UI/UX Advanced Lecture 1

Introduction, Recap, and User journeys

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- Will be recorded and available in BB

Check the manual!

Redo students: Not a lot has changed

What will we be doing?

Work towards building (parts of) a **functional digital solution** in Unity or Web. To do that, first we will need to design a **Hi-Fi prototype** of the solution. We will **test both** the prototype and the application.

It is important to note that in this module we will **focus on the Ideation, Prototyping and Testing phases of the Design Thinking framework** instead of going through the whole process.

Learning goals

Is able to **design a prototype** by applying standard UI/UX theory.

Is able to **implement** a functional, interactive Web/Unity solution.

Is able **to set up A/B user tests** accounting for experimental control (validity).

Is able **interpret** experimental **results** using descriptive **statistics.**

Class Structure

3 lectures + 2 guest lectures / workshops

5 labs

50h – 60h workload - 8.3 h/w – 10 h/w

	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Lectures (minutes)	90	240	90	90	60	
Labs (minutes)	180	180	180	180	180	
Homework (minutes)	300	300	300	300	300	300
Weekly total (minutes)	570	720	570	570	540	300
Weekly total (hours)	9.5	12	9.5	9.5	9	5

Involved teachers

Module coordinator

- Alejandro Moreno (a.m.morenocelleri@saxion.nl)

Lecturers

- Iain Douglas (i.d.douglas@saxion.nl)
- Tim Roosen (t.p.roosen@saxion.nl)
- Herman Paassen (h.paassen@saxion.nl)

Guest lecturers

- Yvens Rebouças Serpa (y.reboucasserpa@saxion.nl)
- Boris Slaghuis (b.slaghuis@saxion.nl)

Assessment (Products)

Hi-Fi prototype of an application (out of a selection of 8).

- Finished in terms of aesthetics, functionality, (relevant) content.

Web or Unity application.

- (At least) One **relevant** interface/screen.
- Must resemble the prototype.

One usability test and one A/B test.

Screen-recording showcasing the Hi-Fi prototype and application.

- No need to explain (but it could be useful anyhow).

Prototype ≠ Application

You need to do both.

CMGTwitch (E-Lecture manager)
Find current and past modules; find past, current and upcoming video lectures and join them if possible.

Looking for a room (mate)
Help students find places to rent; should be easy to use for people outside the cities/countries they are looking to move to.

Wellbeing guardian
Help students track their physical and/or mental wellbeing and encourage them to care for their bodies and minds.

Sharing-is-Caring
Help students borrow/lend things; allow transactions at the smallest of scales ("spoon of sugar") using a quid-pro-quo or an "I owe you" system.

EduBrainTrust
Help find people for study group sessions; should enable scheduling of meetings, sharing resources, or finding tutors.

Possible applications

Limit of 5 students per solution per lab group

First-come, first-serve basis

Grand Tourismo Go
Multiplayer mobile racing simulator game; players can join/create races, choose and customize vehicles; must be played with a vertical orientation.

League of the Ancients
MOBA with a clear and easy champion drafting process that offers players multiple suggestions (draft history, counter strategies, etc.).

Cardbreaker: The Impact
Collectible card game battler with transparent gacha mechanics; allows players to make informed decisions when pulling

Possible applications

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First-come, first-serve basis

You are not making a game! **Only the UI** of the game

Stick to the scope defined in the description!

You've been warned!!

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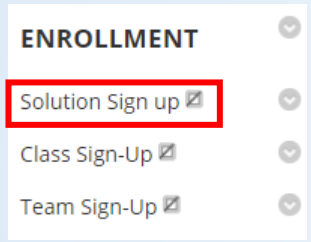
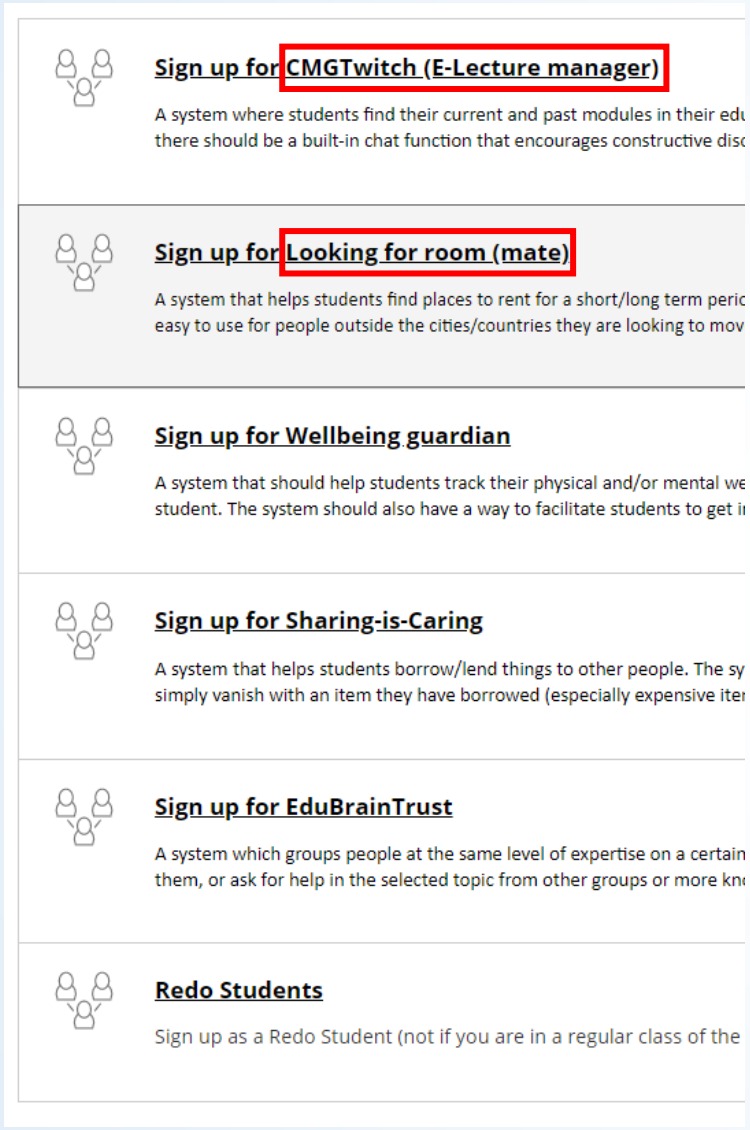
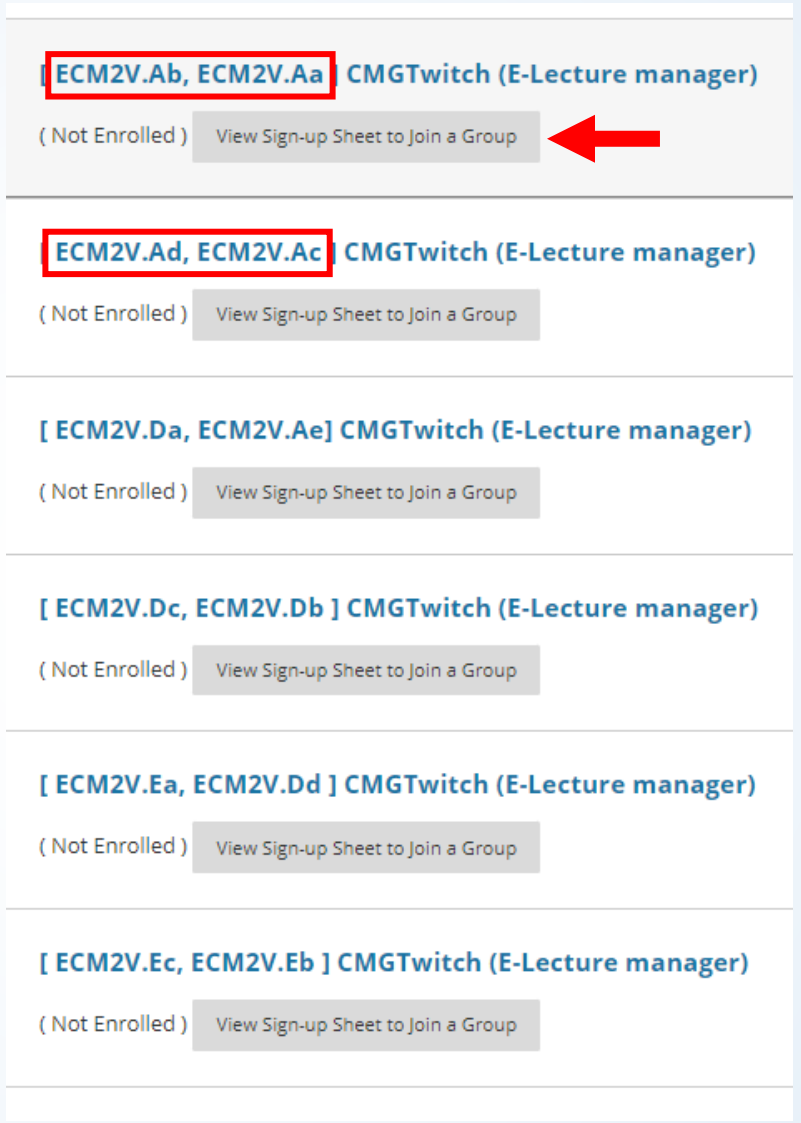
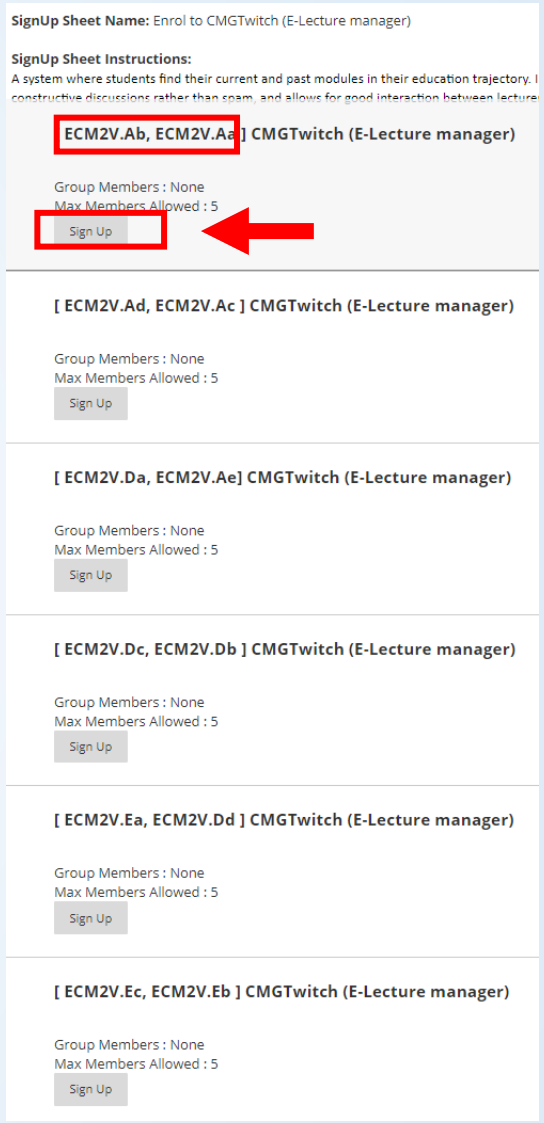
First-come, first-serve basis









