

# Lecture 7

# Ideation

# Brainstorming

# Affinity diagrams

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SOFTENG 350  
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Zoom <https://auckland.zoom.us/j/177084617>

Notes from

The UX Book Sections 14.2, 14.5 and 8.7

[Movie theatre advances](#)

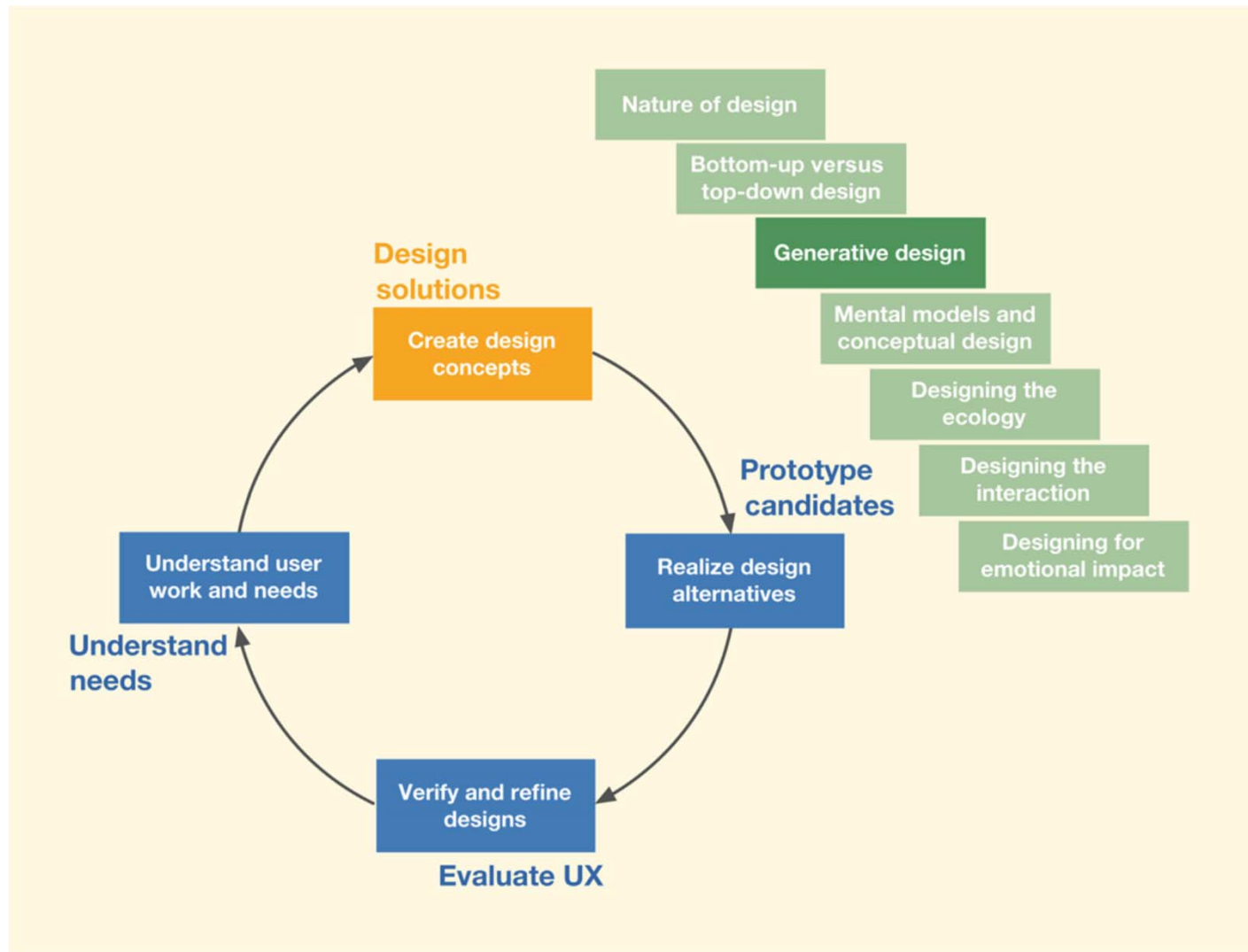
# Learning objectives

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- To appreciate the use of ideation for design idea generation
- To understand the generative design process
- To appreciate the informers, catalysts and techniques for ideation
- To know how to brainstorm
- To know how to create affinity diagrams

