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Process Book

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IACT 701 Theory of Interaction Design

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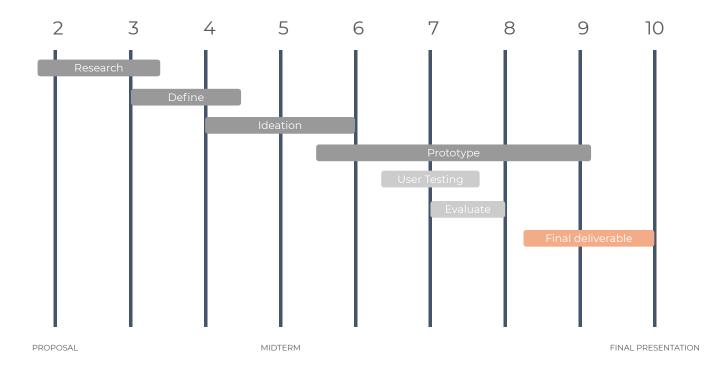
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PROJECT PLAN



INTRODUCTION

- SECONDARY RESEARH
- PRIMARY RESEARCH
- AFFINITIZATION
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- USER JOURNEY MAPS
- 7 IDEATION
- 8 DESIGN CONCEPT
- **PROTOTYPE**
- USER TESTING AND EVALUATION
- FINAL PRODUCT



THE PROBLEM

LET'S MEET STEVE



This is Steve. He has been diligently following pandemic protocols for the past year because he has asthma. He wants to make sure all spaces that he enters are safe for him.



Steve wants to go out into public spaces again so he can get food at the grocery store and meet friends for dinner.



Steve isn't sure if he can go back to public spaces since they might be crowded. How can he be sure that it is safe for him to go there?

WHAT ARE HIS OPTIONS?

OPTION A



Steve goes out and hopes for the best. He tests his luck that the establishments he goes to have also followed proper protocols and are screening all people who come for the virus.



Steve spends the rest of week worrying if someone with the virus was actually at the same places he was. He is unsure if he came into contact with someone unless he gets tested or starts to feel sick. He becomes worried about returning to the places.

OPTION B



Steve goes out and is able to check for himself the air quality and how many people have been around the areas he went to.



After confirming in real time that the spaces are safe for him, he is able to enjoy himself and feel at confident that everything is fine and does not need to worry.



THE PROBLEM

People lack tools that help them feel safe in public spaces. They can only be held responsible for their actions following security protocols, not for others' behavior or the public space management.

OUR GOAL

We intend to design a user experience product to help people feel safer and confident about Covid-19 when entering a crowded place.

SECONDARY RESEARCH

139,501,934 CONFIRMED CASES WORLDWIDE



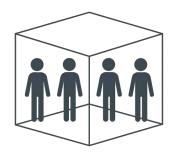
2,992,193 Deaths

"

"

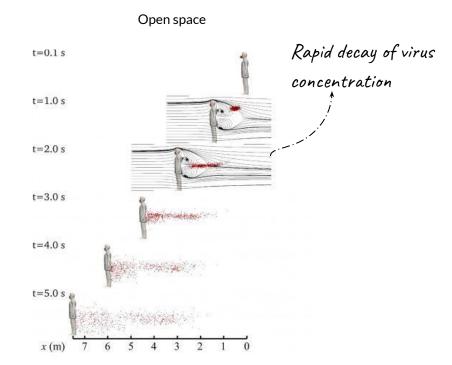
The presence of an infectious person in enclosed spaces for an extended time results in the infection of people who are more than 6 feet away.

