

Module 2

Design Thinking for Innovation

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Design Thinking as Mindset, Process, and Toolbox

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Design Thinking as “a way of finding human needs and creating new solutions using the tools and mindsets of design practitioners.”
(Kelly and Kelly, 2013)

Design Thinking starts with human needs and uses suitable technologies with the aim of creating entrepreneurial value through customer value. (Brenner et al., 2017)

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- ✓ mindset
 - ✓ process
 - ✓ toolbox

Design thinking as mindset?

Design thinking as process?

Design thinking as toolbox?

Design thinking as mindset?

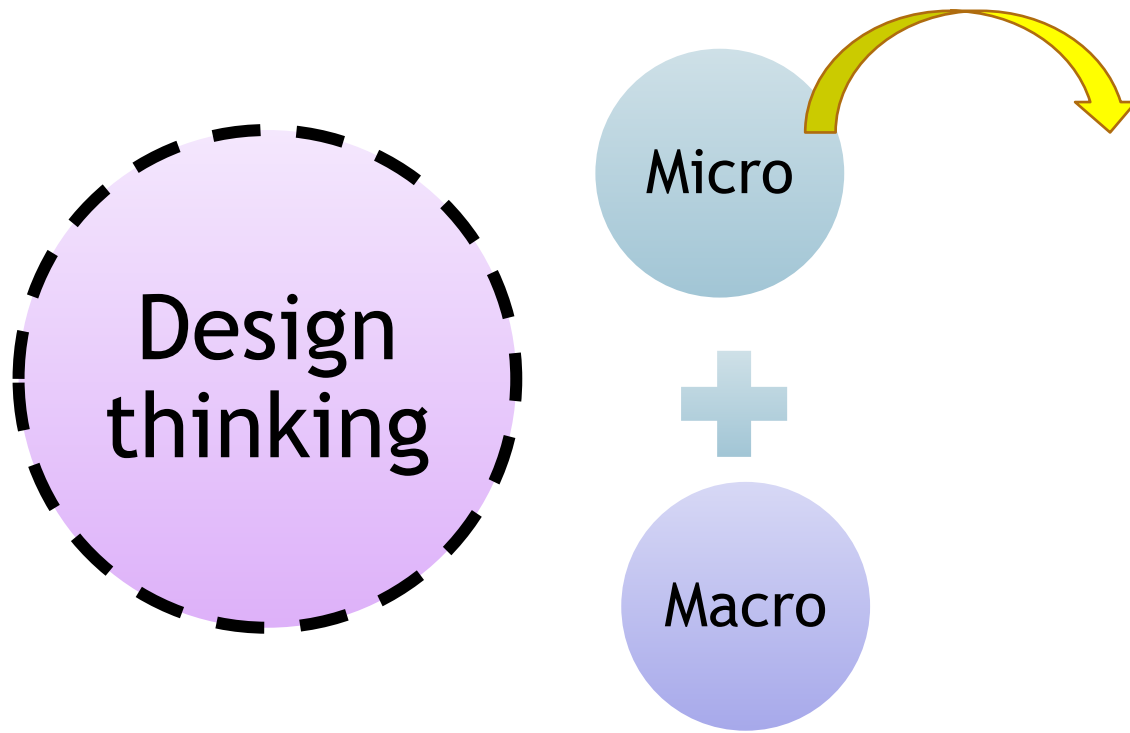
What is mindset?

a set of assumptions, methods, or notations held by one or more people or groups of people.

As a mindset, Design Thinking is characterized by several key principles: a combination of divergent and convergent thinking, a strong orientation to both obvious and hidden needs of customers and users, and prototyping.

