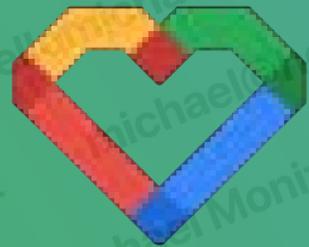


Revive



MICHAEL MONIZ
May 2021

What is



Revive

Revive is a concept app housed under the Google brand umbrella. This app delivers technical and practical lesson plans that teaches users how to perform CPR and how to manage a choking emergency.

After all lessons and tests are completed, the app unlocks new Google Assistant functionality that allows users to activate emergency services and receive coaching throughout the stressful situation. All the user has to say is *"Hey Google! Emergency! Start CPR!"*

Empathize

Interviews.

Participant 6

Age: 38
Location: Orangeville
Gender: cis heterosexual woman
Occupation: Server
Ethnicity: White
Home: Common-law partnership + 3 kids

Michael:

So the first question is when and where did you take your

Participant 6:

I've taken it with the Lifesaving Society. It's our third day

Michael:

Okay. And what specific things did you learn in your course?

Participant 6:

A lot of the baby choking things, like all the choking hazards because I have a baby and they stick everything in their mouth like the things about like heart Rhythmias and heart attacks, elderly and I've had to take my father into the hospital, he has suffered two heart attacks. So I was able to kind of how to act in like a really timely manner. So that's helped with the yearly training that we do.

Michael:

Great. What do you think is most important about CPR?

Participant 6:

Most important is how to assess the situation because the faster, you can either do it yourself or get help if you that's gonna determine if basically like the other person

Michael:

How would you change the process of learning CPR to

Participant 6:

To make it easier to remember? I think in the classes I found is what makes it easier to remember, or as well as, as the just kind of stays into your head, even if the video is a little more, the more that you can relate to them. And like, when and storyline, what makes you see like that? Those are the ones that stick with you the most. Like, I've had the toddler basically choked, like gives the baby the car those are such things that can, like, it can happen in real

Participant 1

Age: 46
Location: Toronto
Gender: Gay Male
Occupation: Flight Attendant
Ethnicity: White
Home: Common-law partnership

Michael:

Okay. So question number one. When and where did you take your CPR course?

Participant 1:

Through my employer.

Michael:

And when was it the last time?

Participant 1:

Uh October of 2020.

Michael:

And what specific things did you learn in the course that resonated with you?

Participant 1:

Situational awareness, delegation and creating a cycle and revisiting things like checking a person's breathing, checking or if, you know, if there's breath and then once the breath returns checking the breathing and the way I do it is it's like a wheel that keeps turning and you gotta just keep checking back at points, checking in with people you designated things to do, which is why they gave you a command. You tell somebody to call an ambulance and report back when you've done it or go get a blanket or report back when you've done it. And so it's building accountability, some good reminders for you as the person taking care of the casualty. Excellent.

Michael:

And what do you think is most important about CPR?

Participant 1:

Beginning it as quickly as possible because the longer a casualty doesn't have oxygen, the likelihood of damage to their brain increases exponentially. Anything else? No.

Michael:

What do you think is the least important?

Participant 1:

The least important? It's a hard question. I guess the people that you have to rely on because ultimately if you're the person taking care of the casualty, you've got to get the, you got to

I decided that it was important to interview people who have taken a CPR/first aid course in the past to see what their pain points were.

Next, I wanted to find out how they would personally change the way they were taught to minimize or eliminate those pain points.

Lastly, I wanted to get their feedback on what features a phone app should have to reduce stress and build their confidence in an emergency was to arise.



Empathy Maps

What they say...

- > "I like to practice so that the mind/muscle will kick in when an emergency happens."
- > "I learn by repetition and doing things"
- > "I think it's a great idea to learn online. Anybody can learn from anywhere."

What they think...

- > Thinks that everyone should know enough CPR to keep people alive until paramedics arrive.
- > The online portion should have life-like animations that shows emergency situations. Also, it should give you the chance to go back and revisit previous modules, test technique, interrupt videos with several multiple-choice questions, and highlight the importance of quick response in a simple straightforward way.
- > The app allows you to call 911, audio/visual cues, and metronome.

What they do...

- > Adjust the hands according to adult, child, infant.
- > Push 2" deep
- > Always check on the person to see if things have changed - if breathing
- > Check for obstructions.

What they feel...

- > The old school videos are boring.
- > Worried that they're gonna break people's ribs.
- > Not 100% confident - if someone else is more capable I'll be happy to help assist them. But, if I was the only one then I'd do my best.

Paula



What they say...

- > "If you don't use it you'll lose it."
- > "If you're confident with CPR you'll be calm and not panicked when an emergency comes up."
- > "I used it once and the bystanders said I worked like a machine. I just grabbed the kid that was choking and saved her life!"

What they think...

- > Doing training once a year allows you to practice and makes feel like second nature.
- > Checklists of order - knowing the next step is important and the differences between adult, child, infant.
- > The app should have reminders for the steps, a record-keeping functionality for EMS, Reminders of what to look for, how deep to compress, what to check for before starting.

What they do...

- > Do it over and over again on a pillow to make it a nature reflex.
- > Situational awareness in key.
- > Speed is key... you need to push hard and fast
- > Interactive learning - actually demonstrating the movement in realtime.
- > On your knees for 10mins - minimum.

What they feel...

- > I feel confident with my CPR. I would be 100% ready to go right now.
- > The more you show everyday situations that can happen the more it will resonate with the students.
- > Fatigue is a real thing and should be taught during the class

Fabian



I started to understand my user's thoughts and feelings towards their current accounting situation.

Empathy maps gave me the initial insights needed to begin pinpointing the user's pain points.



Personas.

This was the perfect opportunity to look at the goals, characteristics and needs of the larger user groups.

I needed to identify patterns in their behaviour that might further point to common pain points that my interviewees experienced.





Fabian

Flight Attendant

I've been a flight attendant for 22 years, which means that I've had to do CPR and first aid training annually. We have to run through several simulations during the 3-day training which prepares me mentally for any kinda of sitation that can happen onboard. I've had to do CPR at work and at home and I'm completely comfortable and confident in anything that comes my way.

About

- 42
- Montreal, Canada
- Flight Attendant
- Married to his husband of 10 years
- College Diploma

Wants & Needs

- > Checklists of order - knowing the next step is important and the differences between adult, child, infant.
- > The app should have reminders for the steps, a record-keeping functionality for EMS, Reminders of what to look for, how deep to compress, what to check for before starting.

Tech

- Internet
- Social Media
- Online Shopping
- Gadgets
- Early adopter

Hesitations

- > He's had a situation before where he needed to use CPR but there was no one around to call 911 so starting CPR was delayed.
- > People run into a situation without first assessing the risks to themselves.
- > The speed of compressions is really fast, people may not fully understand the fatigue that happens when you're in a real life situation.



User Story

Fabian

As a confident CPR/first aider I want to be able to contact EMS while I'm doing CPR so that I can get the extra help that person needs to save their life.

"If you're confident with CPR you'll be calm and not panicked when an emergency comes up."

Paula



Paula

Personal Trainer

After finishing my undergraduate degree in psychology I got really into fitness and decided to get my personal trainers certifications. I'm a level 4 personal trainer with specialized certificates in HIIT training and yoga. To maintain my certificates I need to take a CPR first aid course ever two years.