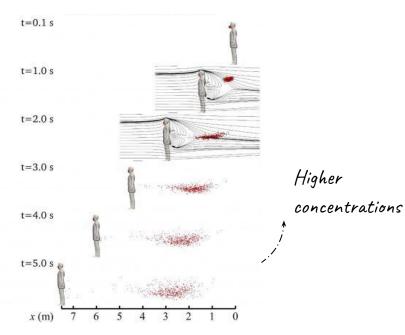
ENCLOSED SPACES RETAIN HIGHER COVID-19 CONCENTRATION



Twice the concentration of open spaces

SARS-CoV-2 STUDIES





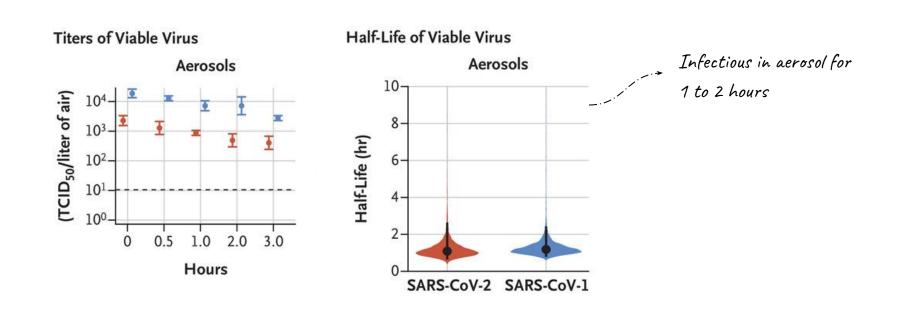
Narrow corridor

COVID-19 REMAINS INFECTIOUS IN THE AIR



For 1 to 2 hours

SARS-CoV-2 STATISTICS

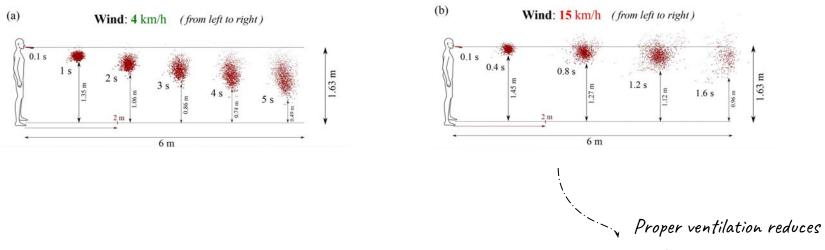


POOR VENTILATION KEEPS VIRAL CONCENTRATION



3 times longer than ventilated places

SARS-CoV-2 STATISTICS



viral concentration

UX PROBLEM

People need to feel **safe**

59% Employees said they are worried about co-workers not following rules

56% Employees are worried about airborne transmission

30% Employees are worried companies will not invest in new technologies

20% Employees are concerned companies will not disclose health risks



< Back

Done

Receiving a Notification

A few times a day, your phone downloads the tokens from other COVIDWISE users who anonymously submitted positive results. When it does, you may discover that your phone was near one or more of those tokens on a day when that user was contagious.

COVIDWISE determines that an exposure notification should be sent if on a single day you are estimated to have spent at least 15 minutes within 6 feet of users who were considered contagious.





< Back

Distance & Duration

These anonymous tokens are never tied to your identity or location. They're just a string of random numbers and letters that change every 10-20 minutes. Devices that are near each other will remember each others' tokens.

COVIDWISE will also remember how long you were near each other and use Bluetooth signal strength to approximate how close the devices were to each other.

All of this information is only stored on your phone.





Sharing a Positive Result

< Back

Done

Done

So let's say you're not feeling well, and you get tested for COVID-19. The test results come back positive, and the lab shares the results with VDH, who contacts you for COVID-related follow up. You'll be given a verification code by VDH, which you can submit into COVIDWISE from the Notify Others' tab.

When you submit a positive result, you'll be asked to select the date your symptoms began. This helps the app understand when you were contagious, which is considered to be 2 days before symptoms began and extend for at least 10 days after. After selecting a date, your phone uploads your anonymous tokens from the last 14 days.

Sharing your positive result will let others know if they were potentially exposed to COVID-19.







Done

Anonymous Tokens

Here's an example of how COVIDWISE works:

You're in a store standing in a line near another customer, who you don't know.

You both have **COVIDWISE** enabled on your phones. Since you were standing close to one another, your phones exchanged anonymous tokens over Bluetooth.





COVIDWISE (Virginia)



As you go about your day, the app uses Bluetooth to sense when you spend more than 10 minutes within 6 feet of another person with the app.

This is "close contact". It's long enough and close enough for you to catch the virus.

The app ignores people who just pass by or stand more than 6 feet away from you. You'll never get any alerts because of them.

How It Works

10 min

X

When your app senses the close contact, your phone exchanges a secure random code with the other person's phone. Your phone stores this close contact code in a list.

The codes are random and don't reveal any information about you or the other person. The app doesn't collect or share any names, locations, or phone numbers.





If you test positive for COVID-19, a public health representative will call you as soon as possible.

The representative will ask if you're willing to share your app's list of close contact codes to help protect other people.

Sharing your list is secure and private. The app never reveals who you are to anyone.

How It Works

X



Each day, every phone that has the app compares its own list of close contact codes to the list of "infected" codes.

If there's a match, the app will display a COVID Alert.



COVID Alert NY (New York)

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20	0	•	_		0 <u>—</u>	Exposure De Learn more >	etection On	0	No Exposure You haven't receiv past 14-days	Reports ved any exposure rej	eports over the
Your phone re other devices it won't identi anyone.	it meets, but	Your persona identifiable i never leaves	nformation	The app will no you may have l exposed to CO	otify you if been		ted positive for can anonymously to help keep your e.	?	Stay home Wear a ma D Stay 6 feet More Info	r hands often e when sick ask	<i>→</i>
Is my privacy p	rotected? →	What if I'm	exposed? →	Get starte	ed →				Ch	eck for exposures	S
How we protec	t your privacy	How we prote	ect your privacy	How we protect	your privacy	Dashboard	(0)	ettings	Dashboard	Exposures	Settings

Guidesafe (Alabama)

Positives:

- Helpful information for tracking those who might have Covid
- Design and layouts are really easy to use
- Privacy concerns are addressed and users do not need to worry about this

Negatives:

- Heavily relying on honesty of other people
- Information comes too late
- Only works well if a lot of people use it
- They are only useful in certain states

PRIMARY RESEARCH

Chosen Methodologies

Based on our research direction and integrated learning from class, we decided to use four methodologies to gather the information

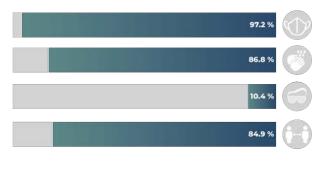
- Survey
- Town Watching
- Grocery Shadowing
- Interview





individual participated in our survey

36+ SAFENESS FEELING + SAFETY PROTOCOLS



Follow safety protocols



Safeness feeling

95% confidence

WHY?

TRUST IN PROTOCOLS + TRUST IN OTHERS



Trust in safety protocols





Trust in others

95% confidence

AWARENESS OF DANGER FACTORS



Are aware of the number of people



Are aware of ventilation

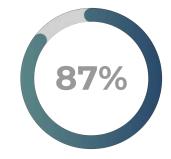
95% confidence

WHAT ARE THE CONSEQUENCES?

