



Aalto University
School of Arts, Design
and Architecture

User evaluation

ARTX-1009 Digital Service Design project

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27 September 2022

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Mid-Term Presentations

The goal of the mid-term presentation is to get constructive feedback from Posti.

You will have 10 min. to present and 5 min. for feedback. NOTE: It is your decision on who presents from your team. Be mindful of time, you only have 10 min.!

The presentation should include:

Use case

- Description of the archetype you are designing for
- The specific situation or problem you will solve
- Evidence from your research to justify it (e.g. interview quotes, pictures from trying the service exercise, service map)

Storyboard

- It should present how the use case will be solved
- Focus on the key moment of the experience and the role of (new) touchpoints in that "story"
- Visualisations should not show interface design at this point but core aspects of the interaction
- Visualisations don't need to be perfect and they can be presented as sketches

Agenda

09.15 – 09.20 Welcome!

09.20 – 09.35 Sending something you sold C2C (identified)

09.35 – 09.50 Sending something you sold C2C (unidentified)

09.50 – 10.05 Returning an online purchase (identified)

10.05 – 10.20 Returning an online purchase (unidentified)

Break

10.30 – 10.45 Sending a gift (identified)

10.45 – 11.00 Sending a gift (unidentified)

11.00 – 11.15 Sending something urgent (identified)

11.15 – 11.30 Sending something urgent (unidentified)



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Why do we evaluate interfaces? What can we learn?

Why do we evaluate interfaces?

To identify problems in the design of a new service:

1. To discover our misunderstandings about users' needs and values
2. To discover usability and UX errors (efficiency, effectiveness, satisfaction)

To be surprised:

That users do different things than we expected

As a concretising element for an interview

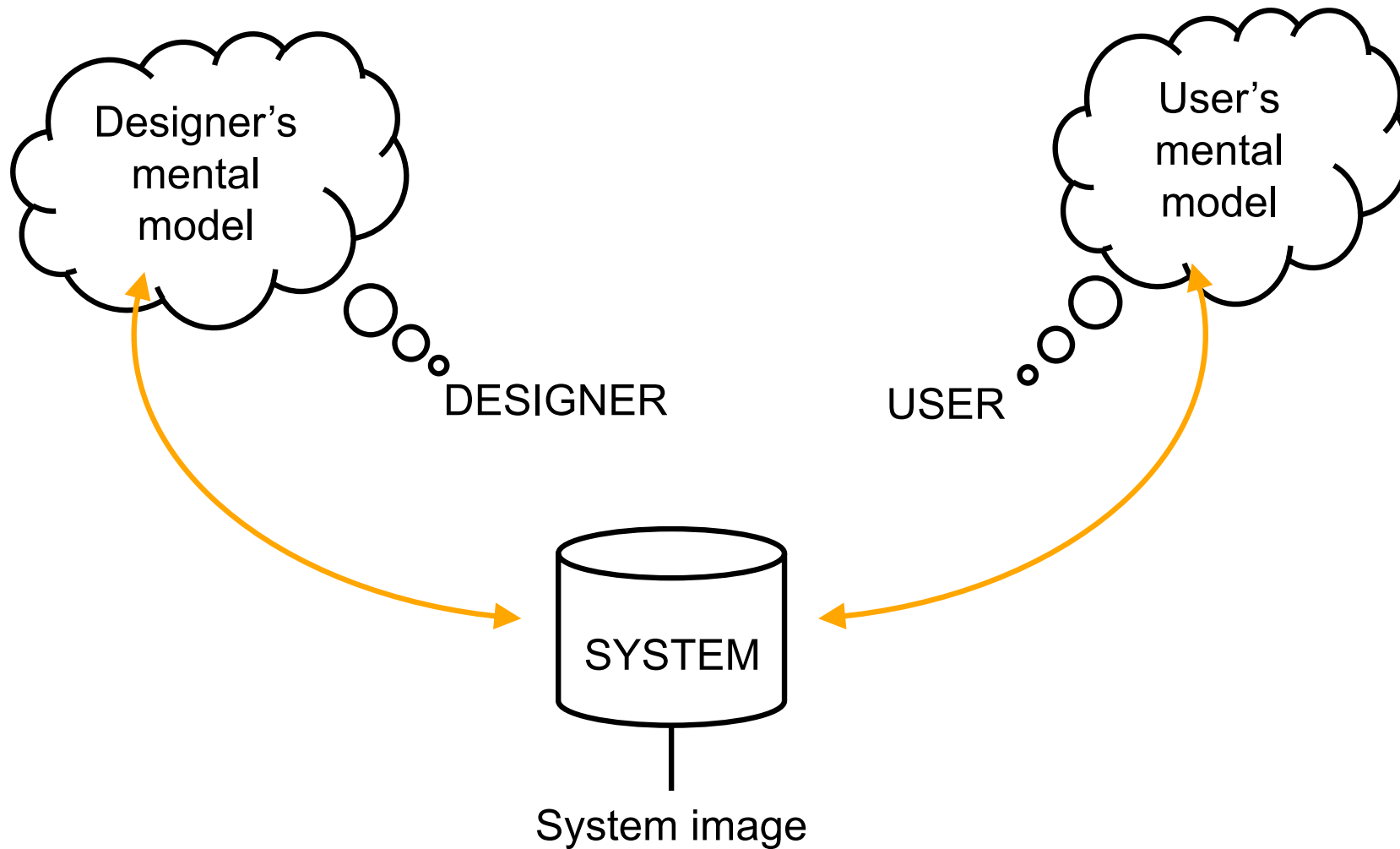
To convince others about the design's high quality

...

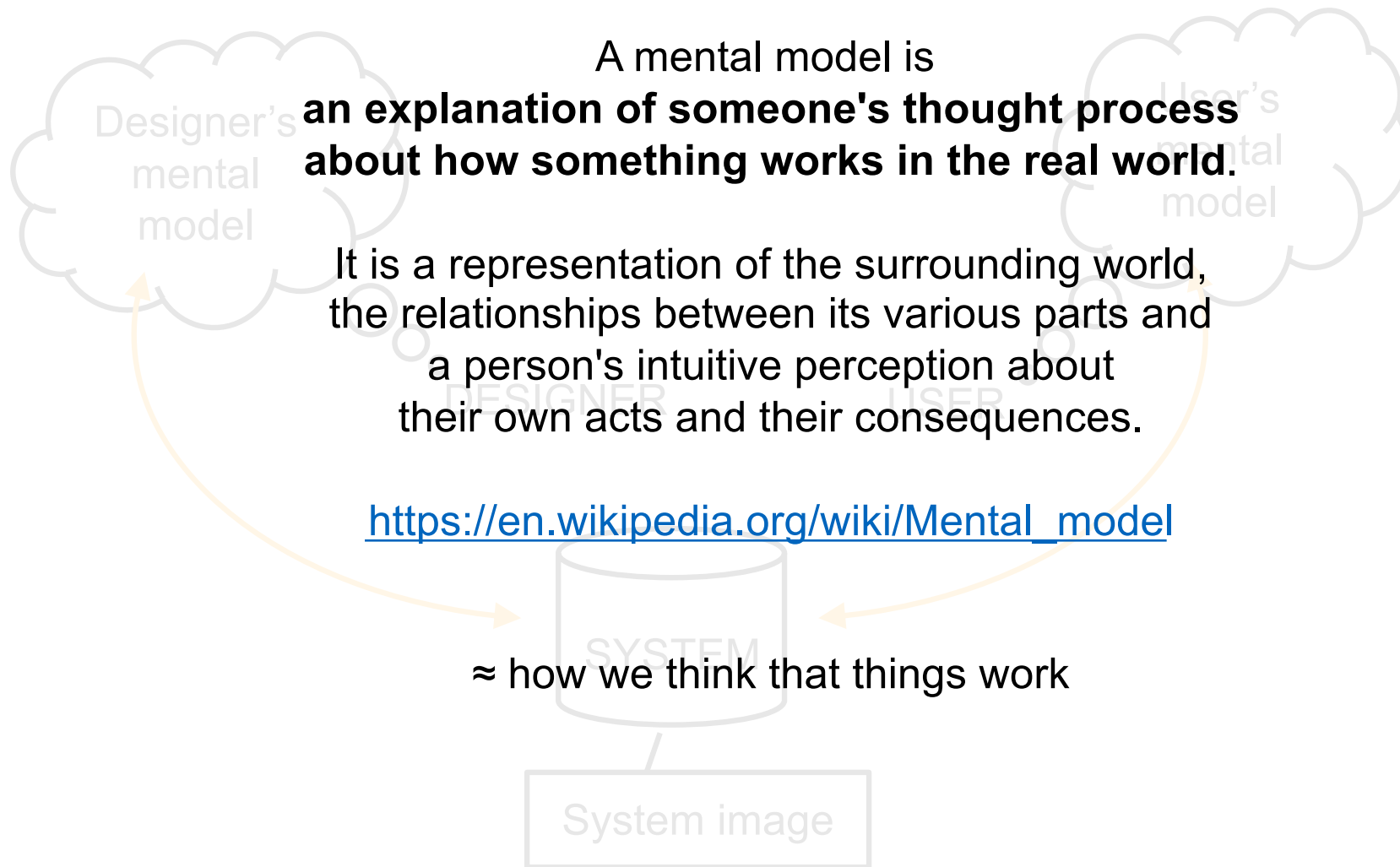
Why do we evaluate interfaces?

