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: Assessment procedure significantly changed from last year*

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)	195	195	195	195	195	
Homework (minutes)	240	240	240	240	240	240
Weekly total (minutes)	525	675	525	525	495	240
Weekly total (hours)	8.75	11.25	8.75	8.75	8.25	4

Involved teachers

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

Lecturers
- Patrick Huitema (p.g.t.huitema@saxion.nl)
- Tim Roosen (t.p.roosen@saxion.nl)
- Herman Paassen (h.paassen@saxion.nl)
- Mark Boerrigter (m.j.boerrigter@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 5).
- Finished in terms of aesthetics, functionality, content.

Web or Unity application.
- (At least) One **relevant** interface/screen.
- Should 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).

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 solutions

Limit of 5 students per solution per lab group

First-come, first-serve basis

ENROLLMENT

Solution Sign up ☑

Class Sign-Up ☑

Team Sign-Up ☑

Sign up for **CMGTwitch (E-Lecture manager)**

A system where students find their current and past modules in their edu... there should be a built-in chat function that encourages constructive disc...

Sign up for **Looking for room (mate)**

A system that helps students find places to rent for a short/long term peric... easy to use for people outside the cities/countries they are looking to mov...

Sign up for **Wellbeing guardian**

A system that should help students track their physical and/or mental we... student. The system should also have a way to facilitate students to get i...

Sign up for **Sharing-is-Caring**

A system that helps students borrow/lend things to other people. The sy... simply vanish with an item they have borrowed (especially expensive iter...

Sign up for **EduBrainTrust**

A system which groups people at the same level of expertise on a certain... them, or ask for help in the selected topic from other groups or more kno...

Redo Students

Sign up as a Redo Student (not if you are in a regular class of the...

[ECM2V.Ab, ECM2V.Aa] CMGTwitch (E-Lecture manager)

(Not Enrolled)   View Sign-up Sheet to Join a Group

[ECM2V.Ad, ECM2V.Ac] CMGTwitch (E-Lecture manager)

(Not Enrolled)   View Sign-up Sheet to Join a Group

[ECM2V.Af, ECM2V.Ae] CMGTwitch (E-Lecture manager)

(Not Enrolled)   View Sign-up Sheet to Join a Group

[ECM2V.Db, ECM2V.Da] CMGTwitch (E-Lecture manager)

(Not Enrolled)   View Sign-up Sheet to Join a Group

[ECM2V.Dd, ECM2V.Dc] CMGTwitch (E-Lecture manager)

(Not Enrolled)   View Sign-up Sheet to Join a Group

[ECM2V.Ea] CMGTwitch (E-Lecture manager)

(Not Enrolled)   View Sign-up Sheet to Join a Group

[ECM2V.Ed, ECM2V.Ec] CMGTwitch (E-Lecture manager)

(Not Enrolled)   View Sign-up Sheet to Join a Group

SignUp Sheet Instructions:
A system where students find their current and past modules in their education trajectory. In the in chat function that encourages constructive discussions rather than spam, and allows for good

[ECM2V.Ab, ECM2V.Aa] CMGTwitch (E-Lecture manager)

Group Members : None
Max Members Allowed : 5

Sign Up

[ECM2V.Ad, ECM2V.Ac] CMGTwitch (E-Lecture manager)

Group Members : None
Max Members Allowed : 5

Sign Up

[ECM2V.Af, ECM2V.Ae] CMGTwitch (E-Lecture manager)

Group Members : None
Max Members Allowed : 5

Sign Up

[ECM2V.Db, ECM2V.Da] CMGTwitch (E-Lecture manager)

Group Members : None
Max Members Allowed : 5

Sign Up

[ECM2V.Dd, ECM2V.Dc] CMGTwitch (E-Lecture manager)

Group Members : None
Max Members Allowed : 5

Sign Up

[ECM2V.Ea] CMGTwitch (E-Lecture manager)

Group Members : None
Max Members Allowed : 5

Sign Up

[ECM2V.Ed, ECM2V.Ec] CMGTwitch (E-Lecture manager)

Group Members : None
Max Members Allowed : 5

Sign Up

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 27th of January 2021, 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. We will be keeping **track of attendance** in the labs.

