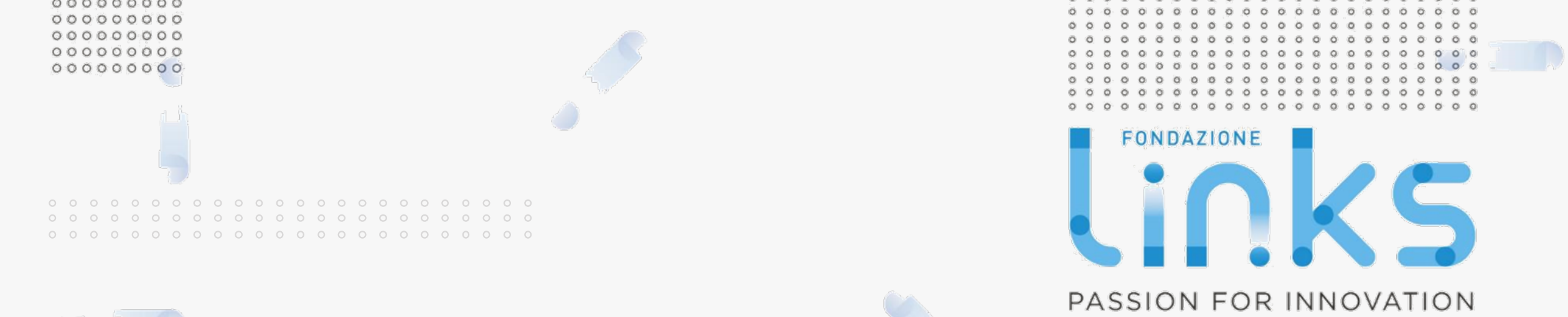


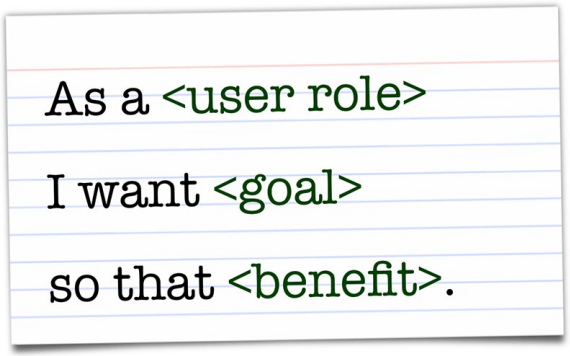
Applied Data Science Project

L23 – User Journey (hands on)

From the need to the experience

USER RESEARCH → **SERVICE STRATEGY**

- Understand the problem thoroughly
- Broadening of knowledge
- Broadening the perspective (beyond our point of view)
- Anchoring to the real



How might we…?

Generative method of ideas
Starts with the problem and identifies opportunities

- *How can we ensure that more people pay their taxes on time?*
- *How can we help employees stay productive and healthy when working from home?*
- *How can we make people aware of the online risks of sharing information?*

https://dschool.stanford.edu/resources/how-might-we-questions

Using “How Might We” Questions to Ideate on the Right Problems

USER EXPERIENCE

ISO 9241-210 (2020)

The user experience or UX includes aspects of **quality** and **fluency**
of the entire experience flow
(**expectation, use, memory**),
compatibly with the users' cognitive, emotional and contextual specificities.

BEFORE USE

Beliefs, emotions, anticipating thought, background, expectations, habits,…

DURING USE

Efficiency, effectiveness and satisfaction pursuing the goal.

AFTER USE

Memories, learnings, and emotional connection that remaining for a while/over time

USABILITY

ISO 9241-11 (1998)

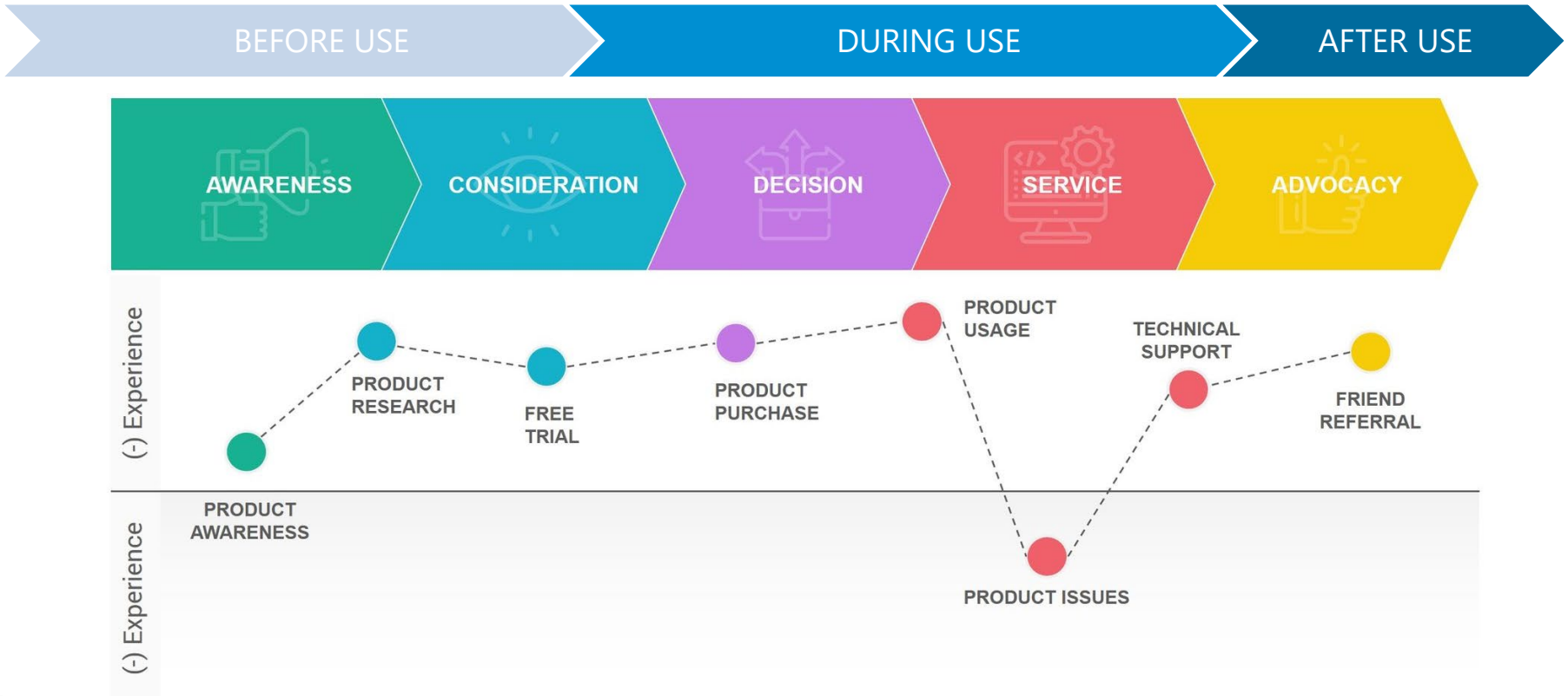
To learn more

Norman, D.A. The Term UX.

The experience of a service

- is made of the events in which we **interact** with the world
- happens in a complex **context** (anticipation)
- implies **points of contact** (human, technological, symbolic, ...)
- has a **duration**, lasting over the specific event (memories)

SERVICE STRATEGY

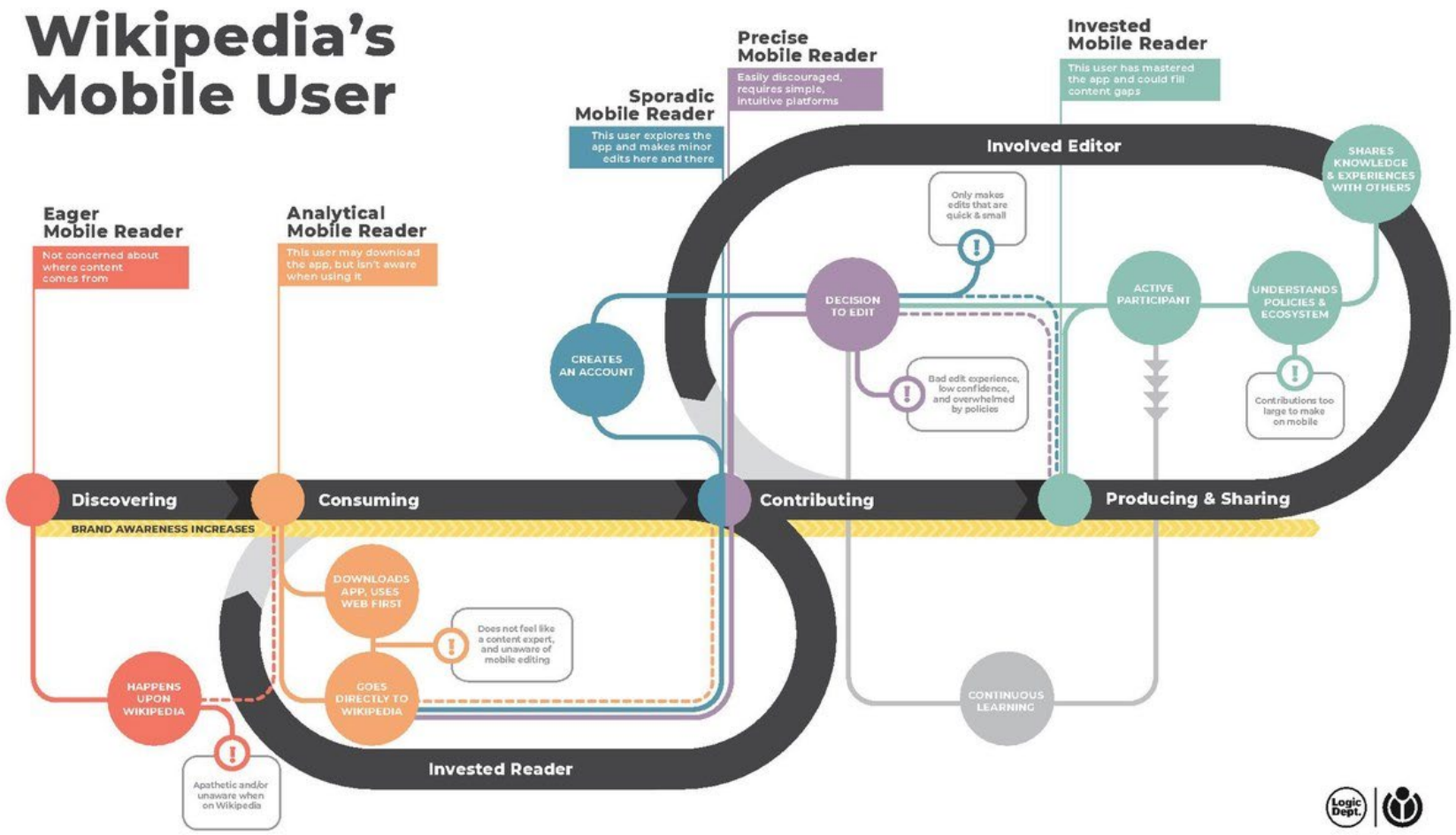


The journey

The User Journey represents

- The **sequence of steps characterising the process or the experience**
- From the **user's point of view**

It can represent both the **current** process and envisage a **new** process, helping to visualise the differences between solutions.



It allows us to understand better the context of the human action:
Goals, Data already available, parallel tasks, interruptions, errors
→ **All these factors affect the output**

We prototype user activity before the solution

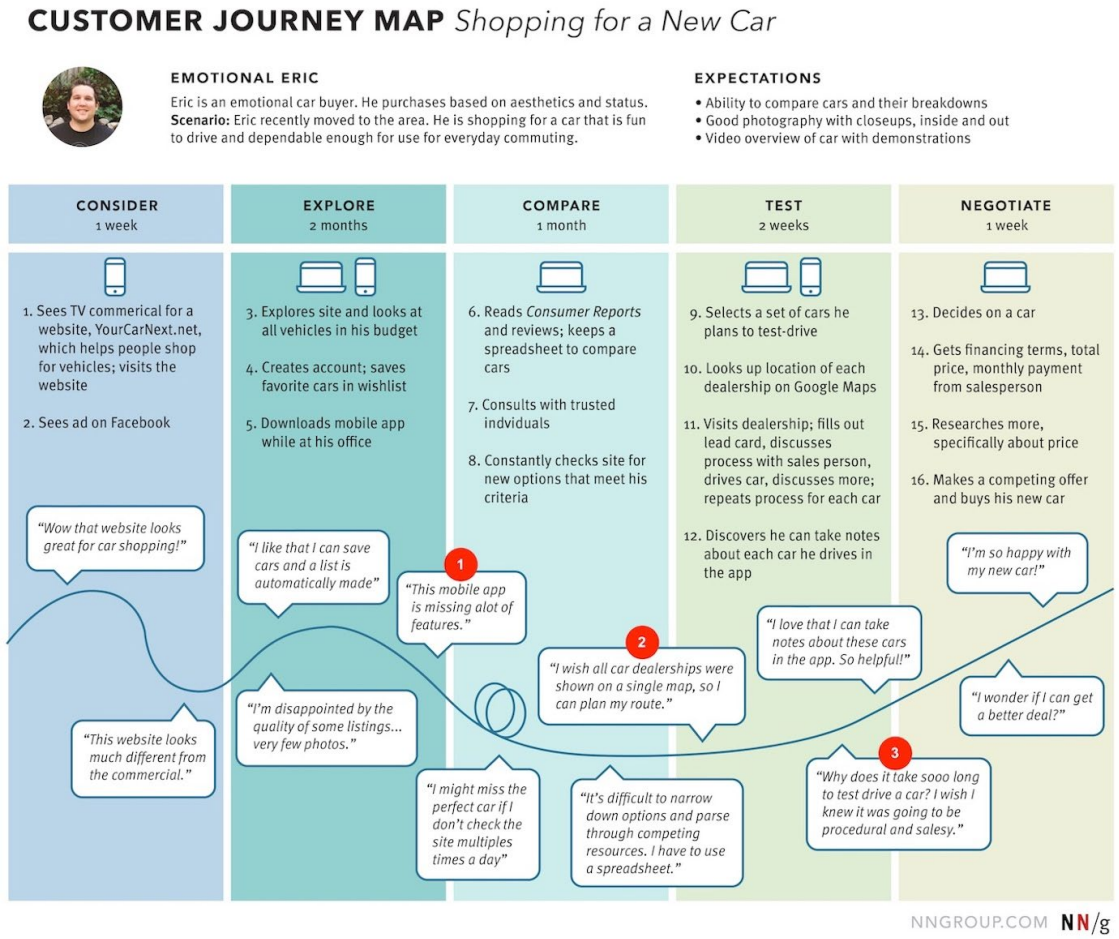
The **user experience** is the result of a **process** that provides value to the end user, the customer. This process is a set of interrelated activities (**decisions and actions**) needed to achieve a predefined and measurable goal (the service).

We model the solution on the current activities and tasks to:

- comply with the **human expectations**, **priorities** and **needs**
- prevent **interferences**
- prevent **human errors**
- To decide **which data** we can collect, sort, process, display and how to design the enabling functionalities, needed to support these actions.

The User journey is the starting point of the User Requirements Engineering Process.

(The experience flows are almost always **UI-independent)**



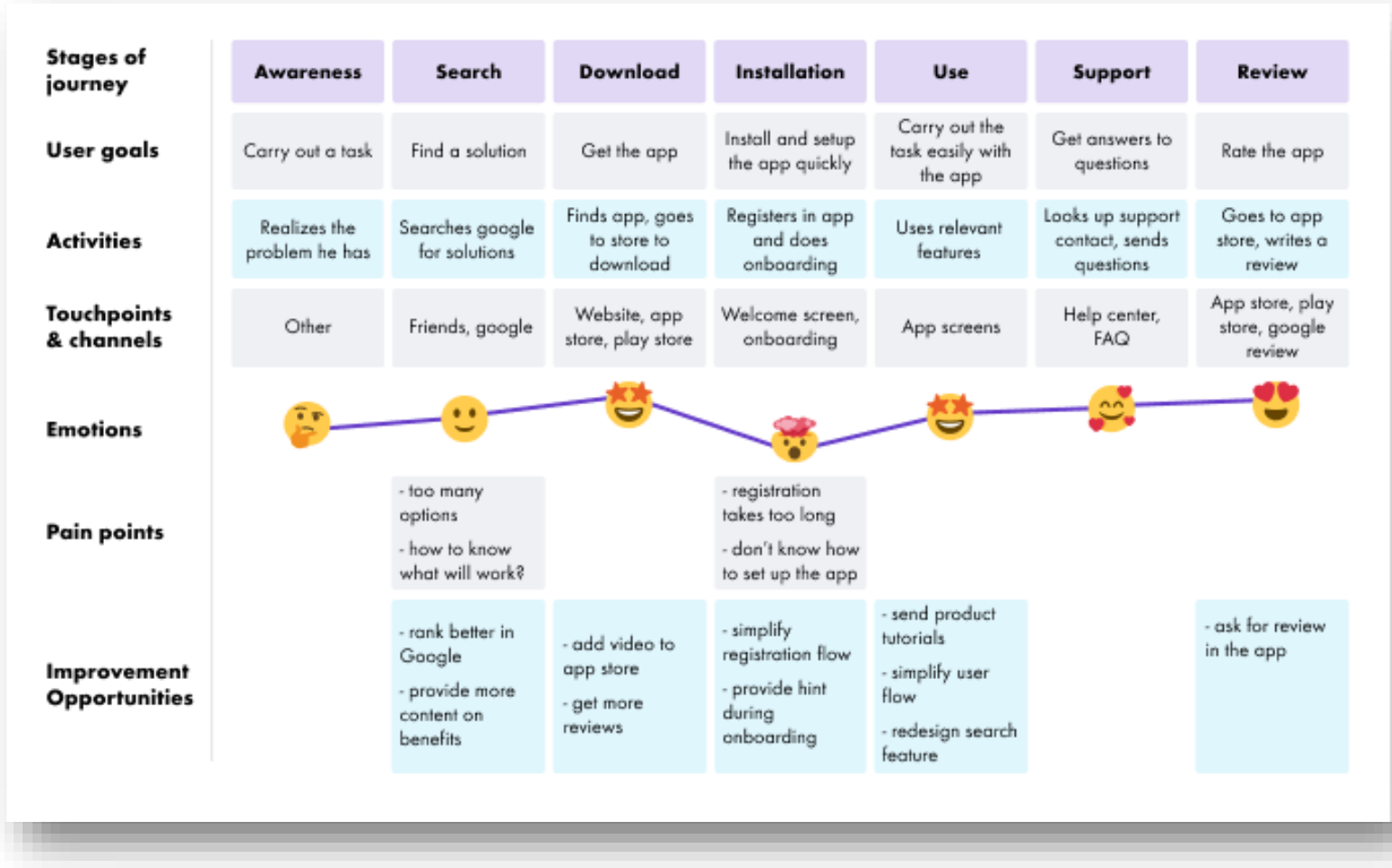
The user journey

The user journey describes the experience of a service from the users' perspective (journey of the user Persona).
Like the Personas, the User Journey is a **heuristic model that helps to define, design and refine the conceptual model and then the system itself**, in a user-oriented view.

