Design and Escalating Complexity

Universitetet i Bergen

Wolfgang Maehr on Sep 18, 2024 for Universitetet i Bergen
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Agenda

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2. Working Definition of Design
3. Design Method
4. Design Delivery Process
5. Scoping the Design Space
6. Escalating Product Design
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    b. Product Design
    c. Service Design
    d. Experience Design
    e. Transformation Design
7. Design for Impact
8. Discussion

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Introduction

What's my learning journey

- **Digital Architect:** solving problems at scale
- **Humanist:** people-centered

My background is...

- Bachelors in **Software Architecture** (Dornbirn, AT) with Masters in **HCI/IxD** (Gothenburg, SE)
- 4 years of **Interaction Design (digital products)** at Opera (Oslo, NO and Chandigarh, IN): Mobile web browsing, widgets across devices (mobiles, TV, etc.), developer tools, ...
- 2 years of **Interaction Design (consulting)** at Extra Thought (Singapore, SG): Intranet, movie streaming website, educational mobile game, ...
- 4.5 years of **Design (digital platform)** at Gumbuya (Singapore, SG): Software platform for industrial software development, delivery methodology, analytics platform, client solutioning for business applications ...
- 5 years of **Design (consulting)** at PebbleRoad (Singapore, SG): Digital transformation strategy through co-delivering digital products like performance management dashboards, digital patient referral platforms, digital license application platforms
- 2 years at SeaBoard as **Co-Founder and Head of Product**: B2B2C maritime open banking platform

Working Definition of Design

What we do

Solving problems → Exploration →

for others → Empathy →

to achieve impact. → Communication and reframing →

Understanding | Delivery

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Design Method

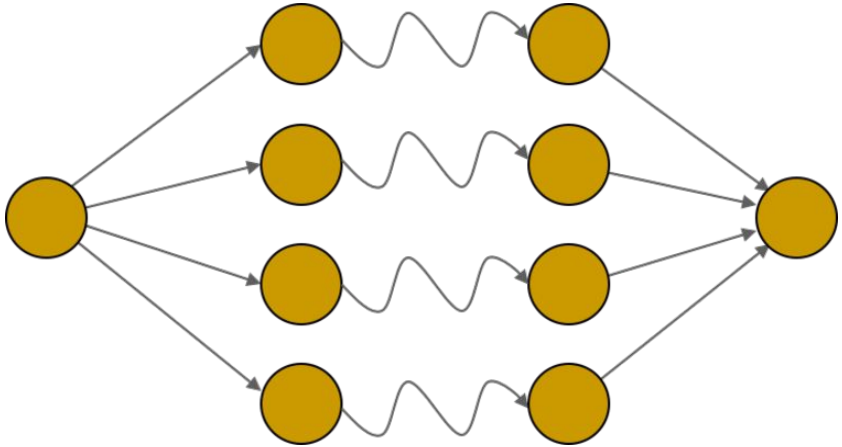
How we do our problem-solving

The Scientific Method

(see Wikipedia)

The Design Method

(from John Chris Jones: Design Methods)



DIVERGENCE TRANSFORMATION CONVERGENCE

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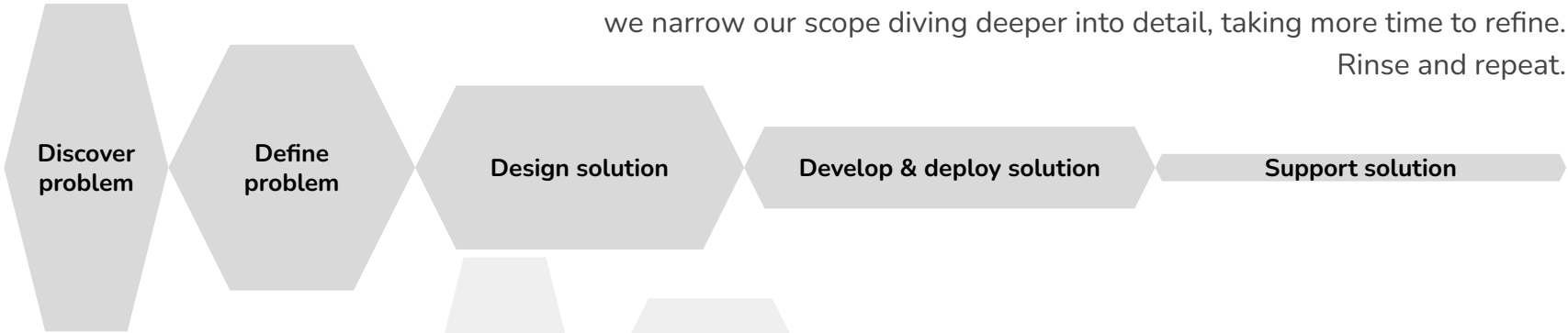
Design Delivery Process