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)
- At least (and also recommended) four relevant questions

Quick overview

Reports (Templates in BB)
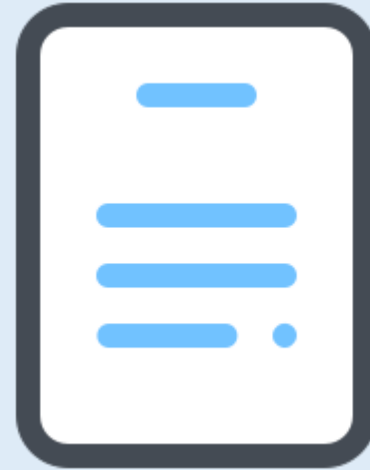
Product report   Evaluation report

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.

Some examples
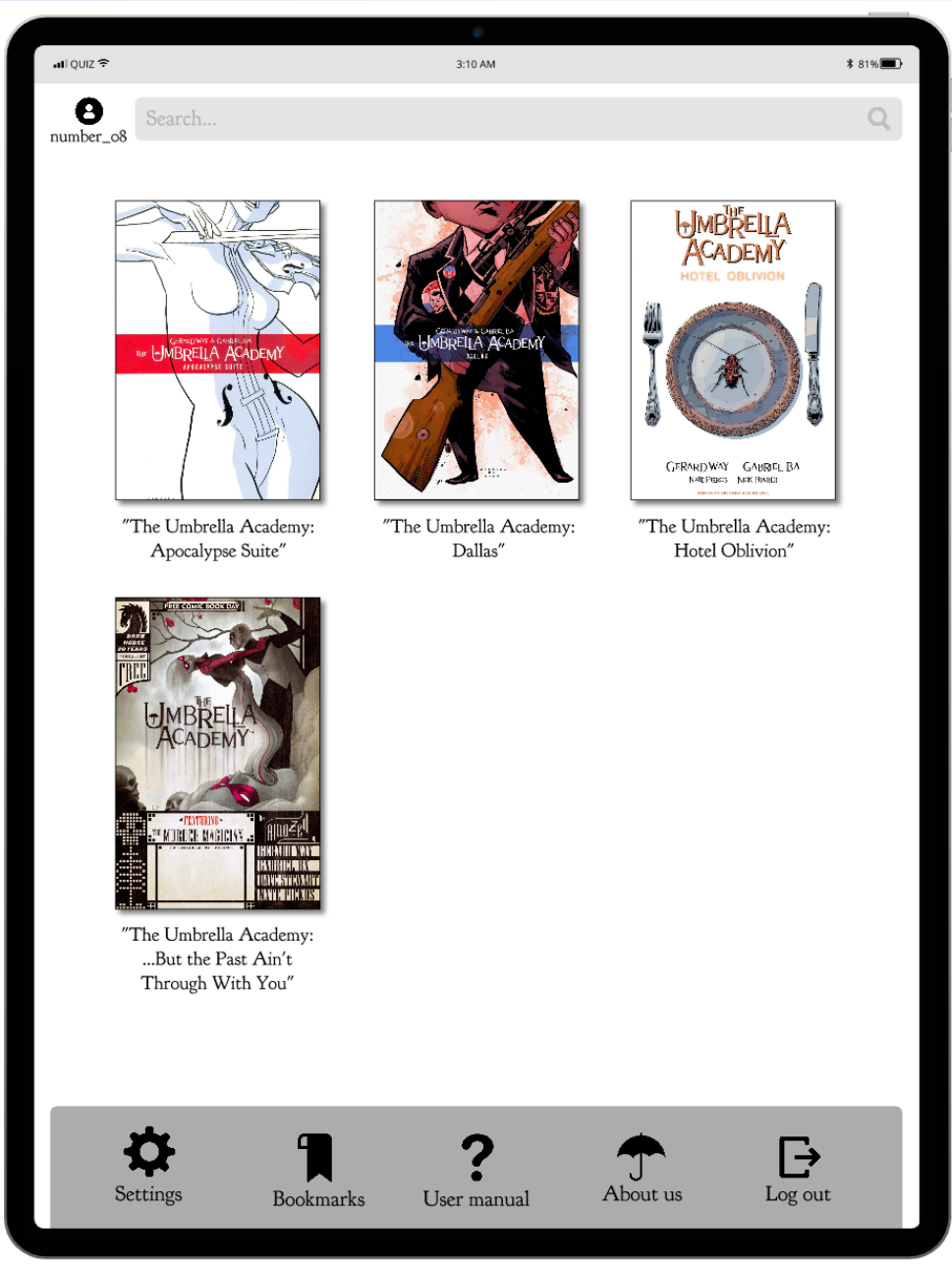
Anna Dutko

The Umbrella Academy reader

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 Execution

How do I use this system?