A User Journey represents the series of steps (**usually 4-12**) that constitute the process of interaction of the user with the service/system that is being planned, within a specific scenario.

It is usually used to demonstrate how users interact/could interact with the service/product

storytelling + visual elements



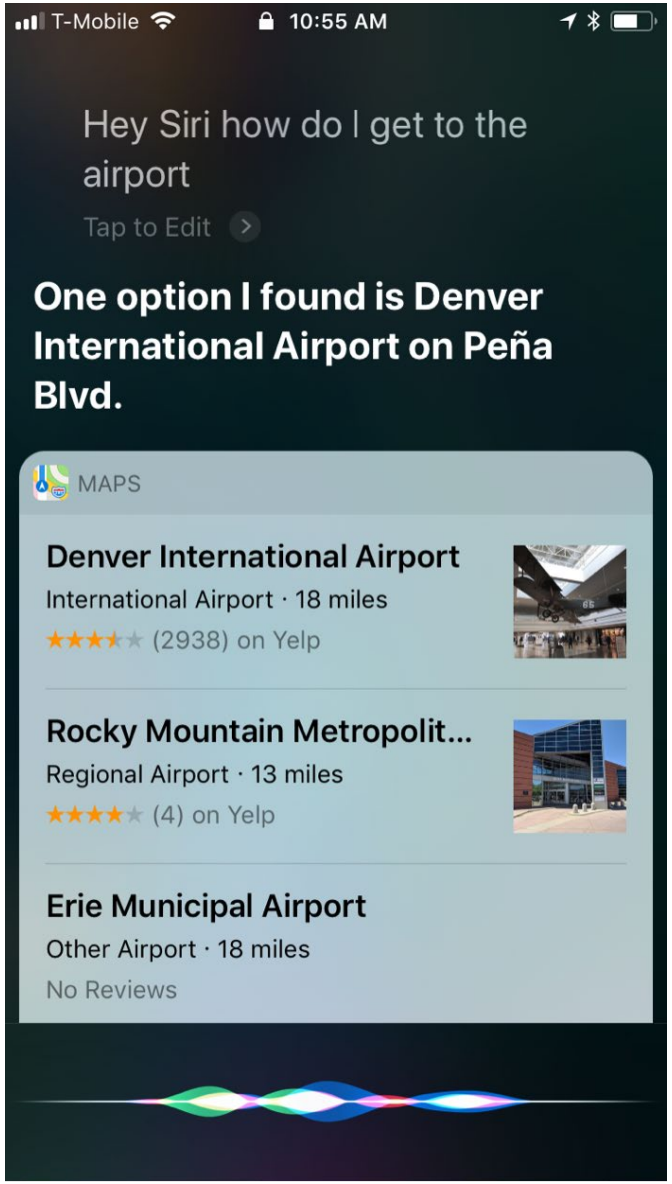
[A Beginner's Guide To User Journey vs User Flow]

Demanding outputs

People often use voice assistants
while performing other activities
(e.g. while driving)
when their hands and eyes are busy.

Siri or Google Assistant show results on your phone screen instead of reading them out loud.

- What effects can this approach bring?

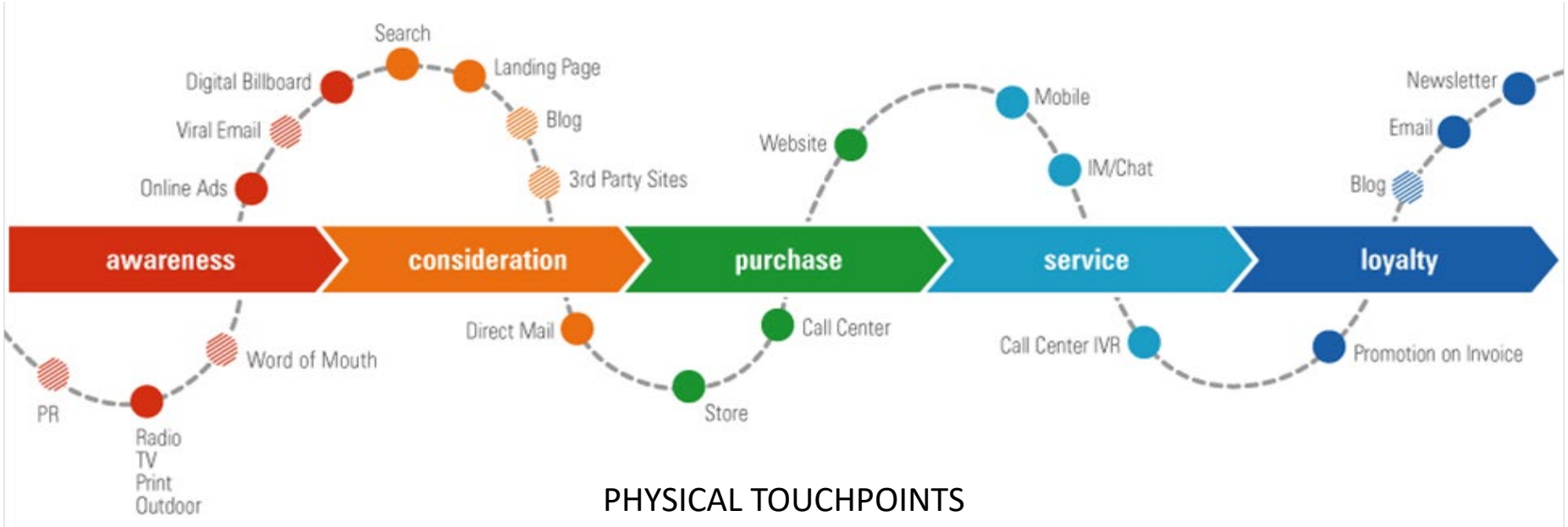


We make experience through touchpoints

This visual tool provides an **overview of the touchpoints** the users do/should/will interact within a specific scenario.

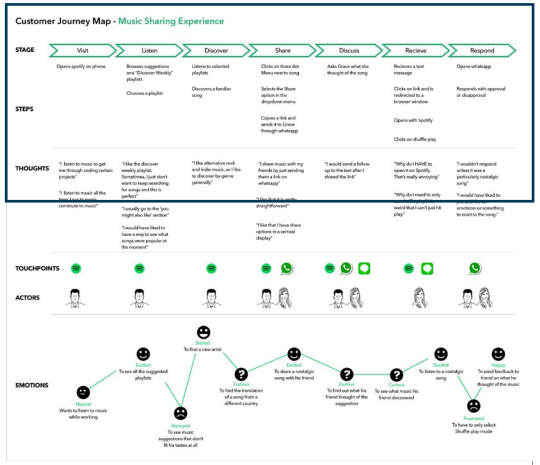
A touchpoint is any point of contact between one service and one user.
In a service, many types of **users** and multiple **touchpoints** (humans, paperware, digital, …)
Each touchpoint provides **information and data** adapted for human processing. c

DIGITAL TOUCHPOINTS



PHYSICAL TOUCHPOINTS

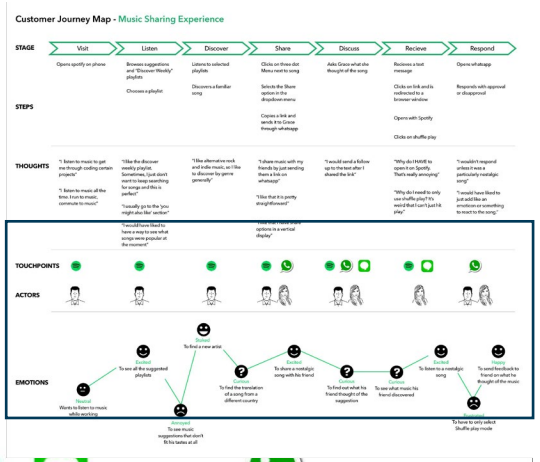
The user journey | The steps (I)

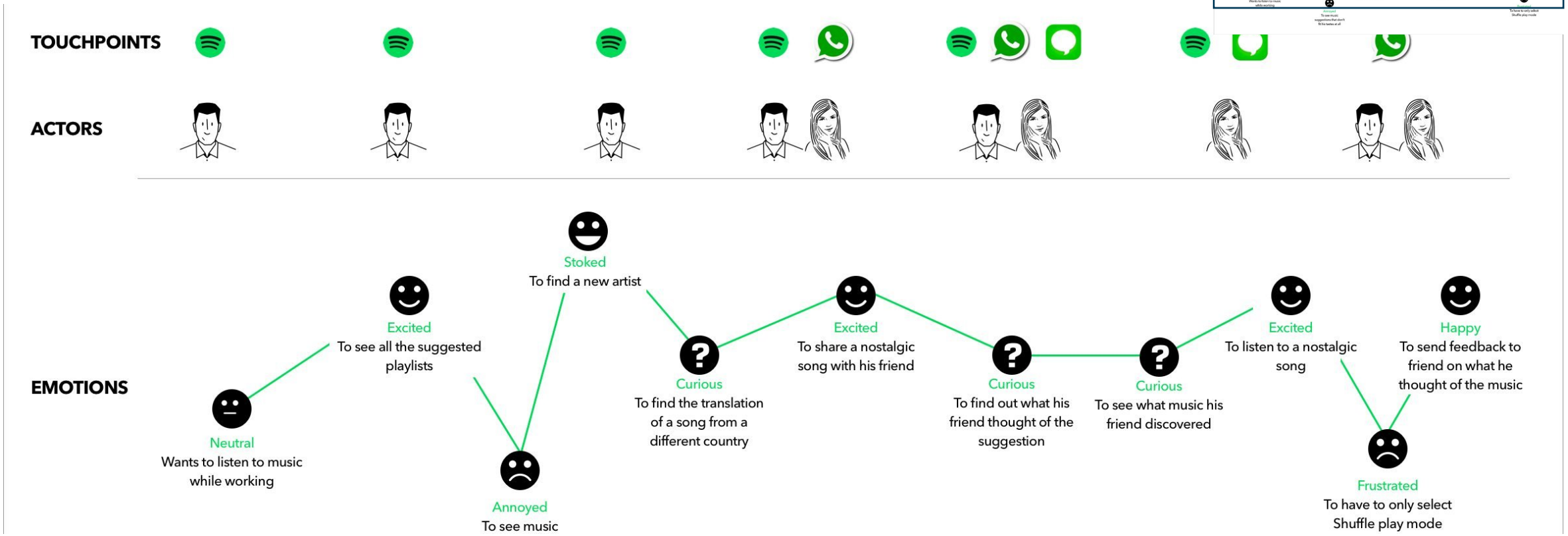


Customer Journey Map - Music Sharing Experience

STAGE	Visit	Listen	Discover	Share	Discuss	Recieve	Respond
STEPS	Opens spotify on phone	Browses suggestions and "Discover Weekly" playlists Chooses a playlist	Listens to selected playlists Discovers a familiar song	Clicks on three dot Menu next to song Selects the Share option in the dropdown menu Copies a link and sends it to Grace through whatsapp	Asks Grace what she thought of the song	Recieves a text message Clicks on link and is redirected to a browser window Opens with Spotify Clicks on shuffle play	Opens whatsapp Responds with approval or disapproval
THOUGHTS	"I listen to music to get me through coding certain projects"	"I like the discover weekly playlist. Sometimes, I just don't want to keep searching	"I like alternative rock and indie music, so I like to discover by genre generally"	"I share music with my friends by just sending them a link on whatsapp"	"I would send a follow up to the text after I shared the link"	"Why do I HAVE to open it on Spotify. That's really annoying"	"I wouldn't respond unless it was a particularly nostalgic song"

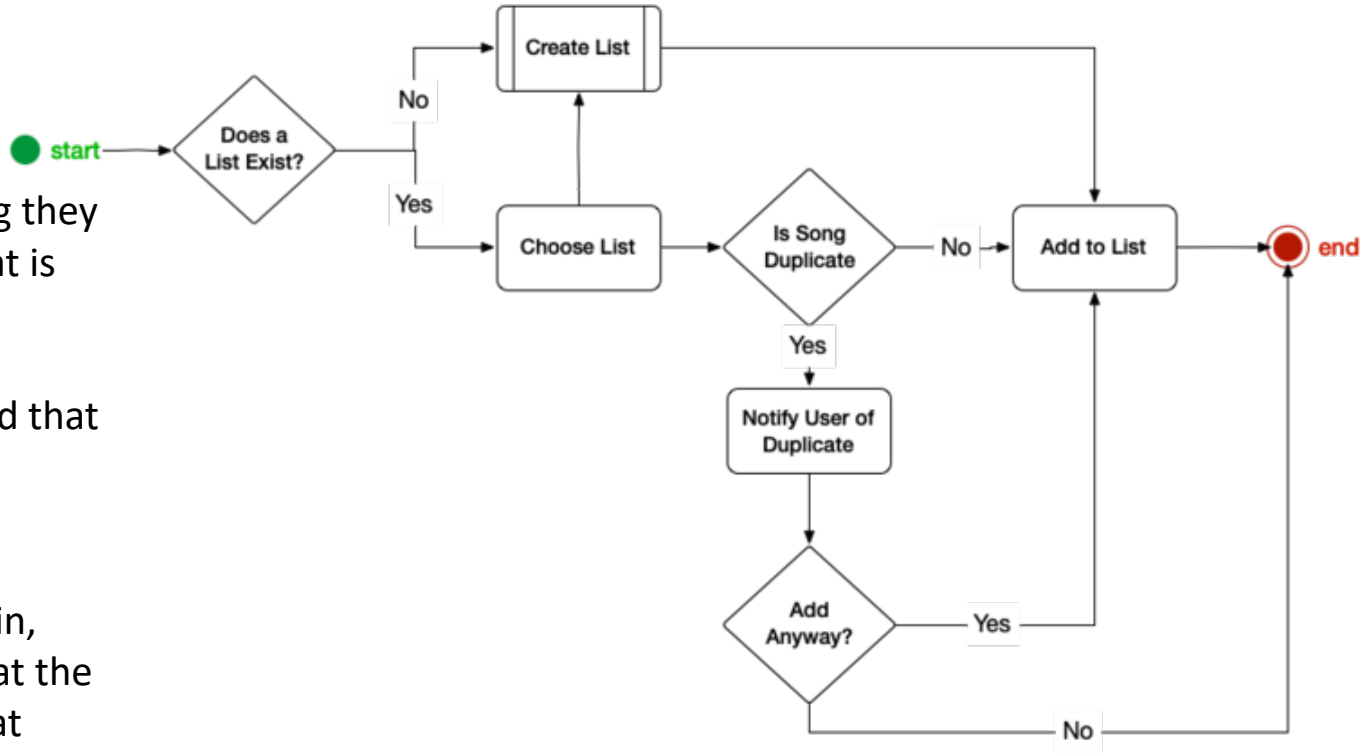
The user journey | The steps (II)





The experience result from a combination of tasks.

- We will assume that this flow is part of some sort of music-listening service that lets you make **multiple playlists**.
- **We will assume** that the user has already found a song they like and that the **Find a Song flow** is a separate one that is not shown here.
- **We'll also assume** that the user is already logged in and that they have permission to make playlists.
- We will also assume that there is SOME widget or affordance (I'm avoiding the term button because, again, this shouldn't depend on a specific UI element) and that the user has interacted with that affordance to indicate that they want to Add This Song to A Playlist.
- The user pushed the **Add Song to Playlist button**.