RETURN TO PUBLIC SPACES



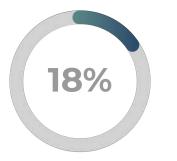
Will never feel safe returning to public spaces



Avoid crowded spaces

95% confidence

PUBLIC SPACES VISITATION



Few times per day



Few times per week

1	0%	

Never

95% confidence



INTERVIEWS



1. What has your experience been with COVID-19 for the past year?

2. What are your thoughts on the current CDC guidelines?

3. Are there any guidelines that you do not feel are being followed well enough?

4.Do you trust others to follow the guidelines? Why or why not?

5. What would you do if you came across a crowded public space?

6. How aware are you of ventilation when in confined public spaces?

7.. What are some things that you notice when entering a confined public space?

8. What would make you feel safer in confined public spaces?

Basic Information

Thoughts on CDC Guidelines

Thoughts on other People

Experience in Public Space

Response to Public Space



Thoughts on the current CDC guidelines?

"I **trust** CDC guidelines because the rules are from experts "

"I feel lots of people follow the rules because they don't want to cause troubles but they don't believe it"

"I **trust** them, but I wish more people followed them."





Are there any guidelines that you do not feel are being followed well enough?

"People are **not keeping 6 feet**. I would avoid crowded people."

"People do **not wear masks properly.** They have them around their chin."





What would make you feel safer in confined public spaces?

If I have to touch the thing in public area, I would touch the part which rarely people would touch it. For example, if I need to pull/push the door, I would touch the bottom of the door handle.

"I would feel better if there were **wipes available for everyone.**"





What would make you feel safer in confined public spaces?

The guest scans a QR code on his / her mobile, sees the menu and places the order via the mobile without downloading any app and touching the menu.

"It makes me feel safer"



TOWN WATCHING



Participants Observed Pedestrian

Point for Observation

- Proper use of the mask
- Hand sanitizer
- Social distancing
- Avoid crowded spaces
- Is people alone or in a group
- Are they careful in the group



Proper use of the mask?

- Many people were wearing masks, but there were a few people who were **not covering their noses.**
- Almost all **children** (under ~12 years old) were **not wearing** masks at all.



Hand sanitizer available?

- Does not seem to be found in many places.
- It was available in certain places, such as restaurants and entrances to a few stores in the mall.
- It could be **difficult to find hand sanitizer** that can be used by the public.



Social distancing?

- Social distance guidelines did not seem to be followed very closely. In places such as the mall or grocery store, people did not seem to care about maintaining a six feet distance from others.
- In places such as the SCAD library, people tended to be seated at a proper distance. This was helped by markings and tables being set at a distance.



Avoid crowded spaces?

- In all places observed, **there did not seem to be anyone avoiding these spaces** due to it being crowded.
- Perhaps **people who were concerned** about crowded spaces **did not leave home** in the first place, or maybe people are less concerned now.



Are people alone or in groups?

- In places like the mall or restaurants, people tended to stay **in groups** of friends or family.
- In other places like the MARTA or library, people were usually alone.



Are people careful in groups?

- Groups seemed to empower people to **not** wear their masks properly.
- In restaurants, **people would remove masks due to the social aspect** of eating out.
- In the mall, **people grouped** together would **lower their masks** to help ease their ability of speaking to one another.



GROCERY SHADOWING



Participants Observed

Family and Friends

Observation Place

Grocery stores

Observation Time 20 minutes

Point for Observation

-What things they would do to feel safe-What things they see other people do to feel safe-What things they care about-What things they pay attention to





What things they pay attention to

- Wipe the cart
- She feels safe to see other **wearing a mask**
- No one eats or drink in the store
- No one is following the arrow on the ground
- Do self-checkout so she could have less

interaction with other people





What things they would do to feel safe?

- Use hand sanitizer before touching own body
- Not touch the item unless trying to see the ingredients on the package
- Disinfect items with alcohol
- Use hand sanitizer once she is back to her car
- Take a shower once back to house

Q Moving from

Survey, Town Watching, and Grocery Shadowing

People said...

People acted...

60% trust in CDC guidelines and most of them follow the guidelines.	CDC Guidelines	Social distance guidelines did not seem to be followed by public areas.
People are scared to return to public space.	Public Space	It did not seem that anyone is avoiding these crowded spaces.
People tend to do extra work to protect themselves.	Protection	People are not wearing a mask properly, and they go with a group.

AFFINITIZATION

AFFINITY DIAGRAMMING

74 8 viable data themes

Thoughts on the current CDC guidelines	COVID Past Experience	Ventilation	Feel Safer
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		Concentration of Concen	
Notice when entering a confined public space	Trust others to follow the guidelines	Entering a confined public space	Mask
			Mask Waska Wask Wask Wask Wask Wask Wask Wask Wask Wask Wask

AFFINITY DIAGRAMMING



? HOW MIGHT WE

Ensure all people are properly wearing safety protocols?

Educate people on the use of safety protocols?

Make people confident with ventilation in an enclosed space?

Make people feel fine about the number of people in an enclosed space?

Create a trusted environment in enclosed spaces?

Ensure there is no virus in the elements people touch?

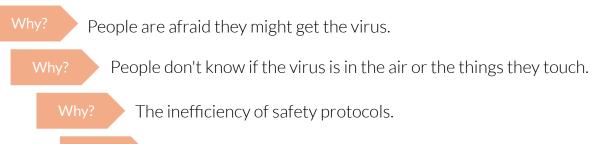
Ensure there are no sick people inside?

Ensure there are no contagious levels of virus in the air?

How might we ... alter the public confined spaces visitation experience to help people feel safe?



