Kiboga, Uganda 2013 | UNICEF BackPack Plus

MEMORY STORE

#magazziniricordati

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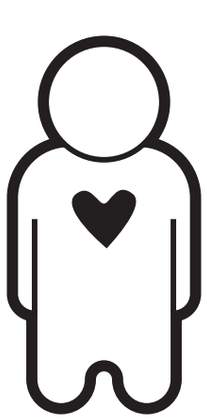
HUMAN CENTERED DESIGN

INTRODUCTION, TOOLS & METHODS

Roberta Tassi



Human centred design (HCD/UCD) is a process in which the **needs, wants, and limitations** of end users of a product, service or process are given extensive attention at each stage of the design process.

PUT THE PEOPLE YOU SERVE AT THE CENTER OF YOUR DESIGN PROCESS TO COME UP WITH NEW ANSWERS TO DIFFICULT PROBLEMS

PRODUCT **SERVICE EXPERIENCE INTERACTION SYSTEM PROCESS**

From the design of a product to the design of an experience or a system, the **growing complexity** designers deal with has raised the need to identify new methods and tools.

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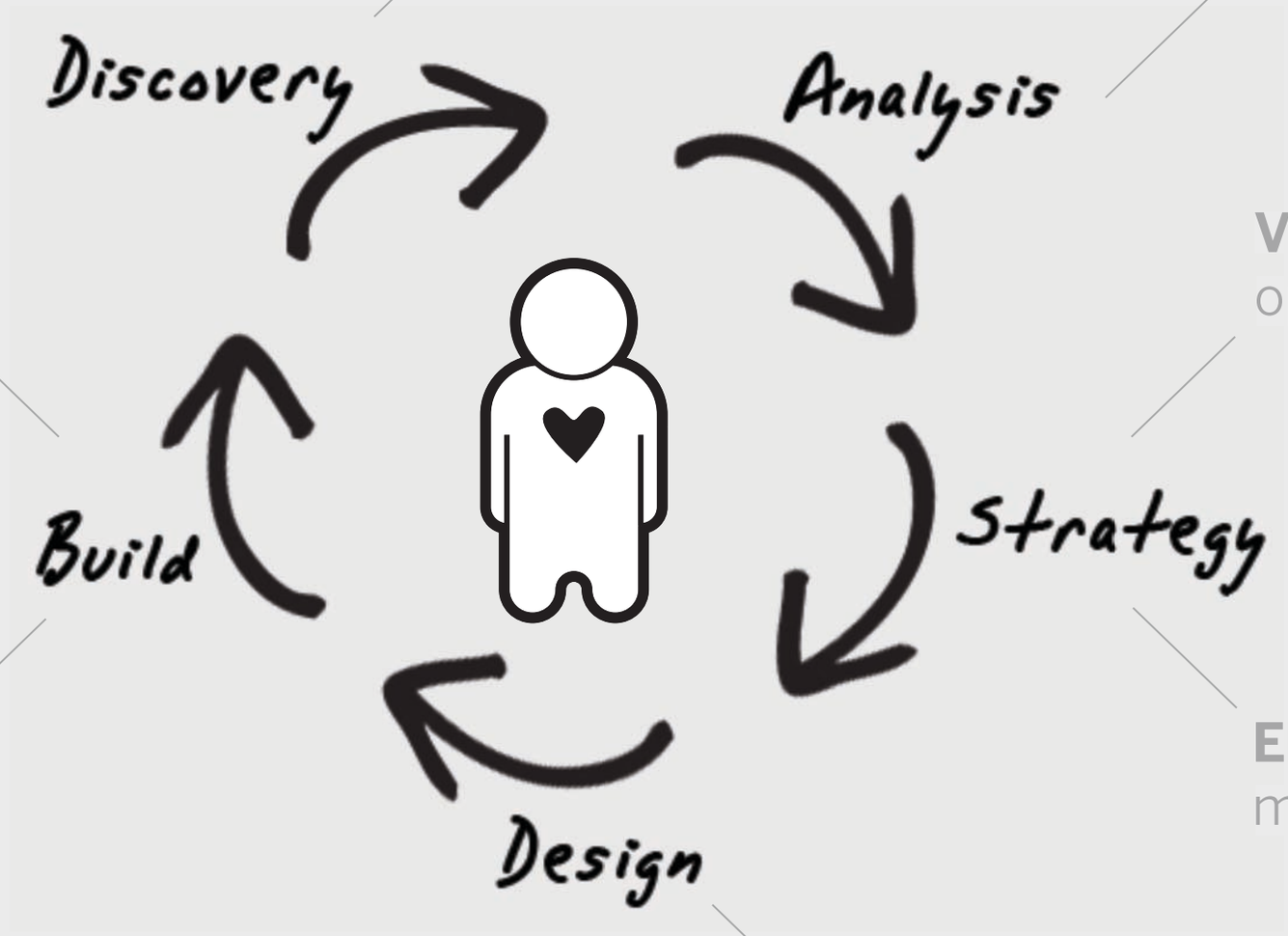
UNDERSTAND
the user

SYNTHESIZE
research insights

PRIORITISE
ideas & decisions

VISUALIZE
opportunities



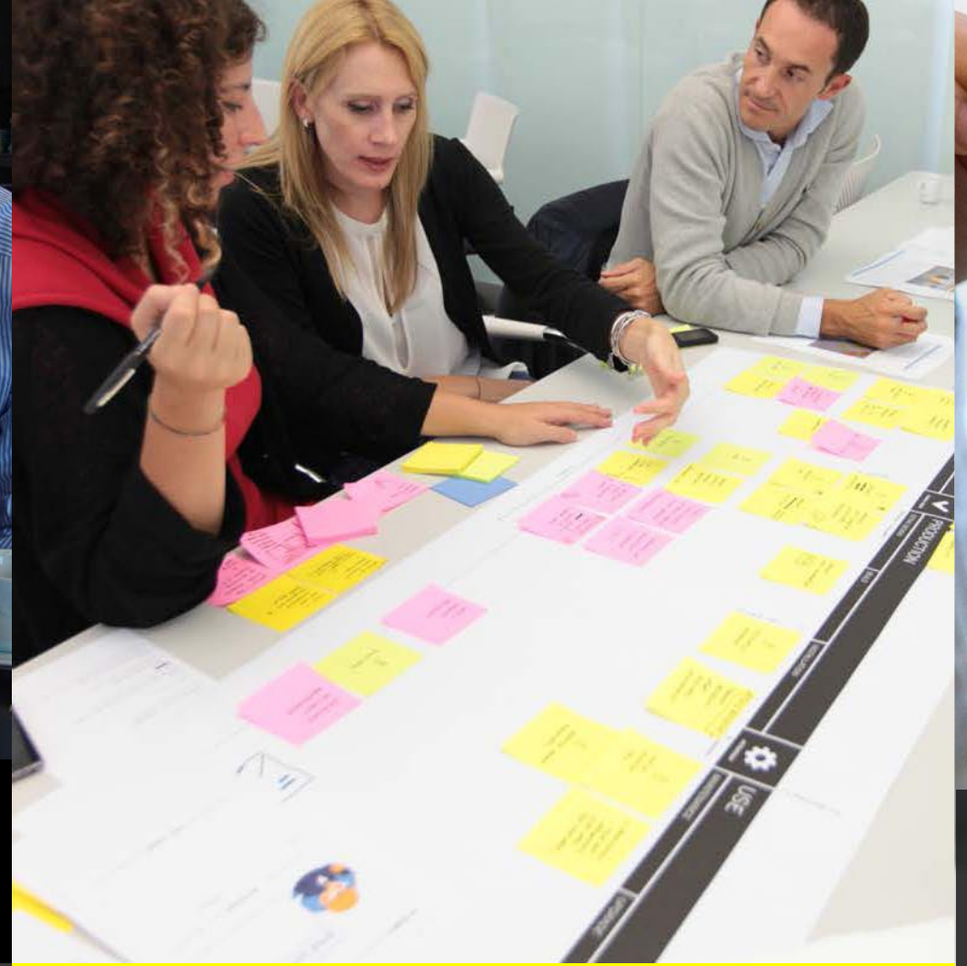
PROTOTYPE
stimuli & solutions

ENGAGE
multiple stakeholders

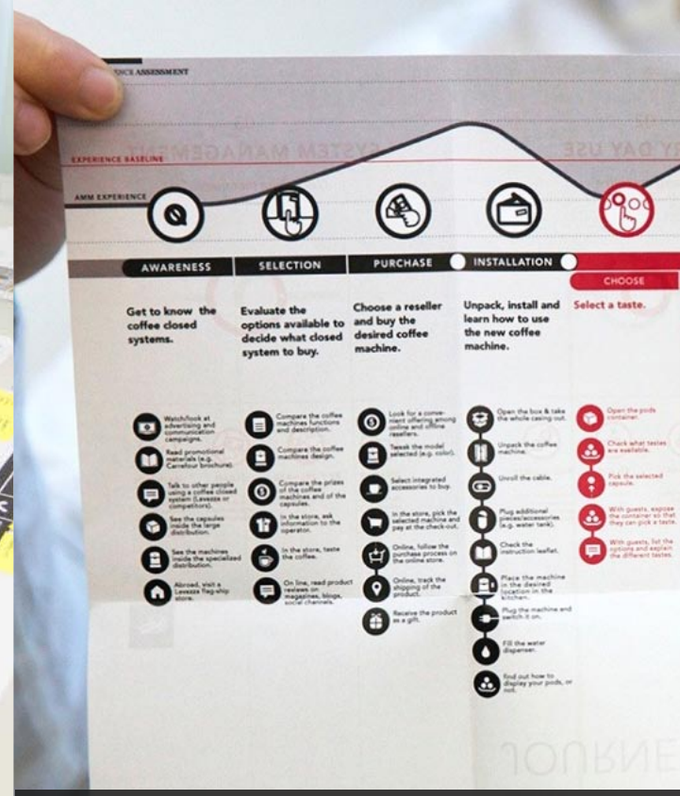
GENERATE
and evaluate ideas

HCD HOW TO DO IT?

UNDERSTAND THE USER
IN DEPTH INTERVIEW



SYNTHESIZE RESEARCH FINDINGS
AFFINITY MAP



VISUALIZE OPPORTUNITIES
EXPERIENCE JOURNEY

GENERATE & EVALUATE IDEAS
IDEA CATALOGUE

COLLABORATE WITH MULTIPLE STAKEHOLDERS
MAKE & BREAK

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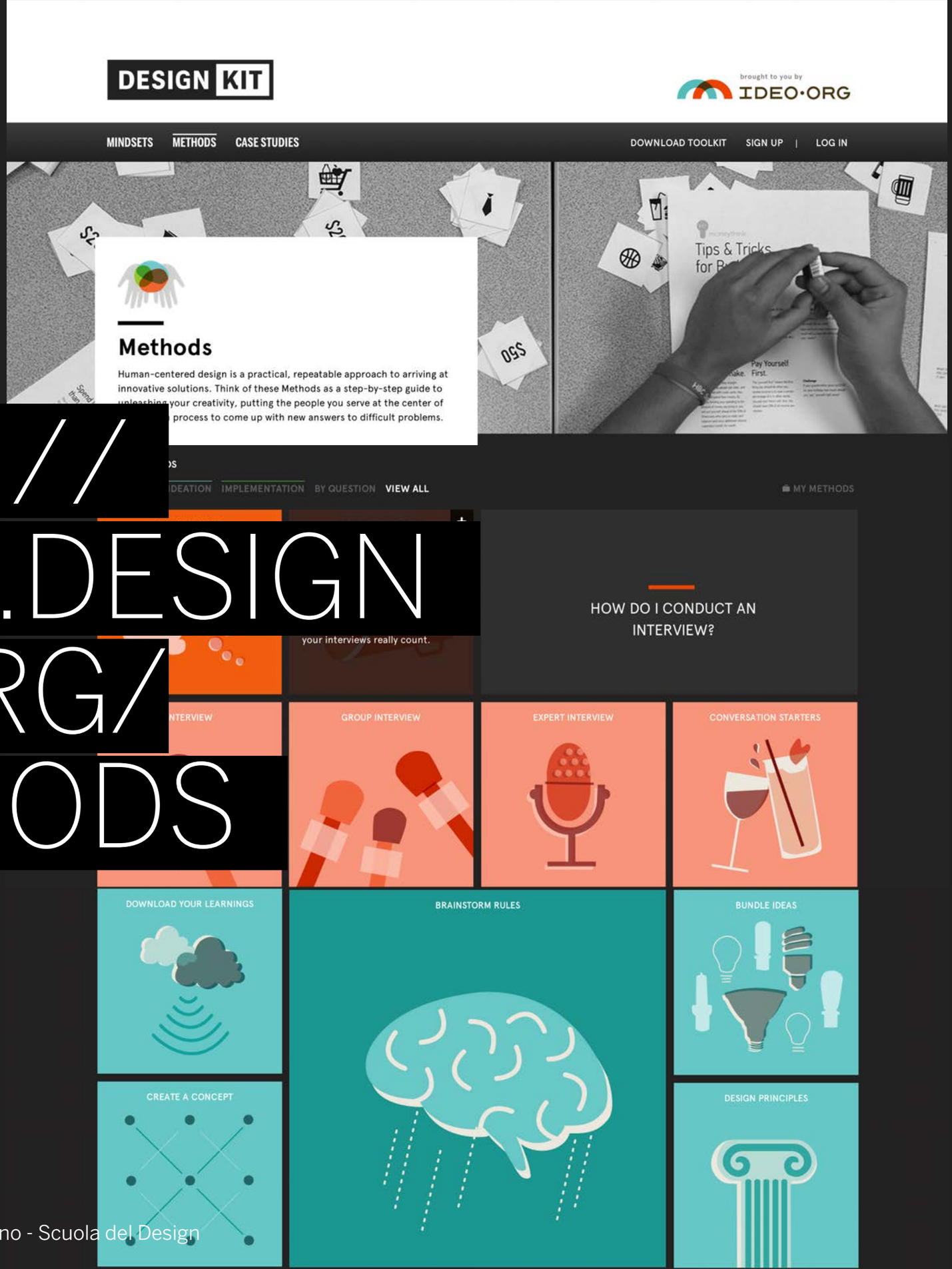
HCD HOW TO DO IT?

HTTP://WWW.DESIGNKIT.ORG/METHODS



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HCD HOW TO DO IT?

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HCD EXAMPLE

DePaul Health Center for SSM Health Care, 2000

UX
FOR GOOD

ACTIVATING THE RWANDAN REBIRTH

JUNE 2014

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UX FOR GOOD DESIGN CHALLENGE

Memorials play an important role of teaching and moving us so that we will never feel detached and complicit again of tragic events that injured humanity. But most of the time when we visit such places, we remain shocked but unable to act beyond that experience. Virtually every visitor to a genocide memorial or holocaust museum can attest to overwhelming feelings of sympathy, sadness and outrage, but **most visitors can also attest that they did nothing substantively differently as a result.**

HOW CAN WE RETHINK THE EXPERIENCE OF THOSE MEMORIALS TO ACTIVATE VISITORS FOR A BETTER HUMANITY?

