



An Roinn Oideachais
Department of Education

HTML/CSS Day 2

Fundamental Skills
Development



Schedule

9:00am – 10:30am	Session 4 UX - part 1 & 2
10:30am – 11:00am	Tea/Coffee
11:00am – 1:00pm	Session 5 CSS - part 1 & 2
1:00pm – 2:00pm	Lunch
2:00pm – 3:30pm	Session 6 CSS - Breakout Tasks



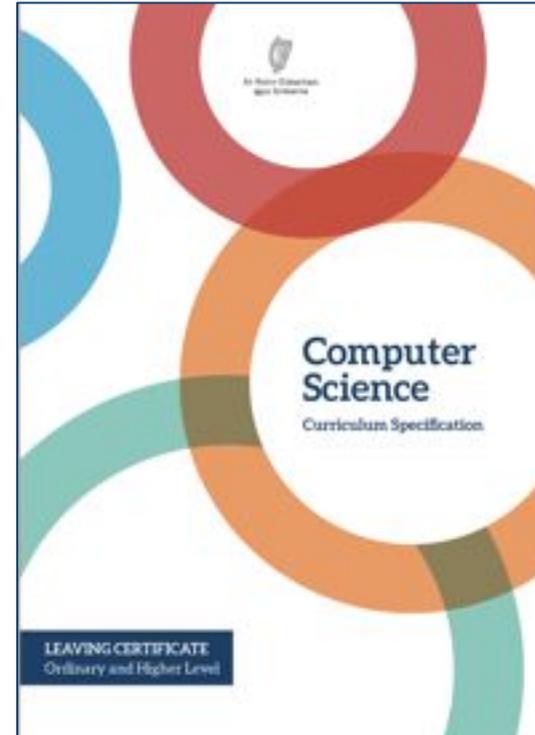
Session 4

UX Design

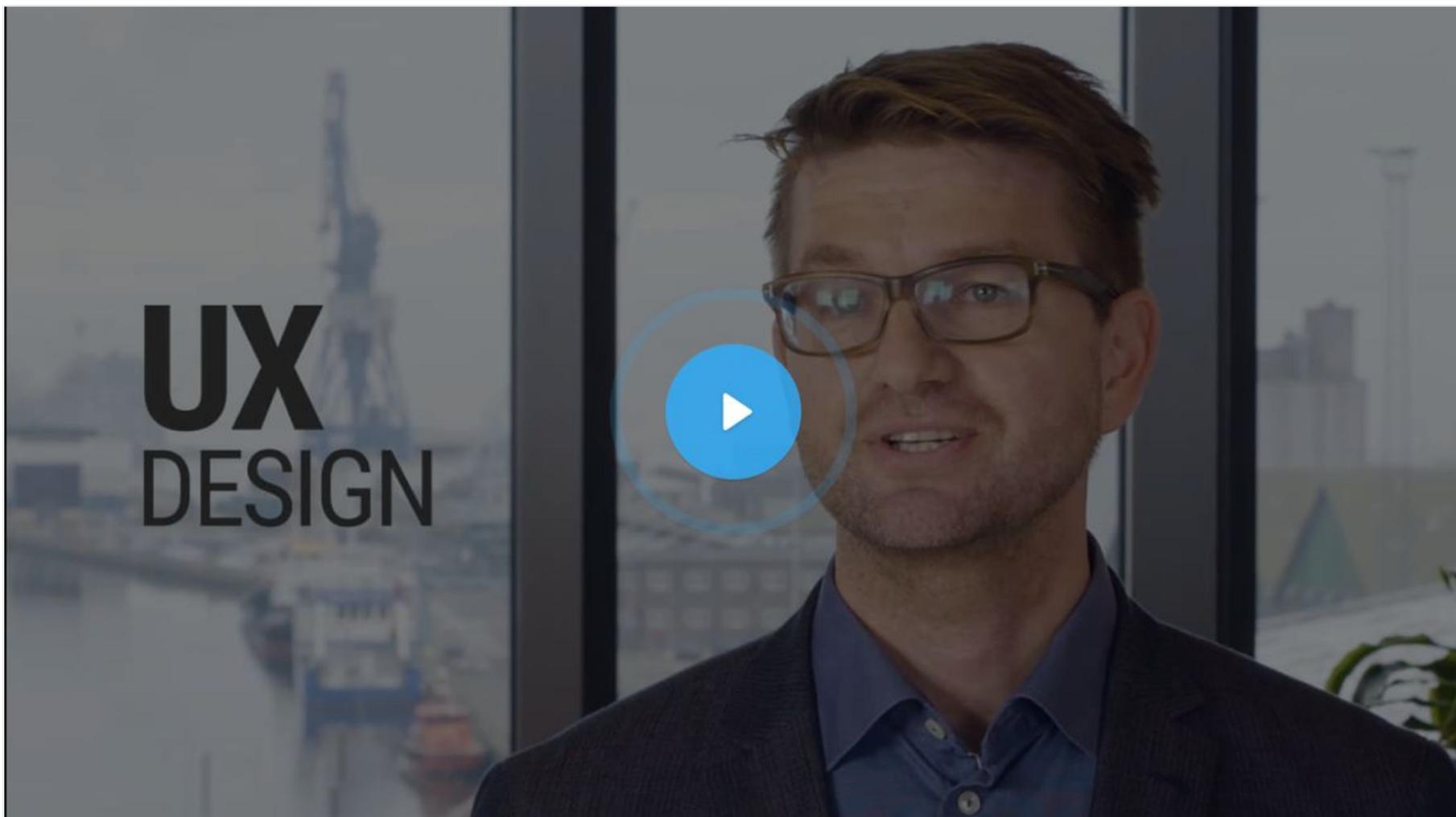
By the end of this session you will have...

- been introduced to UX design.
- looked at UX design examples.
- walk-through the process of UX design.
- examined different techniques - research / wireframe / personas/ sketching /prototyping.
- reviewed a case study - app design.
- been introduced to the principles of good design.
- been introduced to Don Norman's Principles of design.
- been introduced to Jacob Nielsens Usability Heuristics .
- learnt about Universal Design.

Why you need to know UX Design?



UX = User eXperience



<https://www.interaction-design.org/literature/topics/ux-design>

What is UX Design?