# You are here

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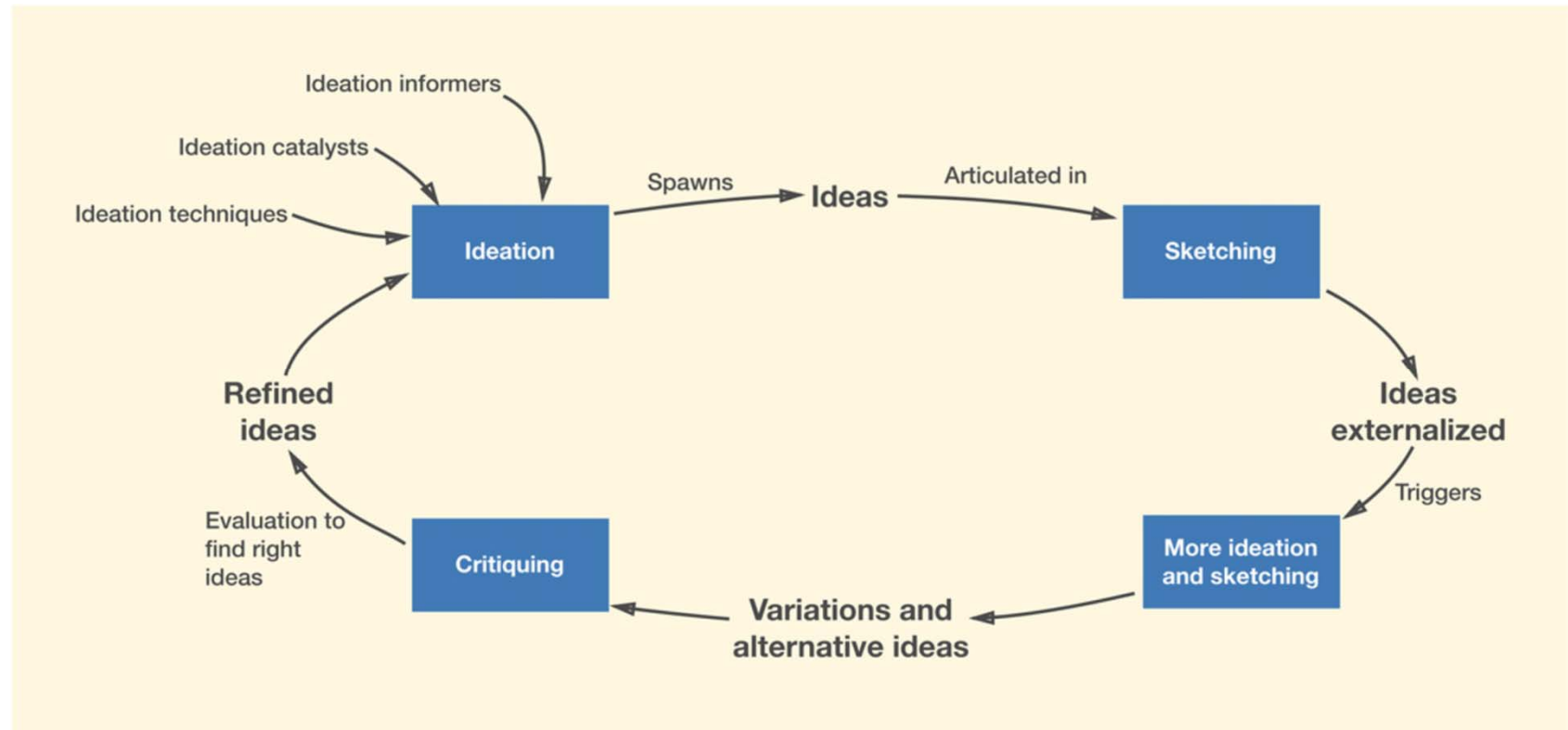
# Generative design

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- Ideation
  - Spawning ideas
- Sketching
  - Capturing ideas
- Critiquing
  - Analysing design ideas
- Refining
  - Adopting, modifying or discarding ideas

# Generative design

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# Ideation

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- Process of creating ideas and proposals for the design
  - Ideation informers
    - Derived from usage research data
    - E.g., task descriptions and personas
  - Ideation catalysts
  - Ideation techniques
    - Brainstorming, framing, storytelling, etc.

