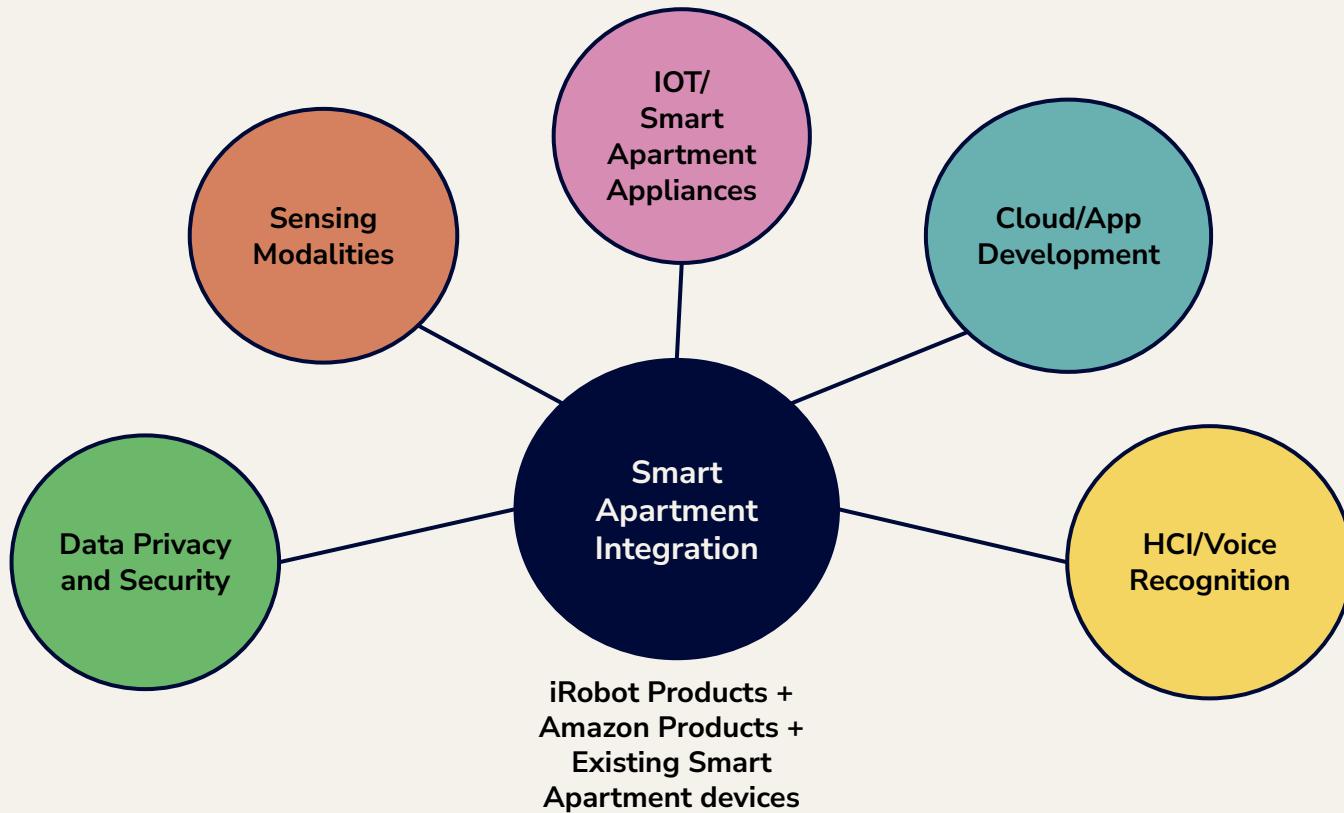
- Substitutes - High
- Competitors - Low
- New Entrants - Medium
- Suppliers - Low
- **Buyers - Medium**
 - Low switching costs
 - Offer a differentiated product
 - High volume and large contracts give buyers more bargaining power



