

From needs to ideas

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CS 247

Invent forty uses for a brick

Classic creativity exercise. Go!

“Math is easy.
Design is hard.”

Jeffrey Veen, VP of Product Design, Adobe

Working with critique feedback

a.k.a. viewing your studio instructors as coaches

Roadmap

- Visual communication and interaction design
- Advanced design thinking process
- HCI in the world

Needfinding

In desperate search of ourselves

What you already know

- Needfinding teaches us how people act today
- Contextual inquiry is a structured set of practices that support needfinding
- Task analysis can help improve at the micro-level
- People may not be cognizantly aware of their needs, known as *functional fixedness*



Needs are verbs, not nouns

- Nouns assume the solution:
“She needs a ladder.”
- Verbs open up many possible solutions:
“She needs to grab all her items before leaving.”



Observation vs. Interpretation

- A common error is to mix up *what you see* with *what you interpret*
- Start with what you see:
 - What's the environment or activity that's framing this behavior?
 - What's out of frame that might be important?
- Capture details! You'll need them later.



Interpretation

- Ask yourself *why* you think something happened
 - Suggest a reason
 - Ask yourself *why* that reason exists and matters
 - Recurse...
- Aim to produce needs



Once more, with feeling

Create groups of three

What are needs suggested in the next slide's picture?

Four minutes



Share with another group

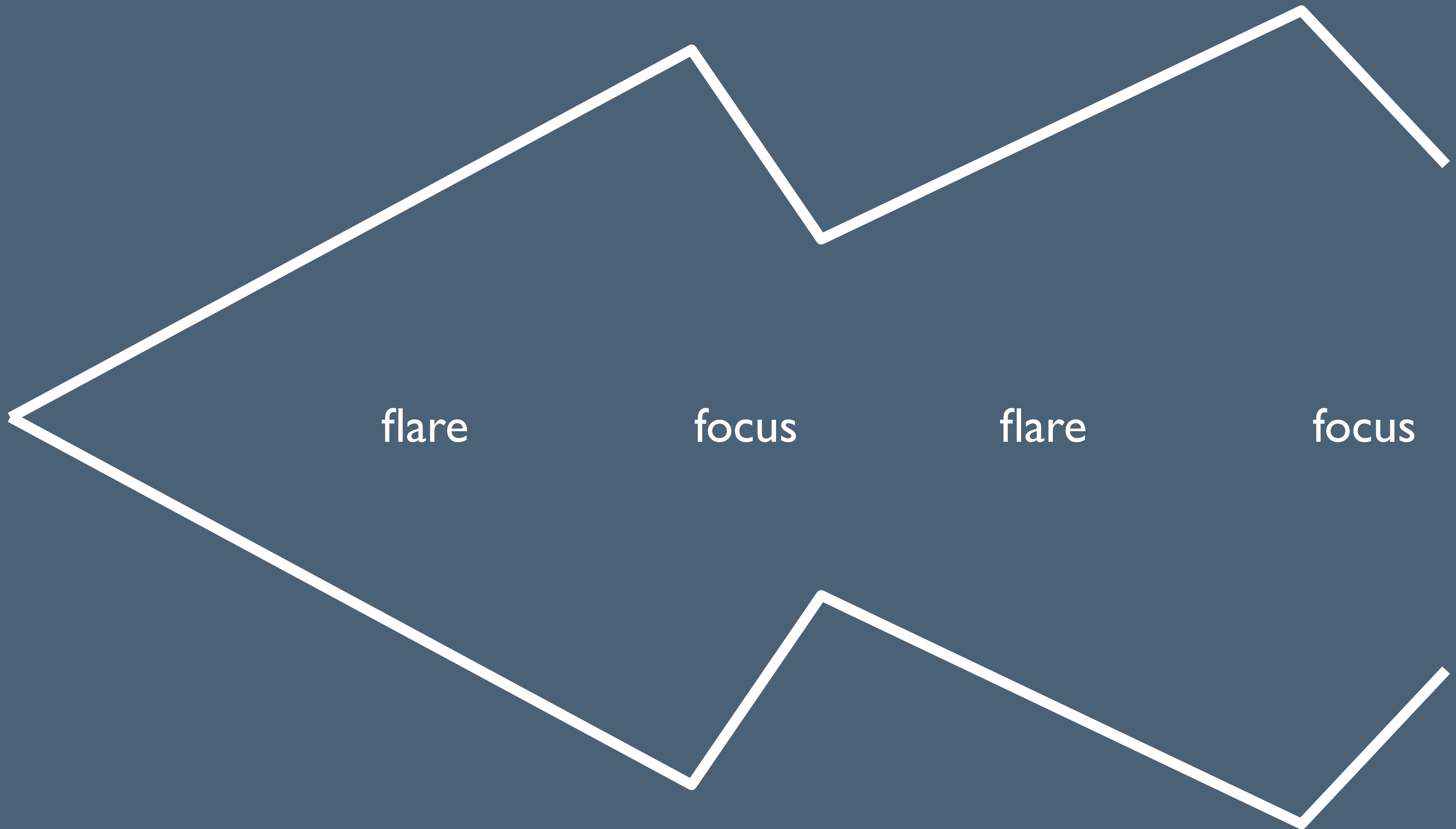
Three minutes

5 minute break

Go ice skating!

Brainstorming

Because it seems like a black art.