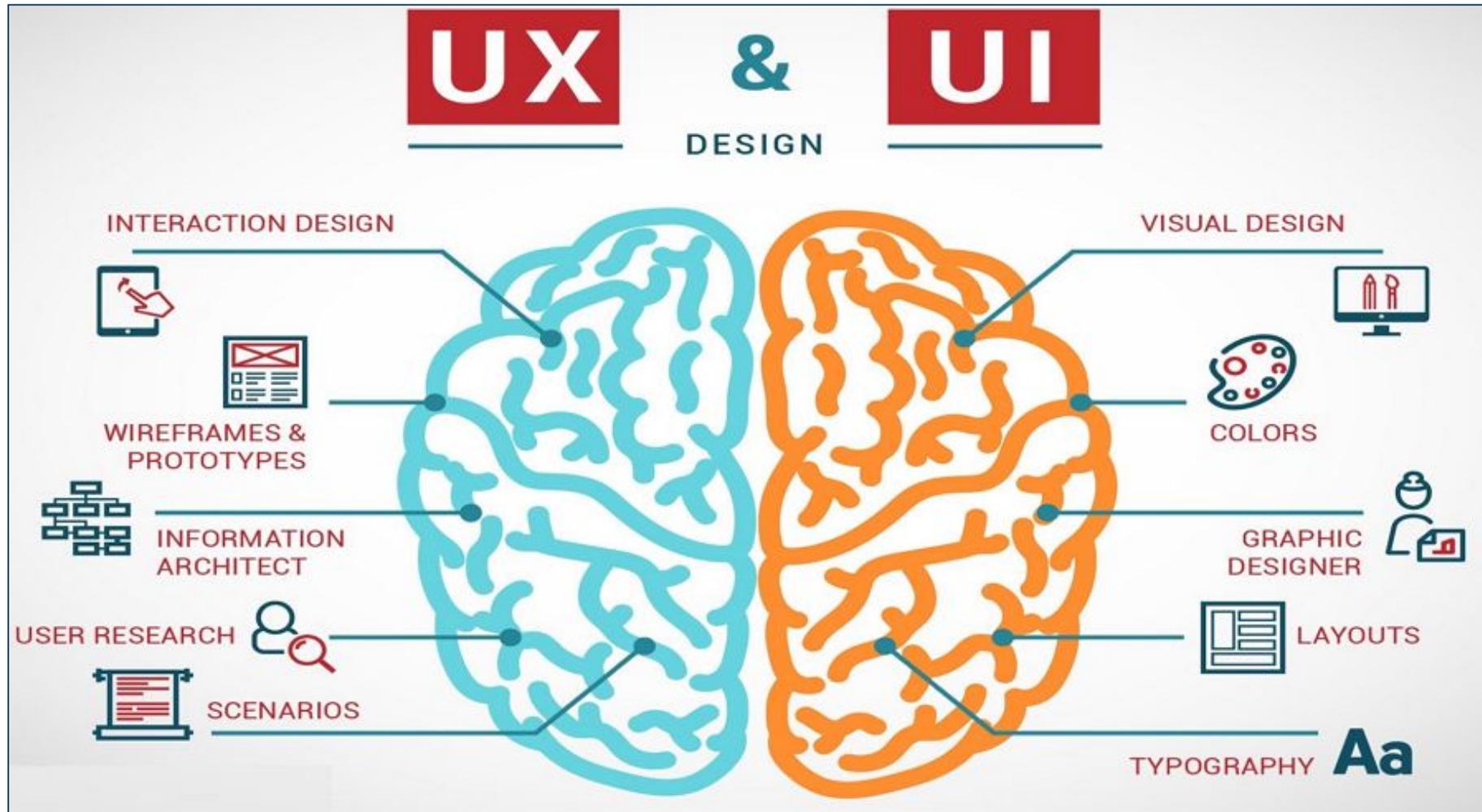


Activity 1 (UX Elevator)



What factors affect the UX of using an elevator?

The most obvious thing is the user interface (UI) - but there are more subtle factors e.g. How long will it take?





UX Design Examples

Good V Bad Web Design

Good web design

- Clear navigation
- Clear purpose of website
- Minimal distractions (adverts, animations, garish colours)
- Colours or theme are appropriate for topic
- Consistent layout/theme
- Considers usability, readability, accessibility

Bad web design

- Confusing navigation
- Confusing purpose of website
- Too many distractions (adverts, animations, garish colours)
- Colours or theme are not appropriate for topic
- Inconsistency in layout/theme
- Usability, readability, accessibility not considered

Take a Closer Look

Customer Registration

Suspicious activity found on lastname

NOTE: If you already have an account with us, please login at the [Sign In page](#).