# Doing ideation

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- Immerse
- A group activity
- Gathering large numbers of ideas
  - All ideas are valued, no ownership of ideas, ego-free process
- Use created models to inspire design
  - E.g., social, flow, artefact, physical, etc.
- Use teamwork to talk through scenarios
- Make ideas visual and tangible

# Try it yourself

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## Ideation About Aircraft Flight Recorders

When planes crash, we often hear that the flight recorder box, which has the most recent flight and pilot data on magnetic tape, is the key to understanding the cause. However, we also often hear that the flight recorder box cannot be found or is found in damaged condition.

Taking into account available technology and the broadest context and ecosystem in which planes and flight recorders operate, come up with a conceptual design of a much better way to do it.



This image is a work of a National Transportation Safety Board employee, taken or made as part of an employee's official duties. As a work of the U.S. federal government, all NTSB images are in the public domain in the United States.



# Time passes...

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# Ideation informers

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- User work roles
- Personas
- Flow models and physical models
- Activity-based interaction and design
- Task structure and sequence models
- Artifact model
- Information architecture model
- Social models
- Requirements

# Ideation catalysts

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- Inspirations

- Perhaps from brainstorming, storytelling, the world, ...
  - Velcro story: George de Mestral getting burrs stuck in his clothes



# Ideation techniques

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- Framing and reframing
- Abstraction
- Magic wand: Asking “what if?”
- Incubation
- Design patterns and experience
- Traverse the different dimensions
- Seek opportunities for embodied and tangible interaction

# Brainstorming

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- Team activity
  - Get out possible ideas, explore the solution space
    - Minimize critical thinking at this stage
    - Any idea is 'good enough' to write down
    - Explore beyond the obvious
    - "Worst possible idea" approach
  - May use storyboarding
    - Making a comic strip of the interaction concept
    - Or any sort of diagramming that denotes the idea

*"It is easier to tone down a wild idea than to think up a new one."*

Alex Osborn

# Brainstorming

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- Teams can work in parallel by breaking into subgroups, or individually, to scribble ideas on paper sheets or post-its
  - Useful to build on other's ideas
  - Want to have variety in group makeup
  - Mediated, only one conversation at a time
  - Ensure everyone gets a chance to contribute
- Brainstorming sessions generate a lot of material that must then be filtered and organized

[YouTube explanation](#)

# Post-its grouped at the end of a brainstorming session

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# Try it yourself

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Imagine that you are looking to (very quickly) create a chatbot system to ease the loneliness for elderly people over the COVID-19 lockdown period. Brainstorm (by yourself unfortunately) what physical and/or virtual forms this system might take and the sort of interactions that would be suitable for the system.

