Workshop
User Experience Design III
(Concept Development)

Lecturer: Alexander Wiethoff
Tutorials and Organization: Steeven Villa & Fiona Draxler
External Lecturer: Marin Zec (HM München)

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

In der Lehrveranstaltung

User Experience III

ist das Ziel **eigenständig** ein **innovatives**

Interaktionskonzept zu erarbeiten und teilweise,

mittels eines **Prototypen**, umzusetzen.

In Teams wird der **iterative UX Designprozess** und seine einzelnen

Phasen praktisch umgesetzt und **theoretisches Wissen**

verfestigt. Eine abschließende Experten **Evaluierung** liefert erste

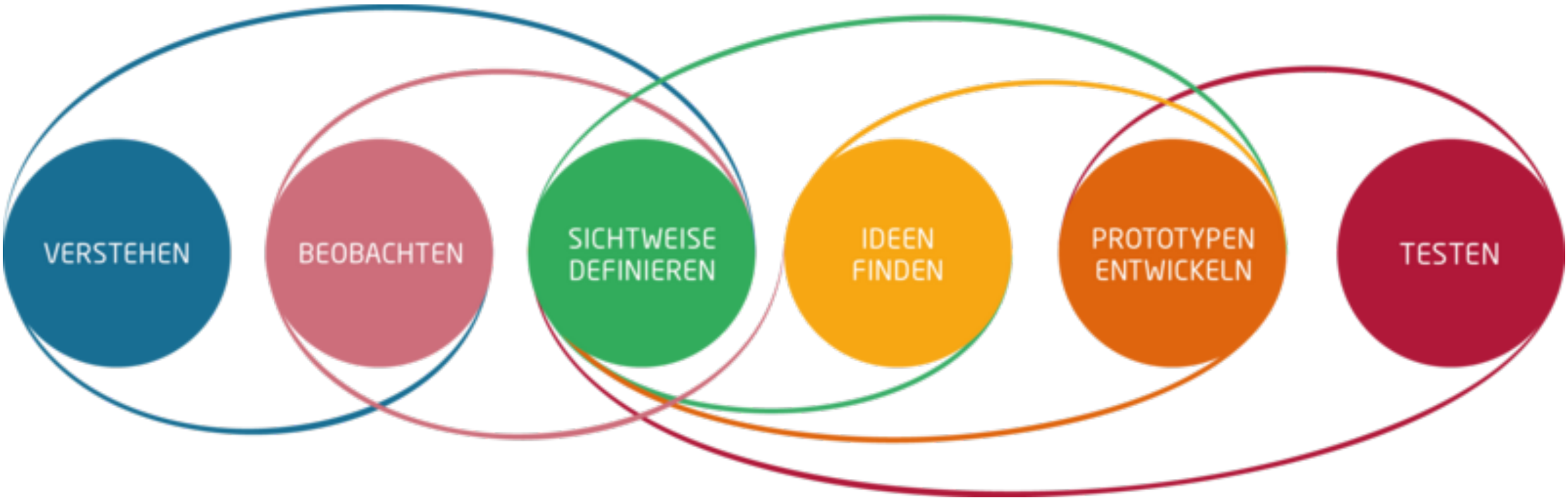
Aufschlüsse in wieweit das Designkonzept Chancen auf eine weitere

Entwicklung hat. Die Grundlagen aus der vorausgegangenen

Lehrveranstaltung **UX I (IxD)** bieten das notwendige

Vorwissen um das Modul erfolgreich zu absolvieren.

UX / Design Thinking



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CX

http://www.uxforthemasses.com/wordpress/wp-content/uploads/2011/06/uxm-inbound-search-word-cloud.png

Ergebnisse

- **Praktische Umsetzung des iterativen UX Designprozess**
- **Arbeit mit UX Tools + Anwendung**
- **Kreative Arbeit im Team an eigenem Projekt**
- **Videoprototyp (UX Präsentationstool)**
- **Öffentliche Präsentation (Firmen, Professoren)**

Ablauf

Woche 1:

- UX Research
- UX Tools & Iterative Entwicklung des Design Konzepts

Woche 2:

- Erste (halb) öffentliche Präsentation des Projekts
- Iterative (Weiter-) Entwicklung des UX Design Konzepts
- Videodreh & Videobearbeitung (UX Prototyping)
- (Halb-) Öffentliche Präsentation

Organisation

Blockpraktikum: 25.09 – 06. Okt 2023 (09:00-17:00)

Räume: Oettingenstr. 67, L 155 + TBD

Bedingungen für das Bestehen:

Anwesenheit (Teilnehmerliste oder Attest) Dokumentation (Fotos, Videos, Blog) Präsentationen
Motivierte Mitarbeit im Team

Gruppenarbeit

(Einteilung heute)

