

A photograph of a workspace on a wooden desk. On the left is a silver laptop with a blue screen displaying a grid of website thumbnails. To its right is an open notebook with hand-drawn sketches and lists. A black pen lies across the notebook. Further right is a camera lens. White earbuds are also visible. The background is a dark wooden surface.

**Indu Kaila @PinnyPinschen**

**At the Women Who Code Bristol,  
May 2015 meet-up @wwcbristol**

# UX Top Tips



About me - Indu Kaila



A person wearing a red t-shirt and a blue and white striped wristband is seated at a light-colored table. They are holding a small blue sticky note with both hands, appearing to be in the process of peeling it or placing it. The table is cluttered with various items: several other blue and yellow sticky notes, a pair of orange-handled scissors, a black marker, a small notebook, a clear plastic water bottle with a blue label, and some crumpled paper. In the background, another person's hands are visible, also working with sticky notes. The overall scene suggests a collaborative design or brainstorming session.

**- UX Designer**

- Post graduate

I want  
to learn more about...





· **UX Obsessive** → “it’s all in the detail”

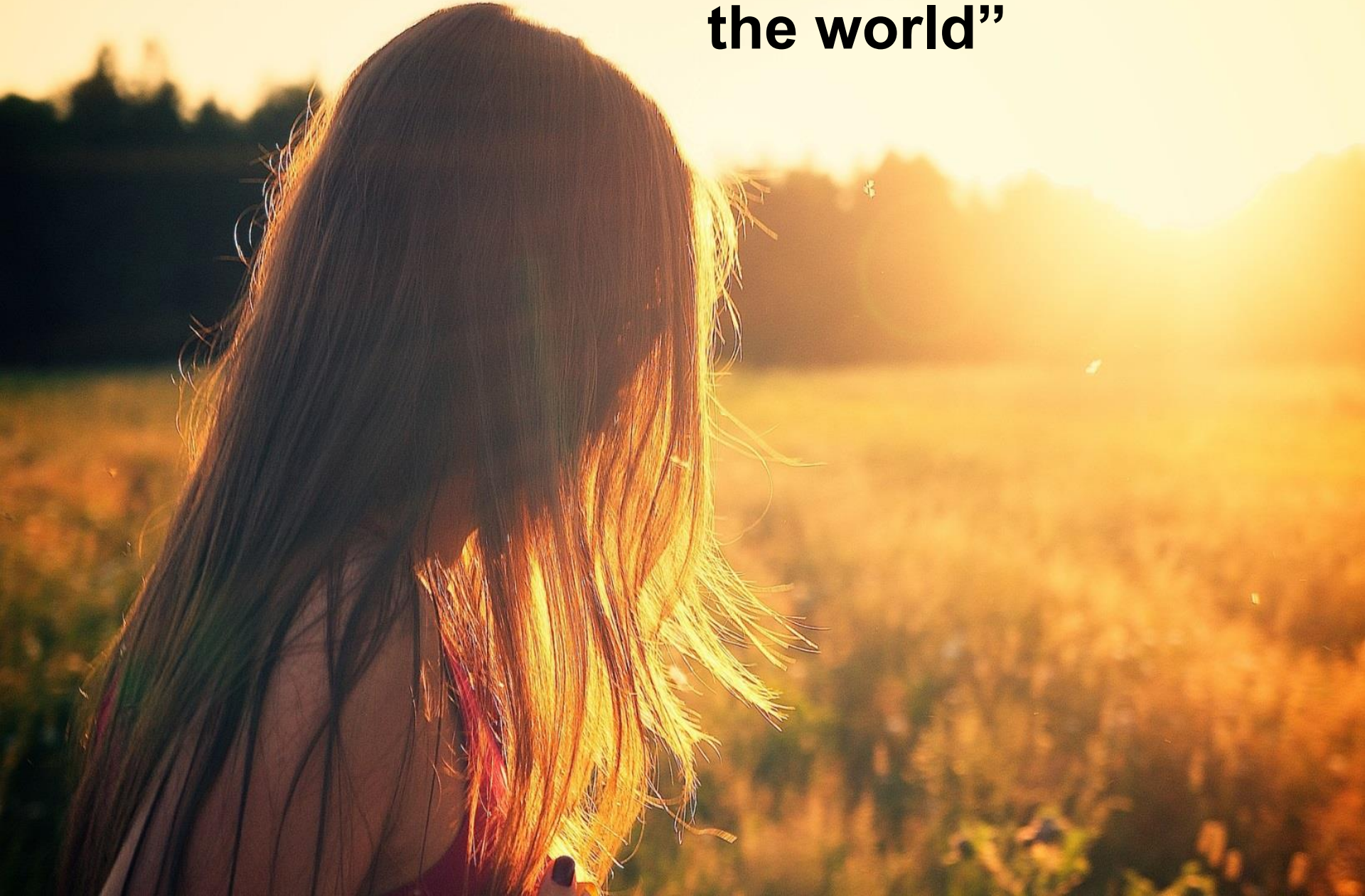


## • Some coding

```
17 string sInput;  
18 int iLength, iN;  
19 double dblTemp;  
20 bool again = true;  
  
21 while (again) {  
22     iN = -1;  
23     again = false;  
24     getline(cin, sInput);  
25     system("cls");  
26     stringstream(sInput) >> dblTemp;  
27     iLength = sInput.length();  
28     if (iLength < 4) {  
29         again = true;  
30         continue;  
31     } else if (sInput[iLength - 3] != '.') {  
32         again = true;  
33         continue;  
34     } while (++iN < iLength) {  
35         if (isdigit(sInput[iN])) {  
36             continue;  
37         } else if (iN == (iLength - 3)) {  
38             continue;  
39         }
```



· Ethical -> **“Change the world”**



- Co-organise South West UX (SWUX)

- Meet-up.com:

- <http://www.meetup.com/SWUX-meetup-com/>

- Twitter: @SW\_UX







# What is UX?



**· 'The UX Book' by Rex Hartson & Pardha S. Pyla gives a good description**

**– UX is a combination of designing for:**

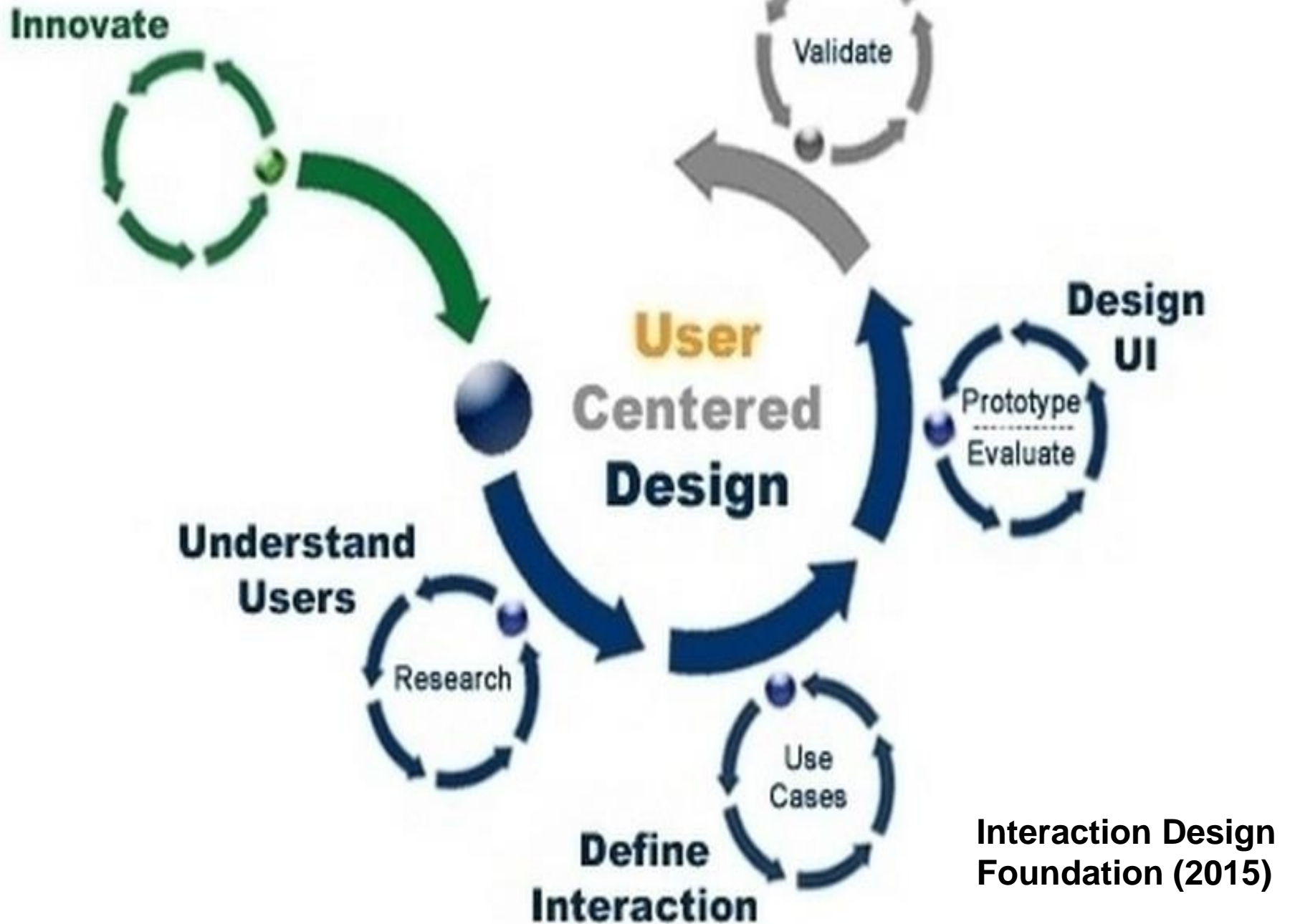
- The user's needs**
- Emotional engagement – emotions, expectations, perceptions & motivations**
- Usability**