The solution sign up link will be available after this lecture

Reusing stuff

You are allowed to reuse: **code, text, icons, fonts and images** (for other assets consult with your lab teacher)

It is of utmost importance that you credit the owner (otherwise its plagiarism)

Assessment (Deliverables)

Deadline: Mid-week 2.9 (Wednesday 26th of January 2022, 23:59h at the latest)

Reports (Templates in BB)

Product report

Evaluation report

Screen recording

Showcase
(HiFi + Application)

Weekly submission of the reports in BB.

Product Report

Application’ s stylesheet

Hi-Fi prototype information (URL, core functionality)

Web/Unity application information (URL, functionality)

Credits/Student generated content

Evaluation Report

Usability test documentation (protocol and results)

- At least three students

Unmoderated A/B test documentation (protocol and results)

- Two slightly different **functional** variations of the prototype (lab teacher has to approve)
- At least 12 students (six for each condition)

A/B test survey (questions and raw data/results)

- Four relevant questions

Quick overview

Reports (Templates in BB)

Product report

Evaluation report

Schedule

Week	Lecture/Lab	Topic(s)
2.4	Lecture	Introduction to the module + Recap of UI/UX + User journeys.
2.4	Lab	Choose application context, theme; Start working on Lo-Fi prototype.
2.5	Lectures x 2	Unity UI; Advanced CSS.
2.5	Lab	Finish 1st iteration of Lo-Fi prototype; Usability testing.
2.6	Lecture	Experimental Design (A/B testing).
2.6	Lab	Start working on Hi-Fi prototype w/improved design based on usability tests.
2.7	Lecture	Designing Questionnaires and Descriptive Statistics.
2.7	Lab	Finish Hi-Fi prototype; Start working on Web/Unity application.
2.8	Lecture	No lecture – use this time to set up user A/B tests.
2.8	Lab	Finish Web/Unity application; A/B testing of Hi-Fi prototype.

Criteria

Hi-Fi Prototype – UI Design (15%)

You are able to apply graphic user interface design principles to develop professional prototypes.

Hi-Fi Prototype – UX Design (15%)

You are able to design systems that are enjoyable and easy to use by the intended audience.

Application – UI/UX Implementation (20%)

You are able to produce a functional and professional solution based on a given design.

Testing (25%)

You are able to properly set up and conduct user tests to enable the collection of meaningful data that can be analyzed purposefully.

Analysis of results (25%)

You are able to derive meaningful insights from user test results, and are able to present both results and insights in a clear and professional format.

The student needs at least a sufficient in each criteria to pass the module.

Excellent criteria for UI, UX or Implementation

	Insufficient	Sufficient	Good	Excellent
Hi-Fi Prototype – UI Design	0% The fundamentals of graphic design (layout, typography, color, etc.) are not applied (correctly).	9% The UI can be considered market-ready (professional-looking icons, good color matching and readability, etc.) A style sheet (art style, color palette, fonts, etc.) has been defined and fits the concept and target user.	12% See sufficient+: The UI can be considered ready to be shipped for implementation (relevant content is finished completely, no placeholder texts or images, etc.).	**10%** **Good in UI Design +** **A significant amount of the UI elements has been created by the student.** **OR** **Good in UX Design +** **A detailed user journey of at least one key functionality of the solution has been created and provides valid insights (opportunities) for future additions to the prototype.** **OR** **Good in Implementation +** **One key user journey (not just one screen) has been implemented in the application context satisfactorily.**
Hi-Fi Prototype – UX Design	0% The prototype is difficult to use without external guidance (feedback is lacking, unintuitive, etc.). The user is not able to perform the main tasks specified in the description of the problem(s).	9% User feedback is given properly and in a timely manner. The structure and flow of information are understandable and facilitate user processes (menus, the order of screens/steps, etc.)	12% See sufficient+: Interaction with the prototype is intuitive and requires no assistance. If assistance is needed, it is built into the prototype. Error prevention strategies are implemented in the prototype.	
Application – UI/UX Implementation	0% The design has not been properly translated to the application context or is (mostly) simulated using static images. The chosen solution's interface is not in a finished professional state (bugs, typos, missing content, etc.) or is of little relevance (e.g. login page).	12% The chosen solution's interface clearly resembles the prototype aesthetically. Basic functionally has been implemented for the solution's interface: -Buttons are interactive -Text can be put into text fields -Menu works completely The solution is (almost) bug-free.	16% See sufficient+: The chosen solution's interface is complex enough to showcase good skill in implementing a solution (functionality beyond just navigation is implemented).	

Everything clear so far?

Then let’s begin!

Recap of UI/UX + a couple of new tidbits

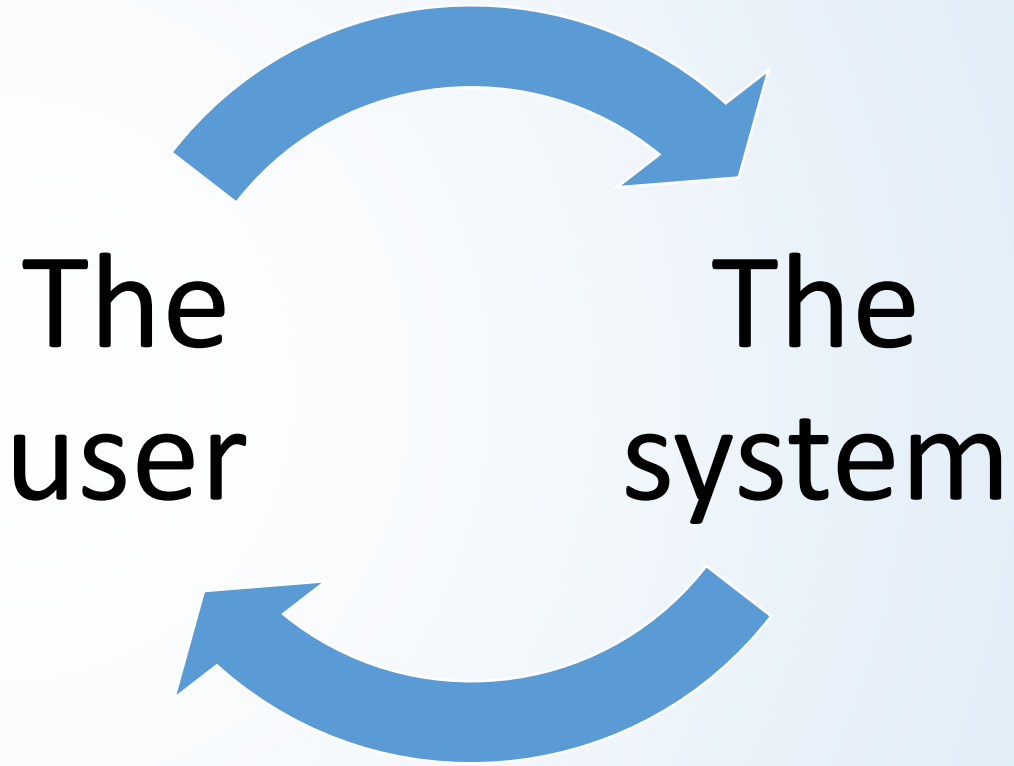
UX vs UI

Focuses on how users interact with a system in order to improve its acceptability, enjoyment and ease of use