1. To discover our misunderstandings about users' needs and values

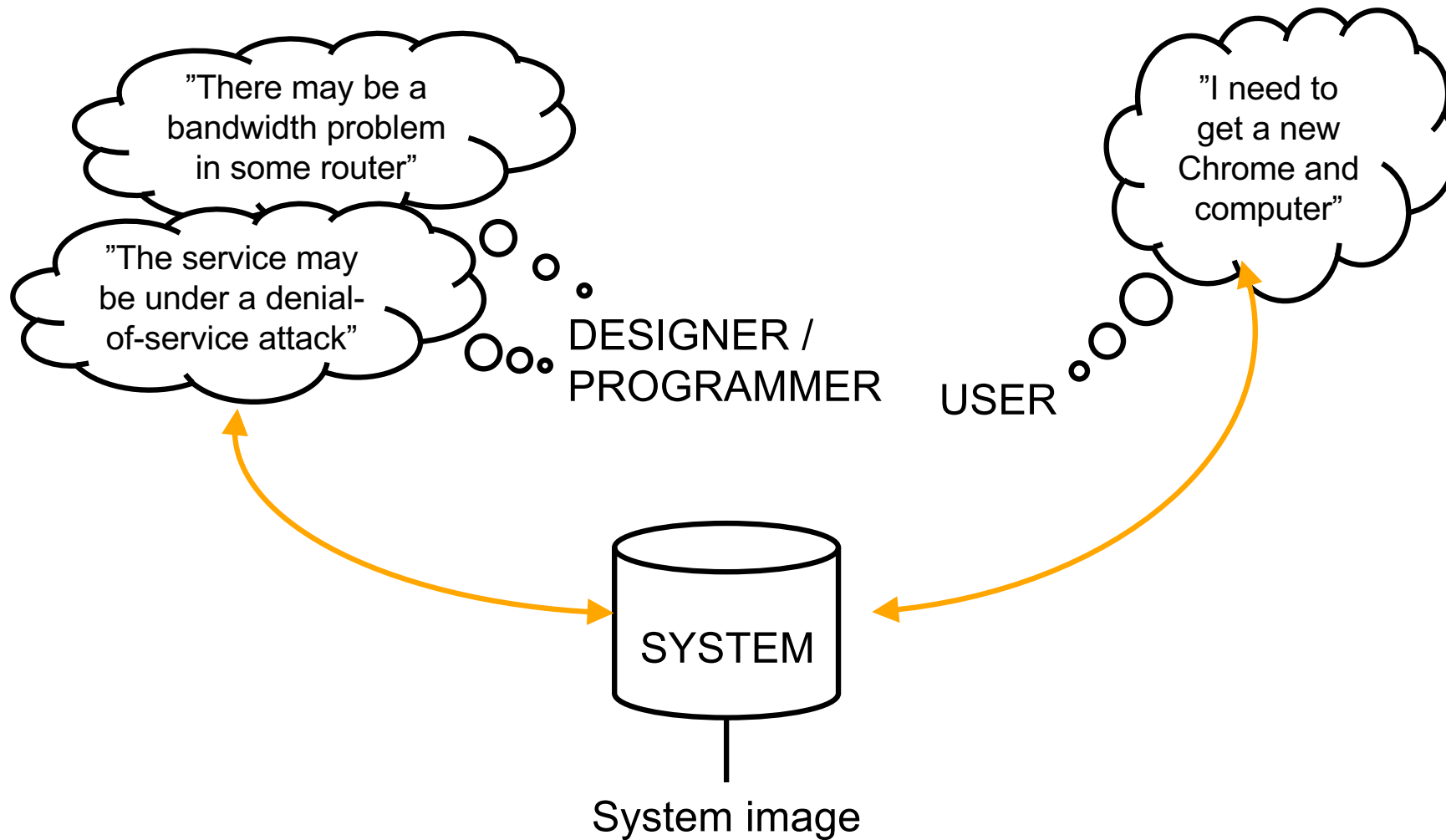
Source of misunderstandings: Different mental models



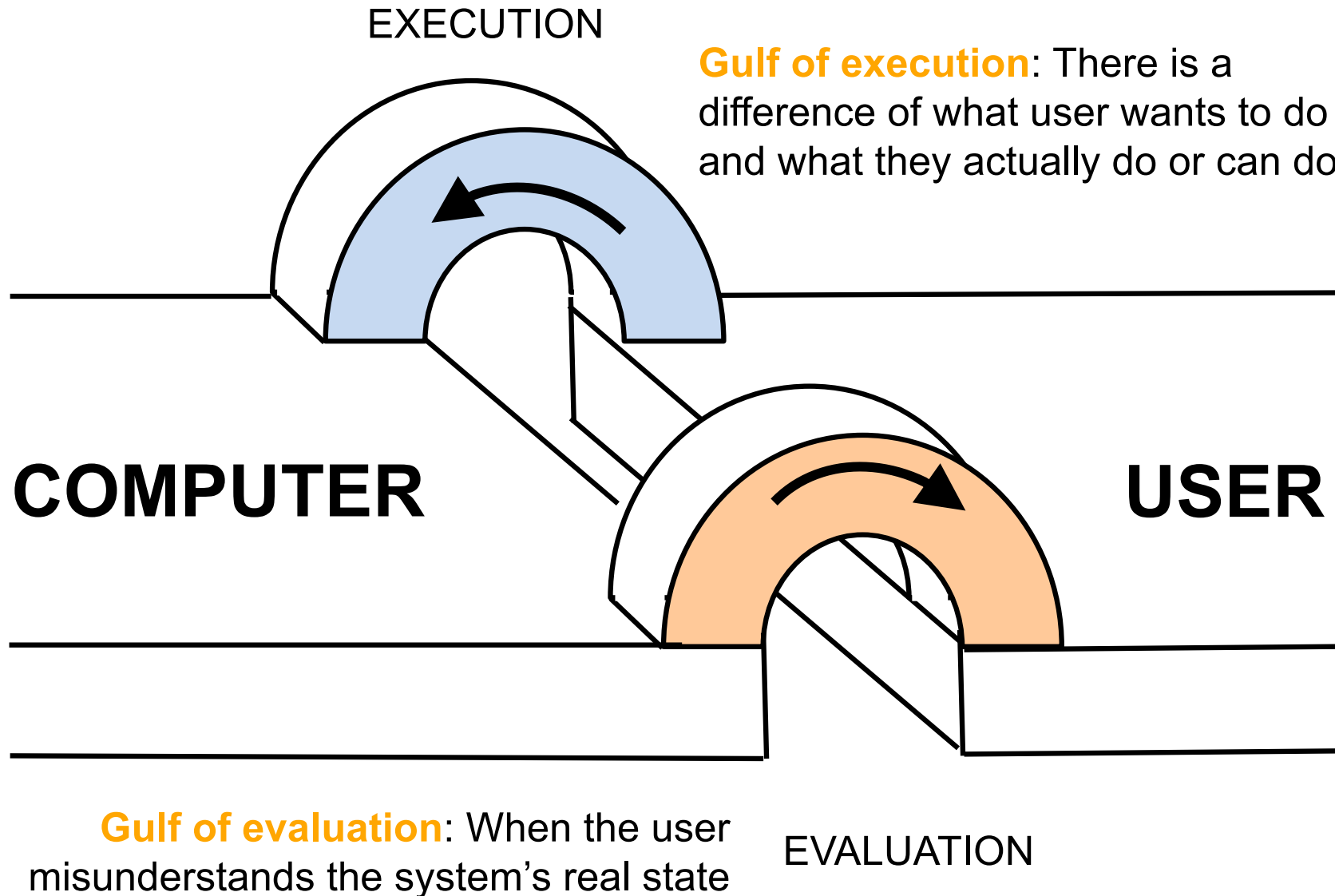
Source of misunderstandings: Different mental models



Example of differences: why doesn't a computer download a page?