Your Personal Details

First Name *

Last Name *

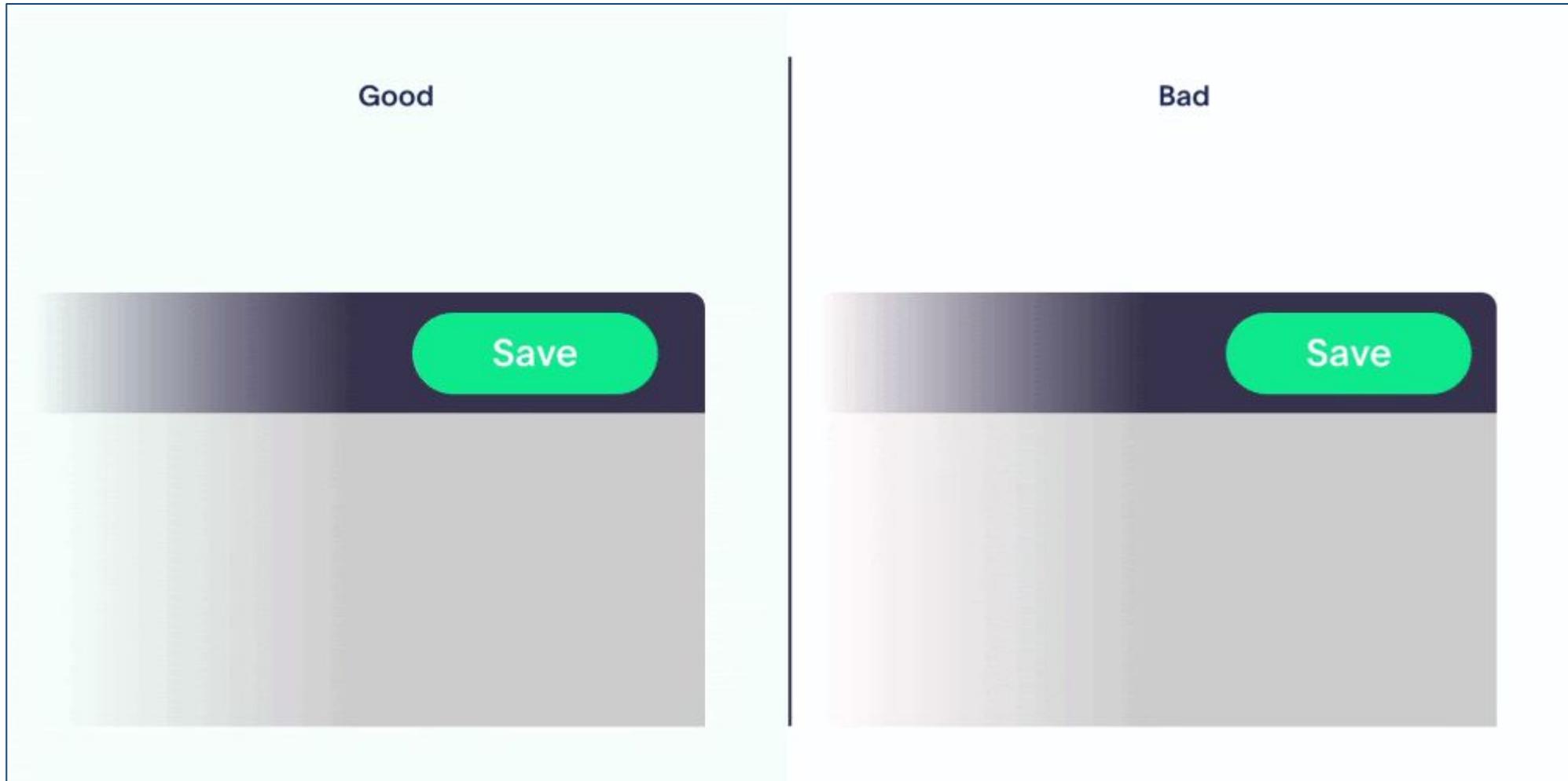
Last name

Required

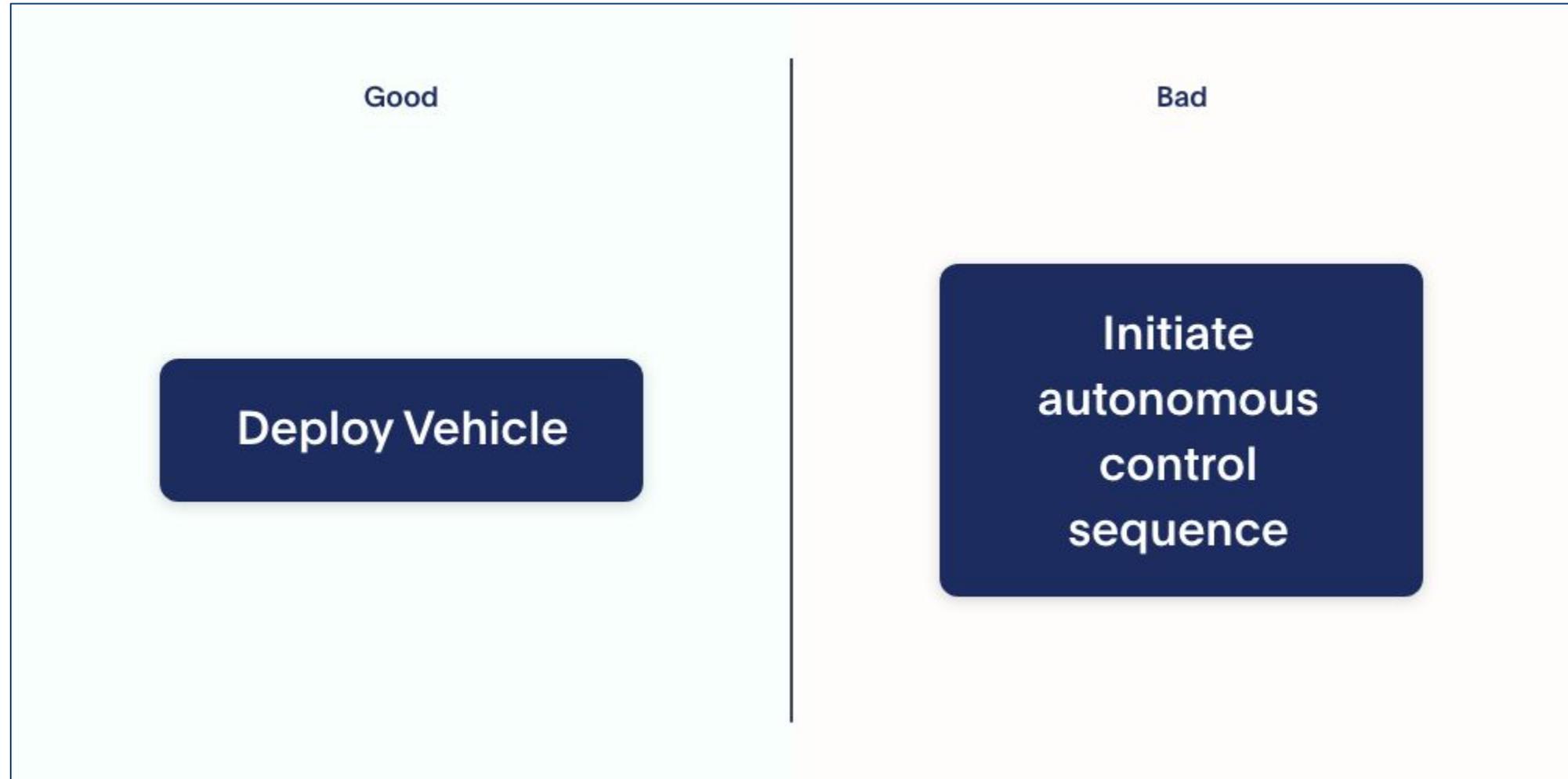


Sorry, please enter letters or punctuation only.

Demonstrate Current State

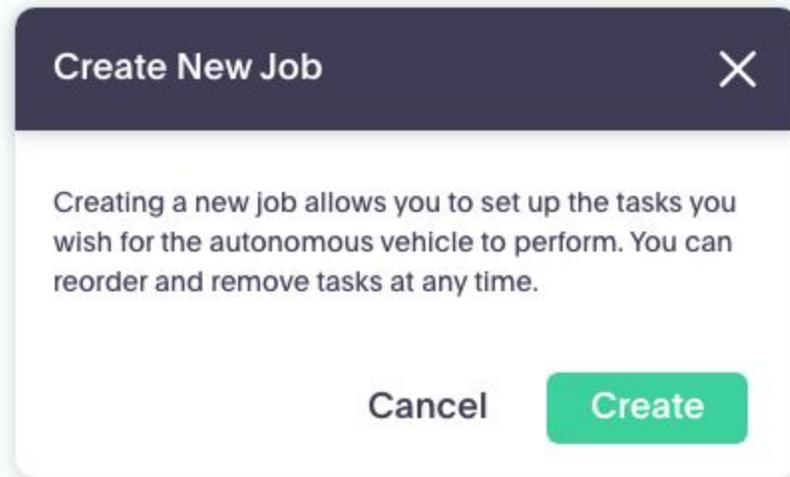


Using Clear, Understandable Language

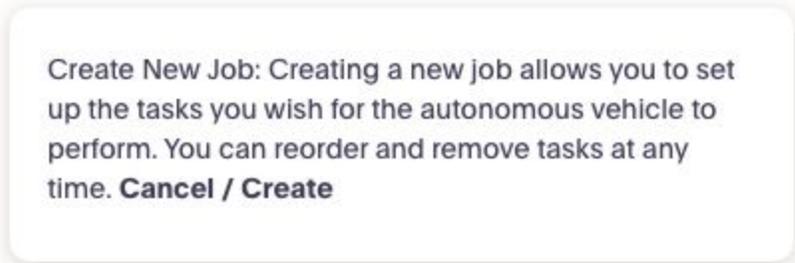


Effective Use of Colour and Hierarchy

Good



Bad



Reduce Errors

Good

Select an action 

Available Actions

- Load
- Send to Location
- Turn Off
- Raise Lift

Bad

Select an action 

- Load
- Unload
- Send to Location
- Turn On
- Turn Off
- Raise Lift

Communicate Errors and Next Steps

Good

First Name

Caitlynn

First Name

Haapala

Email

cait48gmail.com



Oops! This doesn't look like a valid email address. Try adding '@' before the domain name. [Accepted email formats](#)

Bad

validation fault - format does not match database.
Invalid entry.