Heute

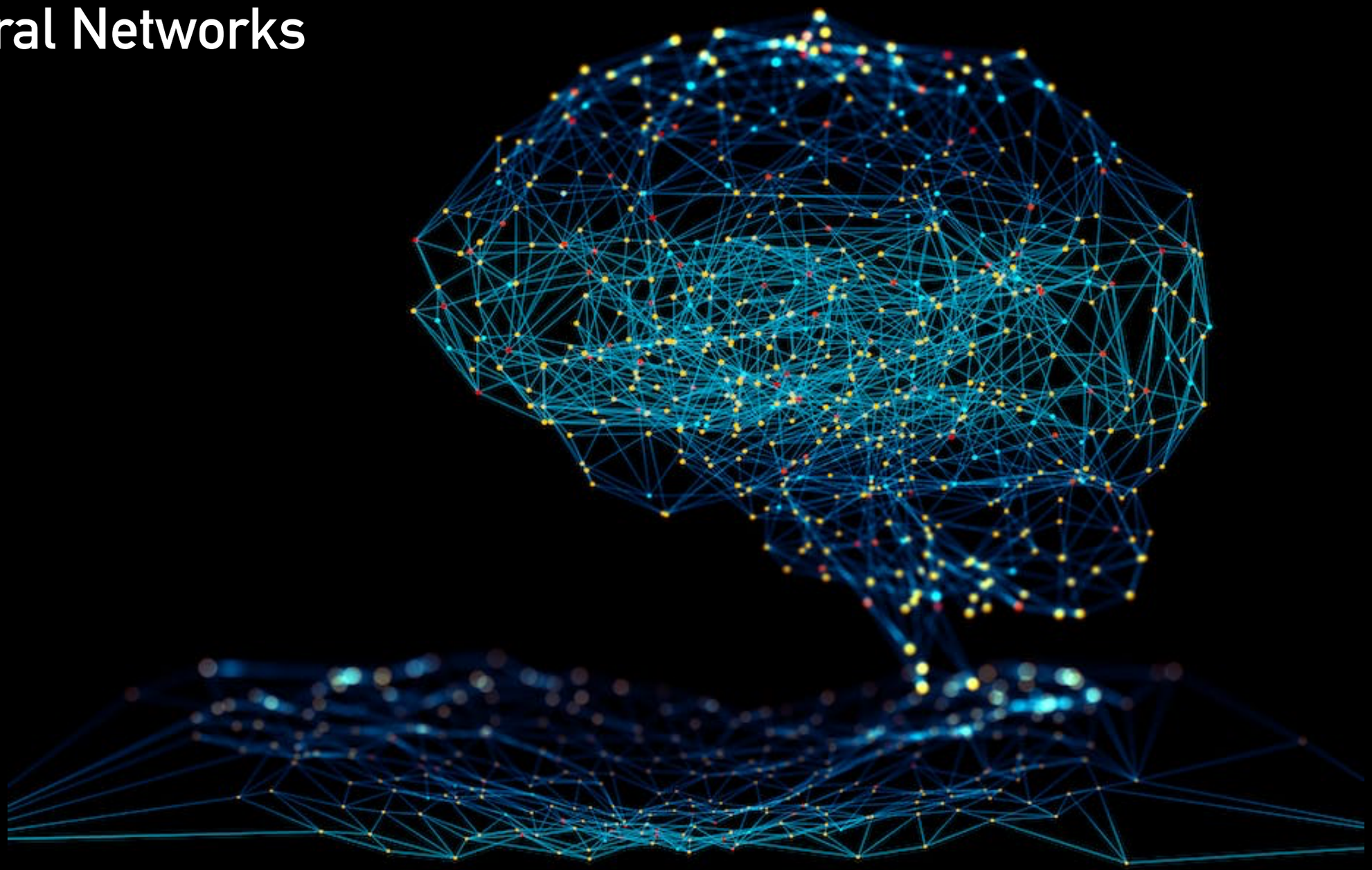
1.) Themenstellung

2.) Aufgaben bis zum Praktikum

3.) Gruppeneinteilung

Thema UX3/Herbst 23:
AI and the Creative Industry - Chances, Opportunities and Risks

Neural Networks



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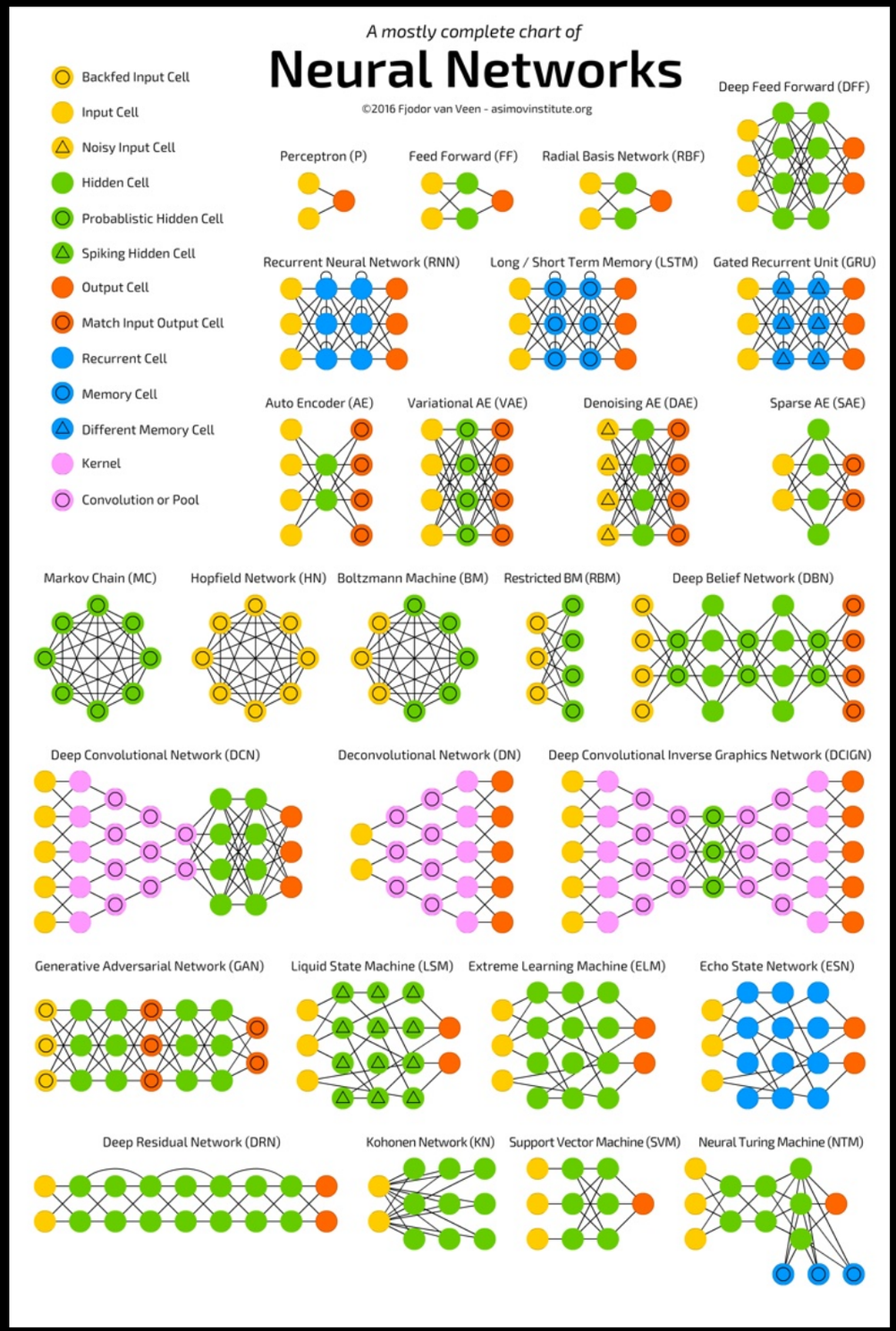
Neural Networks