How we deliver our impact

The Multi Diamond

(extended from the British Design Council's Double Diamond)

To stage-gate risk by increasing agility and learning, we iterate over the design method.
Starting with short phases of wides scope,
we narrow our scope diving deeper into detail, taking more time to refine.
Rinse and repeat.



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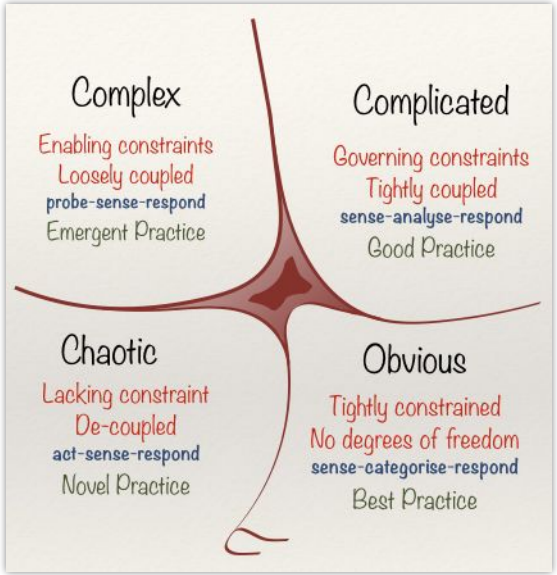
Scoping the Design Space

How to select the right approach to problem-solving

Cynefin Model:

(by Dan Snowden)



Space:	Simple (Obvious)	Complicated	Complex	Chaotic
Example:	Bicycle	Watch, Restaurant, Flight	Weather, Human Body	*Extreme situations*
Knowledge:	Best Practice	Good Practice	Emerging Practice	Novel Practice
Approach:	Sense → Categorise → Respond	Sense → Analyse → Respond	Probe → Sense → Respond	Act → Sense → Respond
Modus Operandi:	**ANALYSIS**		**SYNTHESIS**	

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Escalating Design Complexity

Commodity Design
Product Design
Service Design
Experience Design
Transformation Design

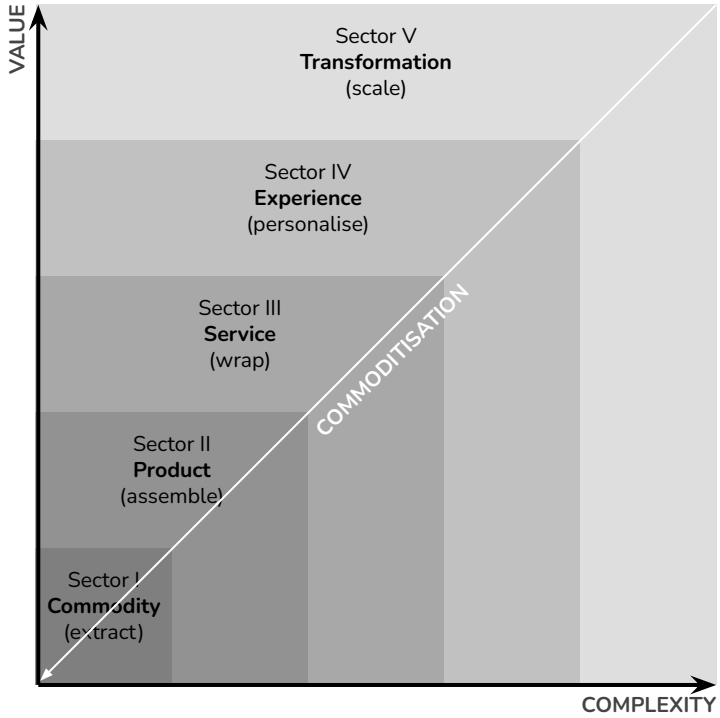
Escalating Product Design

How to determine, what level product to design

Progression of Economic Value

(extended from Pine & Gilmore)

Level	Creation	Cynefin Space	Example
Commodity	Extraction	Simple	Fruits, oil, aluminium, ...
Product	Assembling commodities	Simple to Complicated	Meal, watch, car, ...
Service	Wrapping products in service	Complicated	Restaurant, public transport, taxi, ...
Experience	Combining and personalising services	Complex	Hospital, Disney World, spa, ...
Transformation	Scaling multiple experiences	Complex to Chaos	Education, media, ...