Gulf of **evaluation**
and
Gulf of **execution**

Gulf of Execution

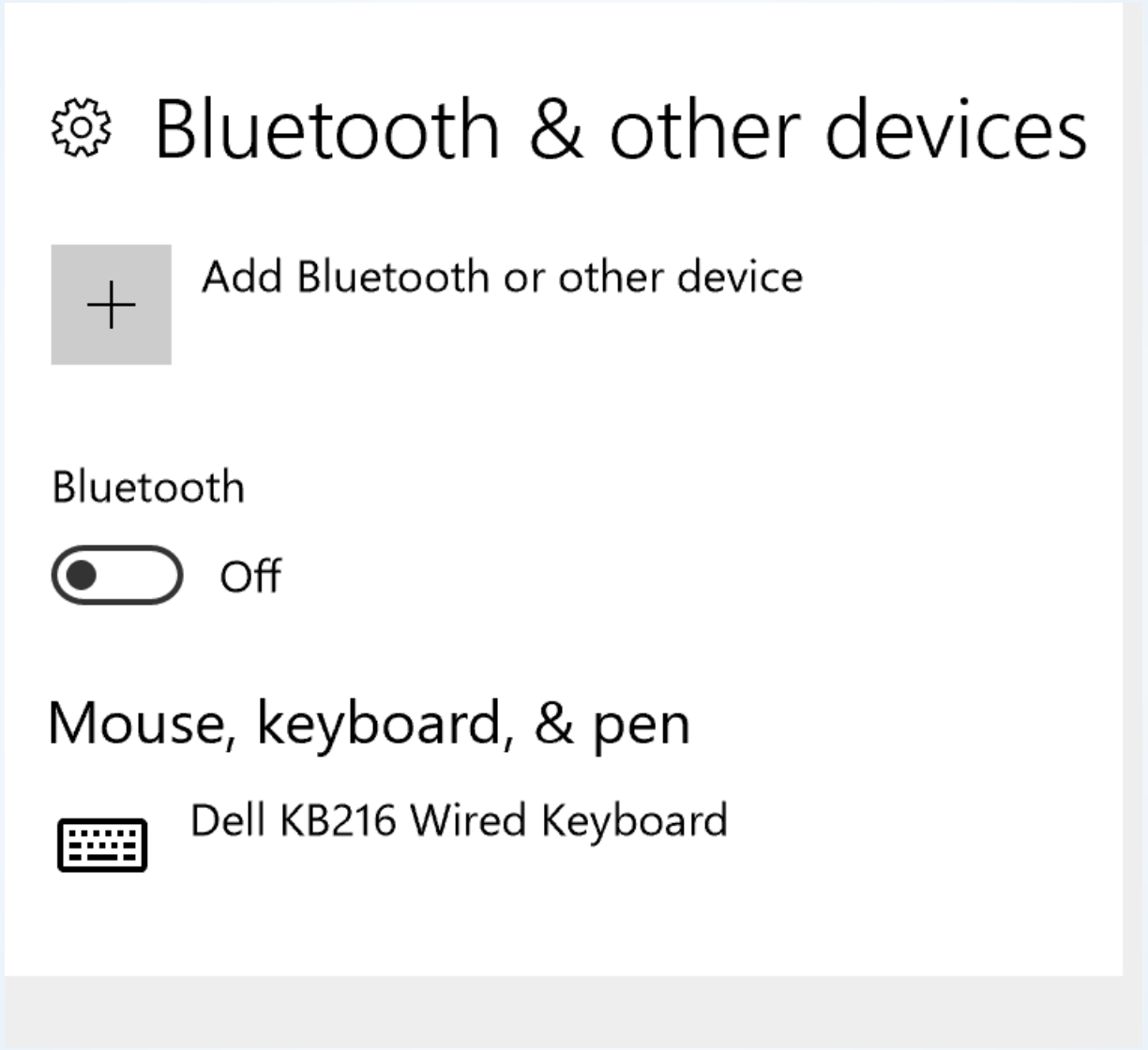
How do I use this system?



Gulf of Evaluation

What is the system doing?

OFF
ON


Bluetooth & other devices
Add Bluetooth or other device
Bluetooth
Off
Mouse, keyboard, & pen
Dell KB216 Wired Keyboard

Bluetooth & other devices

Add Bluetooth or other device

Bluetooth

Off

Mouse, keyboard, & pen

Dell KB216 Wired Keyboard

Bluetooth & other devices

Add Bluetooth or other device

Bluetooth

Off

Mouse, keyboard, & pen

Dell KB216 Wired Keyboard

Bluetooth & other devices

Add Bluetooth or other device

Bluetooth

On

Now discoverable as “DESKTOP-ISFRCAL”

Mouse, keyboard, & pen

Dell KB216 Wired Keyboard

Notifications

Get notifications from apps and other senders

On

Show notifications on the lock screen

On

Show reminders and incoming VoIP calls on the lock screen

On

Hide notifications when I'm duplicating my screen

Off

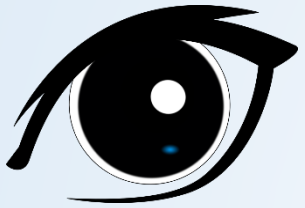
Show me the Windows welcome experience after updates and occasionally when I sign in to highlight what's new and suggested

On

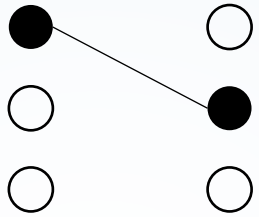
Get tips, tricks, and suggestions as you use Windows

On

10 usability heuristics



Visibility
Keep users informed of what is going on, where they are, what they are doing, etc. through feedback.



Mapping
Use familiar terms and objects, or design processes to be similar to their counterpart in real-life.

Freedom
Allow users to cancel or undo any action they take. They should be confident in exploring.

Error prevention
Constrain options, provide good suggestions. Always ask for confirmation.

Consistency
Make system behavior predictable and objects consistent with each other within the app

10 usability heuristics

Recognition
Use elements and processes that users identify quickly rather than having to remember them.

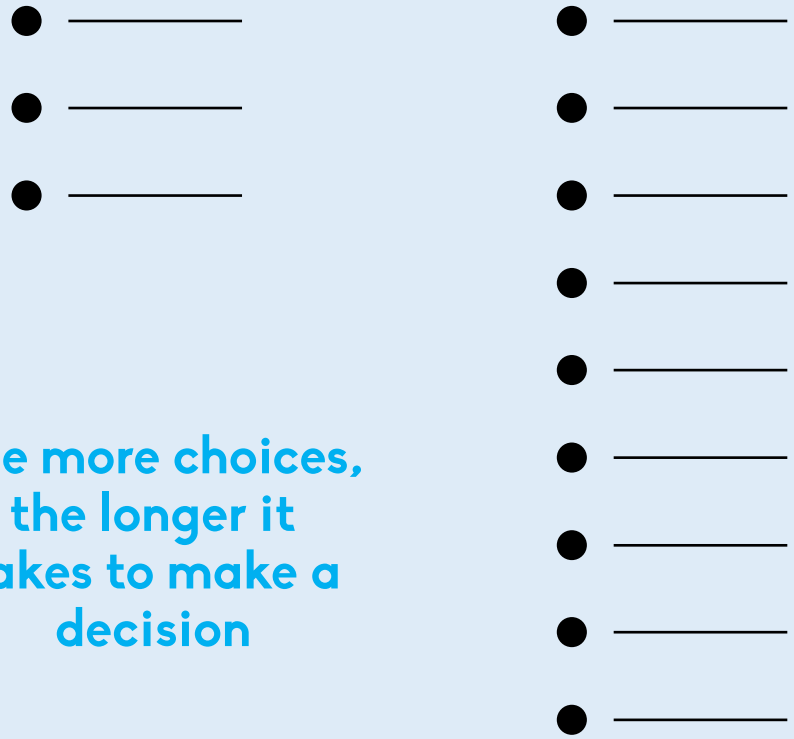
Flexibility
Actions should be achievable through multiple means, both for user new and experienced users

Minimalist design
Remove/hide information that is not needed or used infrequently.

Error recovery
Inform users when and what errors have occurred. Offer shortcuts to solutions.