Technical Feasibility



Technology Overview

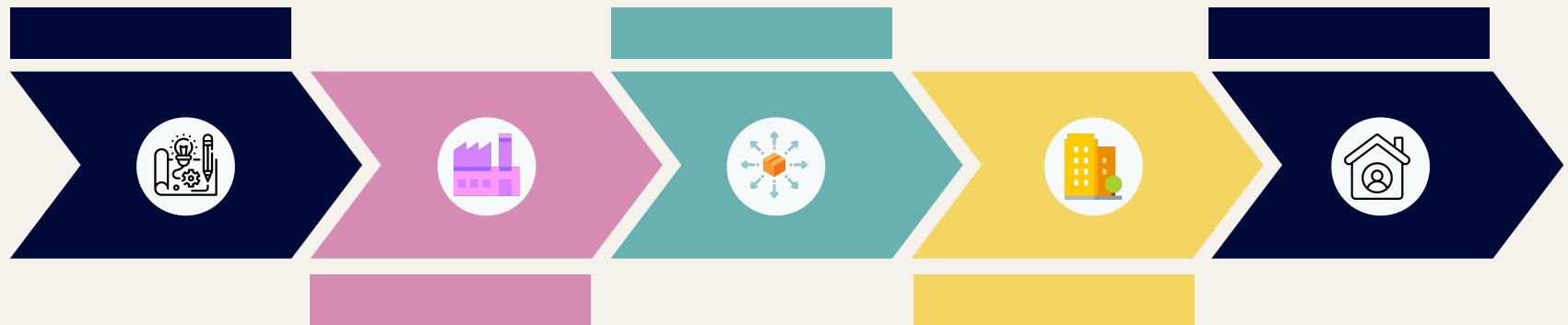


Product Value Chain

Prototype Design

Distribution

Renter



Production

Customer



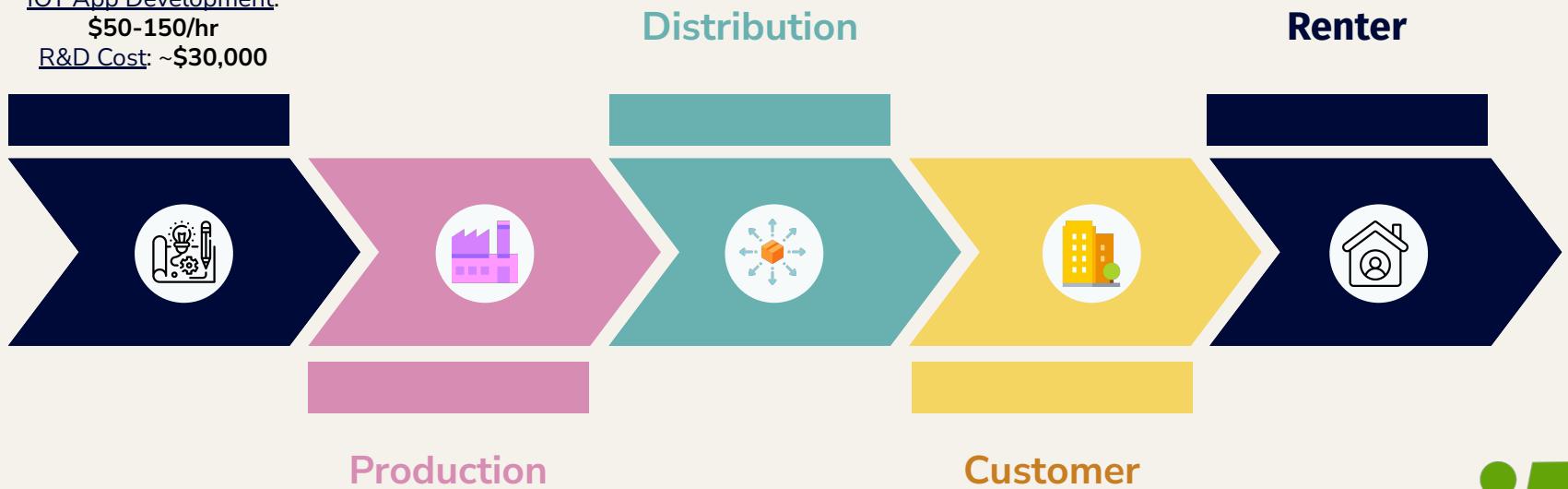
Development Cost Breakdown

Prototype Design

IOT App Development:

\$50-150/hr

R&D Cost: ~\$30,000



Production

Customer

Renter

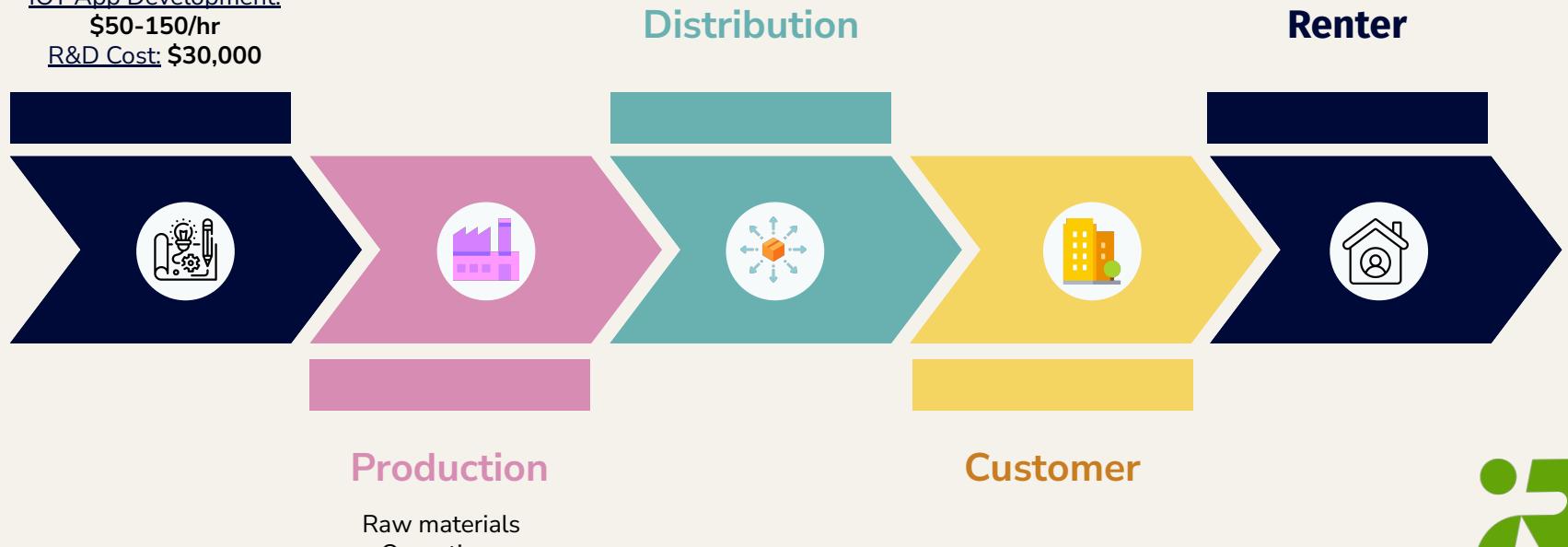
Distribution



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Development Cost Breakdown

Prototype Design

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R&D Cost: \$30,000



Distribution

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

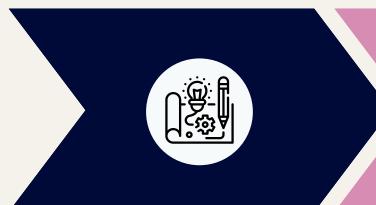


Renter



Production

Raw materials
Operations



Customer



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



Production

Raw materials
Operations



Customer

Partnership cost



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Distribution

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



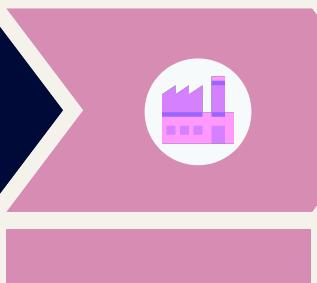
Renter

Service costs: installation,
maintenance, repair, after sales



Production

Raw materials
Operations



Customer

Partnership cost



Risk Identification

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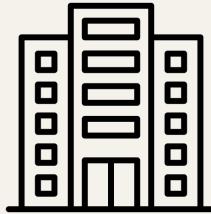
Risk Identification