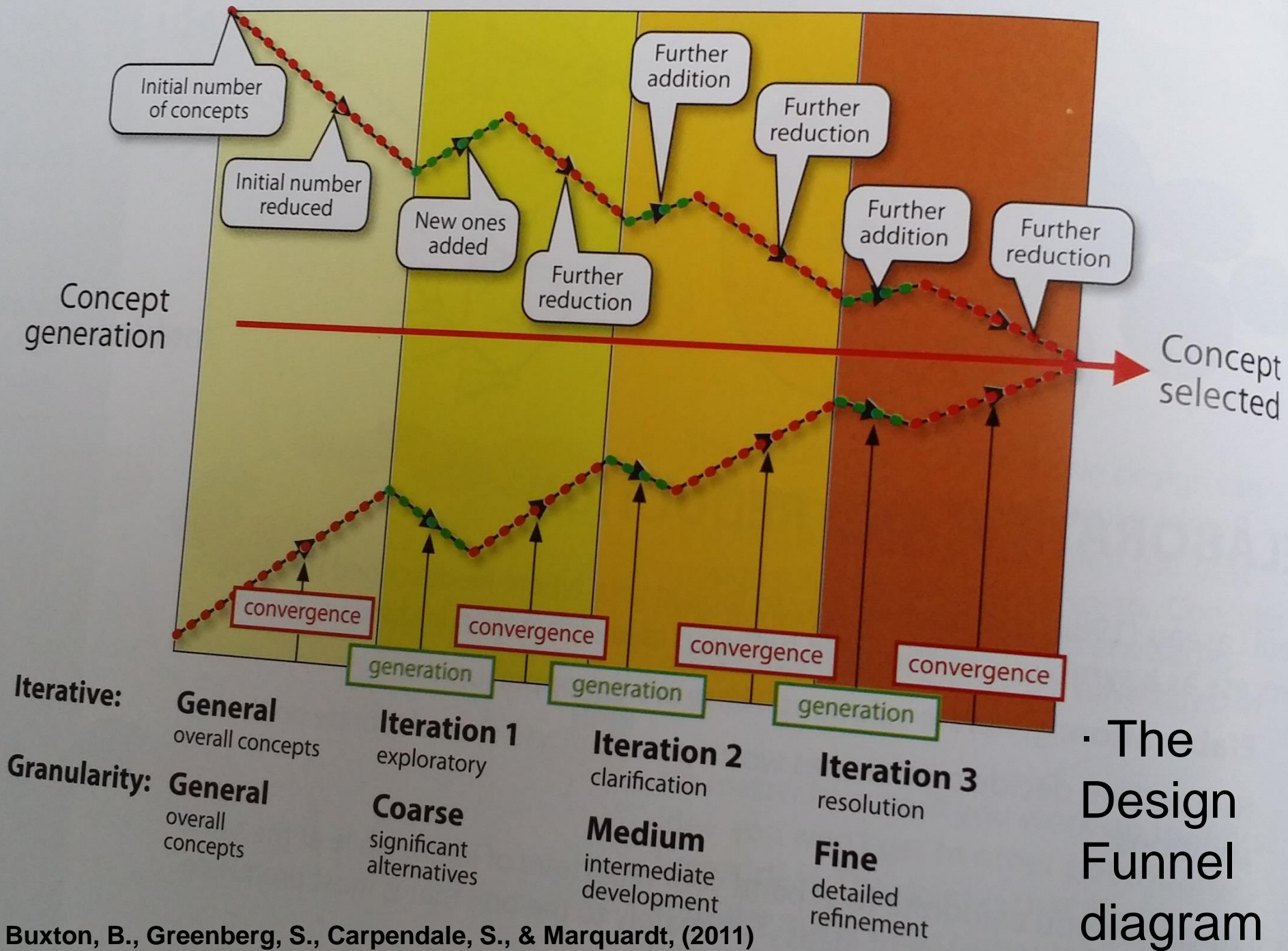


# The Design Process

- User Centred Design (UCD) diagram











· **Type of user (each will have different needs):**

- **Novice user**
- **Intermittent user**
- **Expert (frequent) user**



WEB DESIGN AND  
APPLICATIONS [HTML & CSS](#)[JavaScript Web APIs](#)[Graphics](#)[Audio and Video](#)[Accessibility](#)[Internationalization](#)[Mobile Web](#)[Privacy](#)[Math on the Web](#)

## ACCESSIBILITY

On this page → [why](#) • [what](#) • [how](#) • [wai](#) • [learn more](#) • [recent press releases](#) • [current status of specifications and groups](#)*The power of the Web is in its universality.**Access by everyone regardless of disability is an essential aspect.***Tim Berners-Lee, W3C Director and inventor of the World Wide Web**

The Web is fundamentally designed to work for all people, whatever their hardware, software, language, culture, location, or physical or mental ability. When the Web meets this goal, it is accessible to people with a diverse range of hearing, movement, sight, and cognitive ability.

Thus **the impact of disability is radically changed on the Web because the Web removes barriers** to communication and interaction that many people face in the physical world. However, when websites, web technologies, or web tools are badly designed, they can create barriers that exclude people from using the Web.

The mission of the [Web Accessibility Initiative \(WAI\)](#) is to lead the Web to its full potential to be accessible, enabling people with disabilities to participate equally on the Web.

See below for:

- [why: the case for web accessibility](#)
- [what: examples of web accessibility](#)

## CURRENT STATUS

[Accessibility \(All\)](#)[Web Content Accessibility  
Guidelines \(WCAG\)](#)[Accessible Rich Internet  
Applications \(WAI-ARIA\)](#)[User Agent Accessibility  
Guidelines \(UAAG\)](#)[Authoring Tool Accessibility  
Guidelines \(ATAG\)](#)[Evaluation and Report  
Language \(EARL\)](#)[IndieUI](#)



▪ **Responsive Design**





# Who are your Product Users?



- As part of the UCD process, we can find this out from:
  - User Research/Usability Research:
    - Primary & Secondary Sources
  - Website analytics      · Competitive review/analysis
  - Customer comments/queries
  - UX Targets: quantitative data, both objective data, such as observable user performance, and subjective data, such as user opinion and satisfaction
  - UX Goals





**· Some common UX measures can be paired with quantitative metrics including:**

- Objective UX measures (directly measurable, subjective, based on user opinions)**
- Initial performance**
- Long-term performance**
- Advanced feature usage**
- Benchmark tasks you choose as measuring instruments should closely represent tasks real users will perform in a real work context**







Who do you want as Site Users?



A large, dense crowd of people is shown from a high angle, filling the frame. Many individuals are looking towards the right side of the image. Several people are holding up cameras and smartphones, suggesting they are at a public event or concert. The text is overlaid on the left side of the image.

**· Need to take account of the following in your designing if you want particular users:**

- Ease of use**
- Power performance for expert users**
- Avoid features that can contribute to user error**
- High customer satisfaction**
- Walk-up-and-use learnability for new users**



- Draw in the user, engagement, attraction
- Learnability – a set of benchmark tasks of increasing complexity might be appropriate
- Retainability – keeping the user on the site
- First impression of the website/mobile app etc (initial opinion, initial satisfaction)
- Long-term (longitudinal) user satisfaction