Two points where interaction can go wrong



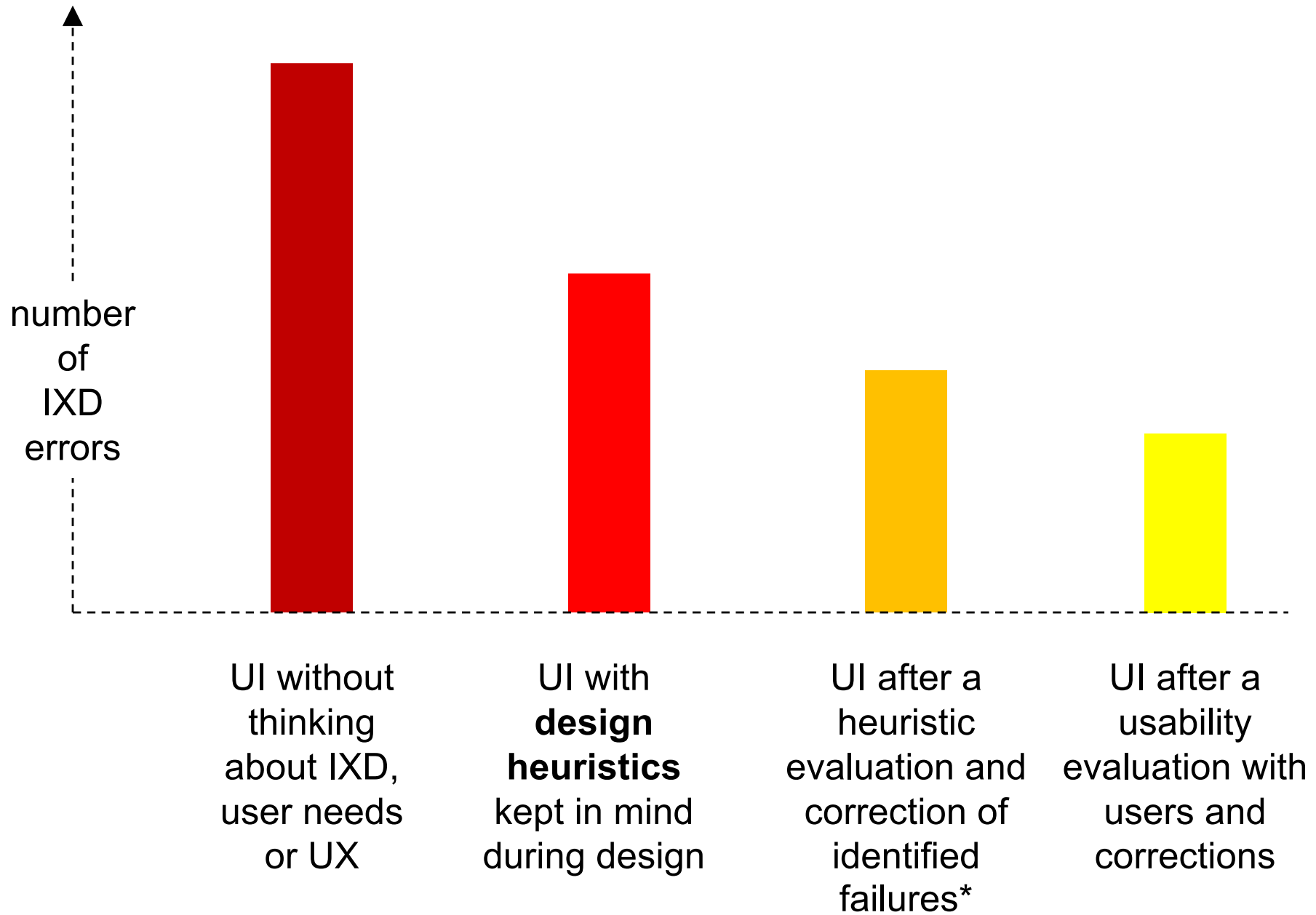
Why do we evaluate interfaces?

2. To discover usability and UX errors (efficiency, effectiveness, satisfaction)

Efficiency: speed, minimal user errors, low effort

Effectiveness: matching with user's goals, getting the desired task done

Satisfaction: user experience, good feel, aesthetics



* Rules of thumb and checklists of general usability guidelines

Design heuristics (one version)

Visibility of
system
status

Match
between
system and
the real world

User control
and freedom

Consistency
and
standards

Help users
recognize,
diagnose,
and recover
from errors

Error
prevention

Recognition
rather than
recall

Flexibility and
efficiency of
use

Aesthetic and
minimalist
design

Help and
documen-
tation

"Usability heuristics"; Nielsen (1993). Usability engineering.

<https://www.nngroup.com/articles/ten-usability-heuristics/>

Exercise

Heuristic evaluation of Sisu

In 3-person teams

10-15 mins of analysis + a discussion

1. Select a common task that is carried out using Sisu
 1. Take screenshots of Sisu's related screens
 2. Put screenshots in a PowerPoint / Keynote / Google Slides / Miro (blur user name or put a block over it if necessary)
2. Analyse the interaction sequence using one heuristic
 1. Annotate the screenshots
 2. When you have noticed 3 violations against the heuristic, pick another heuristic
3. Prepare to present some of your observations

Important learnings from the exercise

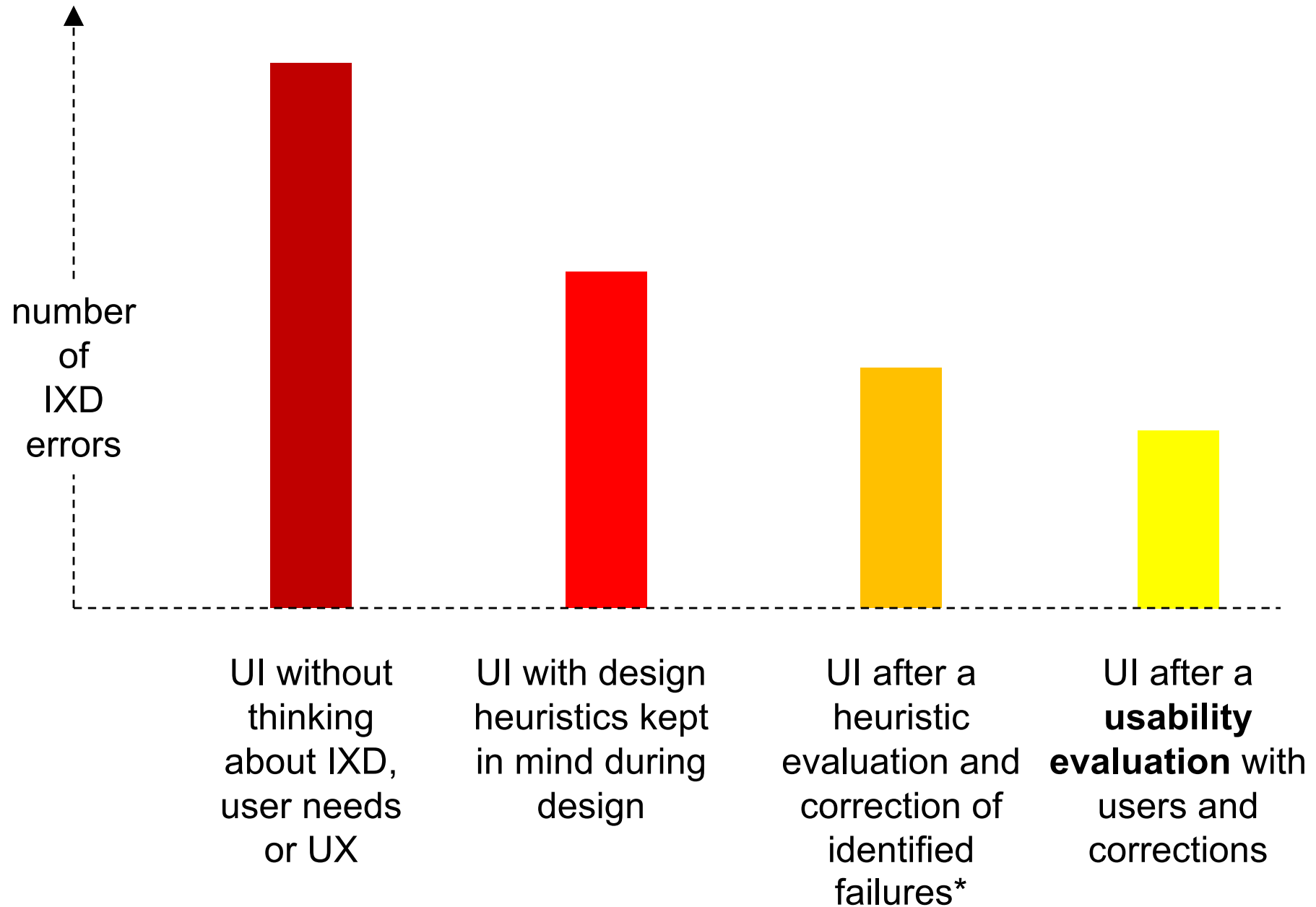
Carry out the heuristic evaluation from user's goals point of view

