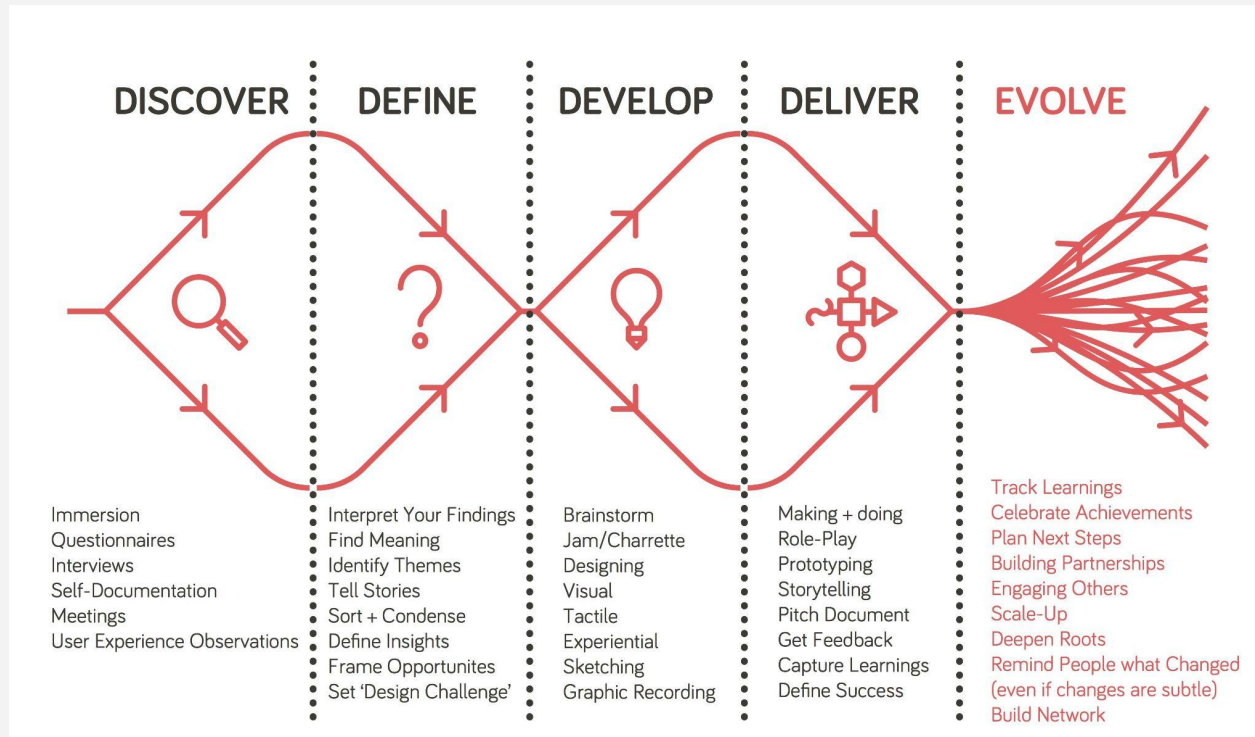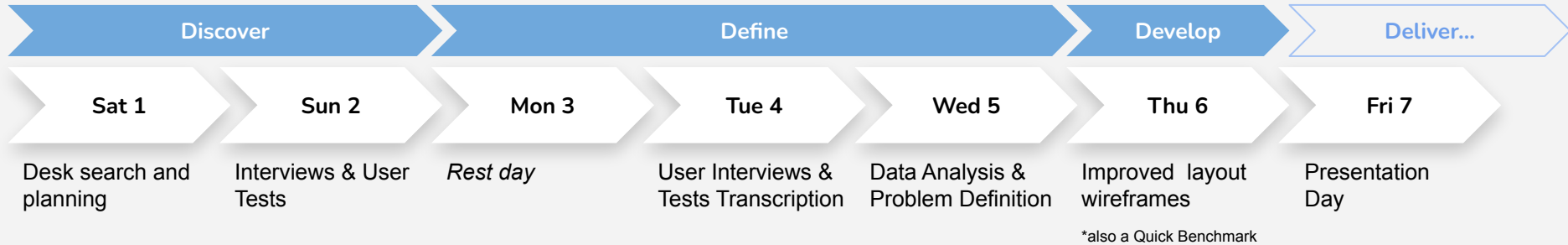2022 - UX case of study by Catalina Vásquez

Madrid Transport Consortium

This is the result of a 7-day case study. The goal: improve the user experience of Madrid's regional transport website.