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Key Dependencies



Apartment Companies

Burden of convincing renters

Maintenance of robots and training personnel



Renters

Affordability

Need

Lack of tech savviness

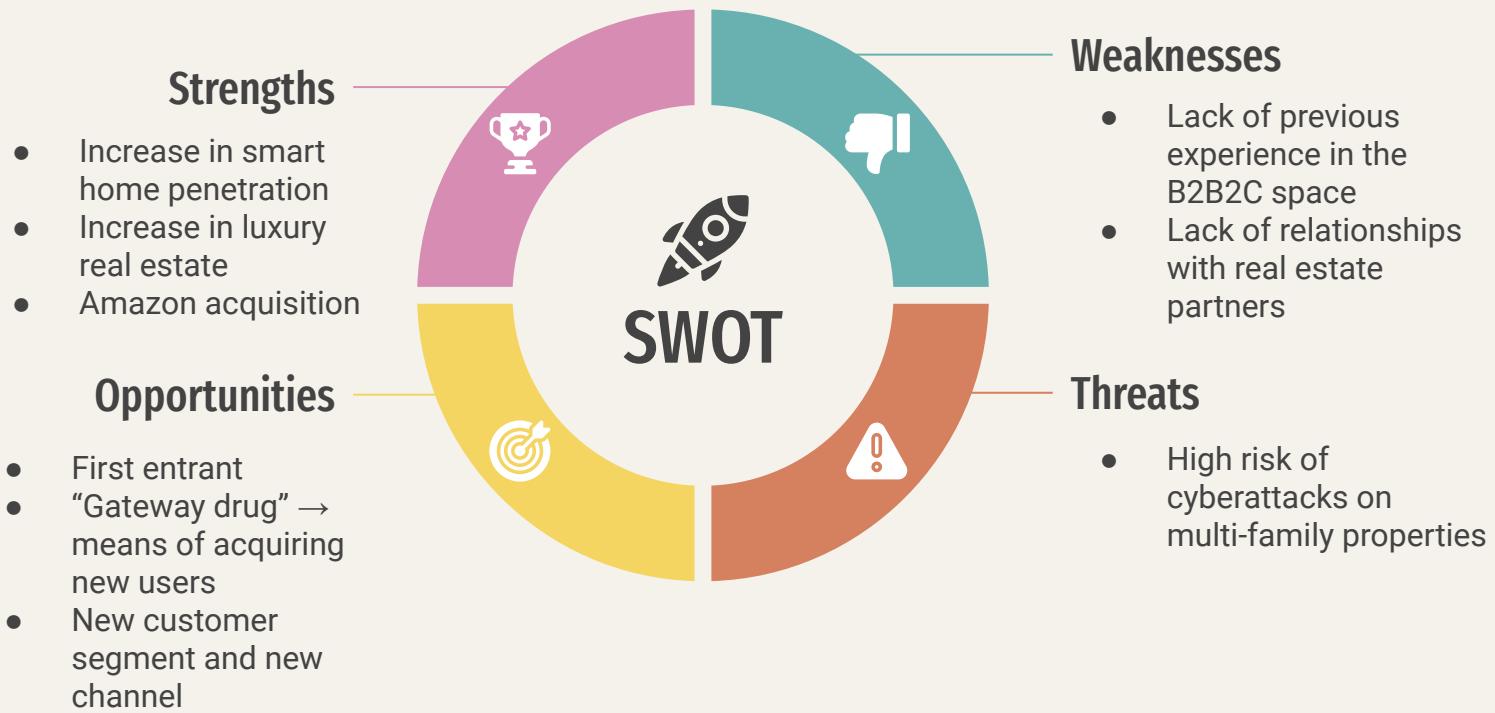


Other Smart Apartment Appliances

Ease of integration

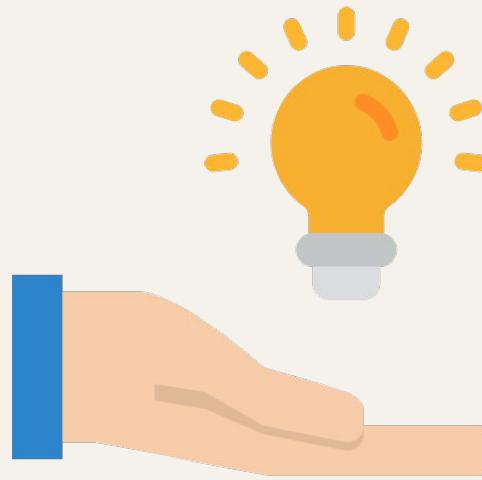


SWOT Analysis

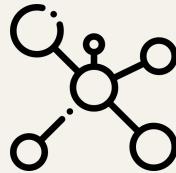


Window of Opportunity

- Growing market
- Unsolved market
- Early Entrant

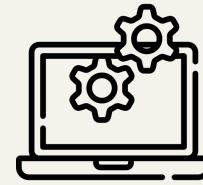


Mitigation Strategies



KEY DEPENDENCIES

- Market analysis → better understand demand