(not by “shopping” a mix of problems)

A real heuristic evaluation focuses on:

Several user goals/tasks

Wide range of design heuristics in parallel in these goals/tasks



* Rules of thumb and checklists of general usability guidelines



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Break

Continuing in 10:50

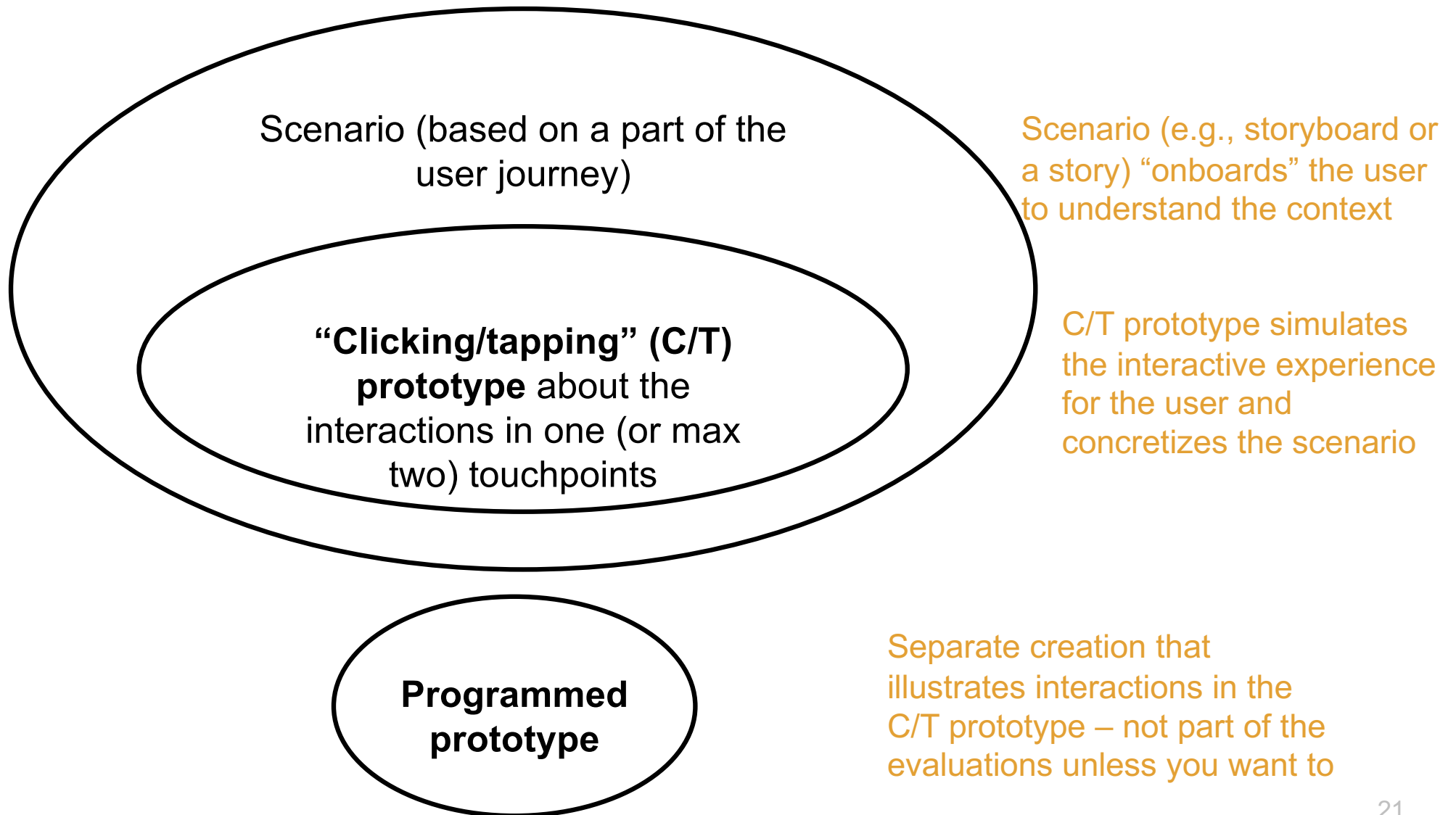


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What the evaluations are like in this course

Evaluation plan

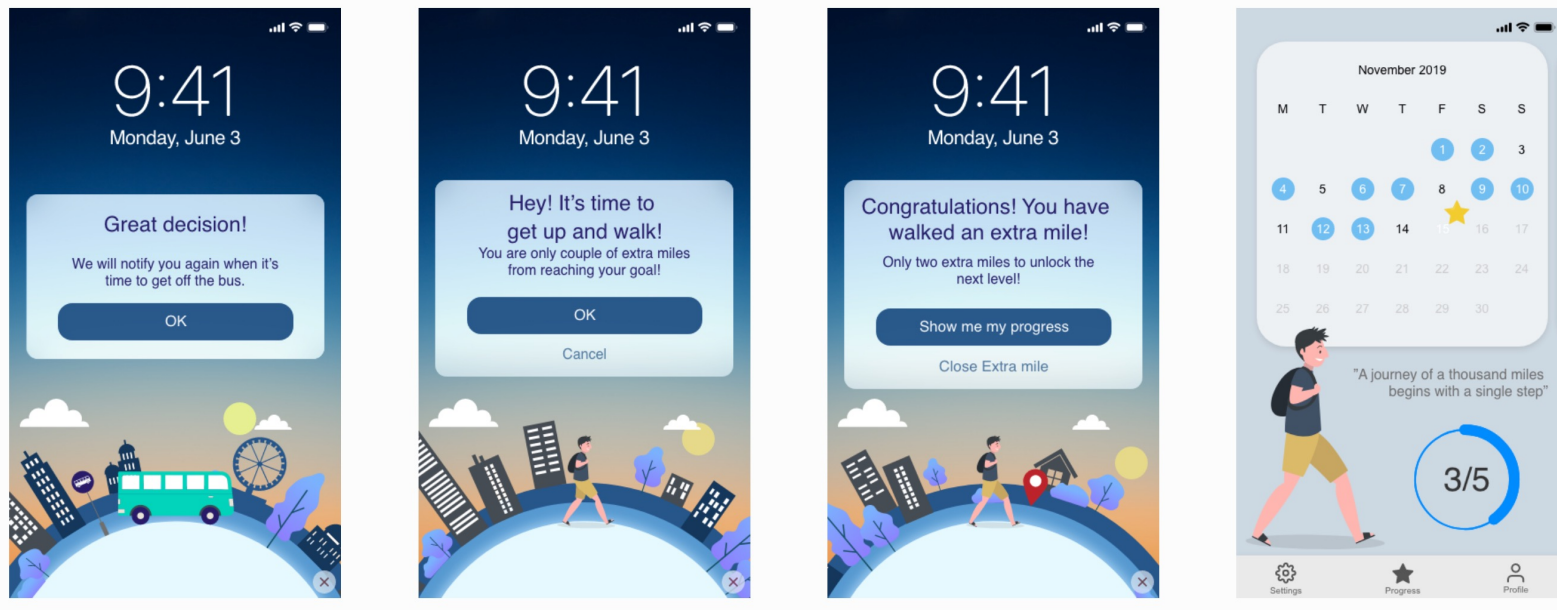
The building blocks of your evaluation



What is a “clicking/tapping prototype”?