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

The user

The system

Gulf of Evaluation

What is the system doing?

The user

The system

Gulf of Evaluation

What is the system doing?

Perceiving
+
Interpreting
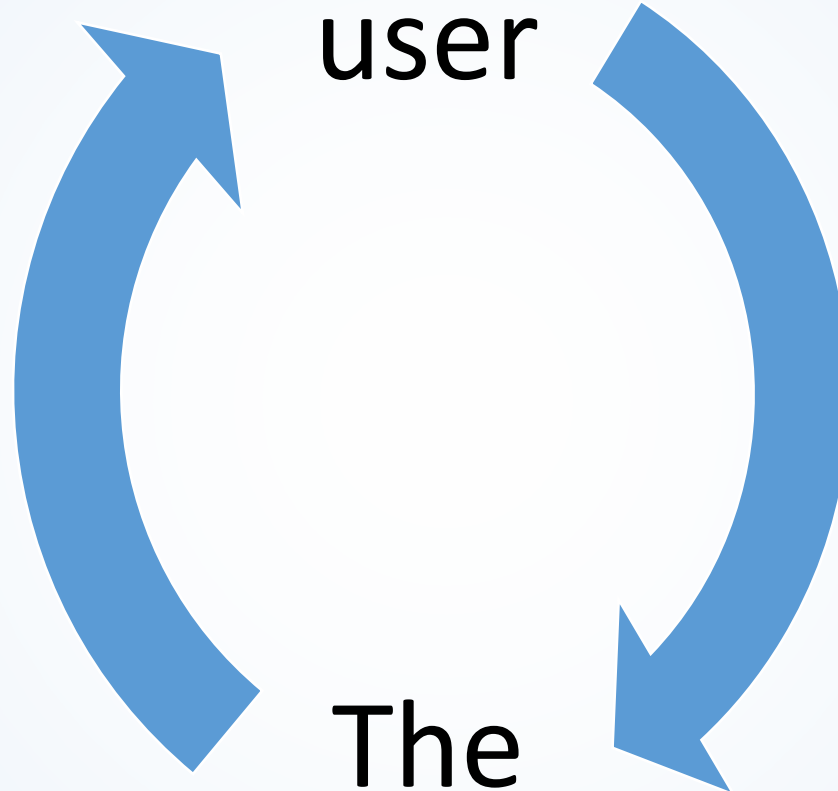
Gulf of Execution

How do I use this system?

Planning
+
Manipulating

⚙ 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

Perceived **Affordance**

Perceived functionality or use of an object

"Beauty is in the eye of the beholder – true, but not just beauty, functionality as well"
Park & Alderman

10 usability heuristics

Visibility
Keep users informed of what is going on, where they are, what they are doing, etc. through feedback.
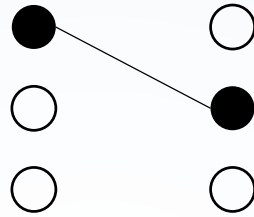
Mapping
Use familiar terms and objects, or design processes to be similar to their counterpart in real-life.

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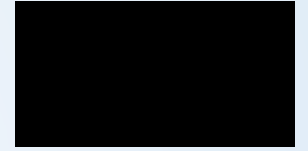
Minimalist design
Remove/hide information that is not needed or used infrequently.