Cardinal rules of brainstorming

- Go for quantity
- Defer judgment
- Enforce a time limit
- Riff and build on others' ideas

Roles in brainstorming

- Facilitator
 - Not the manager or leader!
 - Keeps the conversation flowing
- Recorder
 - Gets everything up on the whiteboard (or sketchbook)
- Participant

“How might we...?” questions

- Turn large needs into actionable charges
 - e.g., “How might we make CS 247 studios feel more like trusted, safe spaces?”
- A useful way to ground a brainstorm

The Goldilocks of How Might We

- A good “How Might We...” question is:
 - Not so broad that it is inapproachable
How might we help people organize all their digital media?
 - Not so narrow that it suggests a solution
How might we help people retrieve their favorite digital media with just a click?
 - In a happy middle ground:
How might we help weekend extreme sports enthusiasts organize their digital media?

How might we...?

Groups of three
Four minutes

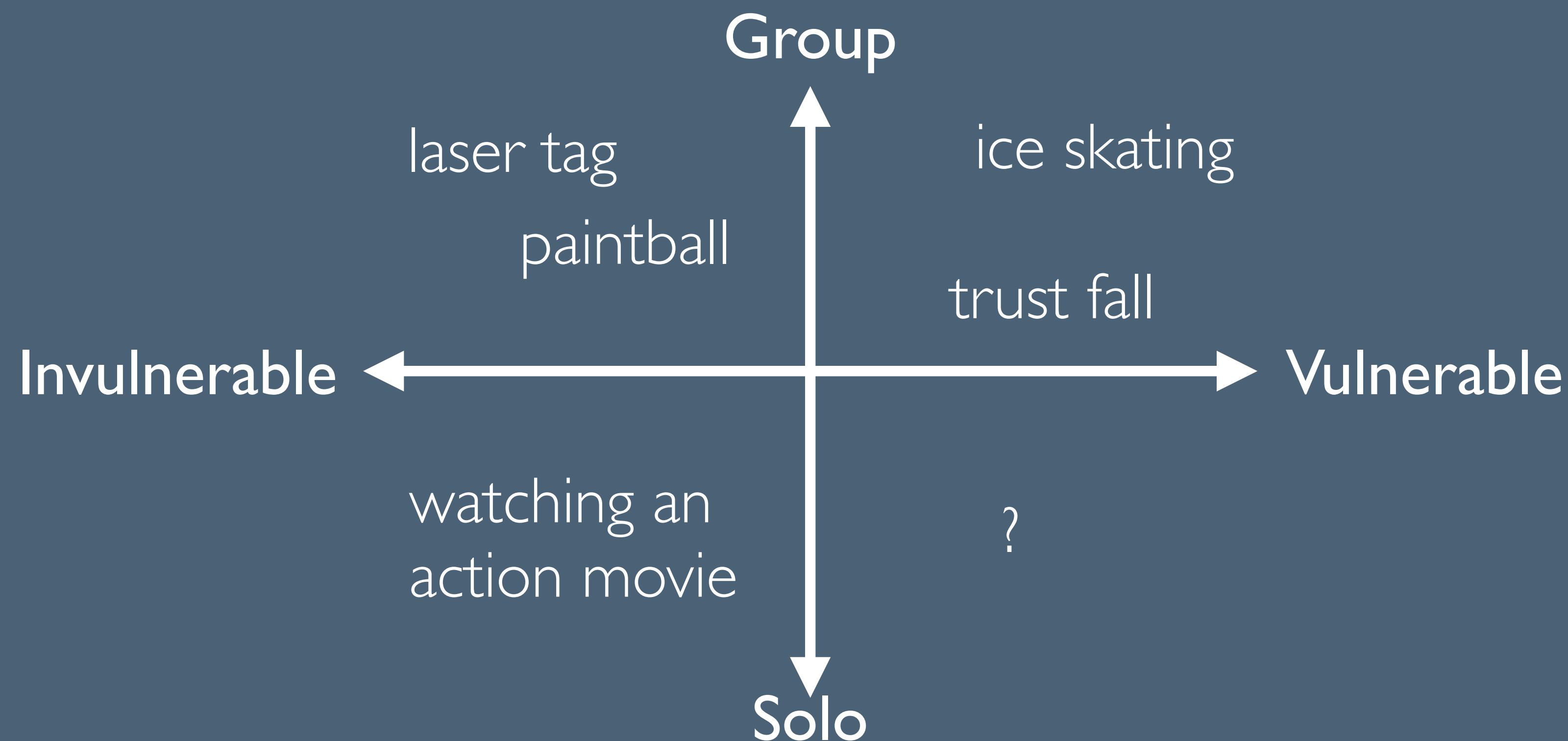


One tactic: Powers of Ten

- When you're considering a question, scale it up and scale it down
- Ice skating as a deliberate controlled vulnerability...
 - Could 1000 people at once engage in a controlled vulnerability activity? Could someone do it alone?
 - Could we do this in extreme heat environments?

Design space axes

- Pull out high-level dimensions along which your observations or ideas vary, then look for holes



Warm-up time

- Your goal: loosen people up so that they aren't self-conscious about sharing ideas with the group
- Reinforce practices of volume, riffing, and fluidity
- Improv games work quite well

Dark horse prototyping

- Include one idea and prototype that is intentionally far out or nearly impossible. Sometimes, it wins.
- Even when it doesn't win, it helps prevent design fixation.

Let's play cards

from Liz Gerber at Northwestern

Remember...

- Defer judgment
- Go for volume
- Keep the conversation flowing
- Roles:
 - Facilitator
 - Recorder
 - Participant

P3.init()

Design thinking project, I choose you!

P3: design sprint

- Pair up with a partner in your studio
- Week 1: Needfinding and brainstorming
- Week 2: Rapid prototyping
- P3 is the first extended exploration of your studio theme
- Focus on going beyond the surface-observable and the simple design patches