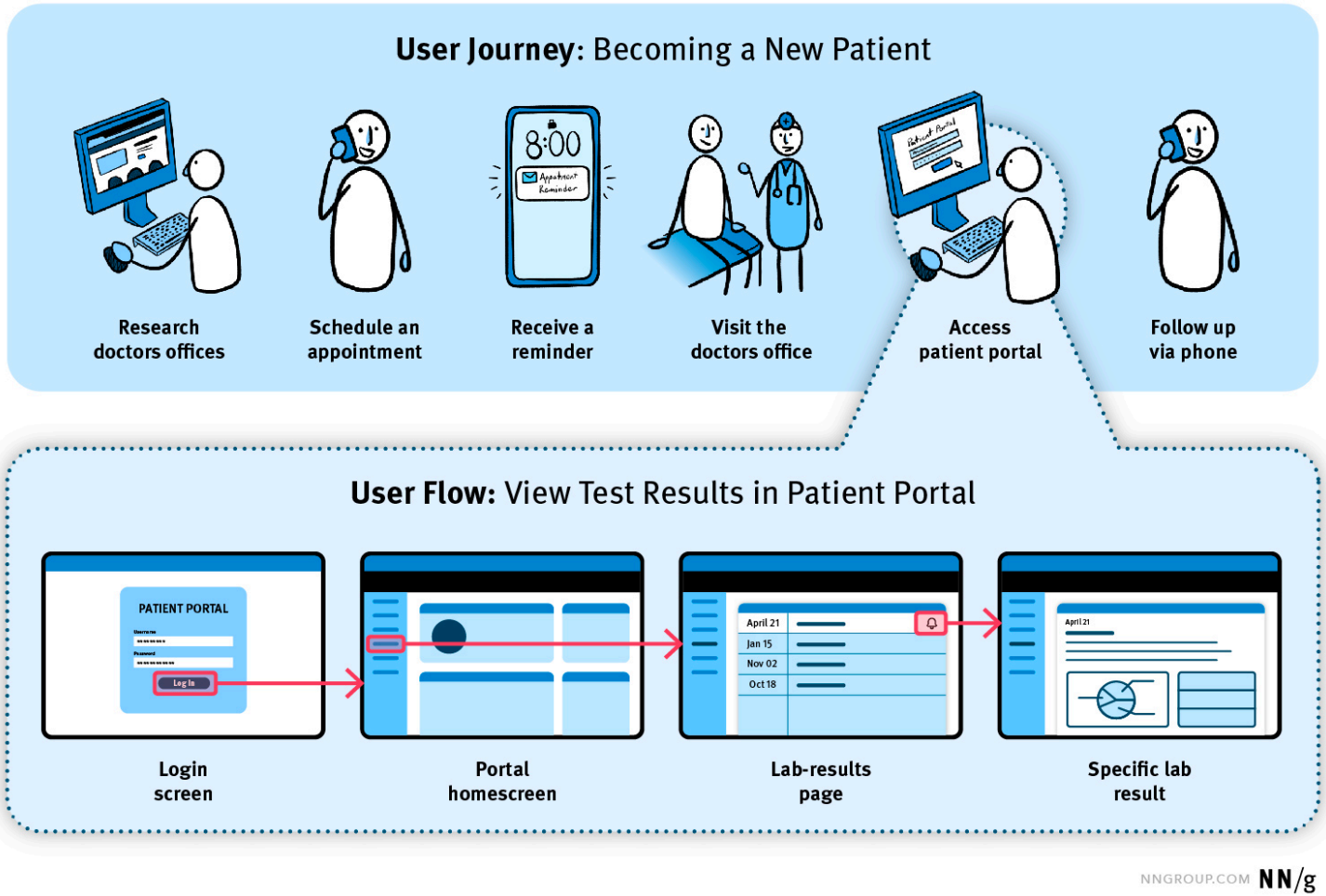
User journey and user flow

A user journey (or customer journey) is a **scenario-based sequence of the steps** that a user takes in order to accomplish a high-level goal with a company or product, usually across channels and over time,

A user flow is a set of interactions describing the typical or ideal steps needed to **accomplish a common task** to be performed.

A flow is a journey
- within a single touchpoint
- accomplished in a short amount of time

E.g.
- filling out an online form,
- the checkout of a shopping cart at an e-commerce site

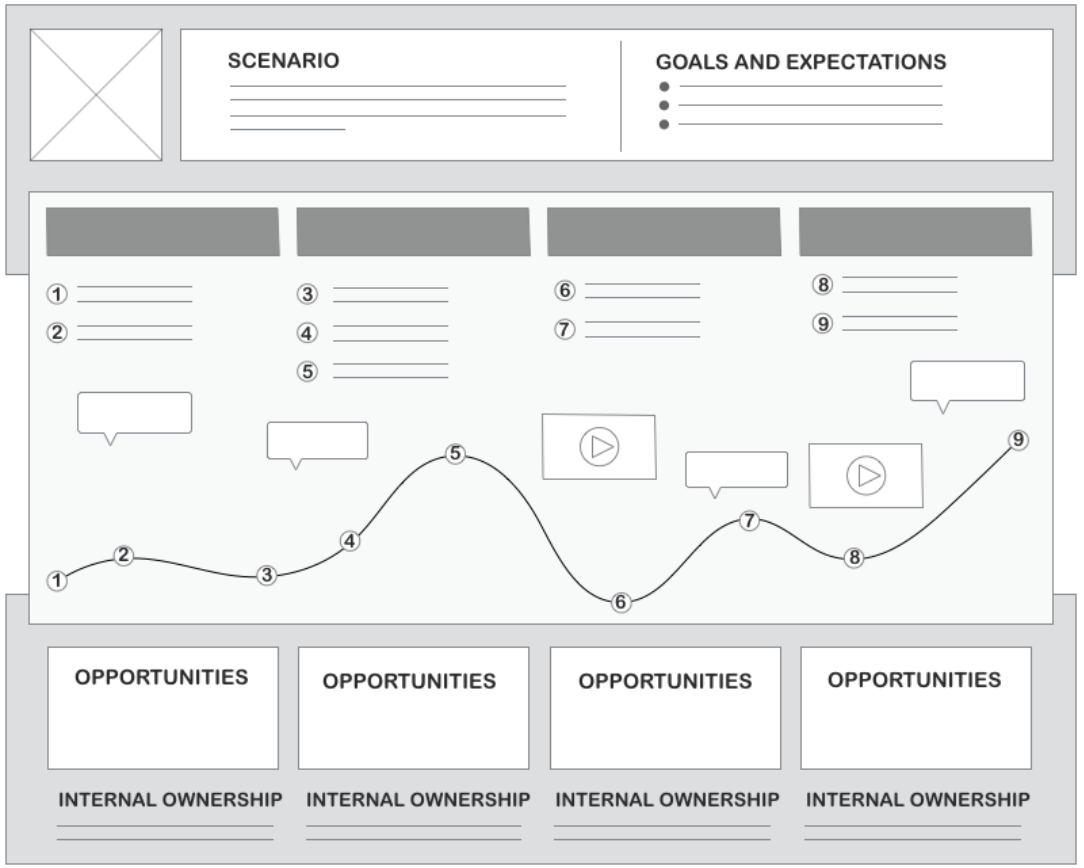


https://www.nngroup.com/articles/user-journeys-vs-user-flows

The user journey content

Journey ingredients:

- **The Personas** (to keep clear needs, goals, thoughts, feelings, opinions, expectations and barriers)
- **A timeline**: referred to a specific timespan of the experience (e.g., 1 day, 1 week, 1 year...) or to the stages of a process (e.g., booking, implementation, payment, use...);
- **Gain and pain**: identifying the advantages and the barriers that can be in every step
- **Touchpoints**: the points of interaction between users and service/system and the enabled actions and received feedback (main input and output)