Built with Adobe XD, Figma, InVision, Sketch or similar visual prototyping tool

Most (if not all) of these have free student/university licenses



“Extra Mile” app by Mingyue Hu, Venla Pesonen & Ville Yli-Knuutila;
Designing interactions course 2019

Template for the user evaluation plan

DL Tuesday 4 October 6PM

1. Scope of the evaluation (1 page)

Copy your storyboard and highlight two parts in it:

1. What part of the board your evaluation will focus on
2. What touchpoint will you evaluate with a clicking/tapping prototype.

Define what you want to learn about with the evaluation (important!)

2. An outline of the contextualizing scenario (1/2 page)

Describes on a high level how you will present the interaction context to the participant (e.g., will you be presenting a storyboard, telling a story, or something else)

3. A sketch of the clicking/tapping prototype (1 page)

Sketches or screenshots that illustrate what kind of a prototype you might use in the user evaluations

Don't over-design at this stage! (see next slides)

Add annotations to explain important parts

4. Division of labour and schedule (who+when) (1/2 page)

Designing of the prototype + mockup materials

Heuristic evaluation

Pilot test

User evaluations

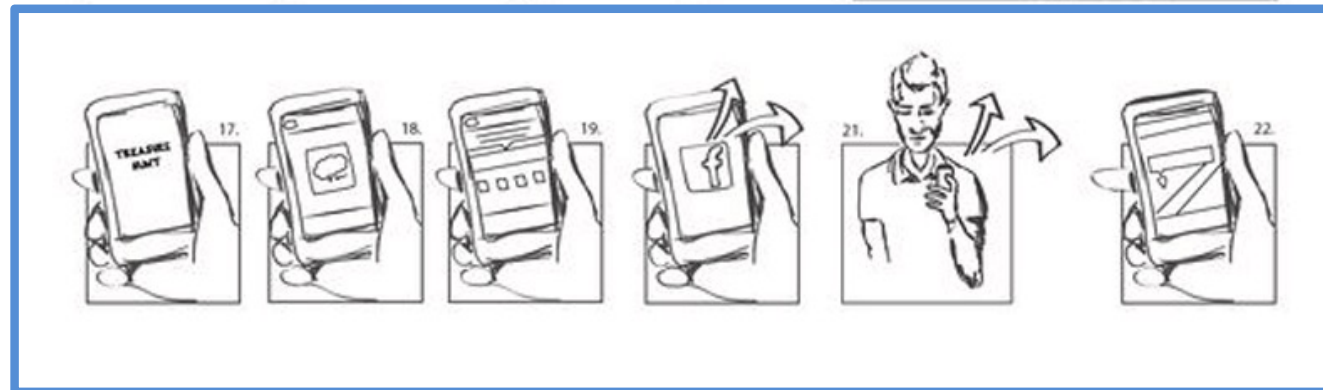
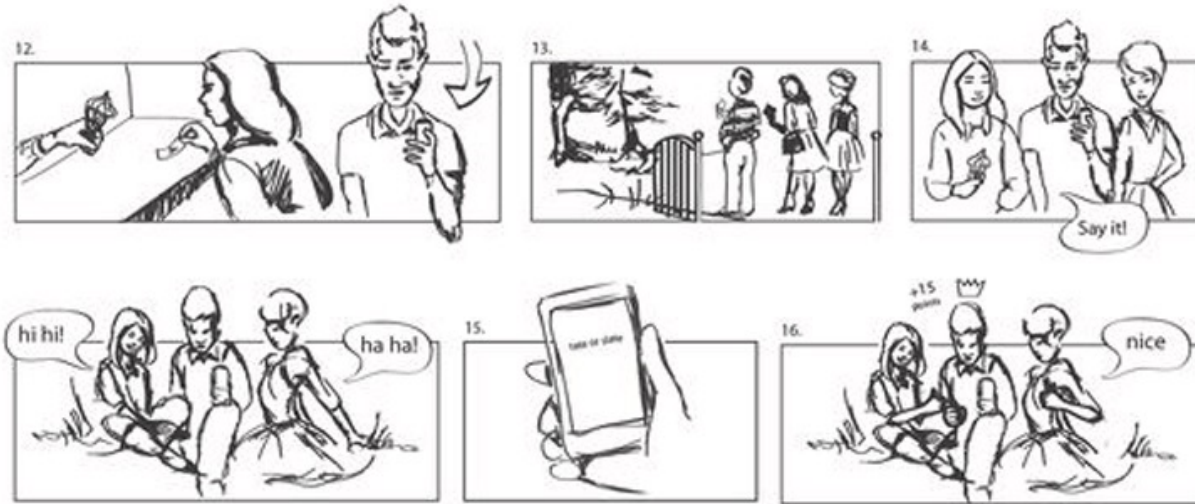
Programmed prototype creation

1. Scope of the evaluation (1 page)

Copy your user journey and highlight two parts in it:

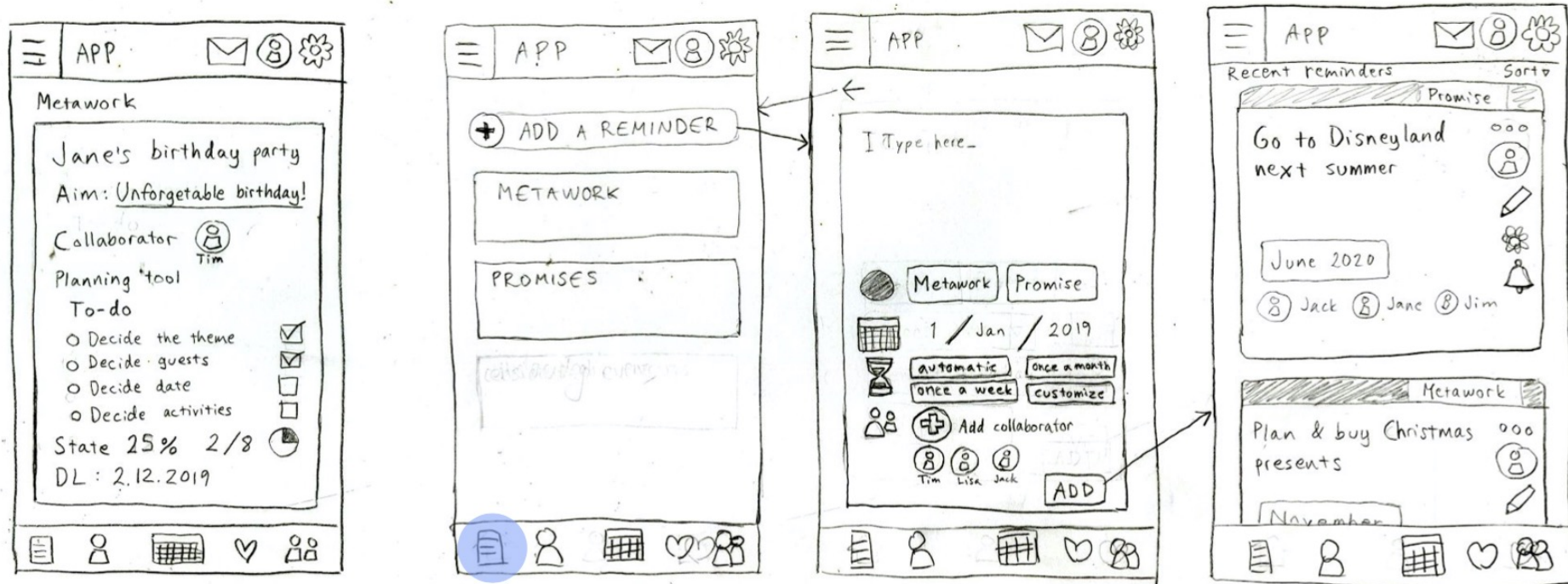
1. What part of the journey your evaluation will focus on
2. What touchpoint will you evaluate with a clicking/tapping prototype.