The methodology I used was based on a double diamond process from Design Thinking.

DISCOVER | DEFINE | DEVELOP | DELIVER | EVOLVE

Immersion
Questionnaires
Interviews
Self-Documentation
Meetings
User Experience Observations

Interpret Your Findings
Find Meaning
Identify Themes
Tell Stories
Sort + Condense
Define Insights
Frame Opportunites
Set 'Design Challenge'

Brainstorm
Jam/Charrette
Designing
Visual
Tactile
Experiential
Sketching
Graphic Recording

Making + doing
Role-Play
Prototyping
Storytelling
Pitch Document
Get Feedback
Capture Learnings
Define Success

Track Learnings
Celebrate Achievements
Plan Next Steps
Building Partnerships
Engaging Others
Scale-Up
Deepen Roots
Remind People what Changed
(even if changes are subtle)
Build Network

General timeline

Discover		Define			Develop	Deliver...

Sat 1	**Sun 2**	**Mon 3**	**Tue 4**	**Wed 5**	**Thu 6**	**Fri 7**
Desk search and planning	Interviews & User Tests	*Rest day*	User Interviews & Tests Transcription	Data Analysis & Problem Definition	Improved layout wireframes	Presentation Day
					*also a Quick Benchmark	

This is the page I started with:

October 2022

Some first thoughts I had when thinking about

Big websites problems

(based on my experience)

- First time users Problems
- Information Findability
- Usability Problems
- Usage Patterns (behavioral)
- Design Patterns (interface elements consistency and understandability)
- Error Rate on Tasks

And some UX academic studies about

Big websites problems
(based on online research)

Layout Page

Unexpected Locations for Content

Hidden Fees and Prices

Flawed Filters and Facets

Overwhelming Users with Information

Hidden Links

Then I open the website to track the current flow to actually "Move around Madrid"...

"Move around Madrid"

Current user flow

Open website

Accept cookies

Go around the Home Page

Find Move Around Madrid menu item and select it

Review available actions

Select action to complete the task needed

...

"Move around Madrid"

Current user flow ← IS IT?

Open website

Accept cookies

Go around the Home Page

Find Move Around Madrid menu item and select it

Review available actions

Select action to complete the task needed

...

I think we
need to test
this thing

With who?

For time and logistics matters I requested the help of the nearest people available for being interviewed and tested: **the borest family members after Sunday's 'onces-comida' at my mom's house.**

(No family members were harmed - *nor paid* - in the following tests)
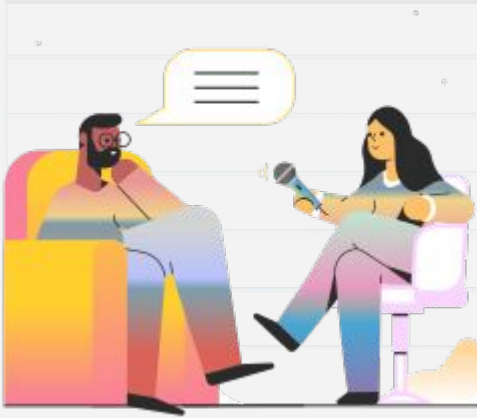
Interview Methodology

- Introduce context: Scenario of Public transportation in Madrid.

- Make some questions about the scenario.

- 10/12 min of audio recorded interview.

- Listen how they feel and think regarding their relationship and experience with public transportation.