About

- 28
- Toronto, Canada
- Personal Trainer
- Boyfriend of 5 years
- Undergraduate degree

Tech

- Internet
- Social Media
- Online Shopping
- Gadgets
- Early adopter

Wants & Needs

- > The online portion should have life-like animations that shows emergency situations. Also, it should give you the chance to go back and revisit previous modules, test technique, interrupt videos with several multiple-choice questions, and highlight the importance of quick response in a simple straightforward way.
- > The app allows you to call 911, audio/visual cues, and metronome.

Hesitations

- > Most people have a difficult time with hand adjustments according to adult, child, infant.
- > Push 2" deep - it may crack ribs, but make sure not to crack the sternum.
- > If I don't get enough repetition I feel like I don't have sufficient mind/muscle memory.



User Story

Paula

As someone who's not 100% confident in my CPR abilities I want to have access to an app or online portal that allows me to practice my skills so that I can create the necessary mind/muscle memory to save a life one day.

"I think it's a great idea to learn online. Anybody can learn from anywhere."

User Journey

This exercise helped me Identify improvement opportunities & reduced the impact of designer bias.

Fabian					
Actions	Download the app	Sign up for an account	Starts CPR lessons	Does practical lessons	Does final exam
Task List	<ul style="list-style-type: none"> > Go to the apps store and find the app to download. > Click Download. > Open app. 	<ul style="list-style-type: none"> > Verifies the Google account that linked to their phone. > Links their Google account. 	<ul style="list-style-type: none"> > Introduction to CPR begins. > Lesson modules cycle automatically. 	<ul style="list-style-type: none"> > Does practical lessons on his living room floor. 	<ul style="list-style-type: none"> > 40 Multiple-choice questions.
Feeling Objectives	> Normal. Business as usual.	> Normal. Business as usual.	<ul style="list-style-type: none"> > Annoyed about the length of each class. > Annoyed that there's no prompt asking if he's done CPR before. 	<ul style="list-style-type: none"> > Annoyed that there's no way to cast the videos to his TV via Google cast. 	> Business as usual
Improvement Opportunities	> Business as usual.	> Business as usual.	<ul style="list-style-type: none"> > Ask if users have done CPR course and if so (in the last 2 years) and how comfortable they feel with doing CPR. > Based on answer activate the fast pace refresher mode. 	<ul style="list-style-type: none"> > Activate the feature to cast. 	<ul style="list-style-type: none"> > Receives a CPR badge that connects to the registered Google account that's on the phone. This unlocks the "Hey Google, start CPR" command.

Paula					
Actions	Download the app	Sign up for an account	Starts CPR lessons	Does practical lessons at home on her computer	Does final exam
Task List	<ul style="list-style-type: none"> > Go to the apps store and find the app to download. > Click Download. > Open app. 	<ul style="list-style-type: none"> > Verifies the Google account that linked to their phone. > Links their Google account. 	<ul style="list-style-type: none"> > Introduction to CPR begins. > Lesson modules cycle automatically. 	<ul style="list-style-type: none"> > Signs into her account. 	<ul style="list-style-type: none"> > 40 Multiple-choice questions.
Feeling Objectives	> Normal. Business as usual.	> Normal. Business as usual.	<ul style="list-style-type: none"> > Annoyed that the lessons are consecutive without stopping between each lesson. 	<ul style="list-style-type: none"> > Frustrated that she had to start from the beginning. It didn't start where she left off. 	> Business as usual
Improvement Opportunities	> Business as usual.	> Business as usual.	<ul style="list-style-type: none"> > Ask if users have done CPR course and if so (in the last 2 years) they activate the refresher mode which makes the pace of the lessons faster. 	<ul style="list-style-type: none"> > Connect the experience between mobile/web. 	<ul style="list-style-type: none"> > Receives a CPR badge that connects to the registered Google account that's on the phone. This unlocks the "Hey Google, start CPR" command.



Define

Problem Statement



Problem Statement

Fabian

Fabian is a good Samaritan who needs an app that can call 911 and give him reminders, each step of the way, because he's been a position before when 911 was needed and there was no one around and after a while of doing CPR he was fatigued and forgot where he was in the CPR cycle.



Problem Statement

Paula

Paula is a personal trainer who needs an app that periodically asks her CPR questions because she doesn't want to be unprepared if she has to use it on one of the gym patrons.

Ideate

Competitive Audit

Analyzing competitors gave me a well-rounded foundation of knowledge about the accounting app market. It helped me create a product that was helpful and unique which added value for users.

The insights gathered here carried over to my designs.

Competative Audit										
	Competitor type	Screen Survey	Adult/Child/Infant	CPR	Choking	Visual Cues	Audio Cues	Call 911	Lessons beforehand	Metronome
PG CPR	Direct	Yes. Visual Only.	Yes	Yes	No	Yes. Must click button	Yes	No	No	Yes
Real time CPR Guide	Direct	Not Really.	Adult Only	Yes	Yes	Yes	Yes	Yes	No	Yes
Resuscitate	Direct	No	Yes	Yes	Yes	Yes	Yes	No	No	No
PulsePoint Respond	Indirect	No	No	No	No	No	No	No	No	No
CPR & First Aid	Indirect	No	Adult/Child	Yes	Yes	No	No	No	Only Lessons	No



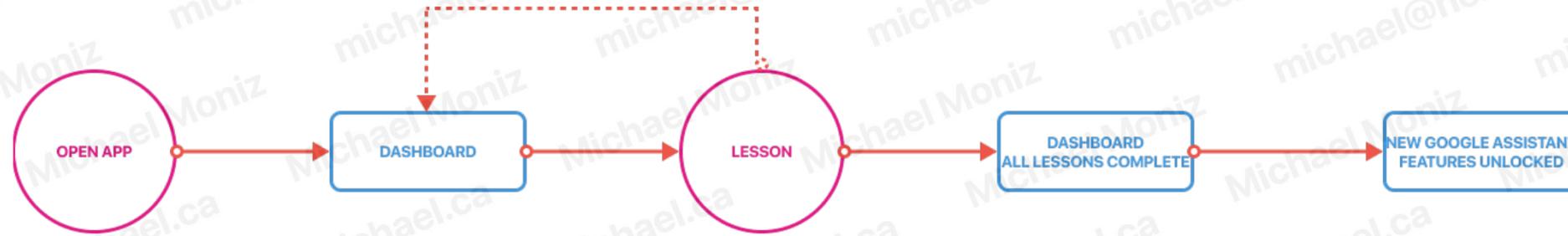
Goal Statement.

My Revive app will let users learn CPR which will affect casualties who are unconscious and not breathing by giving people the skills needed to resuscitate them or until EMS arrives.