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

Fitts's Law

The more choices, the longer it takes to make a decision
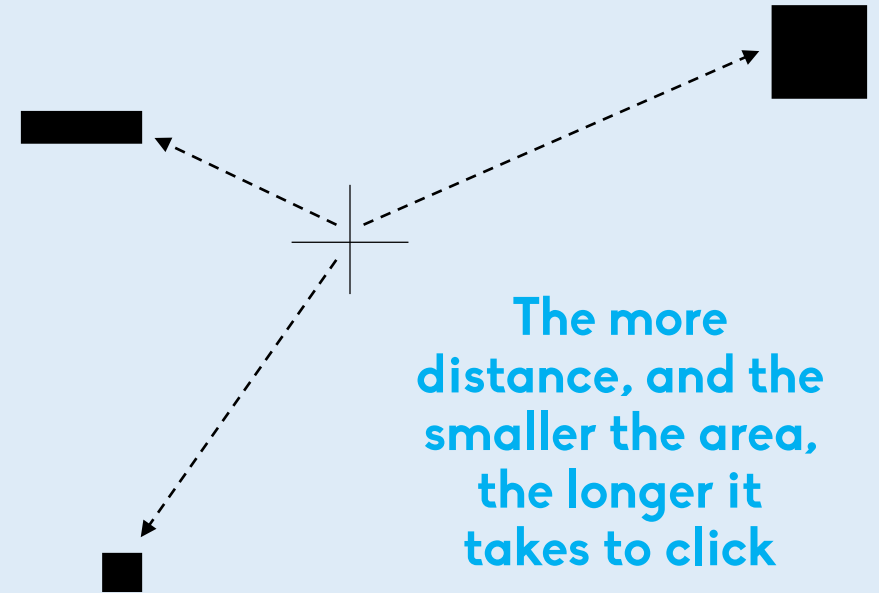
The more distance, and the smaller the area, the longer it takes to click

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

User

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
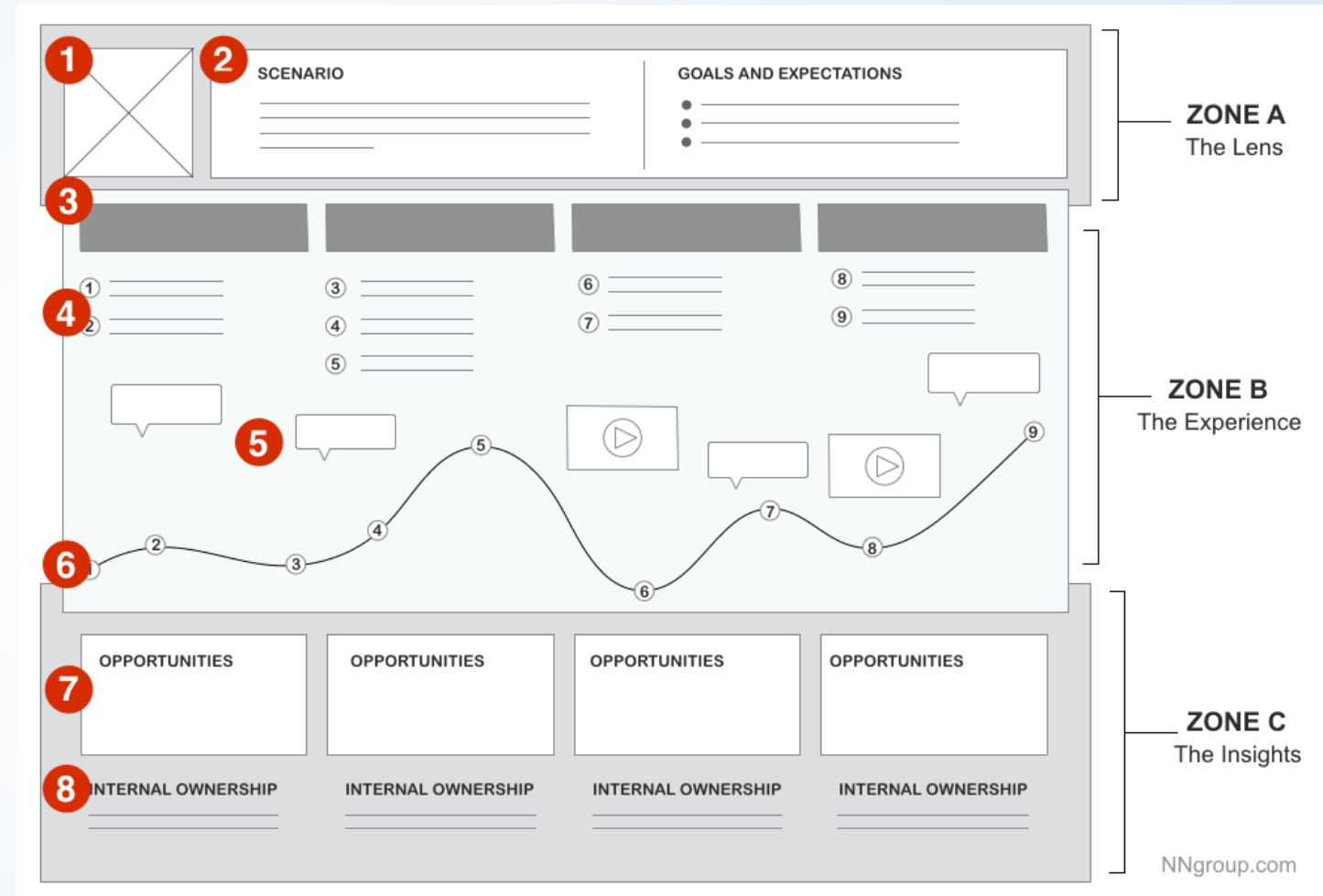
User Profile