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Latent Diffusion Models (2022)

High-Resolution Image Synthesis with Latent Diffusion Models

Robin Rombach[1] * Andreas Blattmann[1] * Dominik Lorenz[1] Patrick Esser[R] Björn Ommer[1]
[1]Ludwig Maximilian University of Munich & IWR, Heidelberg University, Germany [R]Runway ML
https://github.com/CompVis/latent-diffusion

arXiv:2112.10752v2 [cs.CV] 13 Apr 2022

Abstract

By decomposing the image formation process into a sequential application of denoising autoencoders, diffusion models (DMs) achieve state-of-the-art synthesis results on image data and beyond. Additionally, their formulation allows for a guiding mechanism to control the image generation process without retraining. However, since these models typically operate directly in pixel space, optimization of powerful DMs often consumes hundreds of GPU days and inference is expensive due to sequential evaluations. To enable DM training on limited computational resources while retaining their quality and flexibility, we apply them in the latent space of powerful pretrained autoencoders. In contrast to previous work, training diffusion models on such a representation allows for the first time to reach a near-optimal point between complexity reduction and detail preservation, greatly boosting visual fidelity. By introducing cross-attention layers into the model architecture, we turn diffusion models into powerful and flexible generators for general conditioning inputs such as text or bounding boxes and high-resolution synthesis becomes possible in a convolutional manner. Our latent diffusion models (LDMs) achieve new state-of-the-art scores for image inpainting and class-conditional image synthesis and

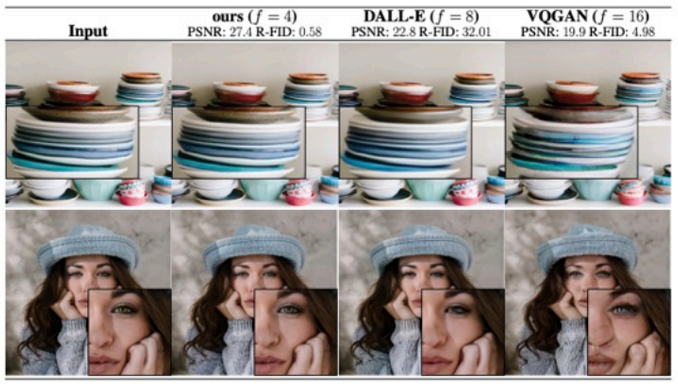


Figure 1. Boosting the upper bound on achievable quality with less agressive downsampling. Since diffusion models offer excellent inductive biases for spatial data, we do not need the heavy spatial downsampling of related generative models in latent space, but can still greatly reduce the dimensionality of the data via suitable autoencoding models, see Sec. 3. Images are from the DIV2K [1] validation set, evaluated at 512^2 px. We denote the spatial downsampling factor by f. Reconstruction FIDs [29] and PSNR are calculated on ImageNet-val. [12]; see also Tab. 8.

results in image synthesis [30,85] and beyond [7,45,48,57], and define the state-of-the-art in class-conditional image synthesis [15,31] and super-resolution [72]. Moreover, even unconditional DMs can readily be applied to tasks such

Midjourney

Midjourney is an independent research lab exploring new mediums of thought and expanding the imaginative powers of the human species.