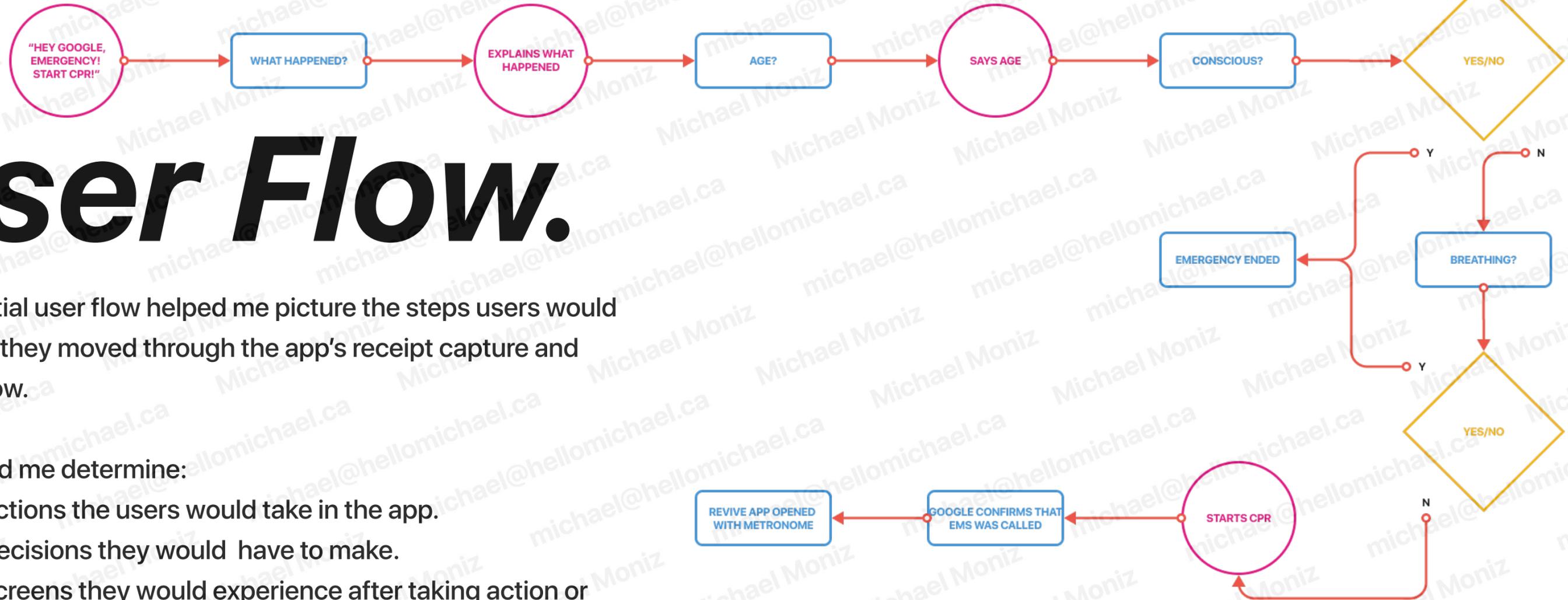
I will measure effectiveness by the number of people who complete the course.



Learning Flow



Google Assistant Flow



User Flow.

This initial user flow helped me picture the steps users would take as they moved through the app's receipt capture and filing flow.

It helped me determine:

What actions the users would take in the app.

What decisions they would have to make.

What screens they would experience after taking action or making a decision.



Storyboards

Using storyboards to sketch an idea helps me work through the flow of the user experience.

UX Design Storyboard
 Scenario: Ordinary people want to learn CPR just in case something happens. Courses cost money, but if Google offered a course for free people would use the app to learn.

Jay was walking home from work and saw a person die after a car crash. No one knew CPR.

Jay sees that Google offers a CPR course & downloads the app.

Jay learns how to do CPR on his phone via mobile phone.

Jay was watching The game with his friend and his friend has a heart attack.

Jay activates his Google Assistant who calls 911 while Jay performs CPR.

EMS arrives and defibrillates his friend and he survives!

Big-Picture Storyboard

UX Design Storyboard
 Scenario: An app that allows ordinary people learn how to do CPR / choosing emergency services.

User downloads & finds the app on their phone.

User signs into the Google account.

User watches all the videos, does tests and practice techniques. Next Google Assistant features are made.

User activates (SA) by saying Hey Google Emergency Start CPR.

After a series of prompts the app calls 911.

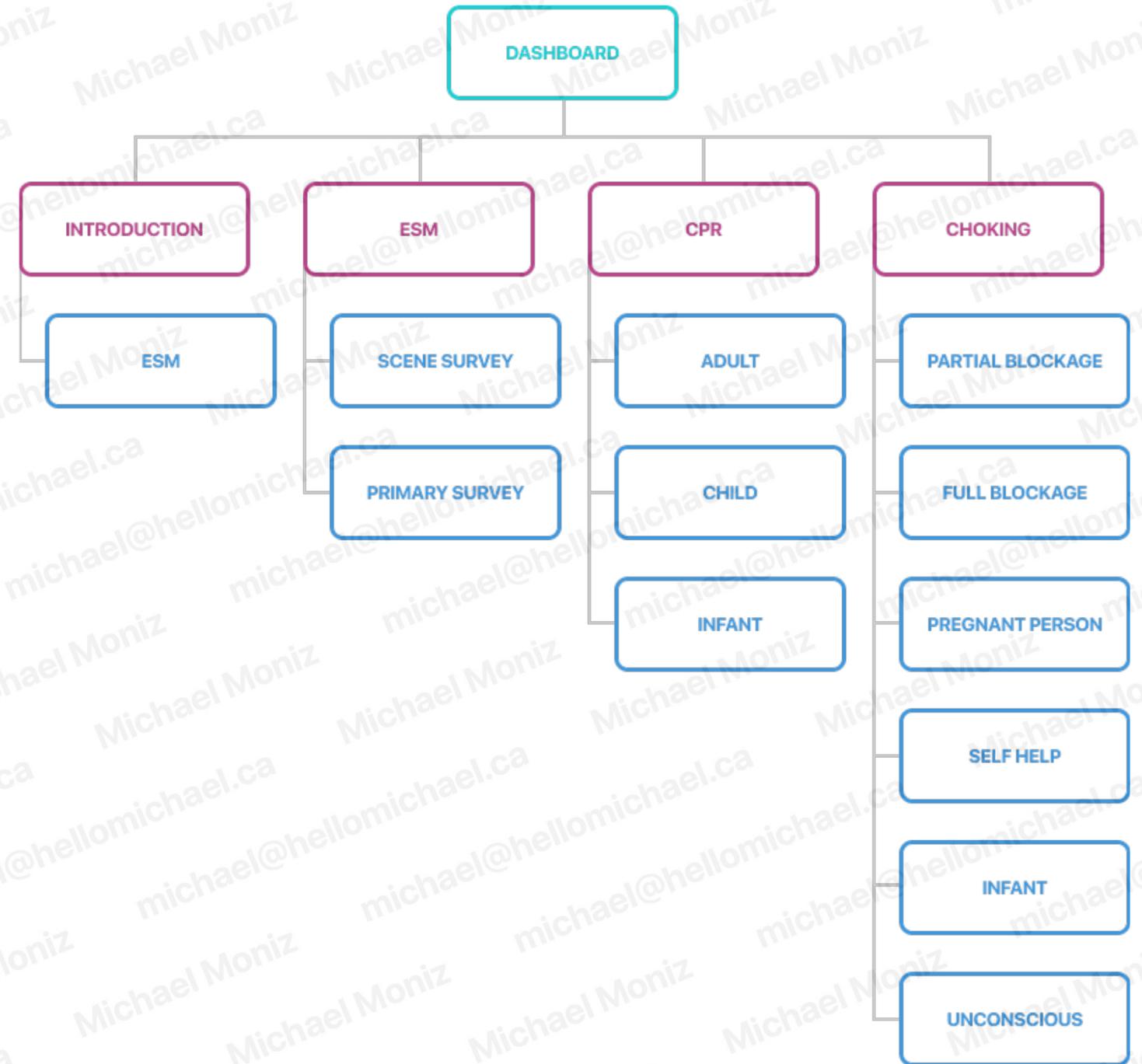
Revive app opens and you get a make one call.