Problem: Why do people not feel safe in public confined spaces ?



Inappropriate use of safety protocols by some people.

Why?

Lack of awareness and citizen responsibility.

Countermeasure: Find a way for people to be aware of the threat posed by the virus in closed public spaces

USER PERSONA



Age: 30+

Follows protocols / Doesn't trust other /Scared to return to public confined space / Avoids crowds







"It's all about quality of life and finding a happy balance between work and friends and family"



Primary Susan Smith

Age	38
Occupation	Interior Designer
Status	Married
Location	Atlanta, GA
Tier	Professional
Archetype	Family person

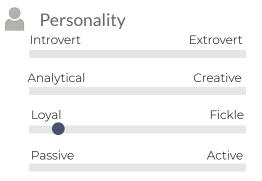


- To have a meaningful job.
- To make the most of her work in the office so work doesn't follow her home.
- To have a happy and united family.
- To take care of her loved ones.



- Has anxiety when away from her loved ones
- Not knowing the health condition of her mom
- Has anxiety when home is not totally clean

Tech Internet Social networks Delivery apps Online shopping Time scheduling app Health app



Biography

Family: one sister, mother, husband, daughter.

Susan is an interior designer at a big company in Atlanta, Georgia. She is passionate about her work and loves going out with her colleagues and friends. **She has a beautiful family and constantly visits her mom.** She is the loving mother of a five-year-old daughter and wife to an architect who also works in a big company.



"Be curious about life, and cautious with it."



Secondary Drew Martin

Age	30
Occupation	Software Developer
Status	Dating
Location	Chicago, IL
Tier	Entry level
Archetype	Extroverted single man



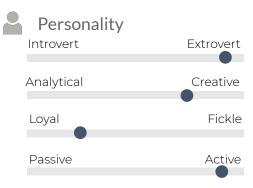
- Earn money for his lifestyle
- Go on lots of dates
- Go to big music festival with all his friends this year
- Continue his workout plan



Frustrations

- Really bummed about not being with friends
- Missing out on fun events
- Has asthma, a Covid-19 comorbidity so he worries about the virus





Biography

Family: mom, dad, younger sister

Drew recently got his first real job as a software developer in Chicago and enjoying single life before COVID. He was active on social media for everyone to stay home and follow protocols. **Drew has asthma, which can be life threatening if he were to contract COVID.** He really wants to go out with friends, but realizes that being uncareful could end up really badly for him.

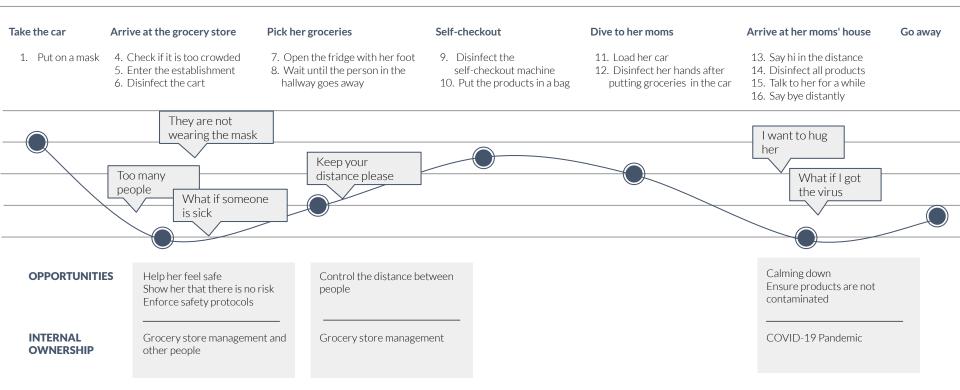
USER JOURNEY MAPS



Susans' Sunday Journey

Scenario

During Covid-19 pandemic, Susan needs to do grocery shopping for her mother.

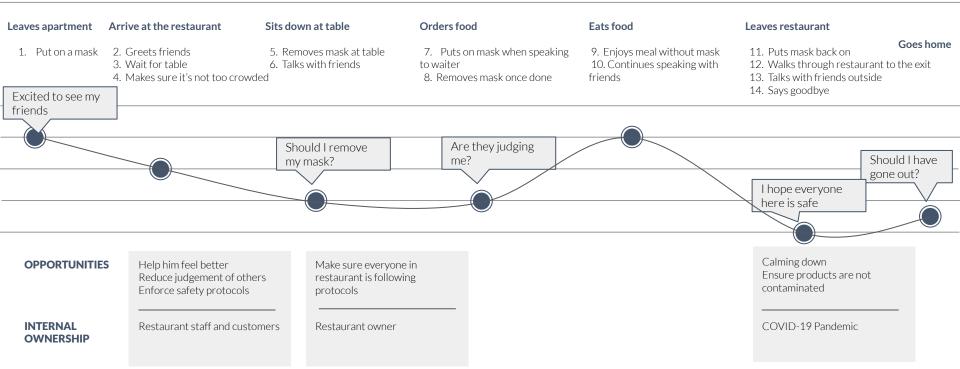




Drew's Friday Night Journey

Scenario

Drew is going to meet up with some friends for dinner at restaurant

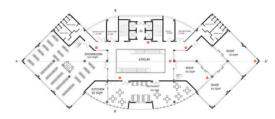


IDEATION

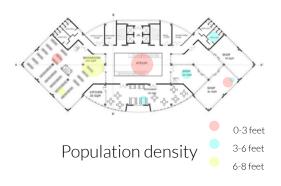




Concept A

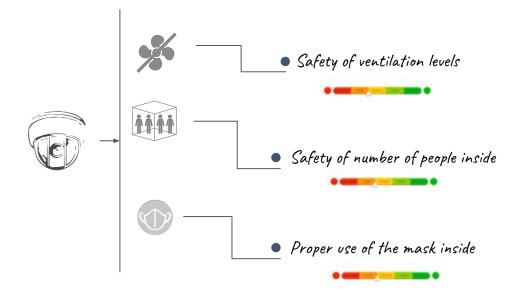


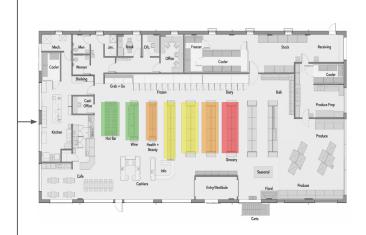
Where is the sanitizer?