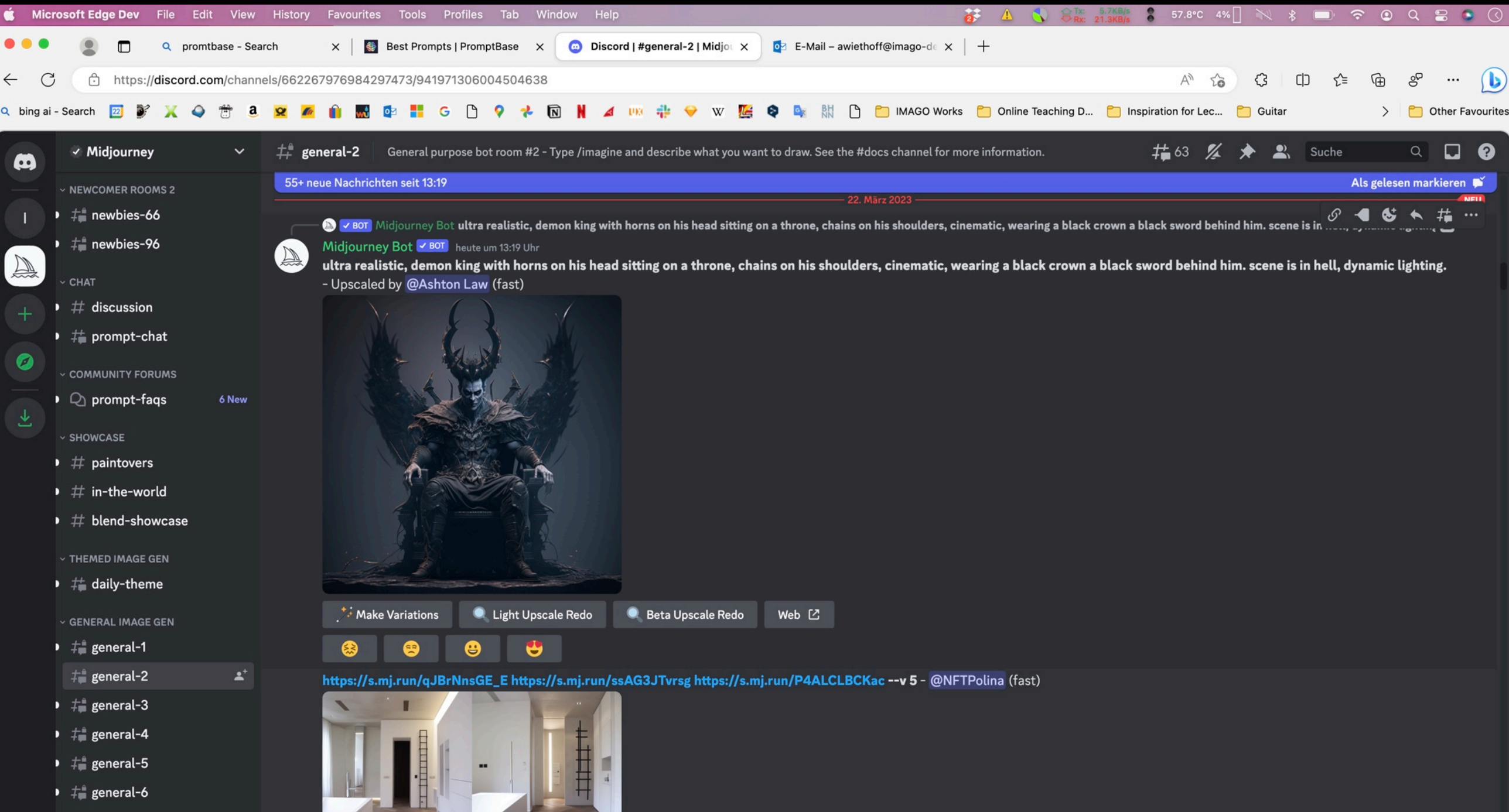
Self-funded team focused on design, human infrastructure, and AI.
11 full-time staff and a set of advisors.

Founded: July 2022
Release of V4: November 10th 2022
Release of V5: March 15th 2023
Release of V5.1: May 4th 2023

CEO
David Holz
Previously: Founder Leap Motion, Researcher at NASA, Max Planck

source: midjourney.com

Midjourney Interface (via Discord)