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UX FOR GOOD PROJECT STORY

10

DESIGNERS

7

DAYS

KIGALI (RWANDA) + LONDON (UK)

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KIGALI GENOCIDE MEMORIAL
RWANDA

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UX FOOD PROJECT STORY

MASS GRAVES

IMMERSION & CONTEXTUAL OBSERVATION

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UX FOR GOOD PROJECT STORY

HISTORICAL GALLERY

IMMERSION & CONTEXTUAL OBSERVATION

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UX FOR GOOD PROJECT STORY

PHOTOS & REMAINS

IMMERSION & CONTEXTUAL OBSERVATION

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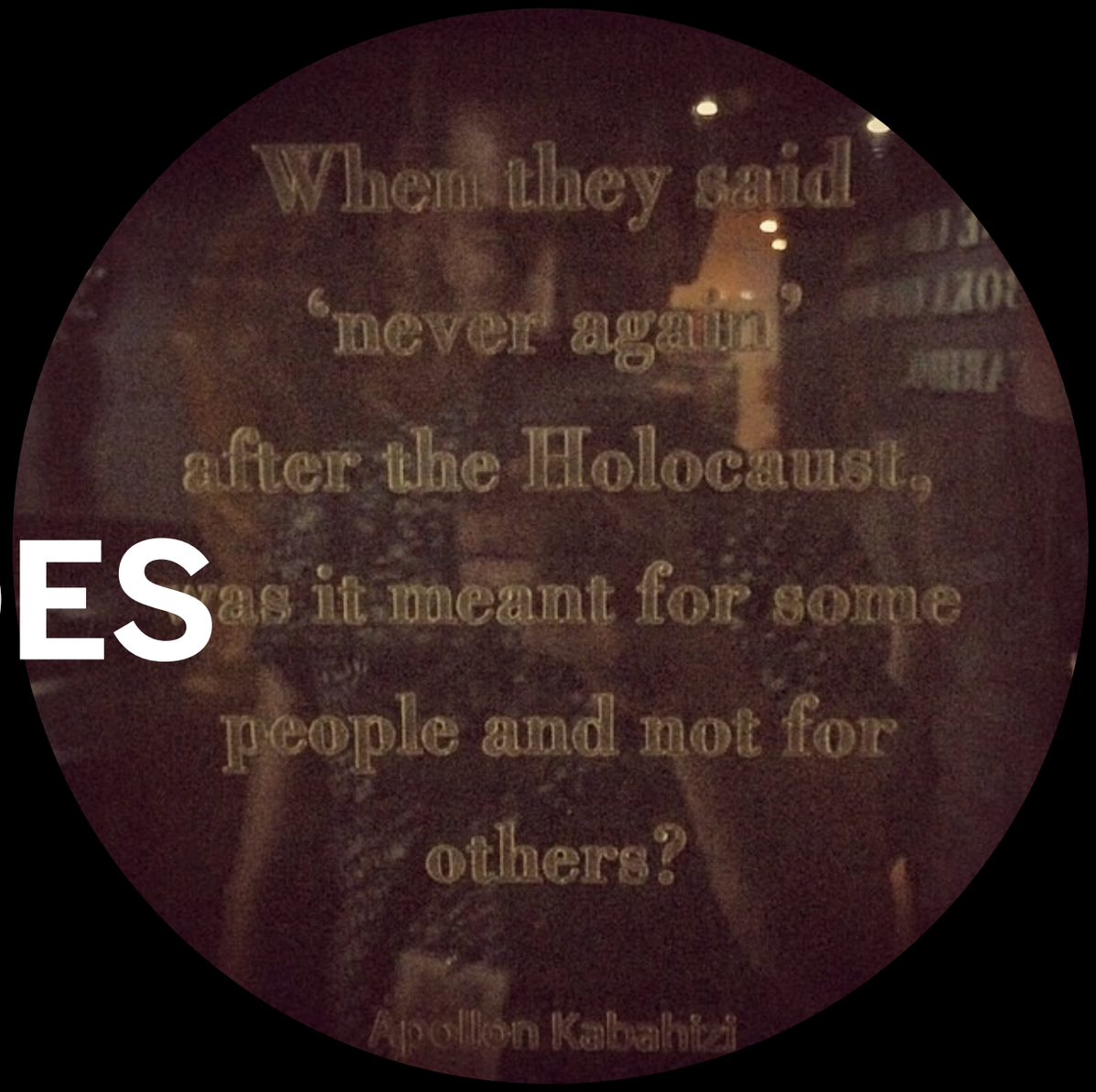
UX FOR GOOD PROJECT STORY

OTHER GENOCIDES

IMMERSION & CONTEXTUAL OBSERVATION



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UX FOR GOOD PROJECT STORY

CHILDREN ROOM

IMMERSION & CONTEXTUAL OBSERVATION

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UX FOR GOOD PROJECT STORY

CALL FOR ACTION

IMMERSION & CONTEXTUAL OBSERVATION

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UX FOR GOOD PROJECT STORY

END!

IMMERSION & CONTEXTUAL OBSERVATION

UNDERSTANDING KGM
WHAT IS ITS ROLE?
WHY IS IT RELEVANT?
WHO GOES THERE?
WHAT IS MISSING?

...

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UX FOR GOOD DESIGN CHALLENGE

CONTEXTUAL IMMERSION

VISITS TO OTHER EXHIBITIONS

IN-DEPTH INTERVIEWS

SHADOWING

INTERCEPT INTERVIEWS

CONTINUOUS LEARNING & SYNTHESIS

Rwanda is a story of resilience, rebirth and regeneration.

“You can’t talk about the genocide without talking about our rebirth: that’s the Rwandan miracle”.

UX FOR GOOD DESIGN CHALLENGE

LONDON

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UX FOR GOOD DESIGN CHALLENGE

THERE'S AN OPPORTUNITY TO TELL THE HOLISTIC STORY FROM GENOCIDE TO REBIRTH. **HOW**

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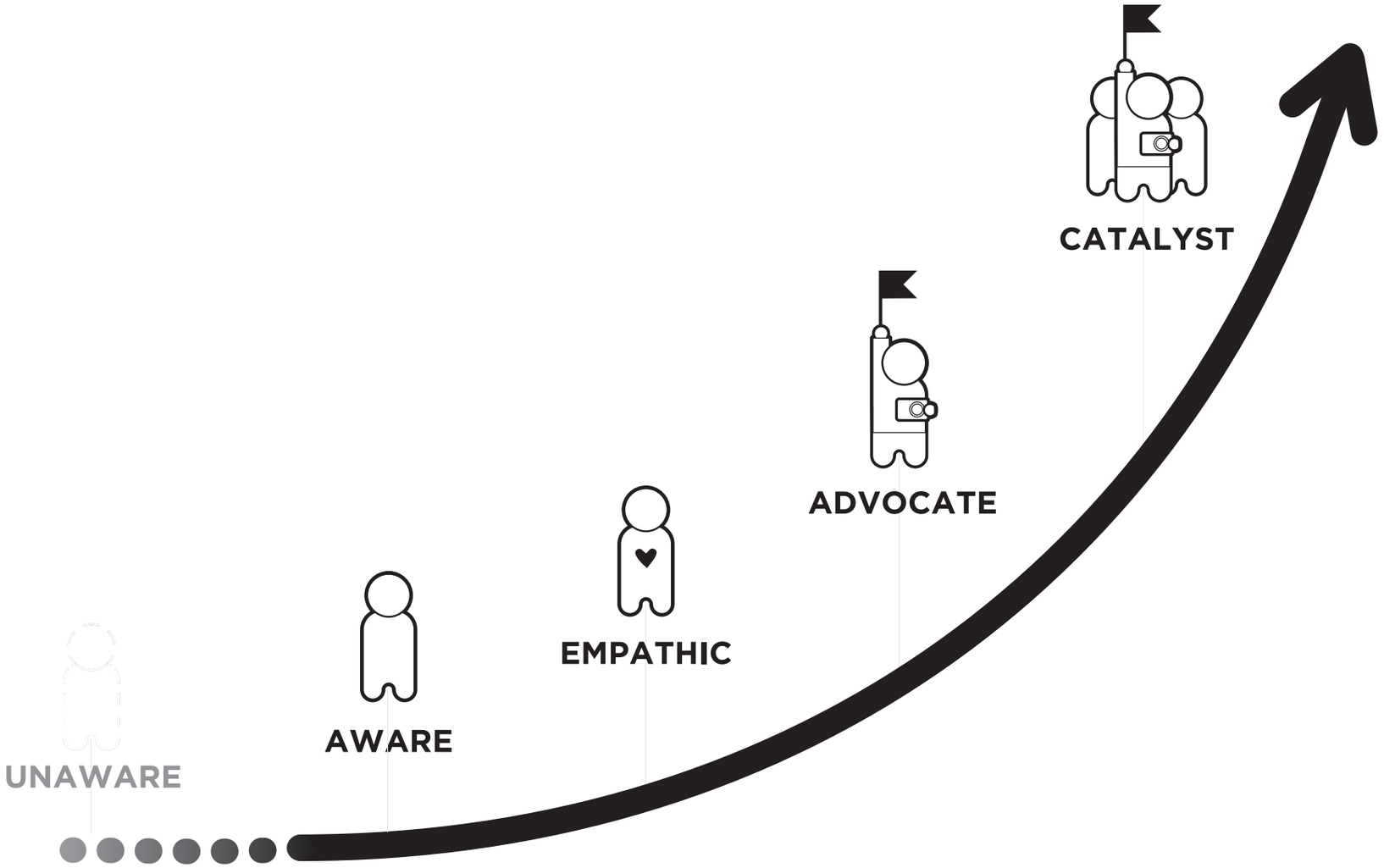
UX FOR GOOD DESIGN CHALLENGE

OBJECTIVE



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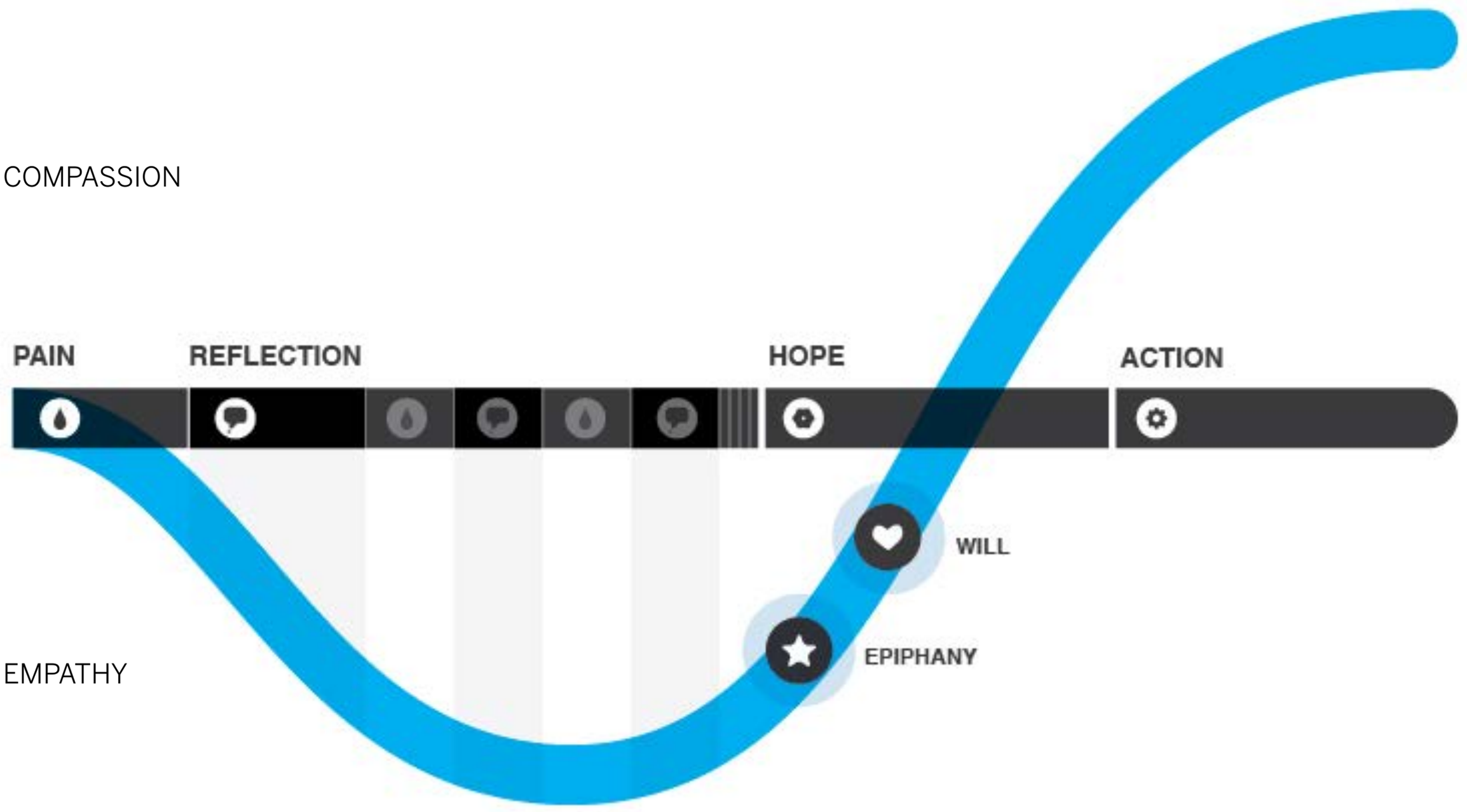
UX FOR GOOD DESIGN CHALLENGE
EXPERIENCE FRAMEWORK



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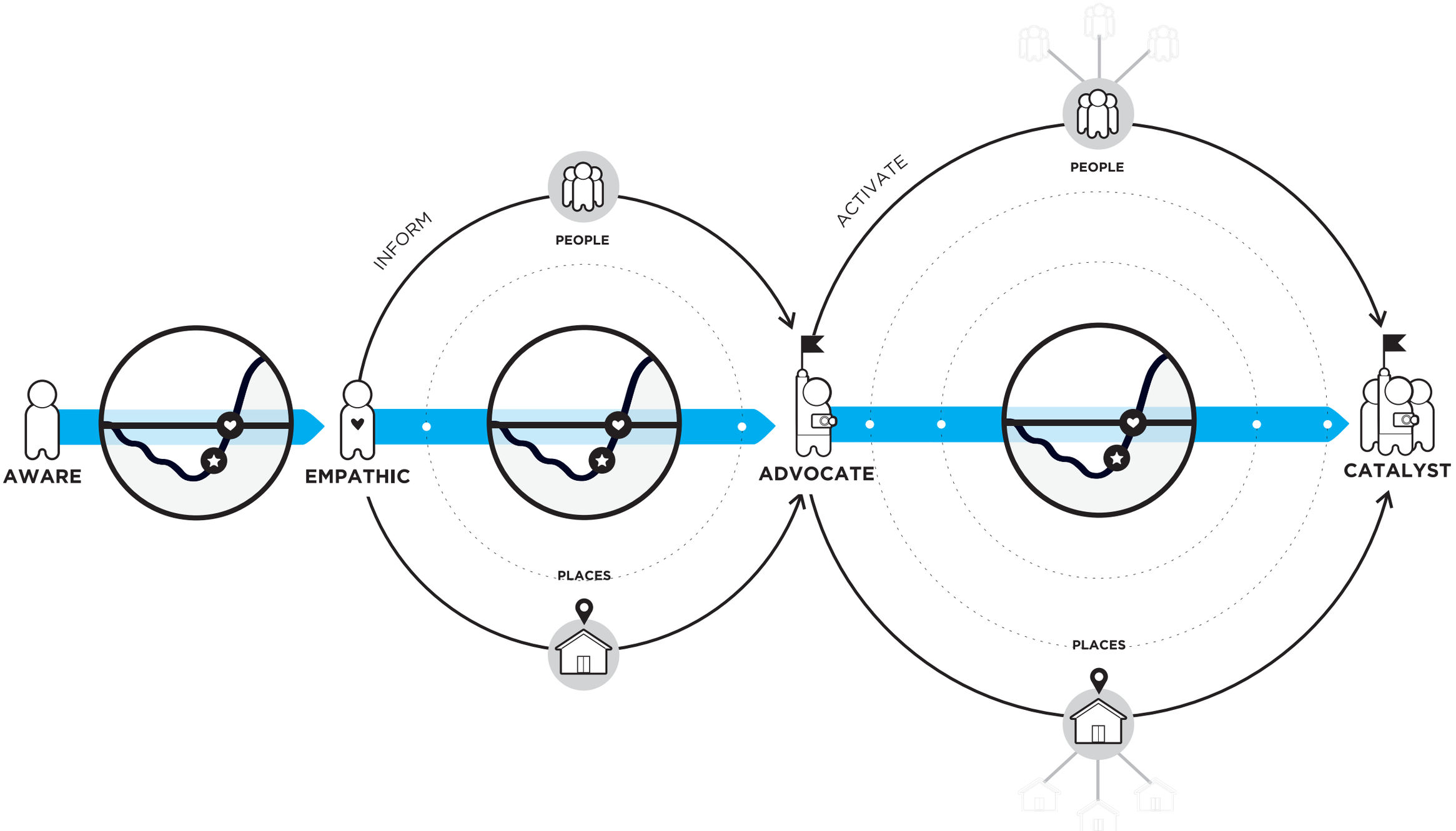
UX FOR GOOD DESIGN CHALLENGE