Closeup Storyboard

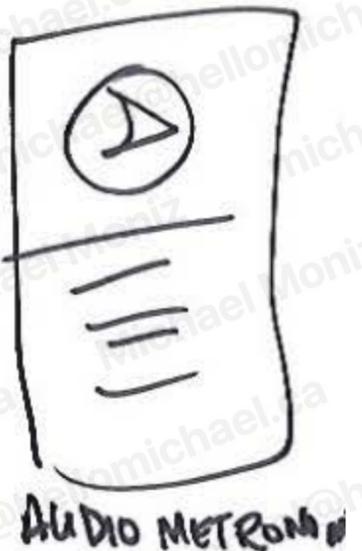
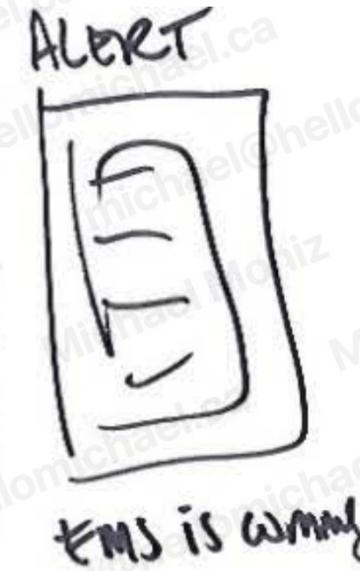
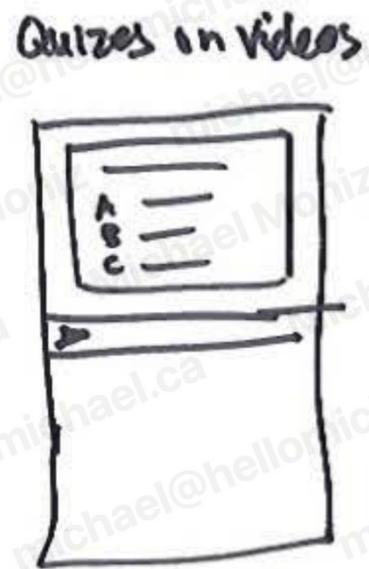


Information Architecture

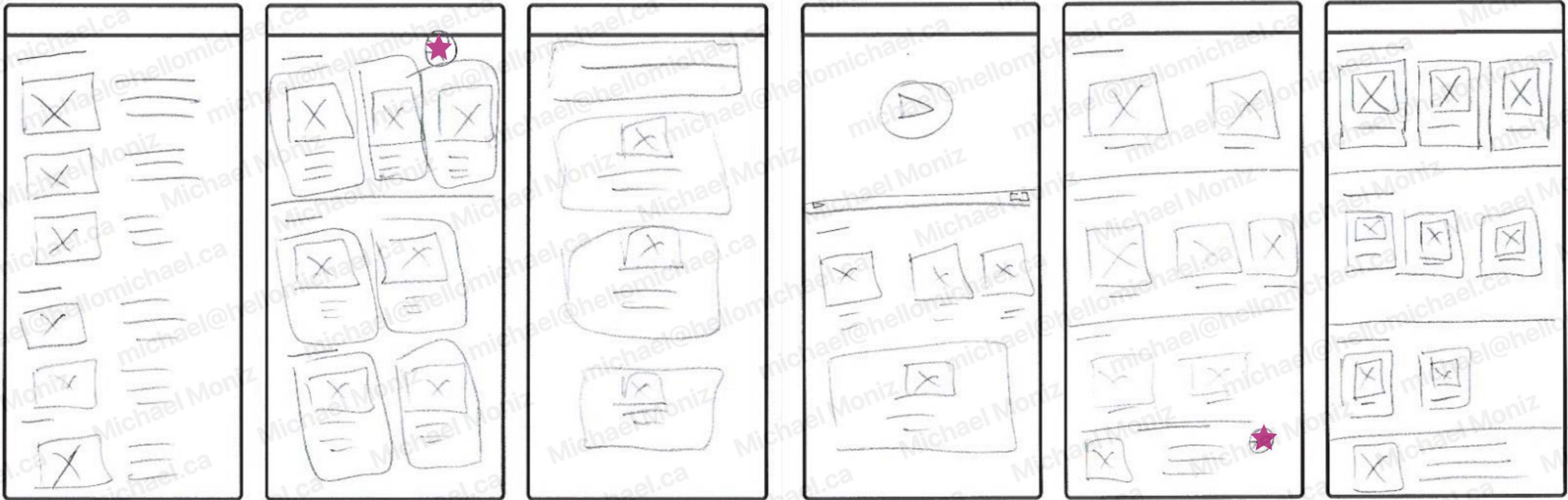
Knowing the users, their goals, and their behaviours are key to effective IA.



Crazy Eights



Wireframe Brainstorming



Prototype

First Iteration

Choking (Infant)

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HOME NEXT

REVIVE

Introduction

ESM

Emergency Scene Management

Scene Survey Primary Survey

Cardiopulmonary Resuscitation (CPR)

Adult Child Infant

Choking

Partial Blockage Full Blockage Pregnant Person

Self Help Infant Unconscious

Course Incomplete

Congratulations

You've unlocked Google "Start CPR" Feature



Testing

First Iteration

Research Study

Script

- In this usability analysis, I'm going to describe a scenario to you and ask you to complete tasks. Throughout your user journey I will stop you by saying "Prompt #1, prompt #2, follow-up prompt, etc.) so I can get your feedback as we go along. I know that this is your first time seeing this app, so please take your time.

Scenario
Google just announced that the new functionality will be activated that will help you in an emergency been working on the lessons.

Throughout this exercise I would better understand your thought together.

Please open the link and begin your user journey.

- (at the end of the learning slide)**
Prompt 1: What did you find challenging about the app so far?
(YES?) How would you change it to make it better?
(NO?) Is there anything you would like to see added to the app?
- (at the end of the emergency slide)**
Prompt 2: What did you find challenging about the app so far?
(YES?) How would you change it to make it better?
(NO?) Is there anything you would like to see added to the app?

After the unmoderated usability study, participants will complete the System Usability Scale (SUS).

Have you taken a CPR course within the last 12 months?

- Participants will score the following five responses that range from 1 (strongly disagree) to 5 (strongly agree):
 - I need the support of a team to use this app.
 - I would sign up to this course.
 - The course area of the app is easy to navigate.
 - I find this whole concept confusing.
 - The Google Assistant coach is helpful.
 - I feel confident using the app.
 - This app wouldn't be useful in an emergency.
 - The homepage with all the information is easy to navigate.
 - This Google Assistant feature is useful.
 - The prompts from the Google Assistant are clear.

UX Research Study — Revive	
Introduction	<ul style="list-style-type: none"> Title: Google Revive usability study Author: Michael Moniz, UX design student, michael@hellomichael.ca Stakeholders: Google Assistant Team Date: May 8, 2021 Project background: I wanted to create an emergency response function for the Google Assistant. It only takes 4 mins for brain death to happen. If more people knew how to perform CPR, fewer people would die in an emergency event. Since everyone has a phone in their pocket, this would be the perfect addition to the functionality of the Google Assistant. Research goals: To determine if people would use this functionality and to see how easy it is to use.
Research questions	<ul style="list-style-type: none"> Are there parts of the user flow where users get stuck? Are there design changes I can make to improve the user experience? Is there anything that users want to see added to this feature? Are there any reasons why users wouldn't use this feature? How can we make the app more efficient?
Key Performance Indicators (KPIs)	<ul style="list-style-type: none"> Time on task User errors System Usability Scale
Methodology	<ul style="list-style-type: none"> Moderated usability study Location: Toronto, Canada, remote (each participant will complete the study in their own home - over Google meet) Date: Sessions will take place during the week between March 31, 2021, and April 3, 2021. Length: Each session will last 10 minutes, based on a list of prompts. Compensation: No compensation.
Participants	<ul style="list-style-type: none"> Two males, two females, one nonbinary individual, between the ages of 20 and 80 years old. The study is accessible for use with a screen reader.