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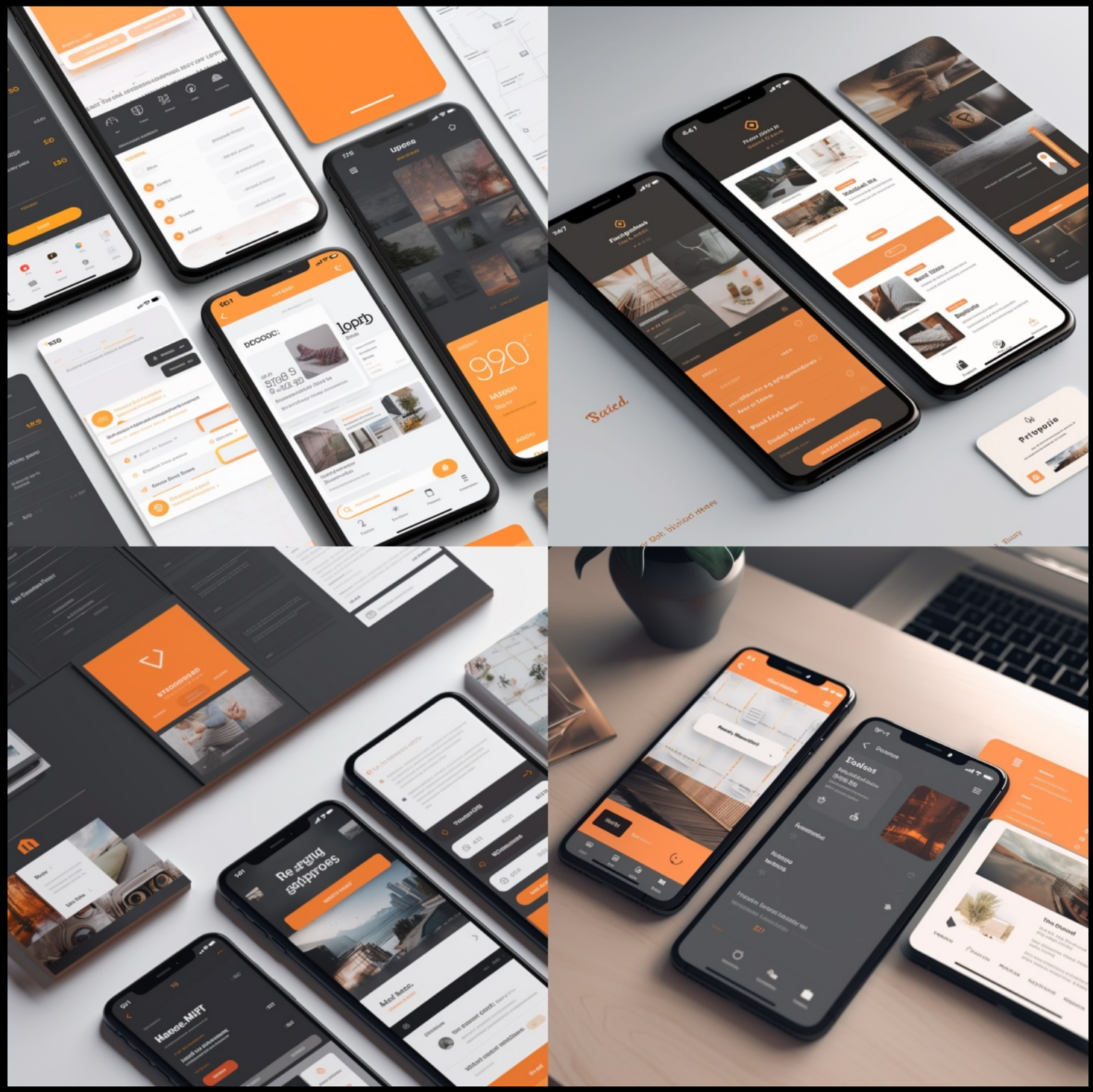
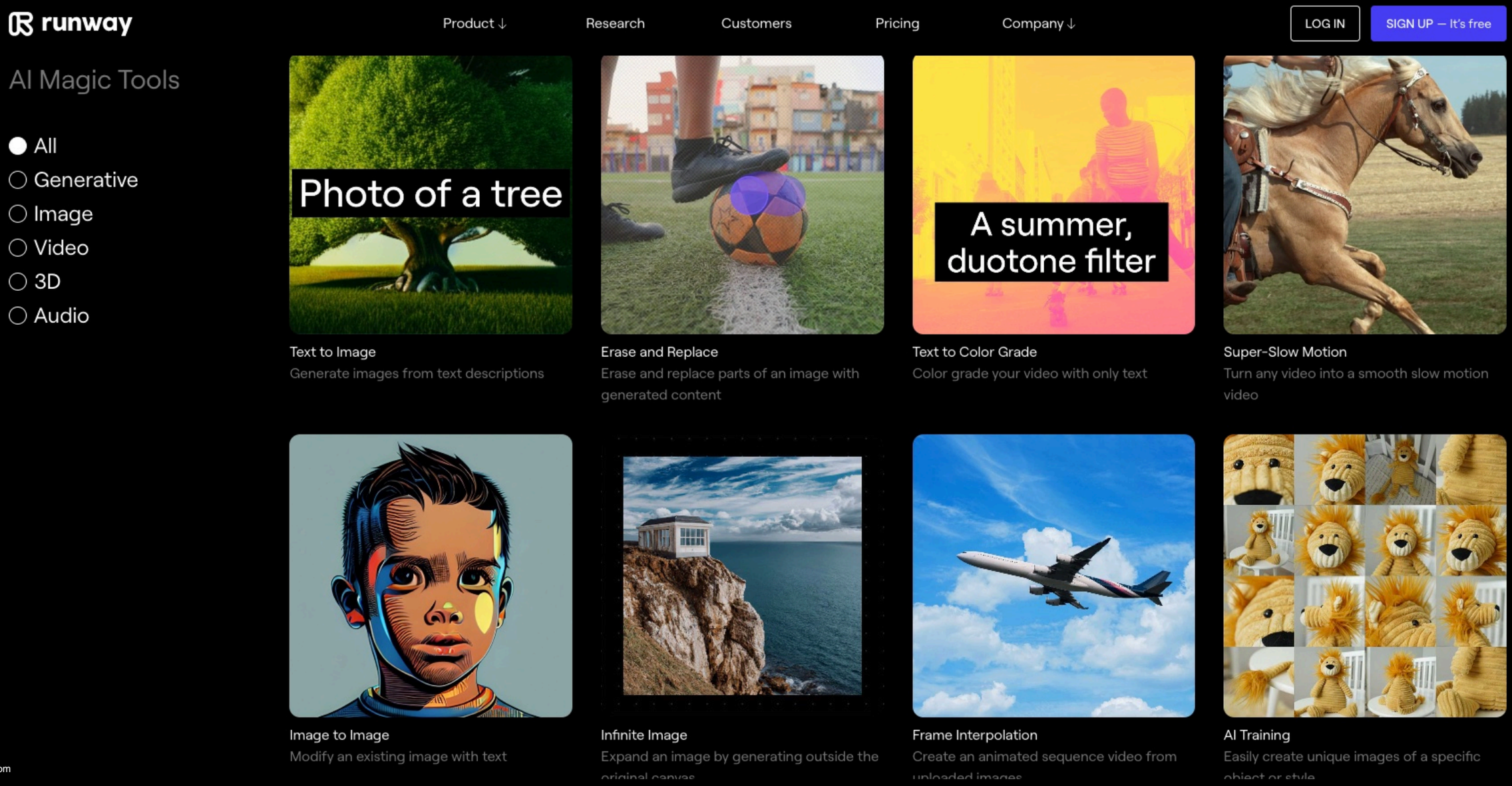


