

NEPPI Week IV

16.11.2022

Project
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Agenda

Recapping the project outcomes

Four fields of action

1. Prototyping
2. Concepting
3. Persuading
4. Documenting

Learning goals (in the project)

- Learn about different **fields of action** in concept design, namely prototyping, concepting, persuading and documenting
- Learn what kinds of purposes for **prototyping**
- Learn what elements may be included in a **design concept**
- Learn what elements may be included in a product concept **document**
- Learn what aspects need to be researched to establish powerful **persuasive arguments**

Project Outcomes

- Concept Presentation @ NEXPO22
- IoT Product Concept Document

NEXPO22

- Product Concept / clarity/perceived value/attractiveness
 - IoT Service / illustration of system architecture
 - Physical Product / illustration/physical mock-up
 - Product UX / demo/video
 - Stand Experience / presentation/attractiveness/feel
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- Evaluated collaboratively with NEXPO visitors + You & Me

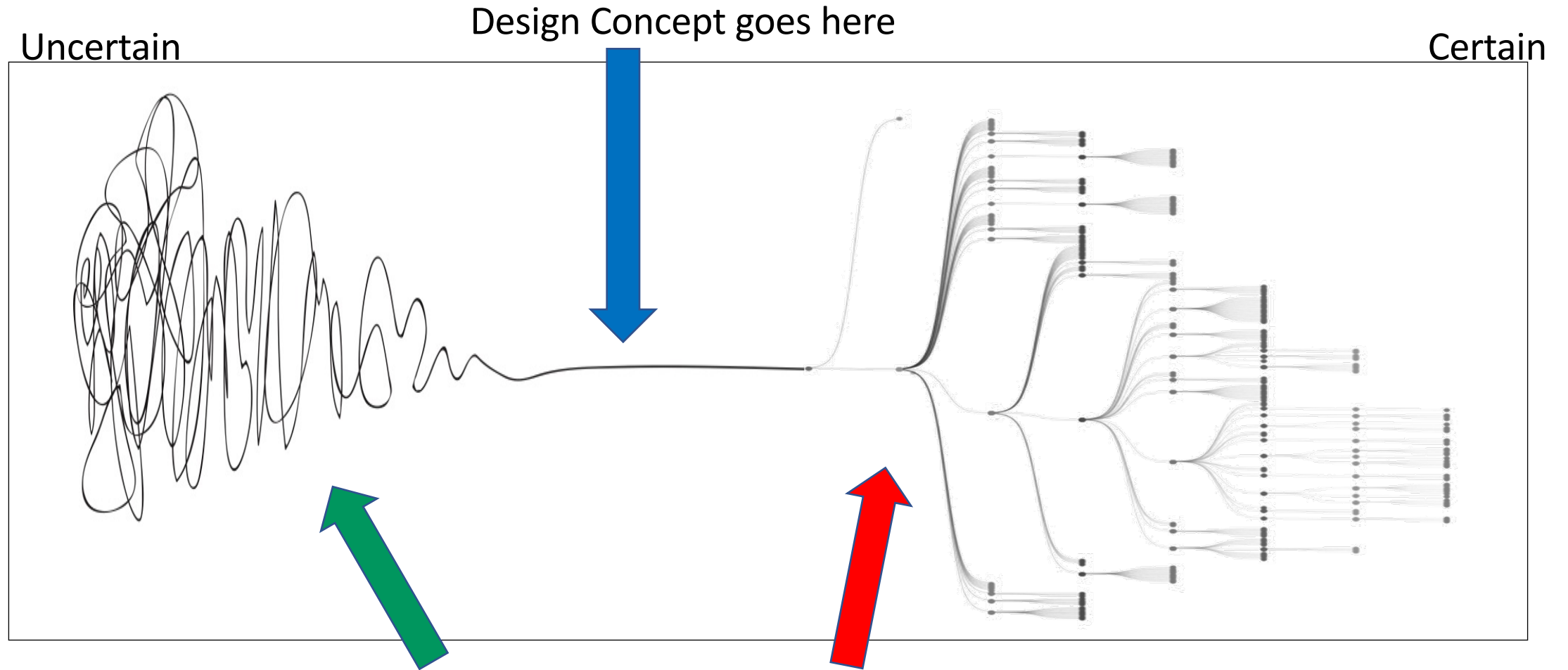
IoT Product Concept Document

- Concept description
- Key design requirements /w concrete suggestions
- Key types of partners /w concrete suggestions
- Key sources of revenue /w concrete suggestions
- Estimated main costs
 - monthly running costs
 - production costs (per thing)