Zone A: **The Lens**

actor scenario

Zone B: **The Experience**

phases actions, thoughts, emotions

Zone C: **The Insights**

opportunities

Journey Mapping in Real Life: A Survey of UX Practitioners

Template

User actions

Personas

Scenarios

User emotions

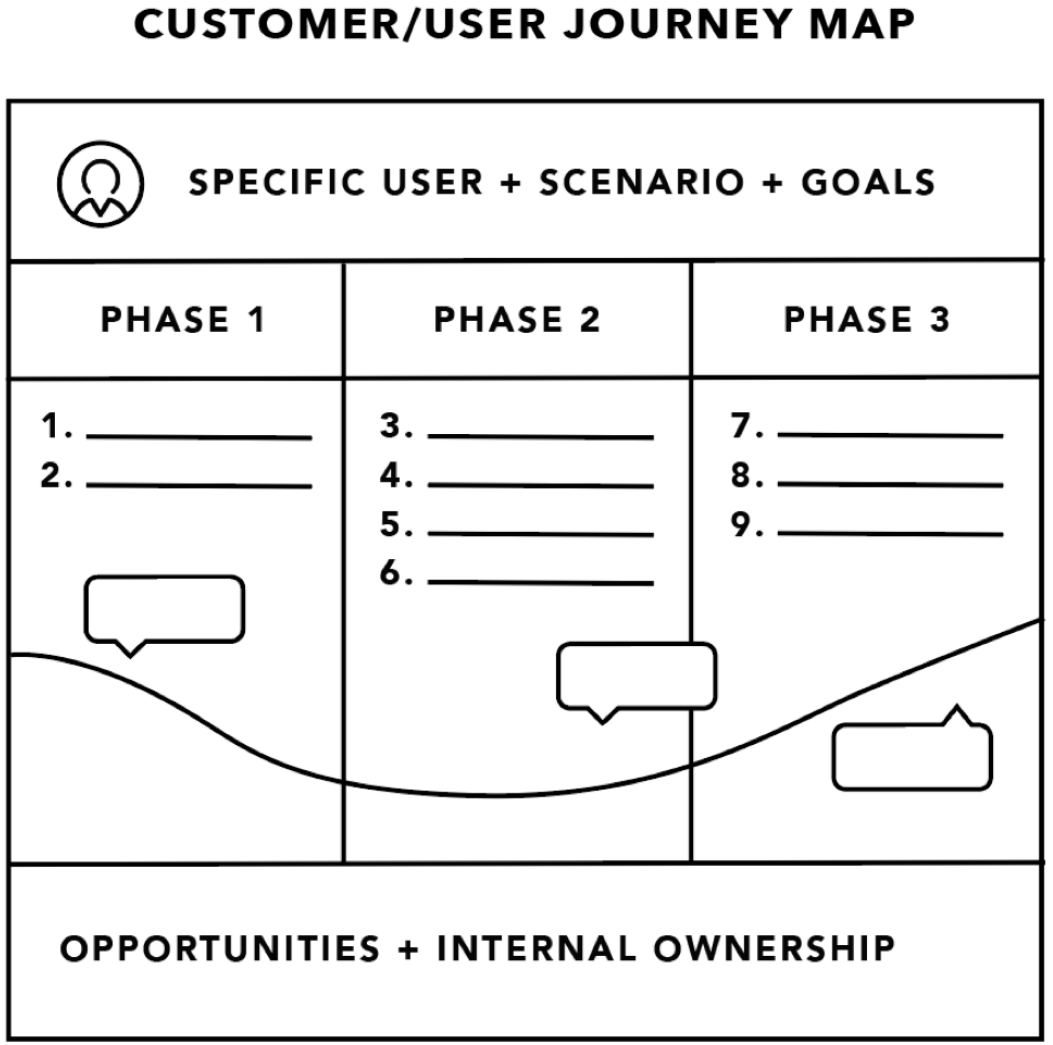
User thoughts

Channels

Devices

Recommendations

Metrics

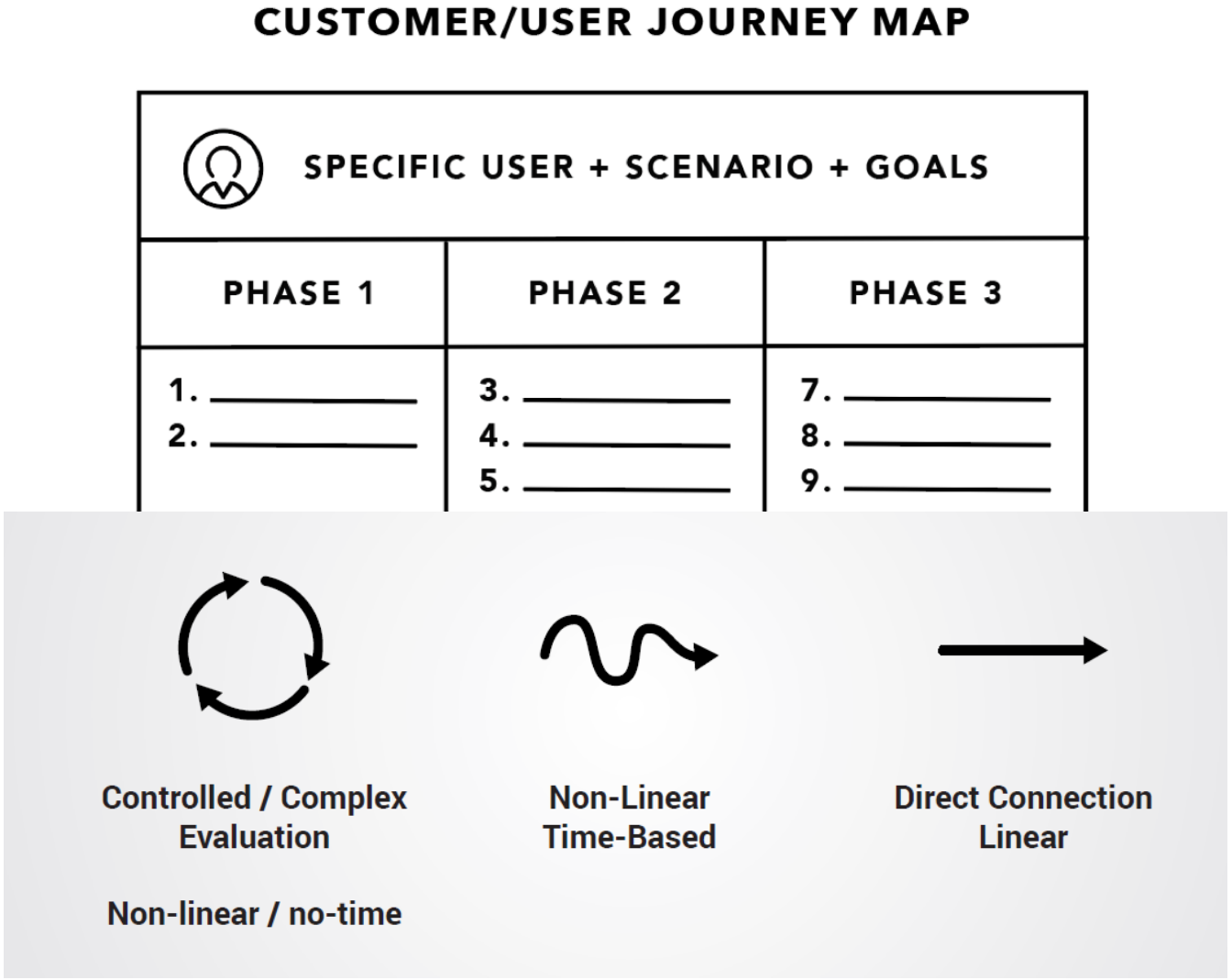


NNGROUP.COM NN/g

Journey Mapping in Real Life: A Survey of UX Practitioners NN/g

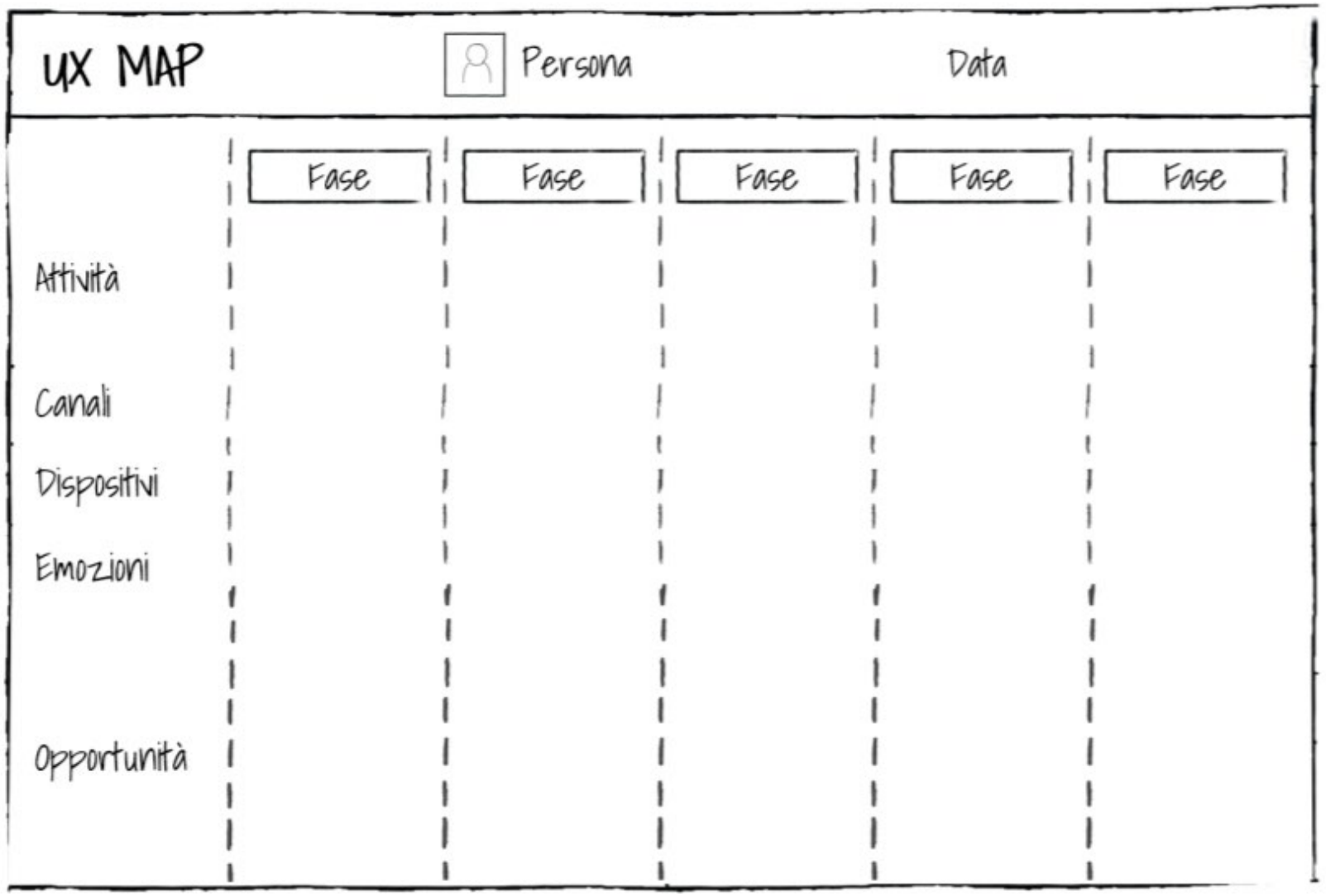
Contenuti

Types of actions



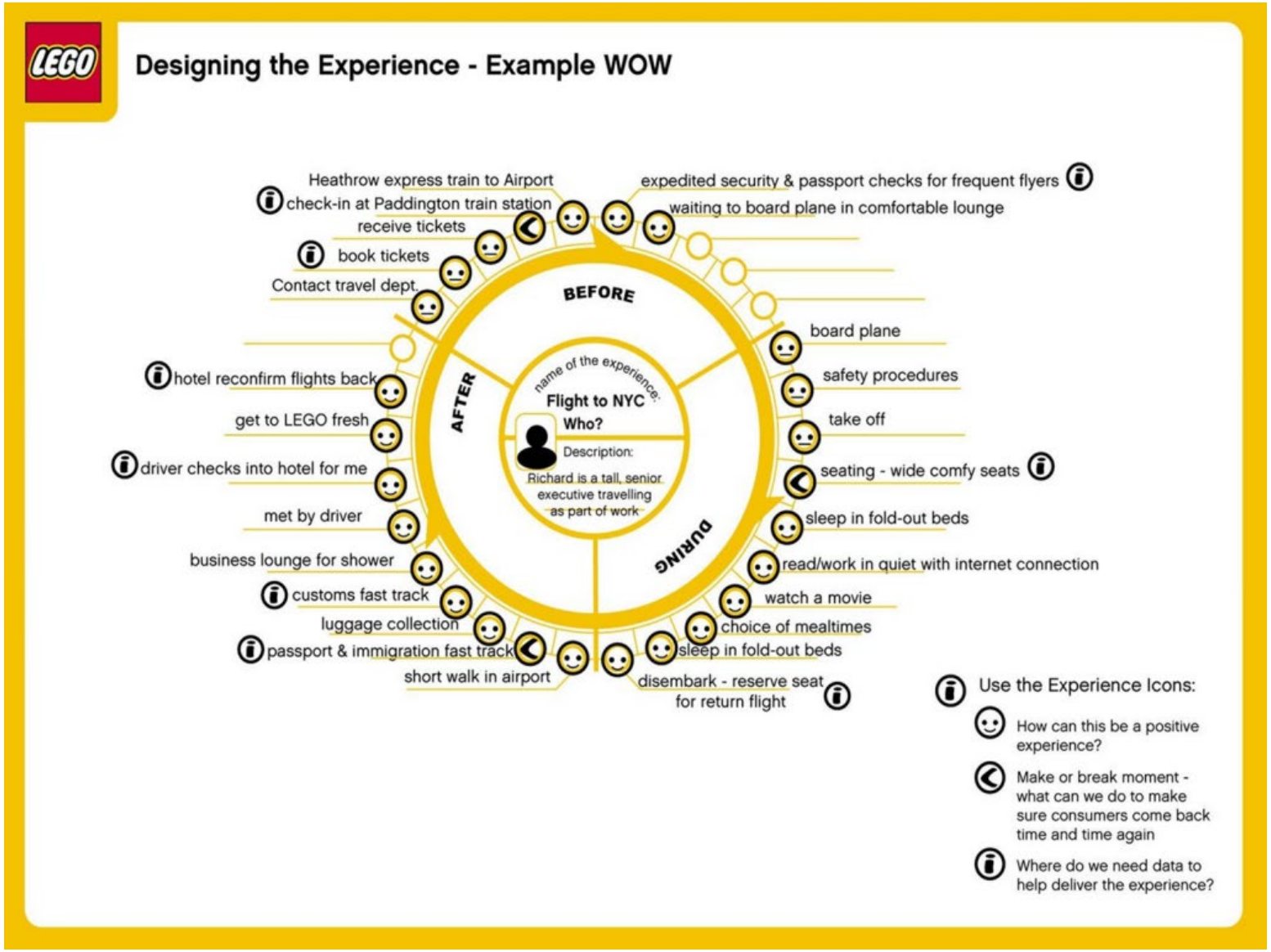
Journey Mapping in Real Life: A Survey of UX Practitioners NN/g

Template

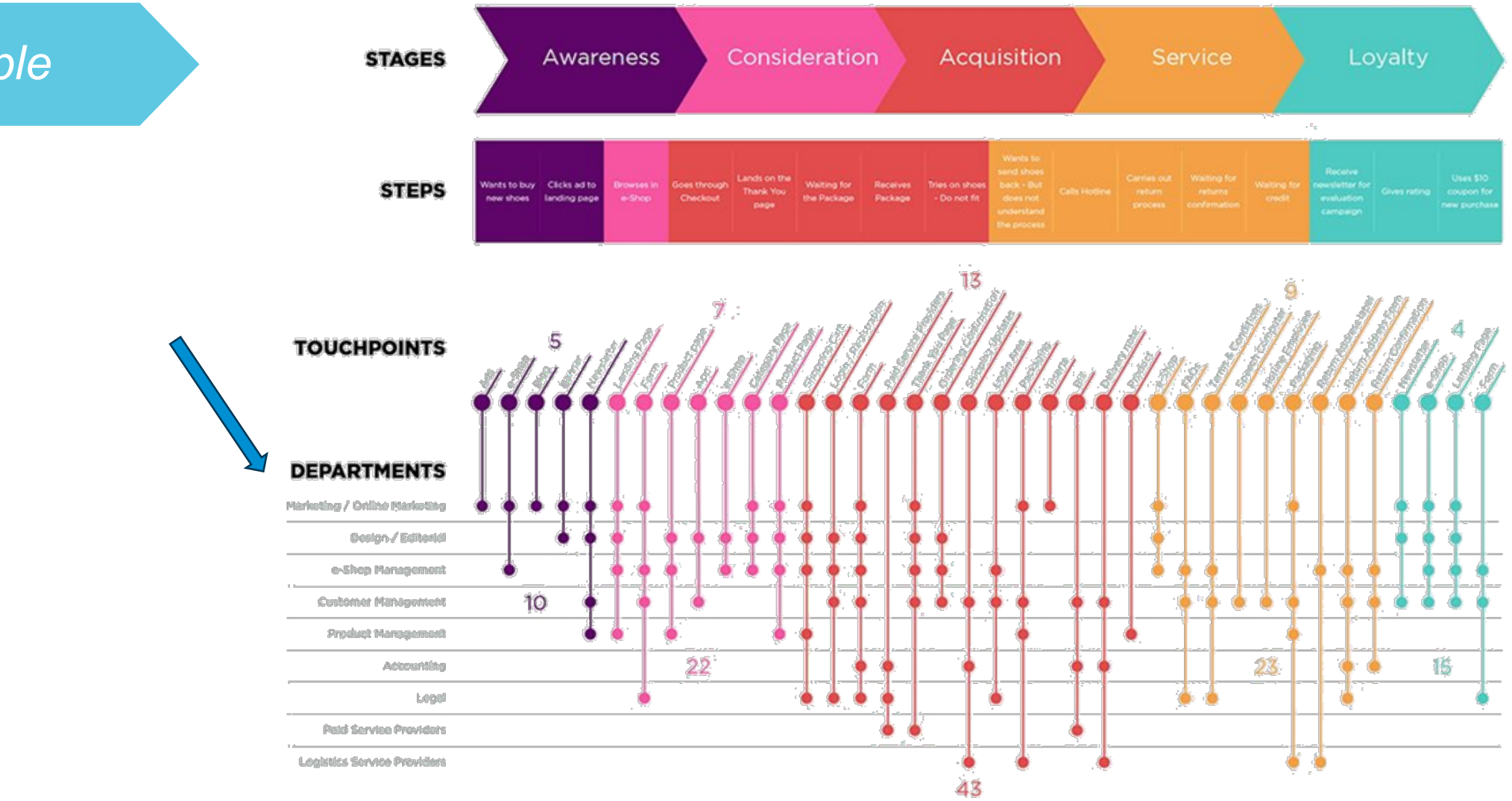

UX MAP
Persona
Data
Fase
Fase
Fase
Fase
Fase
Attività
Canali
Dispositivi
Emozioni
Opportunità

Example

- Longitudinal
- Phygital
- Emotional



Example


STAGES
Awareness
Consideration
Acquisition
Service
Loyalty
STEPS
Wants to buy new shoes
Clicks ad to landing page
Browses in e-Shop
Goes through Checkout
Lands on the Thank You page
Waiting for the Package
Receives Package
Tries on shoes - Do not fit
Wants to send shoes back - But does not understand the process
Calls Hotline
Carries out return process
Waiting for returns confirmation
Waiting for credit
Receive newsletter for evaluation campaign
Gives rating
Uses $10 coupon for new purchase
TOUCHPOINTS
DEPARTMENTS
Marketing / Online Marketing
Design / Editorial
e-Shop Management
Customer Management
Product Management
Accounting
Legal
Paid Service Providers
Logistics Service Providers
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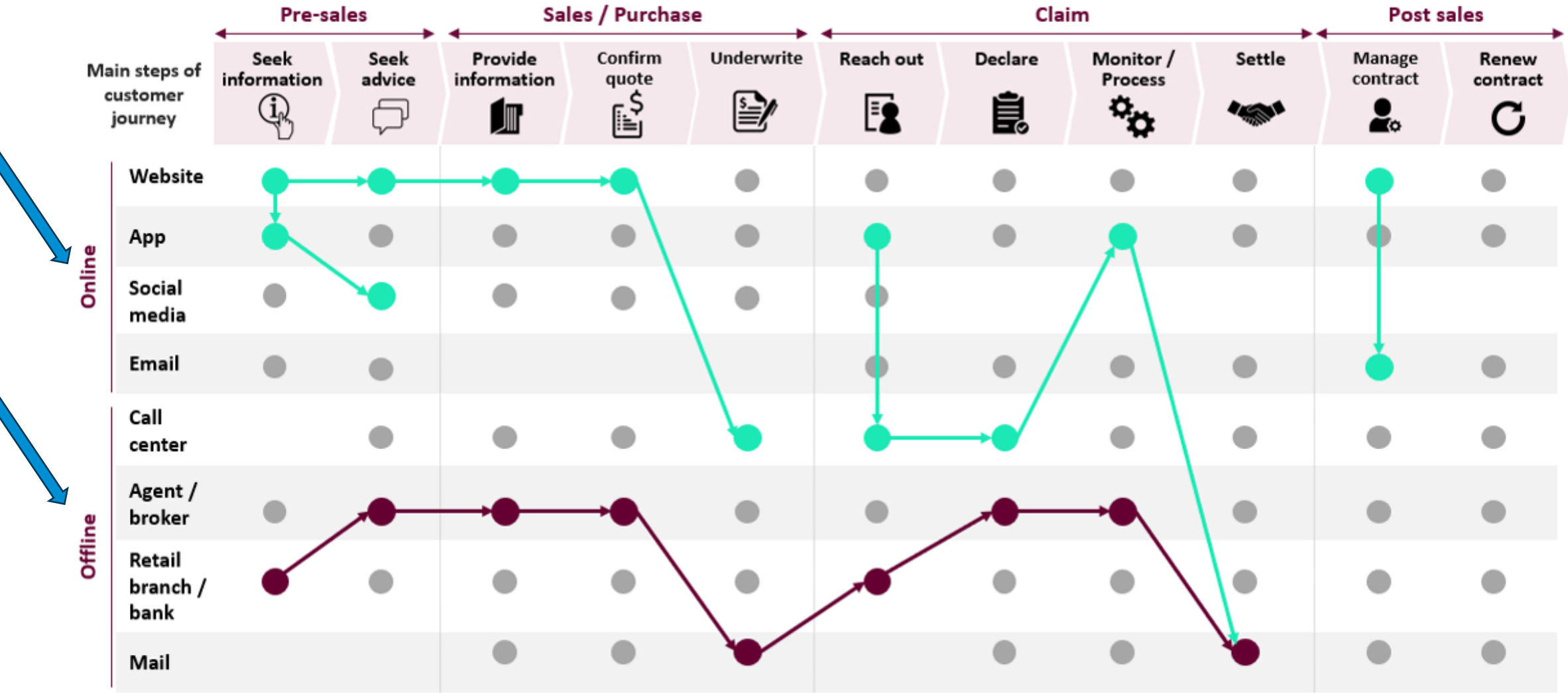
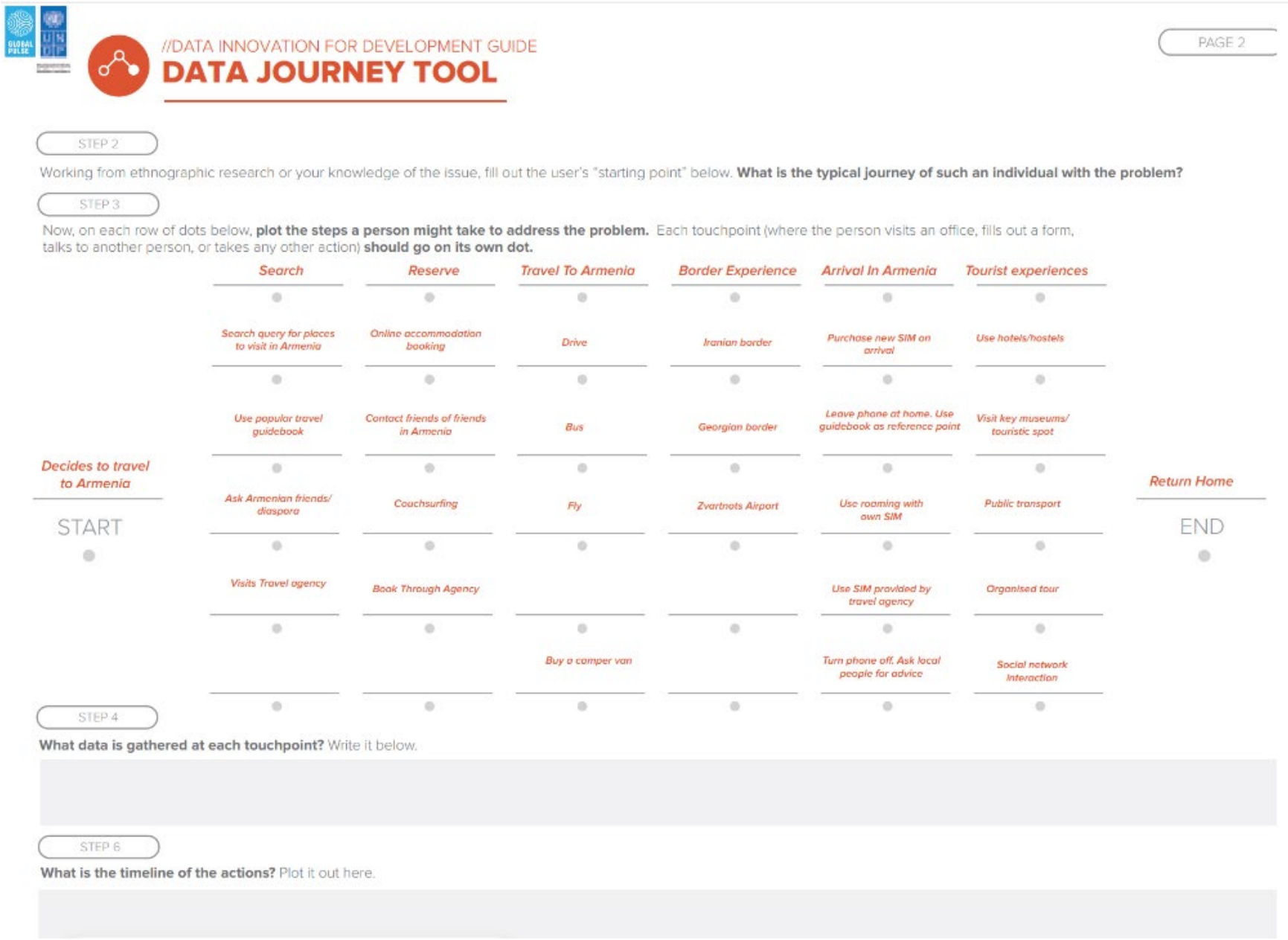

Pre-sales
Sales / Purchase
Claim
Post sales
Main steps of customer journey
Seek information
Seek advice
Provide information
Confirm quote
Underwrite
Reach out
Declare
Monitor / Process
Settle
Manage contract
Renew contract
Online
Website
App
Social media
Email
Offline
Call center
Agent / broker
Retail branch / bank
Mail

The data journey

The Data Journey explores **the interactions with data**.
It helps to identify which data are needed in the various steps of the user journey,
supporting better to define the data architecture and the further development phases.

