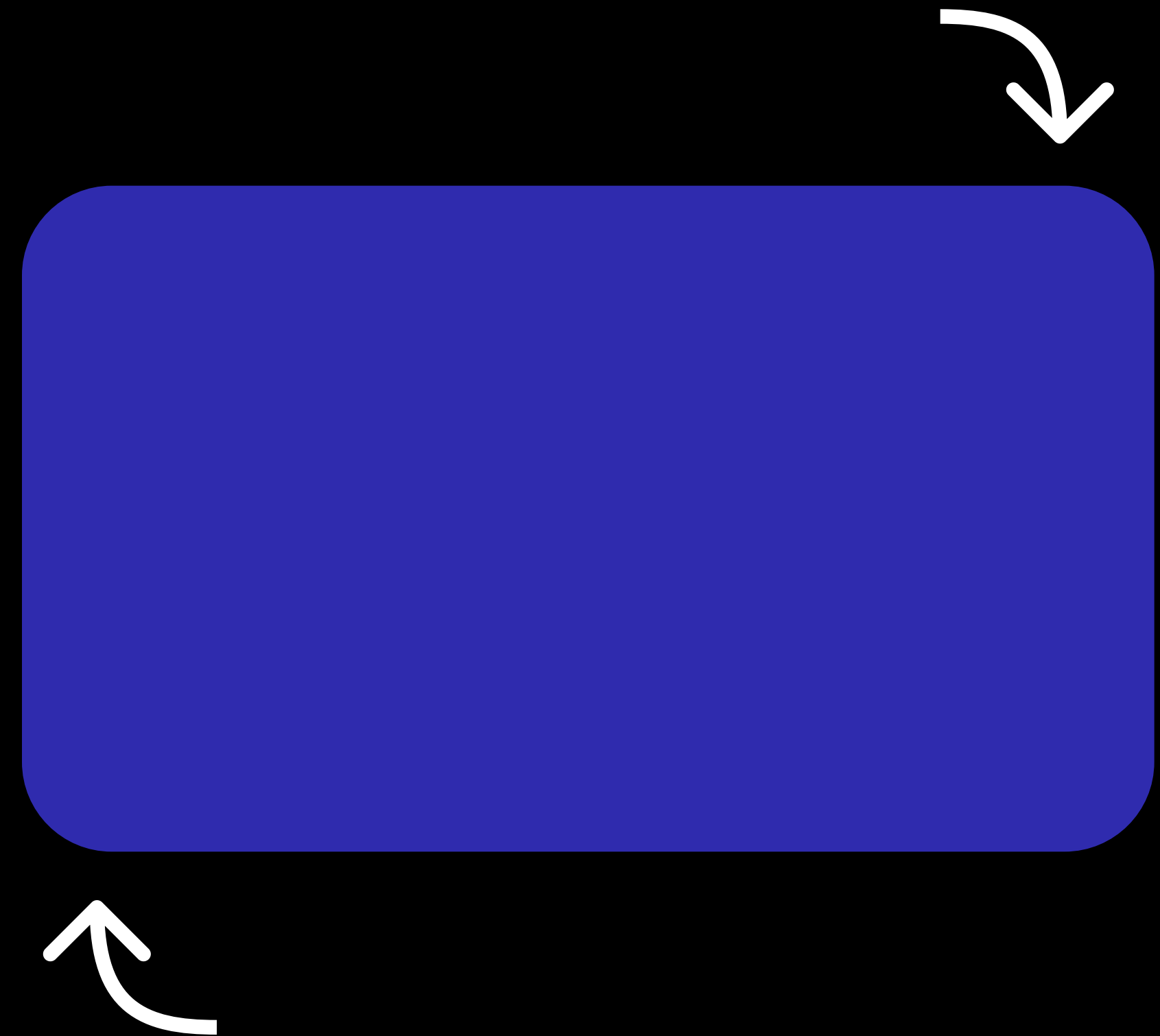