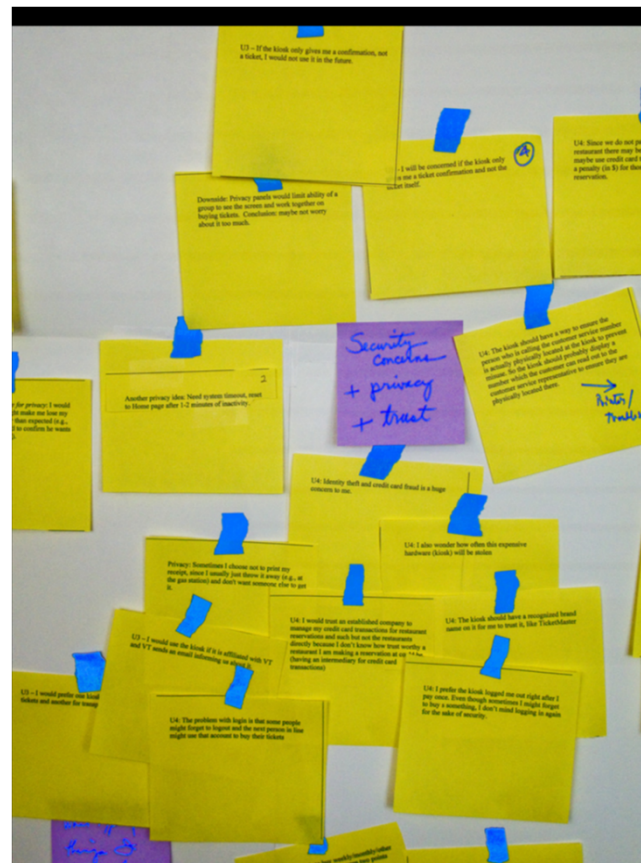


# Time passes...

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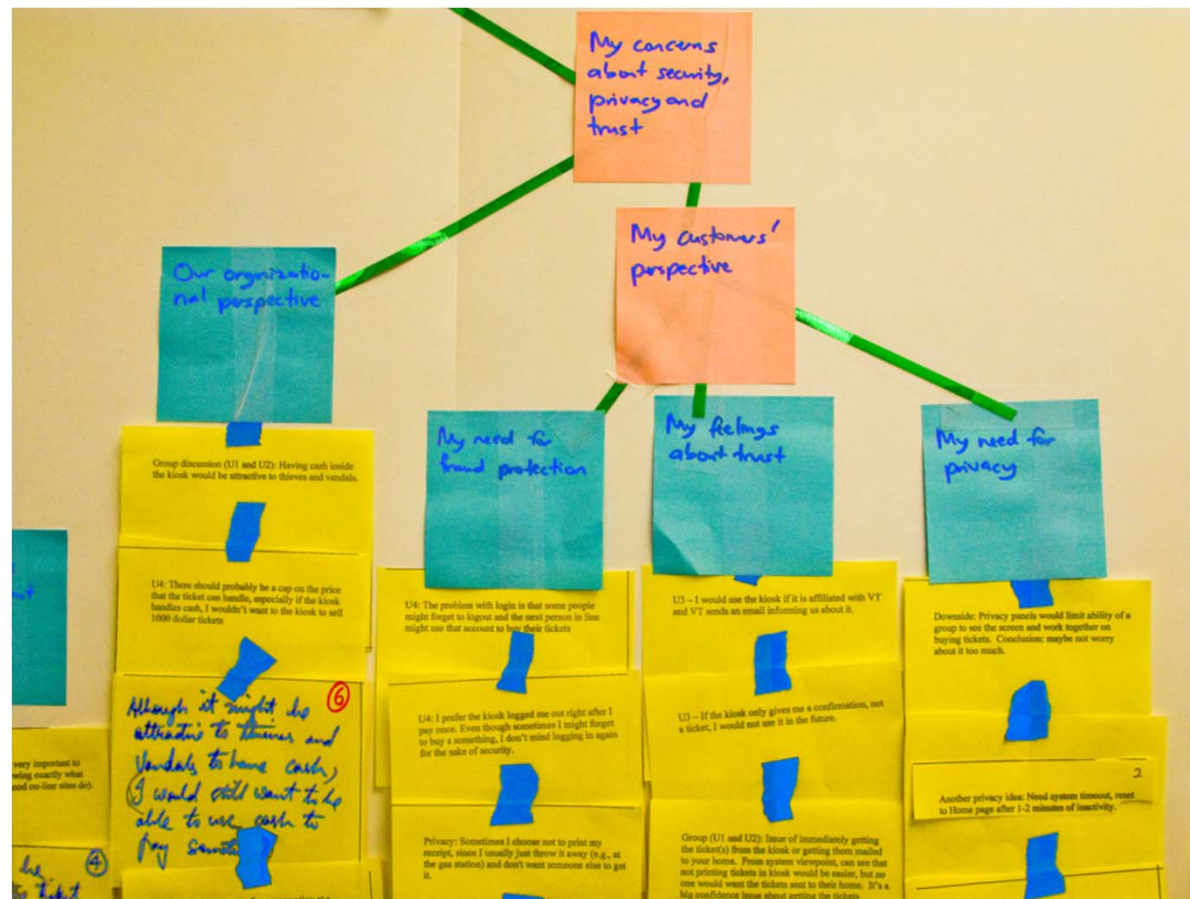
# Affinity diagram

- Hierarchical structure to group similar ideas
- Identify a label for a group of ideas, perhaps grow label in scope



# Affinity diagram

- Look to split up large groups
  - Find sub-topics – forming the hierarchy



# Affinity diagram

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- Needs a large working area



# Summary

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- Ideation is the process of creating ideas for your design based on your usage research and the models created from that
- Brainstorming is effective in generating many ideas within a group setting
- Affinity diagrams help organise the ideas generated in brainstorming

# Multi-choice

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Hmm, with the move to online our test and exam format will need to change. Multi-choice is unlikely to be possible where the test or exam is available over a 24 hour period. The questions we pose are likely to be very similar to those in tutorials, where you work through a problem and write up your analysis and suggestions.

So, is a multi-choice quiz at the end of a topic still useful?