# Understanding & Designing for Users Needs

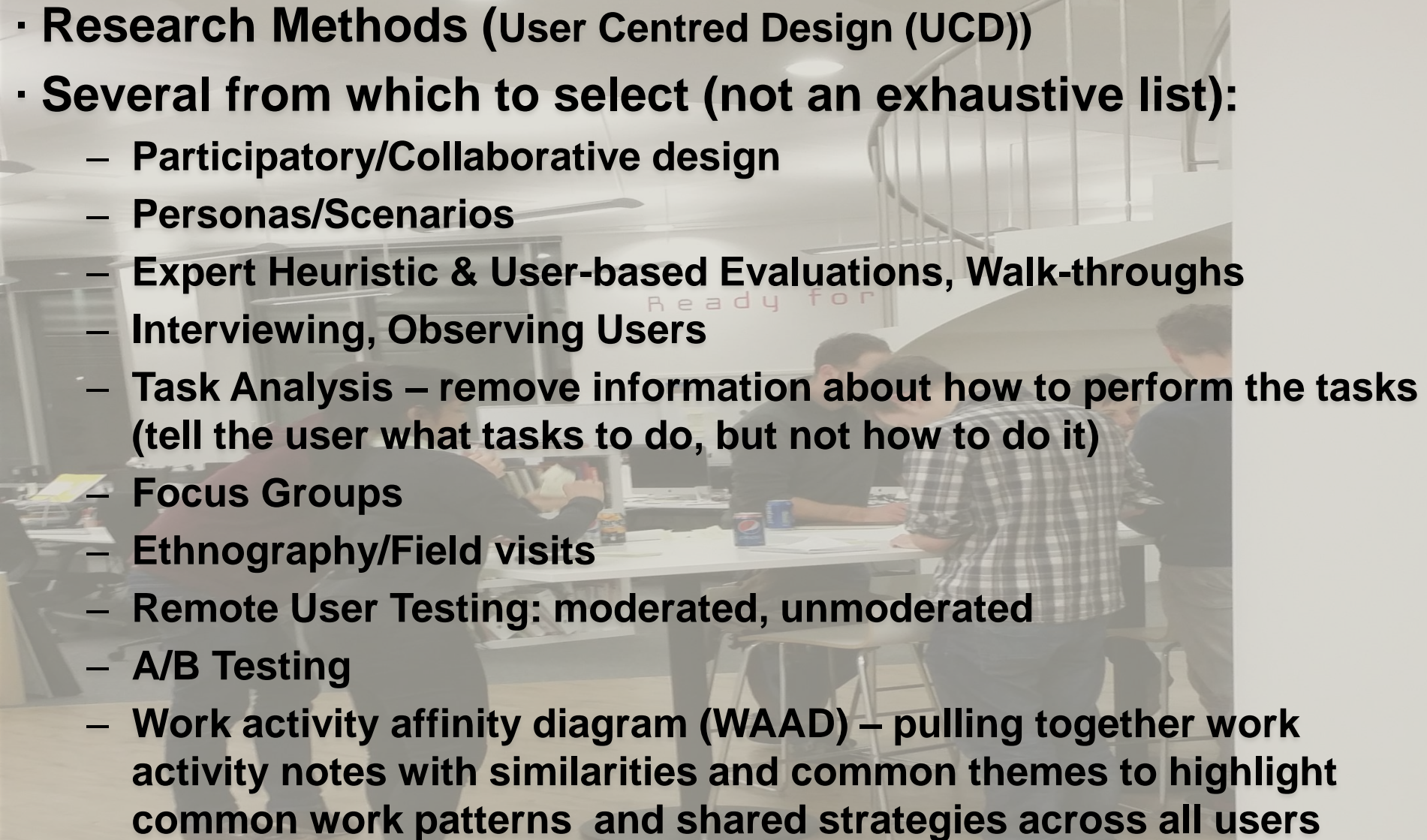


• Understand the users needs so you know exactly what users do, need, and think

– Consider:

- Context of use
- Mental models
- Level of expertise (professional i.e. frequent, or interim, or novice)
- Accessibility



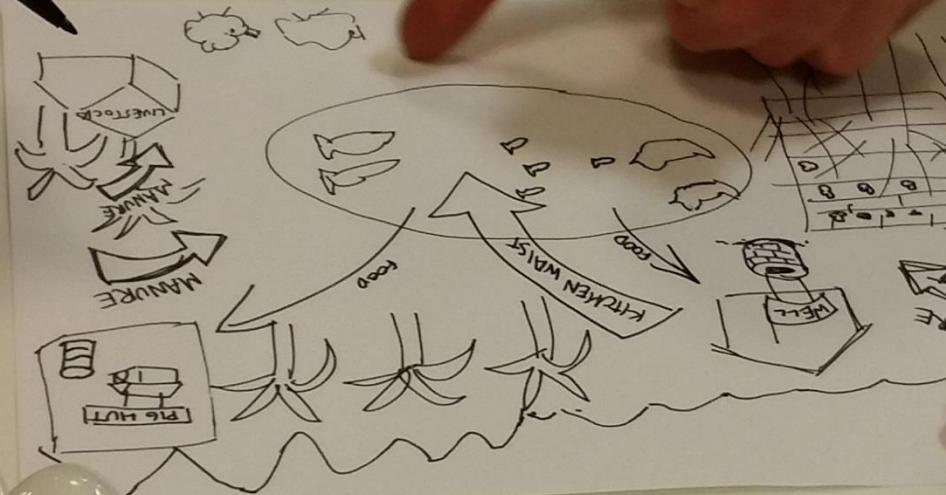
- 
- **Research Methods (User Centred Design (UCD))**
  - **Several from which to select (not an exhaustive list):**
    - **Participatory/Collaborative design**
    - **Personas/Scenarios**
    - **Expert Heuristic & User-based Evaluations, Walk-throughs**
    - **Interviewing, Observing Users**
    - **Task Analysis – remove information about how to perform the tasks (tell the user what tasks to do, but not how to do it)**
    - **Focus Groups**
    - **Ethnography/Field visits**
    - **Remote User Testing: moderated, unmoderated**
    - **A/B Testing**
    - **Work activity affinity diagram (WAAD) – pulling together work activity notes with similarities and common themes to highlight common work patterns and shared strategies across all users**



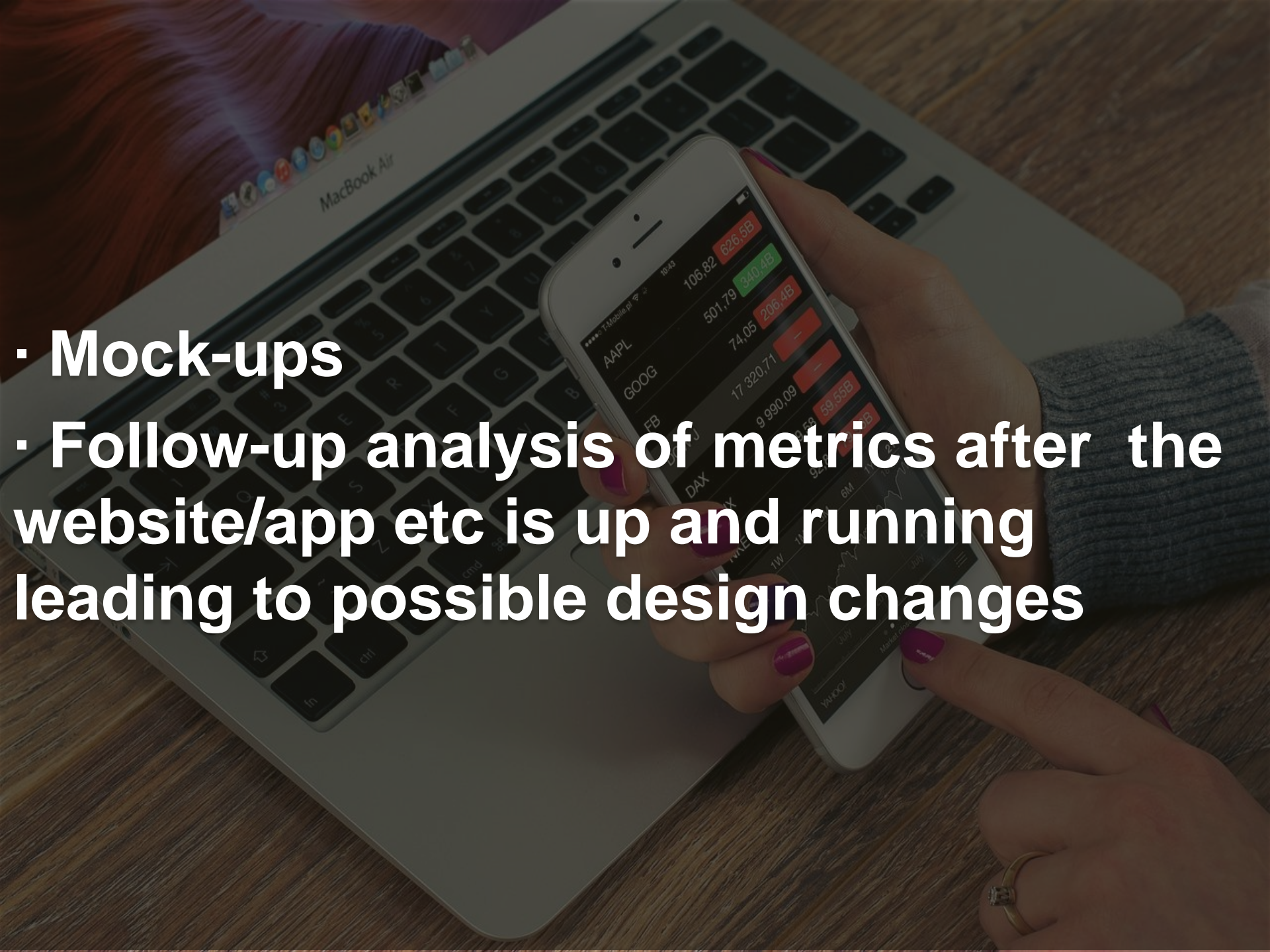
# Following on from Research



- Design ideation leads to the representation of mental models, conceptual design
- User Requirements - meeting user goals and needs, to understand their motivations, the device and usage patterns
- Wireframes
- Design storyboards
- Task flows - most likely scenarios and sequences that users will follow
- Prototypes