- I asked myself these key questions and set out to find the answers:
- Are there parts of the user flow where users get stuck?
 - Are there design changes I can make to improve the user experience?
 - Is there anything that users want to see added to this feature?
 - Are there any reasons why users wouldn't use this feature?
 - How can we make the app more efficient?



Usability Tests

After running my usability test I realized that it wasn't quite perfect. It needed some tweaks to make the user flow with fewer snags.

Usability Study					
	USER 1	USER 2	USER 3	USER 4	USER 5
Had difficulty with home screen				👁️	👁️
Has difficulty with the lesson flow			👁️		
Had trouble understanding the quiz format					👁️
Has difficulty with the CPR flow					
Feels frustrated with the lesson flow					
Feels frustrated with the CPR flow					
Speaks in an indifferent tone	👁️		👁️		
Speaks in a frustrated tone					👁️
Speaks in an annoyed or impatient tone					
Speaks in a positive tone		👁️			
Speaks in a confident tone					
Asked to change the format of lesson cards	👁️			👁️	👁️
How would it tell 911 your apartment					👁️
Asked to change the metronome sequence	👁️				



Themes

Ease of use: Dashboard confusion

Supporting evidence from the usability study.

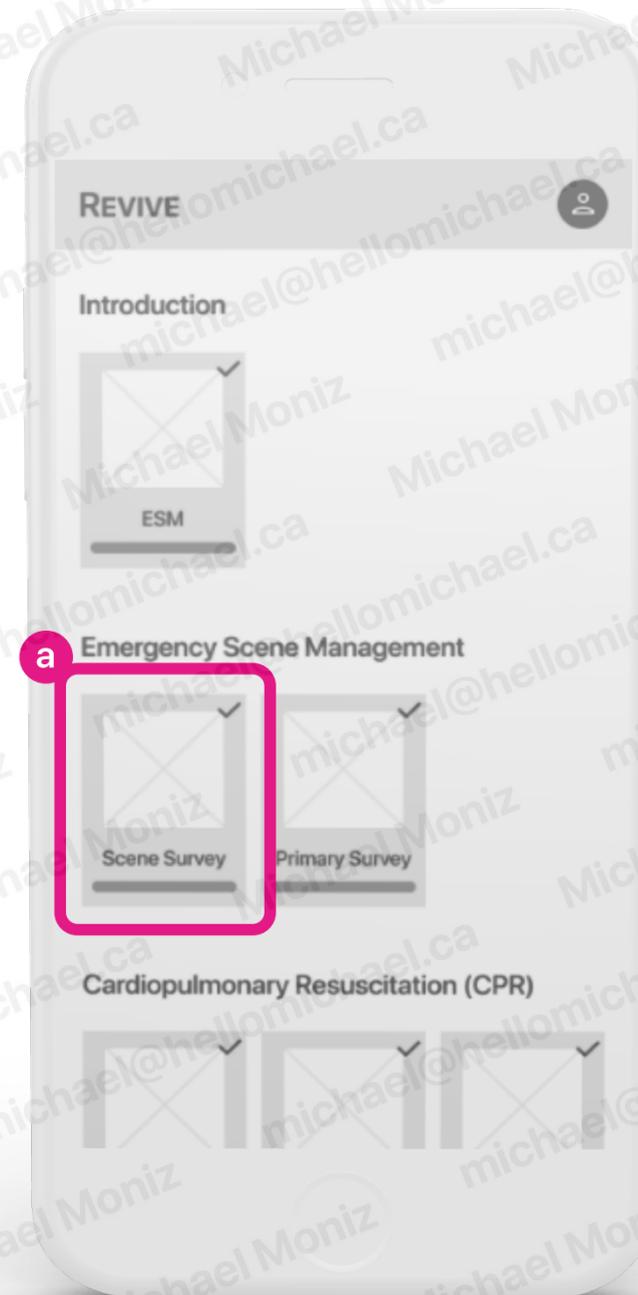
3 of 5 participants wanted to change the style of the card. (a)

2 of 5 participants didn't understand that line at the bottom was a lesson progress bar.

1 of 5 identified didn't understand that the checkmark represented "complete."

1 of 5 participant indicated that they wanted a progress bar at the top.

"The style of these cards makes it very confusing and hard to understand." (P1)



Themes

Confusion: Next button

Supporting evidence from the usability study.

2 of 5 participants struggled with next button. They didn't know how to proceed.

"What am I supposed to do know?" (P1)



Themes

Sequence: Metronome should start sooner

Supporting evidence from the usability study.

1 of 5 participants indicated that the metronome should start sooner instead of coming up at the end.

"It should start right away.' (P1)



Themes

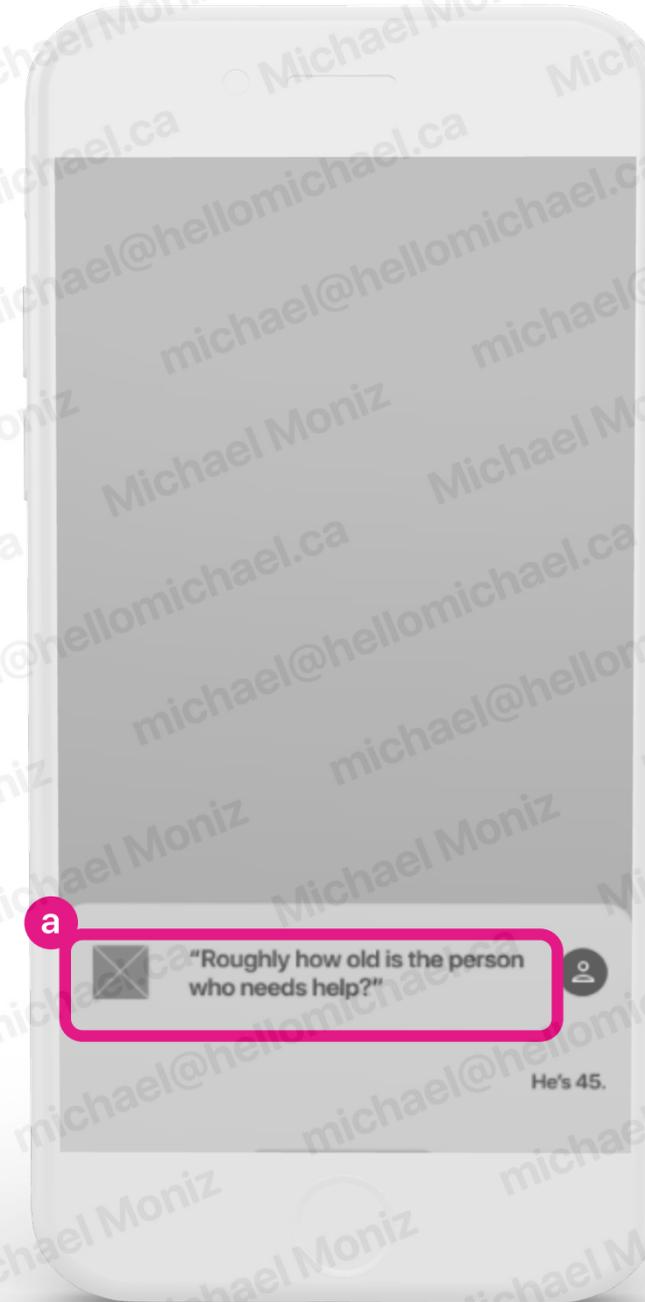
Google Assistant: Confirmation at east step

Supporting evidence from the usability study.

