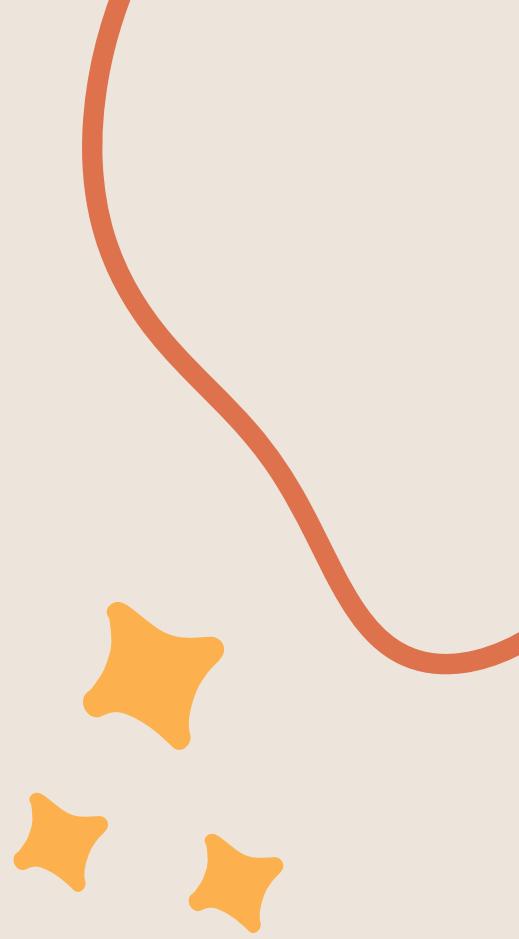


Team Megaminds





SKIT - Presentation

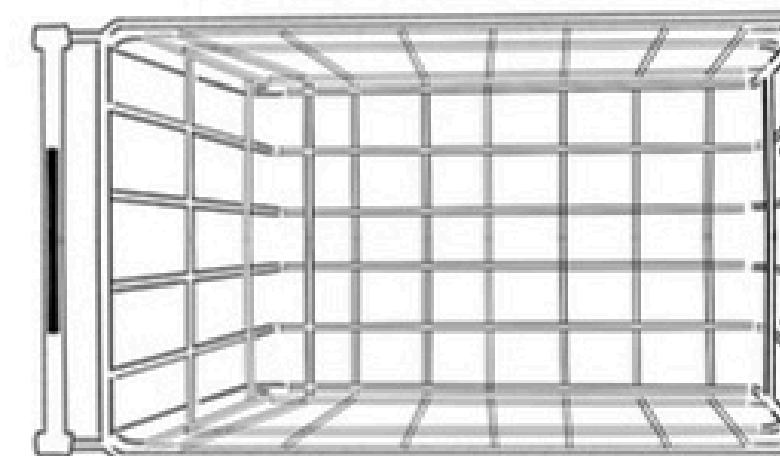


SMART-KART Concept Art

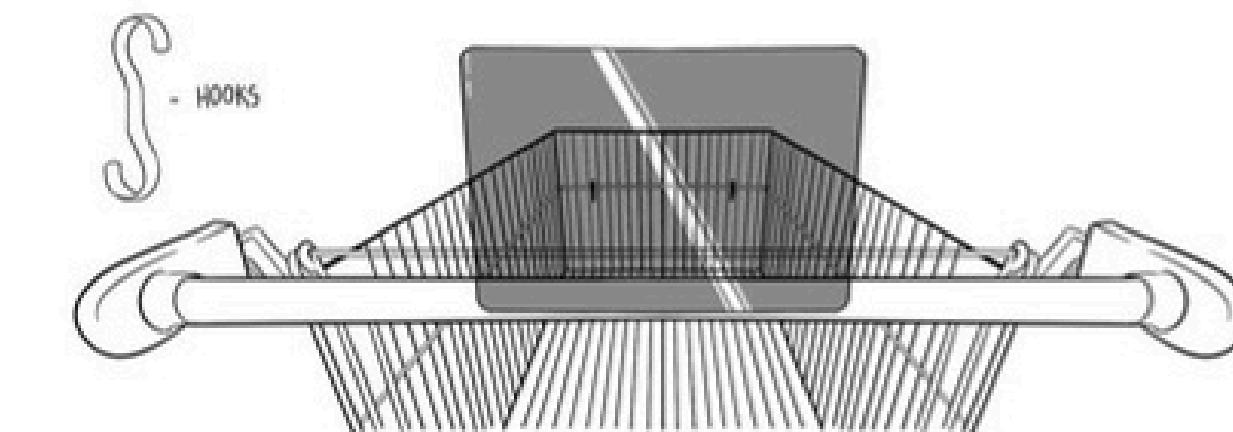
IEN301
OAP PROJECT



SIDE VIEW



TOP VIEW



CLOSE UP

CATEGORY	PROMOTIONS	SEARCH
CANNED GOODS	SHAMPOO offer expires 2/12/25	ASALE 1
CONFECTIONERY	50% OFF	ASALE 2
DAIRY	AL MARAI MILK offer expires 5/12/25	ASALE 3
BREAD + BAKERY	BUY 1 GET 1	ASALE 4
BEVERAGES	BASMATI RICE 1KG offer expires 5/9/25	ASALE 5
FROZEN	25% OFF	ASALE 6
PET CARE	ARIEL LAUNDRY DETERGENT 2KG offer expires 5/12/25	TOTAL : 78.99 AED

CLOSE UP - SCREEN

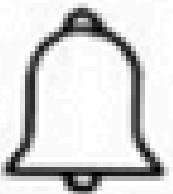
3D MODEL



CATEGORY

PROMOTIONS

SEARCH



CANNED GOODS

SHAMPOO

offer

expires

2/12/25

CONFECTIONERY

50% OFF

DAIRY

AL MARAI MILK

offer

expires

5/12/25

BREAD + BAKERY

BUY 1 GET 1

BEVERAGES

BASMATI RICE 1KG

offer

expires

5/9/25

FROZEN

25% OFF

PET CARE

ARIEL LAUNDRY
DETERGENT 2KG

offer

expires

TOTAL : 78.99 AED

AISLE 1

AISLE 2

AISLE 3

AISLE 4

AISLE 5

AISLE 6

YOU

Concept and Vision

The Lulu Smart Kart is a fully automated, self-driving shopping trolley that uses in-store GPS, voice assistance, product search, and automatic checkout to create a seamless shopping experience. It also includes a child-facing screen for entertainment and built-in obstacle sensors for safety.

The idea stemmed from our own real-life frustrations with in-store shopping—struggling to find items, dealing with crowded aisles, and waiting in long checkout lines. Through our observations and experiences in large supermarkets like Lulu, we realized that traditional carts haven't evolved to match customer expectations in today's fast-paced, tech-driven world.

Our vision is to bring smart, hands-free, and hassle-free shopping into everyday retail—saving time, reducing effort, and improving the shopping flow for both customers and stores.



JOURNEY MAP

- USER GROUP: ELDERLY SHOPPERS, PHYSICALLY LIMITED INDIVIDUALS, AND BUSY CAREGIVERS AT LULU HYPERMARKET.
- INTERVIEWEES: 11 INDIVIDUALS INCLUDING ELDERLY CUSTOMERS, STAFF, AND CAREGIVERS.

SCENARIO

Elderly and busy customers experience challenges at different stages of shopping at Lulu Hypermarket.

EXPECTATIONS

They want a smooth, low effort shopping trip with fewer delays, easier navigation, and better support.