Template



//DATA INNOVATION FOR DEVELOPMENT GUIDE

DATA JOURNEY TOOL

PAGE 2

STEP 2

Working from ethnographic research or your knowledge of the issue, fill out the user's "starting point" below. **What is the typical journey of such an individual with the problem?**

STEP 3

Now, on each row of dots below, **plot the steps a person might take to address the problem.** Each touchpoint (where the person visits an office, fills out a form, talks to another person, or takes any other action) **should go on its own dot.**

	Search	Reserve	Travel To Armenia	Border Experience	Arrival In Armenia	Tourist experiences	
	Search query for places to visit in Armenia	Online accommodation booking	Drive	Iranian border	Purchase new SIM on arrival	Use hotels/hostels	
	Use popular travel guidebook	Contact friends of friends in Armenia	Bus	Georgian border	Leave phone at home. Use guidebook as reference point	Visit key museums/ touristic spot	
Decides to travel to Armenia	Ask Armenian friends/ diaspora	Couchsurfing	Fly	Zvartnots Airport	Use roaming with own SIM	Public transport	Return Home
START	Visits Travel agency	Book Through Agency			Use SIM provided by travel agency	Organised tour	END
			Buy a camper van		Turn phone off. Ask local people for advice	Social network interaction	

STEP 4

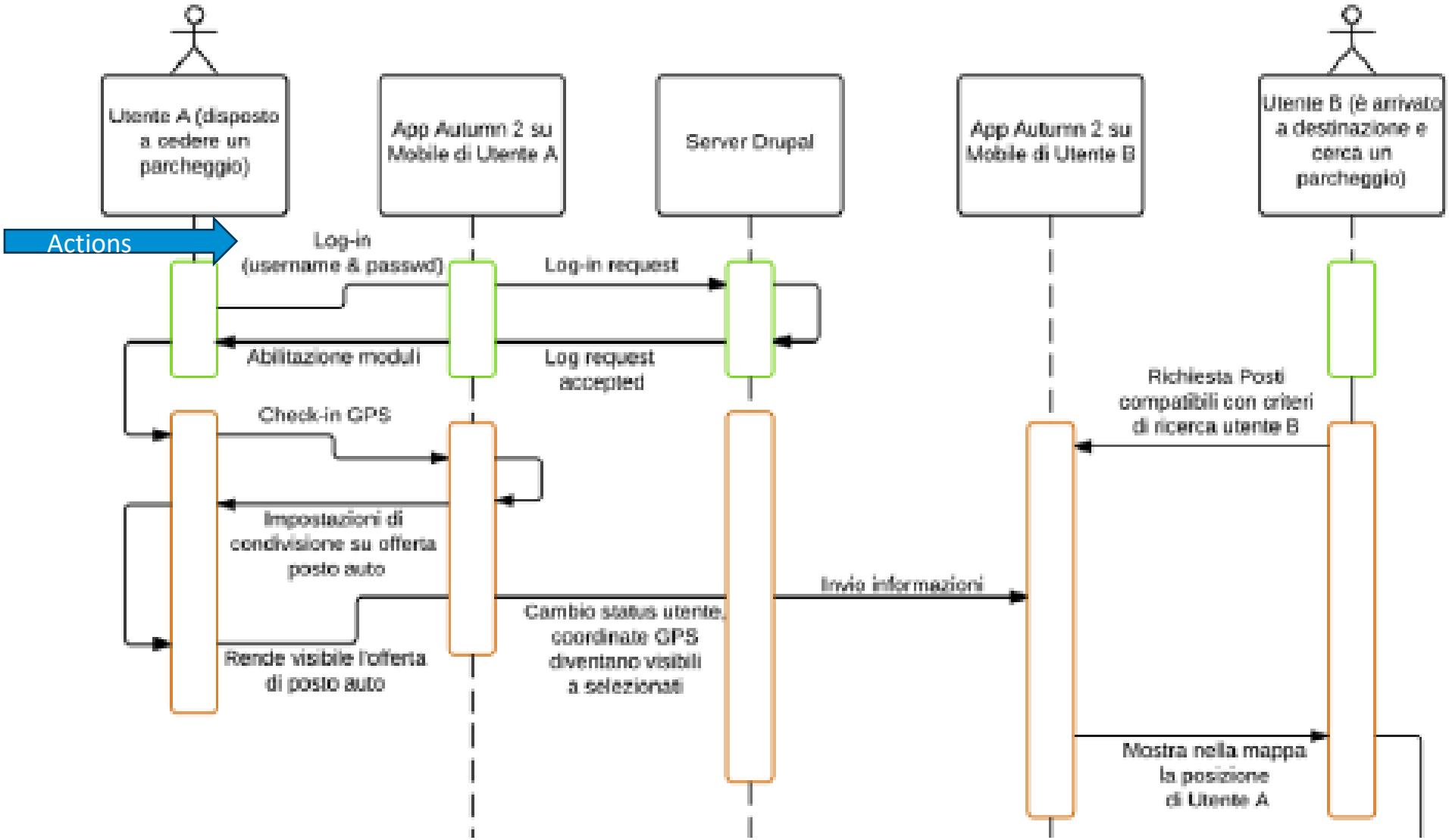
What data is gathered at each touchpoint? Write it below.

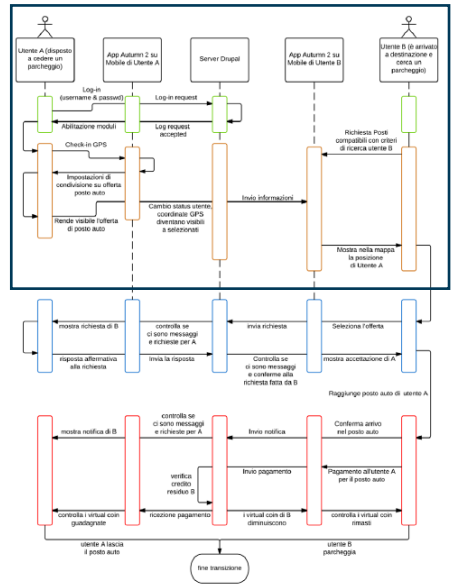
STEP 6

What is the timeline of the actions? Plot it out here.

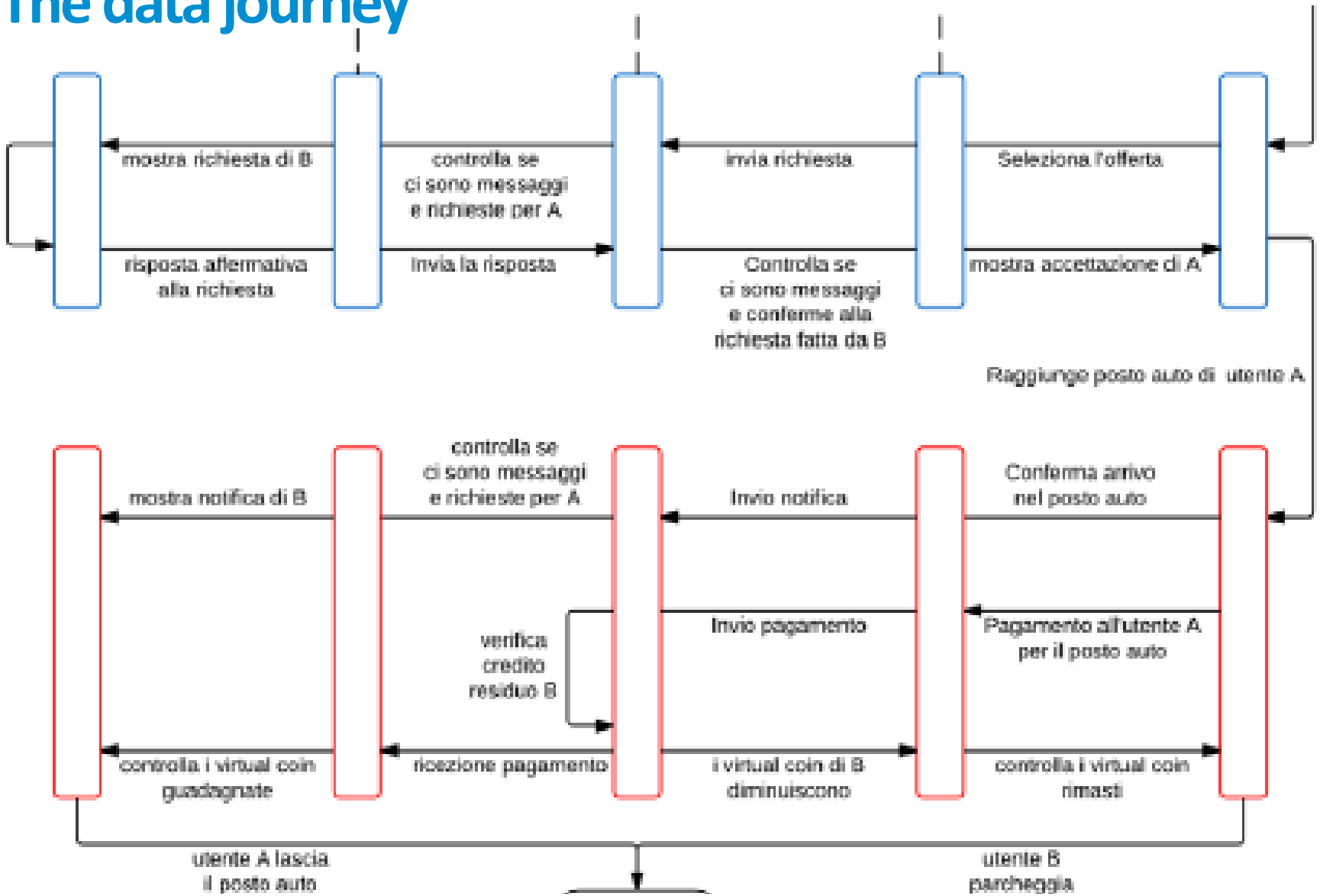
UNDP, A Guide To Data Innovation For Development, 2016

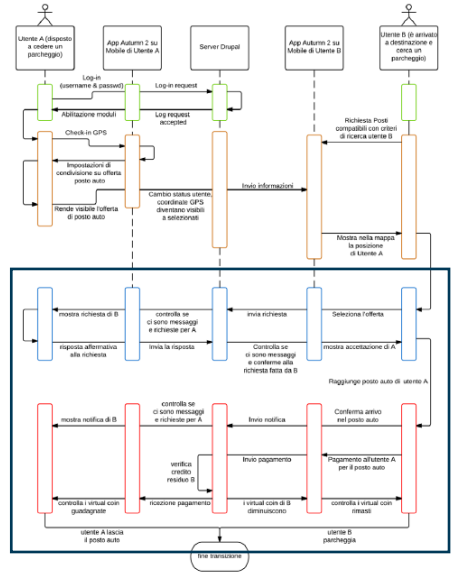
The data journey



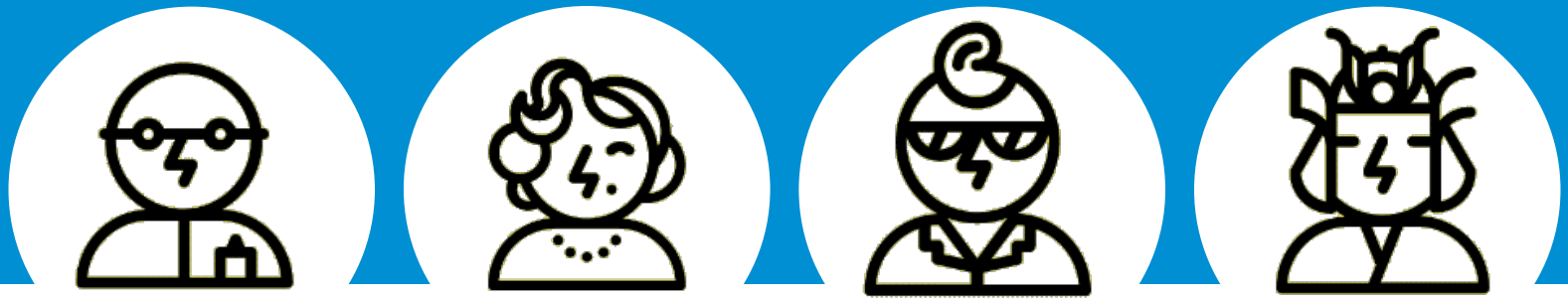


The data journey





Hands-on
Design the user journey



Design the user journey

1. Define the **stages** of the experience, from the “discovery” through the “onboarding” and usage, till the “exit”
2. What **activities** will the Personas perform at each stage?
3. What **touchpoints** does the experience imply?
4. What **data/information** will be provided/requested?
5. What will be the context of the Personas in each phase?

Use www.miro.com to collect, display, rearrange and share your work.

STEPS

ACTORS

ACTIONS

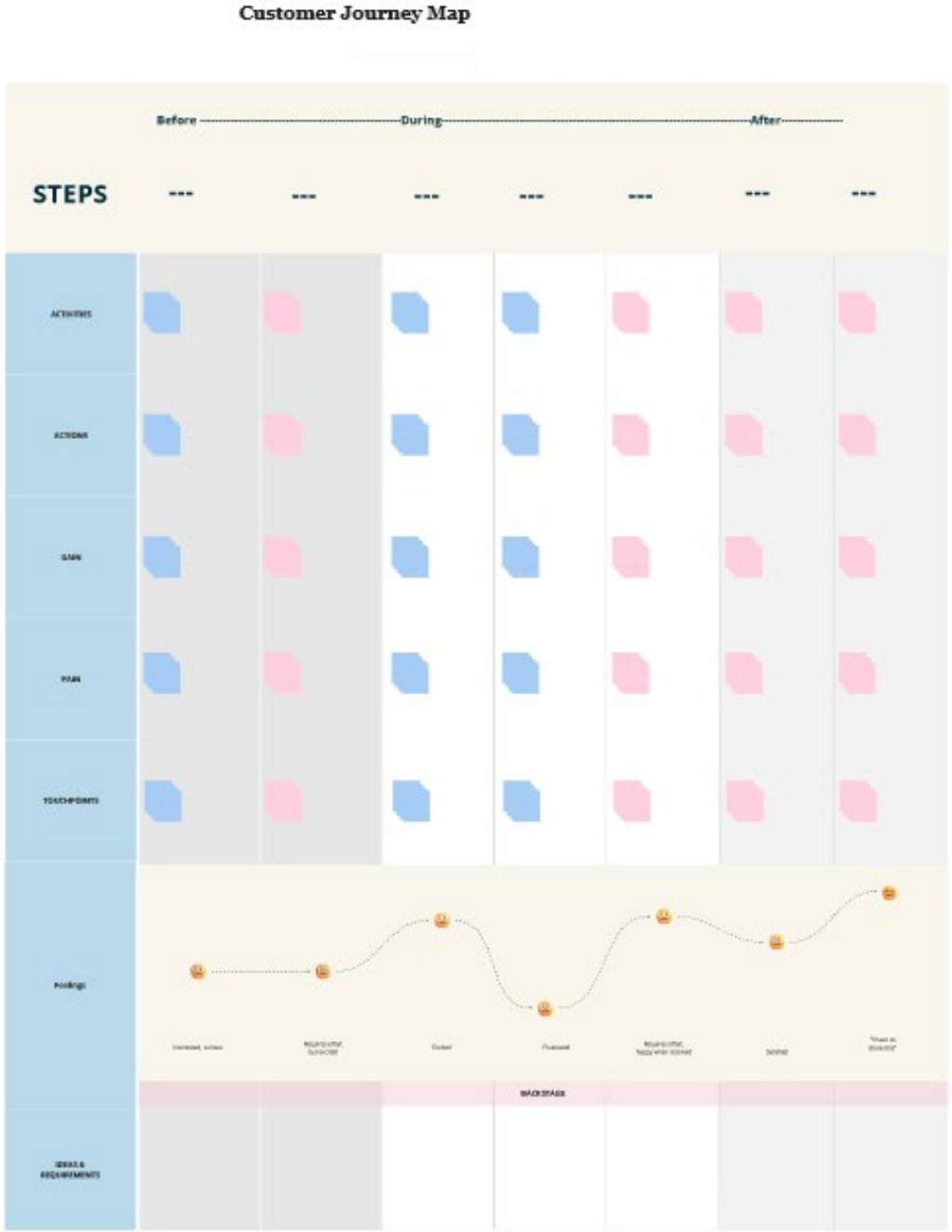
GAIN

PAIN

TOUCHPOINTS

Feelings

IDEAS
REQUIREMENTS



Map the interaction with data

1. Identify the **main steps of the process** you want to provide with your solution

2. Assume the perspective of the direct-user Personas you have defined and **describe in detail the Actions that they can do in every step**

3. **Inlcude alternative actions and loops**

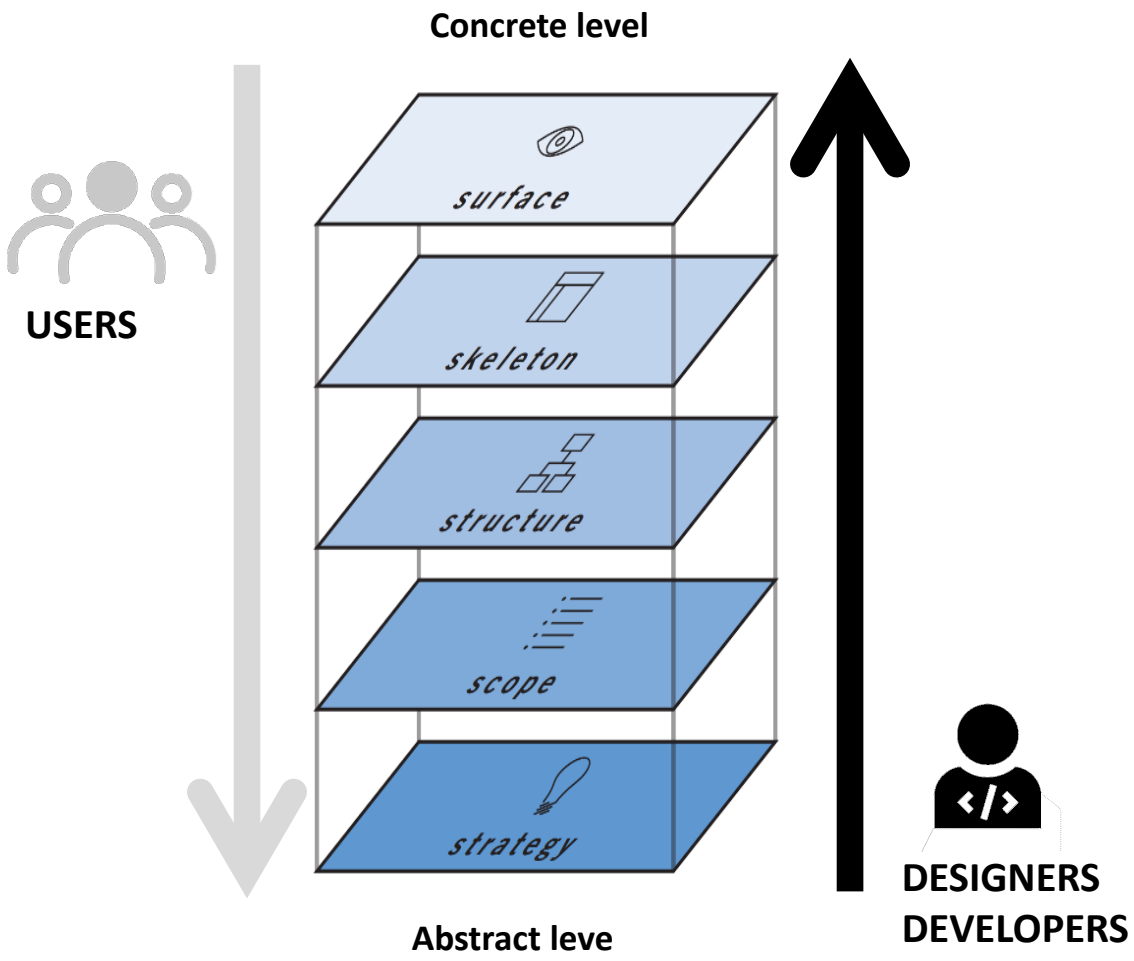
4. List the **touchpoints** used in the specific step

5. Specify **data/information** are provided/requested in every step

New questions?
Confirmations?
Difficulties?
Applicability?