1 of 5 participants indicated that they would need confirmation at each interaction with the Google Assistant so that they know she understood and recorded the information.

1 of 5 participants asked how the Google Assistant would know what apartment you were in.

"I wanna know that she got the info. I don't want to be in an emergency not knowing if the EMS is coming.' (P1)



Insights & Recommendations

- ✓ I need to change the lesson cards to a modular format.
- ✓ I need to a progress bar to indicate how much the user completed.
- ✓ I need to change the sequence of the metronome.
- ✓ I need to change the "next" button to "done."
- ✓ I need to change the Google Assistant responses to add an indication that she understood and recorded the information.
- ✓ I need to add a extra prompt for current address.



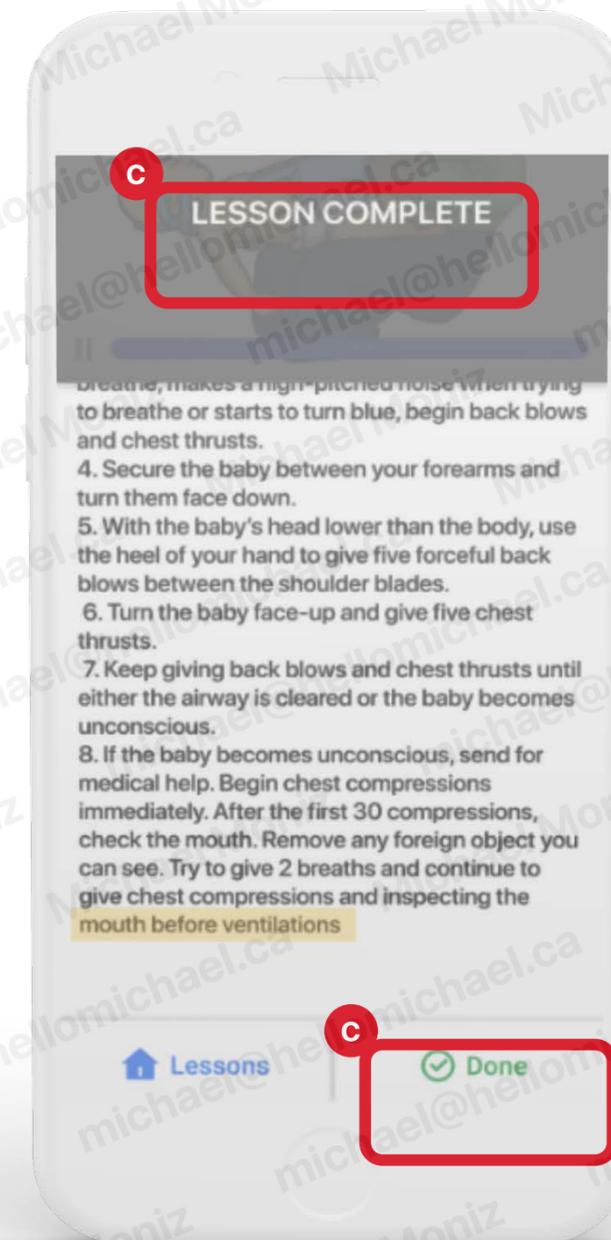
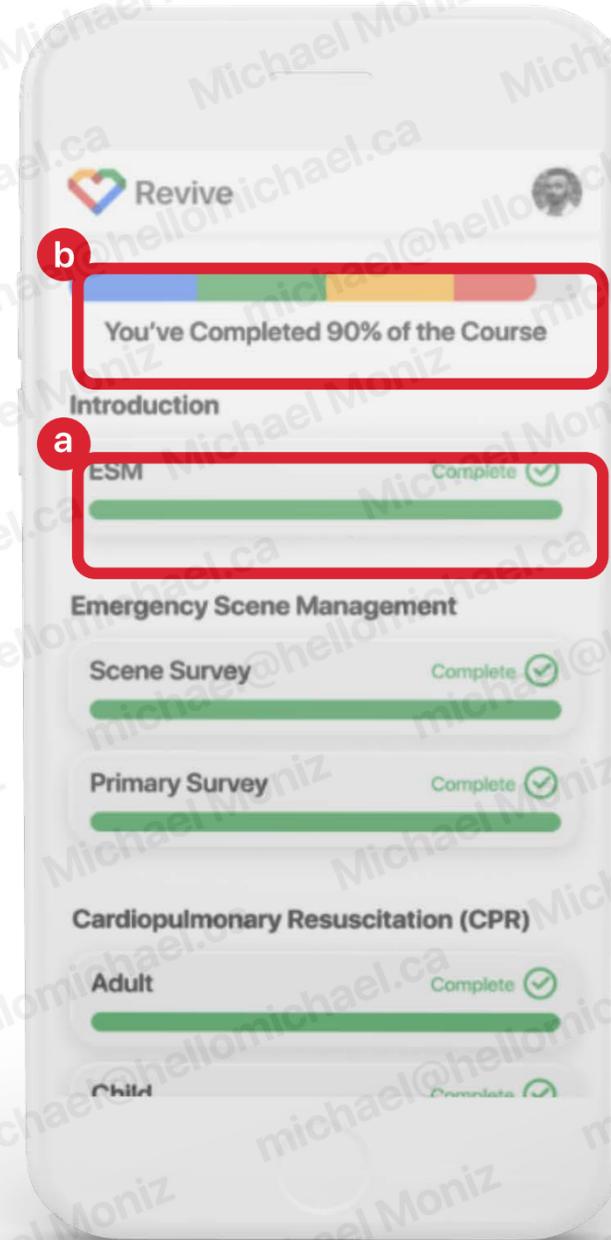
Prototype

