User Interfaces

EECS 3461 – Sections A & B

Fall 2021

R-Design-IV
The SCAMPER Technique

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What is the SCAMPER technique?

- SCAMPER is, at its core, an activity-based thinking process

- it is used to boost innovative thinking *in response to a probe*

- the technique is used to generates many new ideas that "riff" on the probe

- the technique is intended to be used by groups, but can also be used on an individual basis

History of the SCAMPER technique

- the components of the technique were first proposed in the field of advertising in the 1950's
  - in 1953, by Alex Osborn, an advertising executive; Osborn is now credited with popularizing the technique of brainstorming

- then the technique was further developed in the field of education
  - it gained its mnemonic SCAMPER in 1971, by Bob Eberle

- SCAMPER is now used extensively in UX Design and 'Design Thinking' approaches

- SCAMPER gets called a problem solving technique, ideation technique, brain storming technique, etc

SCAMPER Probes

- the nature of the SCAMPER technique depends on the type of probe used

- examples of probes:
    - an existing product
    - an existing service
    - an existing situation
    - a learning topic
    - a challenge
    - …etc

The SCAMPER Technique

- given a probe, the team generates responses to 7 different provocations

- do one provocation at a time

- follow the basic ground rules

Basic Ground Rules

1. at a given point in time, capture *all* of the ideas that are getting generated
   - even if the generated ideas seem to be impractical, impossible or non-sensical, still capture them; don't filter or respond

2. persist: stay in focus even when productivity is low

3. don't skip ahead
   - can go back and fill in ideas that arise afterwards

4. don't pay attention only to yourself, pay attention to others
   - suggested approach: have others (not you) write down your own ideas

5. take breaks and pauses, don't rush; give people time to think things through

6. provide facilitation within the session
   - motivate one another; correct misunderstandings; provide a clear standard of work; keep track of ideas and ensure they are all captured; stick to the rules
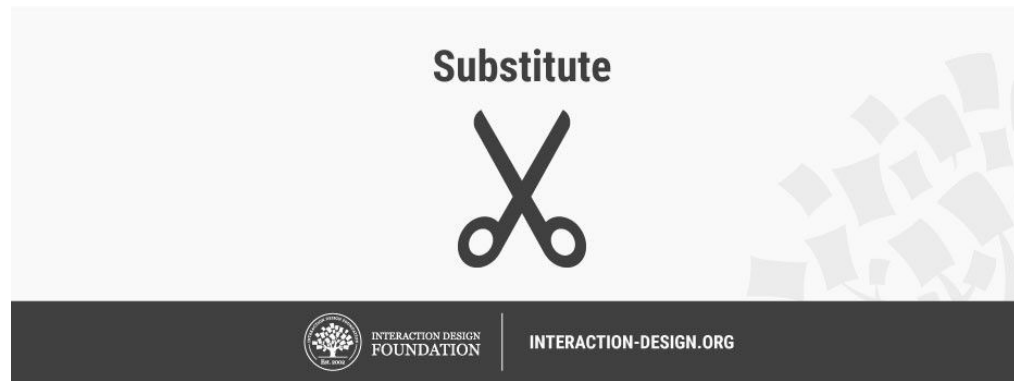
The SCAMPER Technique: The 7 Provocations

- **S**ubstitute

- **C**ombine

- **A**dapt

- **M**odify (Also **M**agnify and **M**inify)

- **P**ut to another use

- **E**liminate

- **R**earrange

…here are the provocations (tailored to *situation* probes)

SCAMPER

Substitute
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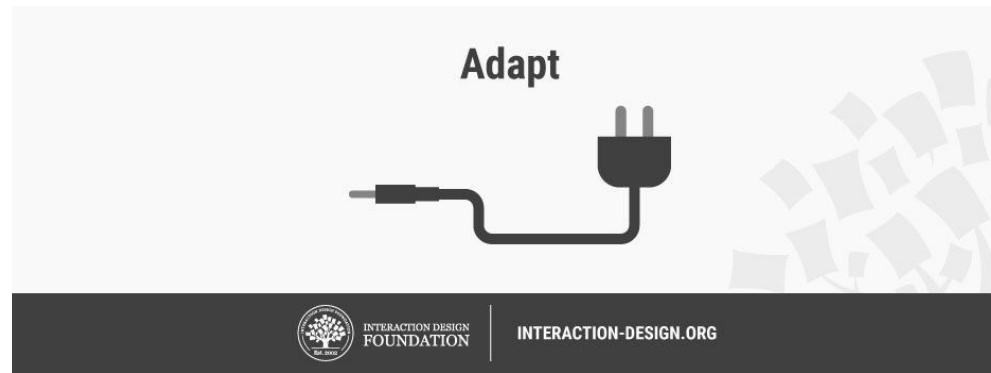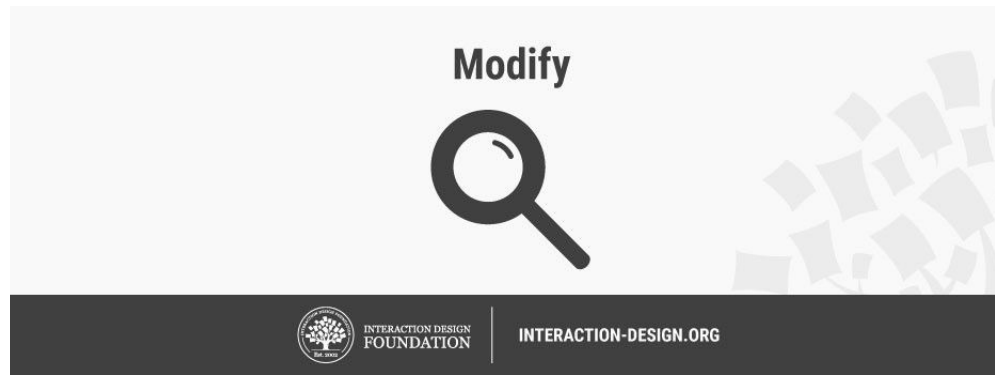
- What if elements (places, times, materials, people) were to be substituted?