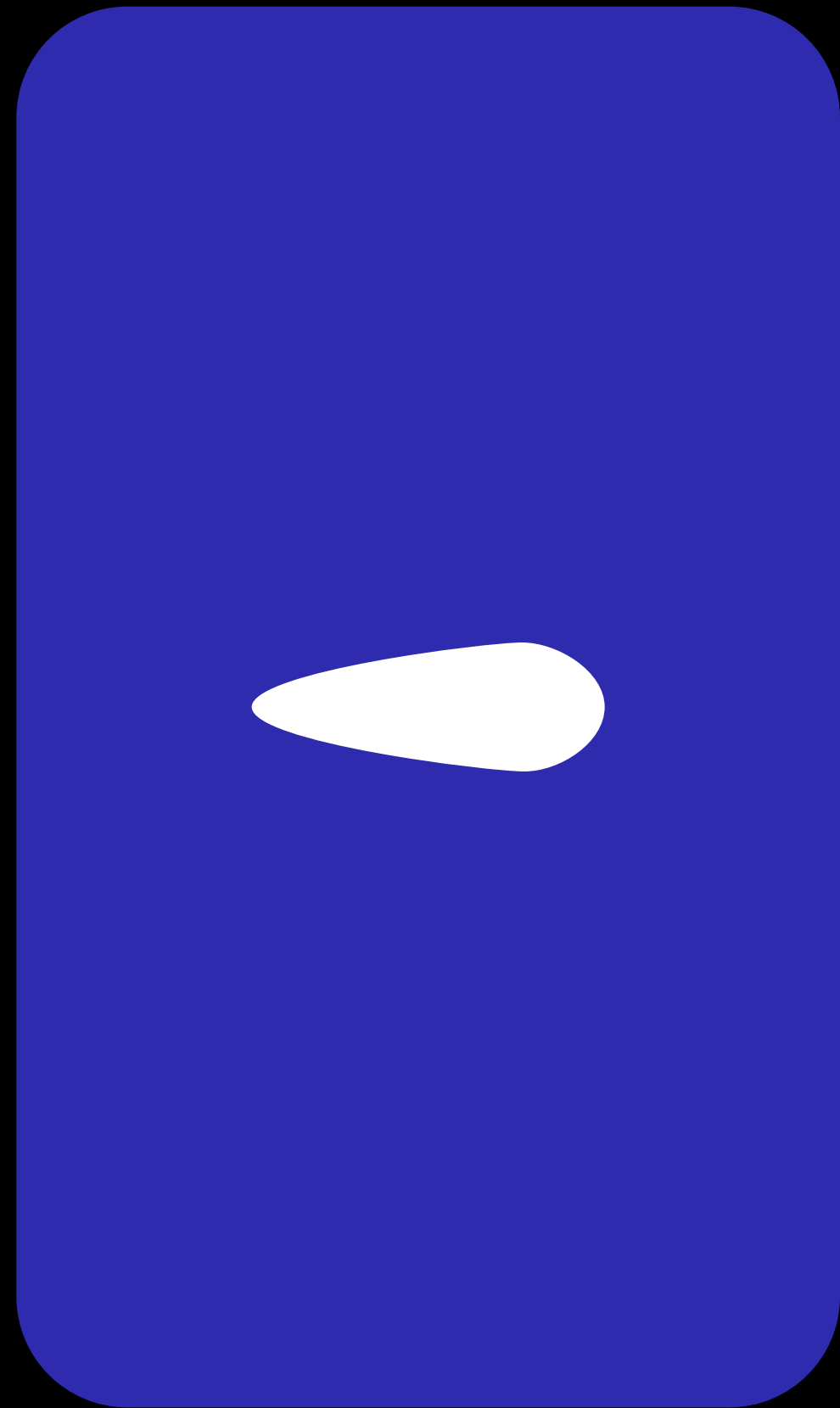