Design thinking as mindset principles

Design Thinking as Process





Design thinking as toolbox



Stakeholder Map

Tools and methods

Empathy Map









Enhancing Design Thinking Through, Empathy, Interviewing, Questioning and Brainstorming



Set a goal for the interview

- Have a video call or phone call (or at least some interaction) with the user before the interview itself.
- Explain the reason for the interview, and how the data from it will be used.
- Make the user feel heard by taking notes, nodding, frequent eye contact, offering acknowledgments like “I see,” and repeating the words the user said.
- Let users finish their thoughts. Do not interrupt them.
- Don’t rush the user.
- Start with questions that are easy to answer and that are unlikely to be interpreted as personal or judgmental.

Interviewing, Questioning



- For example, instead of “What was the last book you read?” try “What do you like to do in your spare time?” The latter is open-ended, while the former assumes the user read a book recently; those who did not may feel stupid.
- Show some empathy by asking related questions.

Brainstorming

ideas.

ertisements,

Six Key Questions



Checklists

Fantasy or Wishful Thinking



Tools of design thinking

Innovation flowchart

The Innovation Flowchart gives a detailed overview of the various stages in an innovation process, listing the activities, requirements and goals of each stage.

These include an overview of the different people, skills, activities and finances that a project or an organisation might need in order to succeed.

This tool helps to review where you are in the process, and to organise the next steps in your work.

This tool helps you to spot opportunities for growth by helping understand which resources to focus on.

You can see this by checking where you are in the process and whether you have thought of all the aspects that need consideration.

| Stages | Specialist skills required | Example activities and tools | Risk level and handling | Finance required | Kinds of evidence generated | Goal |
|--|----------------------------|------------------------------|-------------------------|------------------|-----------------------------|------|
| Exploring opportunities and challenges | | | | | | |
| Generating ideas | | | | | | |
| Developing and testing | | | | | | |
| Making the case | | | | | | |
| Delivering and implementing | | | | | | |
| Growing scaling and spreading | | | | | | |
| Changing systems | | | | | | |