STAGES	PLANNING THE TRIP ➔	ARRIVING AT LULU HYPERMARKET ➔	NAVIGATING THE STORE ➔	CHECKING OUT ➔	LEAVING THE STORE
GOALS	<ul style="list-style-type: none"> Avoid crowded hours and busy weekends Remember all necessary items Minimize time and physical strain during the trip 	<ul style="list-style-type: none"> Start shopping without stress Minimize walking from entrance to cart area Feel confident and ready to shop 	<ul style="list-style-type: none"> Find all items efficiently Reduce physical strain from walking and bending Avoid getting lost or confused by layout changes 	<ul style="list-style-type: none"> Pay quickly without standing for long Avoid lifting heavy items during checkout Complete the process without forgetting anything 	<ul style="list-style-type: none"> Exit smoothly with all groceries Return home without needing help Feel satisfied with the trip
ACTIONS	<ol style="list-style-type: none"> Write or mentally note a shopping list Wait for off-peak times or rely on family members for help Think through the layout of the store in advance 	<ol style="list-style-type: none"> Walk slowly from car or home Look for a cart that's available and easy to use Scan surroundings to get familiar with the layout 	<ol style="list-style-type: none"> Push cart, retrace steps, revisit sections Ask staff for help Look for signs or aisle numbers 	<ol style="list-style-type: none"> Queue at cashier or self-checkout Wait while holding or leaning on the cart Sometimes leave items behind if lines are too long 	<ol style="list-style-type: none"> Load groceries into car or carry home Return trolley Rest or recover afterward
THOUGHTS	<ul style="list-style-type: none"> "I hope I don't forget anything again." "I should go when it's not too crowded." "Will I be able to manage the trip alone?" 	<ul style="list-style-type: none"> "I hope I find what I need quickly." "Do I have the strength to do this today?" "Where are the carts? Are they available?" 	<ul style="list-style-type: none"> "Why can't I ever remember where this is?" "It's tiring walking so much." "I hate having to ask for help every time." 	<ul style="list-style-type: none"> "This line is too long." "I wish checkout was faster." "I hope I didn't forget anything important." 	<ul style="list-style-type: none"> "I'm glad that's over." "That was harder than I expected." "Did I get everything I needed?"
PAIN POINTS	<ul style="list-style-type: none"> Anxiety about forgetting items Feeling overwhelmed or rushed Low physical stamina or recent health conditions 	<ul style="list-style-type: none"> Physical strain before even beginning Difficulty handling or pushing regular trolleys Trouble locating a working cart or entry point 	<ul style="list-style-type: none"> Confusing store layout (especially after renovations) Hard to reach items on top/bottom shelves Fatigue from walking too much Language or signage barriers 	<ul style="list-style-type: none"> Long queues cause physical exhaustion Lifting bags or items at checkout Standing with no nearby seating or assistance 	
EMOTIONS	Worried and unsure	Tired and hesitant		(Frustrated, impatient) or (Occasionally satisfied)	(Exhausted) or (Relieved)
OPPORTUNITIES	<ul style="list-style-type: none"> There is an opportunity to support pre-shopping organization and reduce cognitive load. There is an opportunity to help users feel more prepared and confident before entering the store. 	<ul style="list-style-type: none"> There is an opportunity to make store entry more comfortable and accessible. There is an opportunity to reduce physical barriers right at the beginning of the journey. 	<ul style="list-style-type: none"> There is an opportunity to improve wayfinding and reduce effort spent locating items. There is an opportunity to reduce staff dependency for basic navigation. 	<ul style="list-style-type: none"> There is an opportunity to streamline checkout and reduce wait times. There is an opportunity to minimize the physical effort required during payment. 	<ul style="list-style-type: none"> There is an opportunity to end the shopping experience with ease and peace of mind. There is an opportunity to reduce post-shopping strain through supportive design.



Lulu hypermarket's Ideal Customer



Background

- Age range between 30 to 84 years olds who go grocery shopping at Lulu hypermarket weekly and are familiar with the store.
- Are working, retired or stay at home parents that are in charge of getting groceries for themselves and their families.
- Often deal with health issues like knee surgery or not being able to perform their daily routine due to old age.