- Well-defined marketing and adoption strategies



TECHNOLOGY

- End user education
- Extensive user testing



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



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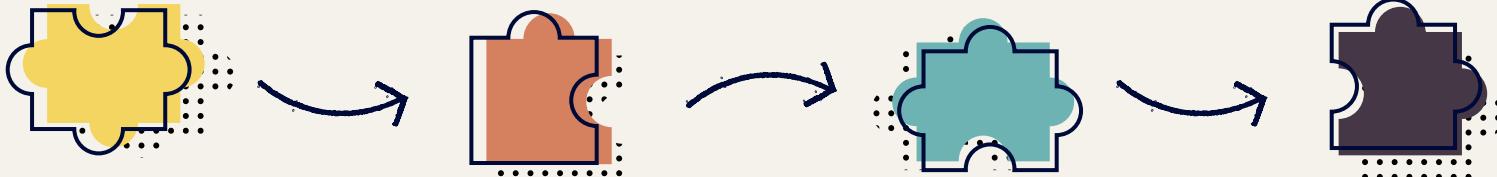
Next Steps

More specificities for initial product idea (1-2 weeks)

Identify stakeholders & survey stakeholders on MVP idea (1 week)

Iterate MVP based on iRobot team's feedback and stakeholder survey (2 weeks)

Decide next steps for MVP (1 week)



Thank You! Questions?

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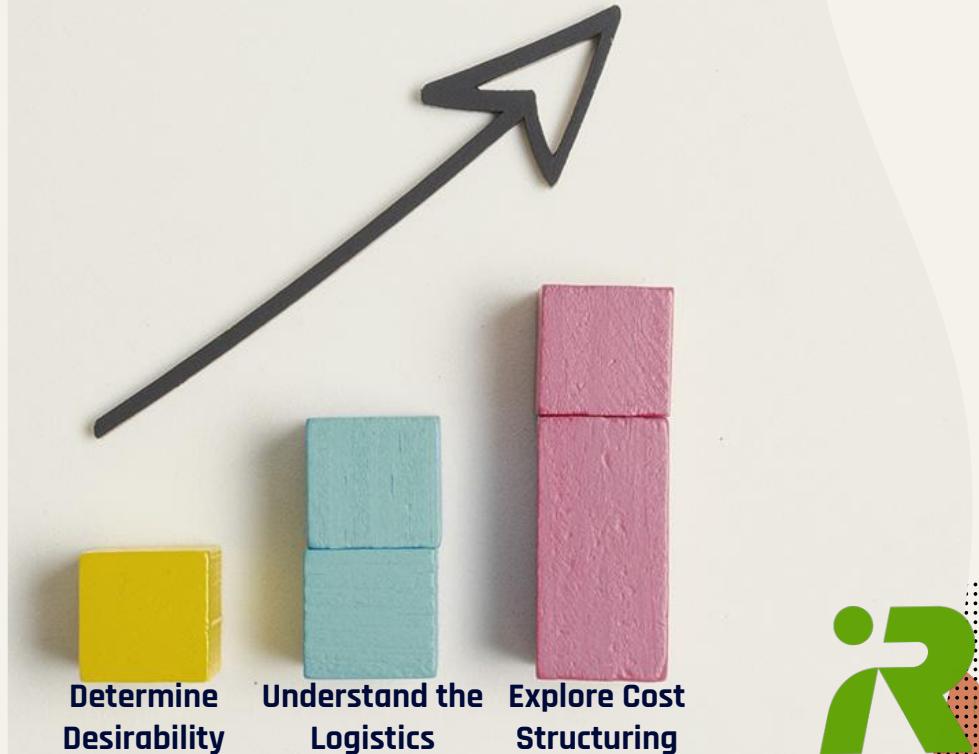
Team Journal Link