iPhone 12 Pro Max – 1	iPhone 12 Pro Max – 2	iPhone 12 Pro Max - 3	iPhone 12 Pro Max – 4	iPhone 12 Pro Max - 5
<text></text>	Scan the OR code RECEIPTION RESONANCE RECEIPTION RESONANCE RECE	Company Info Name Barrie Barrie Menter of monormative available Report of Store	REPORT Store: Time: Description Submit	Thank you for your report!

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Concept A



Concept B



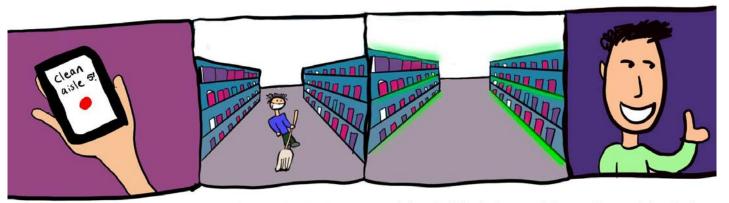
DESIGN CONCEPT

STORYBOARD



Steve really wants to go to the grocery store

When he gets there, he sees the color code to inform him about how clean or dirty an aisle is. This aisle has a red light, which means that it is dirty and could potentially have the Coronavirus The special cameras have been analyzing the store to see how many people have frequented certain parts of the store and can assess the sanitation level.



So they can go clean the aisle

And now the aisle is showing a green light which means that it is safe for patrons to walk down. Steve now feels much safer to shop in the store now that he can see the green light.

The workers of the store are notified that an aisle needs to be cleaned

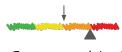


Survillance system



Data

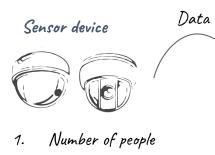
- 1. Number of people
- 2. Time spent



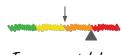
Increase risk level



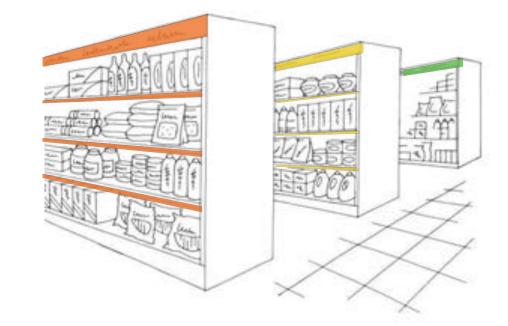
Costumer environment



2. Time spent



Increase risk level

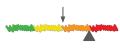


Sensor device



Data

- 1. Number of people
- 2. Time spent



Increase risk level

Survillance system



System automatic actions



- 1. Update ligths status
- 2. Restrict peoples acces
- 3. Request cleaning

Costumer environment

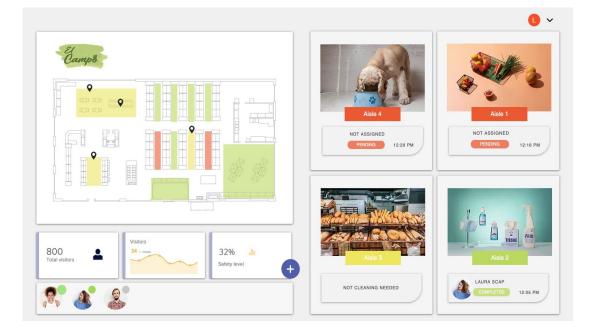


Cleaning staff actions



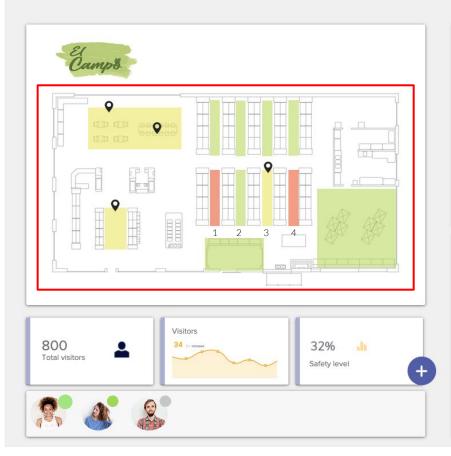
- 1. Receive notification
- 2. Complete the action
- 3. Notify the system