Question ladder

Answer means

or reaching a

Simple questions ← → Complex questions

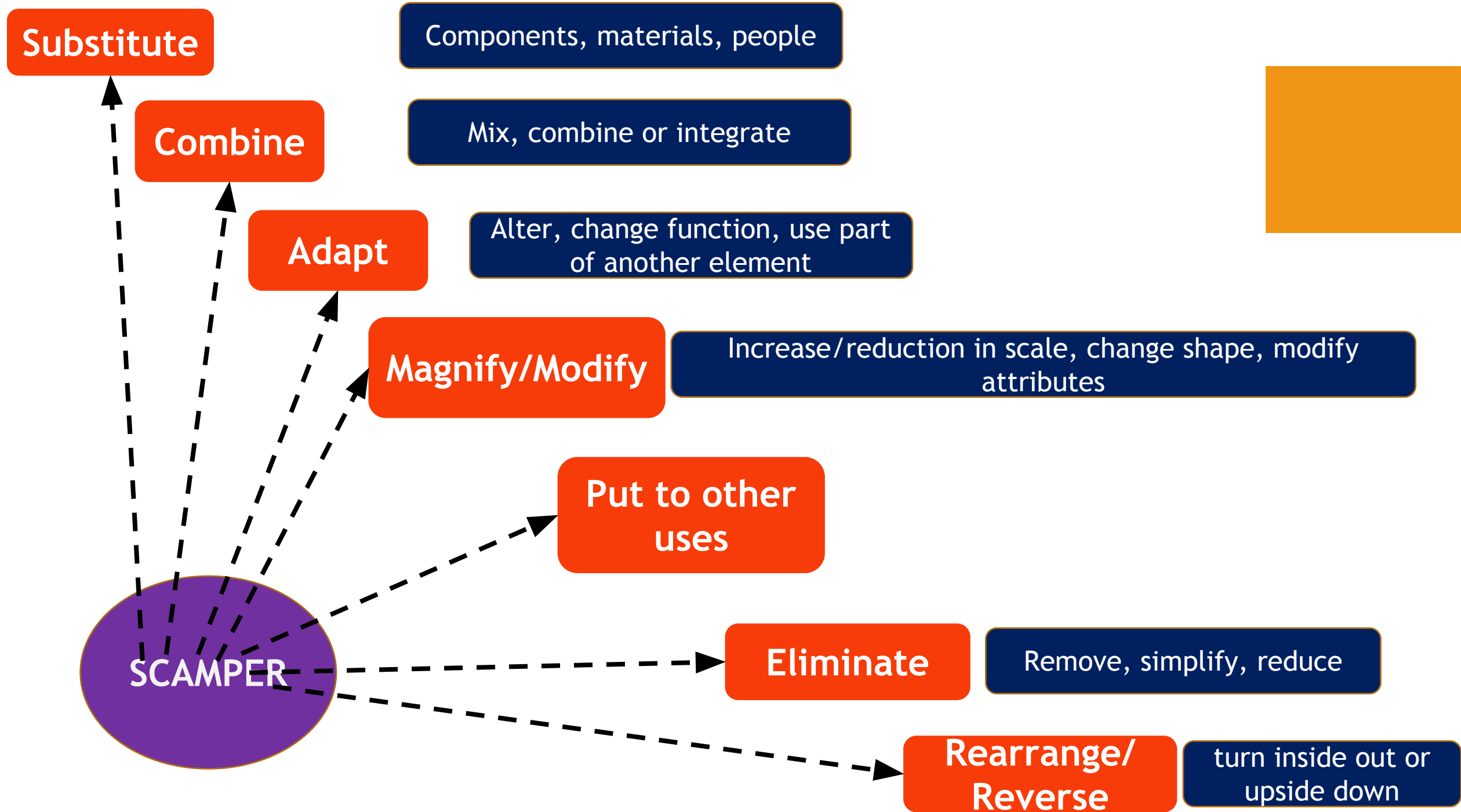
| | Is | DID | Can | will | Would | might |
|-------|----------|-----------|-----------|------------|-------------|-------------|
| Who | Who is | Who did | Who can | Who will | Who would | Who might |
| What | What is | What did | What can | What will | What would | What might |
| Where | Where is | Where did | Where can | Where will | Where would | Where might |
| When | When is | When did | When can | When will | When would | When might |
| Why | Why is | Why did | Why can | Why will | Why would | Why might |
| How | How is | How did | How can | How will | How would | How might |

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|------------------|--|
| Substitute | Think about substituting part of the product or process for something else. Typical questions: What else instead? Who else instead? What other materials, ingredients, processes, power, sounds, approaches, or forces might I substitute? Which other place? |
| Combine | Think about combining two or more parts of the product or process to make something new or to enhance synergy. Typical questions: What mix, assortment, alloy, or ensemble might I blend? What ideas, purposes, units, or appeals might I combine? |
| Adapt | Think about which parts of the product or process could be adapted or how you might change the nature of the product or process. Typical questions: Does the past offer a parallel? What else is like this? What other idea does this suggest? What might I adapt for use as a solution? What might I copy? Who might I emulate? |
| Magnify, Modify | Think about changing part or all of the product or process, or distorting it in an unusual way. Typical questions: What other meaning, color, motion, sound, smell, form, or shape might I adopt? What might I add? |
| Put to Other Use | Think of how you might put the product or process to another use or how you might reuse something from somewhere else. Typical questions: What new ways are there to use this? Might this be used in other places? Which other people might I reach? To what other uses might this be put if it is modified? |
| Eliminate | Think of what might happen if you eliminated parts of the product or process and consider what you might do in that situation. Typical questions: What might I understate? What might I eliminate? What might I streamline? What might I make smaller, lower, shorter, or lighter? |

**Rearrange,
Reverse**

Think of what you might do if parts of the product or process worked in reverse or were sequenced differently. Typical questions: What might be rearranged? What other pattern, layout, or sequence might I adopt? Can components be interchanged? Should I change pace or schedule? Can positives and negatives be swapped? Could roles be reversed?

<https://medium.theuxblog.com/how-to-generate-ideas-using-scamper-technique-d2e50de6402c>