CONVERSION POINTS



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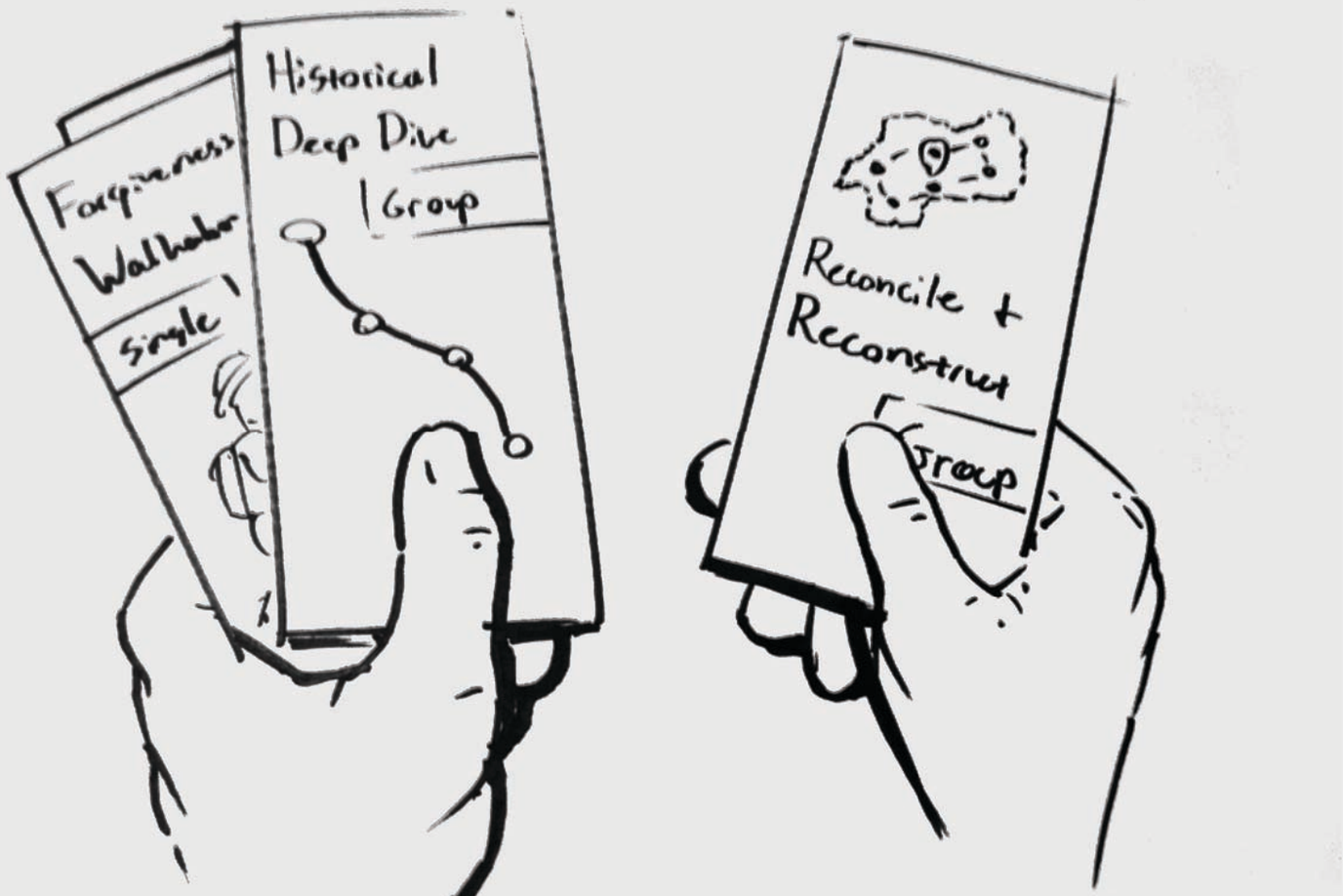
UX FOR GOOD DESIGN CHALLENGE
IDEA CATALOG (EXAMPLE)



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Extend the experience outside the memorial by creating dedicated paths and deep dives.

Raise awareness by making visitors selecting their journey at the beginning.

UX FOR GOOD DESIGN CHALLENGE
IDEA CATALOG (EXAMPLE)

Augment the content and stories displayed in the physical space by giving access to the memorial's archive, creating different narratives and connections based on what visitors are interested into.

UX FOR GOOD DESIGN CHALLENGE
IDEA CATALOG (EXAMPLE)

Give visibility to the moments of hope by creating a space in the museum to display stories of reconciliation.

Support reflection by creating breaks in the physical flow of the visit.

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UX FOR GOOD DESIGN CHALLENGE
IDEA CATALOG (EXAMPLE)

Bridge the gap between will and action by reminding to the experience later on (i.e. a letter to be opened on the way back home).

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UX FOR GOOD DESIGN CHALLENGE

www.uxforgood.com

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USER RESEARCH

HANDS-ON

User Research is a collection of activities specifically undertaken to **inform and inspire** the design of products and services.

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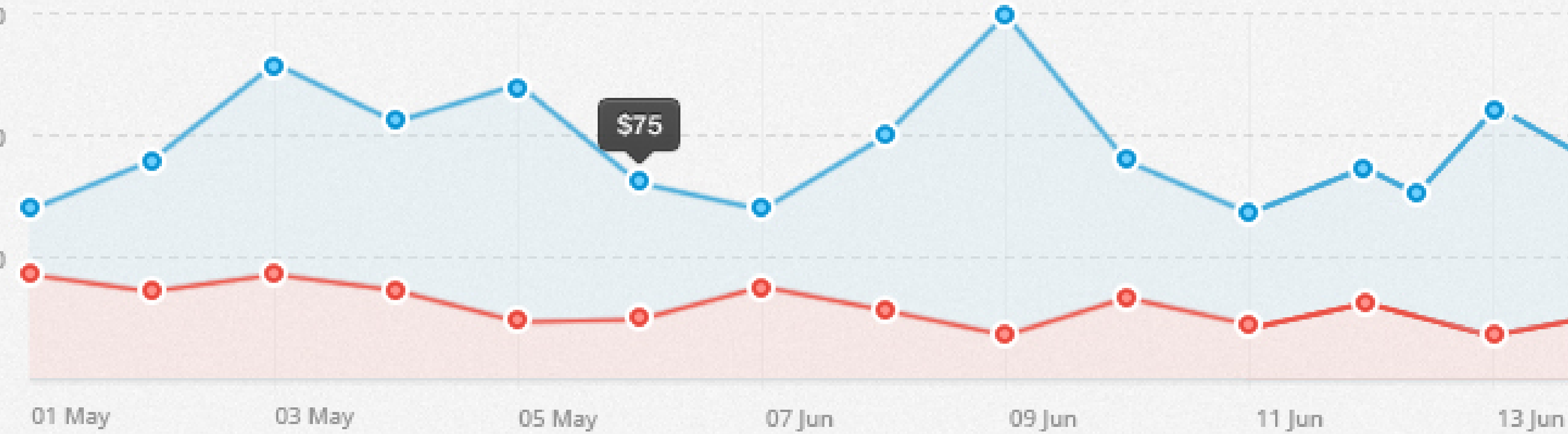


QUANTITATIVE RESEARCH

Quantitative research generates, refines and evaluates marketing decisions and opportunities.

UNDERSTANDING DEMOGRAPHICS

Numerical

Distant from participants

Large samples

Surveying opinions

KPI Value Determination

What people say

UNDERSTANDING HUMANS

Pictures and words

Close to participants

Small groups

Understanding behavior

Observing action

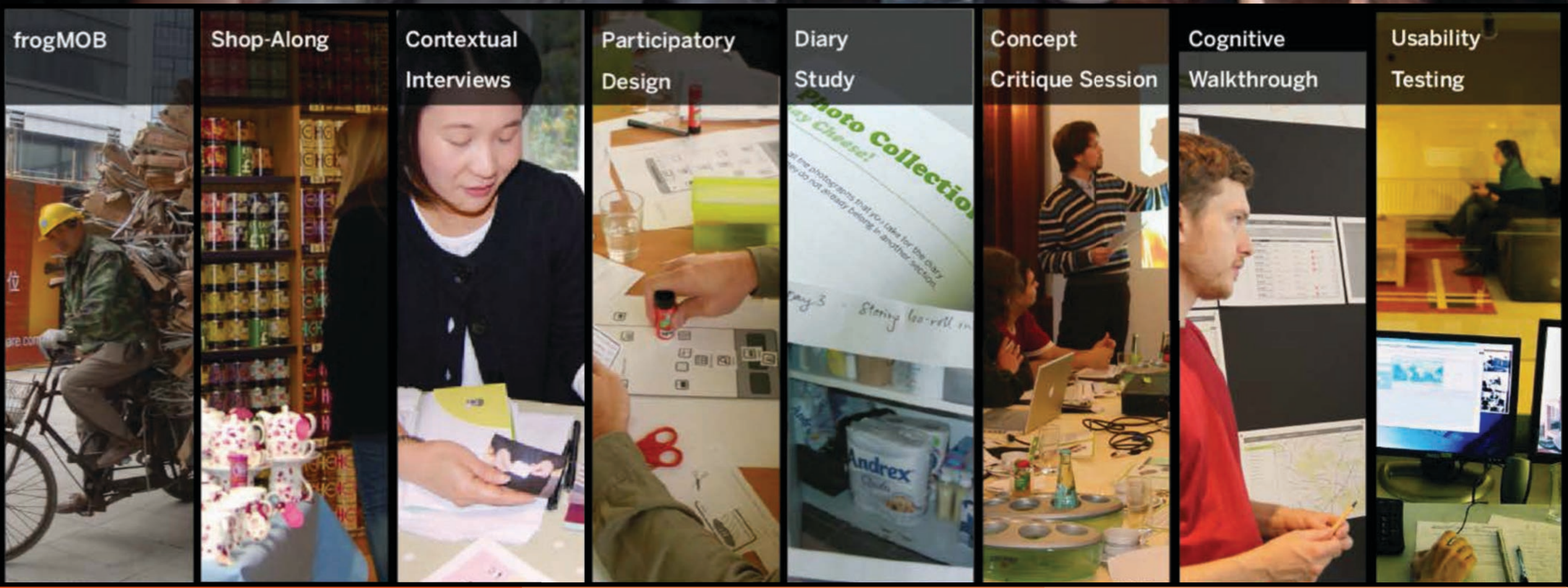
Finding underlying motivations

What people say, do, think.

QUALITATIVE RESEARCH

Design research illuminates human problems, both known and unknown.

USER RESEARCH METHODS



FOUNDATIONAL

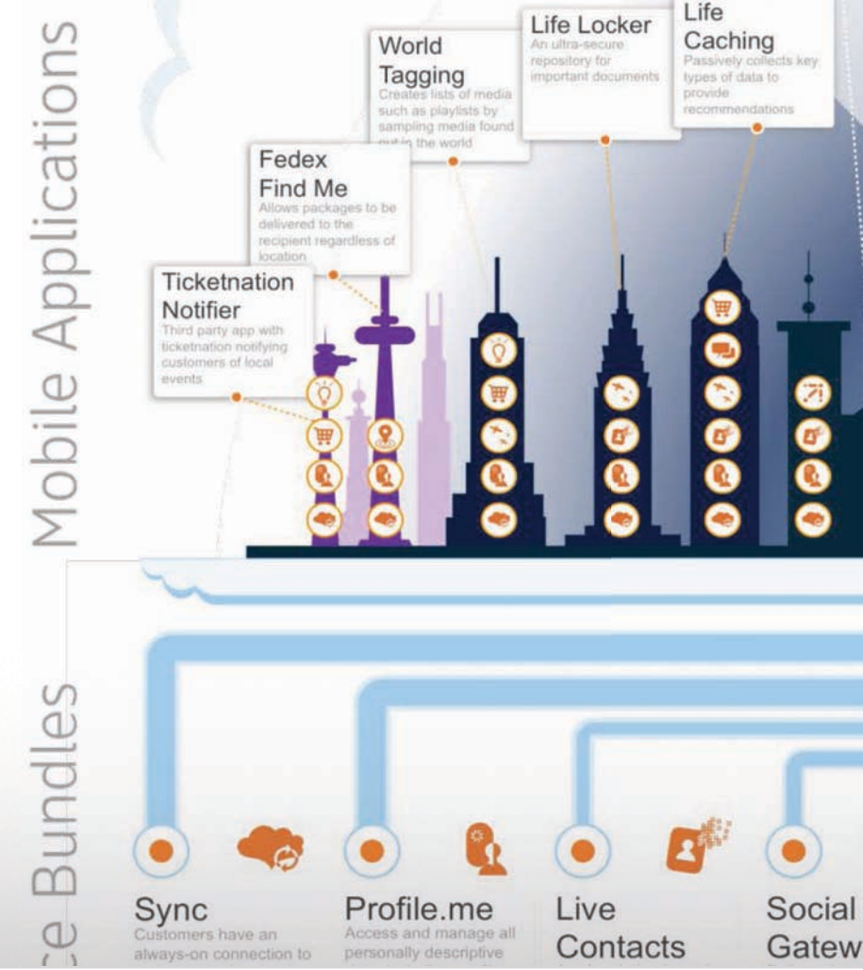
Help us to understand needs

GENERATIVE

Help us to create the right design

EVALUATIVE

Help us get the design right



EXISTING RESEARCH

Establish a solid foundation by looking at existing research.

TREND ANALYSIS

Look at key technology, social and behavioral trends that will have direct impact on the way users will be motivated to adopt and use products in the categories.

STAKEHOLDER & EXPERT INTERVIEWS

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CROWD-SOURCE TOOLS

Believes inspiration can come from everyday life, thus people everywhere are invited to provide photographic insights on a key project topic.

CONTEXTUAL IMMERSION

We go in-home, on-site, and get in-context with a rigorous on-the-ground qualitative research process that generates insights by rapidly immersing the team in the context of use and opportunity.

SHADOWING/ SHOP-ALONG

Observations and interviews in-store elicits insights around shopper expectations and concerns, off-the-shelf impressions and the in store experience.

DIARY STUDIES

In conjunction with a contextual inquiry, diary studies allow participants to reflect more accurately on their own behavior by capturing it across time.

CONTEXTUAL OBSERVATIONS

Interviewing, observing and carefully documenting attitudes and behaviors in the context in which the design solution will be used.

IN-DEPTH INTERVIEWS

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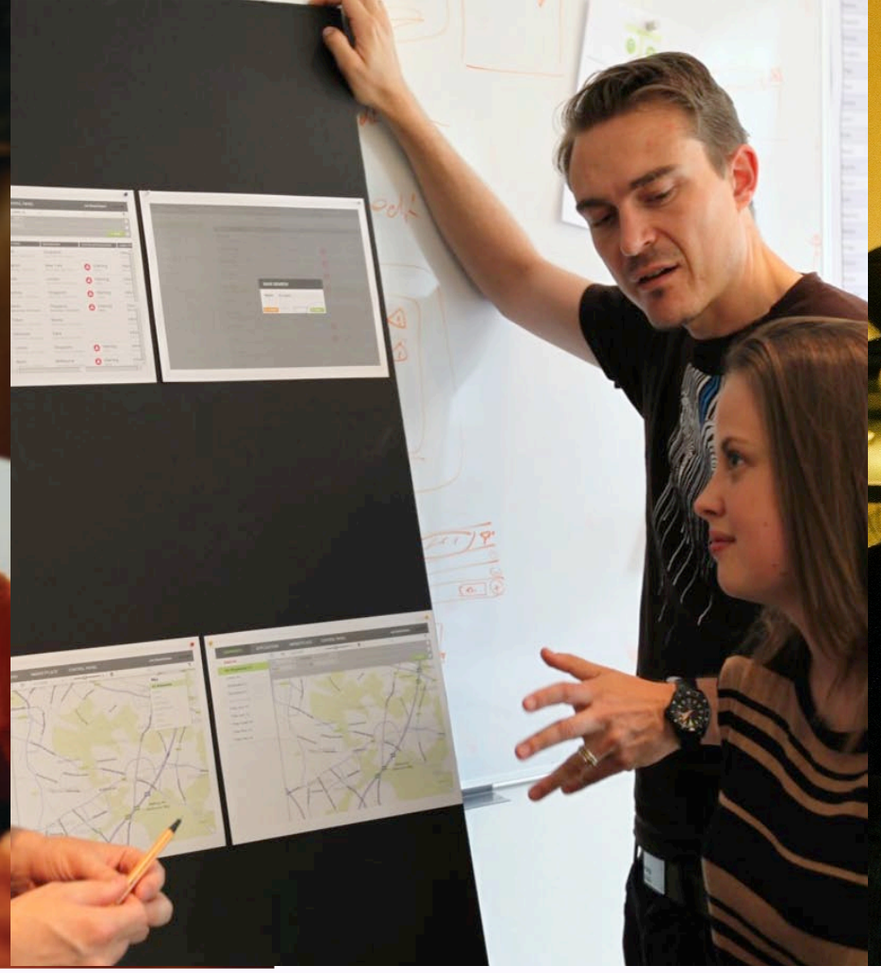
PARTICIPATORY DESIGN

Engages participants in a dialog around crafted stimuli which can be combined in ways to help participants convey their expectations.

CONCEPT CRITIQUE

Participants provide candid reactions to prototypes or demos of product concepts, by probing to understand why we modify the design solutions to better meet needs.



EXPERIENCE PROTOTYPE

Participants provide candid reactions to prototypes or demos of product concepts, by probing to understand why we modify the design solutions to better meet needs.