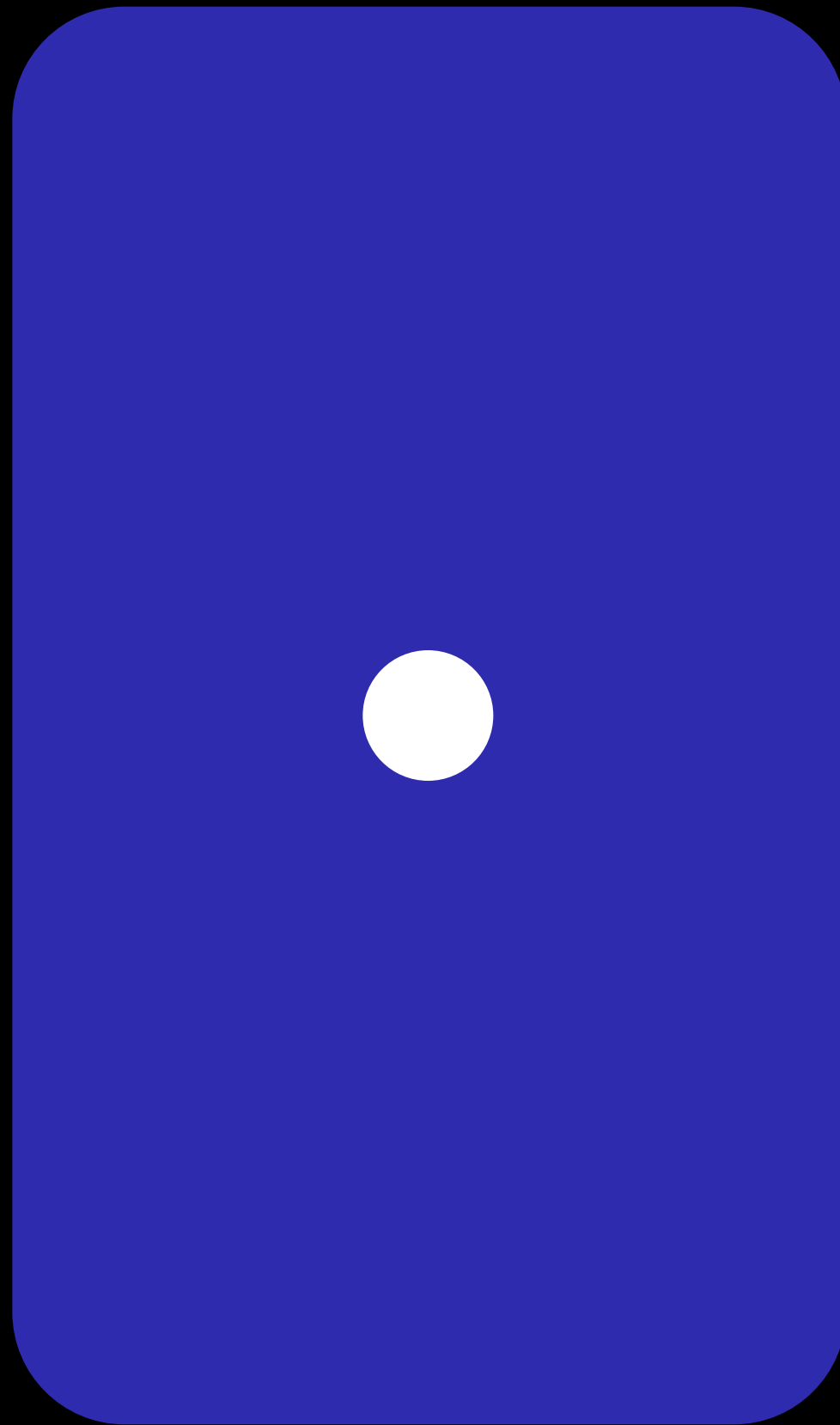**Lec 2**