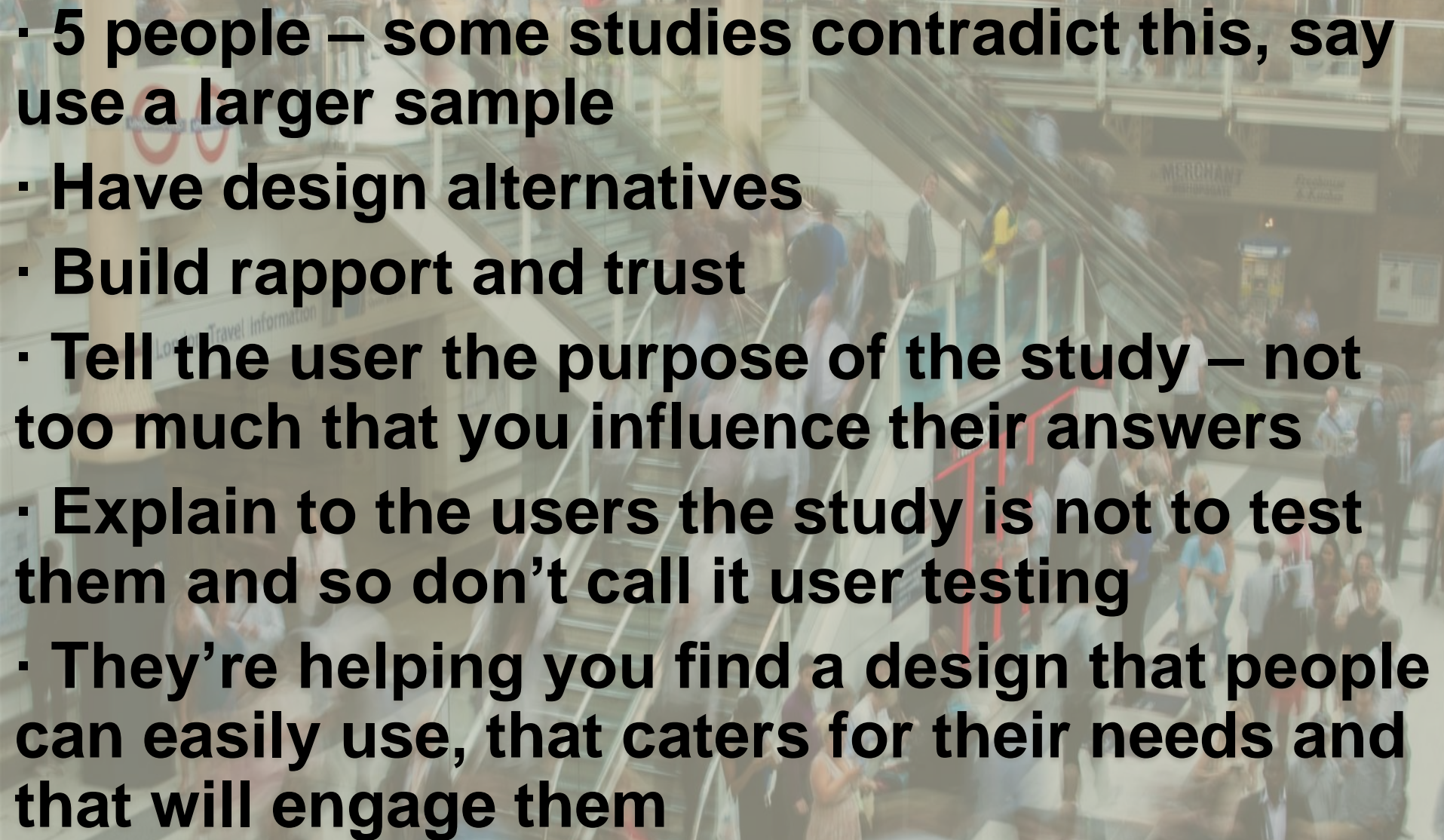
- 
- A hand with purple nail polish holds a white smartphone over a silver MacBook Air keyboard. The phone screen shows a stock market app with a list of stocks and their prices. The background is a wooden desk.
- Mock-ups
  - Follow-up analysis of metrics after the website/app etc is up and running leading to possible design changes



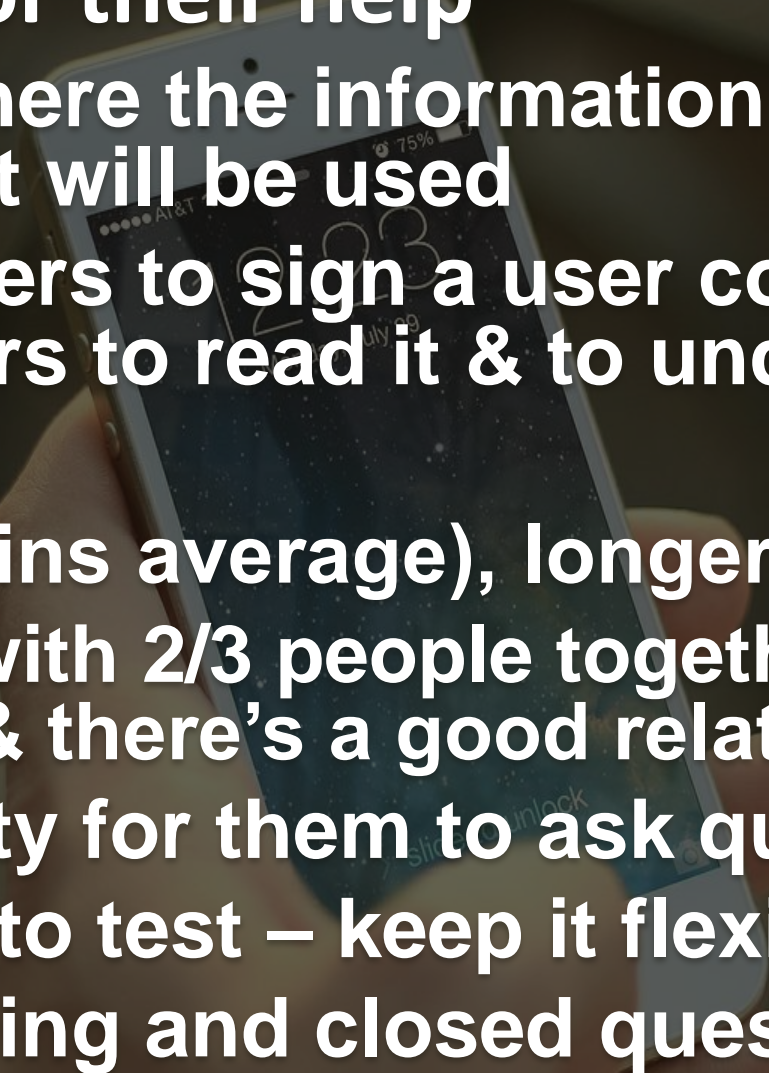


# User Testing



- 
- **5 people – some studies contradict this, say use a larger sample**
  - **Have design alternatives**
  - **Build rapport and trust**
  - **Tell the user the purpose of the study – not too much that you influence their answers**
  - **Explain to the users the study is not to test them and so don't call it user testing**
  - **They're helping you find a design that people can easily use, that caters for their needs and that will engage them**