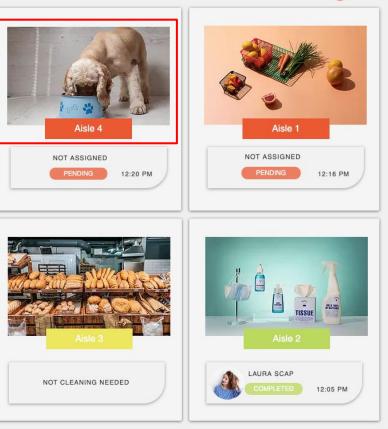
WIREFRAME



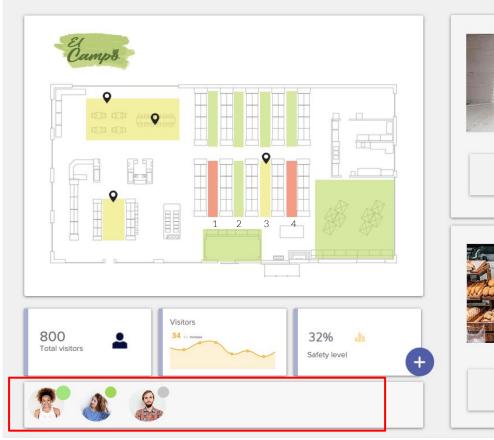


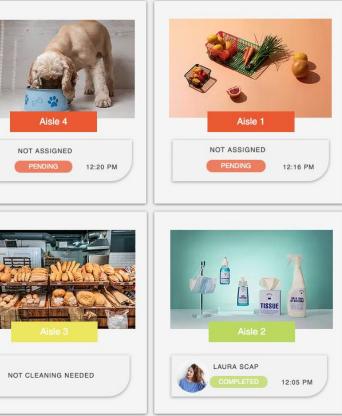
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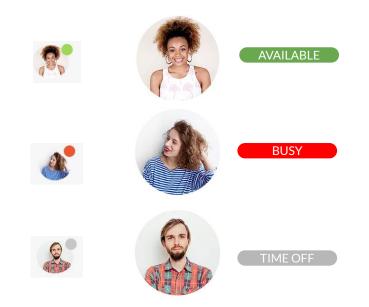


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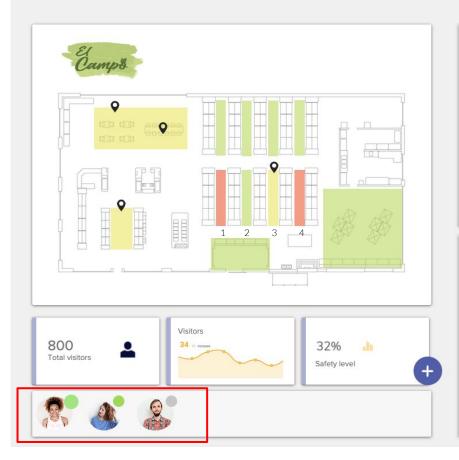


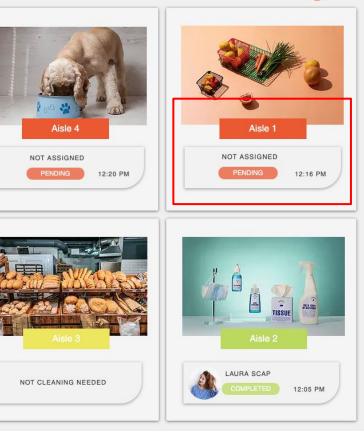


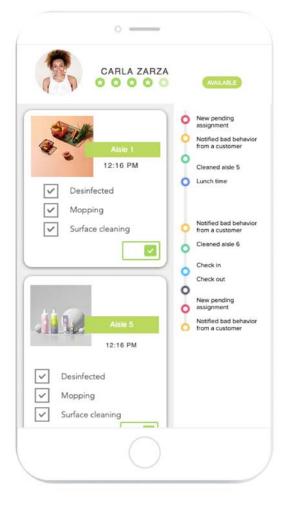
CLEANING STAFF AVAILABILITY



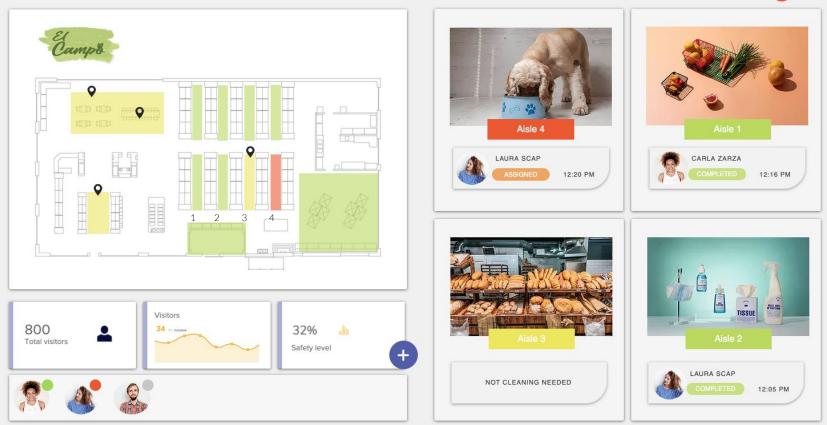
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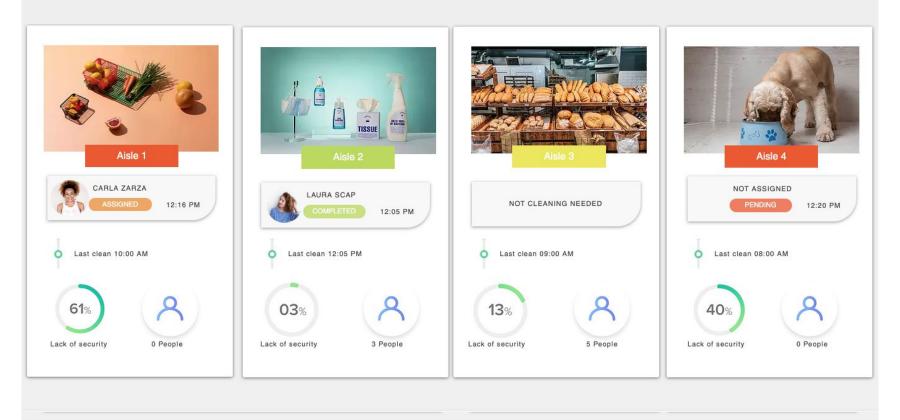