Lifestyle

- Frequently grocery shop at Lulu Hypermarket, either alone or bring their children along.
- Some prefer to shop during quieter weekdays to avoid crowds.
- Often buy the same brands and products when grocery shopping.

Motivations for Lulu hypermarket

- A built-in touchscreen tablet with a search bar to find products instantly and a live map that guides customers to the product's location.
- Voice command system for accessibility.
- Faster and efficient automatic checkout system that scans and bills items as customers walk out.
- Self-driving mode based on GPS navigation.

Values

- Customers such as elderly people value independence, but appreciate assistance, especially automated assistance.
- Most are open to using simple, reliable, and helpful technology to enhance their shopping experience.
- Customers value a quick, easy shopping trip with ease of movement, lack of waiting hours and reducing physical strain while shopping.

Challenges/pain points

- Having a hard time finding or reaching items that leave customers feeling frustrated.
- Forgetting essential items due to distractions or feeling rushed as they watch over their kids.
- Elderly customers depend on workers to help them with navigating the aisles or finding common items.
- Long checkout queues and waiting hours can lead to customers leaving empty-handed.
- Busy working hours lead to customers feeling tired, confused, and frustrated to shop.
- Customers with health issues/physical fatigue have difficulty with walking, standing in long queues or carrying heavy items.