First Name

Caitlynn

First Name

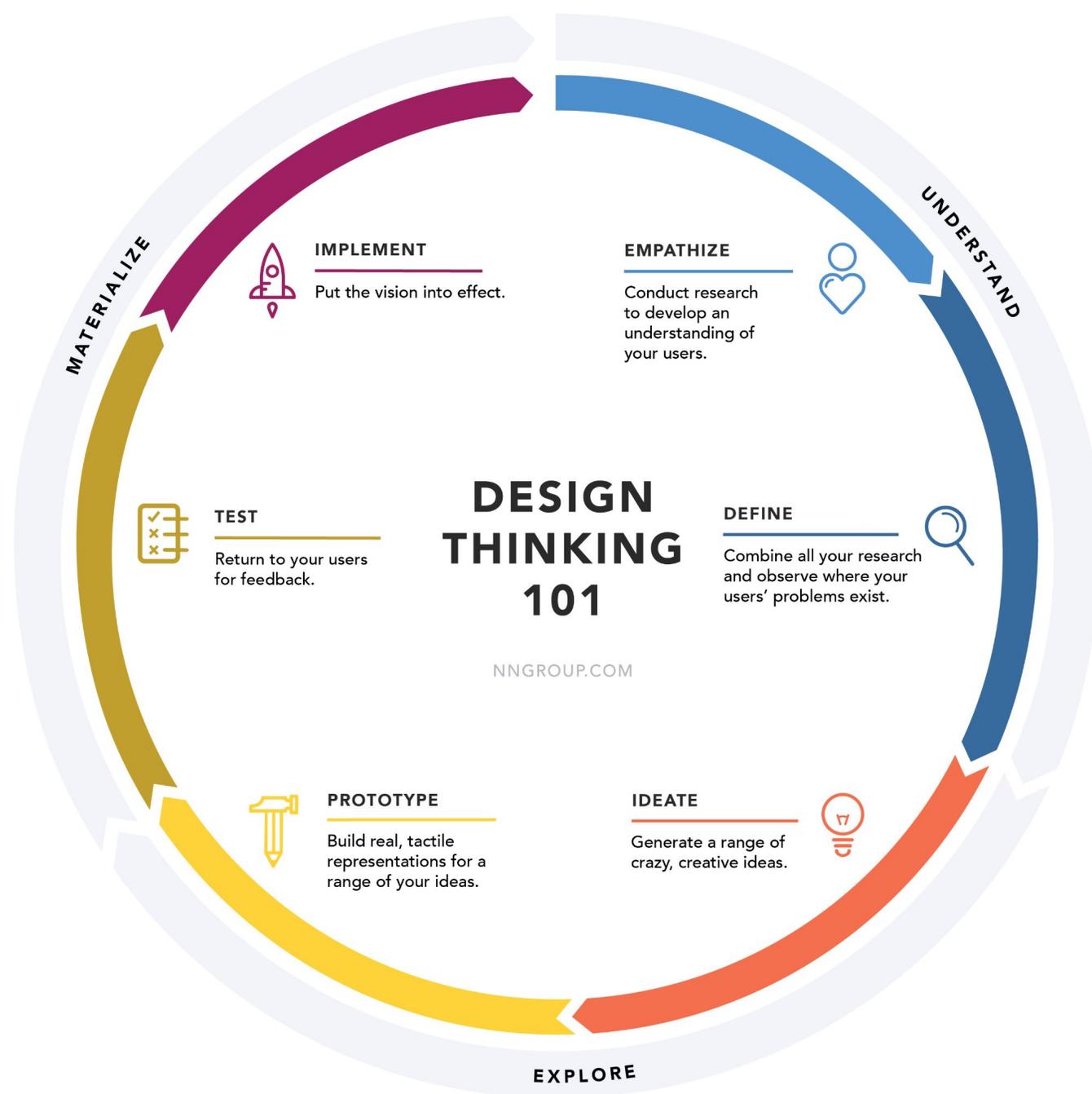
Haapala

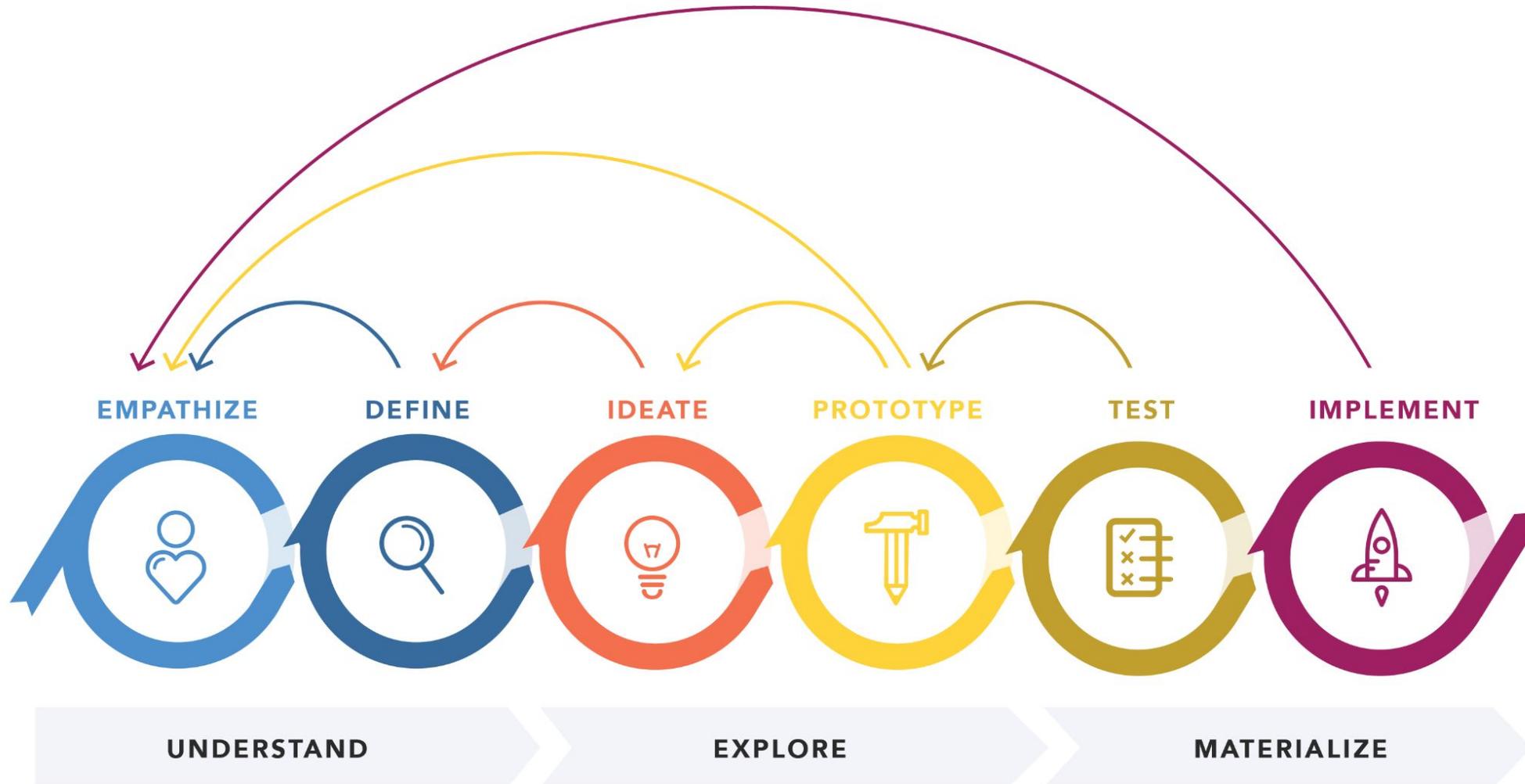
Email

cait48gmail.com

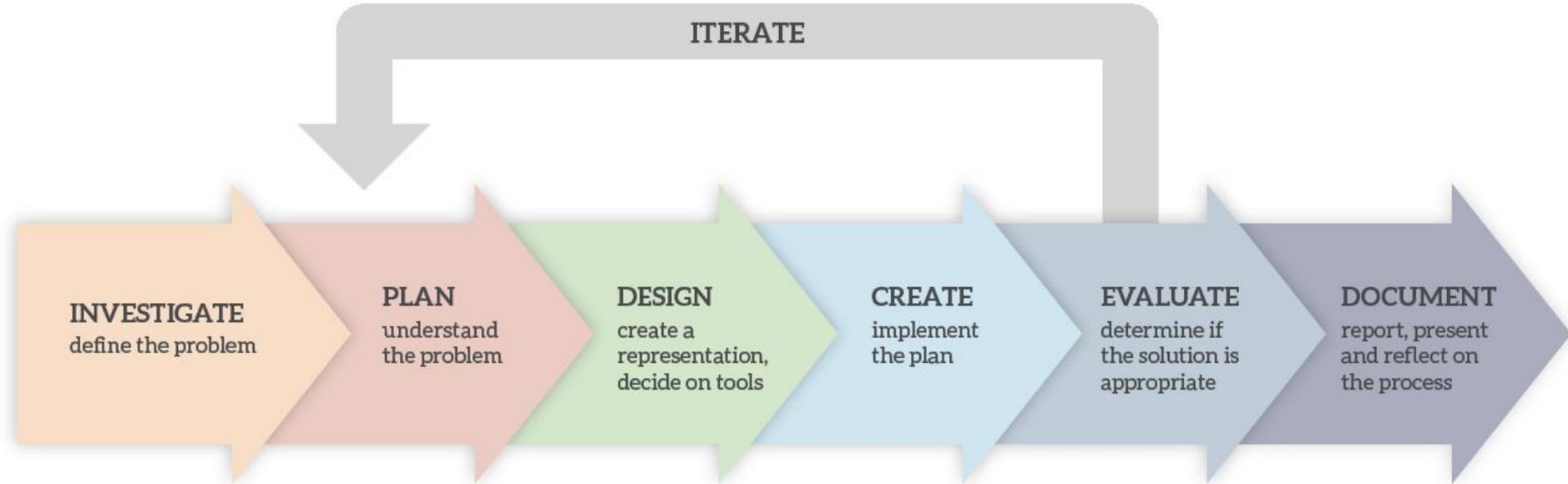


UX Design process





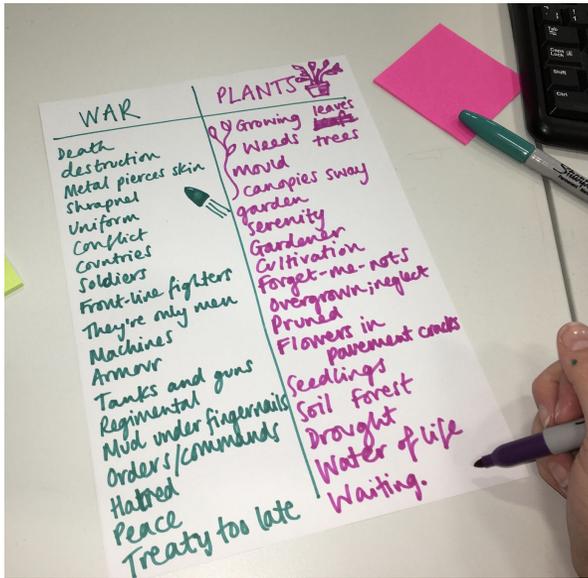
The LCCS Design Process



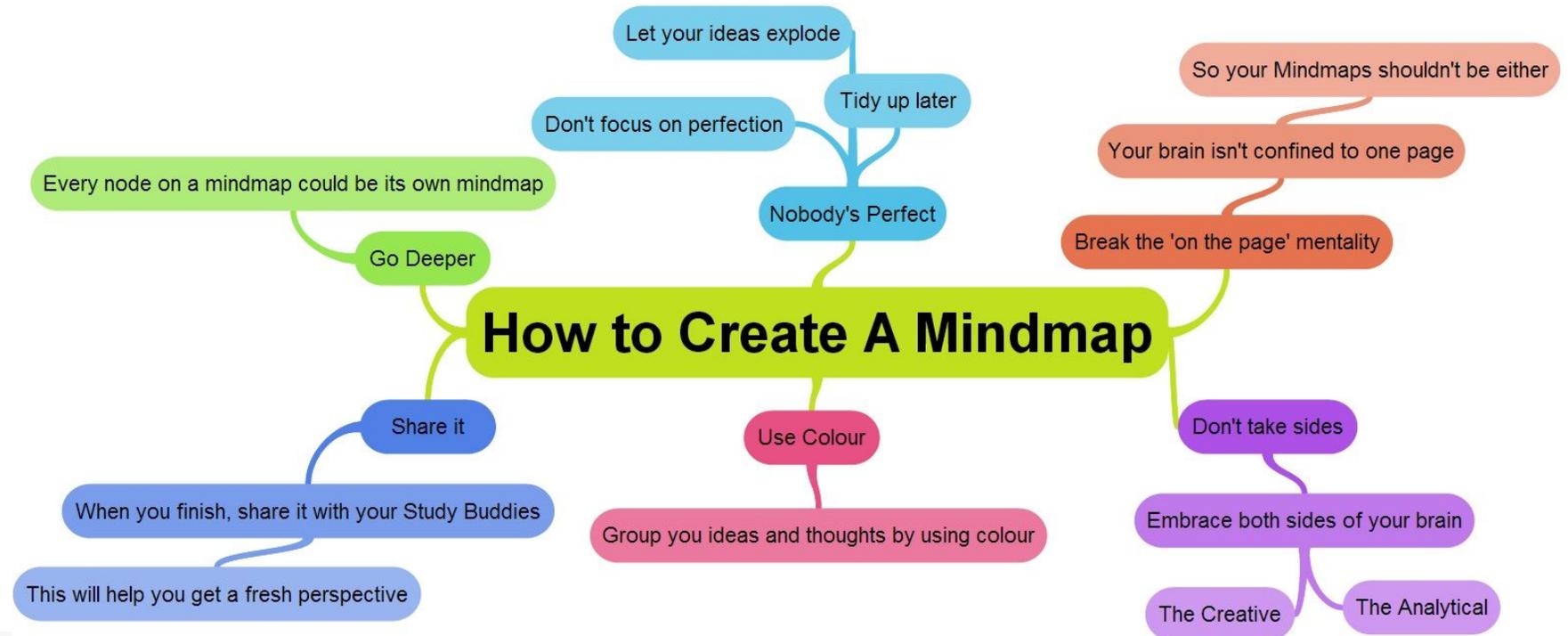


UX Techniques

Research & Brainstorm



- Wordlist
- Mindmap - By hand or software



Personas

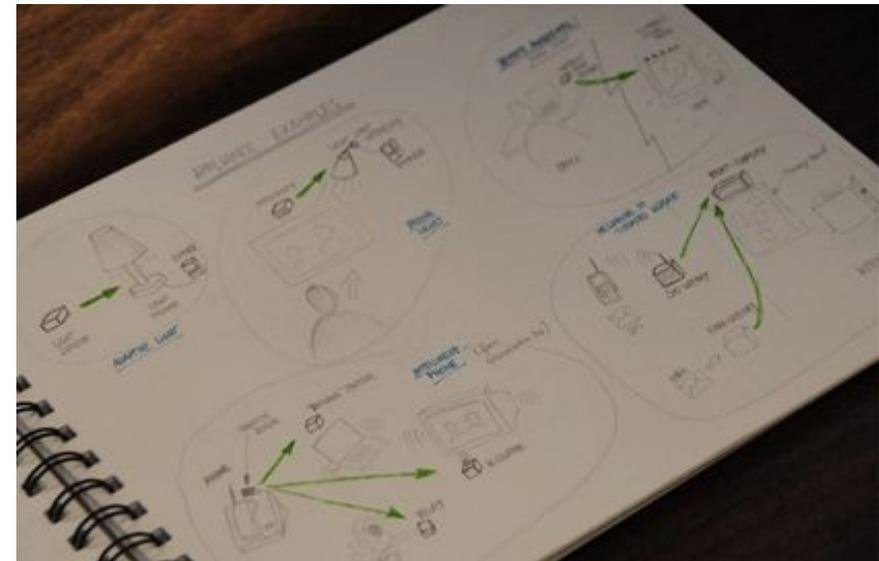
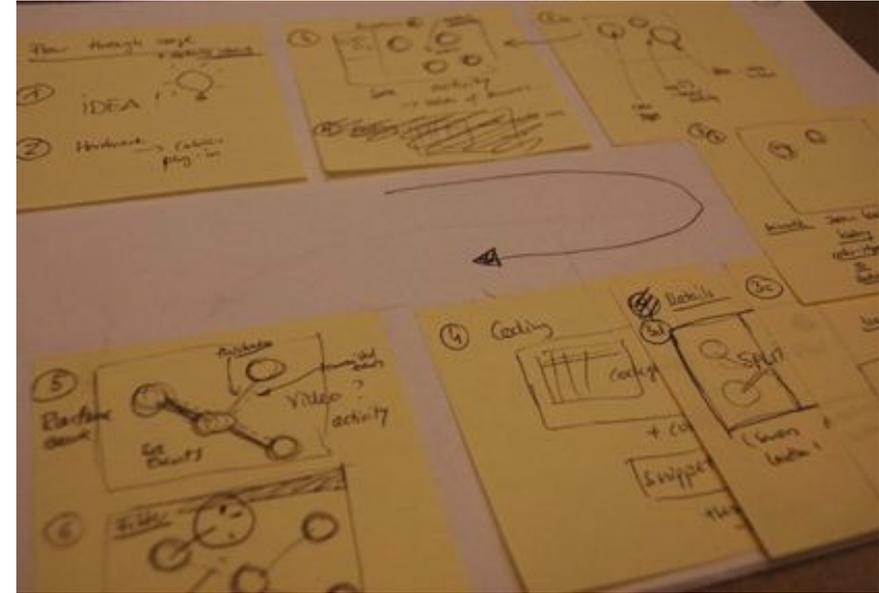
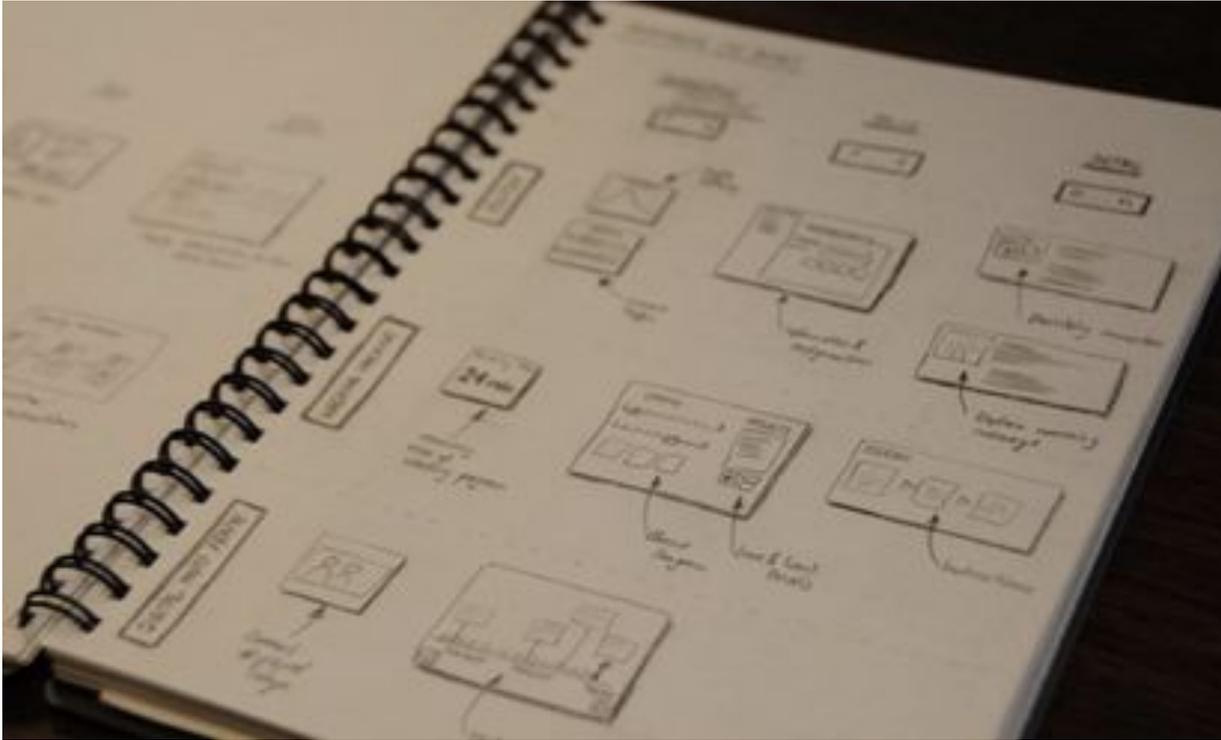
**WHAT IS A
USER PERSONA?**

User personas are **fictitious characters** put together by product, design, and marketing teams to **represent** the types of people that could become users.

PERSONAS

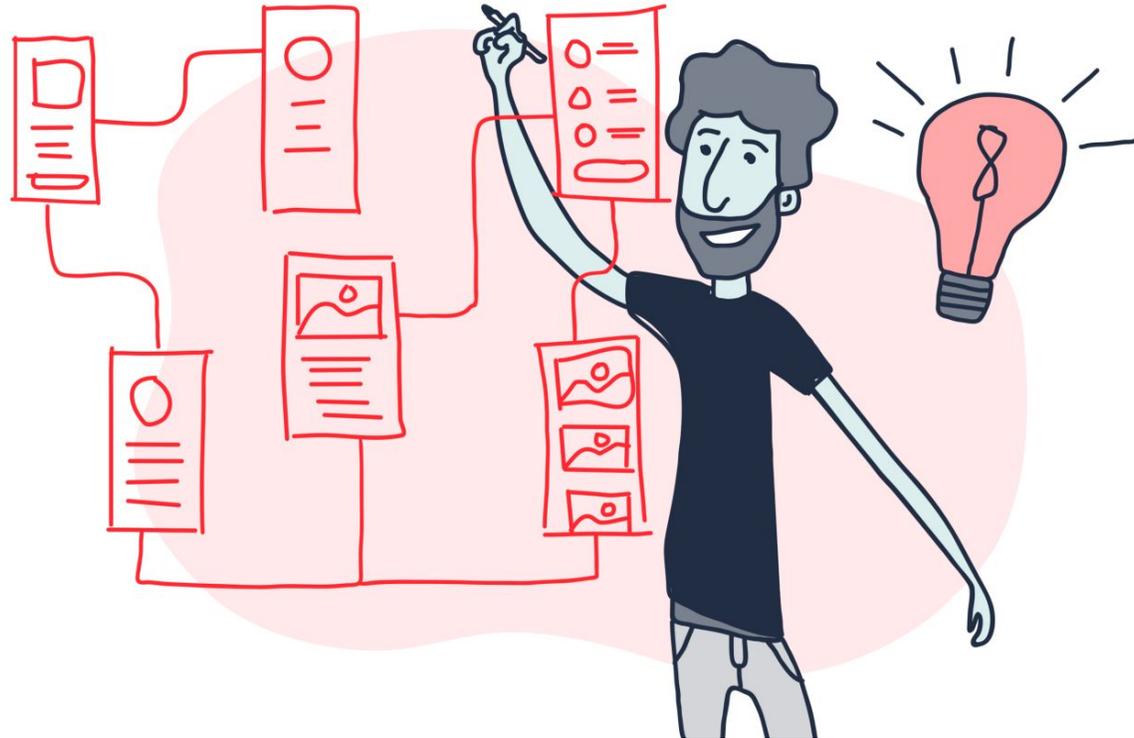
 BOB	General Information Divorce 45 years old Father of 1 Business Man Ireland, Dublin Optimistic	Goals Bob wants to be a great father, his job is very important so one of his goals is to grow his business career and have a great reputation.