COGNITIVE WALKTHROUGH

Modified version of the academic method, allowing us to efficiently gather data on key usability issues and expectation alignment issues in a group session.

USABILITY TESTING

Formalized study to assess the efficiency, satisfaction and effectiveness of a design by providing participants with tasks to complete us a prototype or final product.

USER RESEARCH

BUILDING A RESEARCH PLAN

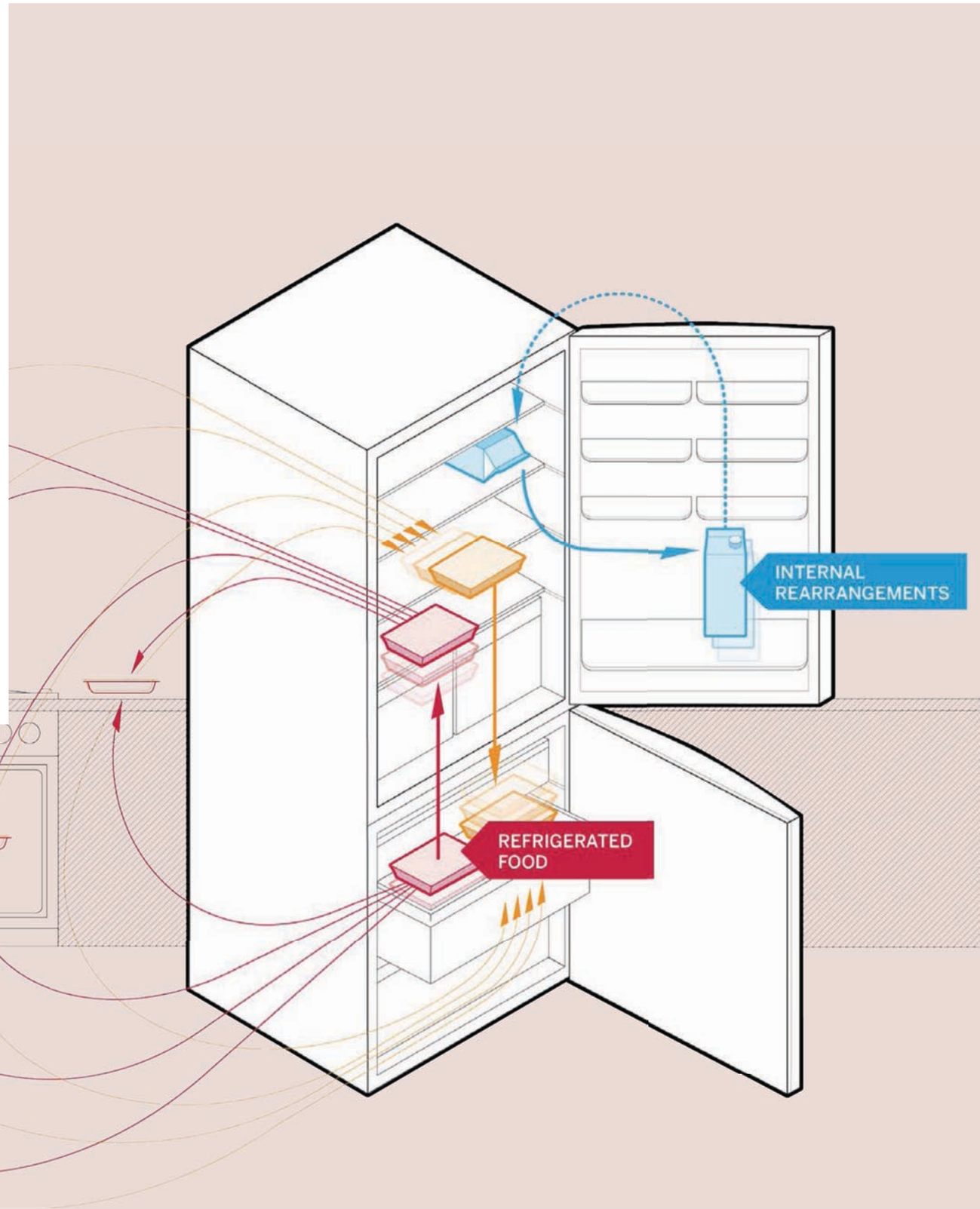
USER RESEARCH

BUILDING A RESEARCH PLAN

Plan the research by defining:

01. Goal
02. Method
03. Participants
04. Locations
05. Time Frame

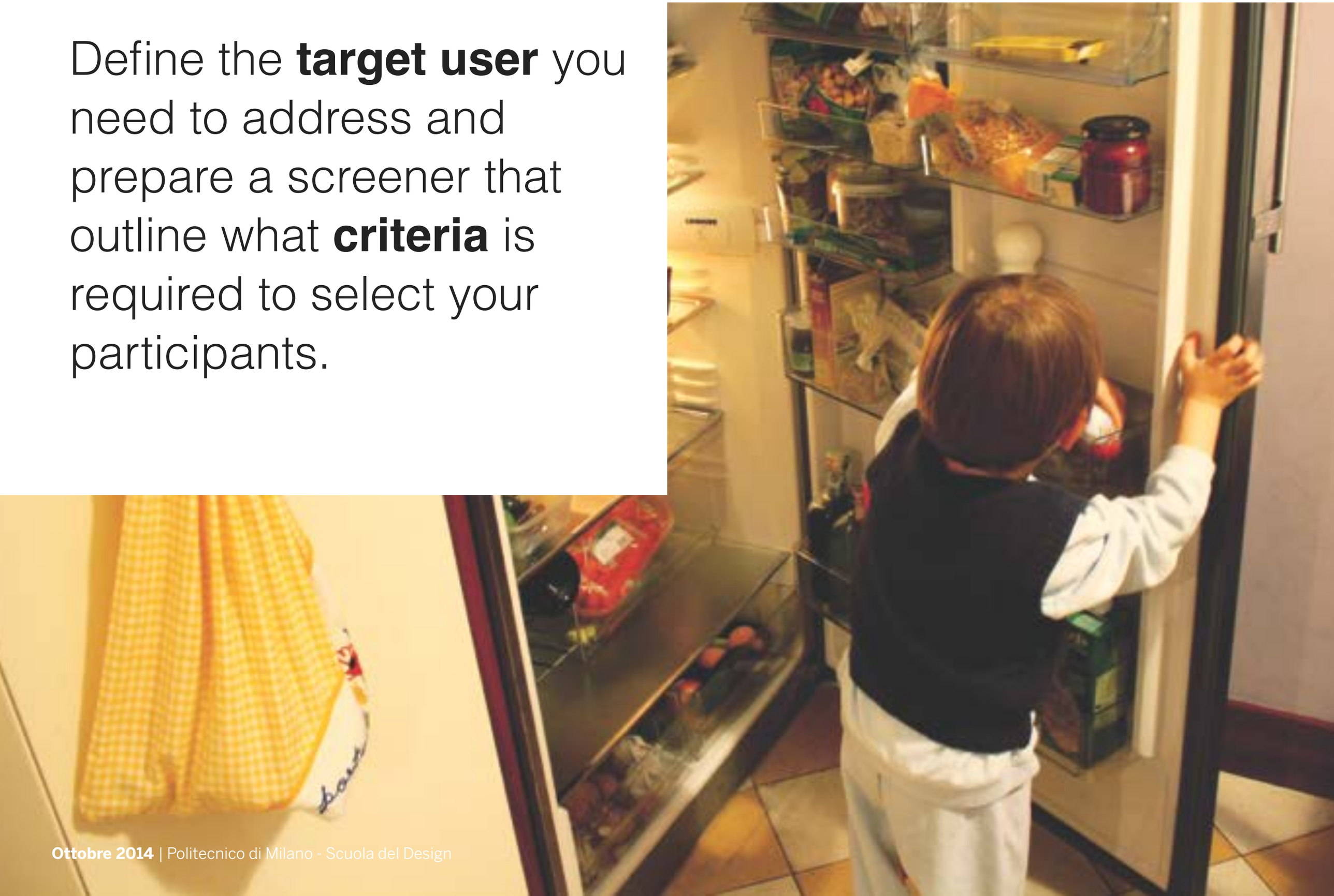
State the **focus** and **objectives** of the research activities based on what you need to design and what you already know.



Define the methods to **engage** the participants in the research activities and collect information.

e.g.: contextual interviews, observations, diary studies, focus groups,...

Define the **target user** you need to address and prepare a screener that outline what **criteria** is required to select your participants.



Target definition

Alcune domande riguardo lei e la sua famiglia

3. Quale delle seguenti intervalli di età rispecchia il suo?

☐ < 24 - **Termina**
☐ 25-45 – Continua
☐ > 46 – **Termina**

4. Household

Quale affermazione rispecchia la sua situazione famigliare?

☐ Vivo solo/a - **Termina**
☐ Io, il mio coniuge / convivente – **Termina**
☐ Io, il mio coniuge / convivente e 1 (o più) bambini – Continua (→4a)

4a. Qual è l'età' dei suoi bambini? (Almeno 1 bambino di età inferiore a 14 anni)

Bambino 1
☐ 0-6 anni – Continua
☐ 7- 13 – Continua
☐ Oltre 14 anni – **Termina**

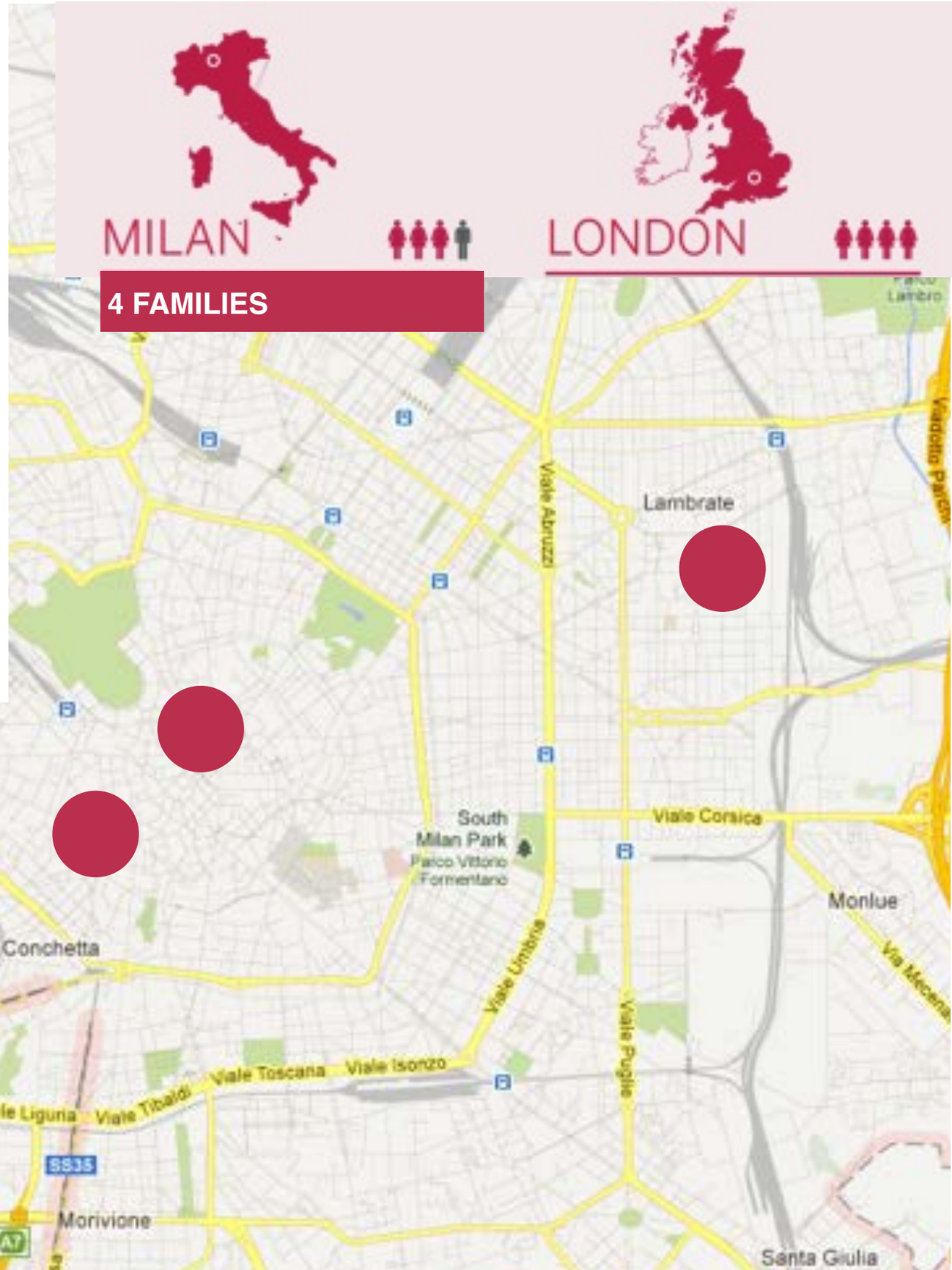
Bambino 2
☐ 0-6 anni – Continua
☐ 7- 13 – Continua
☐ Oltre 14 anni – **Termina**

Crowd-sourced tools can be used to quickly gather input from a broader spectrum of users

Keep a multifaceted perspective

Identify **where** to run your study: define locations according to project scale and focus.

Contextual interviews vs. neutral contexts



Schedule your activities, considering preparation time, field-work, duration of the sessions, debrief and synthesis.

Don’t underestimate travel times between locations

OUTPUT

RESEARCH PLAN

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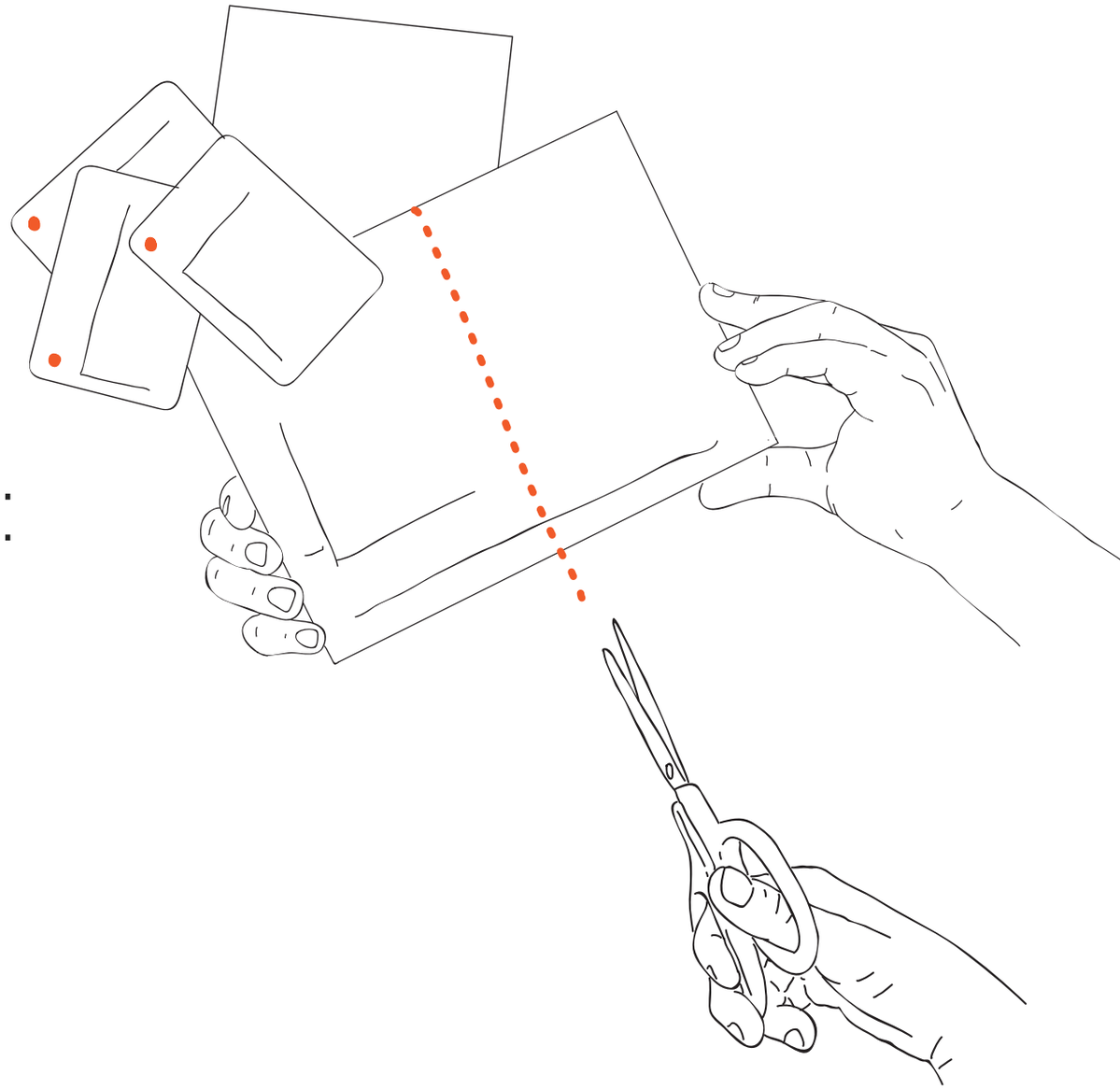
USER RESEARCH
TOOLS & ACTIVITIES