Producing a usable output

From the strategy to the output



Interactive prototype (in-device) — Media rotation

Mockup

Wireframe — Sketch

Use Cases — InfoArchitecture

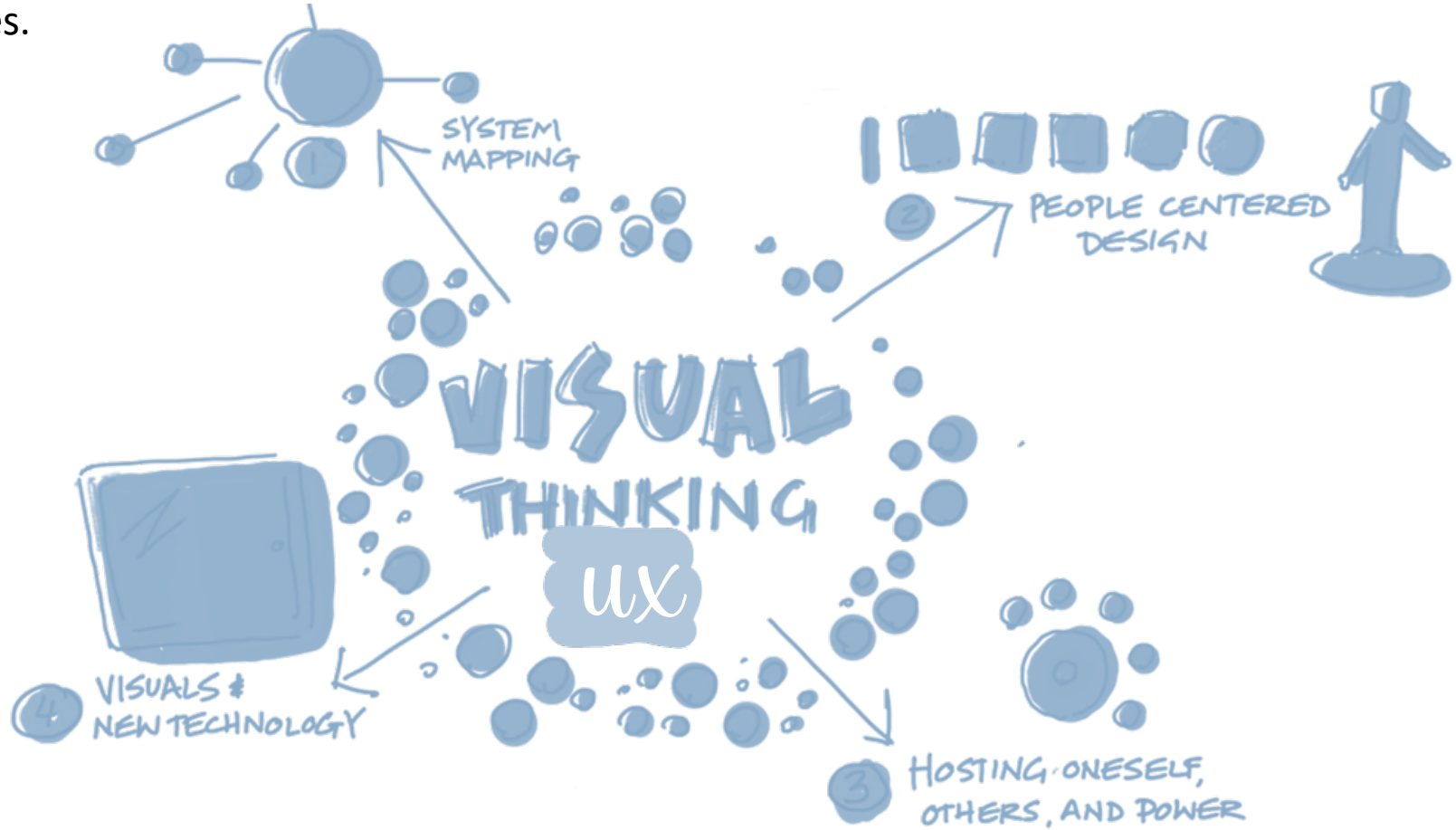
Personas — User Journey

Scenarios — Storyboard

Garrett, Jesse James. The elements of user experience. User-centered design for the web. New Riders, 2011

Visual thinking

It is a method to explicitate and communicate data, insights, models, processes, layouts by visual representations such as patterns and images.



Visual literacy → Visual argumentation

“show don’t tell”

- Show stakeholders the concept and progress
- Collect evaluations and feedback
- Facilitate the assessment of alternatives
- Reduce design errors
- Facilitate communication between project team members
- Save time and money

The written documentation does not allow you to see the big picture.

3 fundamental steps

SKETCH

EVOCATIVE

SUGGEST

EXPLORE

QUESTION

PROPOSE

PROVOKE

TENTATIVE

NONCOMMITTAL

IDEATE	DETALIZE	VIZUALIZE
FIDELITY: LOW SHOW: IDEA, MIND PROCESS USE: COMMUNICATE, FAIL, THINK, EXPERIMENT, GENERATE IDEAS HOW: HANDDRAWN	FIDELITY: LOW TO MIDDLE SHOW: MAIN GROUP OF CONTENT, UI PROPORTION, INFORMATION STRUCTURE USE: COMMUNICATE, DOCUMENT, INTERACT, TEST, GATHER FEEDBACK ANALOG: BLUEPRINT HOW: PHOTOSHOP, ILLUSTRATOR, ANY PROTOTYPING TOOL	FIDELITY: MIDDLE TO HIGH SHOW: VISUALIZE CONTENT, VISUAL PART OF CONTENT, INFOSTRUCTURE USE: DOCUMENT, GATHER FEEDBACK, BUY-IN ANALOG: ARCHITECTURAL LAYOUT HOW: PHOTOSHOP, ILLUSTRATOR, ANY GRAPHIC TOOL

PROTOTYPE

→ DIDACTIC

→ DESCRIBE

→ REFINE

→ ANSWER

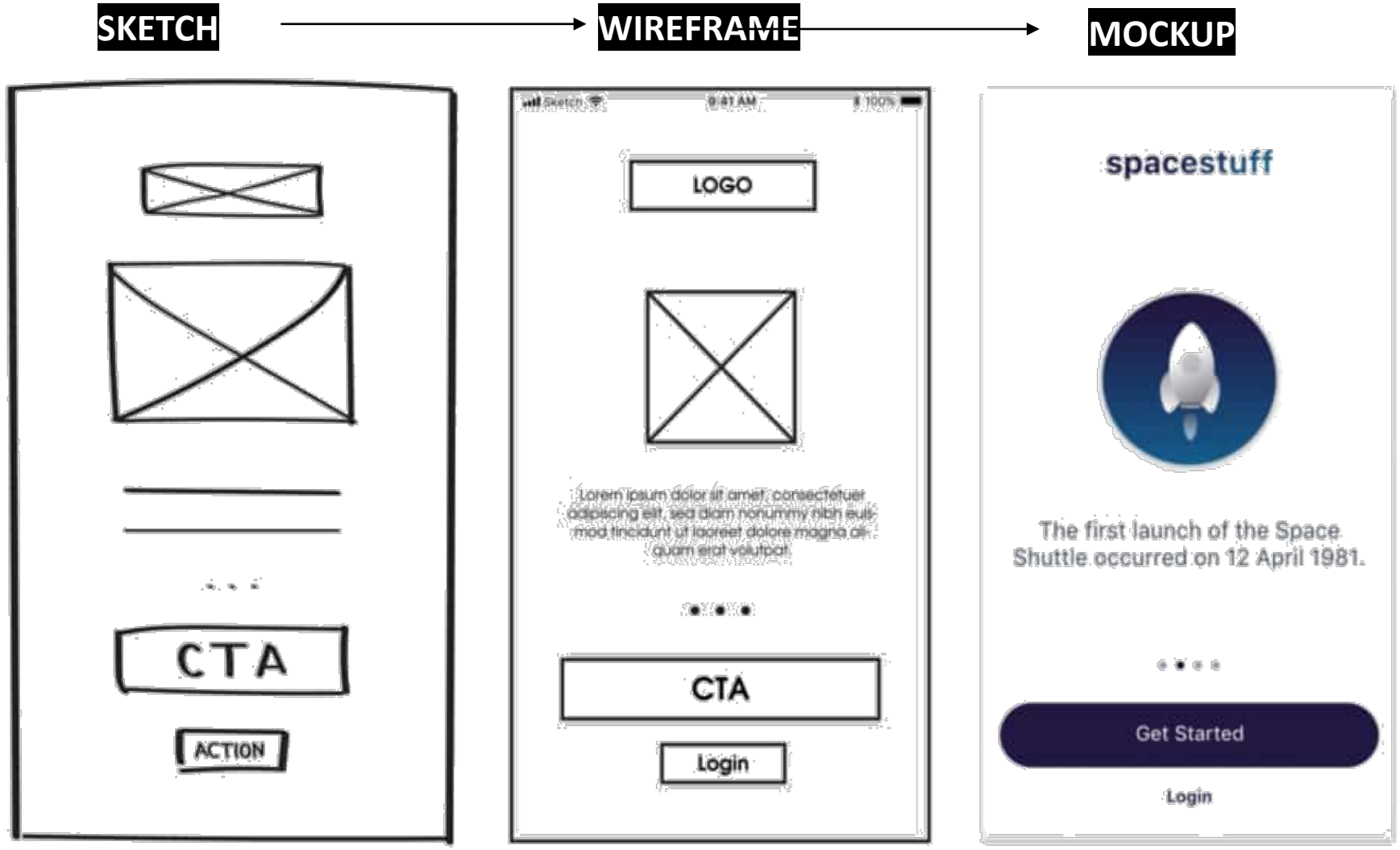
→ TEST

→ RESOLVE

→ SPECIFIC

→ DEPICTION

From low-fi to hi-fi



From low-fi to hi-fi

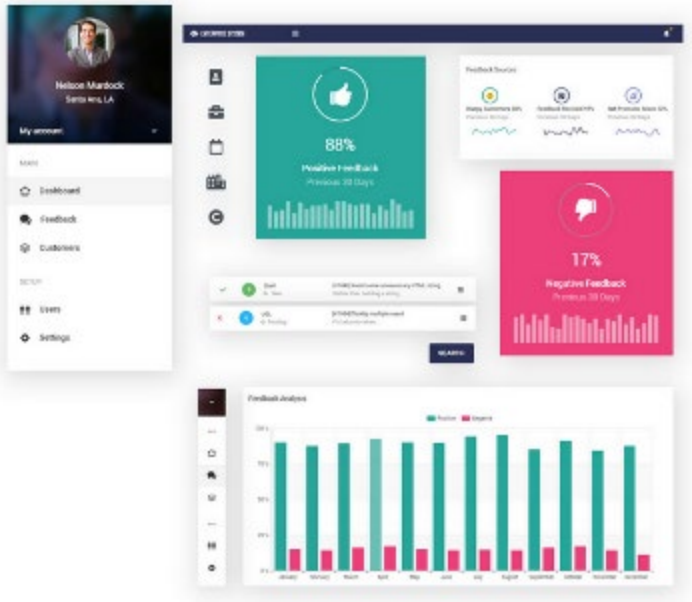
Balsamiq

Wireframes

The initial draft i wanted to be trendy also be standard dashboard, so I started rough sketches with basic research how feedback dashboard looks? and how I'm gonna place my components? In the end i came up with these wireframe:

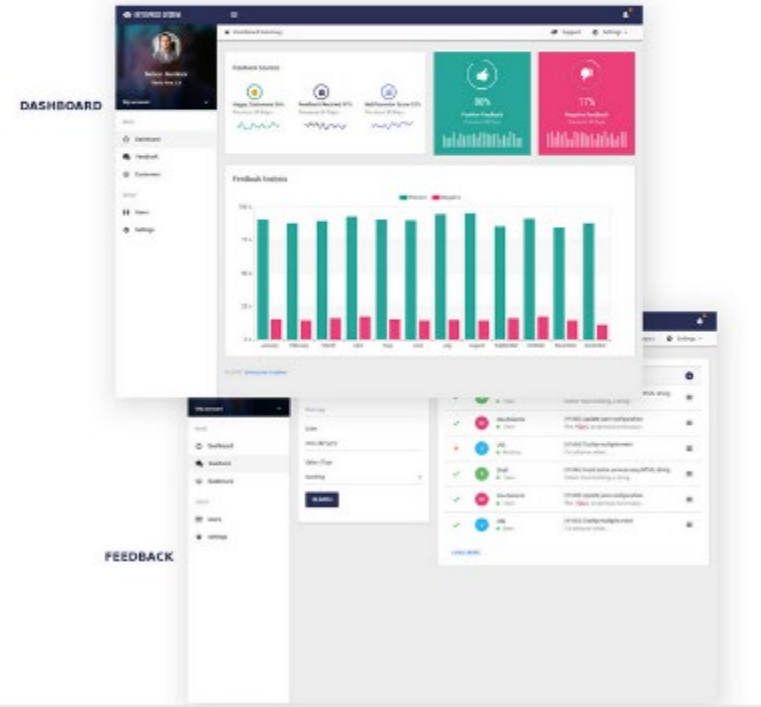
Components

Components are main feature in this theme. I have used multiple asset such as; bar charts, graphs, Pie charts & also progress bars they are trendy and user friendly. The designs are flat with fontawesome icons and assets. Here are the few example of used components



Final Design

After watching so many online dashboards especially for feedback system. I might reach the end product. it is friendly and well maintained, may not be fullfil with complete data but I triend to reach there for ux point of view. Please have a look:



https://www.behance.net/gallery/73331021/Enterprise-System-Feedback-Dashboard-(UIUX-Design)

Minimum Viable Product

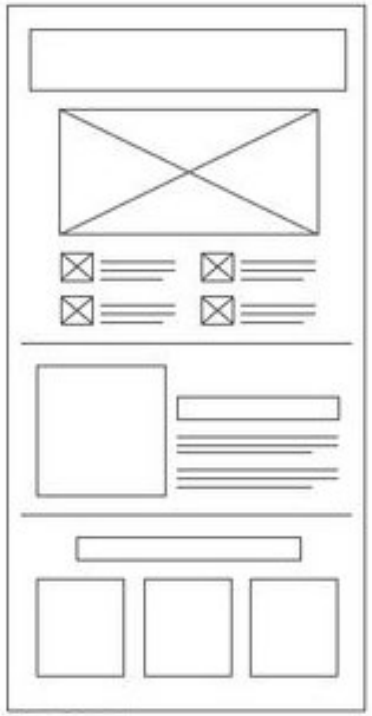
It is an output mature enough to demonstrate the solution that meets the initial need.
It is a high-fidelity prototype which implements the main functionalities required to test it.

"*An MVP is **the smallest version of a product you can use to start the process of learning from customers**. Think of it as the first experiment or in-market test of our ideas. It needn't be the full product; often it's a version with elements removed or one made using a simpler production process. It can be as simple as marketing materials or a brochure*." — Eric Ries

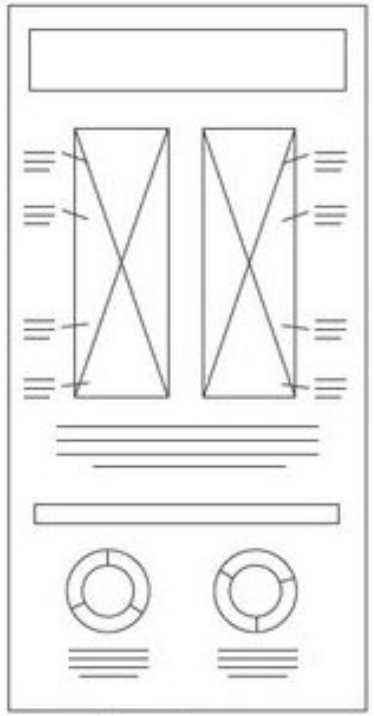
The most valuable MVP - uxdesign.cc

Wireframing an output

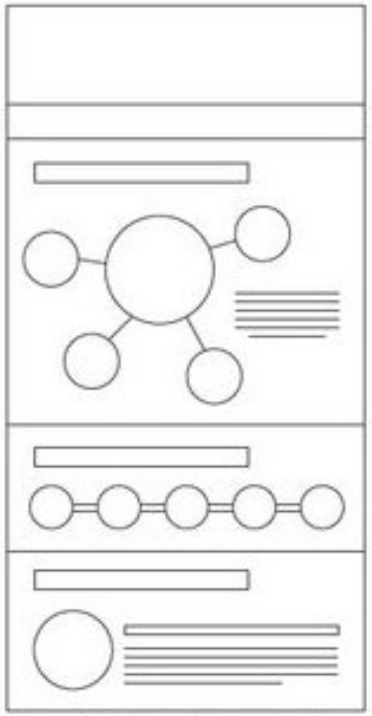
You can envisage a layout including frames, boxes, charts, tables, content and micro-copy.