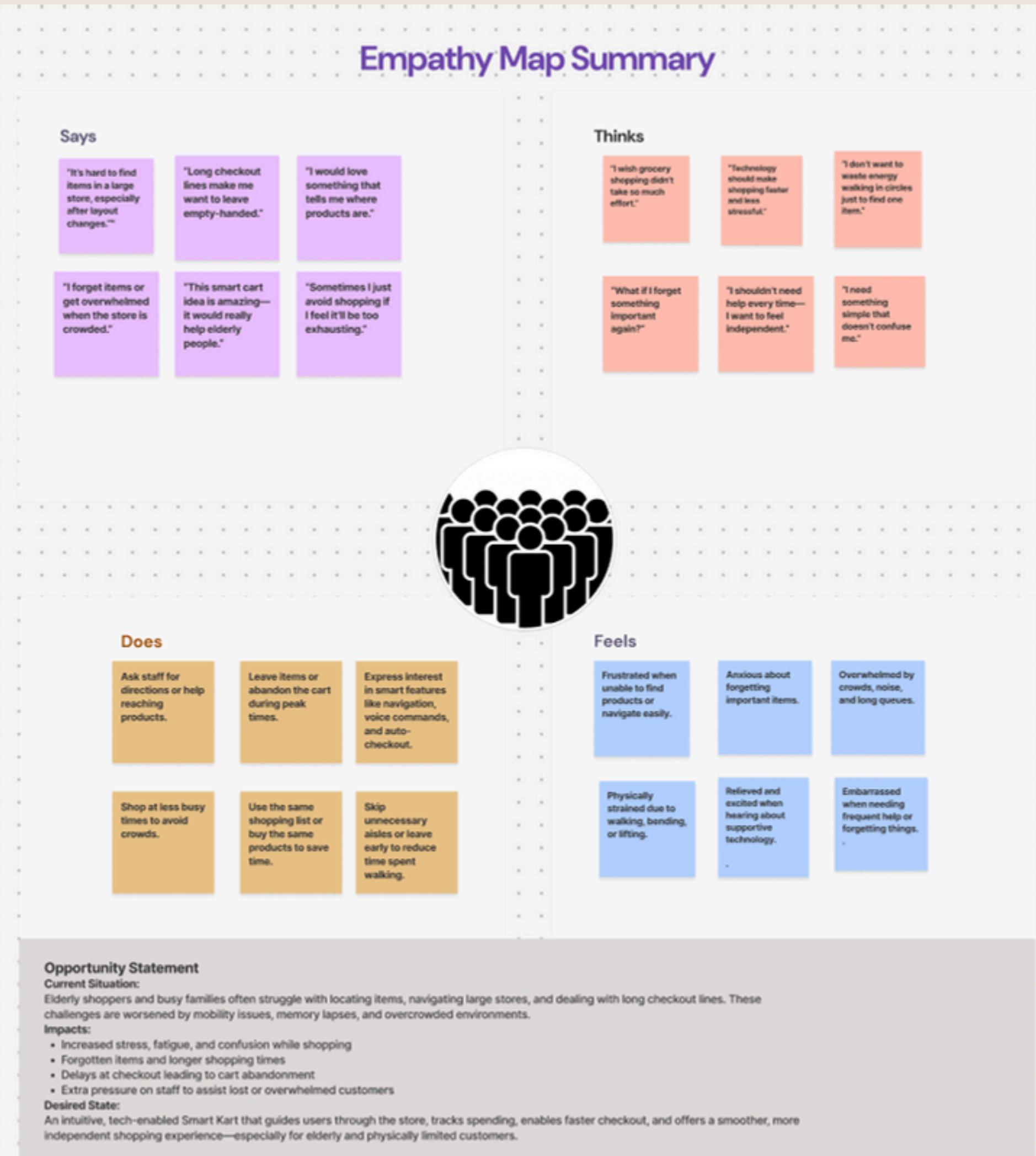
Interview Insights



We interviewed both shoppers and staff. Elderly customers struggled with mobility, finding items, and waiting in line. Staff often get pulled away to assist, slowing operations. Everyone welcomed the idea of a smart cart to improve efficiency.



Empathy Map Summary



Opportunity

There's a gap in the market for an in-store navigation and checkout solution. With no self-driving carts in the UAE and rising demand for retail tech, Lulu has the perfect infrastructure to lead this shift in customer experience.

What If Statement

What if a smart shopping cart could help guide customers such as elderly, working, and stay at home parents by navigating through the store, locating selected items, reducing physical stains and waiting hours that can enhance customer satisfaction and shopping experience.