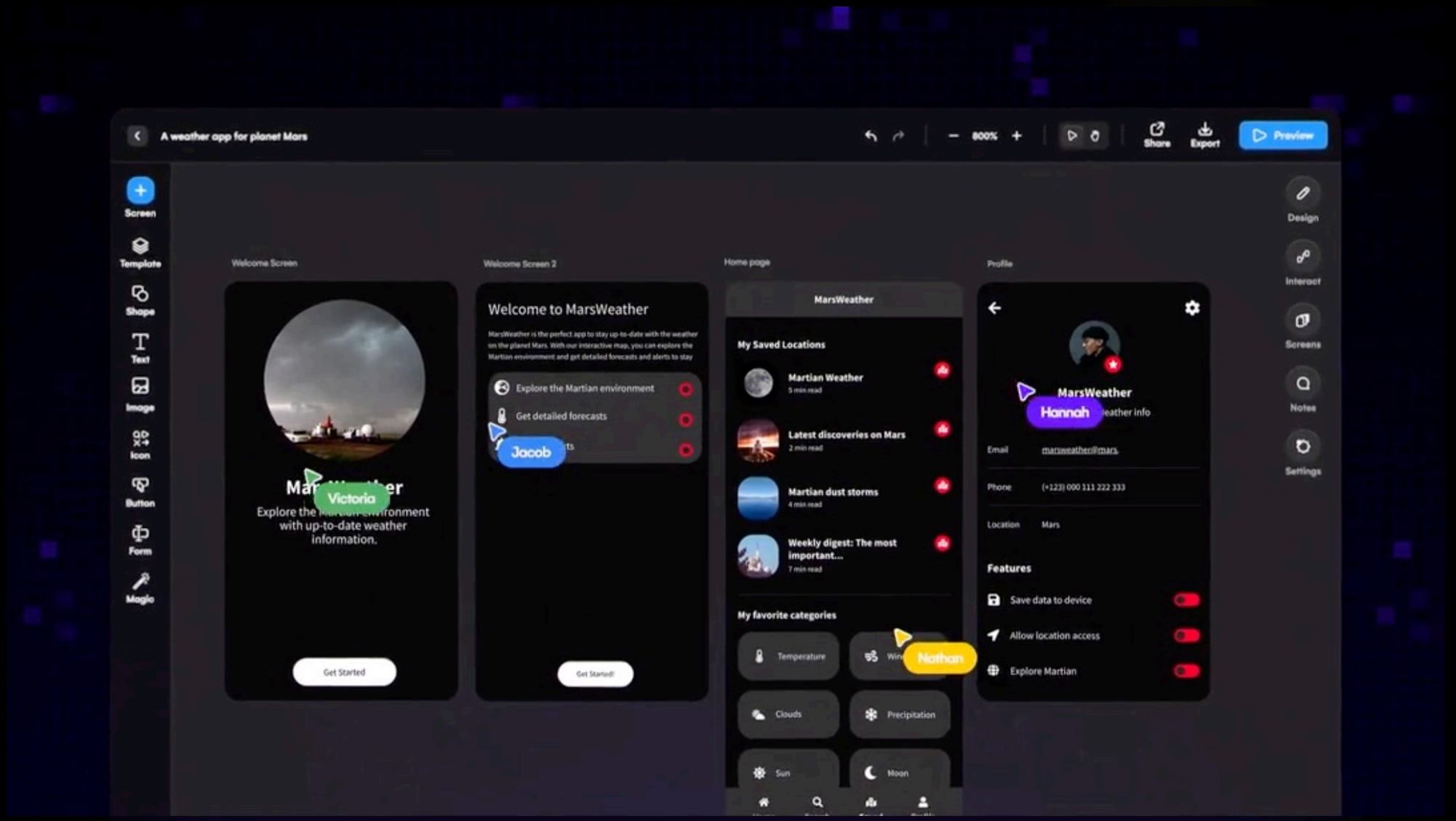
Image generated by: midjourney.com

September 2022-now: Runway AI Magic Tools



source: runwayml.com

May 2023: Uizard Autodesigner



source: uizard.com

https://s40424.pcdn.co/in/wp-content/uploads/2022/05/ui-ux-scaled.jpg.optimal.jpg

5 Halb-Halb-Strukturierte Interviews

mit: UX/UI Designern, Kommunikations/Grafikdesigner, Industriedesigner, Agenturen (z.B. Designaffairs, Frog Design, IDEO… etc.)