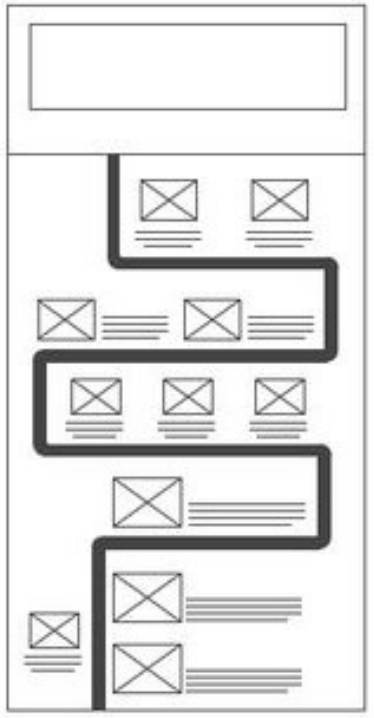
Useful Bait
Works well with most of the data
Easy to read and good usability



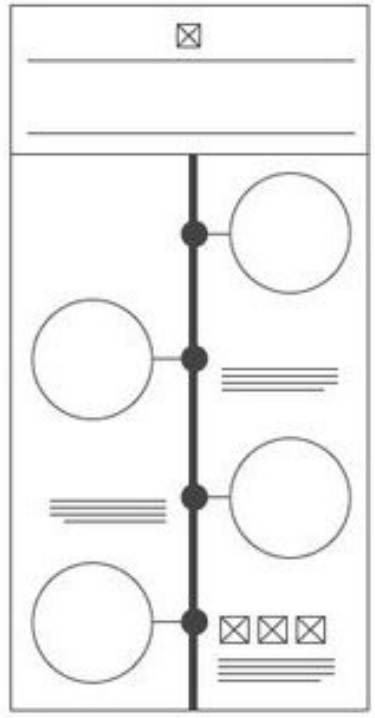
Versus/ Comparison
Works well with a lot of informations
Design(visual) is very important
Informations have to be very interesting



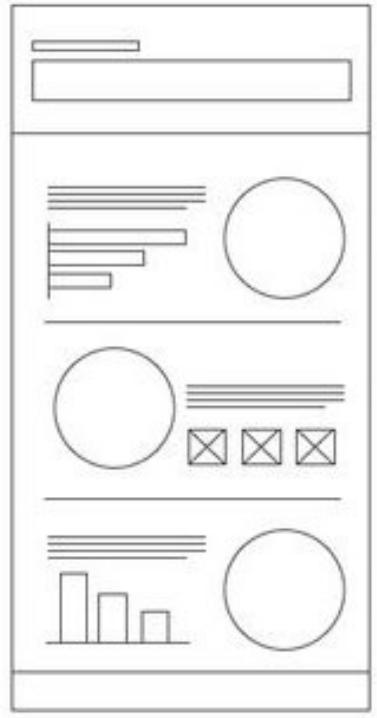
Heavy Data (numbers porn)
Works well with marketing strategy
Timeline for project
Can extend to a flowchart



Road Map
Good for storyline/journey
Can be used as a timeline too



Timeline
Can be a comparison
Good for timeline or journey too
From simple to complex
(depends on your data)



Visualized Article
Needs strong title
Works well with heavt content
Easy to read and understand

Also table must be usable

Checklist for spreadsheets

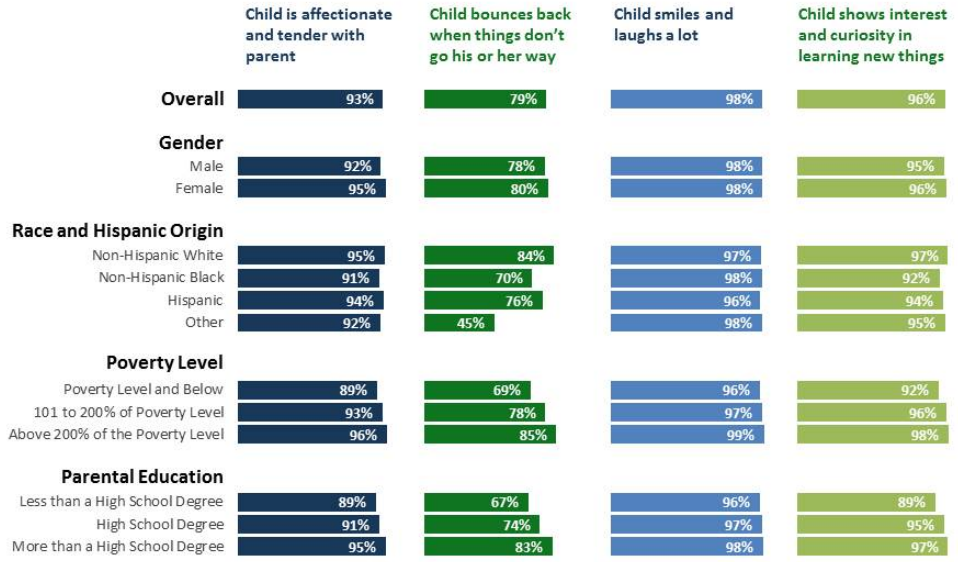
- Name the file significantly
- Name the individual table significantly
- Label precisely and clearly the columns
- Decide the sequence of columns logically
- Assign the correct format to cells
- Check the data formatting

	A	B	C	D
1	Year	Country	FundingAgency	FundingAmount
2	2000	Korea, N	Dept of Agriculture	$32 242 376
3	2000	Korea–North	Dept of Agriculture	$86,151,301
4	2000	Korea North	Department of State	166855
5	2000	SouthKorea	U.S. Agency for International Development	282,805a
6	2000	south Korea	Trade and Development Agency	735718
7	2001	North Korea	US Agency for International Development	345,399
8	2001	N Korea	Department of Argic	117715223
9	2001	So Korea	Department of agriculture	2260293
10	2001	Korea, North	State Department	183,752
11	2001	Korea, South	Trade and Development Agency	329,953
12	2002	Korea, N	Department of Agriculture	37,322,244.00
13	2002	Korea, South	U.S. Agency for International Development	67,990.00
14	2002	Korea, South	Trade and Development Agency	$294,340
15	2003	Korea, North	U.S. Agency for International Development	$333 823
16	2003	Korea, North	Department - Agriculture	$26,766,828
17	2003	Korea, North	Department - Agriculture	$19,337,695
18	2003	Korea, No	Department of State	220,323
19	2003	Korea, South	U.S. Agency for International Development	66,765
20	2003	Korea, South	Trade and Development Agency	19,899

Also table must be usable

	Total defects	A	B	C	D	E
A4636	131	37	21	28		45
A2524	86	20	24	21	1	20
A3713	75	17	13	18		27
A4452	73	5	33	17		18
A4088	72	14	16	12	2	28
A2103	68	14	13	14	1	26
A2156	68	16	13	19	2	18
A3681	66	12	16	9	1	28
A1366	50	11	15	12		12
A2610	39	5	7	12		15
Total	728	151	171	162	7	237

Percentage of children, ages six months through five years, whose parents indicated they “usually” or “always” showed selected “flourishing” behaviors

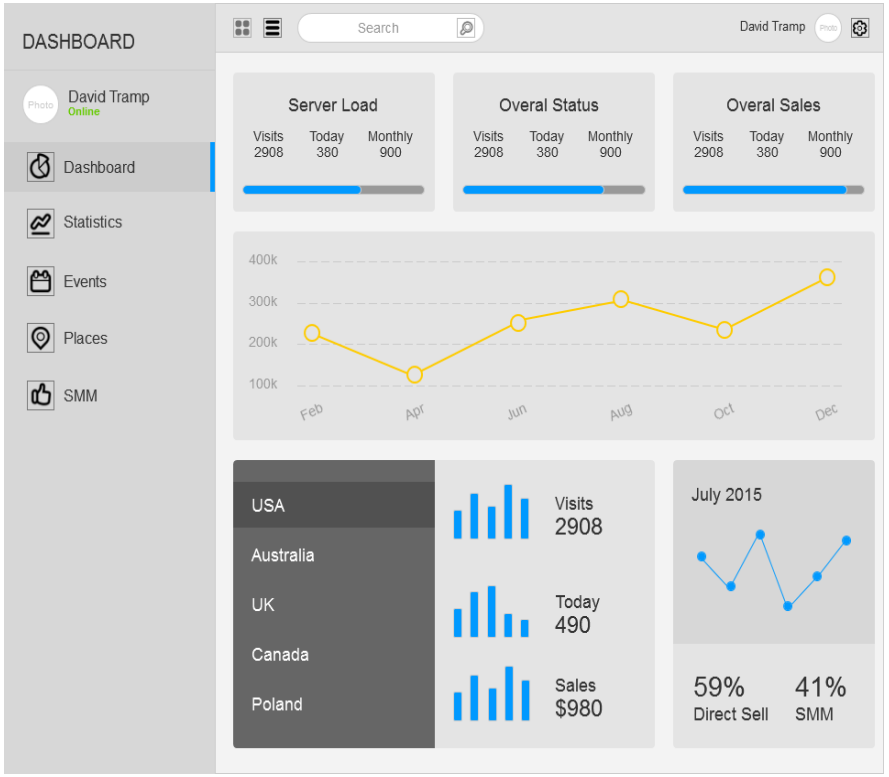


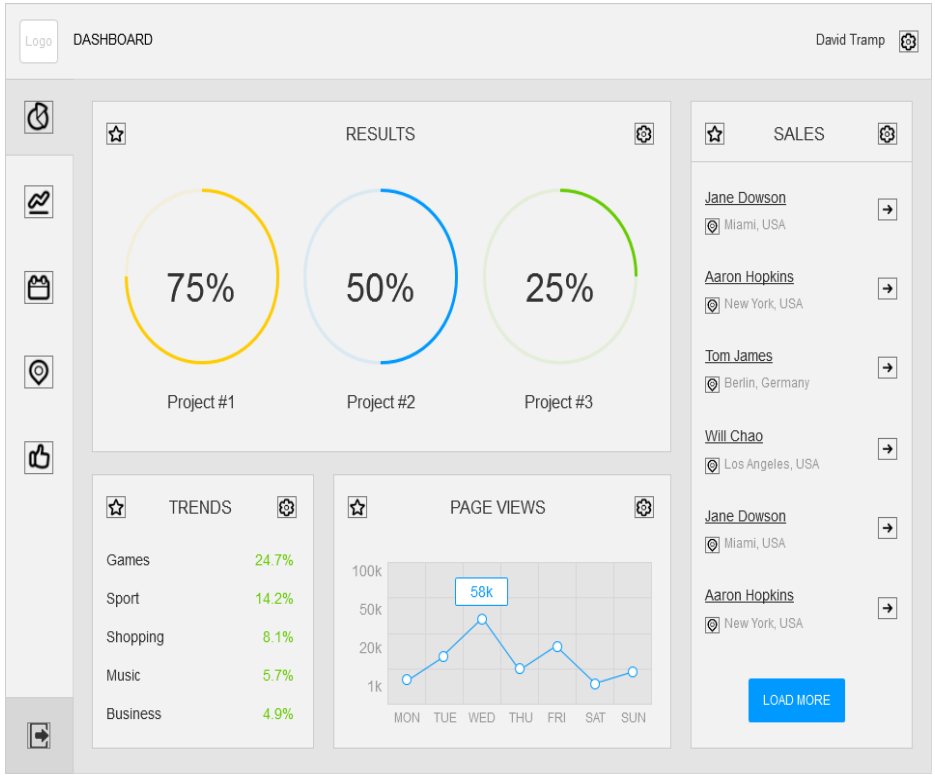
Data source: http://www.childtrends.org/wp-content/uploads/2013/07/125_Flourishing_Measures.pdf

Visualization by Ann K. Emery

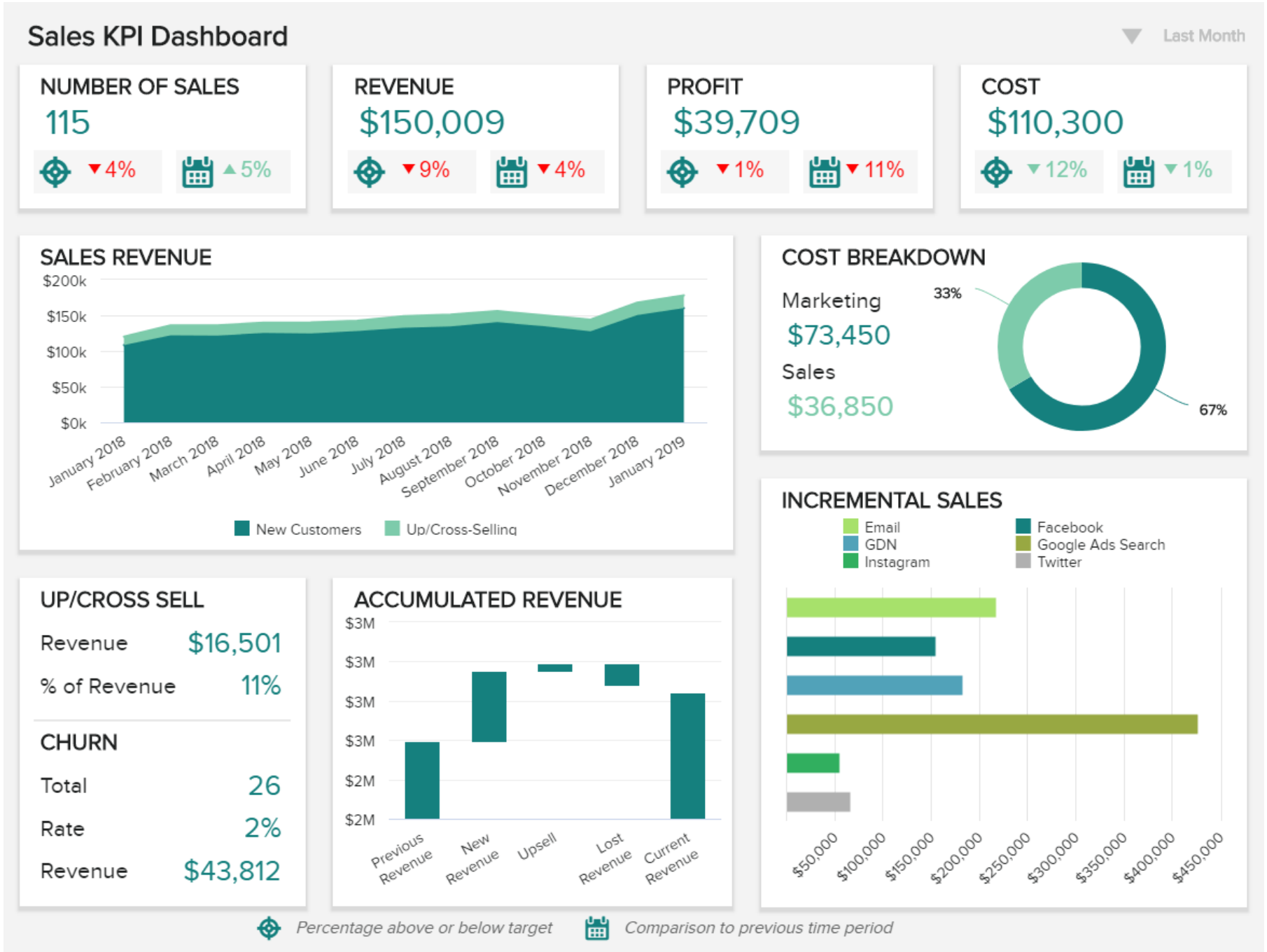
Dashboard layout

Your output shall be part of an integrated system.
You can envisage a layout including frames, boxes, charts, tables, content and micro-copy.





Dashboard



https://www.datapine.com/dashboard-examples-and-templates/sales

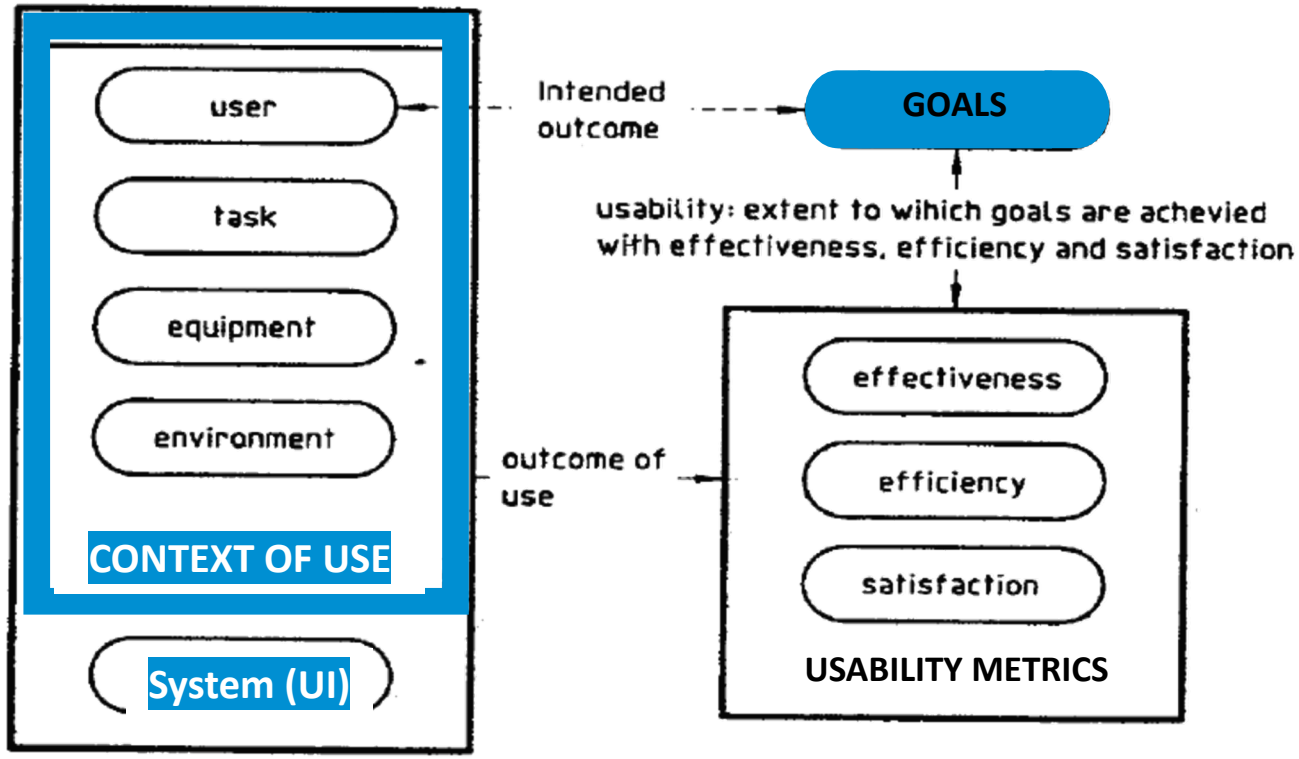
FONDAZIONE links PASSION FOR INNOVATION

Politecnico di Torino 1859

USABILITY

ISO 9241-11 (1998)

The extent to which a system/product can be **used by** specified users to achieve specified goals with **efficacy, efficiency, and satisfaction** in a **specified** context of use.