Decision Making Units (DMUs)

- *Initiators* - Sales and Managers
- *Gatekeepers* - Legal and Finance
- *Deciders* - Owners and Executives
- *Influencers* - Local Support Staff
- *Purchasers* - Owners and Executives
- *Users* - Renters/Tenants

Decision Making Processes (DMPs)



Product Ecosystem

Apartment Services Staff

Understanding how to integrate into existing appliances and maintain

End Users/Renters

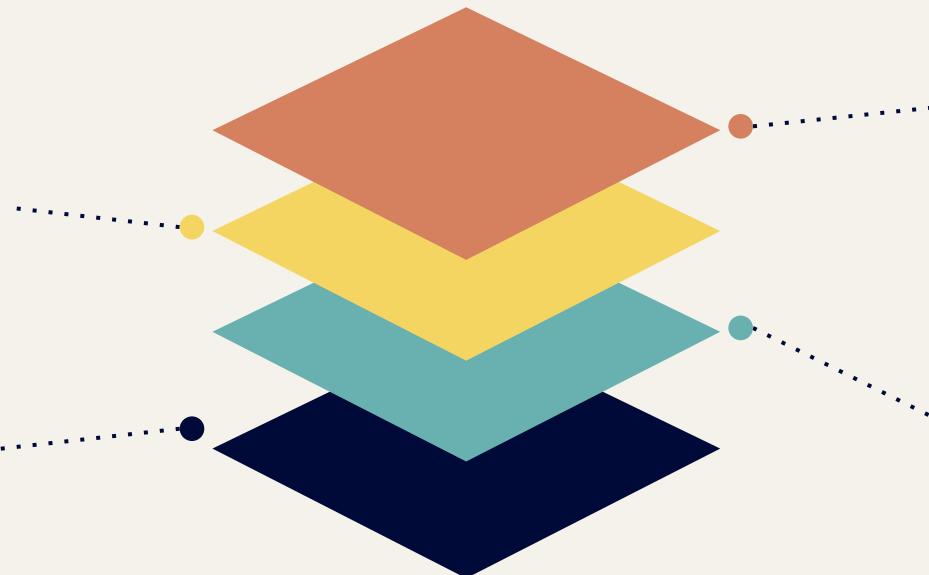
Expectation of cleanliness and what smart-apartment products do

Apartment Marketing/Sales

Responsible for "selling" the product

Smart Apartment Devices

Better idea of when to start/stop cleaning, integration with other smart-apartment services



Barriers to Adoption

For Luxury Apartment Companies

Up-Front Costs

How much will it cost to get?

Ease of Integration

Will it work with my existing setup?

Desirability

Will tenants want this?

Operating and Maintenance

How much will it cost to maintain?



Benefits from Integration



WiFi Router

- Internet Connection
- Control through mobile app



Smart Thermostat

- Better information of occupancy (nobody is home)



Smart Speaker

- Enhanced HCI
- Voice control
- Auditory cleaning updates



Smart Lights

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



Smart Lock

- Better information of occupancy (nobody is home)



Apartment Complex

- Preloaded maps from apartment floor plans





Technology

- Potential loss of integration with other companies due to Amazon acquisition
- Incompatibility with other products → leading to bad customer experience





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



Risks and Mitigation - Extra Info

	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
	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 researchImplement 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 strategyImplement 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 coursesProvide 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 strategyProvide 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 strategyImplement 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 toolsEnd 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

References

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