Kein: Skype, Zoom, Teams etc. erlaubt

In-context Interview (Contextual Inquiry - CI)

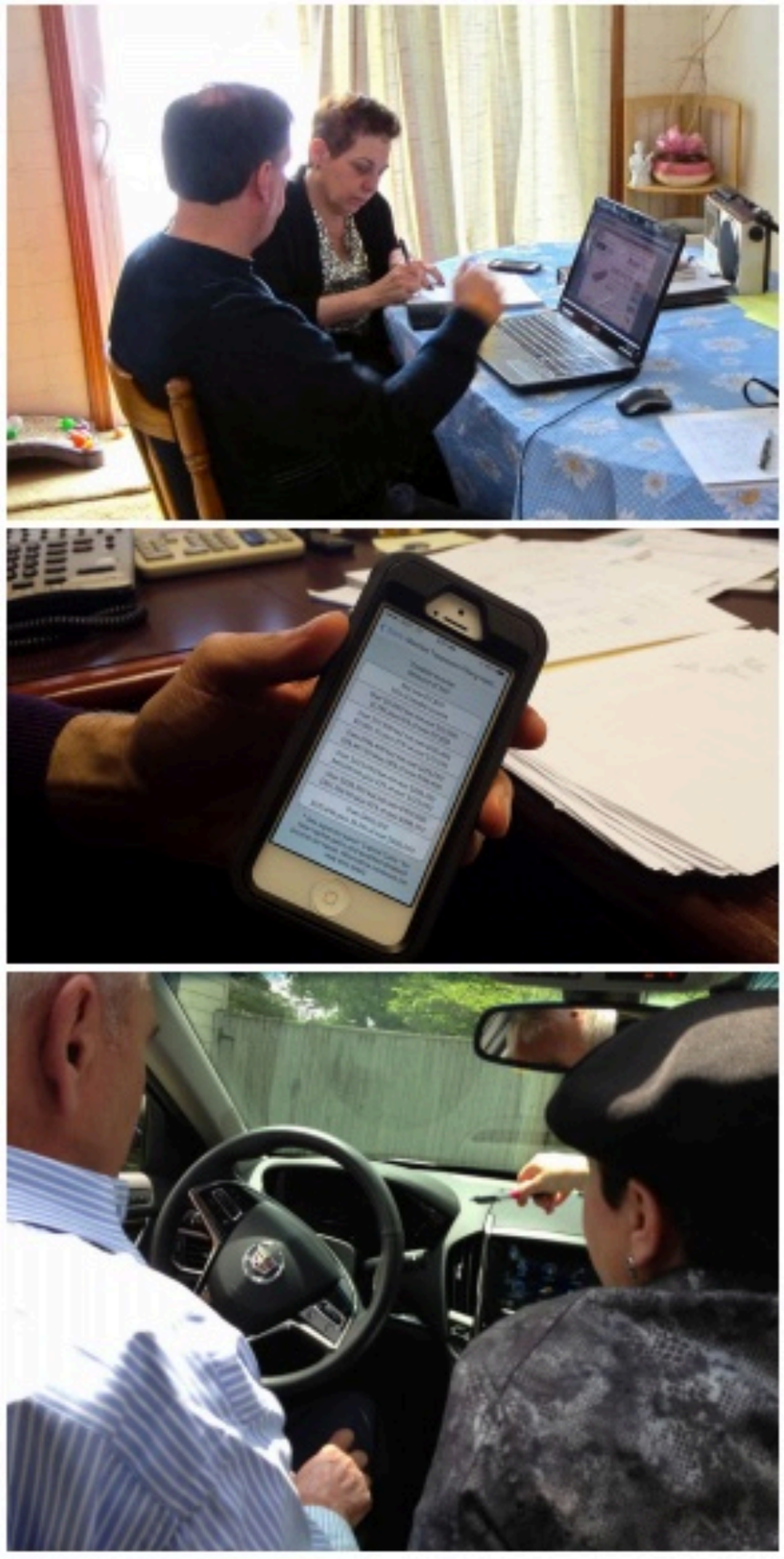


Figure 3.1: Contextual interviews in different life contexts: work, home, and car. Interviews are conducted wherever the activities of interest take place.

Holtzblatt, K., & Beyer, H. (2008). Contextual Design, Morgan&Claypool Publishers

Contextual Inquiry (CI)

Holtzblatt, K., & Jones, S. (1993). Contextual inquiry: A participatory technique for system design. *Participatory design: Principles and practices*, 177-210. (458 citations on Google Scholar/25.01.2018)

Contextual Design is a user-centered design process (UCD) that uses in-depth field research to drive innovative design. Contextual Design was first invented in 1988 and has since been used in a wide variety of industries and taught in universities all over the world (K. Holtzblatt)

ANALYSIS

Definition of the system

What is the problem?

EVALUATION

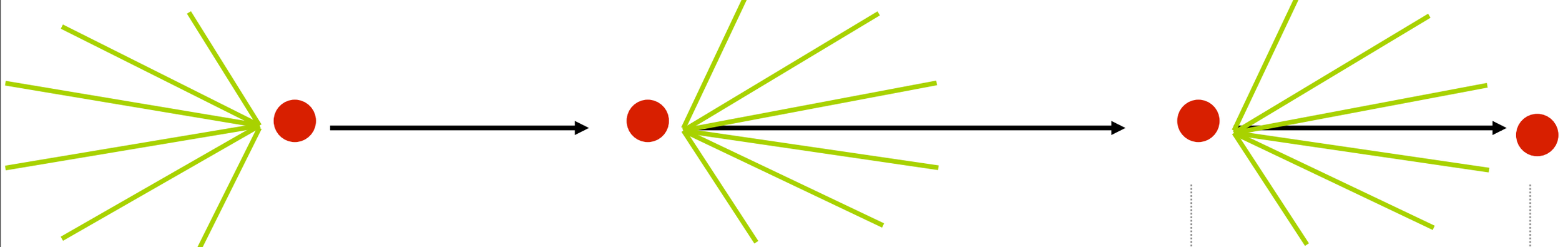
Possible alternatives

What future do we want?

SYNTHESIS

Design of final solutions

What do we implement?