Source: ISO 9241: 2006–2020 Ergonomics of human-system interaction — Part 110: Interaction principles

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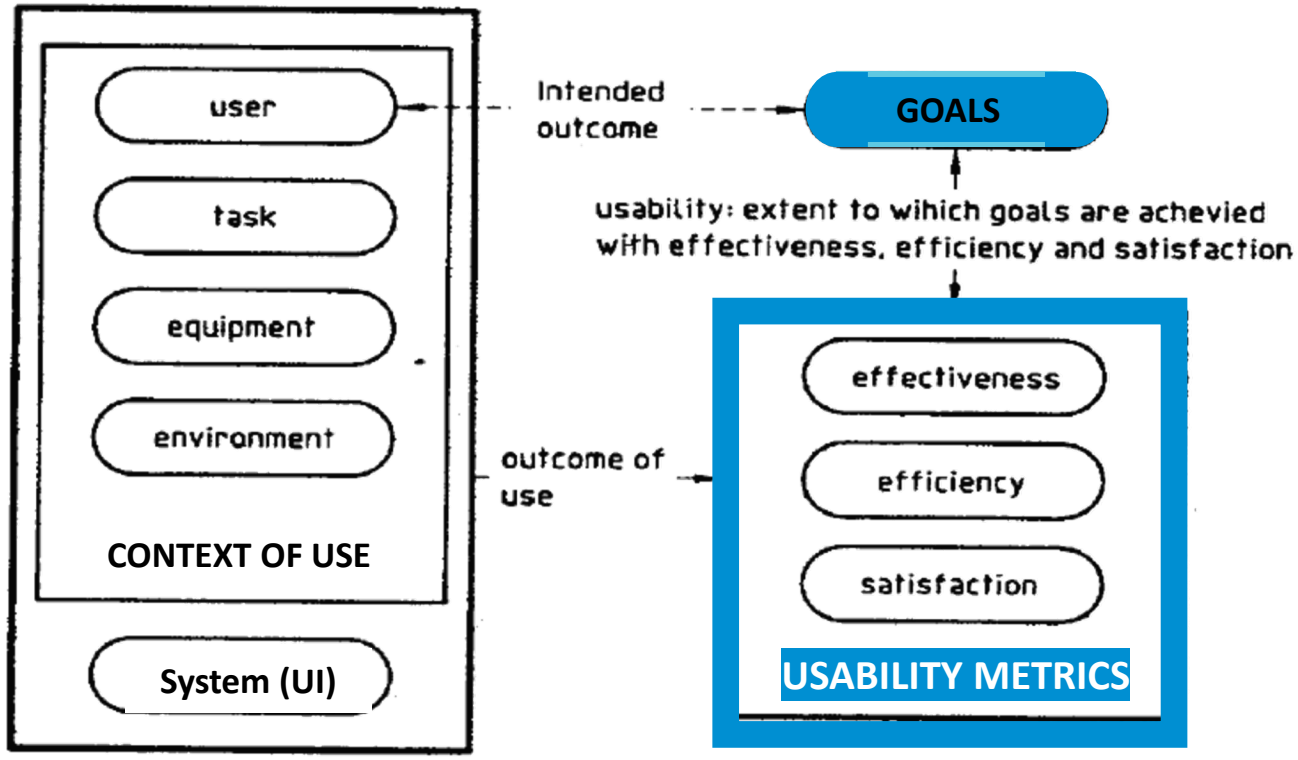


Source: ISO 9241: 2006–2020 Ergonomics of human-system interaction — Part 110: Interaction principles

Metrics

Efficacy

The extent to which a person correctly and completely achieves the goal through the system.

→ Goals completeness, Accuracy

Efficiency

The amount of resources spent by the person to reach a goal.

→Execution time, Nr. and types of errors, Nr. of steps, clicks, Repeated tasks

Satisfaction

The degree of comfort/absence of frustrations related to the use of the system. It is also influenced by aspects such as visual style and human-machine dialogue quality.

→ errors, appreciation, lack of frustration,…

They are offered through properties such as:

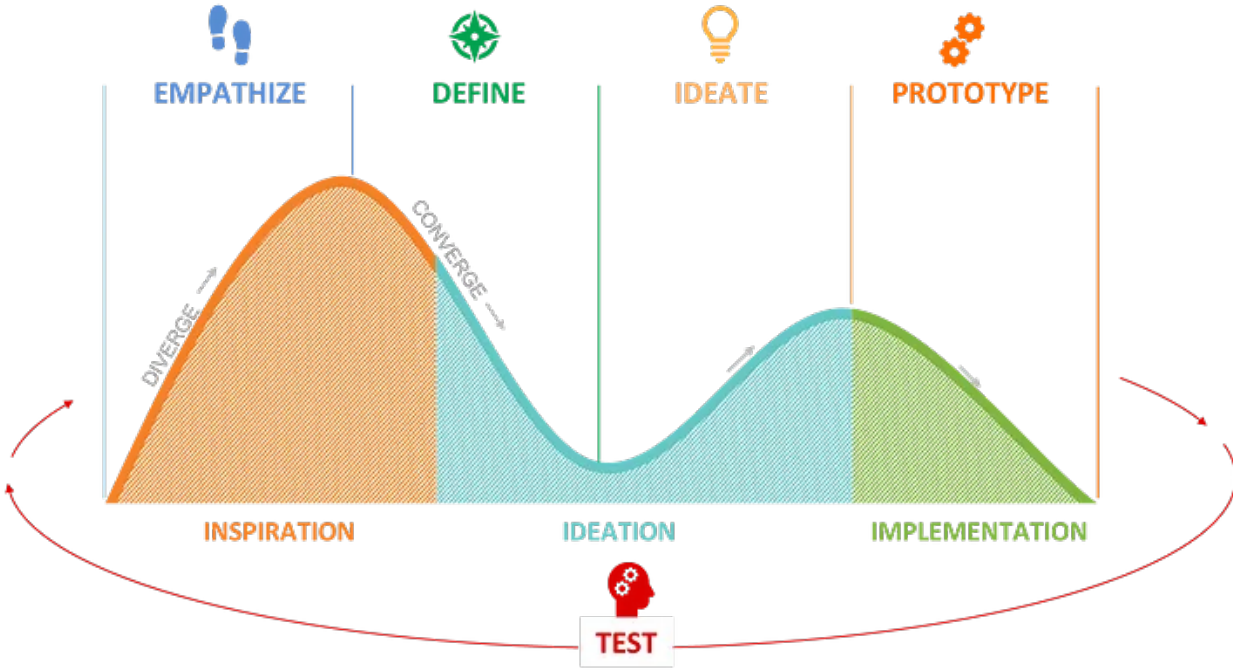
- Feedback
- Transparency
- Visibility
- Consistency
- Reversibility
- Controllability
- Flexibility

What comes next?

Keep on working

The journey will help you identify and specify
the core elements of your solution in a higher fidelity shape:

- USE CASES/USER STORIES
- USER REQUIREMENTS
- TECHNICAL REQUIREMENTS
- DATA ARCHITECTURE
- ERROR RECOVERY STRATEGIES
- INTERACTION RECOMMENDATION
- MICROCOPY/CONTENTS



Human-Centered Design - Design Thinking

Keep on applying the design-oriented approach to

- **Define the strategy before developing**
- **Err e refine** your work
- Integrate the **user** knowledge and **feedback** into your work and outputs
- and **design good solutions <u>for the real world</u>.**

Let’s design our service

1

- What is the challenge?
- Who are the actors involved in the field?
- Which needs and opportunities do they refer?

Context analysis and STAKEHOLDERS MAP

2

- Who are the direct and indirect users? What do they have in common? What differences?
- What do the direct users want to reach?

PERSONAS

3

- How do the users discover/receive your output?
- Which touchpoints will they use?

CUSTOMER JOURNEY

4

DEFINE YOUR SOLUTION IN DETAIL:

- Which data and information will be provided?
- Where do they come from? How will be updated/verified?

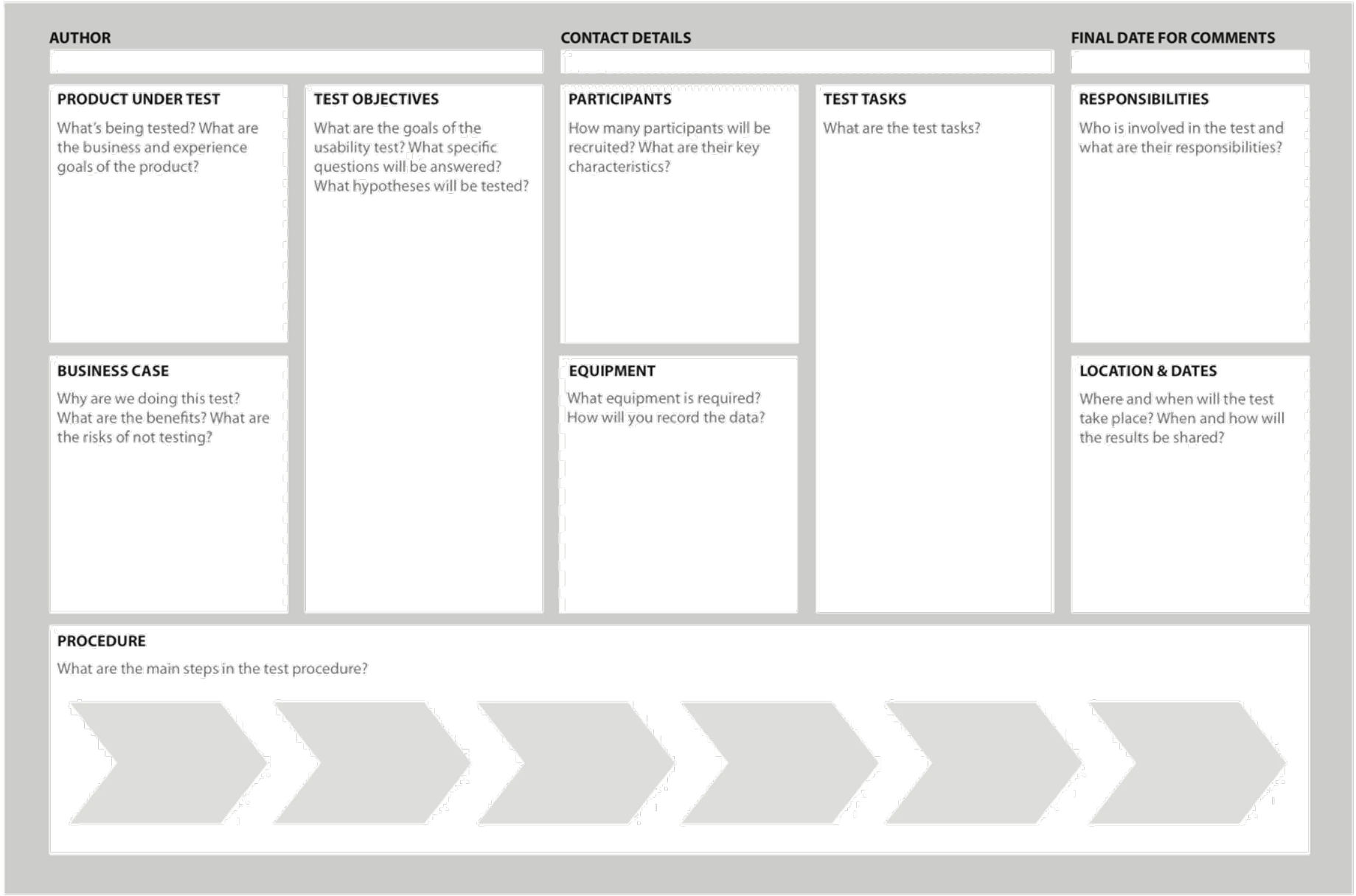
VALUE PROPOSITION
REQUIREMENTS
MOCKUP

Value proposition statement

Template	Sample(s)
For _____ (target customer)	For non-technical marketers
who _____ (statement of the need or opportunity)	who struggle to find return on investment in social media
our (product/service name) is _____ (product category)	our product is a web-based analytics software
that (statement of benefit) _____ .	that translates engagement metrics into actionable revenue metrics.

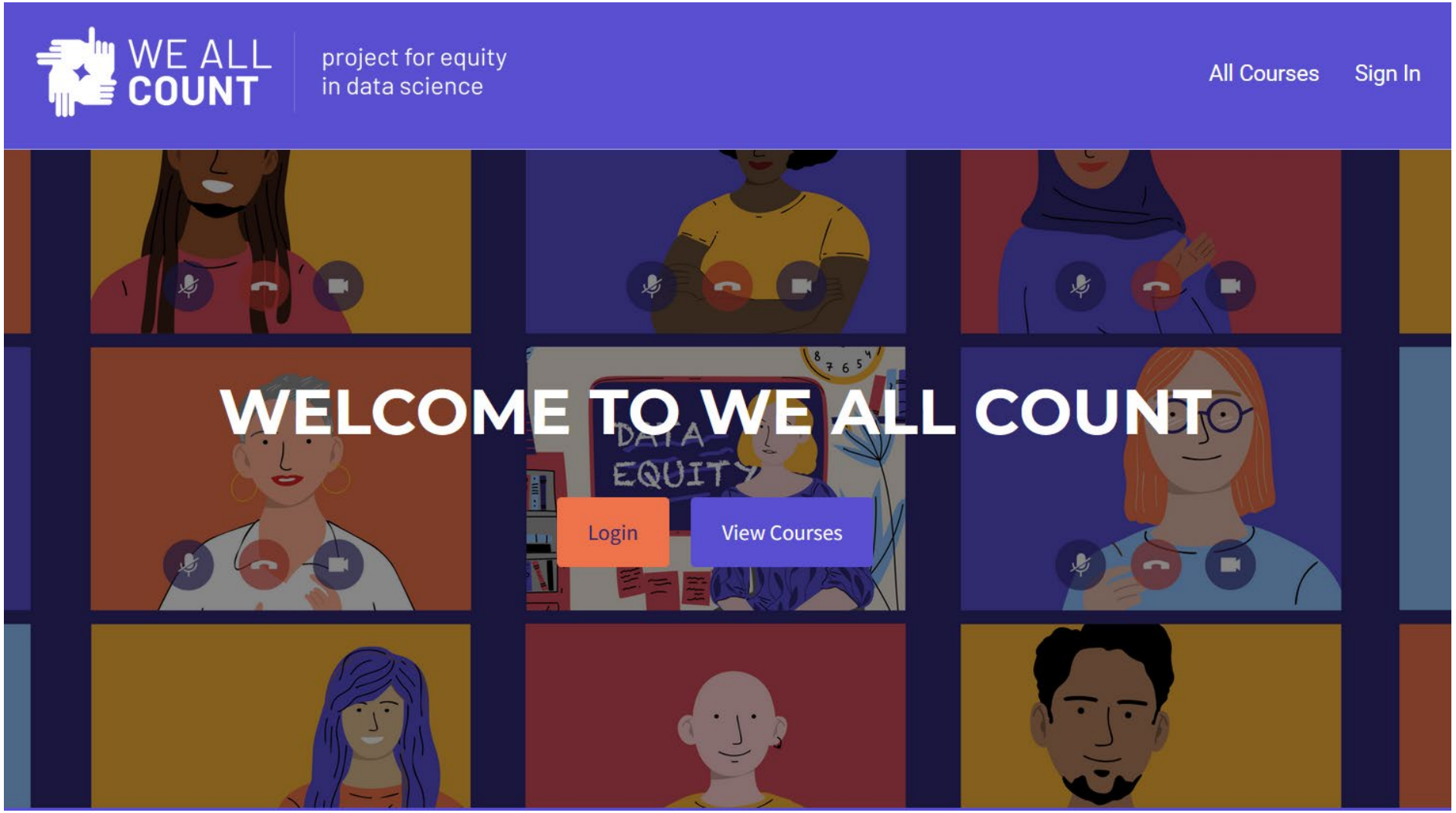
https://monday.com/value-proposition-template

Test test test



https://medium.com/@userfocus/the-1-page-usability-test-plan-dbc8c3d7fb54

Learn and apply



https://workshop.weallcount.com/

Learn and apply

A Guide to Data Innovation for Development - From idea to proof-of-concept

NOVEMBER 16, 2017

'A Guide to Data Innovation for Development - From idea to proof-of-concept,' provides step-by-step guidance for development practitioners to leverage new sources of data. It is a result of a collaboration of UNDP and UN Global Pulse with support from UN Volunteers, led by UNDP innovation teams in Europe and Central Asia and Arab States.

https://www.undp.org/publications/guide-data-innovation-development-idea-proof-concept

Contacts

Antonella Frisiello
. Researcher in Digital Ergonomics [LINKS Foundation]
. Adjunct Professor [Politecnico di Torino]

antonella.frisiello@polito.it