Story Bob is recently divorce, he is 35 years old, Bob moved from the countryside to Dublin City Centre as soon as the divorce was finalize so he could start enjoying his life. Bob lives in a 3 bedrroms apartment and drives an Audi, he likes fine things. Bob works very hard and sometimes even during the weekend.	Hobbies Playing Golf Socializing with friends Plying football	Identifiers Funny Work orientated
 LISA	General Information Single 28 years old Retail Manager London, UK Generous	Goals Lisa is a happy person, she likes to travel for work. Her passion are fashion trends so she enjoys seeing different styles. She is been promoted recently so she is still in a learning curve.
Story Lisa is very outgoing, She just turned 28 years old, She is from London, so she is used to noisy and active cities. She share a flat with her best friend in Hampstead that this neighborhood seems far from the bustle of central London but closed to Lisa's work. Lisa is under a bit of stress as the moment with the new promotion, but nothing she can't handle.	Hobbies Socializing Traveling Cinema	Identifiers Happy Outgoing
 LUCAS	General Information 14 years old Student Barcelona, Spain Artsy	Goals Lucas wants to be a good student and develop his artistic skills.
Story Lucas is a 14 year old boy from Barcelona, he loves to draw digital art and wants to develop his skills outside the digital artform. Lucas is a bit shy and find it hard to communicate with his classmates.	Hobbies Drawing Gaming	Identifiers Shy Confused
 LINDA	General Information Single 20 years old College Student Calgary, Canada Funny	Goals Linda would love to travel the world and find a place a nice place to live after she graduates.
Story Linda is an exchange student studing bussiness. She loves to travel and explore unique an interesting places as well as collecting and reading books. She hopes that one day she can find a place where she can she can settle down and make a life for herself.	Hobbies Reading Traveling	Identifiers Cheerful Outgoing