Introduction to HCI

What, Why, How?

Dr. Omar Hammad

Think of some digital products that we interact with?

- The computer
- Apps
- Virtual assisstant
- Smart Watches
- Smart Devices
- ATMs/CDMs
- Headphones
- Keyboards

Different ways of interactions

Think of other ways human interact with computers

- gestures
- eye tracking
- moving the device
-

Design the following requirement

As a smartphone user, I want to find an app and launch it.

Location and time based prediction and opens automatically	Cont. Three shaking of phone and google maps will launch	get info from user patterns and location, battery and voice, then suggest once user opens his phone
based on temp notify another person (gurdian) and then they can launch the app	Popup for most recent and most used apps	Based on the number of taps behave differently: best, recent, most use, all others.
automatic arrangement of apps based on categories, most recent at the top	Keypad based research	menue based naviation of apps

Maximizes users' ability to achieve their goals while providing the best possible experience.

What are the general metrics/indicators for ..

Ability
Or Performance

Experience
Or Perception

Time to open
Time between stps
Ability to use
Number of steps
Error rate

Satisfaction/Frustration
Usage frequency
Trust
Privacy
 # complaints / report
 # purchases / premium

Why is HCI important?

Why it is important to design the interaction with digital products carefully?

Think of the bad consequences of having a bad interface design of one of the following digital systems

Car Navigation System   Health System   Social Media System   Banking Apps

AR furniture app   ATM Interface   Car Parking   Online Game   Operating System

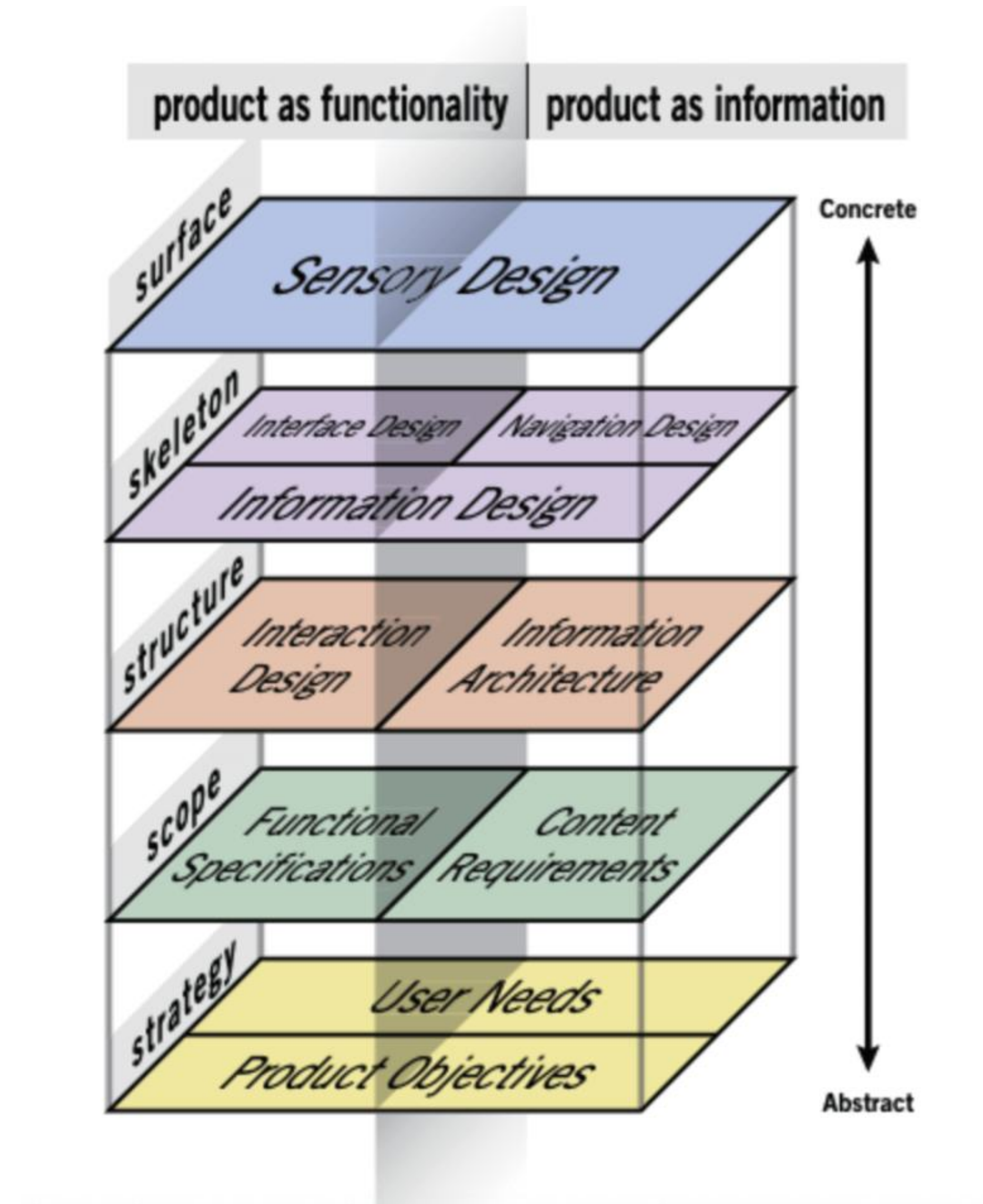Smart Home System   Airplane System   Smart Watch interface   Robot System

What to design?

·····

The elements of UX design

Jesse James Garrett

The methodologies

Is there a process that has been defined and tested to help designers design top quality user interfaces?

