Workshop

Concept Development

Lecturer: Alexander Wiethoff & Andreas Butz
Tutorials and Organization: Sebastian Löhmann
External Lecturer: Kalle Kormann-Philipson (INNUID)
Industry Partner: Designaffairs Munich

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OVERVIEW

Week 1

Intro & User Research

Monday

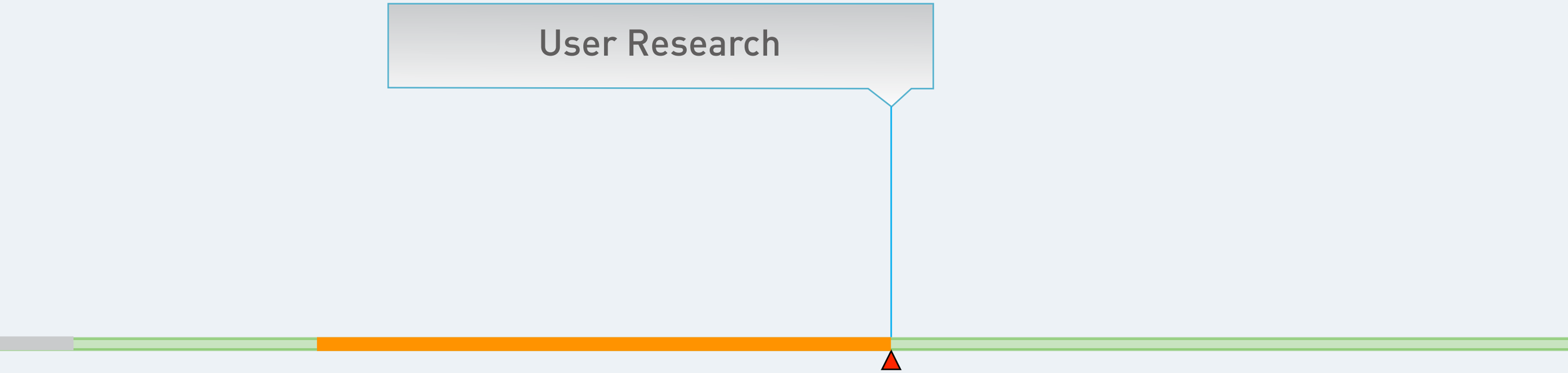
Tuesday

Wednesday

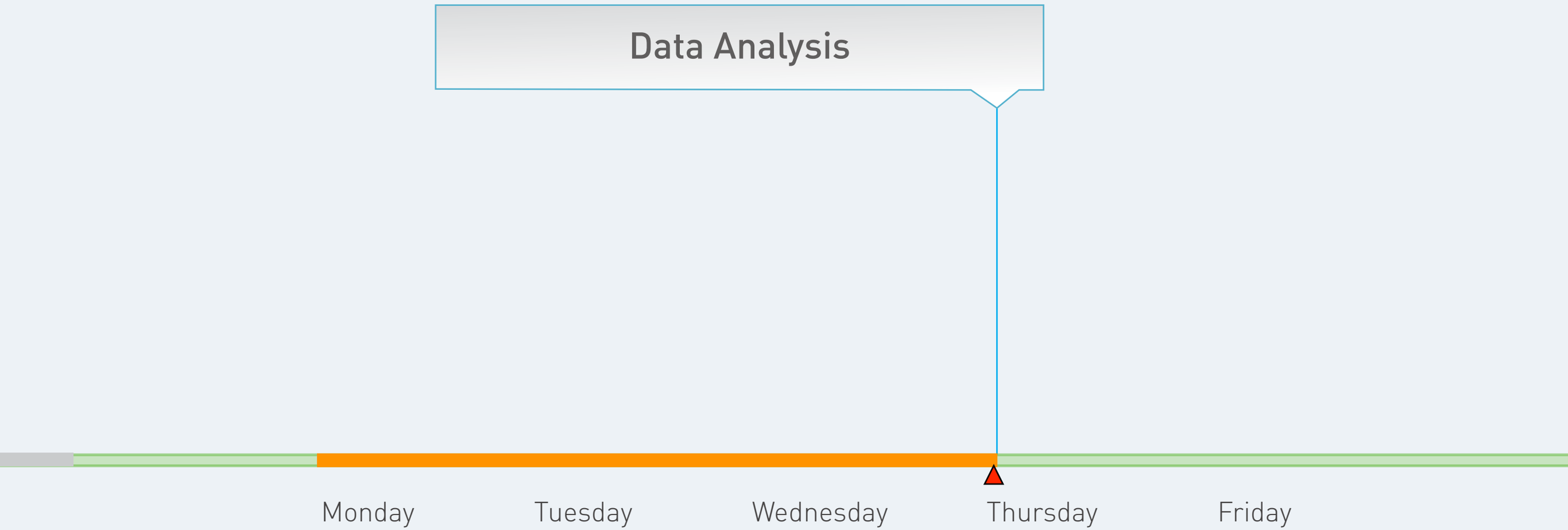
Thursday

Friday

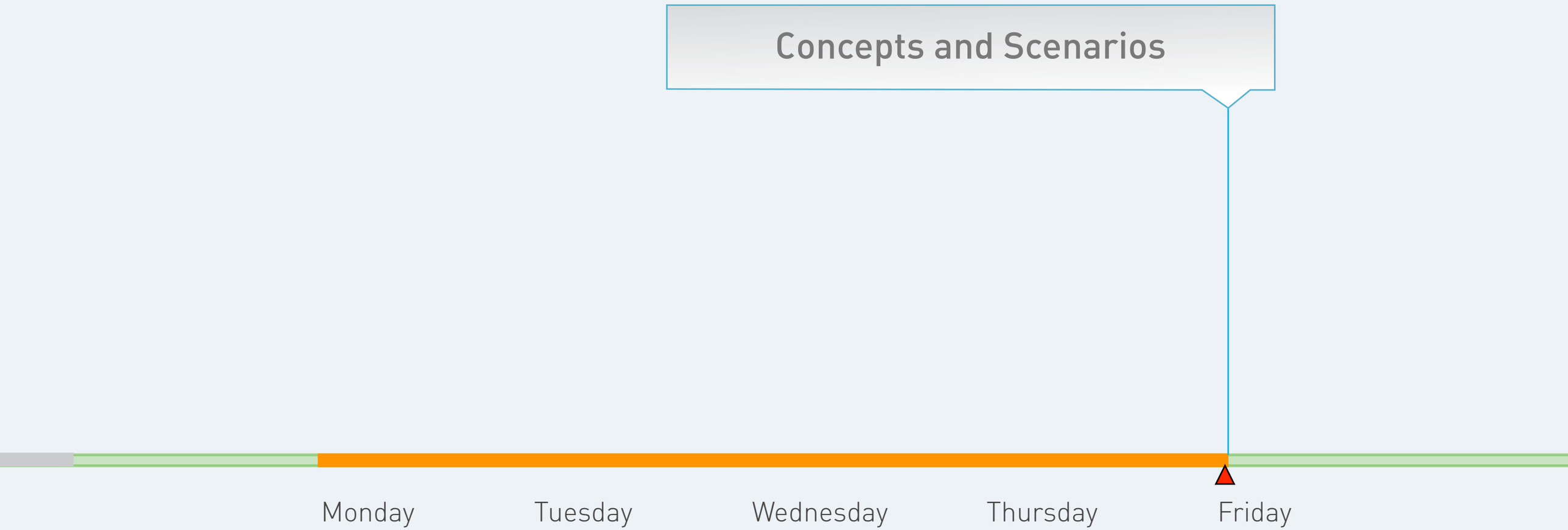
Week 1



Week 1



Week 1


Concepts and Scenarios