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Escalating Product Design

How to determine, what level product to design

Commodity Design	**Product Design**	**Service Design**	**“Experience Design”** (Service Platform Design?)
Well understood	Physical/digital products and platforms, architecture, …	“[…] something that helps someone to do something.” — Lou Downes	Rather nascent; luxury space, Disney World, employee experiences
	→ Desirability, Feasibility, Viability	→ Orchestration of service delivery and cost (e.g. OPEX, CAPEX, …) vs. quality	→ Orchestration of service delivery at scale and cost via operations and business models, etc.
Optimisation → Process engineering	**Understand users, their needs and motivations** → Kano Model	**Understand users, their needs and motivations** → Journey Maps & Service Blueprints	**Create a consistent service experience across a portfolio of engagements** → *nothing yet?!?*

Transformation Design

How do we design systemic change (e.g. fake news, recycling, surveillance, climate change, etc.)

Systemic Design Toolkit

(by Nahman et al.)

Phases:

1. Framing the system
2. Listening to the system
3. Understanding the system
4. Defining the desired future
5. Exploring the possibility space
6. Designing the intervention model
7. Fostering the transition

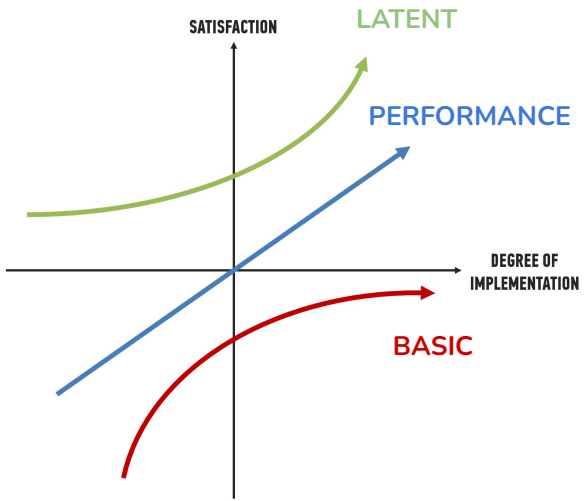
Part	Description
Framing	Defines the scope, level of granularity and correct direction of the question to be asked.
Feedback Loops	Circular cause and effect stories between parts of the system: - Reinforcing loops: Vicious and virtuous cycles (e.g. a savings account) - Balancing loops: Cycles balancing each other (e.g. predator and prey)
Systems Map	Shows how the different system factors are connected through forces.
Leverage Points	Incision points in the system that trigger a ripple-effect through the system.
Interventions	A change introduced at a leverage point to affect (improve) the system, based on a hypothesis.

Design for Impact

How to decide what makes it into our product

Kano Model

(by Noriaki Kano)



Needs:	Basic	Performance	Latent (Excitement)
Example: Car	Steering, brakes, seatbelts, airbags	Passengers, consumption/range, space	Parking support, self-driving
Elicitation:	Customers will not mention these	Customers will share these	Customers are not aware of these
Impact:	Not having these leads to dissatisfaction	Linear correlation with satisfaction	Having these leads to Excitement

Exercise

Putting this to use

In groups (next 20min)

- Select a product at each stage: Product, Service, Experience, Transformation
- For each of the stages, answer:
  - What user groups can you think of?
  - How would you go about eliciting user needs?
  - What would you expect to be basic, performance and latent needs?

We'll do a quick round of sharing in the end.

Exercise: Sharing

Putting this to use

Each group:

- Think of your “product” (project)
- Share:
  - What primary and secondary user groups can you think of?
  - How would you go about eliciting user needs?
  - What would you expect to be basic, performance and latent needs?

Break

Back in 10 min.

Ask me anything meanwhile. :)

TL;DR:

What I hope you take away from this session

1. **Intro to some key frameworks and principles in design.**
2. Stage-gate and iterate your work (unless it's simple), refine over time.
3. Research continuously to generate insights and guide your work.
4. Decide the type of research needed, depending on phase and insight needed (e.g. exploration vs. verification).
5. Spend the extra effort to consider impact and scale to solve classes of problems, not one-off.

Thanks for your interest, feel free to reach out with any questions.