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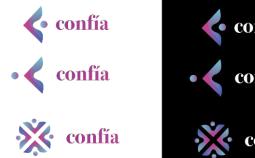
















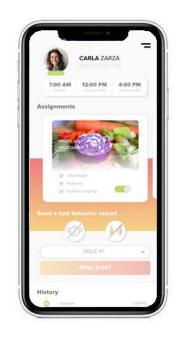
PROTOTYPE

Prototype #01



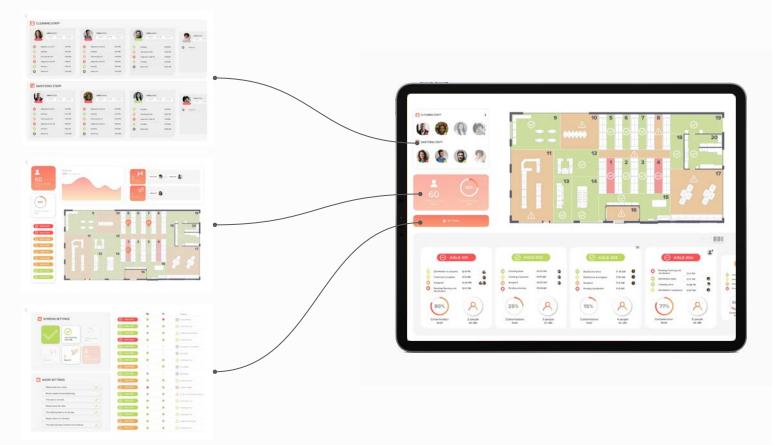


Prototype #01





Prototype #02



USER TESTING AND EVALUATION

Professor's Feedback

SCREEN 1

- If on top left corner is an overview of which staff member is on a task, I would revise for the following:
- Add staff member name and role (just the picture, especially that small, might not be enough to recognize someone)

I would make it a list with individual reports, which might have an icon referring to the type of report, without aggregating them (try to look at it as if you were a supervisor, what would you need to know, why?)

• The list of locations on the left looks unnecessary: it would take less space, and be more easy to read if the reports about contamination level were directly on the map.

SCREEN 2

- What does the staff viz on the top left mean? Red dots, green dots, grey dots.
- I don't think pictures are enough to discriminate who is who: think about the potentially high turnover of staff members, a supervisor might need extra help recognizing people, plus: seeing staff names repeatedly on the UI might help memorize those names.

Settings button is huge, does it need to take all that space?

- On the map, I don't understand the difference between the warning symbol and the "forbidden" symbol. I'd imagine two levels of warning, for which color discrimination may be enough, but "forbidden" symbol seems out of place.
- The overview of task activity on aisles is very dense/heavy, I would try to boil it down to what is the information needed to support decision making for the viewer of the screen: any other thing should be dropped. For example regarding activity status, a history may be overkill here, just current status may be enough (leave history for a detailed view in another screen).

SCREEN 3

- The list view looks so much more credible than the widget view: it has far less data. In this particular case showing just the avatar of the employees assigned might be enough (I feel the most important piece of information is how many staff members are actively responding, especially "nobody" vs. "someone on task").
- I am confused by the status of the last 3 items... if cleaning is done, why is there still a warning?

SCREEN 4

- What is the meaning of the large green box with the tick?
- In general, what is the meaning of all the boxes in screen settings? Are the ones greyed out meant to be NOT shown on displays? You might want to add a header and/or description to teach/remind operator.
- Same thing for audio settings on bottom left: it's unclear what the list, and the ticks, mear
- Same thing for the big list on the right: what is the meaning of green, red, grey, light grey dots? Do they have different meaning from those for staff members? In that case you might want to make them different (different shape, different set of colors), to avoid confusion.

SCREEN 5

- If showing day schedule is meant to support staff with different shift schedules, you might want to add variety in the schedules on the screen: this way you will make it self-explanatory
- Be mindful of basic conventions with color coding:
- Light grey: unavailable/disabled. Green: OK/good. Yellow or orange: attention/warning/anomaly.Red: big problem
- Especially for the status of assigned (but not started job yet): I would replace red with an arbitrary color you decide (e.g. purple)
- I would try to make the color coding in the history more seamless and less obtrusive (for example by making smaller filled circles instead of outlines), as they are they are grabbing maybe too much attention instead of the text labels next to them.
- You could think about dynamic horizontal sizing for the individual cards (as you open the page all cards are very narrow only showing avatar, name, current status and colors/time of history, so you can view 8-12 of them at once, then if you tap on one, it widens to show the full information).
- I would also add visual cues for the affordances in the screen (I imagine that if more than 2 roles are available, the viewer would be able to scroll horizontally in each role list, and scroll vertically in the page across all roles).