Human-Centered Design   **The Design Sprint**   **The Lean UX process**

Design Thinking   **The Double Diamond**

Common among different processes

Explore & Learn about
the users and the
domain

Common among different processes

Define the problem that you need to solve

Explore & Learn about the users and the domain
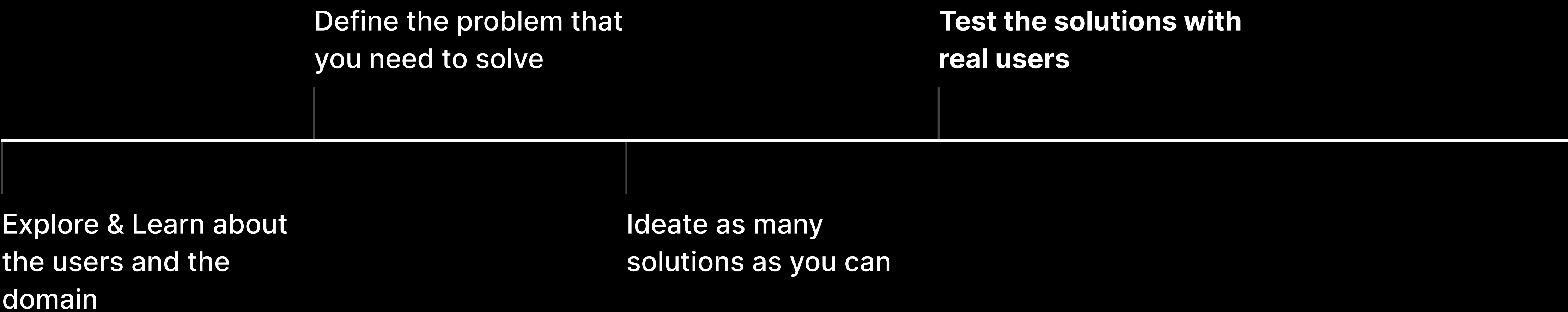
Common among different processes

Define the problem that
you need to solve

Explore & Learn about
the users and the
domain

**Ideate as many
solutions as you can**

Common among different processes

Define the problem that
you need to solve

**Test the solutions with
real users**
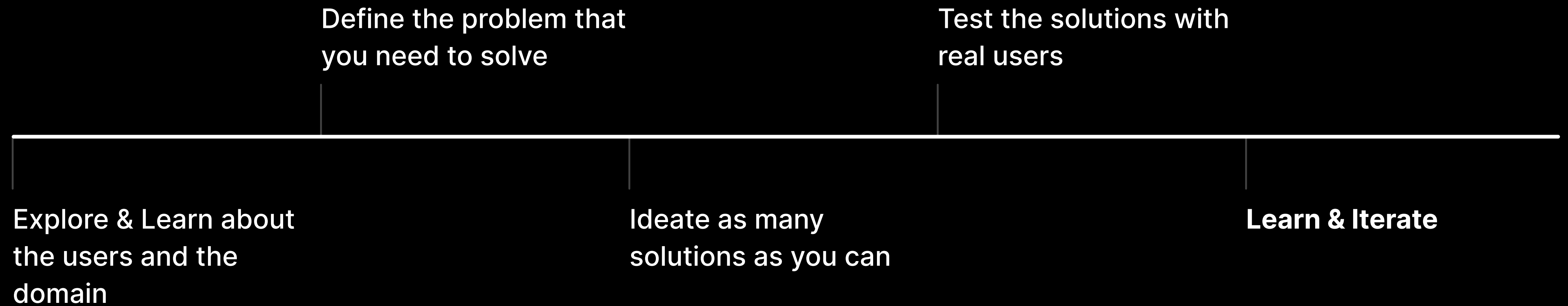
Explore & Learn about
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Ideate as many
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Common among different processes

Define the problem that
you need to solve

Test the solutions with
real users

Explore & Learn about
the users and the
domain

Ideate as many
solutions as you can

Learn & Iterate

Differences are in the **details**

Research Methods

Behaviour

Eyetracking

Clickstream / Analytics

A/B Testing

Usability Benchmarking

Usability Testing

Remote Moderated Testing

Unmoderated Testing

Field Studies

Contextual Inquiry

Concept Testing

Participatory Design

Diary Studies

Card Sorting / Tree Testing

Focus Groups

Customer Feedback

Attitude

Interviews

Desirability Studies

Surveys

Qualitative

Quantitative

Content by Christian Rohrer
Poster Design by Kelley Gordon
https://www.nngroup.com/articles/
which-ux-research-methods/

Choose a common website and do the following

Evaluate one user flow using using the 10 Usability Heuristics for User Interface Design

Understand the why behind each process to know which one to apply

Next Week

- Read Chapter 1 & 2 of the book
- Join a group in BB