Deliverables

- Weekly deliverables
 - W1: IoT Machine – Challenge 1
 - W2: IoT Machine – Challenge 2
 - W3: Three initial design concepts (idea framing)
 - W4: Design concept (V1)
 - W5: Key design requirements (CANT)
 - W6: Final IoT Concept & NEXPO
 - W7: Final deliverable (Concept document) & exam

Design Concept and the Process



Prototyping

Define what is critical to learn: Possible learning goals with protos

1. Are you creating the right product, i.e., do users find your product desirable
2. Have you outlined relevant key functionalities
3. Do you have an appropriate idea of the size, shape, and behaviour
4. Do users understand how your design works (usability stuff)
5. Are the desired functionality and interactions actually possible
6. Do people appreciate how the product looks like
7. How small device or how low power consumption is actually possible

Define requirements for your technical proto V1

- For example:
 - Device:
 - R1: It needs to measure temperature
 - R2: It needs to send temperature wirelessly to cloud
 - App:
 - R3: It needs to fetch temperature data from the cloud
 - R4: It needs to display temperature on computer screen

Possible purposes for the technical proto in NEPPI

- Have a Wow! effect in the NEXPO
- Get more hands-on feeling with technical prototyping
- Train on your technical skills

- Technical prototyping is not a requirement for a good grade in NEPPI

Concepting

Design Concept (in NEPPI)

- Name
- Purpose
- Design driver(s)
- Overall system architecture (CANT) - visual
- Vision of the appearance (or overall shape, size, behaviour)
- Envisioned user experience (story, enactment, demo, video)

Persuading

Value proposition

- What does your design help people to achieve?

Benchmarks

- What are the alternatives to achieve the same goals that you are serving with your design?

Why and how your design makes sense

- What is the key difference that your design makes so that it warrants the investment?

What kinds of sums are we talking about?

COST

- Estimated production cost per physical product unit (Thing)
 - Total desired volume, year 1
- Estimated key running costs
 - Personnel, storage, web services, data plans, ...

REVENUE

- Key sources of revenue
 - Getting started – investors
 - Sustained revenue – customers

Documenting

IoT Product Concept Document

1. Concept description
 - a. Name, purpose
 - b. Key design requirements
 - i. Design Driver(s)
 - c. Possible system architecture
 - i. Cloud
 - ii. App
 - iii. Network
 - iv. Thing
2. Partnering
 - a. Your own role (or envisioned role for a start-up)
 - b. Expected roles for partners
 - c. (Possible real partners to consider)
3. Estimated production cost per physical product unit (Thing)
 - a. Total desired volume, year 1
4. Estimated key running costs
 - a. Personnel, storage, web services, data plans, ...
5. Key sources of revenue
 - a. Getting started – investors
 - b. Sustained revenue – customers

Teams for the Project

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|----|-------------------|-------------------|------------------|------------------|--------------------|
| 1 | Chi Pham | Alischa Thomas | Evie Kivi | Nhu Nguyen | Sabanur Mete |
| 2 | Ruth Kupiainen | Apeksha Ravikumar | Vilma Juusonen | Nelia Peurala | |
| 3 | Tomi Rantanen | Otto Helakorpi | Milla Tervola | Gladys Suryana | |
| 4 | Rosa-Maria Majuri | Santeri Tenhunen | Matias Salmimies | Thao Nguyen | Mia Nygren |
| 5 | Reti Kilvet | Laura Lonka | Matias Nissinen | Paula Juntura | Nicha Tantitavewat |
| 6 | Moritz Kremer | Kalle Dalgamoni | Laura Putkinen | Merika Mattila | Anna Afanasyeva |
| 7 | Monica Romagnoli | Joonas Alanenpää | Karolina Salin | Emilia Lilja | Ahn Bui |
| 8 | Mirte van der Nat | Anthony Lau | Julius Thimm | Matti Kuusela | Kia Vuoksenmaa |
| 9 | Linnea Seeskari | Tommy Vanhanen | Juan Arce Camino | Jaana Talja | |
| 10 | Helena Mäeorg | Jusa Annevirta | Thanh Duong | Emilia Sundqvist | |