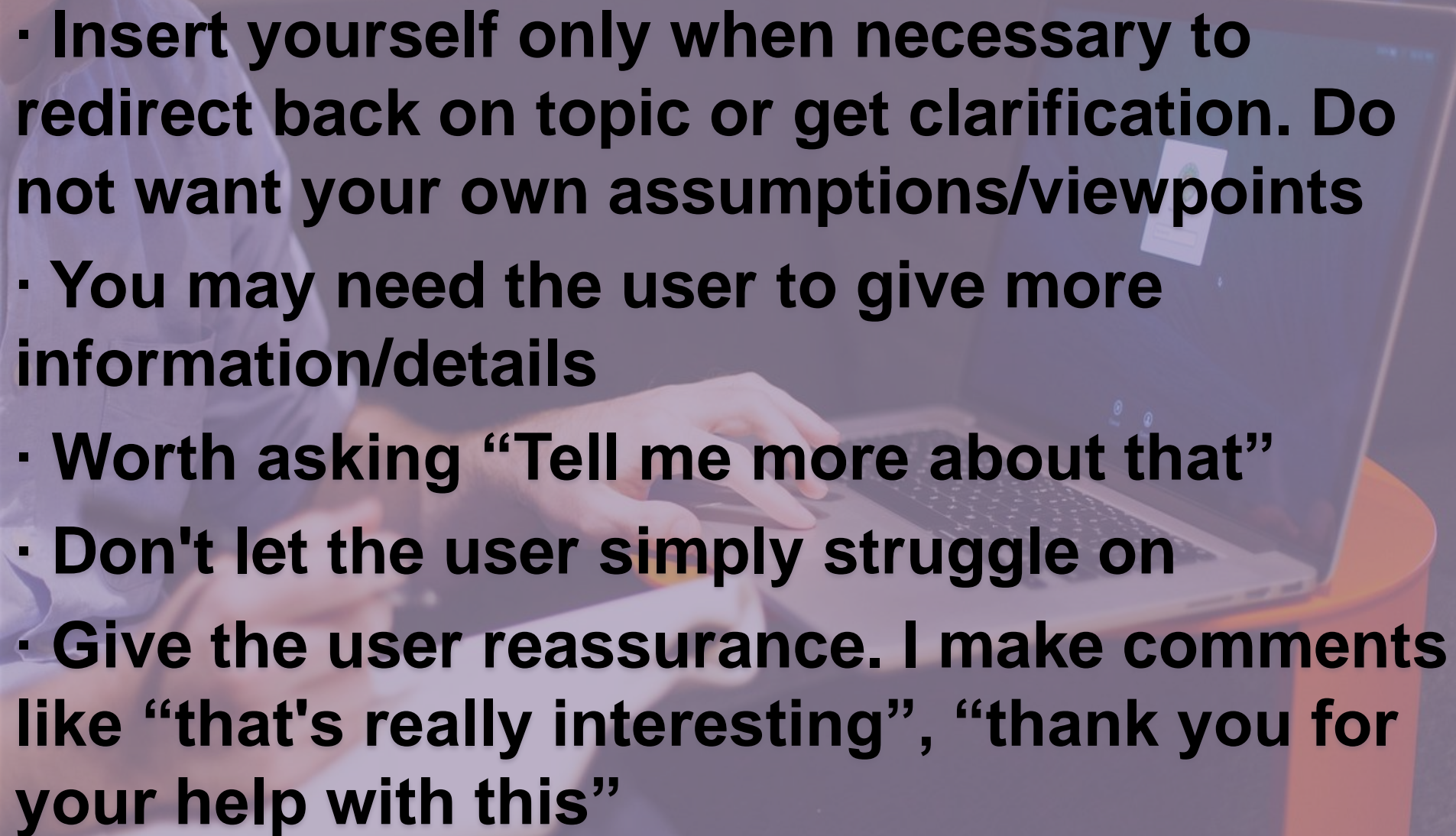


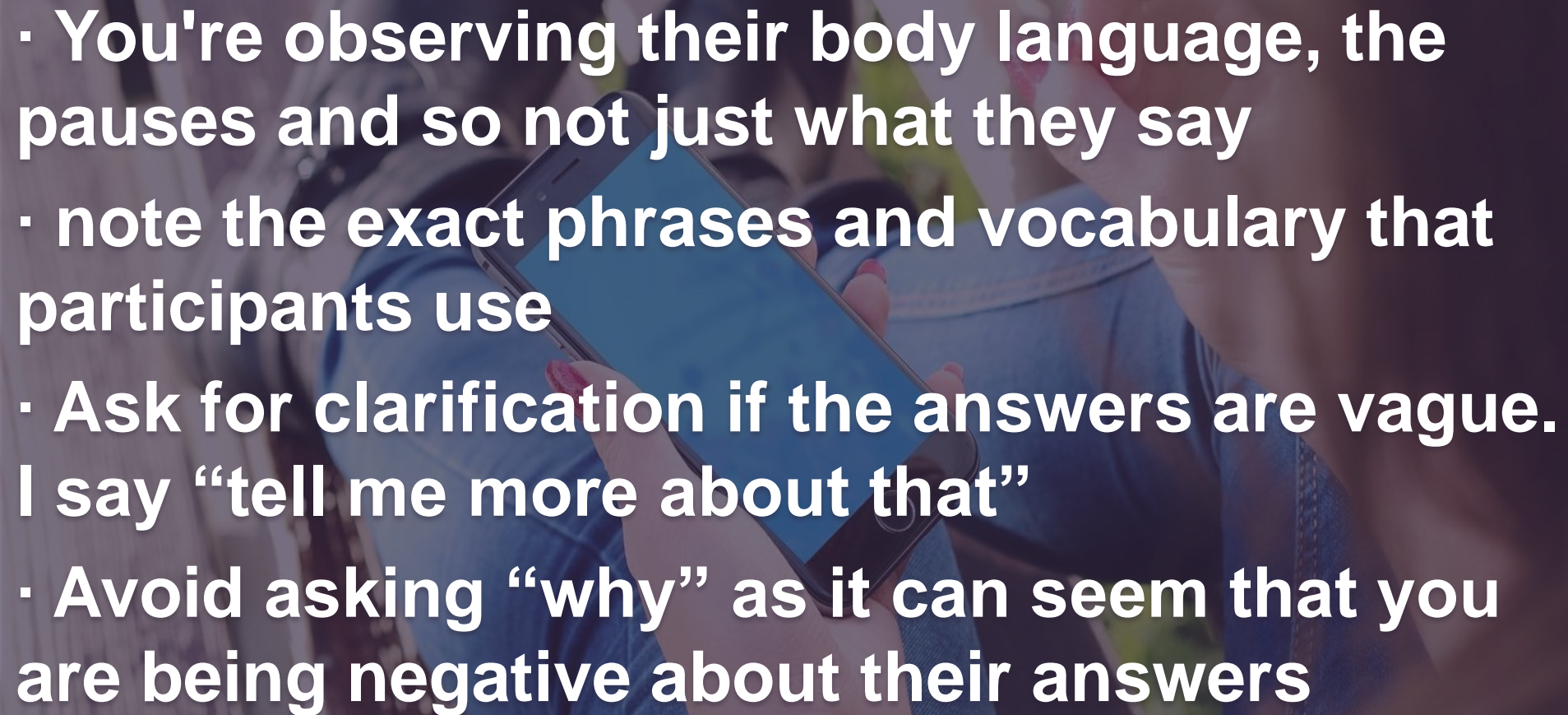
- 
- Looking for their help
  - Explain where the information from their involvement will be used
  - Get the users to sign a user consent form – at least 24hrs to read it & to understand
  - Location
  - Time (20mins average), longer -> breaks
  - Sessions with 2/3 people together -> they know each other & there's a good relationship
  - Opportunity for them to ask questions
  - List areas to test – keep it flexible
  - Avoid leading and closed questions

- Ask follow-up questions
- Ask open-ended questions that encourage the subject to talk
- Your questions are prompts to reveal situations, attitudes, and behaviours
- Be relaxed to keep the interview as natural as possible

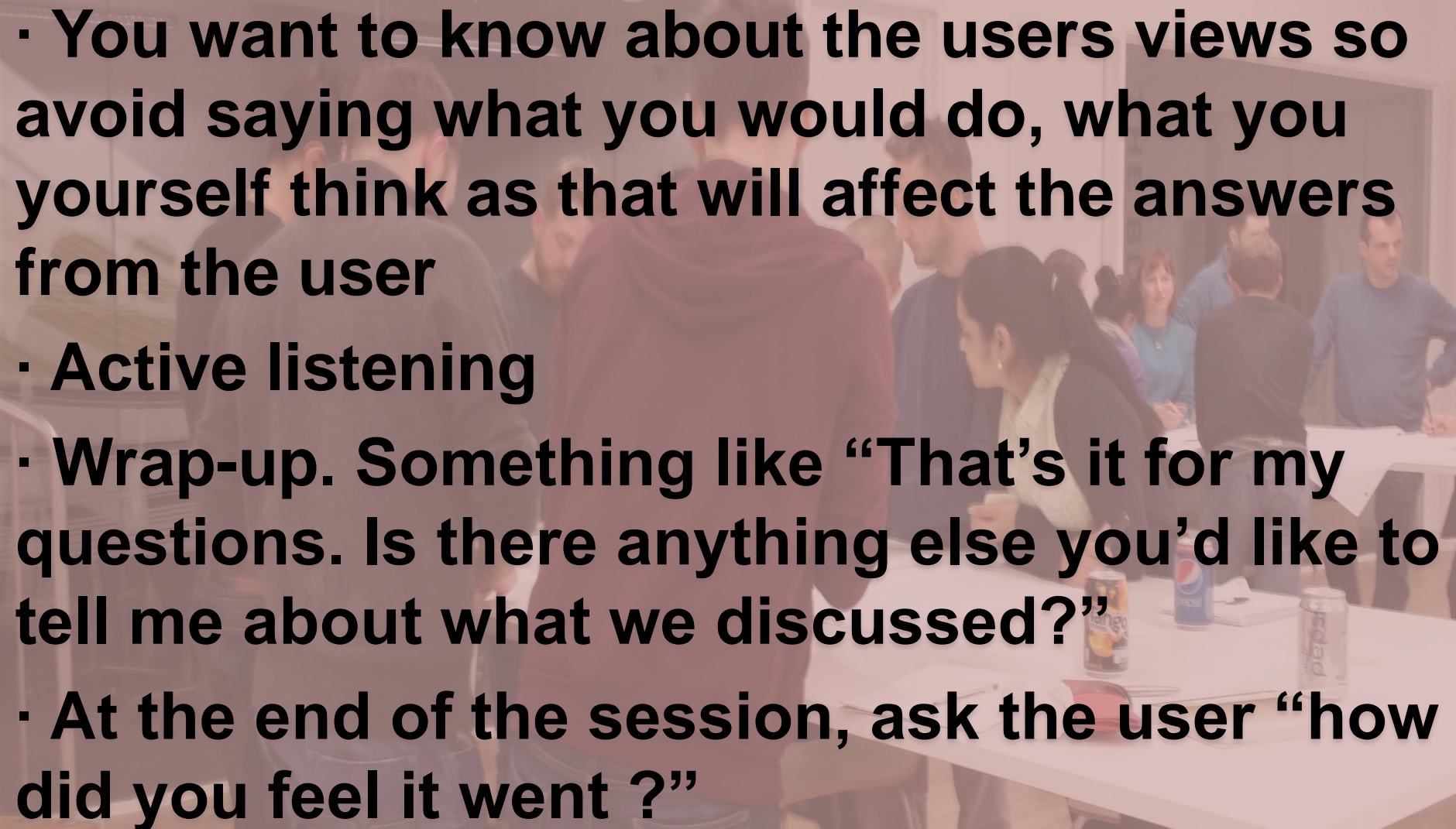




- 
- A person is sitting at a desk, using a laptop. The background is slightly blurred, showing a person's arm and hand on the laptop. The text is overlaid on the image in a large, bold, black font.
- **Insert yourself only when necessary to redirect back on topic or get clarification. Do not want your own assumptions/viewpoints**
  - **You may need the user to give more information/details**
  - **Worth asking “Tell me more about that”**
  - **Don't let the user simply struggle on**
  - **Give the user reassurance. I make comments like “that's really interesting”, “thank you for your help with this”**

- 
- You're observing their body language, the pauses and so not just what they say
  - note the exact phrases and vocabulary that participants use
  - Ask for clarification if the answers are vague. I say “tell me more about that”
  - Avoid asking “why” as it can seem that you are being negative about their answers



- 
- You want to know about the users views so avoid saying what you would do, what you yourself think as that will affect the answers from the user
  - Active listening
  - Wrap-up. Something like “That’s it for my questions. Is there anything else you’d like to tell me about what we discussed?”
  - At the end of the session, ask the user “how did you feel it went ?”