Sketching

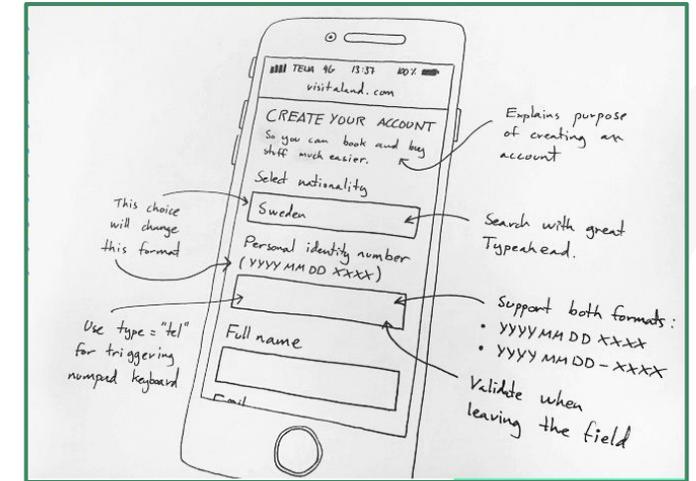


- Concept/Idea Variations
- Storyboard
- Scenarios

Wireframe



Prototypes - Paper



- Concept & Idea Generation
- Create walkthroughs - animated gifs
- Iteration
- Testing
- Low vs High Fidelity Prototypes





Case Study - UX Process for App Design

Millions of animals are currently in shelters and foster homes awaiting adoption. Design an experience that will help connect people looking for a new pet with the right companion for them. Help an adopter find a pet which matches their lifestyle, considering factors including breed, gender, age, temperament, and health status. Provide a high-level flow and supporting wire frames.

Activity 2 (Animal Shelter)



1. Open <https://tinyurl.com/y2m92bha>
2. Review the Google Design Exercise: Solving the shelter problem
3. Answer the questions in the Google document provided
 - 3.1 List the design process steps taken
 - 3.2 What design techniques are used?
 - 3.3 Identify as many examples of good design as you can from the case study.
 - 3.4 Outline any improvements that could be made to the design

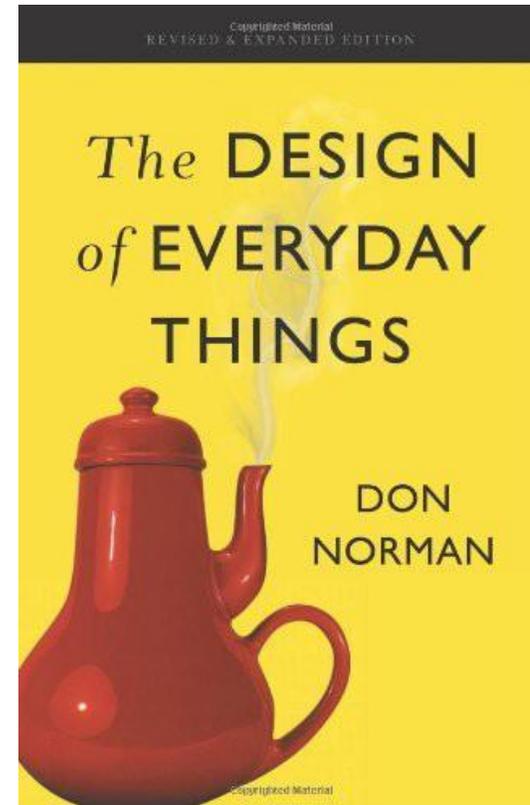


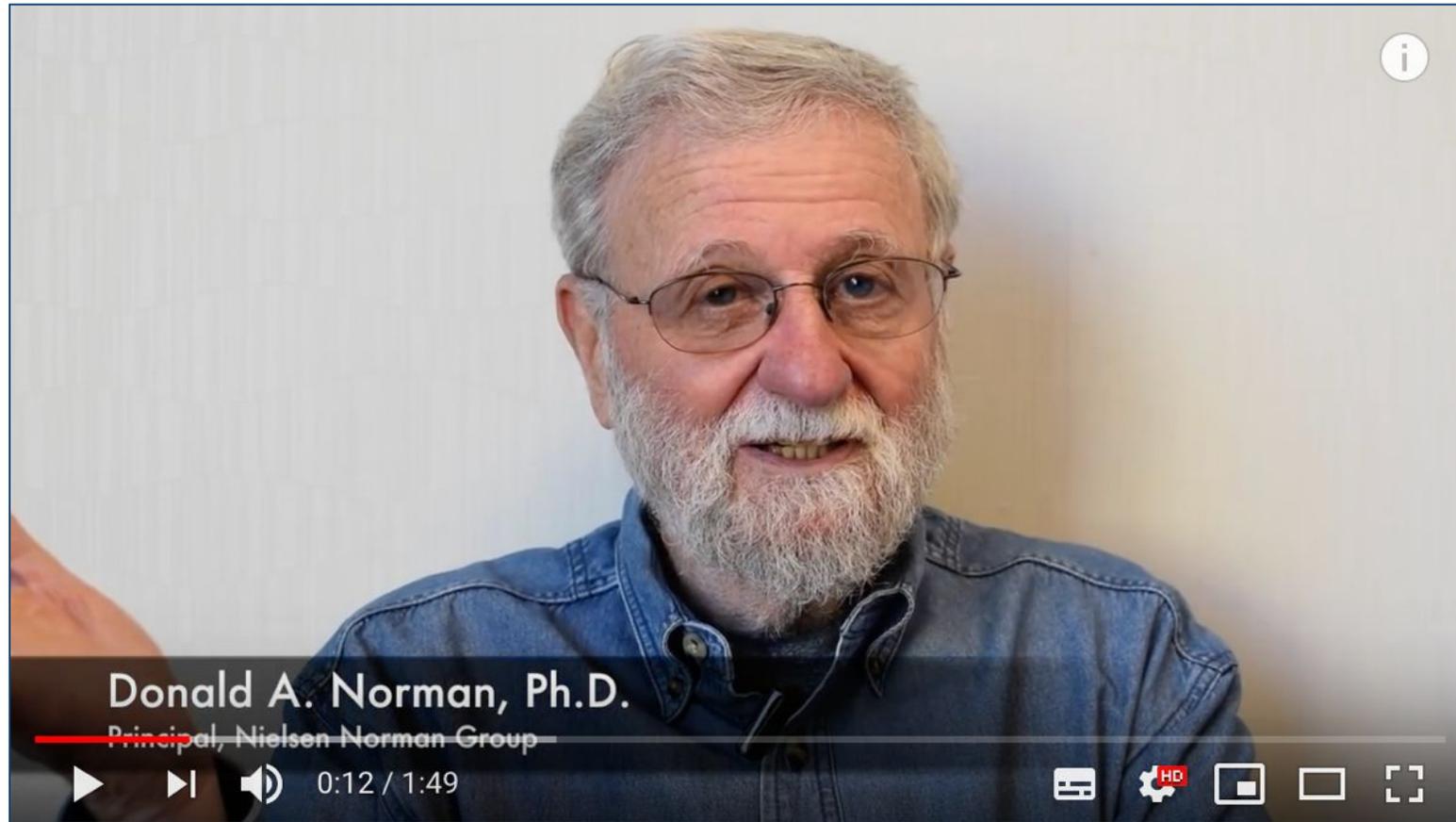


Stretch break



Design Principles





<https://www.youtube.com/watch?v=9BdtGjoIN4E>

Principles of Design (Norman)