USER RESEARCH
TOOLS & ACTIVITIES

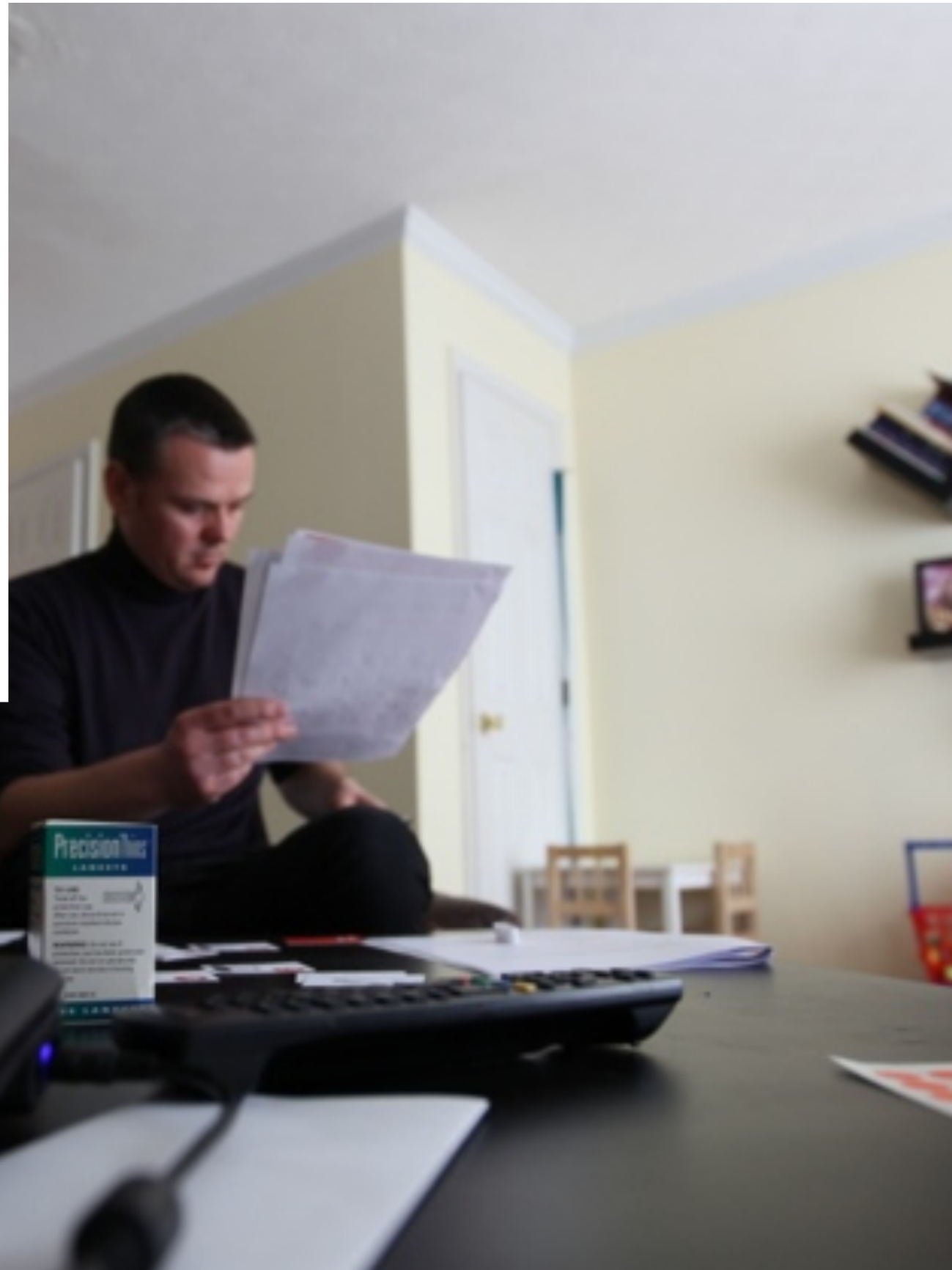
Design the research sessions:

01. Discussion guide
02. Hands-on activities



The discussion guide outlines the **areas of investigation** you plan to focus on, detailing all the questions and activities.

Building a discussion helps defining the flow of the interview **before** *going in the field.*



Areas of investigation

The objective of the research is to understand how the HCPs manage their patients with diabetes. Specific areas of investigation that we have indentified include: (A) HCP workflow, (B) tools & approaches, (C) data analysis.

(A) WORKFLOW
The workflow will be investigated at two different levels: the routine of a typical working day and the sequence of activities during a visit with a PwD.

- DAILY ROUTINE:
  Which is the typical day of the HCP? What are his tasks? How does he manage his time and visits? How is he related to other professional figures (e.g. the assistant)? Which is the balance between work and life?

- PwD VISIT WORKFLOW:
  Which is the sequence of actions/tasks? How long does each activity last? Which are the devices or instruments involved? Which factors have an impact on the way in which the visit is managed?
  A quick simulation of a visit can provide a useful immersion to recover all the aspects, helping the interviewer understanding the whole experience.

(B) TOOLS & APPROACHES
Apart from the specific moment of the visit, how does the HCP manage, support and monitor his patients with diabetes? We've identified 3 areas that can be interesting to explore:

- EDUCATION
- MOTIVATION
- COMMUNICATION

Which tools does the HCP use to educate his patients, motivate his patients and communicate with his patients? Which factors can affect the way in which he approaches these activities?
It's important to see directly those tools if possible.

(C) DATA ANALYSIS
Understanding how the HCP uses and interacts with the patient diabetes-related data is one of the core parts of the interview.
The HCP will be asked to focus on the instruments related to data analysis and specifically on the Information Management software he is using. What information is most relevant? Which are the most recurring paths? What triggers the HCP attention and why?
We'll ask the HCP to walk us through some cases to get to a more complete understanding of the meanings and interaction with the available information. Once more it's important to understand what changes in terms of data management according to the different segments of patients.

Interview guide

We plan to give a brief introductory leaflet to the participants a few days before the inte
order to clarify the main topics we're going to delve into and let them be prepared with
we need to look at.
The interview will be structured as a conversation, guided by a sort of direct simulation
Although each interview will be properly structured, the frog team will ensure adequate
discussion in order to capture as many insights as possible.

Interview introduction: PRELIMINARY QUESTIONS (10 min)
objective: set the tone for the interview and gather few necessary background inform
To begin each interview we will ask some basic information.
Questions will include but not be limited to:

- *What's you role inside this medical practice?*
- *How long have you been working in this practice?*
- *What's your background?*
- *What are your previous working experiences?*
- *Who are your collaborators?*

In addition to the traditional interview, use **hands-on activities** to help push the conversation deeper and into new areas.

e.g.: card sorting, image sorting, collaborative diagrams,...

Munich, January 2012
Emotional Journey

London, November 2010
One-word association

London, November 2010
Image association

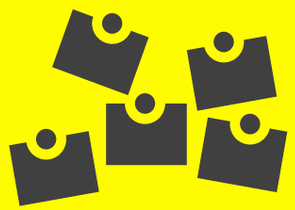
Kiboga, June 2013
Card-sorting

Mpigi, June 2013
Idea prototyping

OUTPUT

RESEARCH PLAN

DISCUSSION GUIDE



RESEARCH MATERIALS

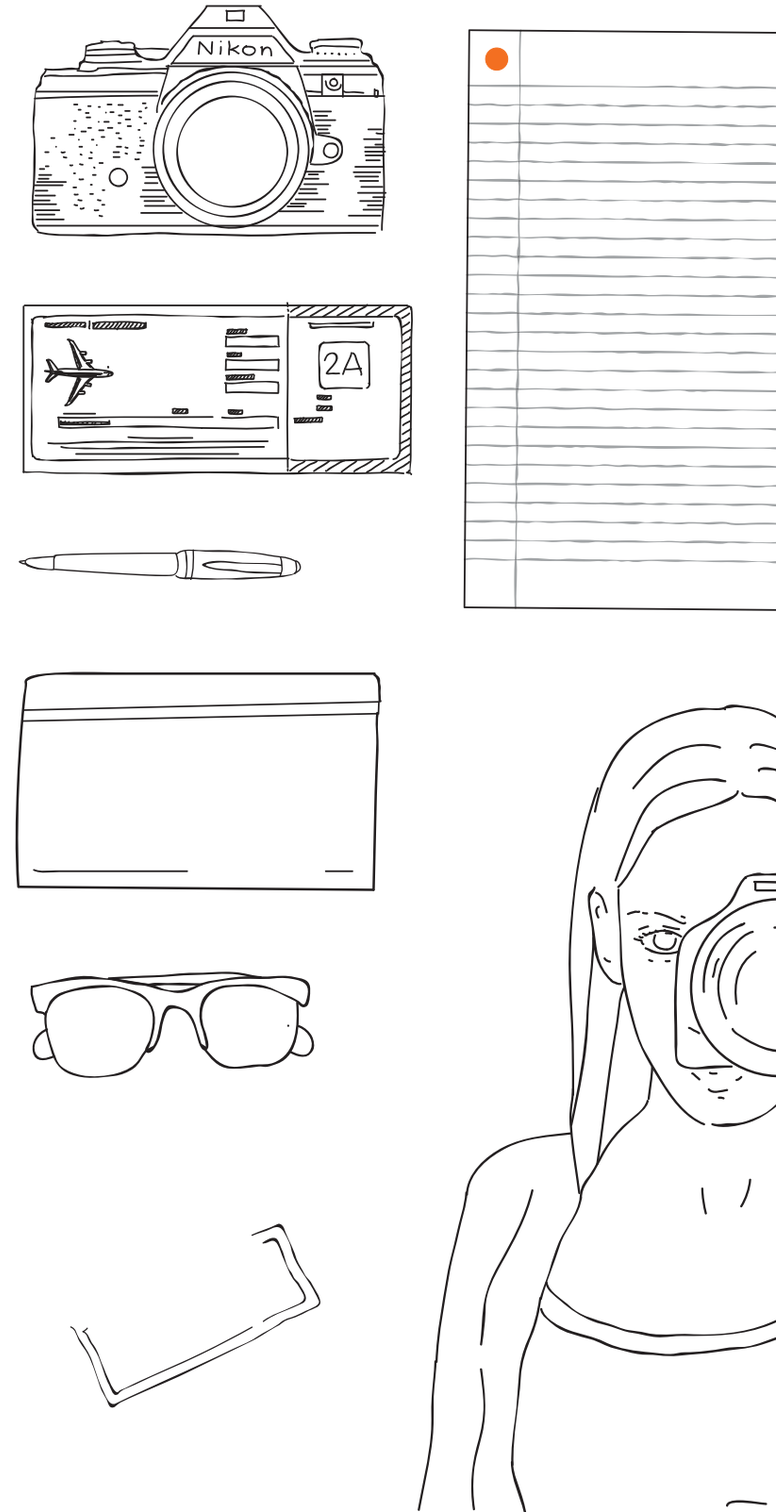
USER RESEARCH

FIELD PREPARATION

USER RESEARCH
FIELD PREPARATION

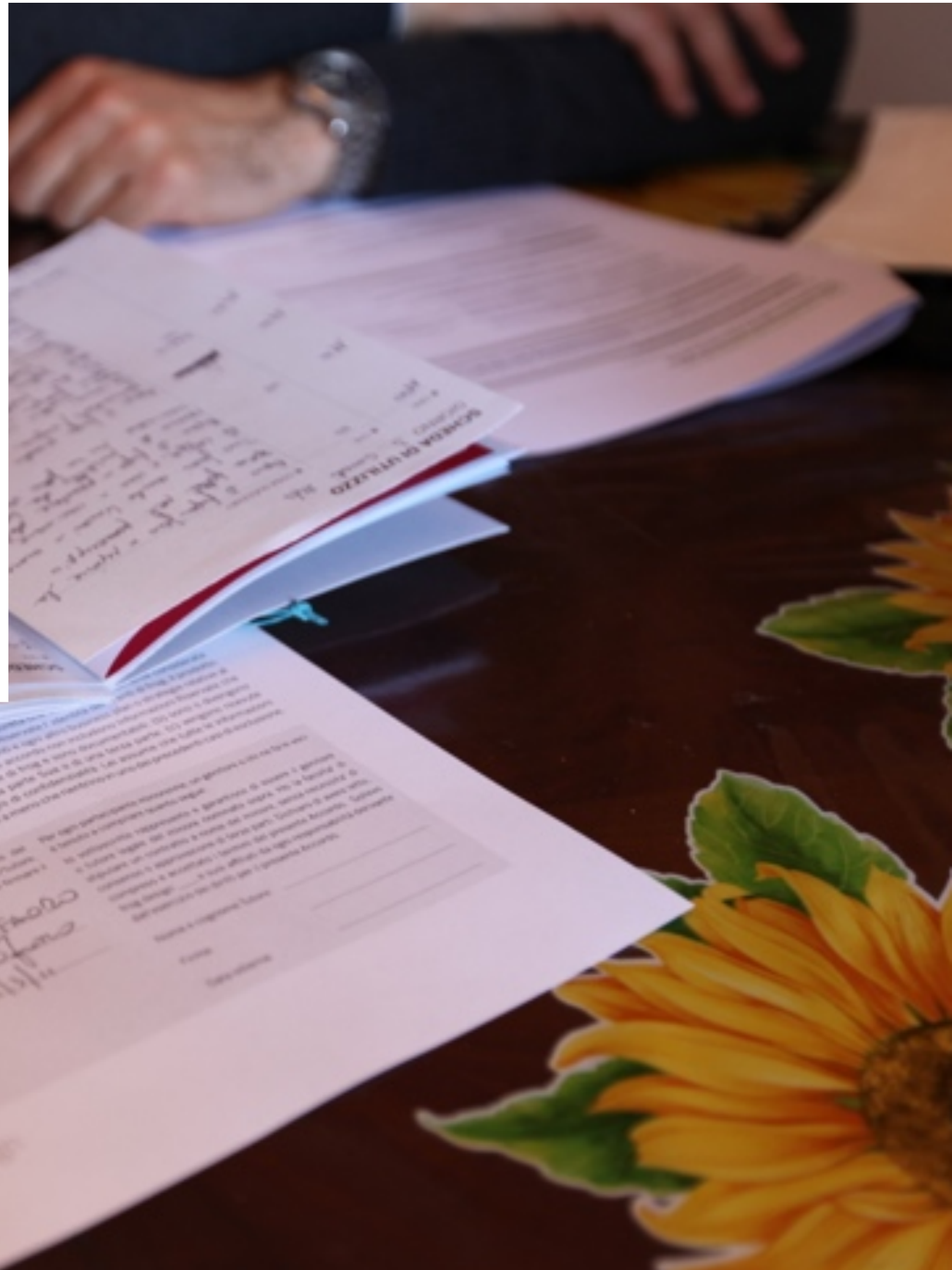
Prepare the team for the field-work:

01. Permissions
02. Roles & tasks
03. Recording methods
04. Equipment



Release forms establish and **protect the rights** of both you and the participant.