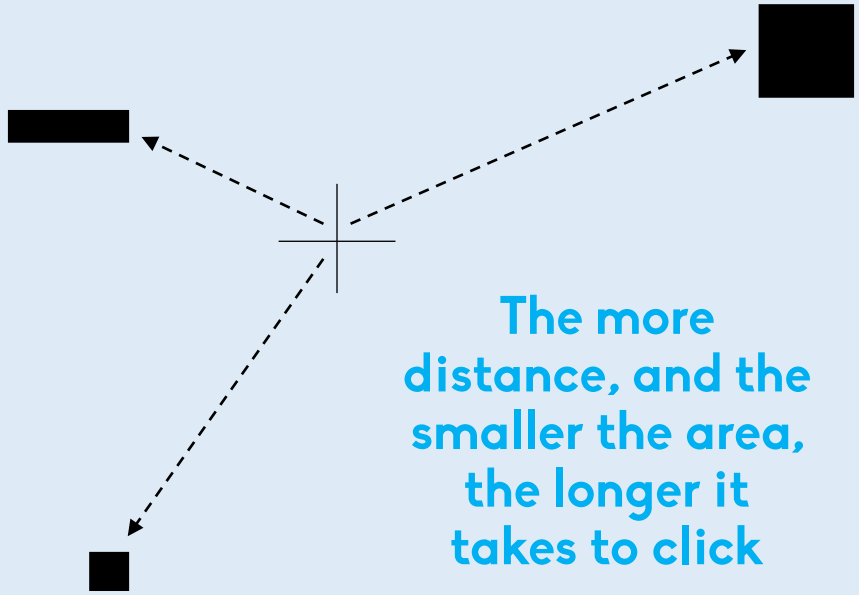
Help and documentation
Make it easy for users to ask/search for help. Offer help as concrete steps to follow, for the task at hand.

Hick's Law



The more choices, the longer it takes to make a decision

Fitts's Law



The more distance, and the smaller the area, the longer it takes to click

User Journeys

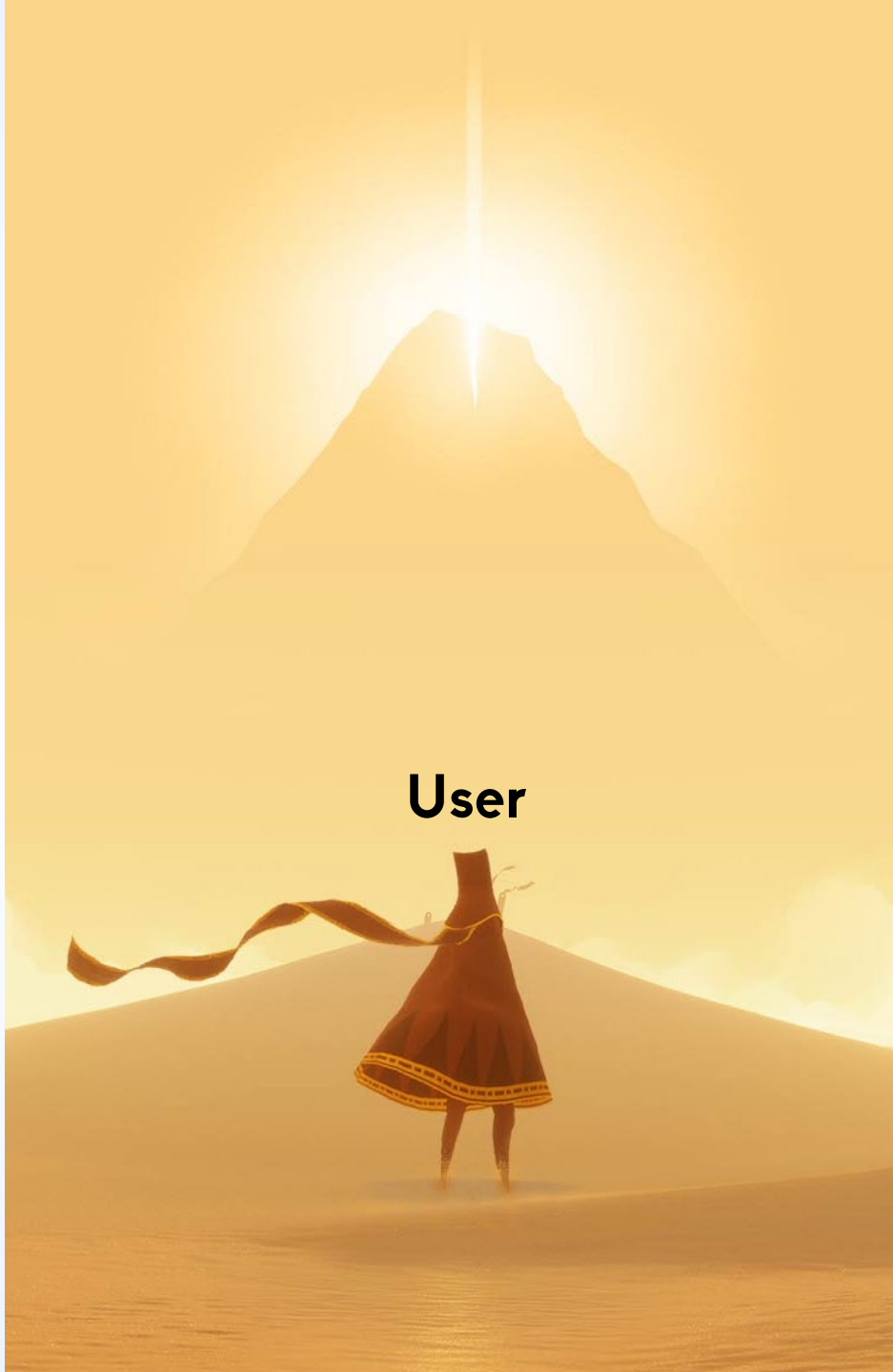
User journey (mapping)

Visualizing or charting, in order, what a person (user/customer) has to go through to reach their goal

It can be as general or as specific as your purposes require

(e.g. buying a PS5, buying a PS5 in Coolblue, etc.)

Can also be done before or after the product is made



Sarah

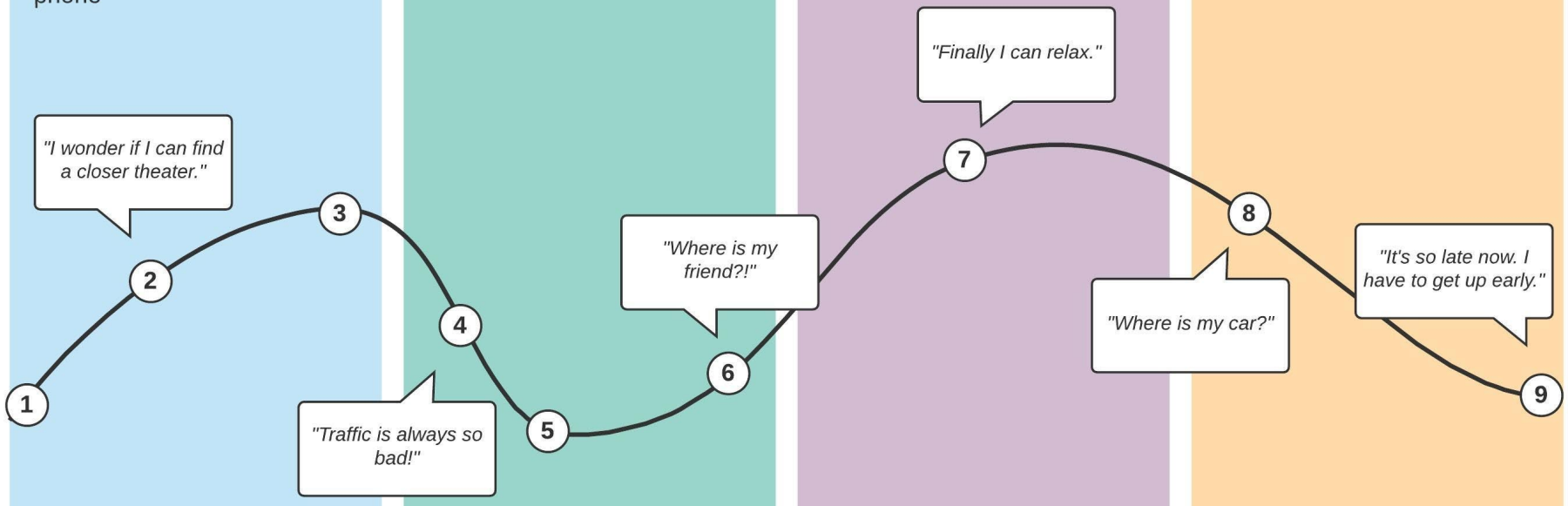
Scenario

Sarah is going to the movies. She is excited to go out for the night and will meet her friend at the theater.