# UX Designing with User Testing – Weather app example



## **- Summary of what I did:**

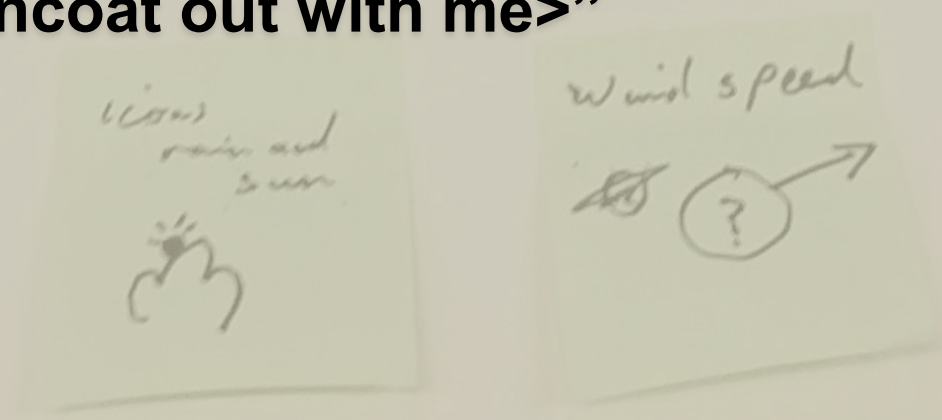
- Asked a random sample of 5 people what apps they used on their mobile phones – found weather apps were the common choice**
- From that, to show the design process for this group, decided on a weather app designed for older adults (50+ yrs) (have worked with older adults in the past, so that came to mind for the example tonight)**
- Carried out background secondary research on designing for older adults – peer reviewed journal articles, plus research/studies carried out – reliability & validity**
- Methods: Expert Heuristic & User-based Evaluations, Participatory/Collaborative design, Interviewing/Observing Users -> observing - using their mobiles**
- Expert/user heuristic evaluation of 3 weather apps: Met office app, Yahoo weather app, BBC Weather app**  
**-> found the BBC Weather app to be the better one**

- User testing session with 4 people so far to find the ‘user requirements’
  - User requirements -> “As a <type of user>... ..I want <some goal>... ..so that <some reason>”
- Video recorded the 4 user testing sessions
- The ages of the users were 63, 59, 59, 42 and were male
- Divided the users from what they said/their actions into the user type: 1 novice user, 3 expert (frequent) mobile app/weather app users
- So far from the user testing sessions, have found over 25 user requirements (bear in mind the secondary research findings/user requirements also are to be added)

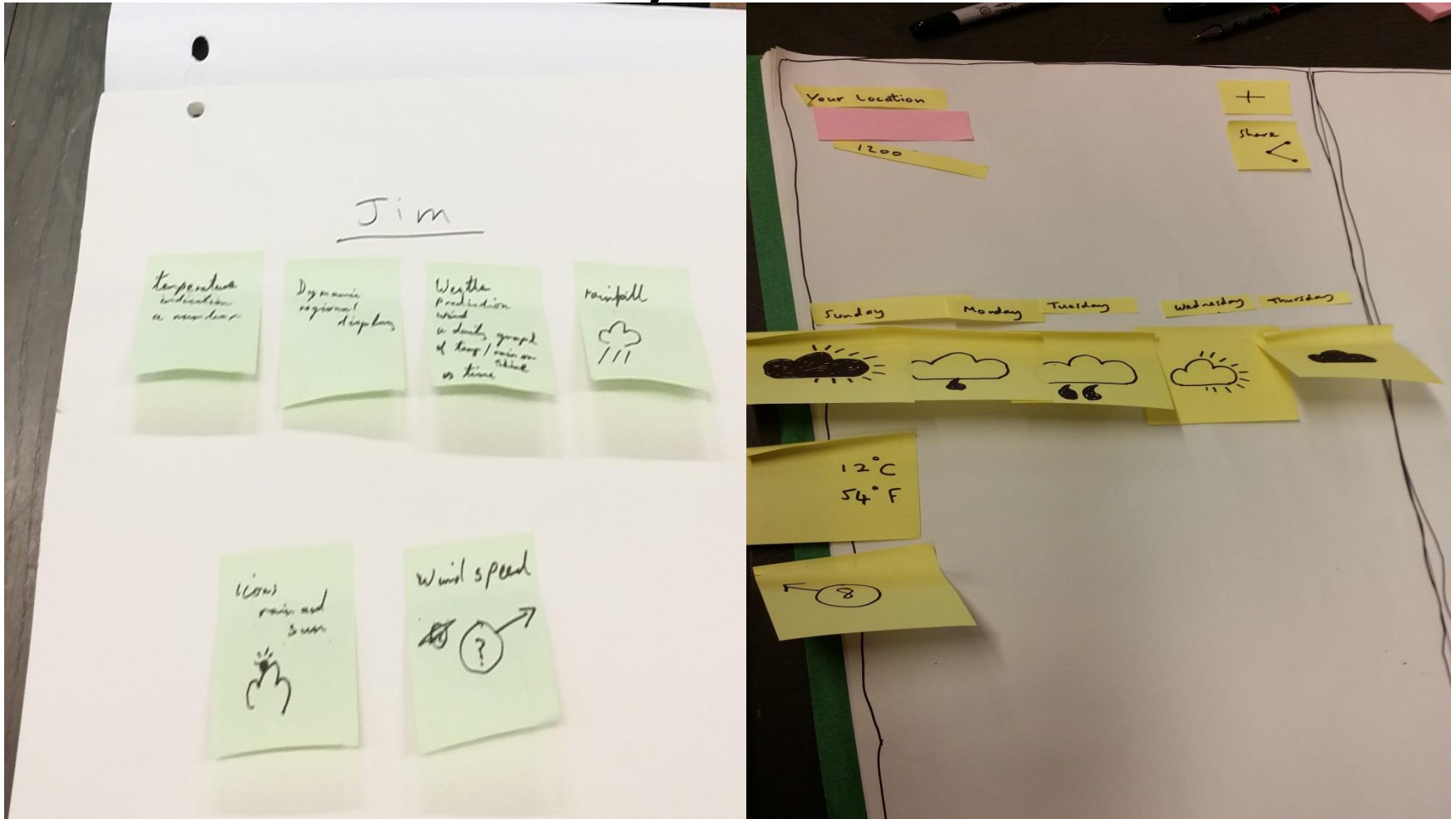


· Example from the user transcript:

- User requirements -> “As a <type of user>... ..I want <some goal>... ..so that <some reason>”
- User requirements -> “expert user of the weather app>I want <to be able to see what the weather is quickly whilst I’m on the go>so that<I know whether to take a raincoat out with me>”