Small + Medium-sized Business Owner
- Less than 20 employees
- Wants to save time and $
- Looking for tools to grow business
- Seeks quick, reliable answers

Needs Mobile Credit Card Reader
- Wants to find a quick, easy solution
- Expects enough info to make a decision
- Needs clear pricing, what equipment might be needed, pros/cons of different card readers

	SEARCH →	READ →	CHOOSE
ACTIONS	• Googles "best mobile credit card reader on mobile device • Clicks on search result for Business.org	• Lands on Business.org best credit card readers page • Scans/reads copy	• Clicks *learn more* for square app • Adds square reader to cart
THOUGHTS	• "I want to quickly find what I need." • "I want to know prices." • "I want to see what other SMBs use."	• "I love the last updated verbiage because I know this is recent and the *best* for messaging." • "Are there reviews from SMB owners I can read?" • "Where are the prices and fees?" • "What equipment do I need?"	• "Why am I being pushed to buy after clicking *learn more*? I want more info." • "If I made the wrong choice, can I return it?"
EMOTIONS	*Hopeful* *Impatient*	*Frustrated* *Overwhelmed*	*Surprised* *Nervous*
OPPORTUNITIES		• Clearer prices • Quotes from business owners • Improved comparison tables • Clearer equipment requirements	• Revise *buy now* vs *learn more* links • Make sure prices match
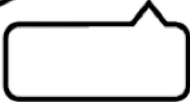
4 lanes of information

CUSTOMER/USER JOURNEY MAP

SPECIFIC USER + SCENARIO + GOALS

PHASE 1   PHASE 2   PHASE 3

1. _____   3. _____   7. _____
2. _____   4. _____   8. _____
            5. _____   9. _____
            6. _____