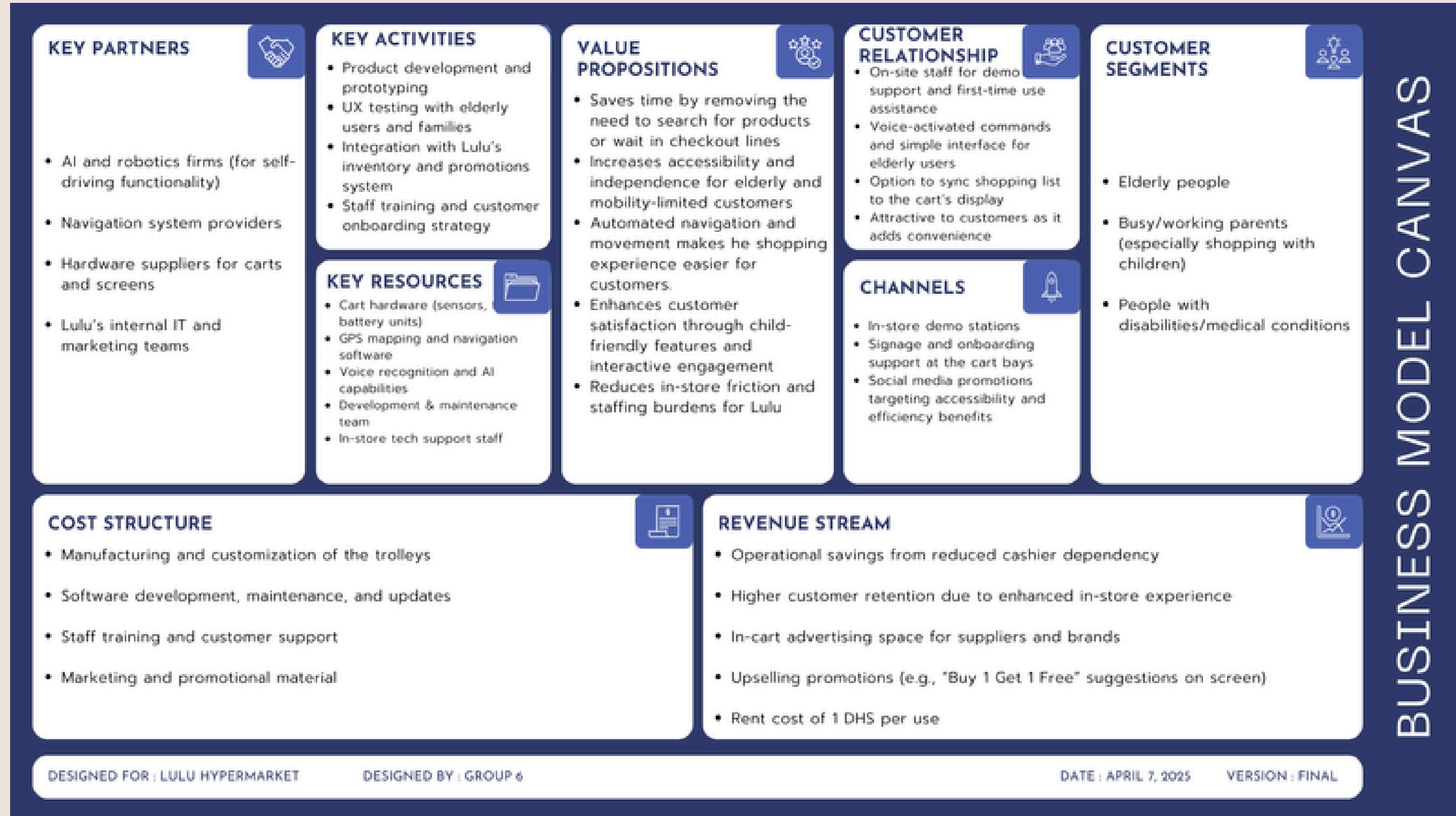
Proposed Solution

Our solution is a self-driving cart with GPS navigation, voice assistance, automatic checkout, and a second screen for children. It solves key pain points while offering added value to families, elderly shoppers, and the store itself.



Business Model

BUSINESS MODEL CANVAS



SWOT ANALYSIS



STRENGTHS

- First AI-powered cart in UAE hypermarkets.
- Easy-to-use, voice commands, and large UI text.
- Leverages existing brand trust and store network.
- Built-in tote bags reduce plastic waste.
- Reduces queue hassle with auto-scan/payment.



OPPORTUNITIES

- Potential government grants
- Scale to Saudi Arabia/Oman post-pilot.
- Sell anonymized shopping trends to brands.
- Sell tech to other retailers (Carrefour, Spinneys).