# Sessions with users – Yes, post-its are very useful

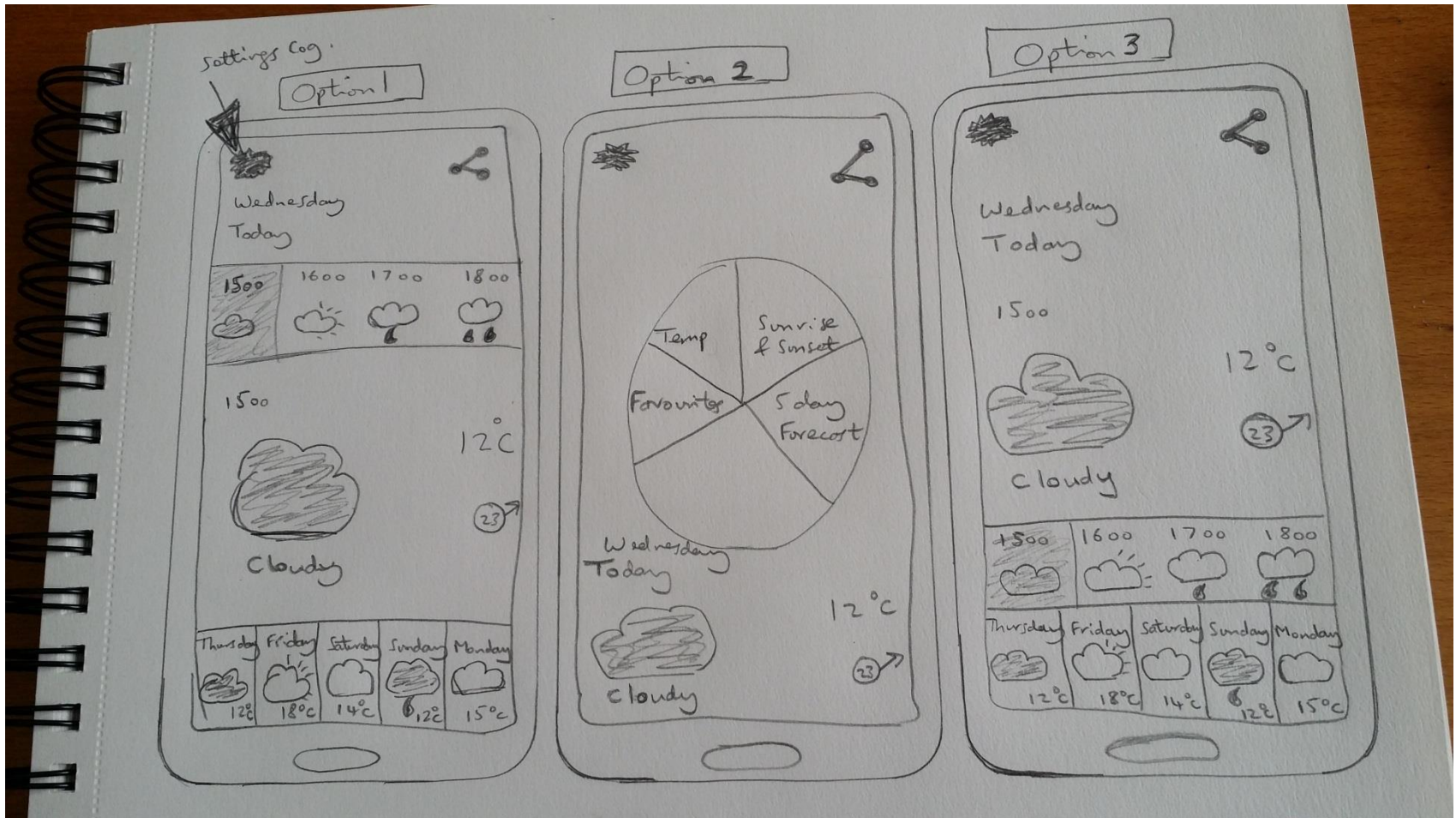




Sessions with users – can be practical, which will be engaging & they'll feel at ease



# Initial sketches from starting the user testing sessions (main home screen). Try and give alternative screen layouts:





# **Future work required:**

- Find an Intermittent older adult user for user testing**
- Female older adults (differences in thinking?) – include as the 4 included were male**
- Show screen layout sketches for views**
- Prototypes of the screen designs and get the same users to try them out – from this refine the designs trying the designs out on the users each time (remember the Design Funnel diagram)**
- User Journeys – Goals, Tasks**
- Could add an additional user (cross-reference the findings) in addition to the ones already involved**

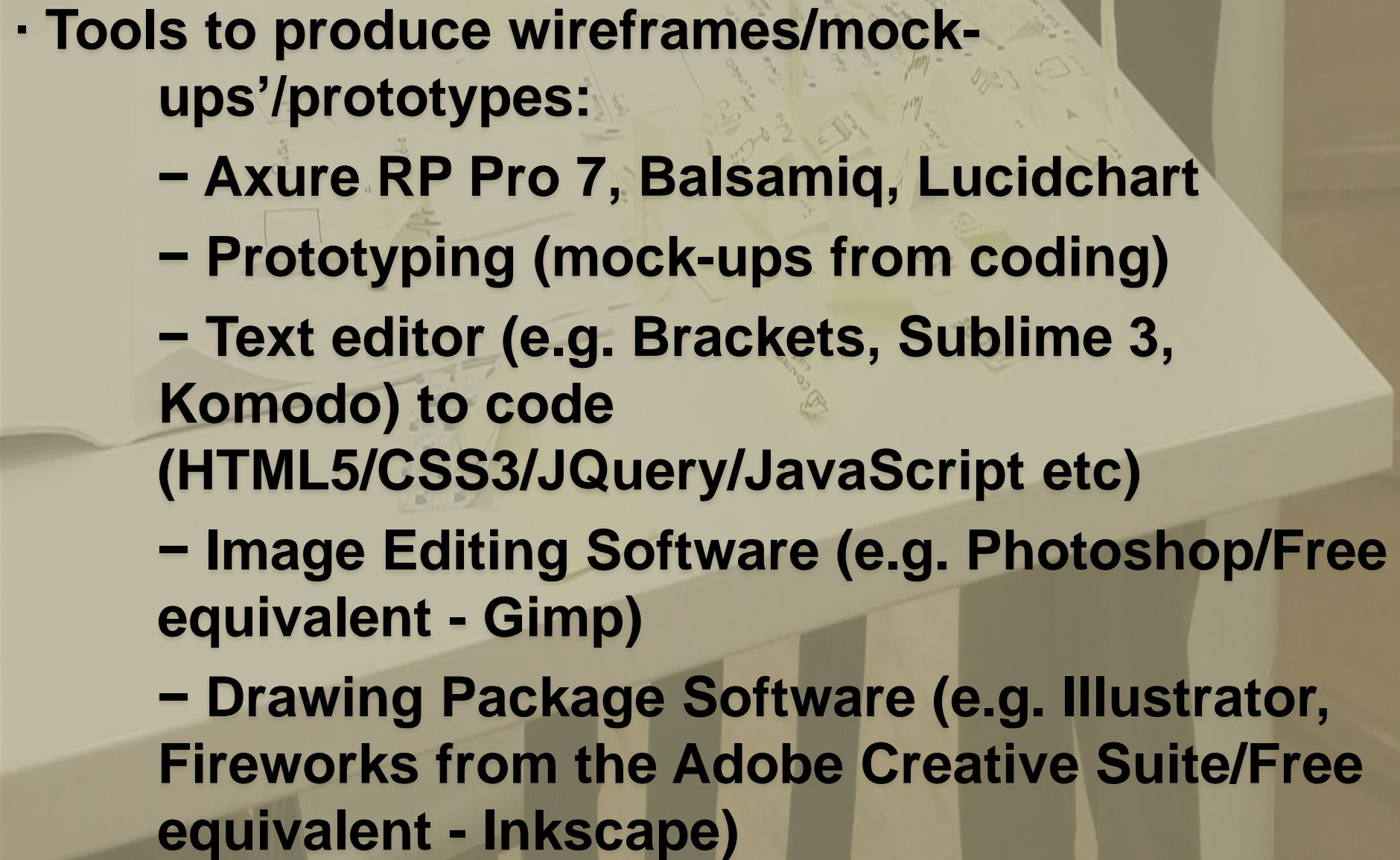


# Your UX Toolkit





- **Your Own Sight (observation)**
- **What you hear**
- **Active listening (users body language)**
- **Camera**
- **Video/Audio Recorder**
- **Paper Prototyping:**
- **paper, pencils/pens, scissors, blu tack, post-its**

- 
- The background of the slide is a photograph of a white table. On the table, there are several sheets of paper and numerous yellow sticky notes. Some of the sticky notes have handwritten text, including "23/07/2017", "11/11/2017", and "10/11/2017". There are also some small diagrams and sketches on the papers. The scene is lit with warm, indoor lighting, and the overall tone is professional and creative.
- **Tools to produce wireframes/mock-ups'/prototypes:**
    - **Axure RP Pro 7, Balsamiq, Lucidchart**
    - **Prototyping (mock-ups from coding)**
    - **Text editor (e.g. Brackets, Sublime 3, Komodo) to code (HTML5/CSS3/JQuery/JavaScript etc)**
    - **Image Editing Software (e.g. Photoshop/Free equivalent - Gimp)**
    - **Drawing Package Software (e.g. Illustrator, Fireworks from the Adobe Creative Suite/Free equivalent - Inkscape)**



- Refer to relevant standards
  - For example:
    - ISO 13407 'Human-Centred Design Processes for Interactive Systems'
    - IOS design standards when designing for IOS
- Refer to relevant guidelines
  - For example:
    - Nielsen's heuristics of Usability
    - Material Design



# Useful Resources



- 
- **Keep an electronic folder of things that inspire you to aid your creativity**
  - **Keep an electronic folder containing other screen shots of websites/apps etc of design features**
  - **Glean UX information from podcasts, blogs, websites and books**
  - **Listen to Podcasts to learn more – personal favourites:**
    - **Unfinished Business** <http://www.unfinished.bz/>
    - **UX Podcast** <http://uxpodcast.com/>
    - **The UX Intern** <http://theuxintern.com/>
    - **Johnny Holland** <http://johnnyholland.org/radio-john>

- 
- **99% Invisible** <http://www.airingpods.com/pods/99-invisible/>
  - **Let's Make Mistakes**  
<http://www.muleradio.net/mistakes/52/>
  - **The Web Ahead** <http://5by5.tv/webahead>
  - **UIE Brainsparks**  
<http://www.uie.com/brainsparks/audio/>
  - **Accidental Creative**  
<http://www.accidentalcreative.com/category/podcasts/>



- Read Blogs to learn more - personal favourites:
  - Boxes and Arrows <http://boxesandarrows.com>
  - Elegant Hack <http://eleganthack.com/>
  - Luke W - Ideation & Design <http://www.lukew.com/>



- Andrea Resmini <http://andrearesmini.com/>
- Useful Usability <http://www.usefulusability.com/>
- Tandem Seven <http://www.tandemseven.com/blog/>