- Ask the permission to record the interview
- Clarify the usage of the material
- Show the photos before asking to sign the disclaimer
- Leave to the participant your contact information



Garante per la protezione dei dati personali
http://www.garanteprivacy.it/web/guest

DICHIARAZIONE DI CONSENSO AL TRATTAMENTO DEI DATI PERSONALI

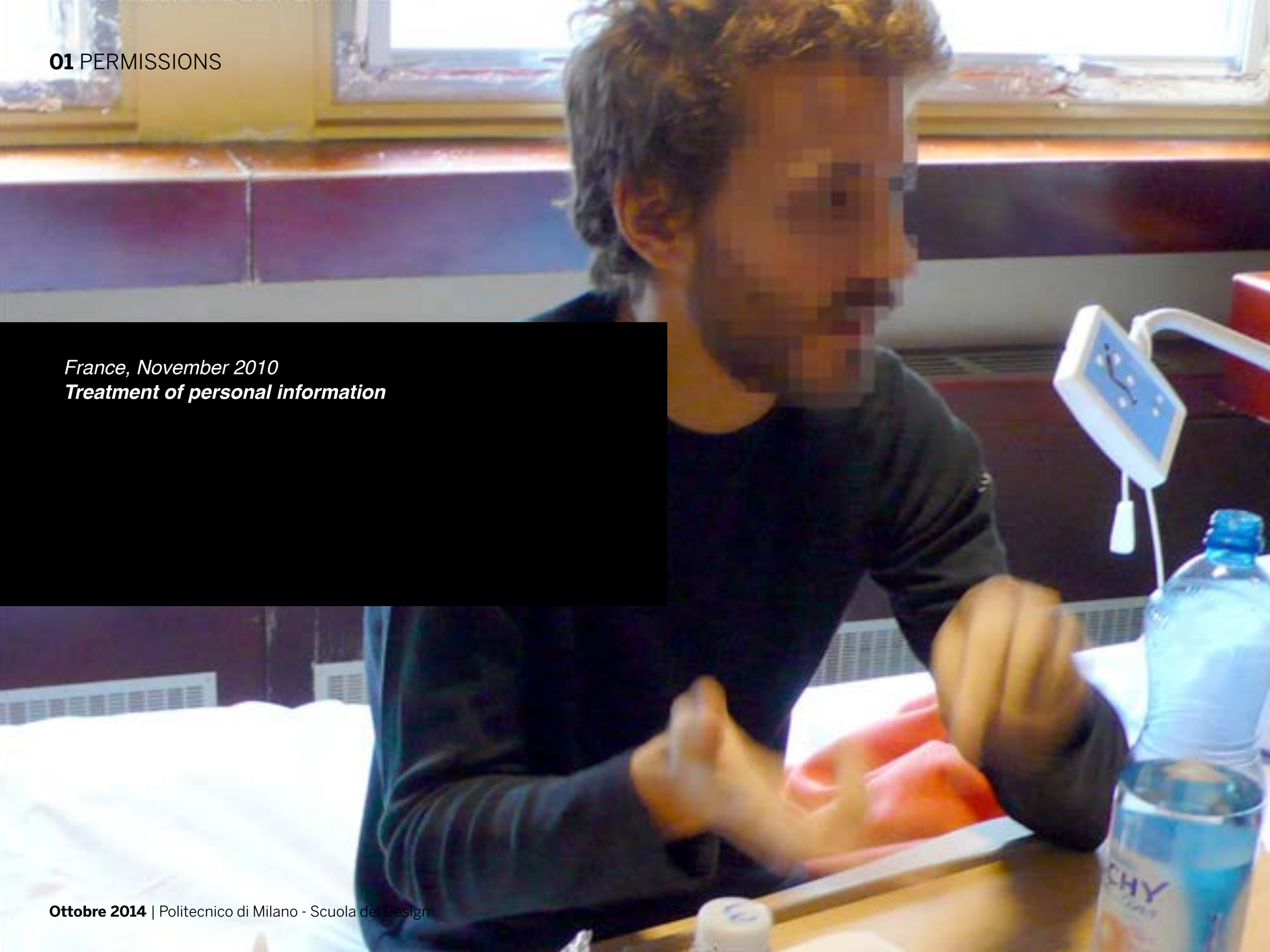
Il sottoscritto……..
dichiara di aver ricevuto completa informativa ai sensi dell'art. 13 della Legge 196/2003 unitamente a copia dell'art.7 della Legge medesima ed esprime il consenso al trattamento ed alla comunicazione dei propri dati qualificati come personali dalla citata Legge con particolare riguardo a quelli cosiddetti sensibili, nei limiti, per le finalità e per la durata precisati nell'informativa.

…….. ……..
DATA FIRMA

DIRITTO DI ACCESSO AI DATI PERSONALI ED ALTRI DIRITTI
Art.7

1) L'interessato ha diritto di ottenere la conferma dell'esistenza o meno di dati personali che lo riguardano anche se non ancora registrati, e la loro comunicazione in forma intelligibile.

2) L'interessato ha diritto di ottenere l'indicazione:
   a) dell'origine dei dati personali;
   b) delle finalità e modalità di trattamento;
   c) della logica applicata in caso di trattamento effettuato con l'ausilio di strumenti elettronici;
   d) degli estremi identificativi del titolare, dei responsabili e del rappresentante designato nel territorio dello stato, di responsabili o incaricati.



France, November 2010
Treatment of personal information

Atlanta, January 2012
Treatment of personal information

The contextual interview team shouldn’t exceed **3 members:** moderator, note taker and photographer.

Usually the note taker plays a support role, including setting up the recording equipment, facilitating the hand-on activities and asking additional questions.

OBSERVER

IN FIELD RESEARCH

NOTE TAKER

IN FIELD RESEARCH

INTERVIEWER

IN FIELD RESEARCH

TRANSLATOR

IN FIELD RESEARCH

PHOTOGRAPHER

IN FIELD RESEARCH

Recording **notes and images** during an interview is essential for later analysis and sharing with your team.

Plan out your recording tools before getting into the field!

Milan, October 2011
Customized notebook

Atlanta, January 2012
Nikon IID, Flip-camera, tripod

OUTPUT

RESEARCH PLAN

DISCUSSION GUIDE

RESEARCH MATERIALS

RESEARCH KIT

USER RESEARCH

IN-FIELD ACTIVITIES

USER RESEARCH
IN-FIELD ACTIVITIES

Some tips to remember while running the research:

01. Before starting the interview
02. During the interview
03. Data capturing
04. Processing information

Don’t forget to:

(1) observe & capture the context, (2) introduce your equipment and the team, (3) get the participants permissions

Follow some rules:
- Establish credibility
- Remain open minded
- Shape the dialogue
- Consider body language
- **Ask why**

Record the explicit (needs expressed by the participant), **uncover the implicit** (latent needs they don’t initially express).

Interview + observe

While observing and interviewing participants, researchers capture **words, phrases and quotes.**

Field notes can be recorded using different tools (e.g. by hand in a field notebook or digitally with a computer)

03 DATA CAPTURING

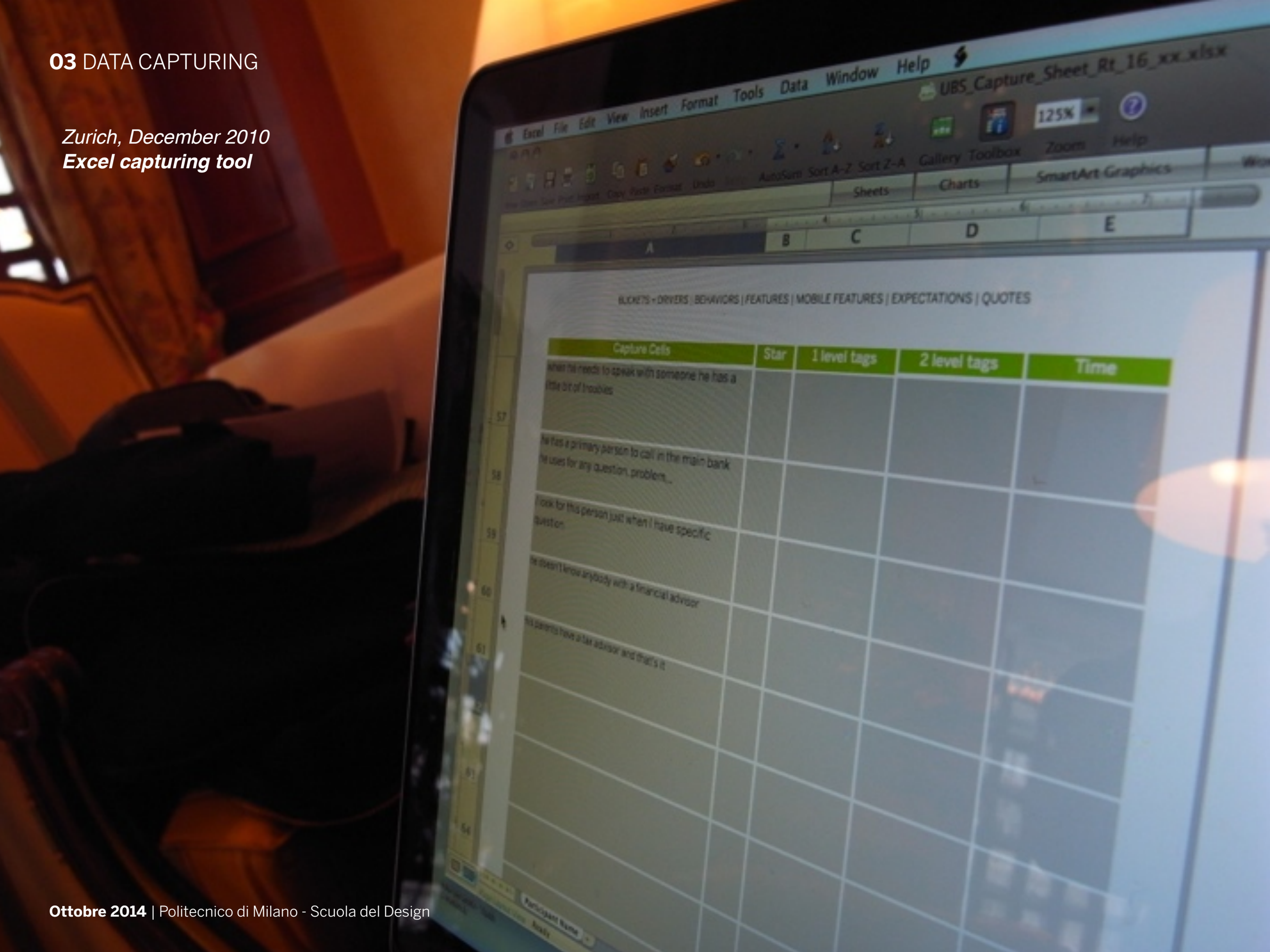
DATA/QUOTES

OBSERVATIONS

INTERPRETATIONS

03 DATA CAPTURING

Zurich, December 2010
Excel capturing tool



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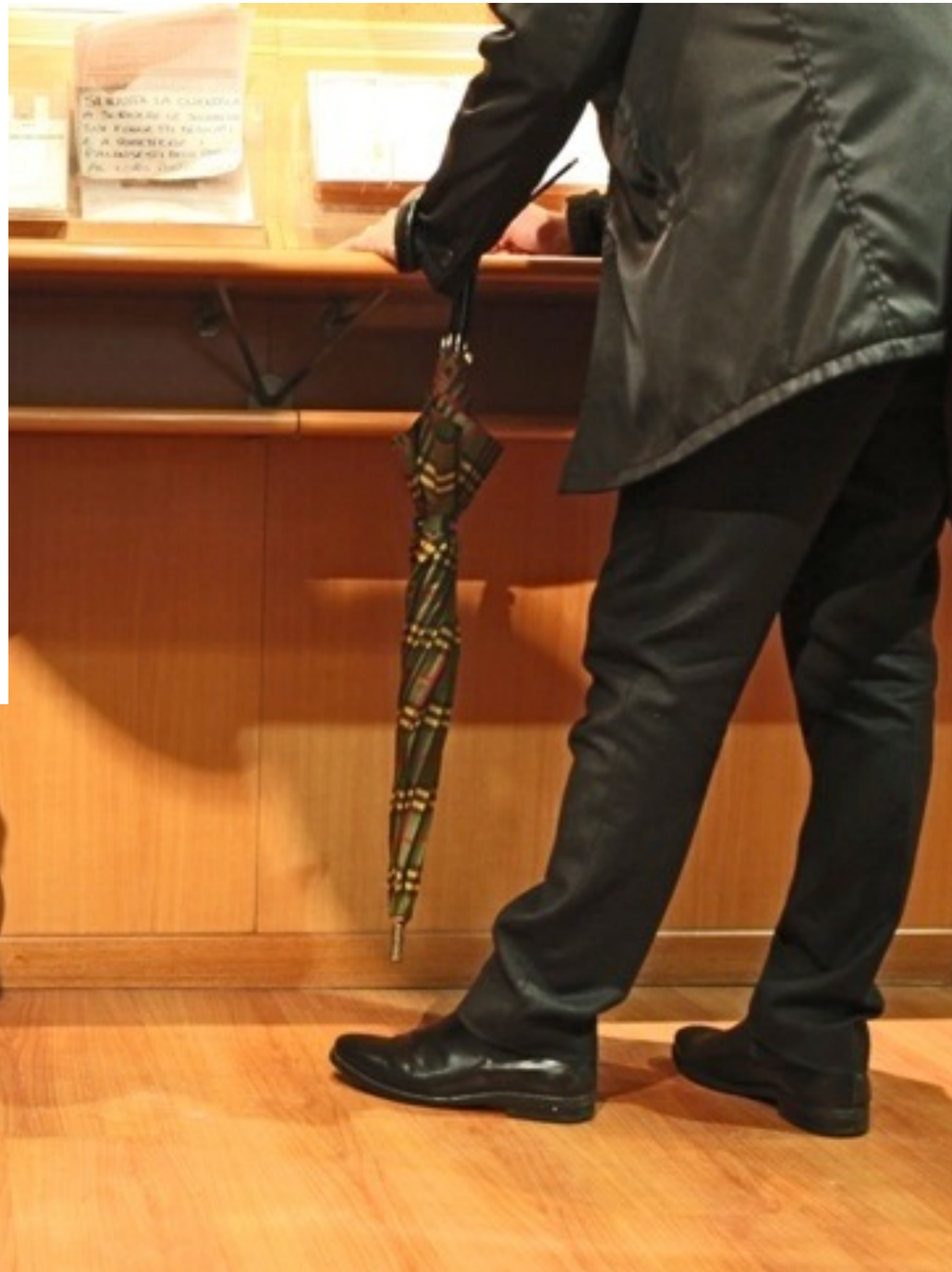
Photographs can capture a spectrum of data, from broad contextual information to specific details.

Gather a wide range of pictures to ensure depth of coverage!



can you show me

Portrait

Capturing **audio** is fairly easy and unobtrusive. Great for re-listening to get detail that you may have missed with your field notes.

Video is one of the most comprehensive data capture techniques, recording the realism of time and the subtleties of emotion.

New Delhi, November 2012
Intercepts

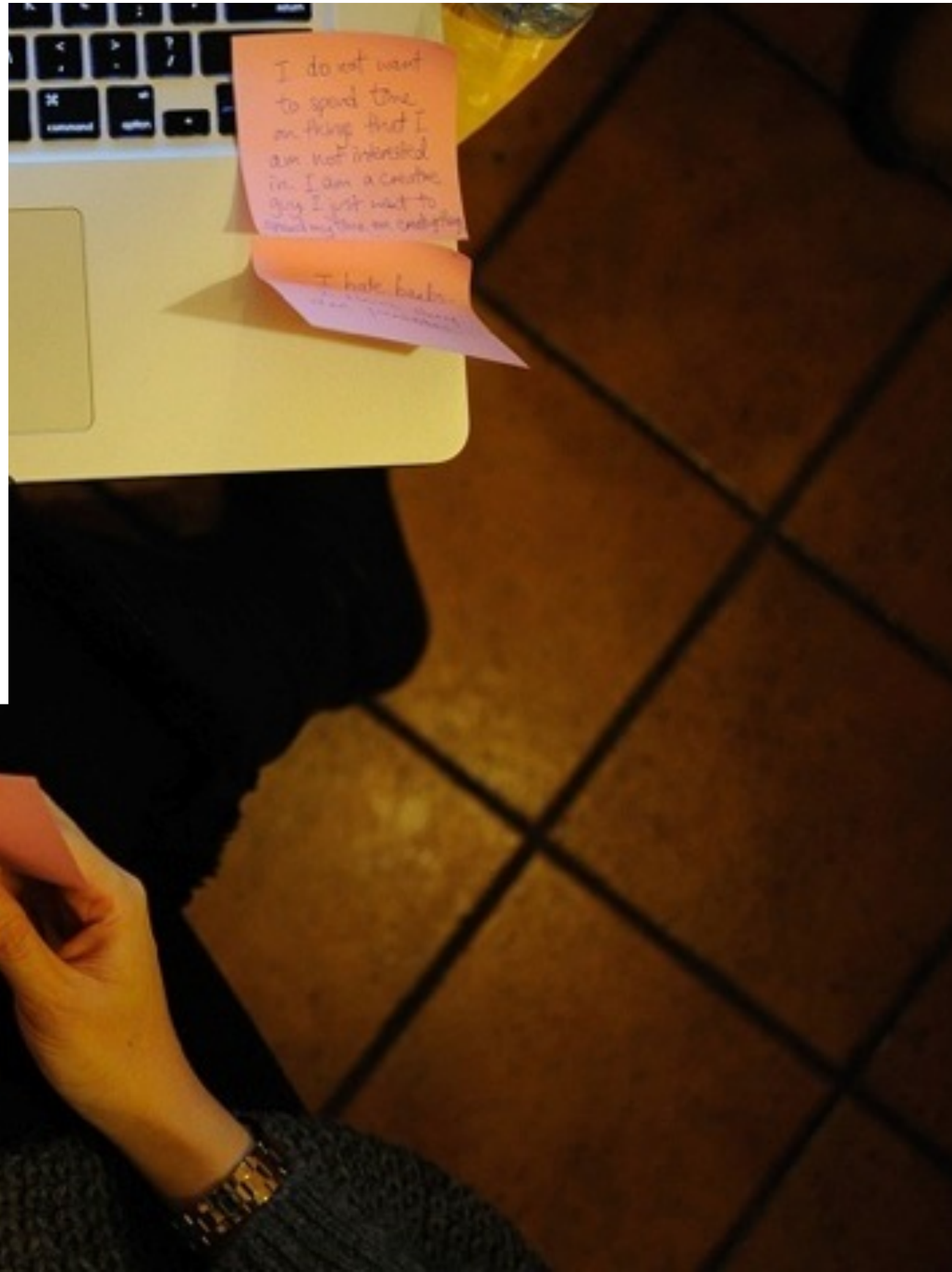

WAFFLE HOUSE

Milan, October 2011

Being participants in your own research

Dedicate time after each interview to process and **capture what you learned** with the other team members.

e.g. ‘our three key learnings for today are...’