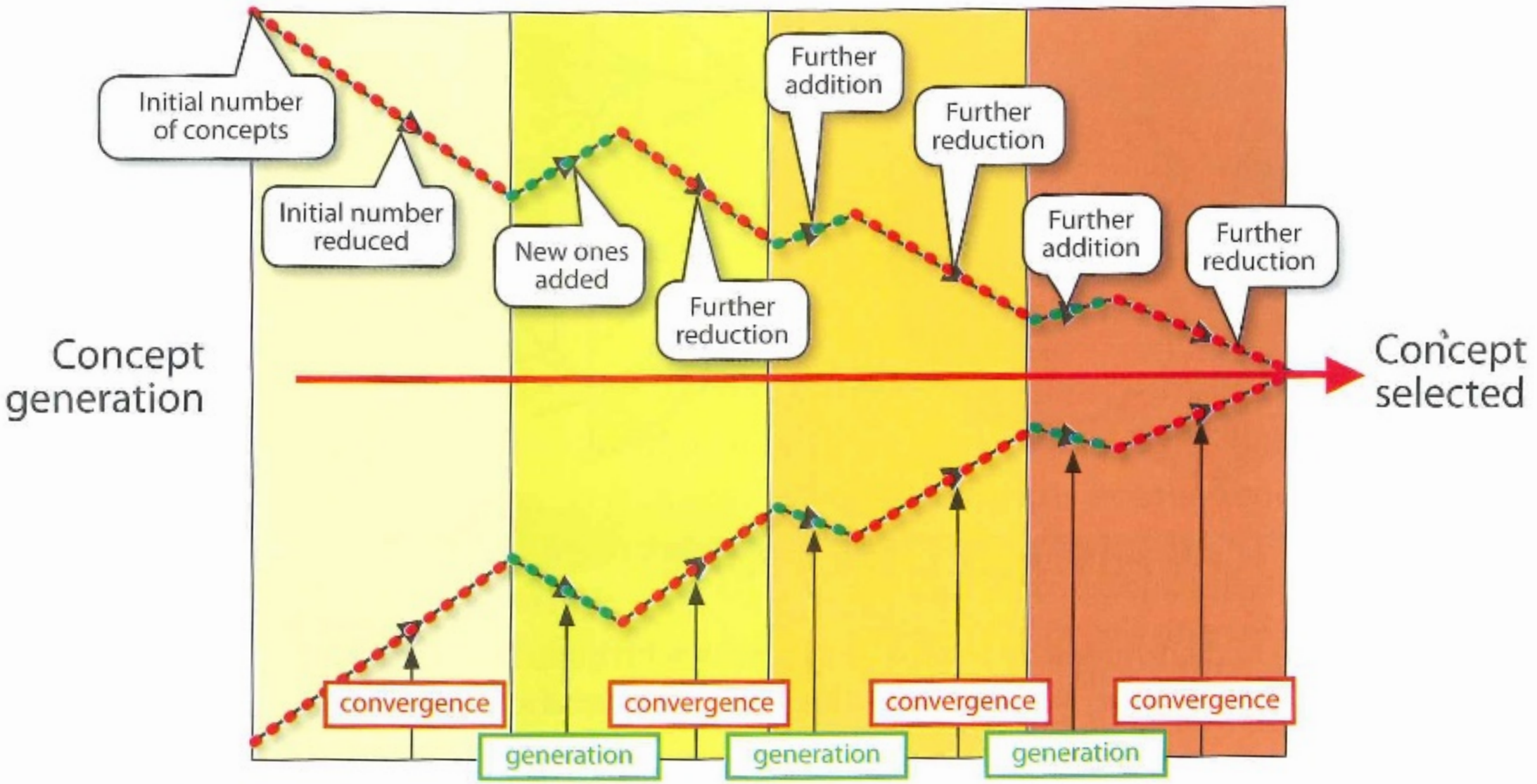
brief **solution**

The designer is a ‘problem-scouter’

The designer is a ‘story-teller’

The designer is an ‘executor’

source: [4]



Iterative:	**General** overall concepts	**Iteration 1** exploratory	**Iteration 2** clarification	**Iteration 3** resolution
Granularity:	**General** overall concepts	**Coarse** significant alternatives	**Medium** intermediate development	**Fine** detailed refinement

Deliverable - 25.09:

Interviewplan + Questions

Interviewplan (immer zwei Teammitglieder pro Interview)

Interview Partner	Teammitglied	Termin
Kurt Müller (Schule YX)	Andy Bauer Assistenz: Ina Müller	20. September, 14:00
…		

Interviewleitfaden

- Welche Fragen werden Sie stellen? (Minimum 10 Stück)
- Welche Antworten erwarten Sie?
- Welche dieser Fragen sind am interessantesten und sollten auf jeden Fall gestellt werden?

L
R
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PEAK
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MIC
WAV 16bit
44.1K
DR-05
HOME
RECORD
MENU
QUICK
PB CONT
MARK
LINEAR PCM RECORDER

Deliverable - 28.09:

5 transcribed interviews

Good documentation shows context, interesting details and interview partners…

..not (only) your group!

Minuten

25.09 09:00 (c.t.)

1.) Nutzergruppe vorstellen (mit Bild)

2.) (Semi-Structured) Interview präsentieren

3.) 5 Interview Termine mit Personen aus der Zielgruppe vorstellen (25.09 ab 11:30 oder 26.09 oder 27.09 ganztägig)

4.) Observationsleitfaden

see you! 25.09 09:00 (c.t.)

Oettingenstr. 67, L 155

Details via Uni2Work und Website