User journey



Clicking/tapping prototype

Example of what the sketch can look like



Vivi Pesonen & Yanran Wu; Designing interactions course 2019

See “wireflows” as an inspiration:

<https://www.nngroup.com/articles/wireflows/>

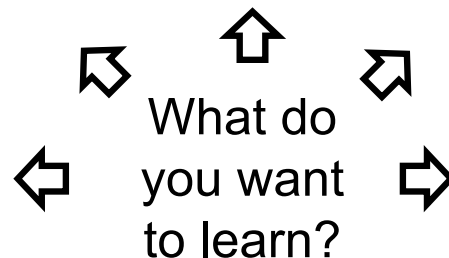
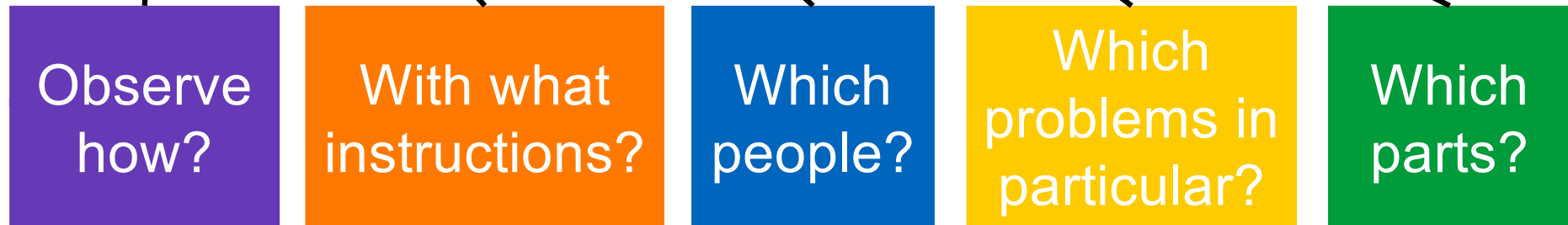


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How to decide what to learn using the user evaluation

A simplistic view on user evaluations

“Let’s just ask people explore our prototype and observe their problems and listen their feedback”



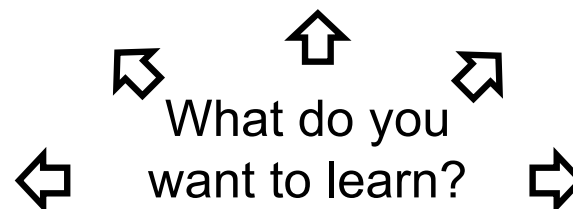
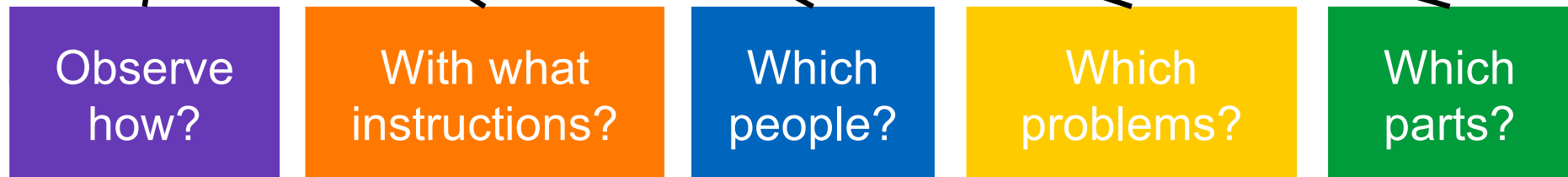
If you figure out answers to these questions, you are on a good path for a well-focused evaluation!

Group exercise

10-15 minutes in your teams

Discuss your opinions about these questions

“Let’s just ask people explore our prototype and observe their problems and listen their feedback”