- Document what they say, feel about their experience and the ideas they might have.
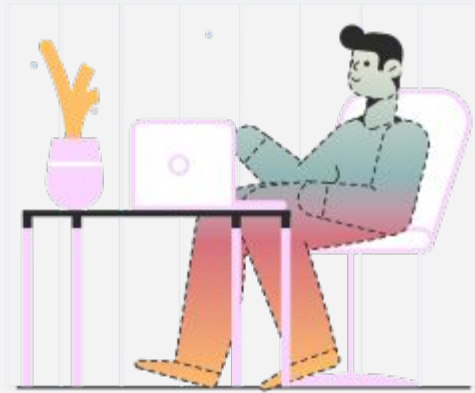
User Testing Methodology

- Main question: "How would you use this website to MOVE AROUND MADRID?"

- Tech implications: two laptops to share screen and record.

- Avoid bias: try not to guide the user into particularly desirable feature. See if they can find it and use it them themselves.

- Take into account:
  - Ask "Why?" to add depth on the insights they have and say.
  - Observe their body language and expressions.
  - Make the time count and be present. Record video/audio to prevent note taking that might be distracting.

Francisco, 28 yrs
Independent Chef

- ☑ Interviewed
- ☑ Tried the Website

Goals
- Use his phone as main navigation tool.
- Don't get lost.
- Discover cool restaurants and touristic places.

Fears & Frustrations
- Lost signal = no real time map navigation update.
- Buggy navigation app.
- Lose transportation card to pay.
- Don't understand the metro connections, directions or stations.

Jackie, 62 yrs
Retired Engineer

- ☑ Interviewed
- ☑ Tried the Website

Goals
- Know where she is when traveling underground.
- Being able to see and read exits and direction signs.
- Have a calm and easy trip.

Fears & Frustrations
- Battery or phone signal.
- Lose notion of location because of underground transportation.
- Miss station name on the speakers.
- Go lost in the metro lines.
- Unsafe travels (mobility).

Gloria, 71 yrs
Retired Psychologist

- ☑ Interviewed
- ☑ Tried the Website

Goals
- Get general knowledge beforehand (lines & fares).
- Feel safe when traveling.
- Know where things are (stations and streets).
- Feel considered by others.

Fears & Frustrations
- Misunderstand the system, make mistakes and don't arrive to destination.
- Feel unsafe when traveling.
- Inability to see metro signs or information displays.
- Feel vulnerable.
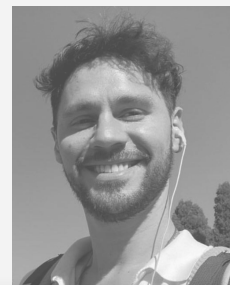
Felipe, 33 yrs
Actor, Producer, student

- ☑ Interviewed
- ☐ Tried the Website

Goals
- Save money when traveling.
- Discover cool places based on good websites ratings.
- Use his phone to pay and as main navigation tool.

Fears & Frustrations
- Don't know how to use the metrocard machine to add balance and travel.
- Forget the metro station names when traveling to a certain touristic places in the city.
- Loose connection / internet.

Results & findings

User flow problems

"Move around Madrid"
Current user flow

Unnecessary big popup ends up taking 2 minutes of website usage on older users.

Open website

Accept cookies

Too much mixed information about transportation.

Go around the Home Page

Only 1 of 3 user decided to select this tab to actually search for related info

Find Move Around Madrid menu item and select it

Review available actions

Too many actions and information leading to multiple areas: confusing and misleading.

Select action to complete the task needed

...

After 10 minutes no one felt like they were able to complete the task of Move around Madrid using the website.

Main Results

When navigating, all users relied on metro as main transportation method.

3 of 4 mentioned the phone as main navigation tool for public transportation.

If found, no one used the page to actually know how to Move Around Madrid.

Interactive maps in the page are not displaying useful information to plan a trip.

The page is full of additional information that confuses the user and distracts them from their main goal.

Page gave more questions than answers when trying to plan a trip.

Some interesting ideas

Digital card available to add balance online in advance and QR code to pay transportation.

Audio guide might be necessary for older folks so they can pay attention to their surroundings (GPS).

Google Maps integration to discover cool places and their ratings

Budget: know in advance how much money is needed for trips and the combination of sections.