OUTPUT

AUDIO/VIDEO RECORDS

DIGITAL/ANALOG NOTES

CONTEXT/PEOPLE PHOTOS

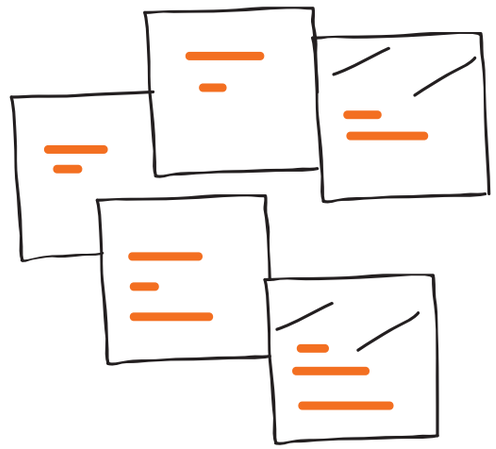
ROUGH INSIGHTS

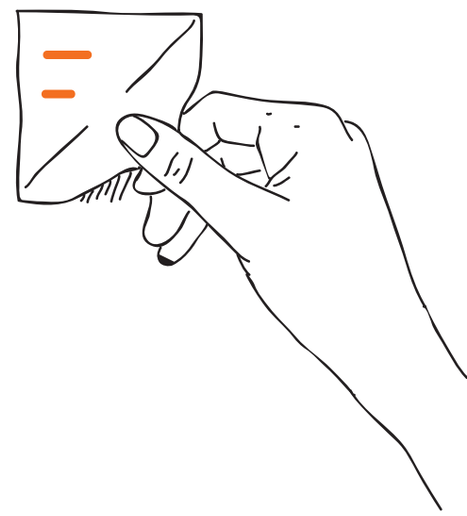
USER RESEARCH

SYNTHESIS

USER RESEARCH
SYNTHESIS

How do we translate the **chaos** of research insights into something meaningful for the project?





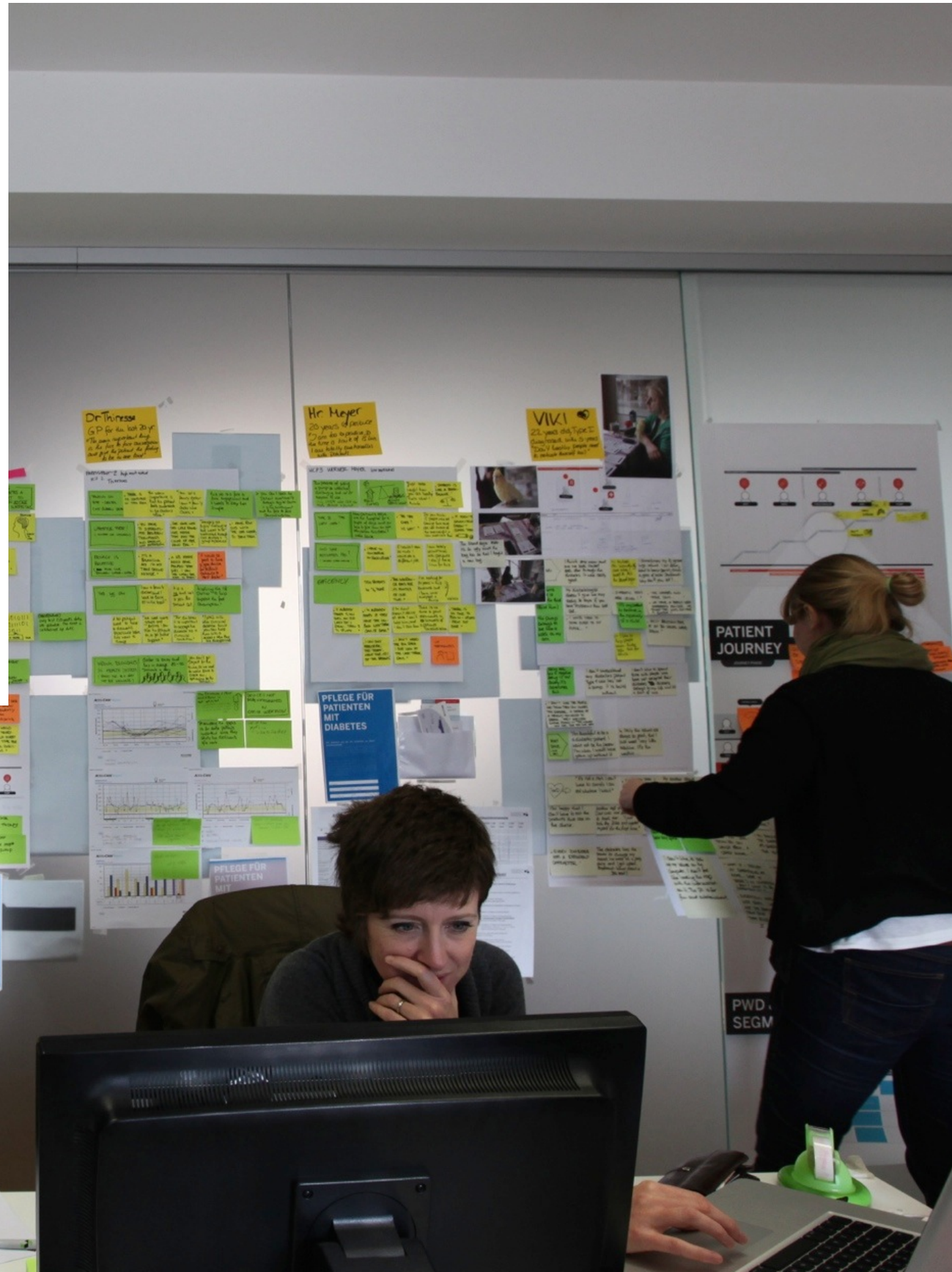
The volume of data captured can be overwhelming: be **diligent** and develop a **consistent** storage method.

e.g. consistent naming files and folders, meta-data, light-room,...

01 PROCESSING INFORMATION

Atlanta, June 2012
Video encoding into a cab

Pre-determined categories will help you map and cluster your data so that it doesn't become overwhelming.



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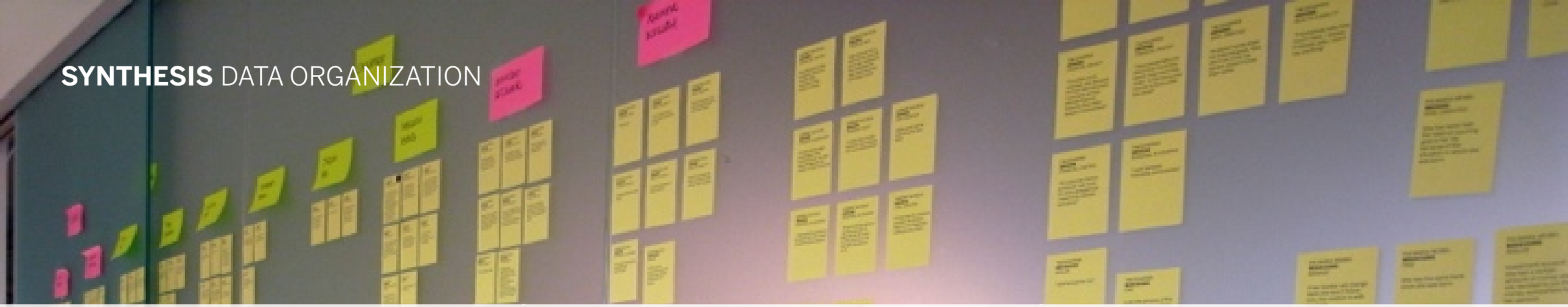
research participant >

topic >

< data/insights

Munich, October 2012
Synthesis wall



SYNTHESIS DATA ORGANIZATION

I saw this + I know this = Insight

Make Observations

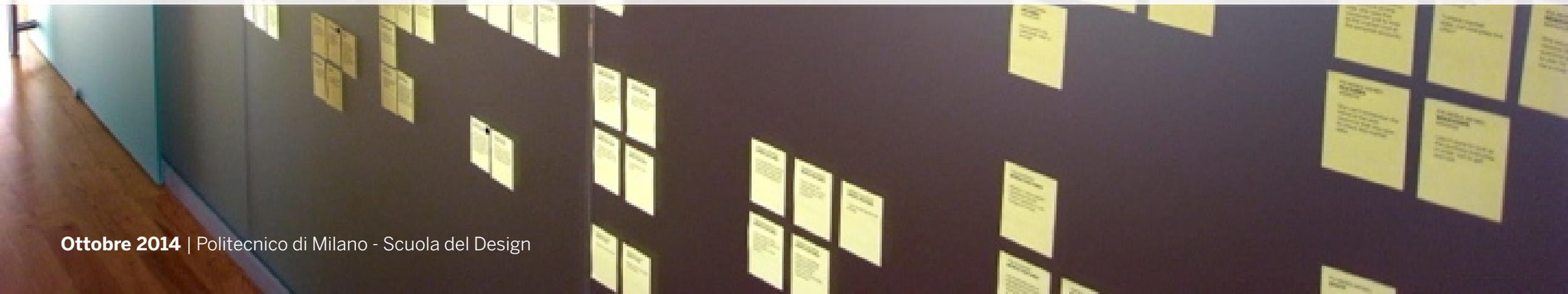
Analyze your field notes and document interesting observations, anomalies, or things you found unique.

Group & Interpret

Group the observations similarity. Ask, “Why” about each observation group and answer this question based on your own personal experience and what you know about the situation.

Draw Insights

From the key observation summaries in each group, craft provocative statements of truth.



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Milan, December 2010
Synthesis wall

OUTPUT

THEMES

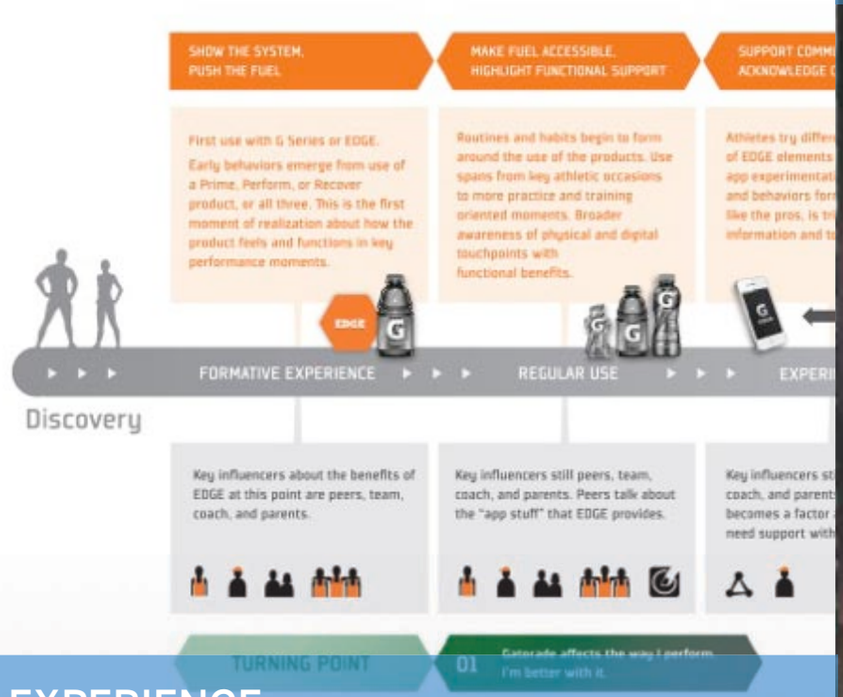
USER FRAMEWORKS

EXPERIENCE FLOWS

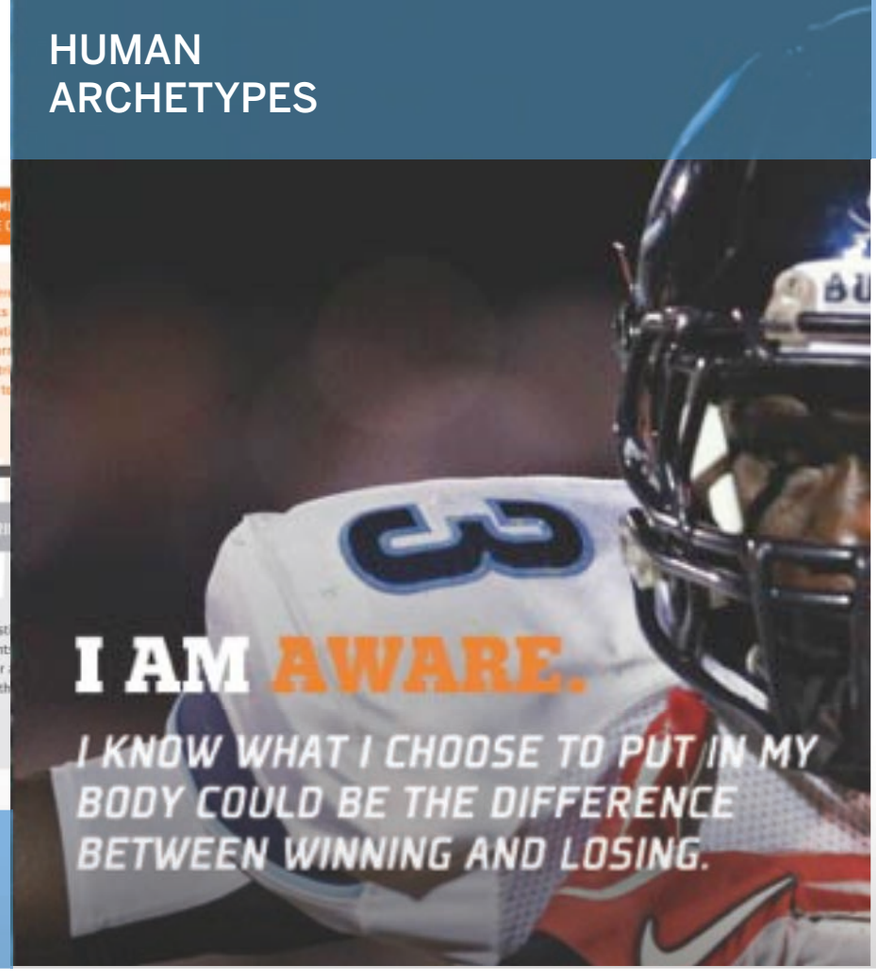
SYSTEM MODELS

DESIGN FRAMEWORKS

Creating abstract representations of users can be a powerful device for improving the final experiences with products and services. These frameworks play a central role in translating our thinking into specific solutions and aligning various participants in the process.