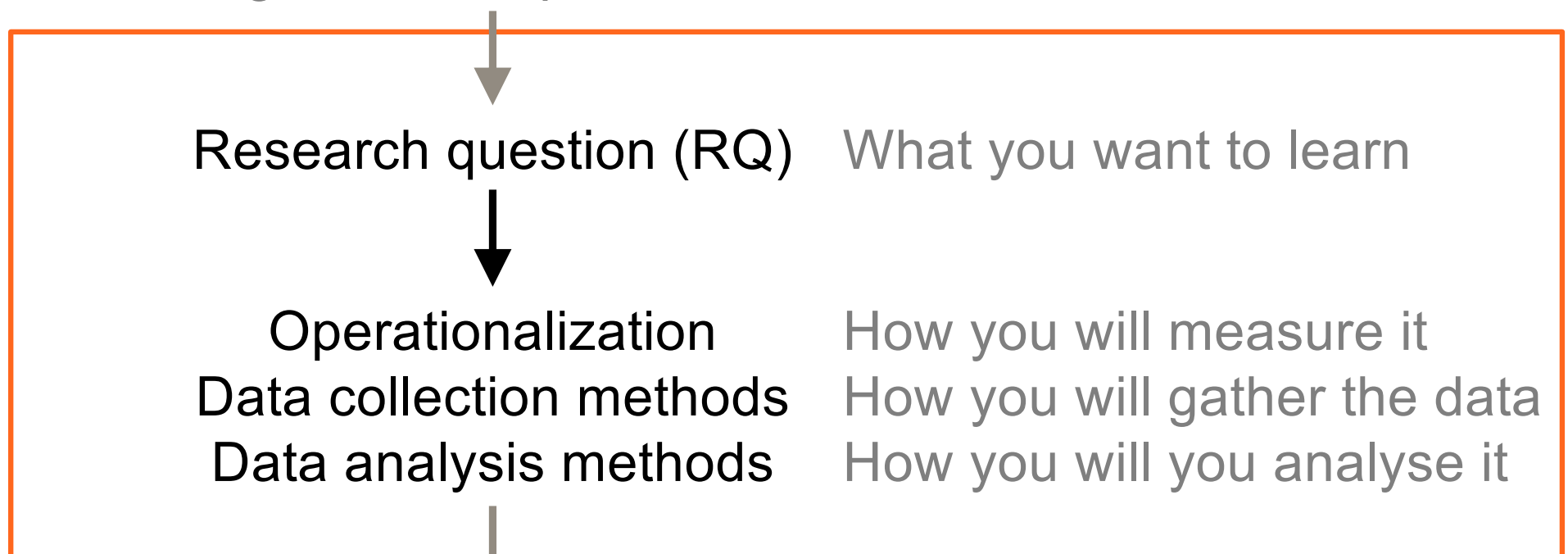


Research design

Matching your research questions to methods

**Research design =
how you “design” (=plan) your evaluation process**

Framing what is important to learn

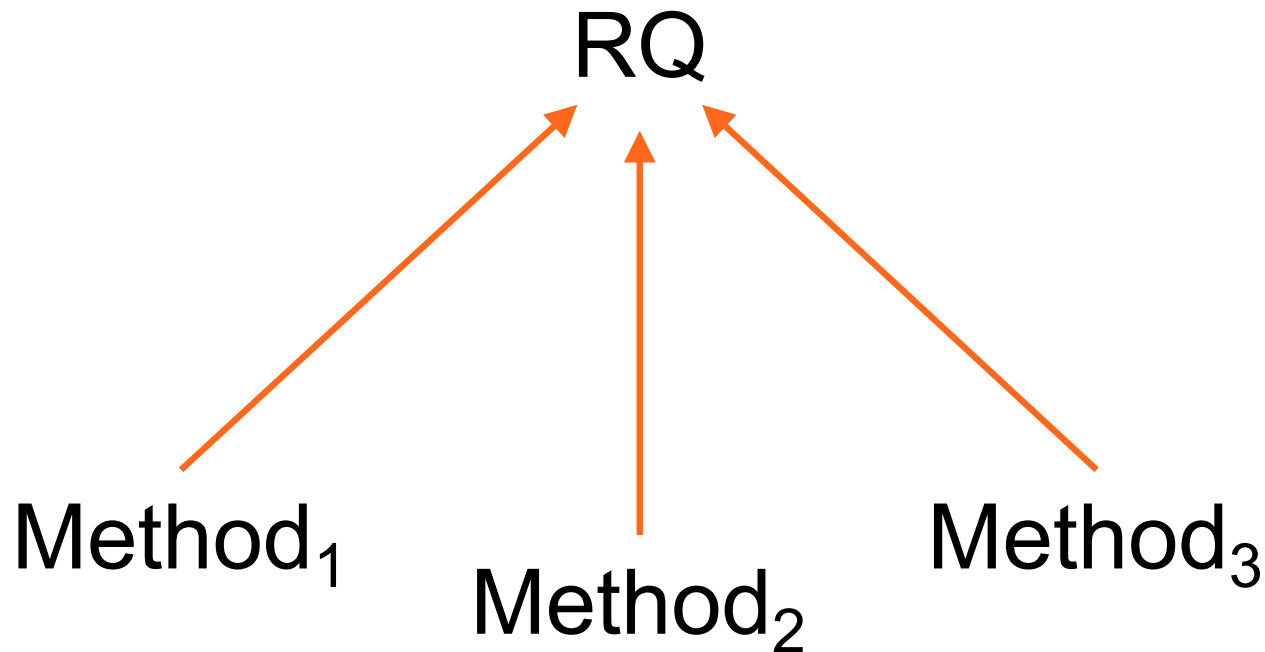


Needs for improvement

Operationalization: turning RQ into methods

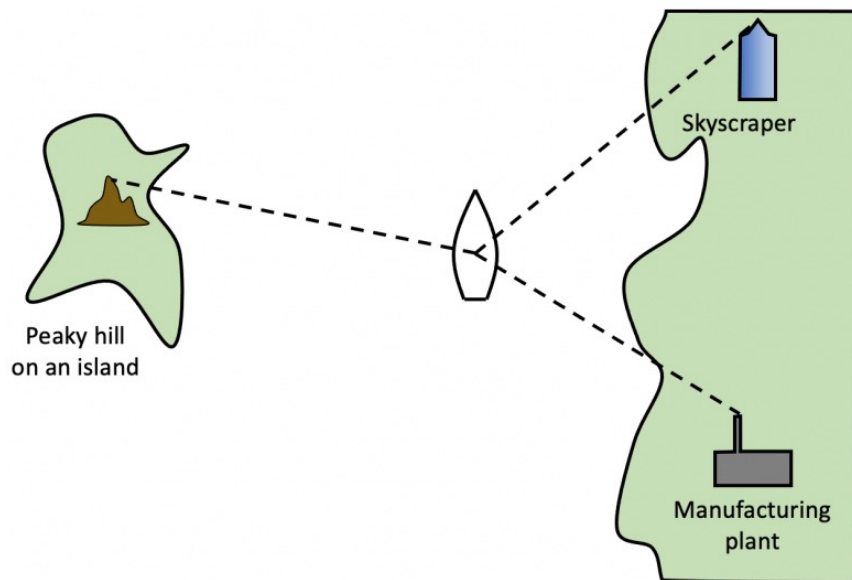
The challenge:

All RQs can be studied in several ways.
Which method(s) should one choose?

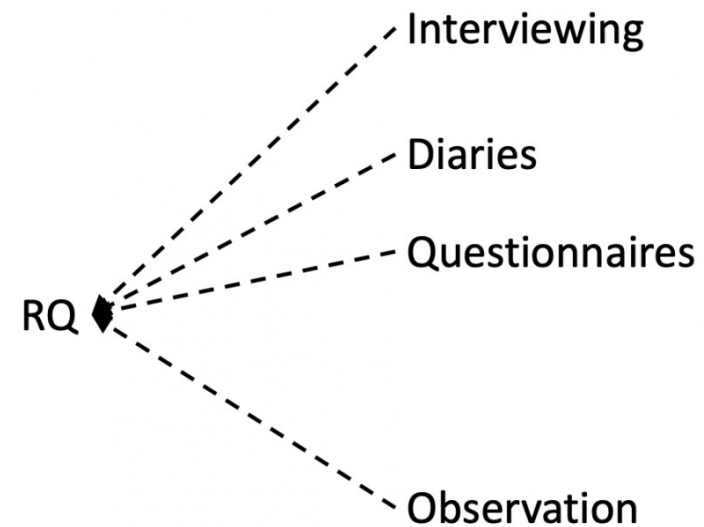


What does triangulation mean?

Choose methods that eliminate each other's weaknesses

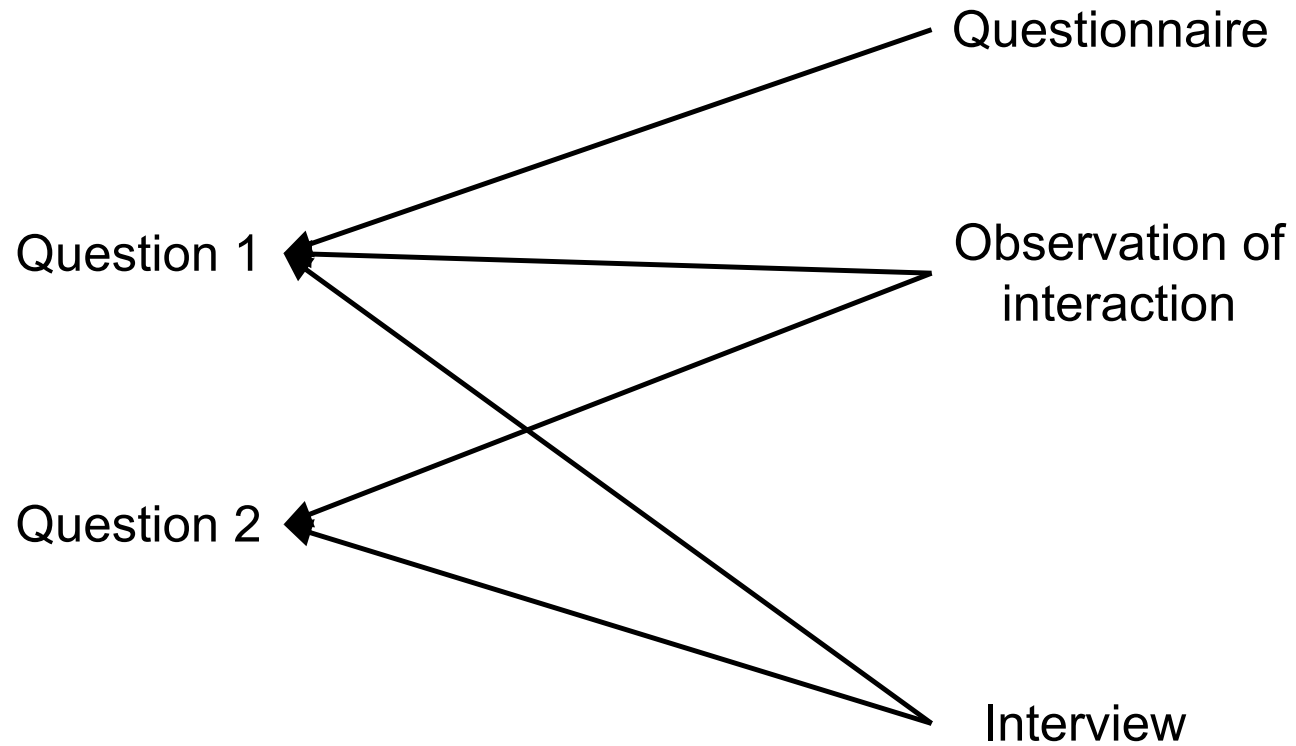


How a ship without GPS would choose the landmarks to locate itself



Consider your choice of methods as a similar problem

Example of a good research design



Research question (RQ)