Expectations

- Great movie
- Friendly staff
- Good seat

Decide	Travel	Experience	Return
1. Looks up movies on phone 2. Decides which movie to see and which theater to go to 3. Buys ticket online from phone	4. Drives to movie theater 5. Stands in line and buys popcorn 6. Finds seat next to friend	7. Watches movie	8. Exits theater 9. Drives home



User journey (mapping)

Focuses on user’ s experience

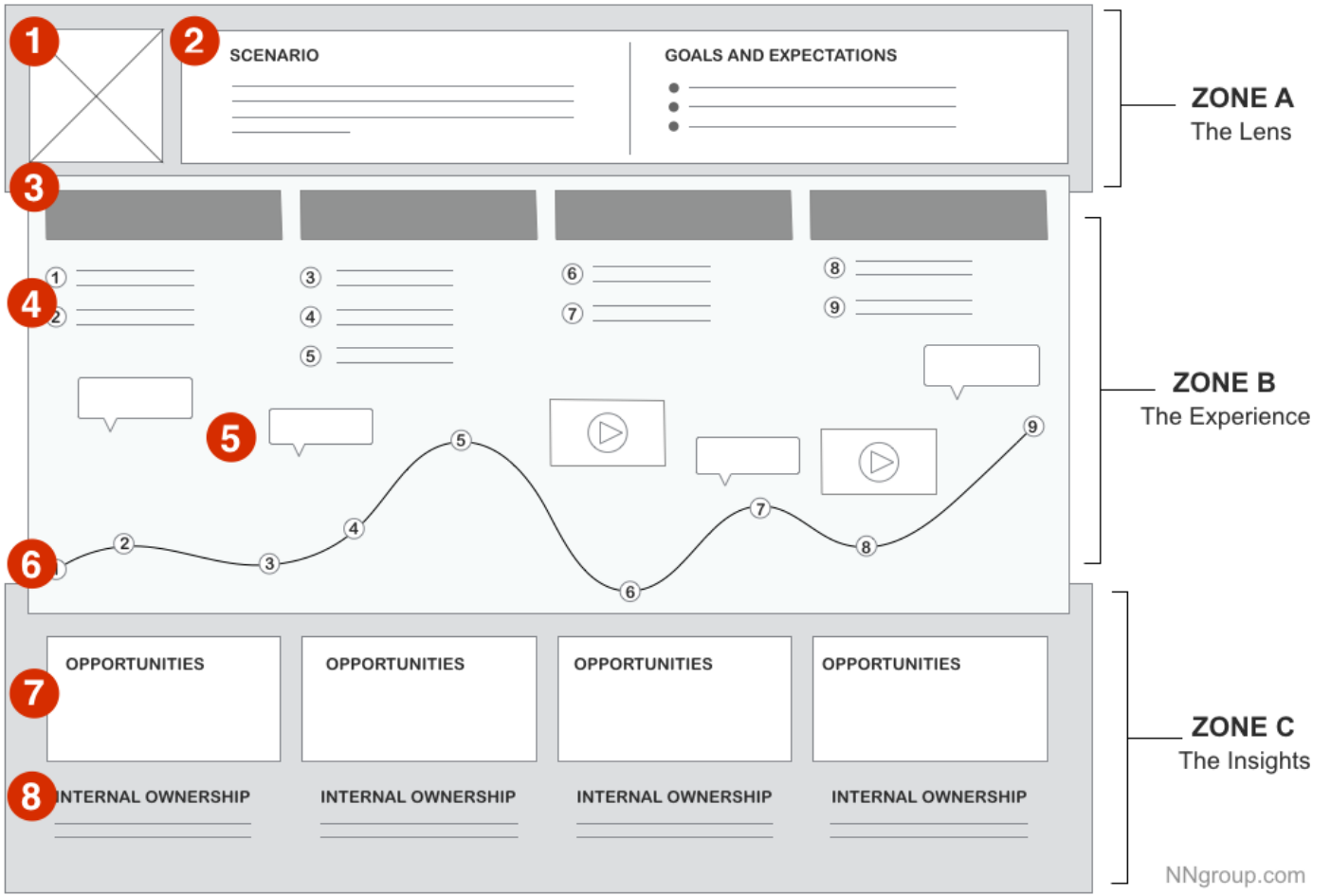
- Emotions they go through
- Tools they use
- Actions they take

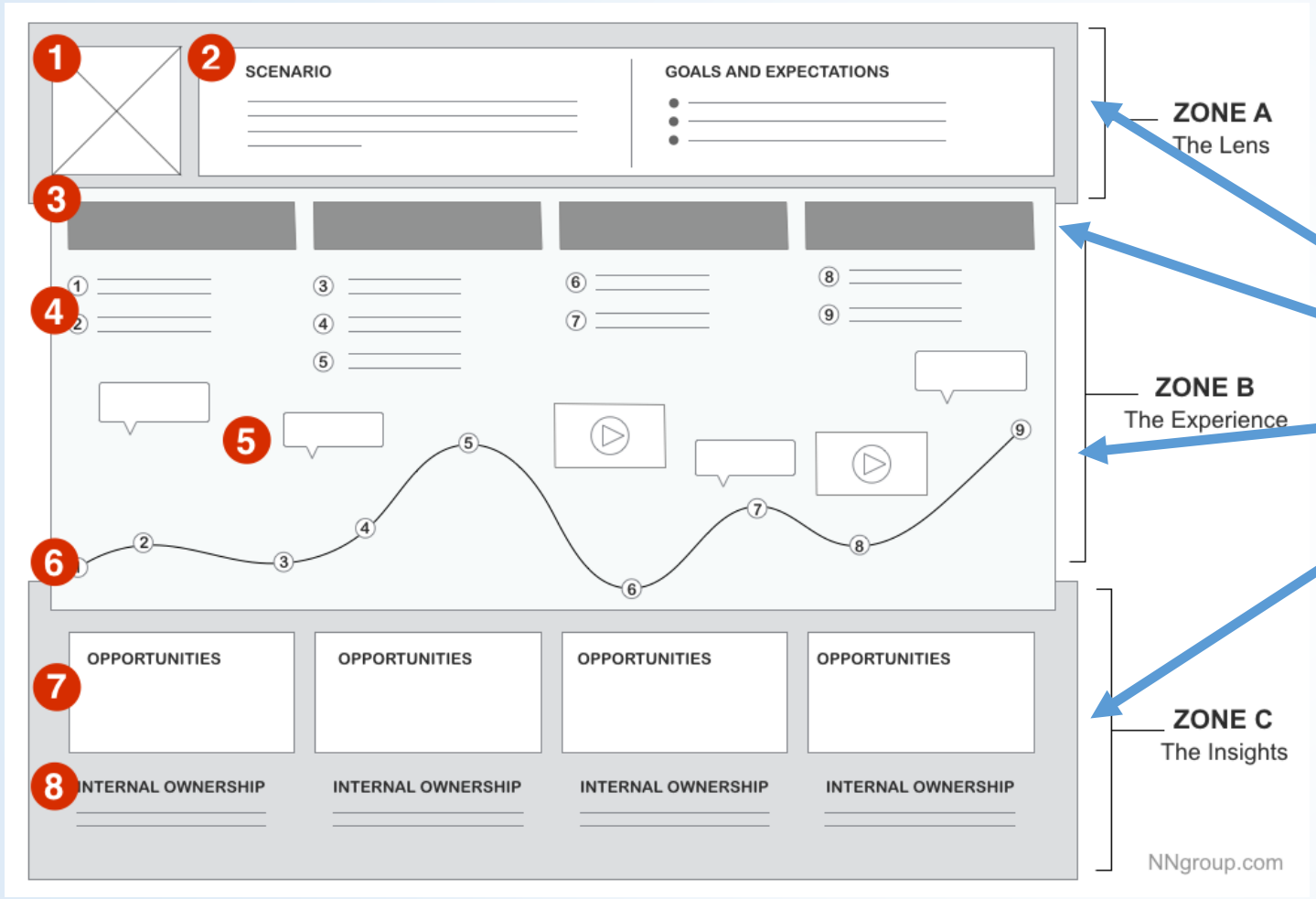
Leave out implementation details

Not necessarily a step-by-step of user actions, but a condensed timeline of a process