WEAKNESSES

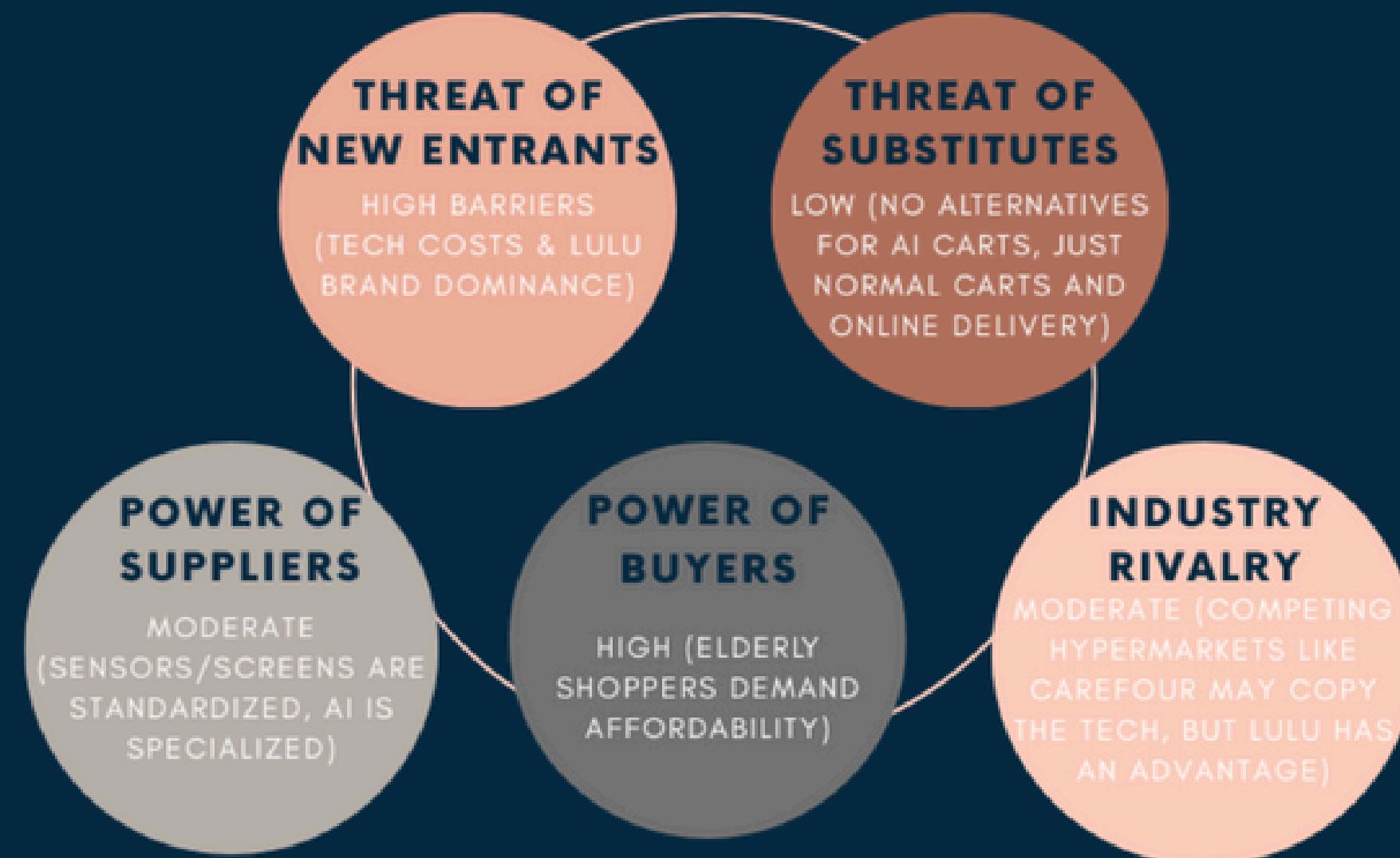
- High initial cost via R&D and manufacturing expenses.
- Elderly may be averse to learning new unfamiliar systems.
- Limited to one retailer (LuLu) initially.
- Sensors/screens require regular updates.



THREATS

- Rivals may replicate features.
- Pushback over payment/data tracking.
- Reduced consumer spending on non-essentials.
- Bugs in navigation/payment erode trust.

PORTER'S FIVE FORCES ANALYSIS



Learning and Adaptation

Originally focused only on navigation and automation. Through interviews, we added auto-checkout, child features, and a simple user interface. Feedback shaped the solution into one that's both innovative and inclusive.



Summary

There's a gap in the market for an in-store navigation and checkout solution. With no self-driving carts in the UAE and rising demand for retail tech, Lulu has the perfect infrastructure to lead this shift in customer experience.

The Lulu Smart Kart is a fully automated, self-driving shopping trolley that uses in-store GPS, voice assistance, product search, and automatic checkout to create a seamless shopping experience. It also includes a child-facing screen for entertainment and built-in obstacle sensors for safety.

The age range between 30 to 84 years olds who go grocery shopping at Lulu hypermarket weekly and are familiar with the store. The customers are working, retired or stay at home parents that are in charge of getting groceries for themselves and their families. Additionally, they often deal with health issues like knee surgery or not being able to perform their daily shopping due to old age.

Thank you