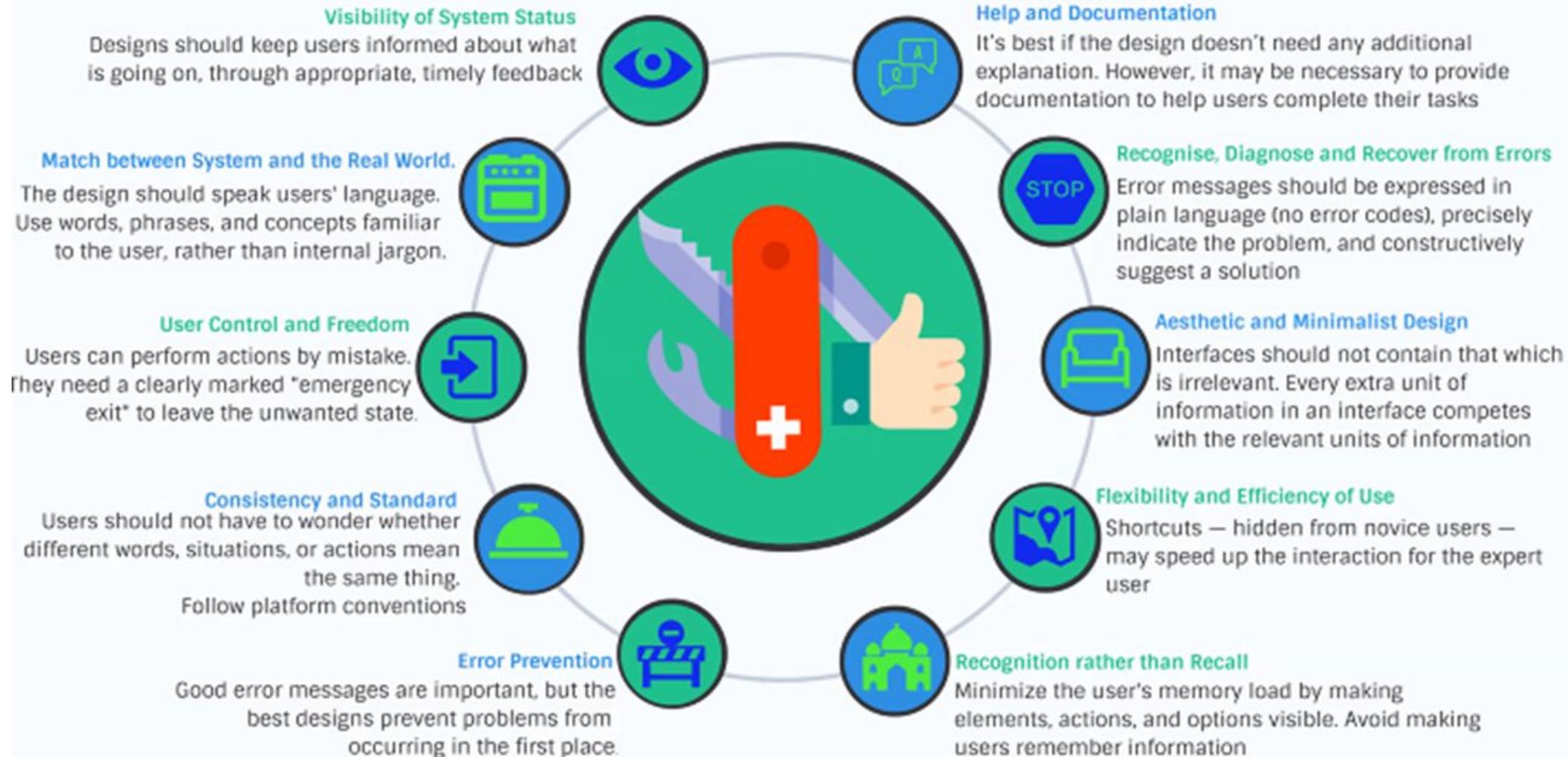
- **Visibility.** The more visible functions are, the more likely users will be able to know what to do next
- **Feedback** — is about sending back information about what action has been done and what has been accomplished, allowing the person to continue with the activity
- **Affordances** — the quality or property of an object that defines its possible uses or makes clear how it can or should be used- we sit or stand on a chair because those **affordances** are plain to see.
- **Mappings** — refers to the relationship between controls and their effects in the world. For example, the arrangement of light switch that corresponds to the order of the lightbulbs-mapping on a hob
- **Consistency-** This refers to designing interfaces to have similar operations and use similar elements for achieving similar tasks.
- **Constraints** — the design concept of constraining refers to determining ways of restricting the kind of user interaction that can take place at a given moment. It is a crucial decision made by the designer to limit the set of all possible actions that are appropriate for the object



Jacob Nielsen's Usability Heuristics for UI design

Jakob Nielsen's 10 general principles for interaction design.

They are called "heuristics" because they are broad rules of thumb and not specific usability guidelines



Universal Design

Equitable Use

The design is useful and marketable to people with diverse abilities

Flexibility In Use

The design accommodates a wide range of individual preferences and abilities

Simple and Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level

Universal Design

Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities

Tolerance For Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions

Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue

Size and Space for Approach And Use

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility



Breakout Activity

Activity 3 (Website UX design principles)



1. Discuss website UX design factors (principles). Decide on your top 3.
2. Find one website that exemplifies good design and one website that exemplifies poor design. (Use your agreed design principles as your criteria.)
3. Add your examples to the Google document.
4. Write a short explanation if needed.



Website Design Principles

1. Usability (Ease of Use)
2. Layout Design (Alignment, Use of Space, Images)
3. Visual Design (Typography, Colour)
4. Content & Language
5. Accessibility
6. Feedback
7. Navigation
8. Hierarchy (structure)



Bringing It All Back to the Classroom

Bringing it Back to the Classroom - Tips

- Integrate UX design from the start - don't leave this topic till the end of the two years.
- When discussing ALTs with students, always refer back to the end user - who is the product for? Get them to think and act as a typical user would.
- Write UX design requirements into your ALT briefs - e.g sketch or wireframe required by mid way point.
- Get them to mock things up in a tactile way - eg cut out paper can create a user interface / sketch out the interface. Stay away from computer at the start.
- Show and explain good & poor examples of UX design.
- Align the work to the LCCS Design Process Model.
- Make links where possible with other subjects that students might be taking or have taken at Junior Cycle - Technology / Art & Design / Engineering / Tech Graphics. There are cross over skills.

Additional Resources



INTERACTION DESIGN
FOUNDATION

<https://www.interaction-design.org/>



<http://www.compsci.ie>



<https://www.usability.gov/>



<https://xd.adobe.com/ideas/>



<http://universaldesign.ie>



<https://www.ahead.ie/ATHive>



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