Google Maps integration to have updated information about state of service.
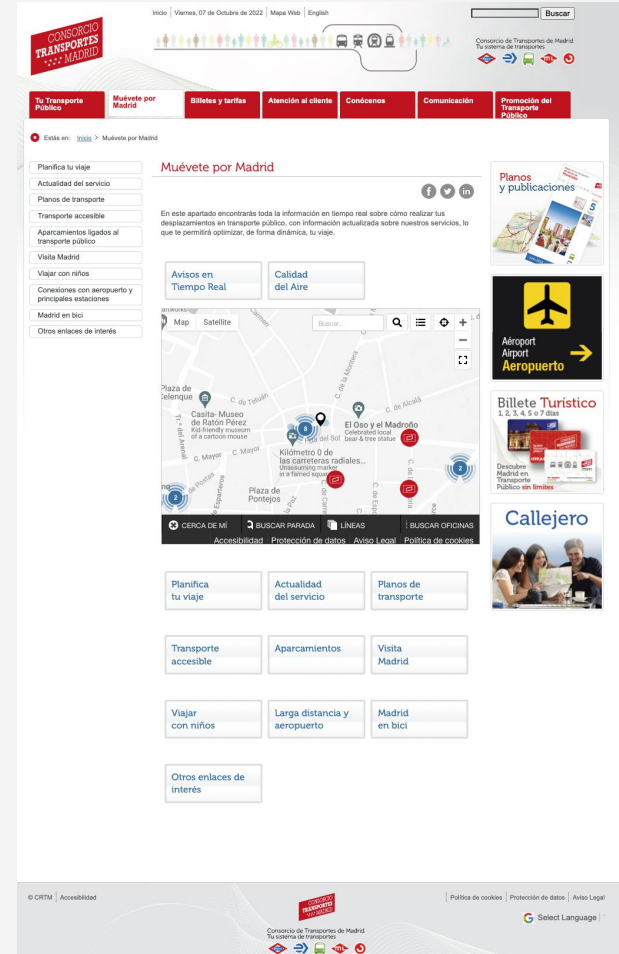
Navigation information in real time and Stations names voice over to keep user updated when traveling.

Current layout

Home

Move Around Madrid

Current layout

Home
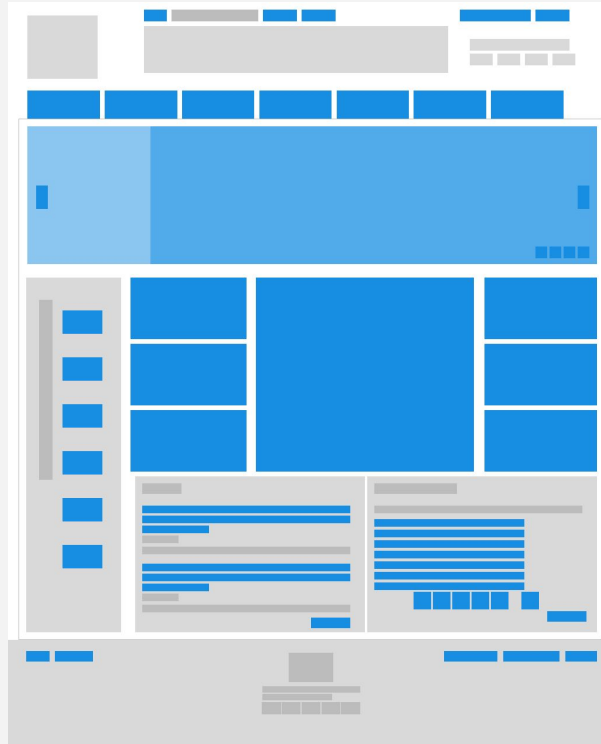
BLUE: Interactive elements and areas.