Second Iteration

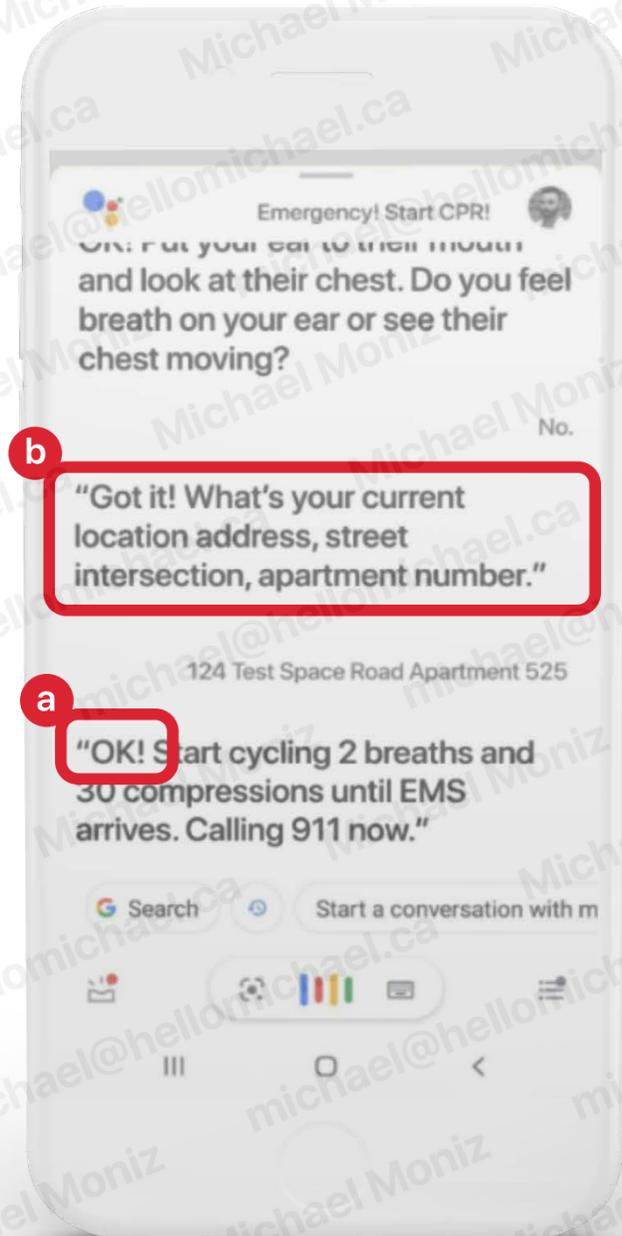
a Changed the lesson cards

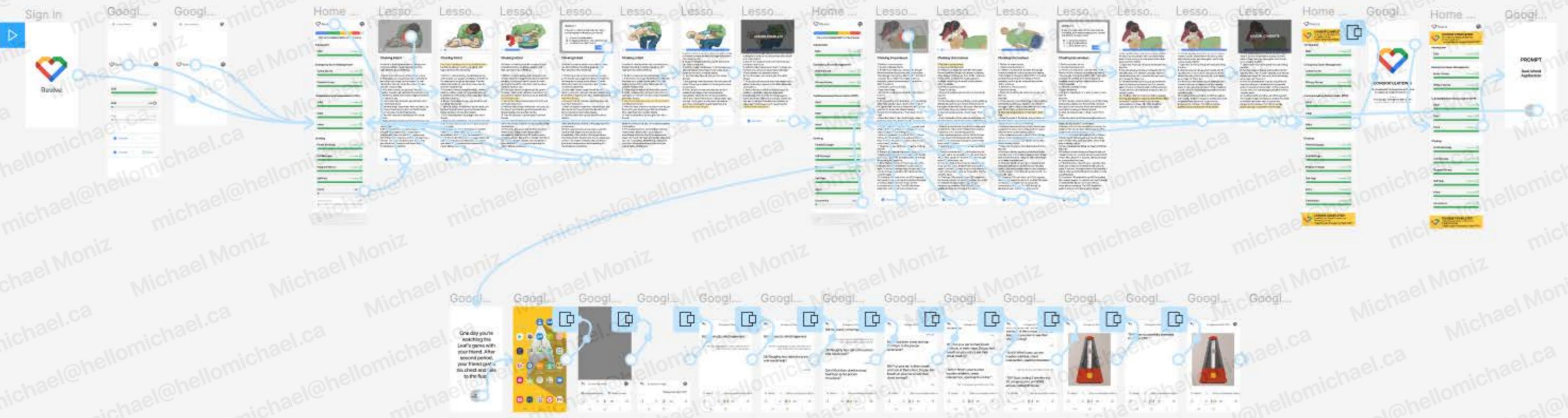
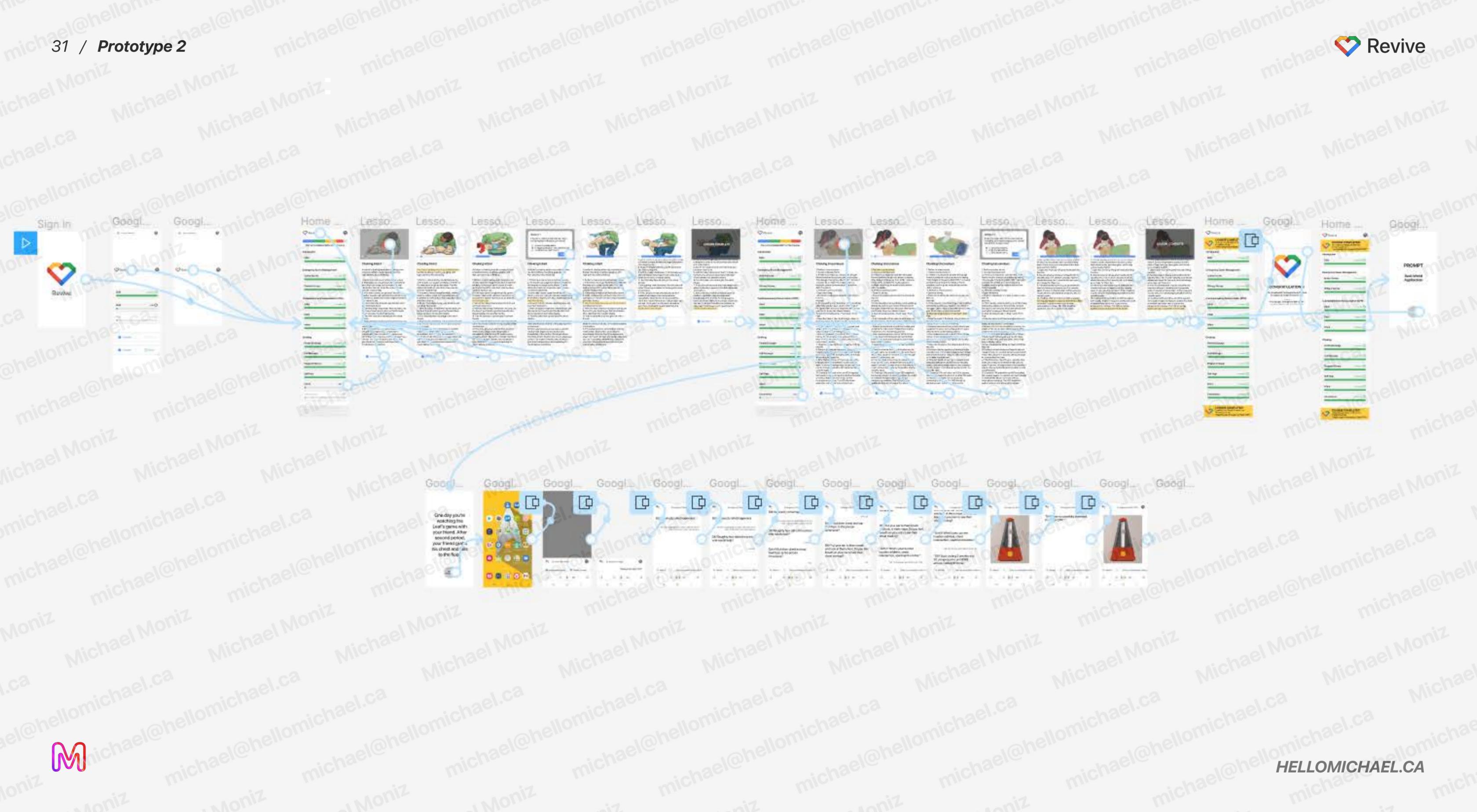
b Added progress bar

c Lesson Complete and Done button added to make it clearer

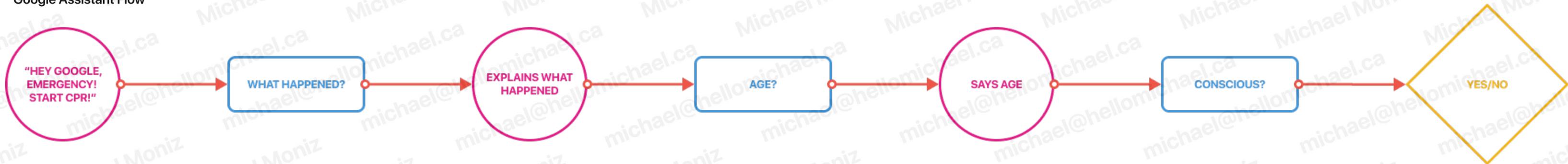


- a** I added "OK!" and "Got it!" to indicate that the assistant understood
- b** The assistant now asks for the current address
- c** The metronome is now integrated into the assistant sequence. It starts ticking right after the assistant calls 911