Monday
Tuesday
Wednesday
Thursday
Friday

Week 2

Mid Presentation w. Guests

Monday

Tuesday

Wednesday

Thursday

Friday

Research

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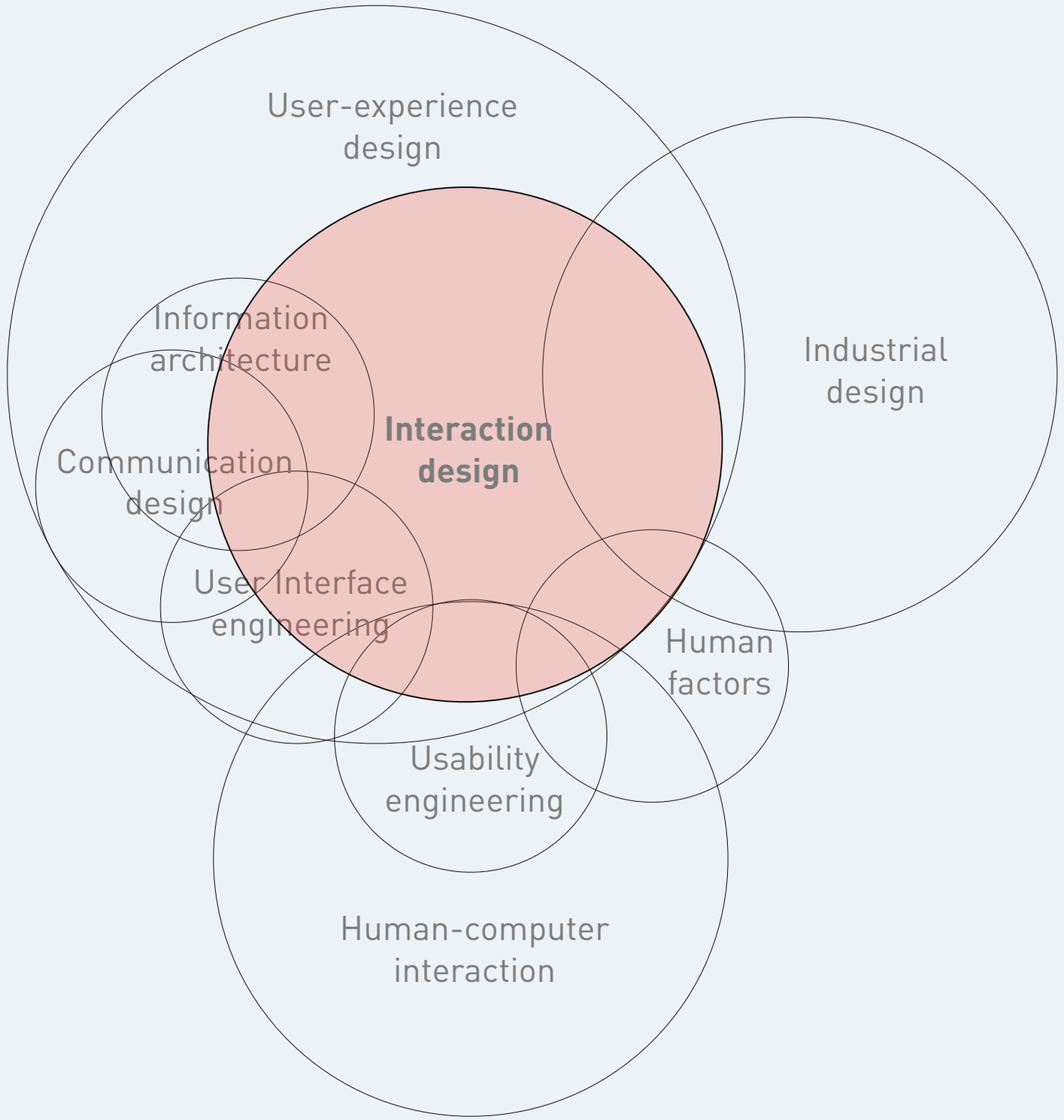
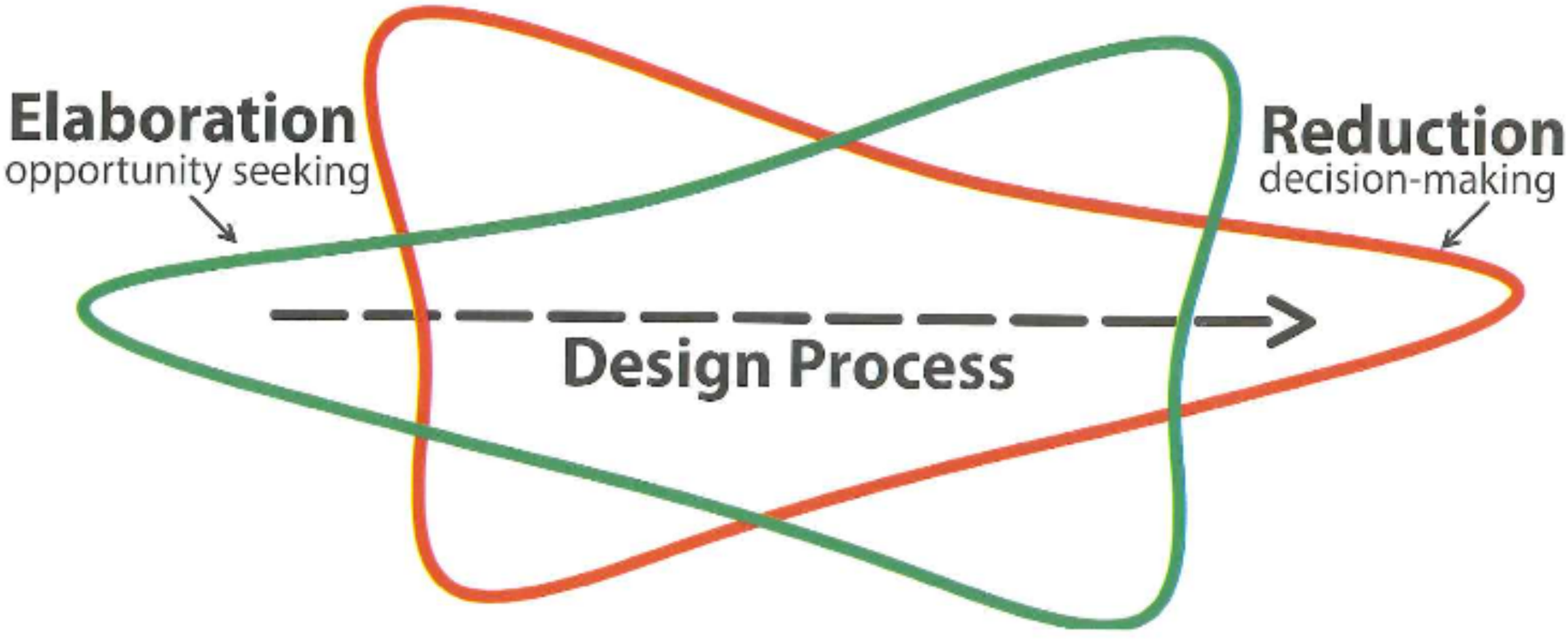