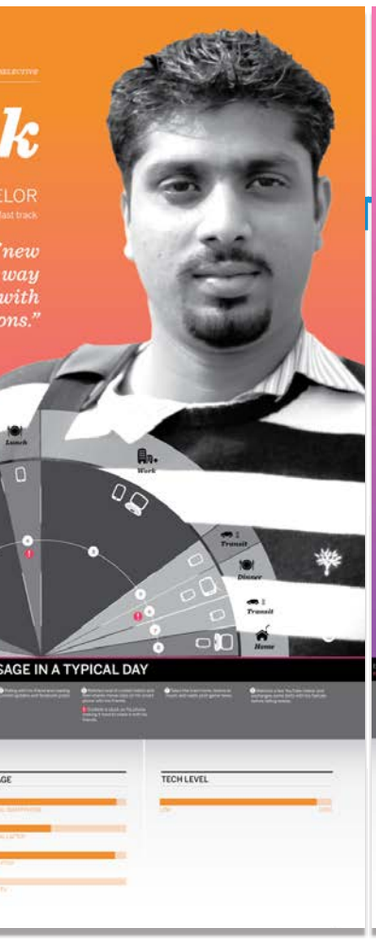
EXPERIENCE JOURNEY

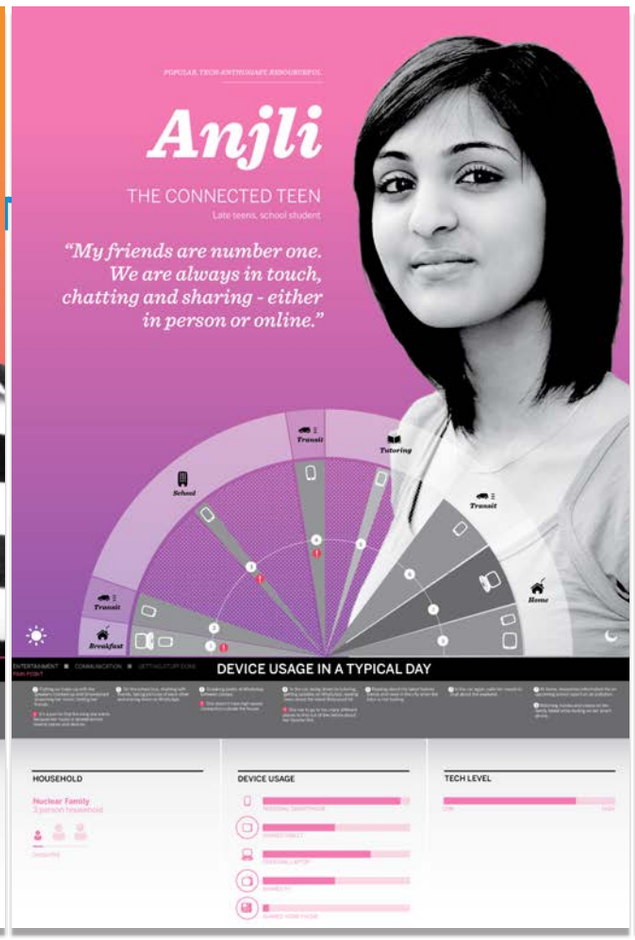


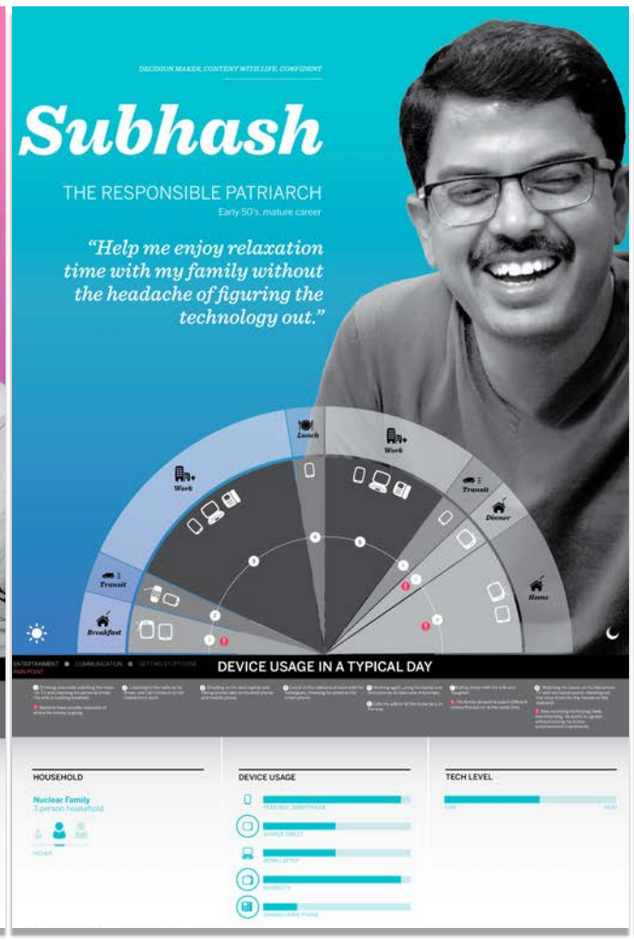
HUMAN ARCHETYPES

ECOSYSTEM MAP

EXAMPLE: PERSONAS

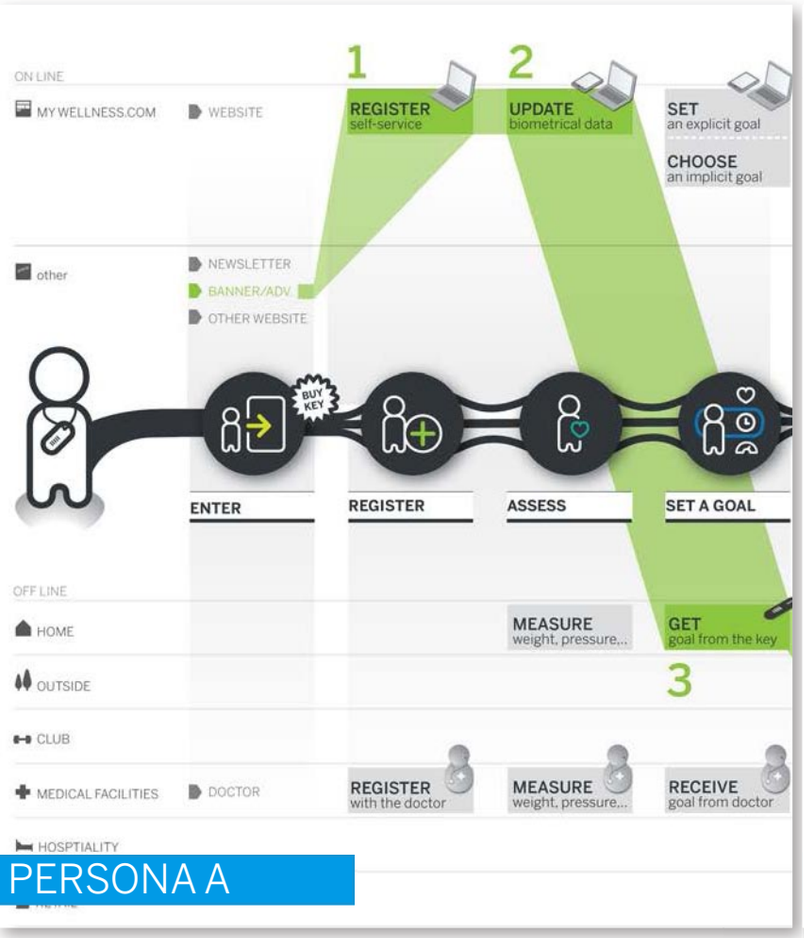






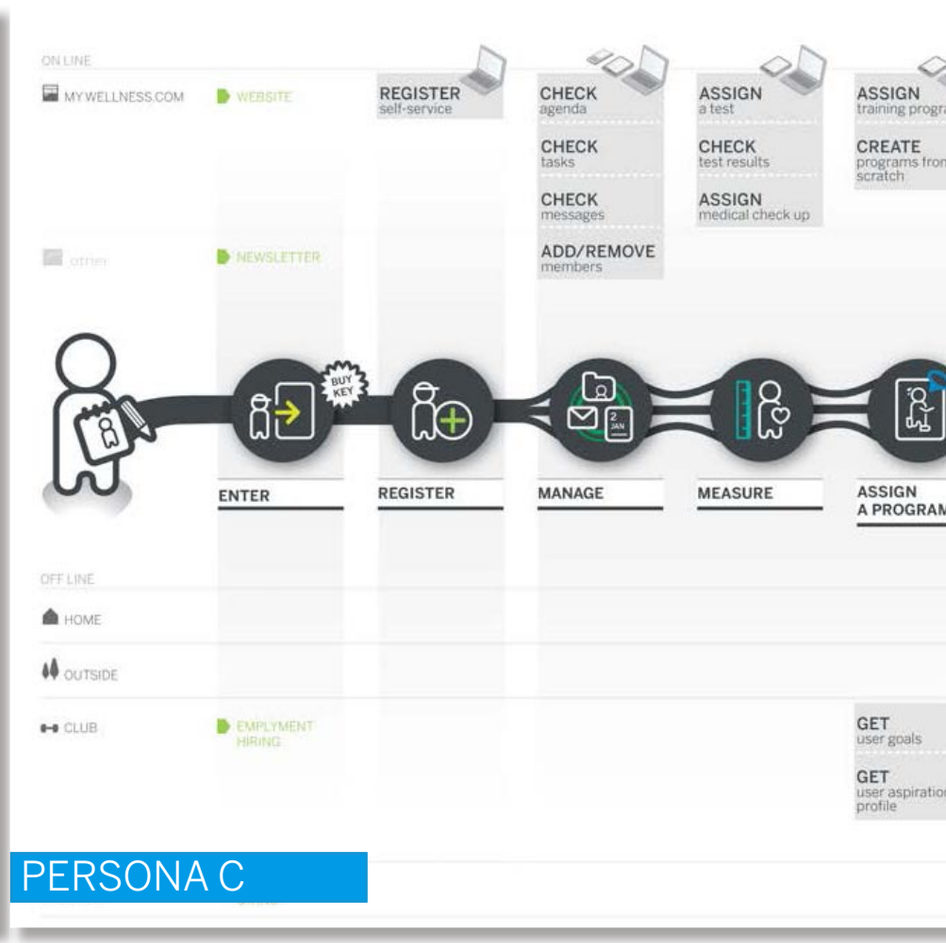
The more human and believable your persona is, the easier it will be for the team to focus on them.

EXAMPLE: JOURNEYS



PERSONA A

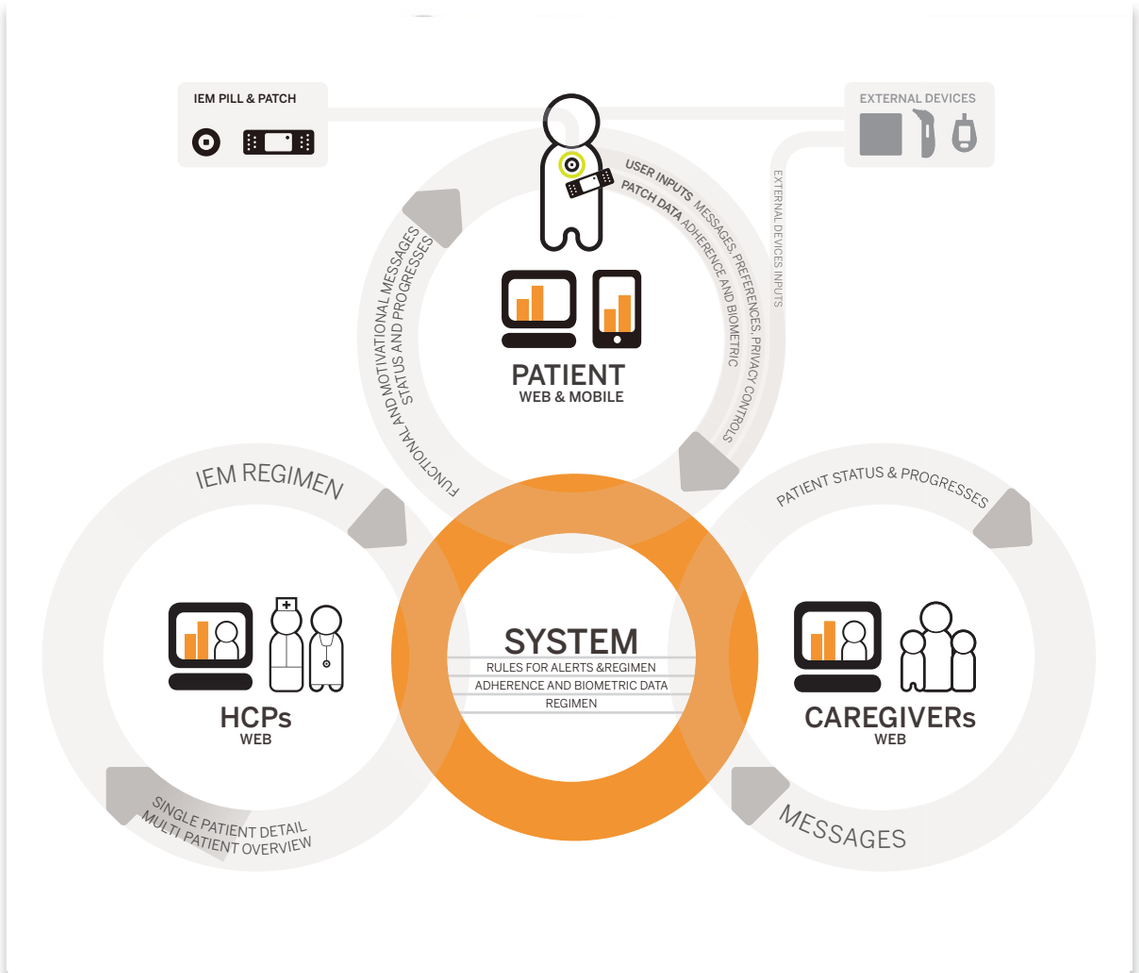
PERSONA B

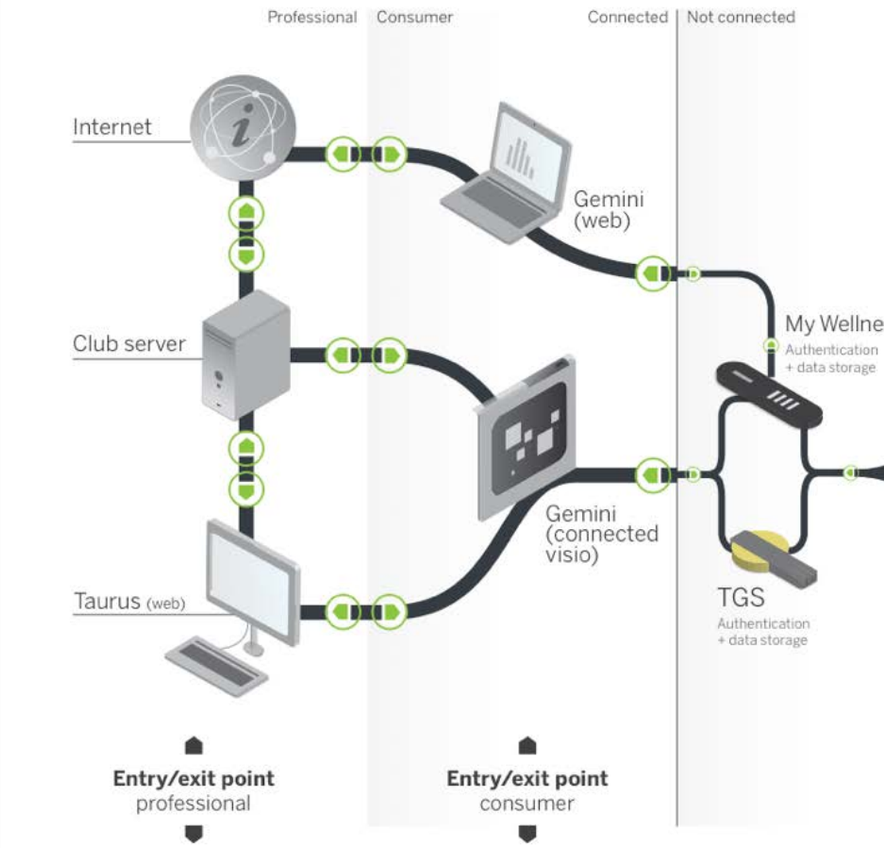


PERSONA C

Creating a detailed customer journey for each persona/user archetype can help to compare their different experiences.

EXAMPLE: SYSTEM MAPS





The same tools and procedures can be used to map the model of an organization and all the internal relationships.

www.servicedesigntools.org

communication methods supporting service design

SERVICE DESIGN TOOLS

COMMUNICATION METHODS SUPPORTING DESIGN PROCESSES

An open collection of communication tools used in design processes that deal with complex systems.

The tools are displayed according to the WHEN design activity they are used for, the kind of HOW representation they produce, the WHO recipients they are addressed to and the WHAT contents of the project they can convey.

DESIGN ACTIVITIES	REPRESENTATIONS	RECIPIENTS	CONTENTS
CO-DESIGNING	TEXTS	STAKEHOLDERS	CONTEXT
ENVISIONING	GRAPHS	PROFESSIONALS	SYSTEM
TESTING & PROTOTYPING	NARRATIVES	SERVICE STAFF	OFFERING
IMPLEMENTING	GAMES	USERS	INTERACTION
	MODELS		

NEWS

twitter

THANKS