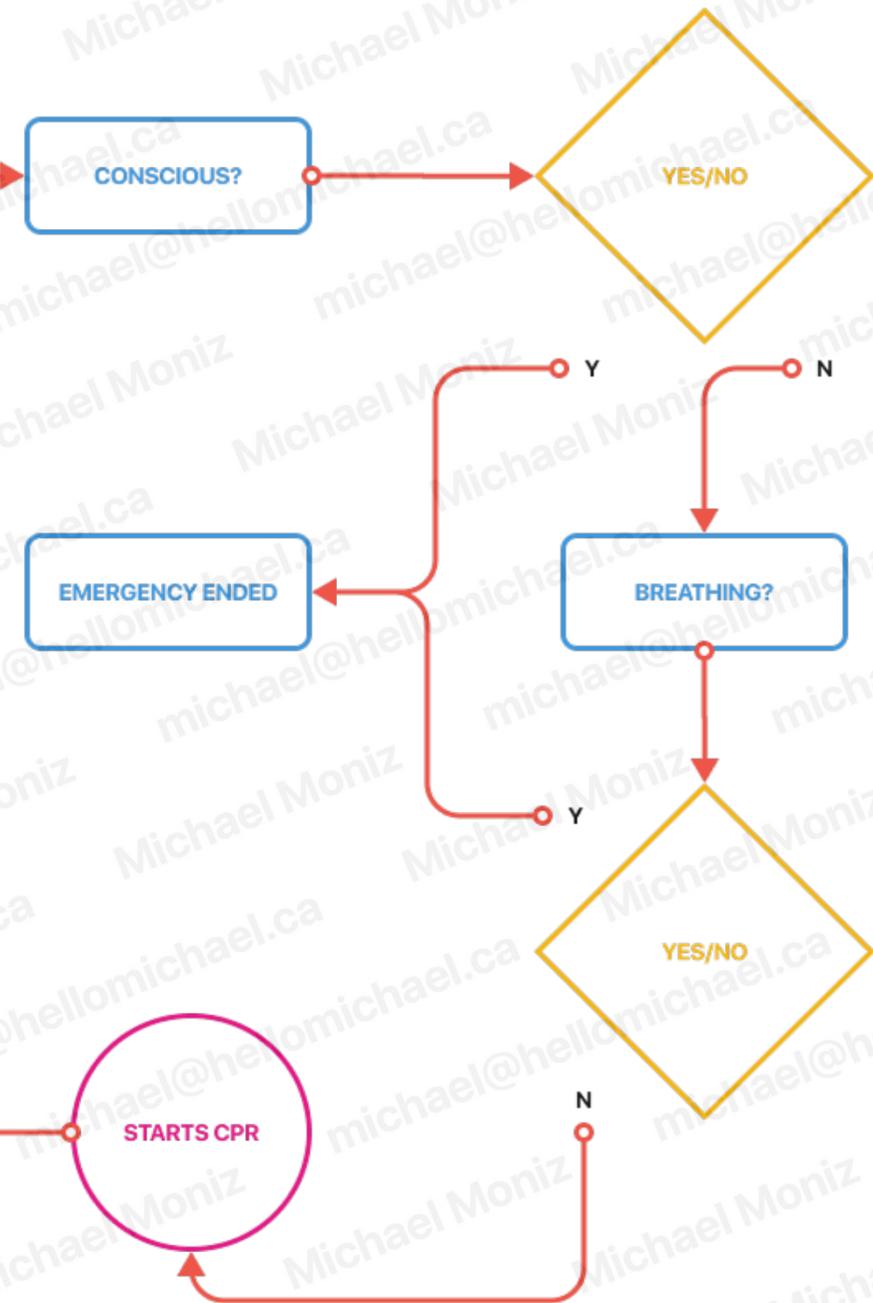


Google Assistant Flow



User Flow.

This updated user flow reflects the user's need to have the assistant produce the metronome cues for the correct compression rate.



Testing

Second Iteration

Usability Tests

After running my second usability test, all users were confident using the app and spoke in a positive tone.

Usability Study					
	USER 1	USER 2	USER 3	USER 4	USER 5
Had difficulty with home screen					
Has difficulty with the lesson flow					
Had trouble understanding the quiz format					
Has difficulty with the CPR flow					
Feels frustrated with the lesson flow					
Feels frustrated with the CPR flow					
Speaks in an indifferent tone					
Speaks in a frustrated tone					
Speaks in an annoyed or impatient tone					
Speaks in a positive tone	☉	☉	☉	☉	☉
Speaks in a confident tone	☉	☉	☉	☉	☉
Asked to change the format of lesson cards					
How would it tell 911 your apartment					
Asked to change the metronome sequence					



Responsive Online Promotional Landing Page

Revive [Get started](#)

Save lives with Revive

When you complete the Revive CPR training, you will have the skills and knowledge necessary to perform CPR in an emergency situation.

Experience Revive on any device

Straightforward technical and practical lessons that help save lives.

[GET IT ON Google Play](#)

Save lives with Revive

You'll build the confidence you need to make good decisions and do everything possible to help in an emergency situation.

Unlock new Google Assistant actions

Have your Google Assistant coach you through any stressful CPR emergency & call for help.

"OK! Start cycling 2 breaths and 30 compressions until EMS arrives. Calling 911 now."

Get started with Revive

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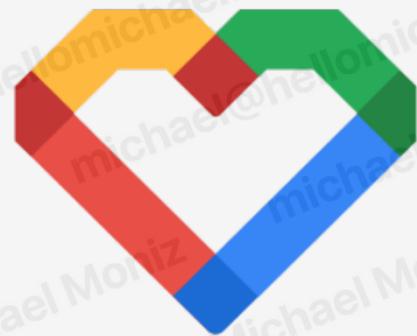
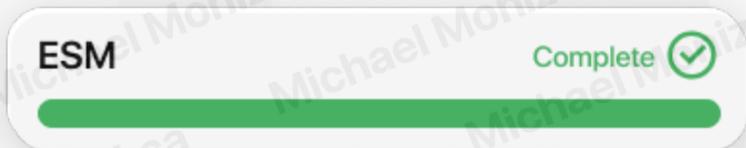
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Help English



Style Guide



Revive



PRIMARY

#34A853



#4285F4



#FBBC05



#EB4335



HEADING FONT

SF Pro Display

FONT WEIGHTS

Bold Regular

BODY FONT

SF Pro Display

FONT WEIGHTS

Medium Regular Light

Final Thoughts

As a former lifeguard/swim instructor/CPR & first aid instructor, I know how important this app would be if it was actually created - especially if Google was to take it up as one of their projects. There would definitely be more interest in learning the information that arms them with the necessary tools to save lives.

In a big city, EMS can show up within minutes, but in other parts of the country, it could take 10x as long for EMS to show up. Remember, it only takes 4 minutes for the oxygen-starved brain to start dying which makes it harder for medical professionals to resuscitate casualties once they're in the back of an EMS truck.