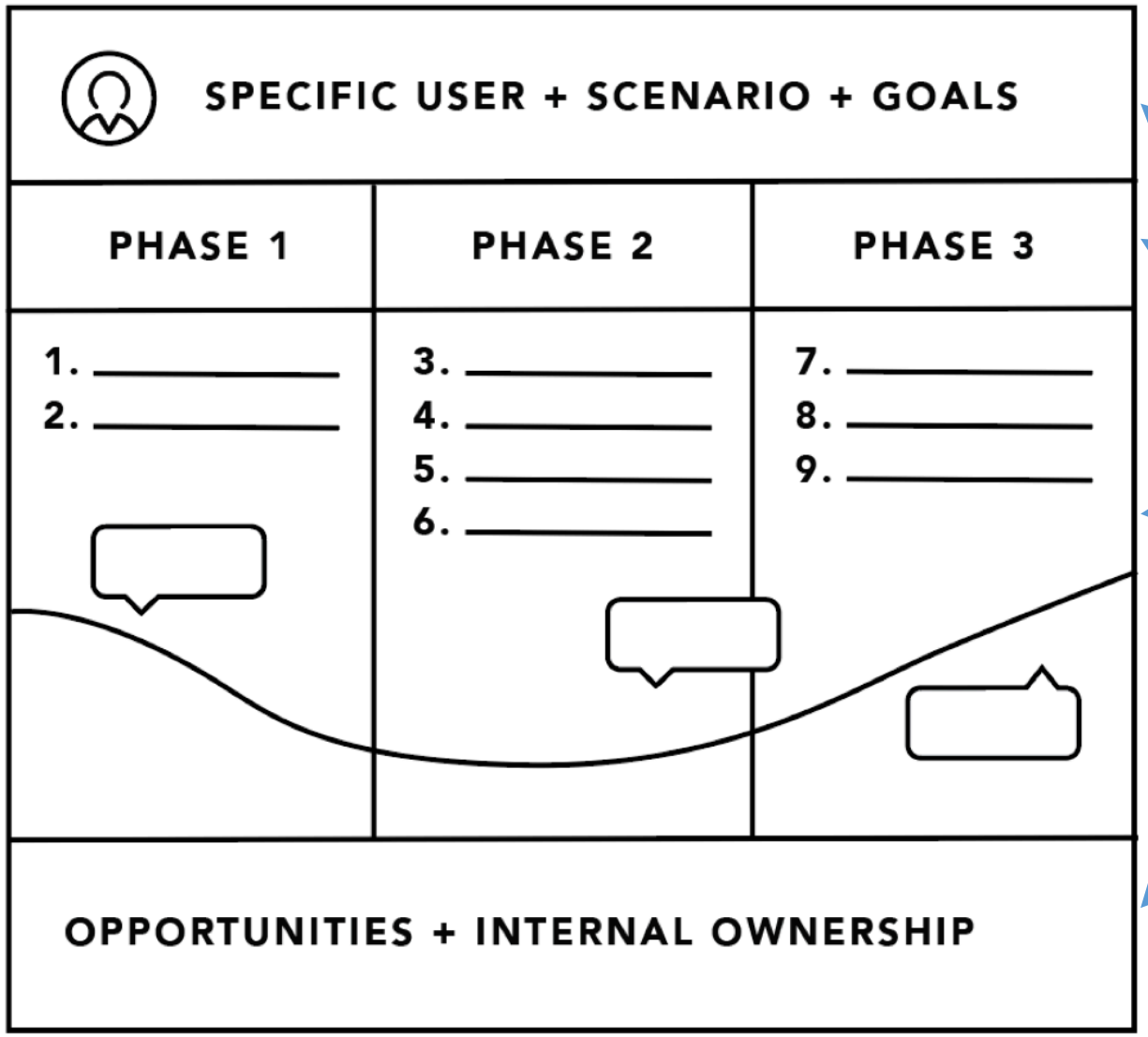
The outcome of the mapping is

- User’s actions and associated mindset, positive and negative
- Team-wide understanding of the entire process
- Identified opportunities for improvement
- Assigned ownership of phases





4 lanes of information



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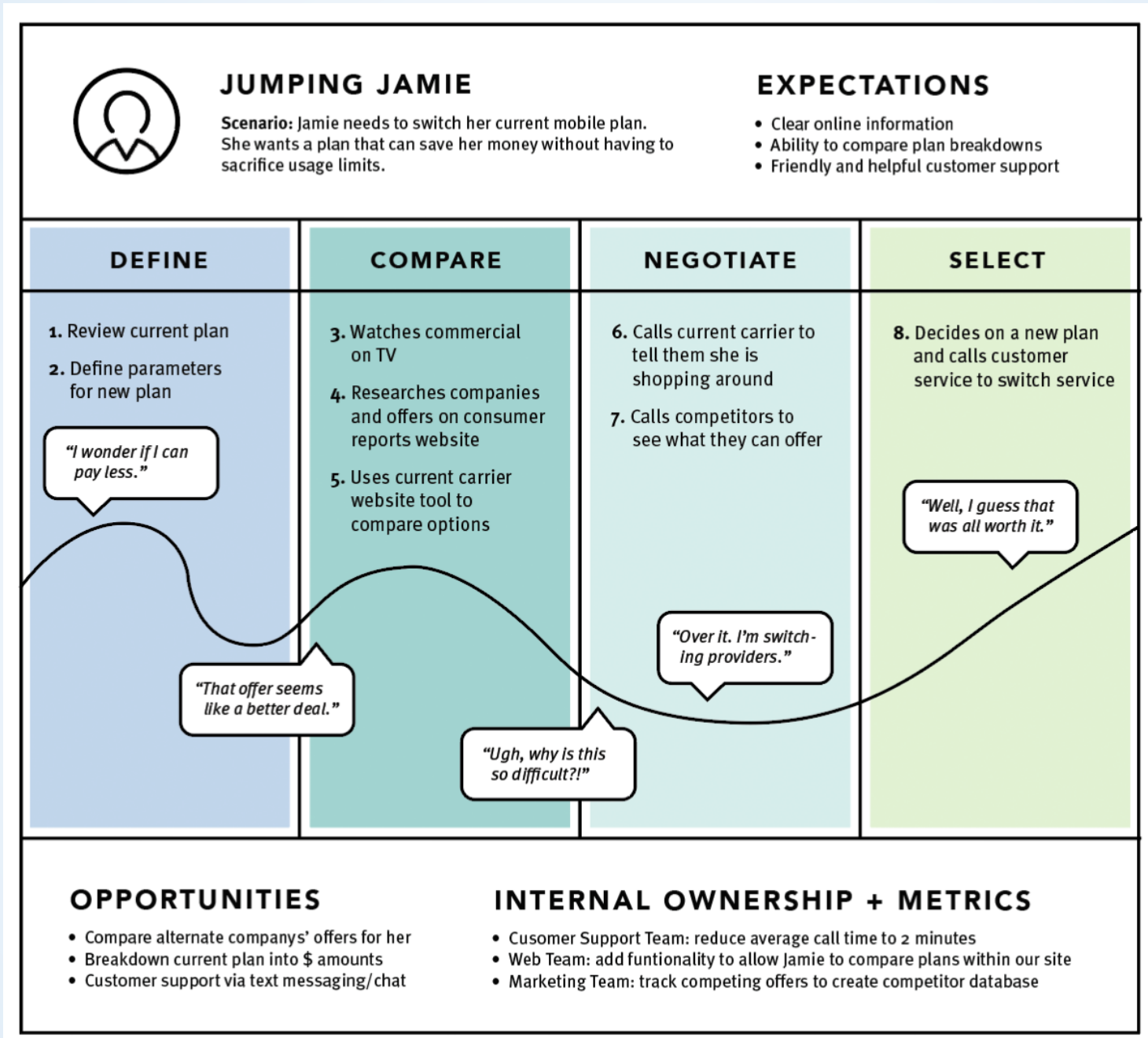
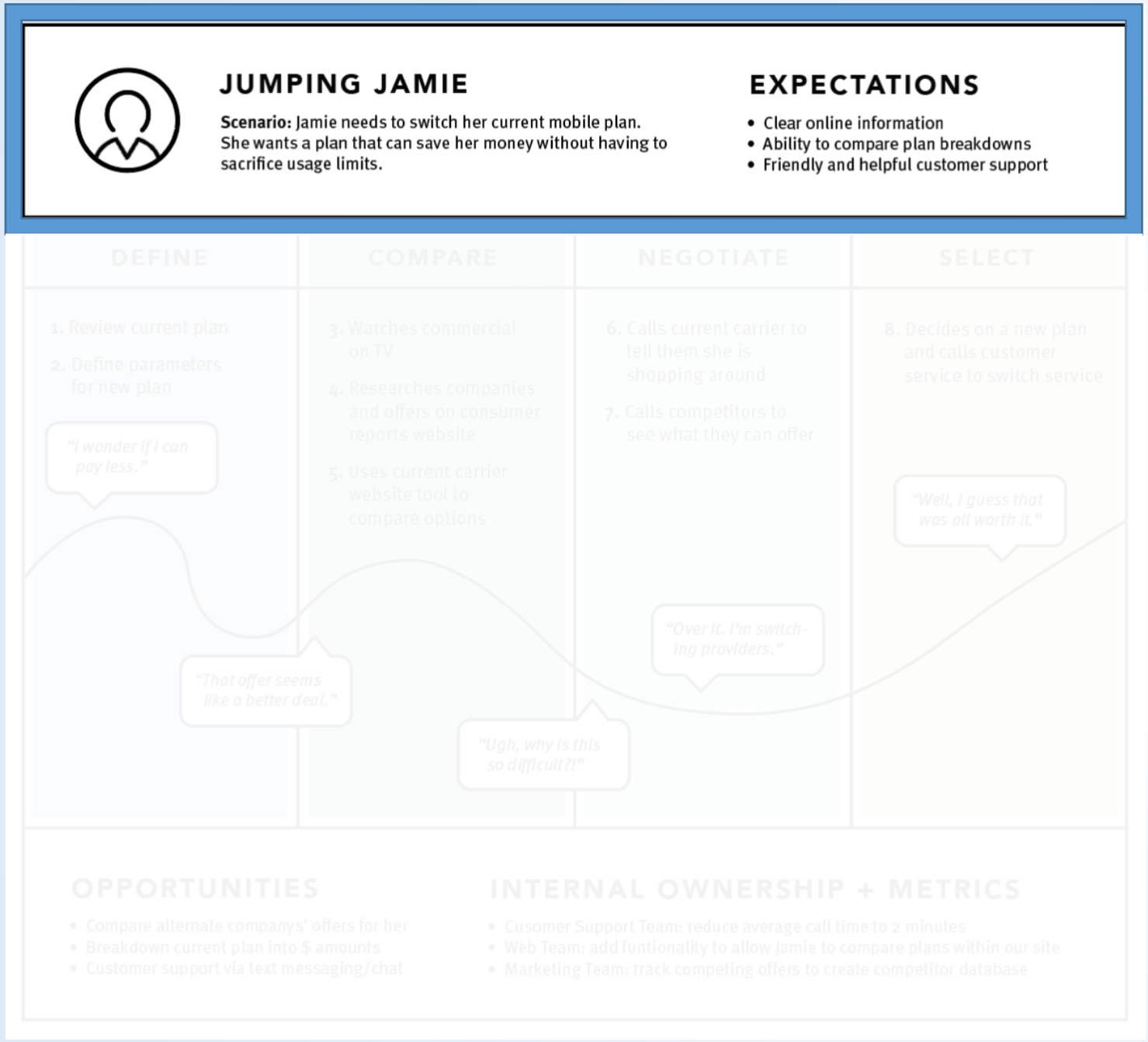