Move Around Madrid
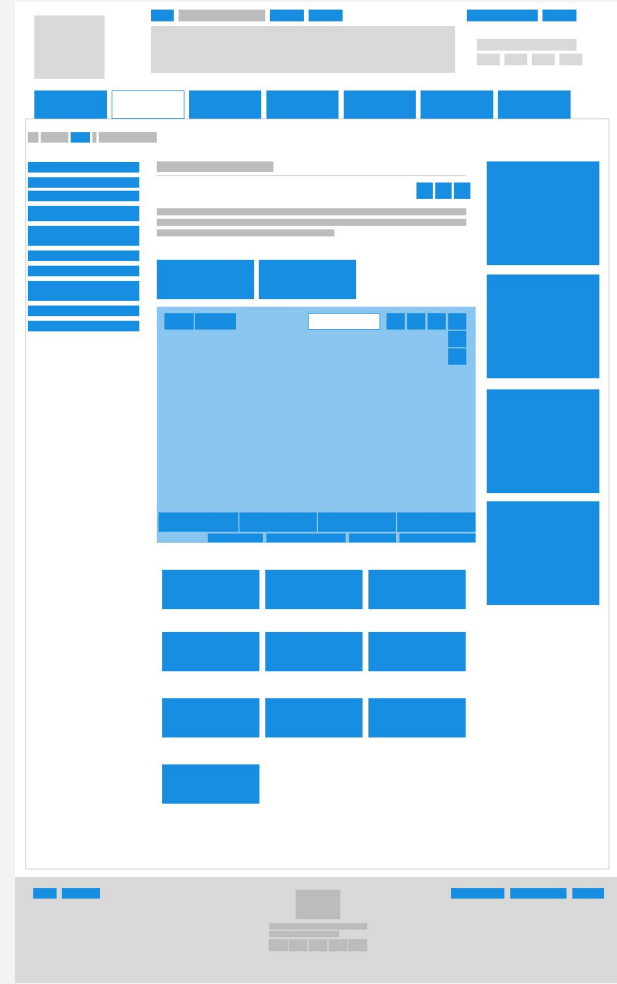
Design References

As the main device to navigate the transportation used by the users interviewed is the phone, a very quick benchmark on apps that offer navigation one way or another was perform.

The main features and interactive elements were:

- Search for Destination.
- Near interesting sites.
- Real time map navigation.
- Final fares based on hour and number of combinations taken while traveling.
- Clear visualization of the state of the route (clear/busy), destination (opening/closing hours) and the services associated (network alerts).

Based on all that, a new layout for the website is proposed:

¿Dónde quieres ir hoy?

Málaga

Madrigal

Los Ol...

Alicante

Vaticano

Fernando de M...

Martin de Zar...

Rodrigo de...

Av. Am...

Shell

Filter | Filter | Filter | Filter

Indicaciones en tiempo real

180 m
Av. Américo Vespucio Sur

y luego

Ruta Completa

Centro
Madrid, España

Toma C. de Toledo y P.º de los Pontones hacia M-30.

7 min (2.0 km)

Toma A-5 hacia C. del Cine.

7 min (7.5 km)

Conduce hacia Carr. de Carabanchel a Aravaca.

1 min (550 metros)

Colonia Jardín
Carr. de Carabanchel a Aravaca, 28024 Madrid, España

Viajas en Horario Punta
Lunes a Viernes:
07:00:00 - 08:59:59 / 18:00:00 - 19:59:59

Tarifa Total de tu Viaje

Metro	$800
Bus	$800
Descuento Transbordo	-$800
TOTAL	$800

Simplified Navigation

Focus on map navigation

Filter main touristic places (restaurants, hotels, museums, etc).

Additional Information area (News, history of Transportation, etc)

Real Time Indications or steps (mostly for mobile)

Complete Route to follow and acknowledge

Details about Fares and Prices for the selected route and combination of transport.

State of the transportation network and other last minute news.

Muevete por Madrid

Q ¿Dónde quieres ir hoy?

Indicaciones en tiempo real

180 m
Av. Américo Vespucio Sur

y luego

Ruta Completa

Centro
Madrid, España

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TOTAL	$800

Málaga

Madrigal

Alicante

Shell

Filter   Filter   Filter   Filter

Next Steps
(things that could be done if I had more time).

- Information Architecture (IA) based on Card Sorting exercise with users to determine categorization of the site content and copy.

- Iterate on the layout based on Card Sorting results. Test the new lay out with users.

- Build a Hi-Fi interactive mockup, remote testing and aim to improve UI details.

Thank you!