- What if one part of the situation were to be substituted or changed for another part?

- What if someone involved were to be replaced?

- What if the rules of the situation were to be changed?

- What if the name of the situation were to be changed?

- What if other processes or procedures were to be used?

- What if my feelings or attitude towards the situation were to be changed?

SCAMPER
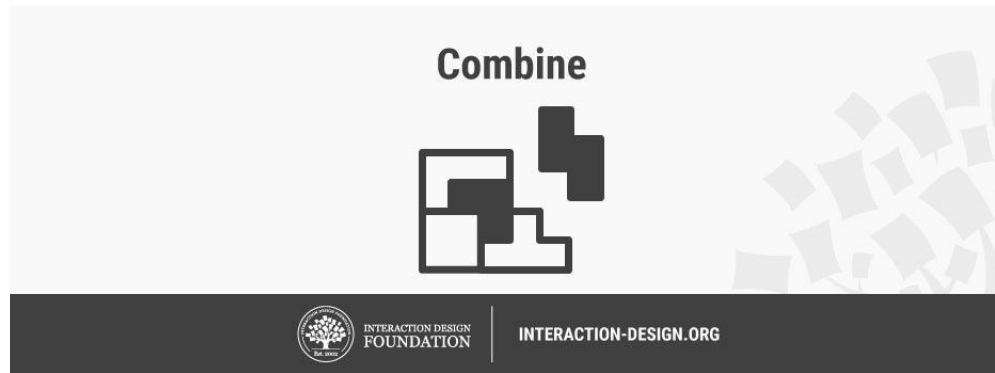
- What if elements (places, times, materials, people, etc) were to be combined or merged?

- What elements could be combined so as to maximize the number of uses?

- Where could synergies be achieved? ("kill two birds with one stone")

- Which are the best elements that could be brought together so as to achieve a particular result?

- What can be combined (in 'this or that way') in order to bring about 'such-and-such' result?

SCAMPER

Adapt
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- What if elements (places, times, materials, people, etc) were to be adapted?

- What processes within the situation were to be adapted?

- What could another situation from a different context were to serve as inspiration for this situation?

- Does history offer any insights to the situation?

- Which ideas could I adapt, copy, or borrow from other people's situations?

- What if the situation were to be adapted to a different context or a different group of individuals?

- What can be adapted (in 'this or that way') in order to bring about 'such-and-such' result?

SCAMPER

also Magnify, Minify

- What if elements (places, times, materials, people, etc) were to be magnified or minimized?
  - higher/lower? bigger/smaller? stronger/weaker? faster/slower? more/less frequent? condensed/expanded? taller/shorter? heavier/lighter? streamlined/complicated? compacted/divided?

- What if the size of the situation were to be made much larger or smaller?

- What if extra elements were to be added into the situation?

- What could be modified (in 'this way or that way') so as to achieve 'such-and-such' result?

SCAMPER

Put to another use

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- For whom else does this situation apply?

- How would others find themselves if in this situation? a child, an older person, a person with disabilities, a novice, an expert, …

- How would this situation apply or unfold in another context?

- Could the outputs or by-products of this situation be put to use elsewhere?

- What other situations are captured or represented by this situation?

- Are there new ways of thinking about this situation in its current shape or form?

SCAMPER

Eliminate

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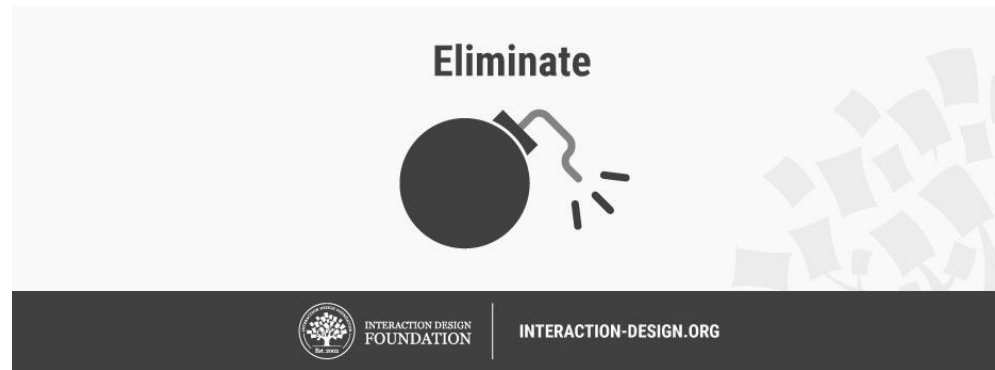
- What if elements (places, times, materials, people, etc) were to be removed?

- What if effort were to be eliminated?

- What if cost were to be eliminated?

- What's non-essential or unnecessary?

- What if the rules were to be eliminated?

- What if the situation were to be split into parts?

- What can be eliminated (in 'this way and that way') to bring about 'such-and-such' result?

SCAMPER

Rearrange

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- What if elements (places, times, materials, people, etc) were to be rearranged in some way?

- What if roles were to be reversed or swapped in the situation?

- What if any components or patterns in the situation were to be interchanged?

- What if the elements of the situation be sequenced differently?

- What if the situation were to unfold in reverse?

- What if the the pace or schedule were to be changed?

- What can be rearranged (in 'this way and that way') to bring about 'such-and-such' result?