FINAL PRODUCT

LookBook

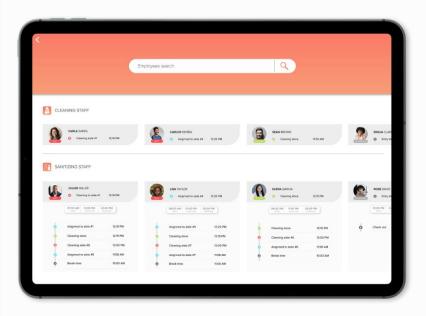


Prototype

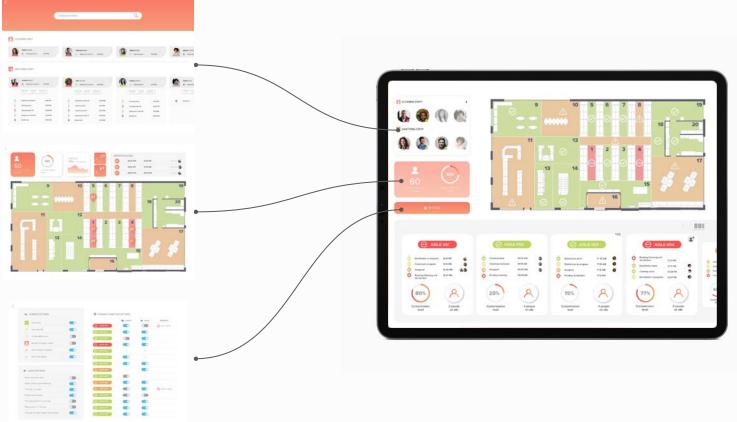


Prototype iPad

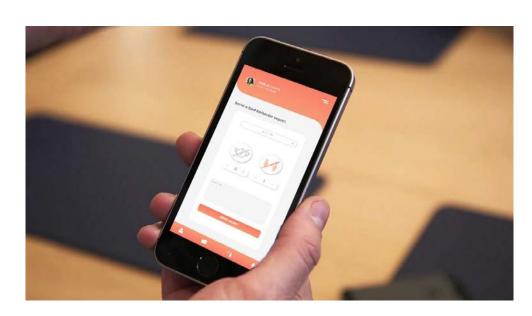




Prototype iPad

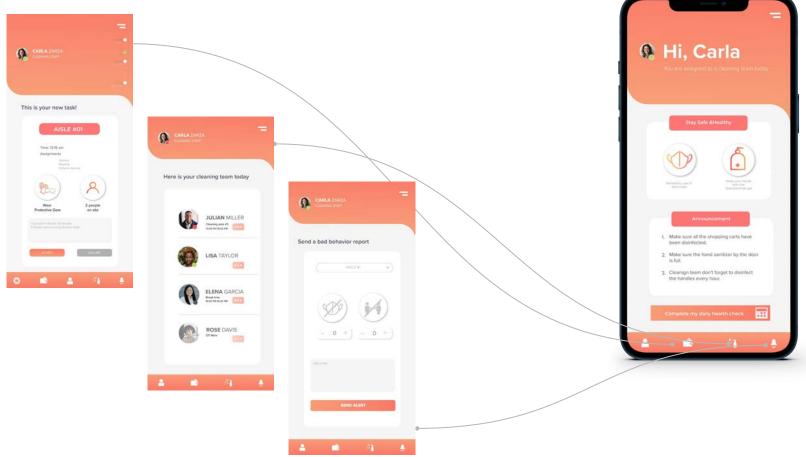


Prototype iPhone





Prototype iPhone



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Poster

The Problem

People lack tools that help them feel safe in public spaces. They can only be held responsible for their actions following security protocols, not for others' behavior or the public space management.

Our Solution

We intend to design a user experience product to help people feel safer and confident about Covid-19 when entering a crowded place.

Analysis We use real-tim

We use real-time data to analyze spaces to ensure they are kept at a safe and sanitary level.

Transparency

Using a system of lights, customers are made instantly aware of the cleanliness of every space they enter into.

Community

By working together to keep every space safe, we can promise a better future for everyone.

Sanitation

During COVID-19, the world learned the importance of keeping every space clean. With Confia, it is easier to detect and make sure sanitation levels are kept at a safe



Business Model

Key Partners

Business Owners who will want to include our system in their places of business.

Store Managers who will be relying on our system to manage their employees.

Manufacturer companies who will build the materials needed for our system.

Cleaning and disinfection agencies

Key Activities

Research and development of system

Installation process of system into the stores

Education process so managers and staff learn how it works.

Key Resources

Human resources, managers and staffs

Physical resources, camera in the store Ipad and cell phones

Value Proposition

To create a system that people can trust and know that if they shop at Confia certified location, they will be safe and want to shop at your store over those who do not have it.

When customers see the Confia certification, they will instantly know that this store is looking out for the best interests of the customer and cares about their safety.

Customer Relationship

Customers at stores see in real-time the sanitation levels and can feel safe instantly.



Channels

Paid advertisements

Word of mouth from store owners





Customer Segment

Various spaces such as

arocerv stores, restaurants.

car dealerships, and malls.

Any owner of a space who

is looking to ensure the

safety of their customers.

Cost Structure

Research and Development costs to ensure system is working efficiently

Secondary costs from marketing and promotion

Source materials that are already being used in stores (cameras, monitors) to lower costs for customer



Revenue Streams

Stores will pay to have system placed into their store (lights, sensors). They can pay upfront or finance the costs.

Once store has equipment in place, they will need to pay monthly dues to ensure they keep their certified status.





Executive Summary

The Problem

Our Goal

Target Audience



The Research

Survey Interviews Town watching

How might we?

Summary

The Solution

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Key Functions



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Detection

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Assignment Automatic or manual assignment of cleaning

Follow up

Reports

No mask or bad social distancing reports

Color lights

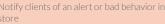




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Information

Voice memos





confía

THANK YOU!