What you want to learn



Operationalization

How you will measure it

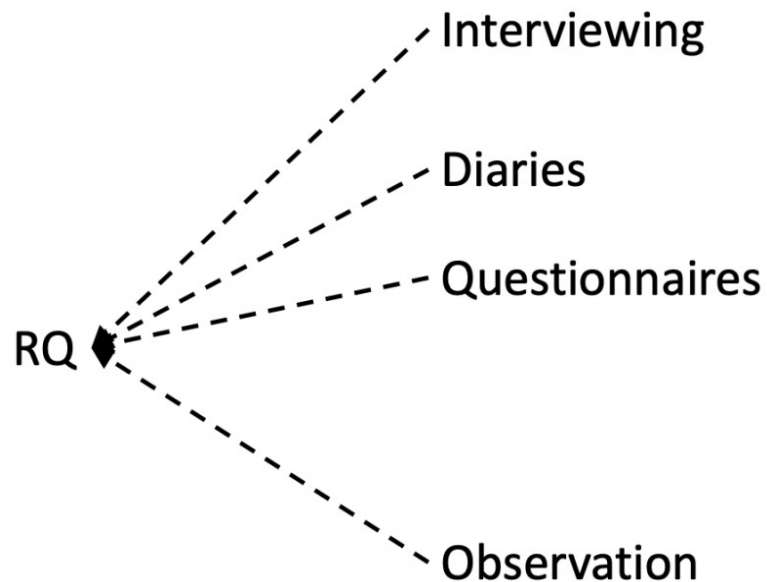
➔ Data collection methods

How you will gather the data

Data analysis methods

How you will you analyse it

Exercise

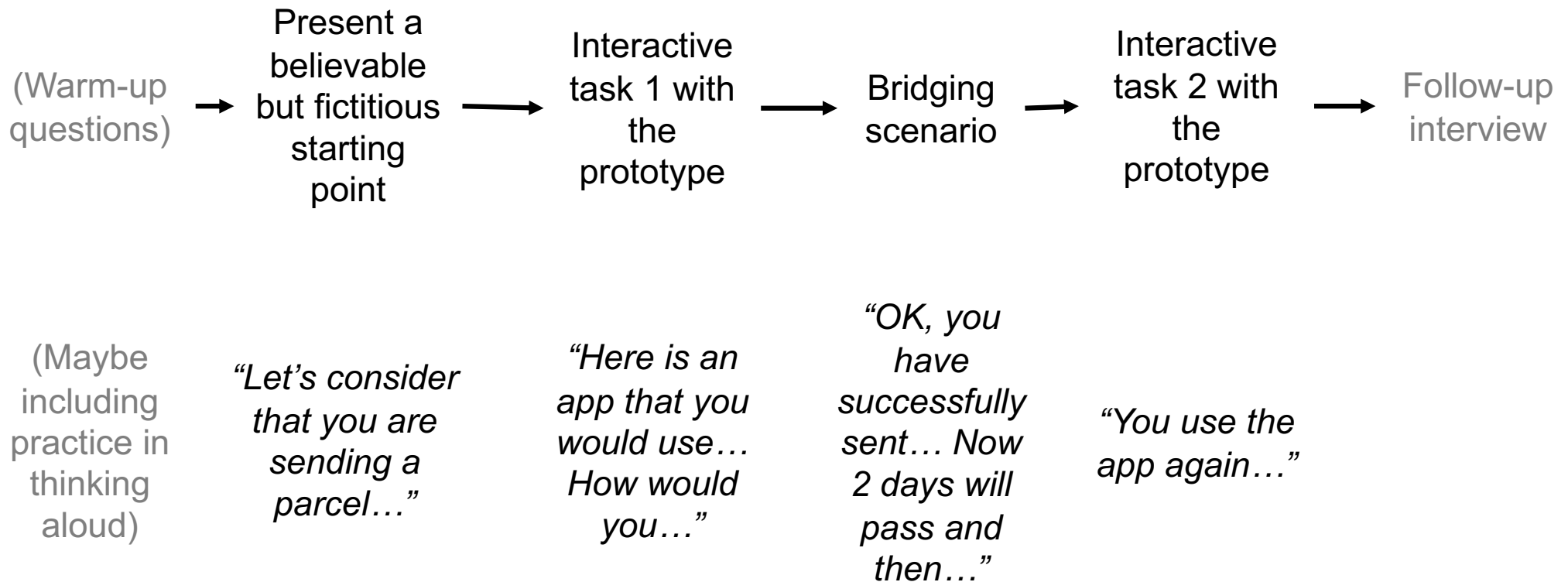


Remind yourselves about the **questions** that you discussed in the previous exercise

Brainstorm methods that you could use to get answers to these questions

Possible methods + putting them together

Putting the methods together: The evaluation should have a story



Usability evaluation



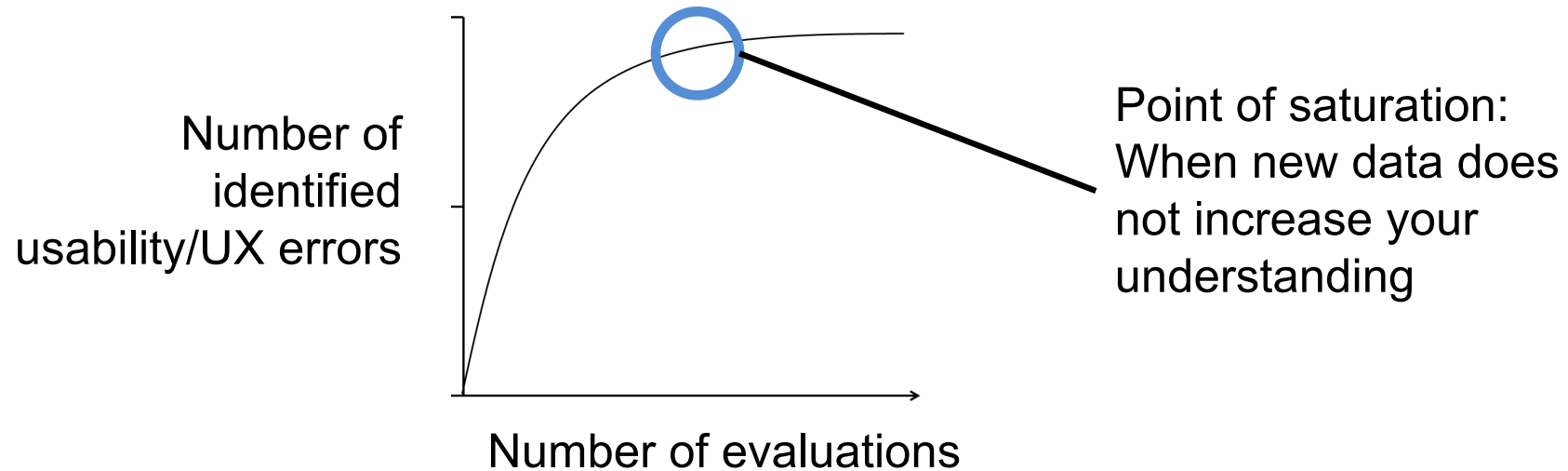
Preparations:

1. Write realistic task scenarios for the features that need evaluation
2. Create a **mockup** UI that has realistic-looking content

With the user:

1. Present the scenario for the participant and ask him/her carry out the tasks using the UI
2. Ask the user to **think aloud**
3. Record with video
4. Repeat with more participants until findings “**saturate**”

What does “saturation of findings” mean?



Industry practice is to evaluate with 5–6 users.

Practitioners often say that this number is sufficient for spotting the most common errors.

Warning! There is no guarantee that 5–6 is always (or even ever) enough

Paper prototyping

A top-down view of a person's hands interacting with a hand-drawn paper prototype of a user interface. The prototype is laid out on a green surface and features various rectangular boxes, lines, and text, representing a form or a data entry screen. One hand is pointing at a specific element in the center, while another hand rests on the left side. The drawing is done in black ink on white paper.

<https://www.youtube.com/watch?v=GrV2SZuRPv0>

Co-design & participatory design



Usually carried out as a workshop

Includes props to and other material that helps concretize ideas

May involve drama and role-playing exercises

Follow-up interview

After the usability test, it is a good idea to let the user speak what they thought about the prototype

Prepare also some questions of your own about the important matters

Additional important matters

Pilot test

= “Dry run” of your evaluation

Carry out everything in the way that you plan to do in the actual interview

Recording method, tasks, mockup material, ...

No shortcutting! You also need to test the evaluation’s length!

Carry out one pilot test

At least 1 day before the first actual interview

One of team members pretends to be a user

Make adjustment and fix problems

Tips for making the user feel relaxed

Explain the anonymity and confidentiality in the beginning

No names or other identifiable information will be revealed to Suomi-Seura or other people in the course

User is free to terminate the evaluation at any time, with no need to explain why

The recording and notes from the evaluation will be destroyed after the course

But those contents that are relevant to the prototype's success will be kept and may also be used in presentations

Express interest in what user does

Good also for gathering detailed data: if you ask for clarifications you both express interest and also don't leave unexplained user behaviours in your data

Don't:

Don't sigh or yawn

Don't express anxiety if user struggles

Don't try to speed up the user if s/he is slow – Instead prepare the tasks so that some elements can be skipped without user noticing it

Do:

First task has to be easy

Present the tasks both verbally and visually on text => improves user's comprehension

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