– **Smashing Magazine**

<http://www.smashingmagazine.com/category/uxdesign/>

– **Mashable** <http://mashable.com/category/ux/>

– **A List Apart** <http://alistapart.com/blog>

– **Blog Invisionapp** <http://blog.invisionapp.com/>

– **Sitepoint Design & UX**

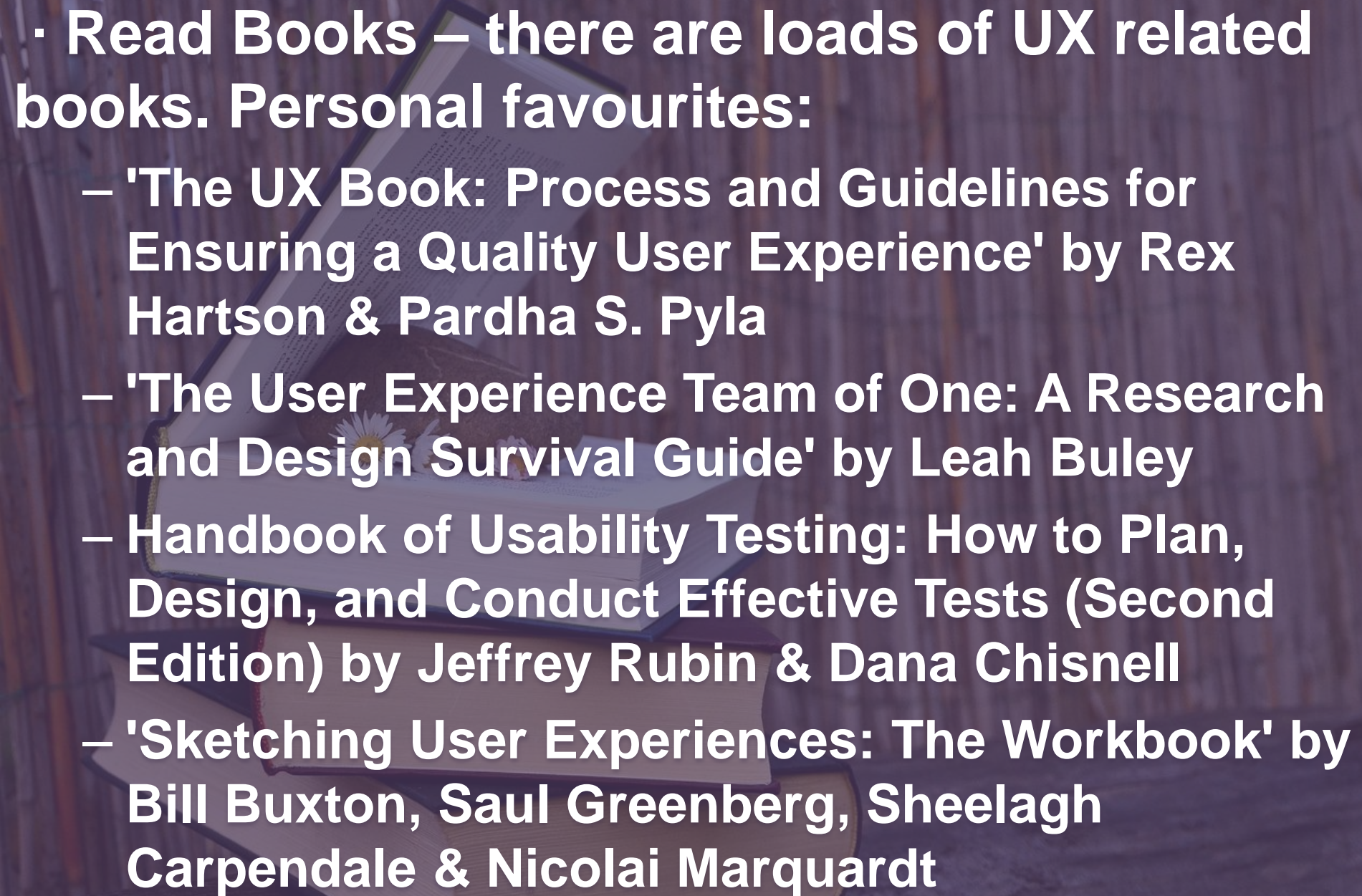
<http://www.sitepoint.com/design-ux/>

– **UXPA Magazine** <http://uxpamagazine.org/>

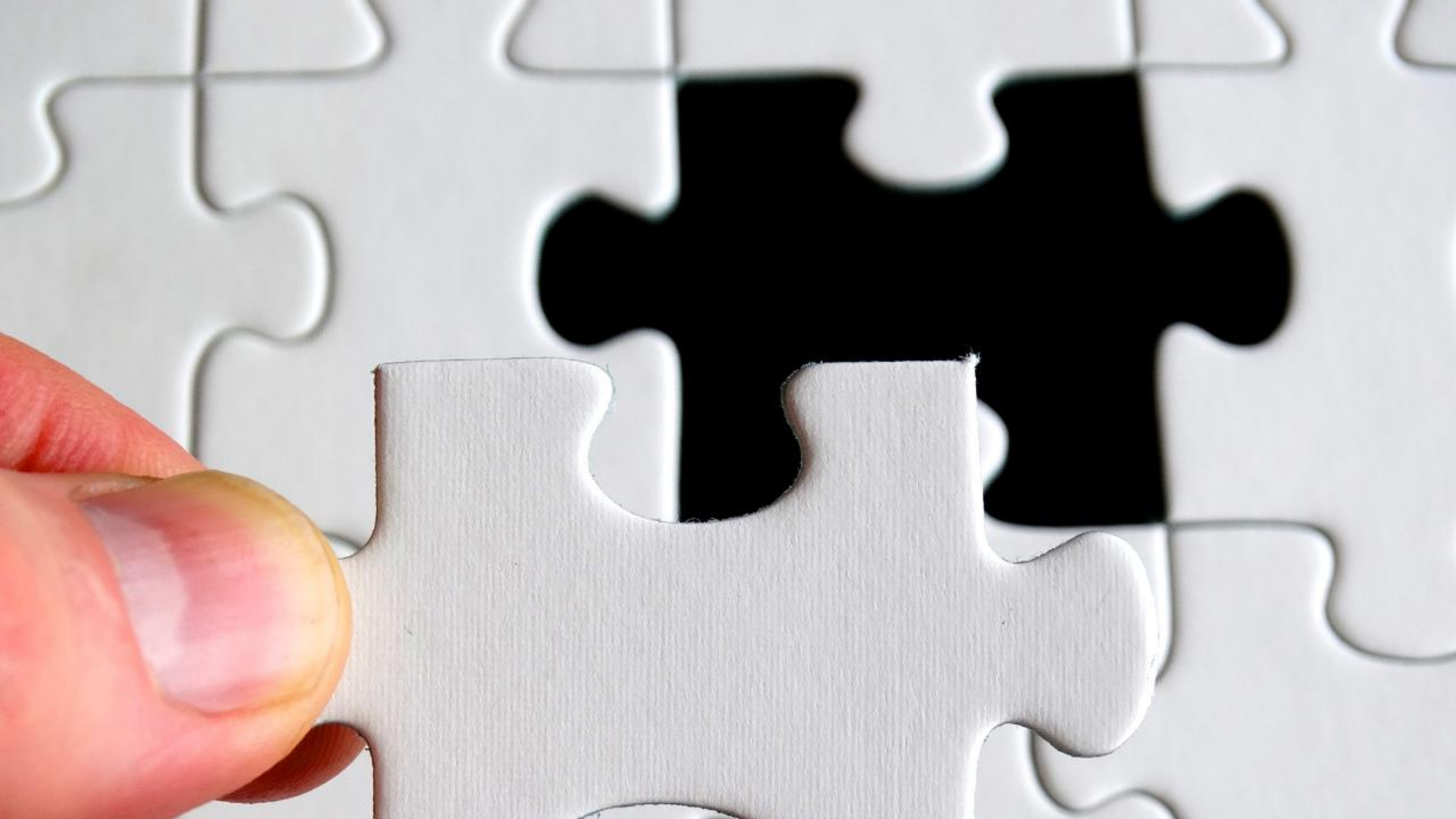




- Read websites with UX related articles – personal favourites:
  - Nielsen Norman Group <http://www.nngroup.com/>
  - User Interface Engineering <http://www.uie.com/>
  - UX Mag <http://uxmag.com/>
  - The UX Review <http://theuxreview.co.uk/>
  - UX Matters <http://www.uxmatters.com/>

- 
- A stack of four books is shown, with a small white daisy flower resting on the top book. The books are of various colors and thicknesses, and the flower is positioned slightly to the left of the center. The background is a dark, textured surface.
- **Read Books – there are loads of UX related books. Personal favourites:**
    - **'The UX Book: Process and Guidelines for Ensuring a Quality User Experience' by Rex Hartson & Pardha S. Pyla**
    - **'The User Experience Team of One: A Research and Design Survival Guide' by Leah Buley**
    - **Handbook of Usability Testing: How to Plan, Design, and Conduct Effective Tests (Second Edition) by Jeffrey Rubin & Dana Chisnell**
    - **'Sketching User Experiences: The Workbook' by Bill Buxton, Saul Greenberg, Sheelagh Carpendale & Nicolai Marquardt**





Any Questions?

## • Diagram References

### – User Centred Design Diagram

- Interaction Design Foundation (2015) User-Centred Design - Introduction. Available at: <https://www.interaction-design.org/> [Accessed: 3rd April 2015].

### – The Design Funnel Diagram

- Buxton, B., Greenberg, S., Carpendale, S., & Marquardt, N. (2011) *Sketching User Experiences: The Workbook*. Morgan Kaufmann.
- Original work from Stuart Pugh in 1990.