JUMPING JAMIE
Scenario: Jamie needs to switch her current mobile plan. She wants a plan that can save her money without having to sacrifice usage limits.
EXPECTATIONS
• Clear online information
• Ability to compare plan breakdowns
• Friendly and helpful customer support
DEFINE
COMPARE
NEGOTIATE
SELECT
1. Review current plan
2. Define parameters for new plan
3. Watches commercial on TV
4. Researches companies and offers on consumer reports website
5. Uses current carrier website tool to compare options
6. Calls current carrier to tell them she is shopping around
7. Calls competitors to see what they can offer
8. Decides on a new plan and calls customer service to switch service
"I wonder if I can pay less."
"That offer seems like a better deal."
"Ugh, why is this so difficult?!"
"Over it. I'm switching providers."
"Well, I guess that was all worth it."
OPPORTUNITIES
• Compare alternate companys' offers for her
• Breakdown current plan into $ amounts
• Customer support via text messaging/chat
INTERNAL OWNERSHIP + METRICS
• Cusomer Support Team: reduce average call time to 2 minutes
• Web Team: add funtionality to allow Jamie to compare plans within our site
• Marketing Team: track competing offers to create competitor database



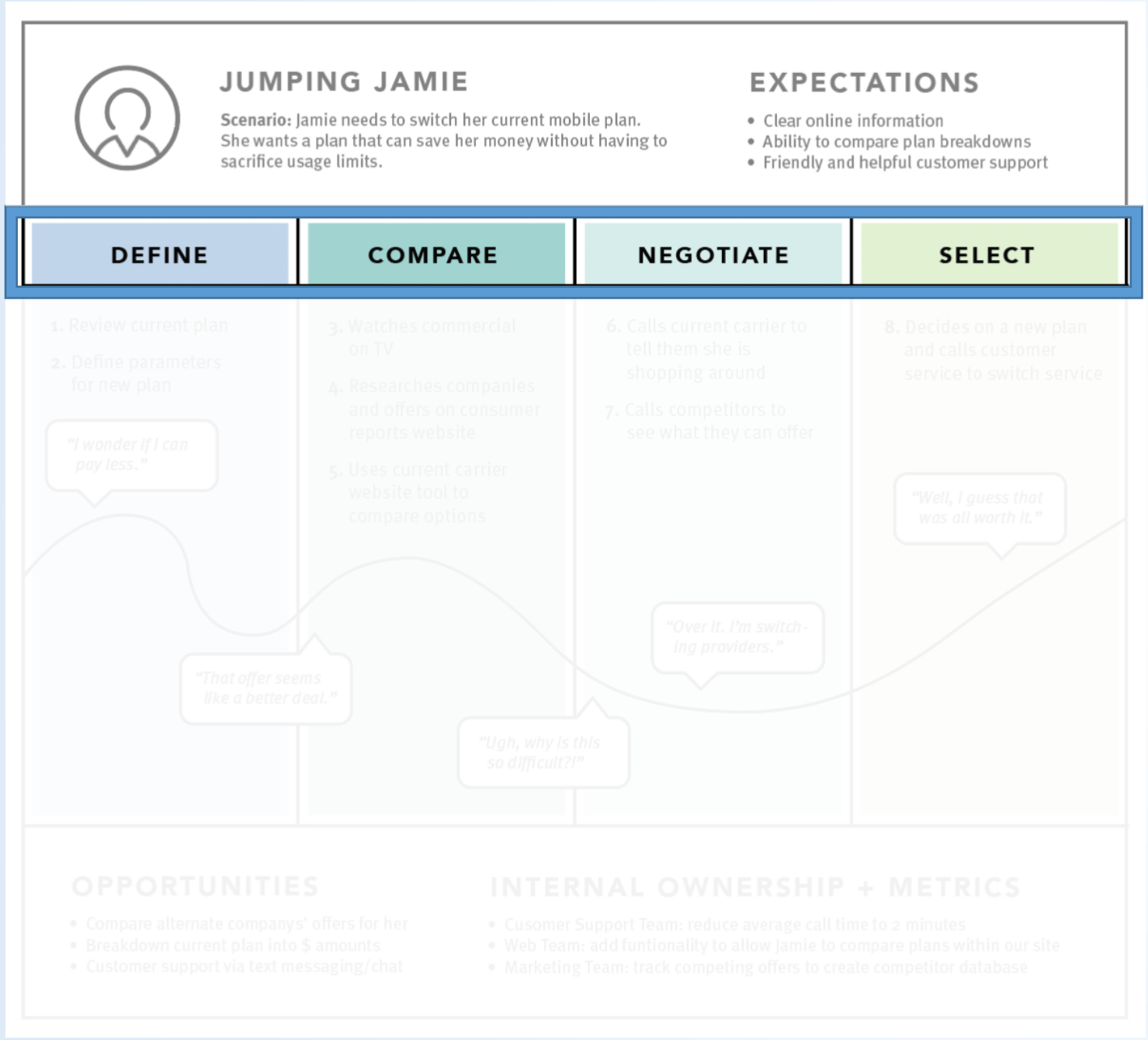
Actor, Scenario and Expectations

Person who experiences the journey

- A point of view
- **Normally represented as a persona**

The situation the user will go through

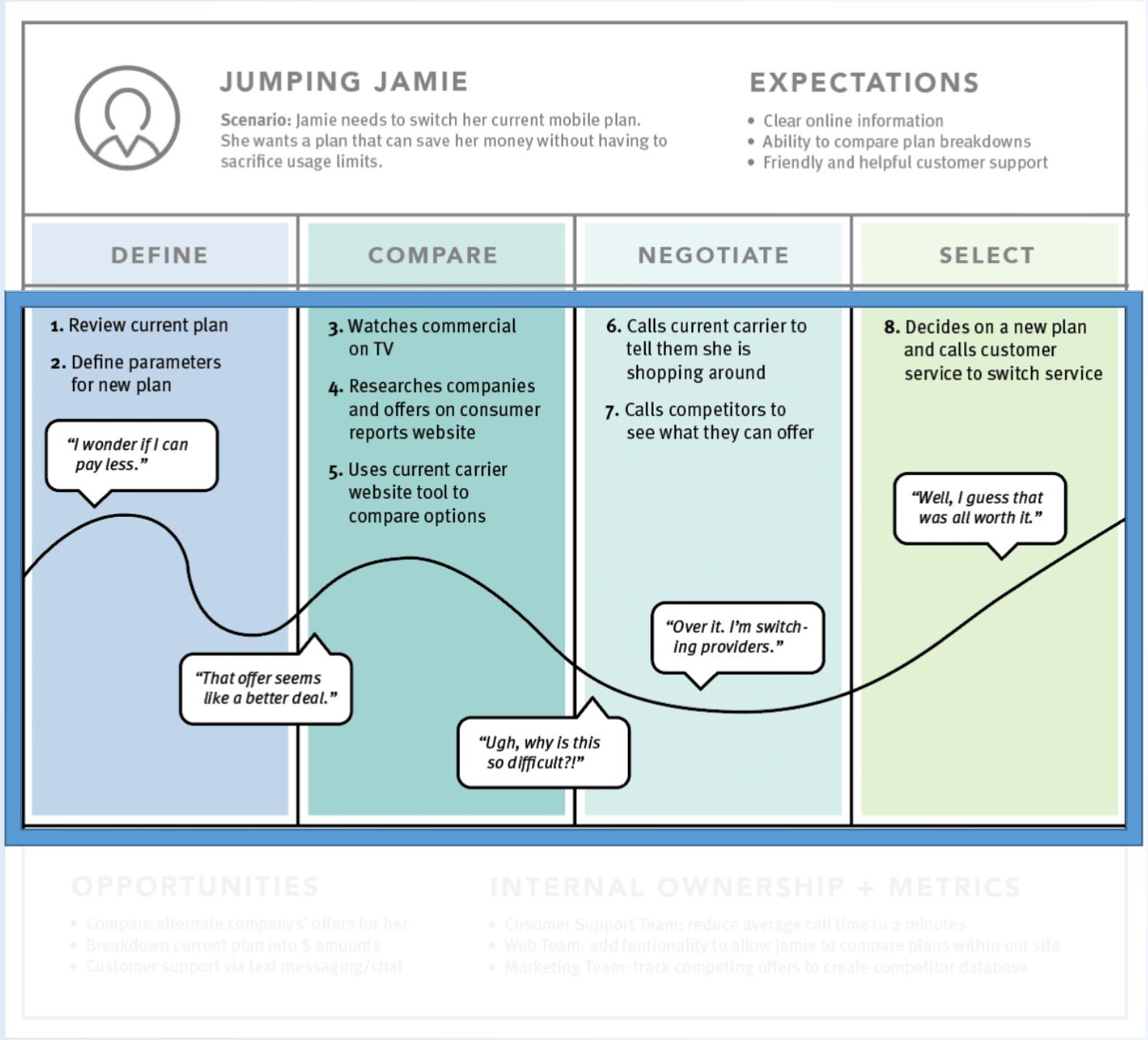
The expectations of the user



Phases of the journey

High level stages of the process

They help organize and compartmentalize the analysis of the user's actions



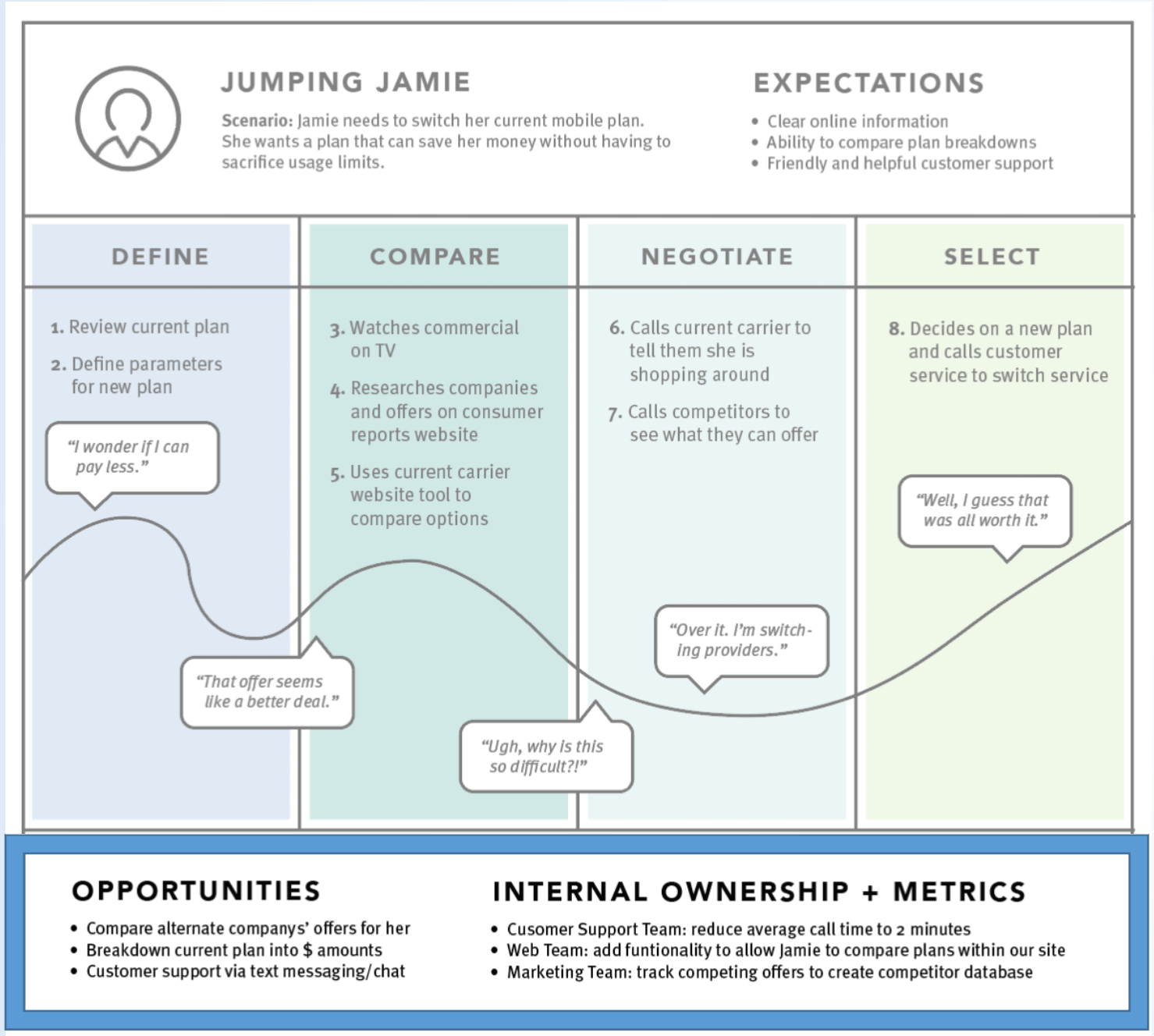
Actions, Mindsets, Emotions

Actual behavior of the user

User's motivation, internal questions, thoughts, etc.

Emotional up and downs

- Delighted vs Frustrated
- Plotted as a line

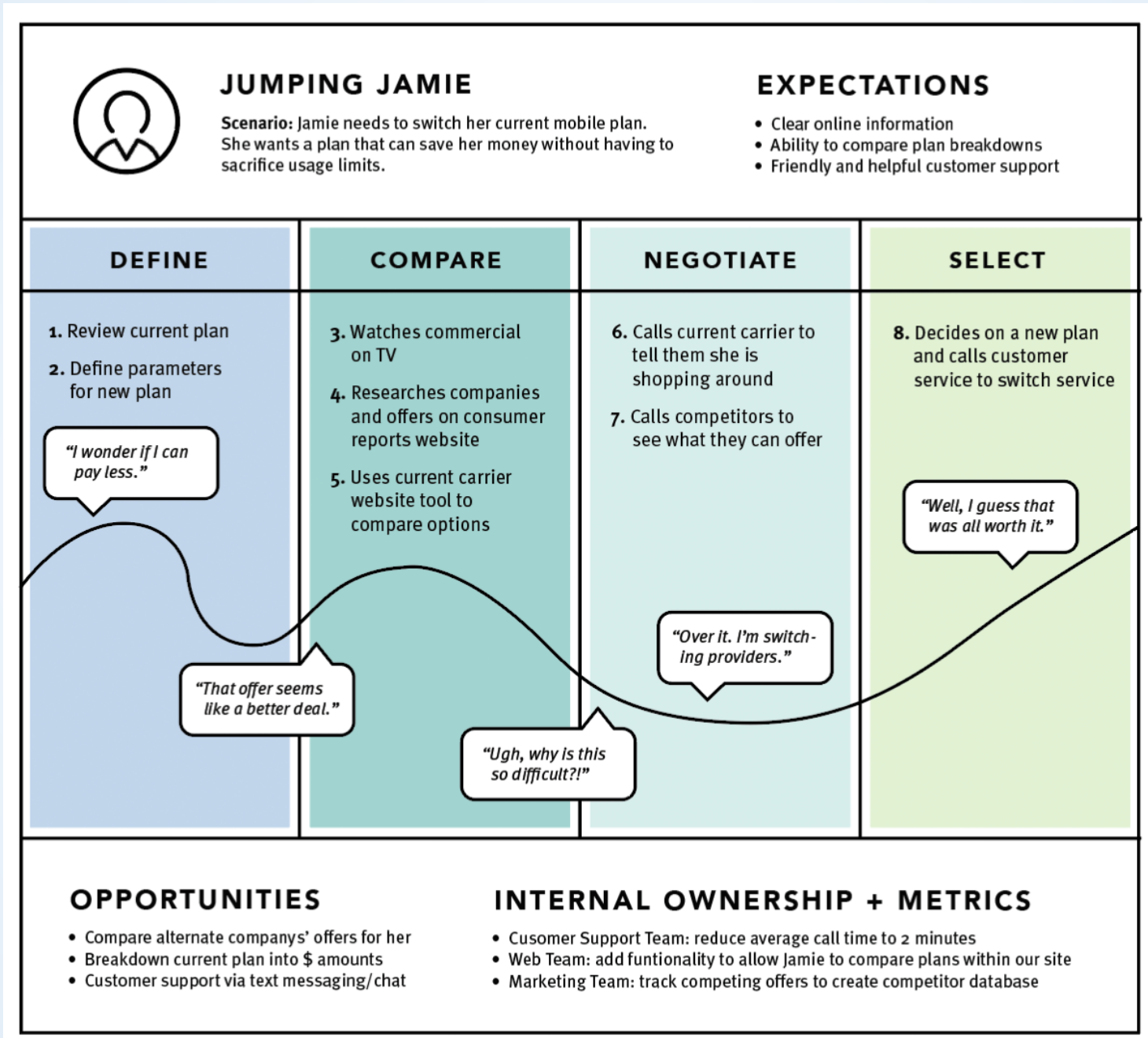


Insights from the mapping

How can the experience be improved or optimized?

Who is in charge of this phase

Opportunities and Ownership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a.m.morenocelleri@saxion.nl