OPPORTUNITIES + INTERNAL OWNERSHIP

NNGROUP.COM   NN/g

4 lanes of information

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
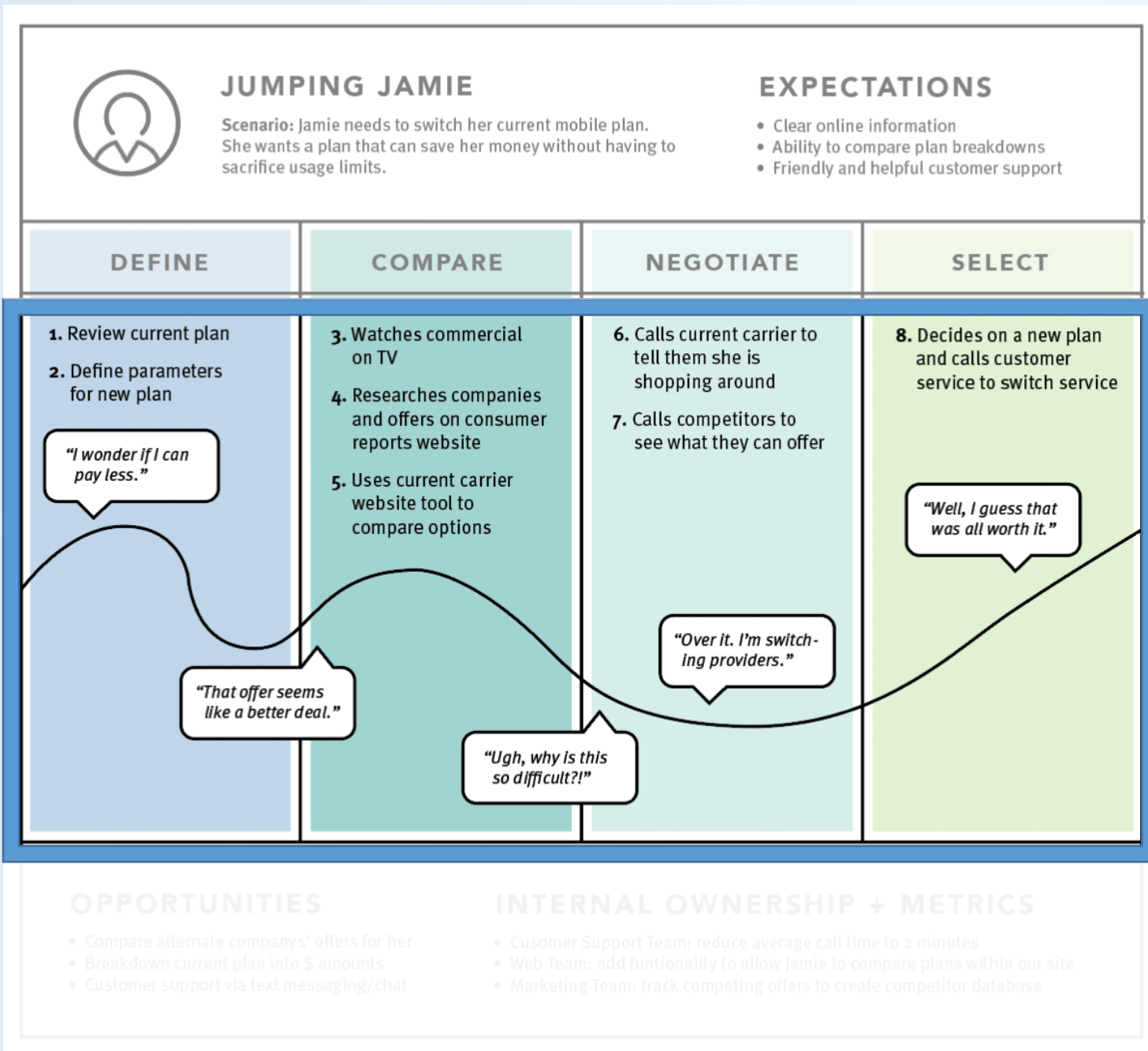
Actions, Mindsets, Emotions

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**

Let's try one ourselves

Persona: Me

Scenario: I am shopping for a smart doorbell during Black Friday / Cyber Monday

Persona	Alejandro Moreno, 30 something year old, teacher at CMGT - Saxion and module leader for UIUXA. Father, Husband, Gamer.
Scenario	Alejandro has a regular doorbell in a house with 4 floors which means he has to run down the stairs when the postman arrives. He is looking to buy a smart video doorbell during Black Friday/Cyber Monday because of the discounts so that his knees can last well into his old age (and prevent falling down the stairs while running to open the door as an added bonus).
Goals & Expectations	Describe users' goal & expectations

Phase 1 Describe the first step	Phase 2 Describe the next step	Phase 3 Describe the next step	Phase 4 Describe the last step
User actions: - - -	User actions: - - -	User actions: - - -	User actions: - - -
User Thoughts: - - -	User Thoughts: - - -	User Thoughts: - - -	User Thoughts: - - -
Opportunities: (potential improvements for the user)	Opportunities: (potential improvements for the user)	Opportunities: (potential improvements for the user)	Opportunities: (potential improvements for the user)

Thanks!

Alejandro Moreno
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