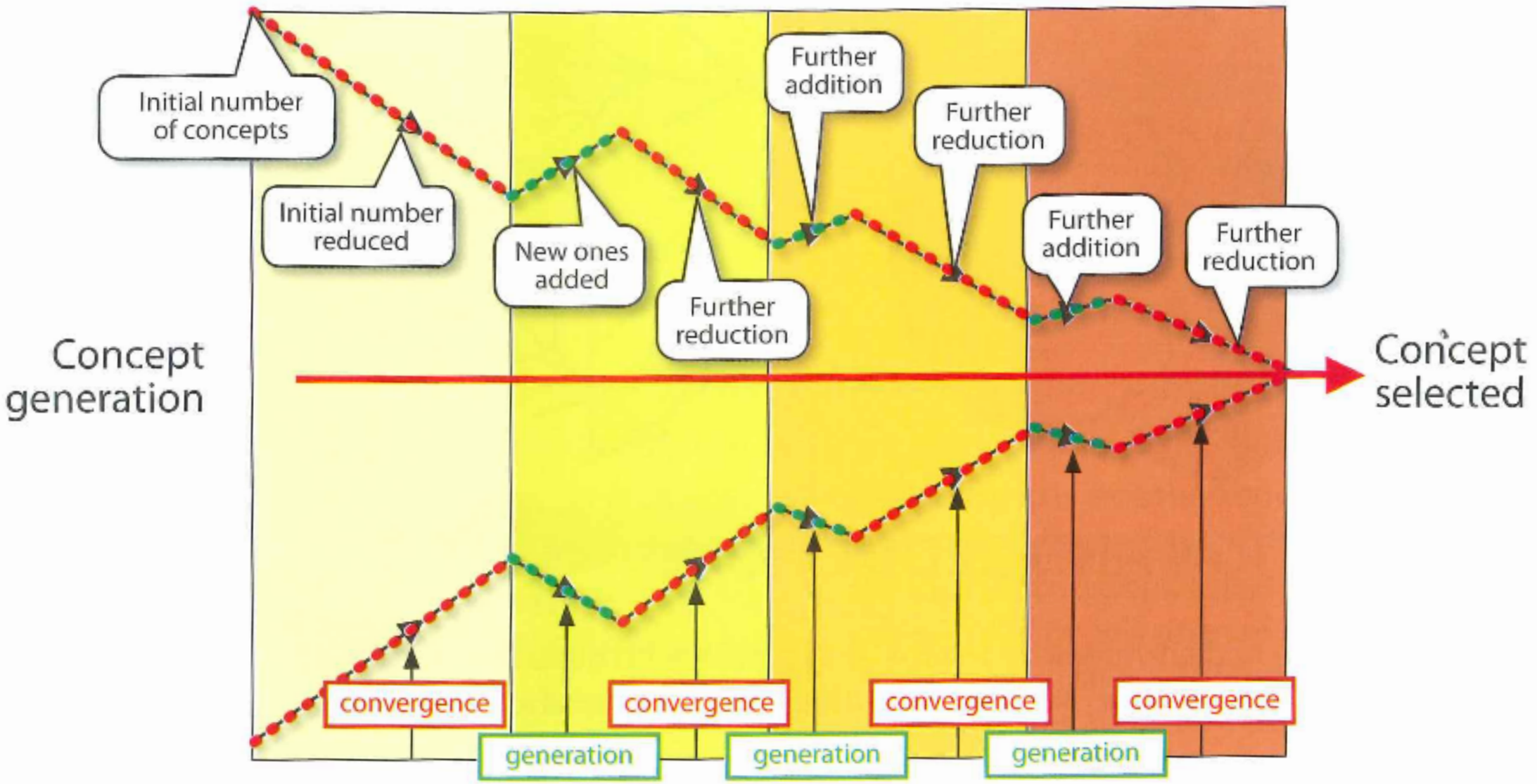
Recap:


User-experience design
Information architecture
Industrial design
Interaction design
Communication design
User Interface engineering
Human factors
Usability engineering
Human-computer interaction

source [3]

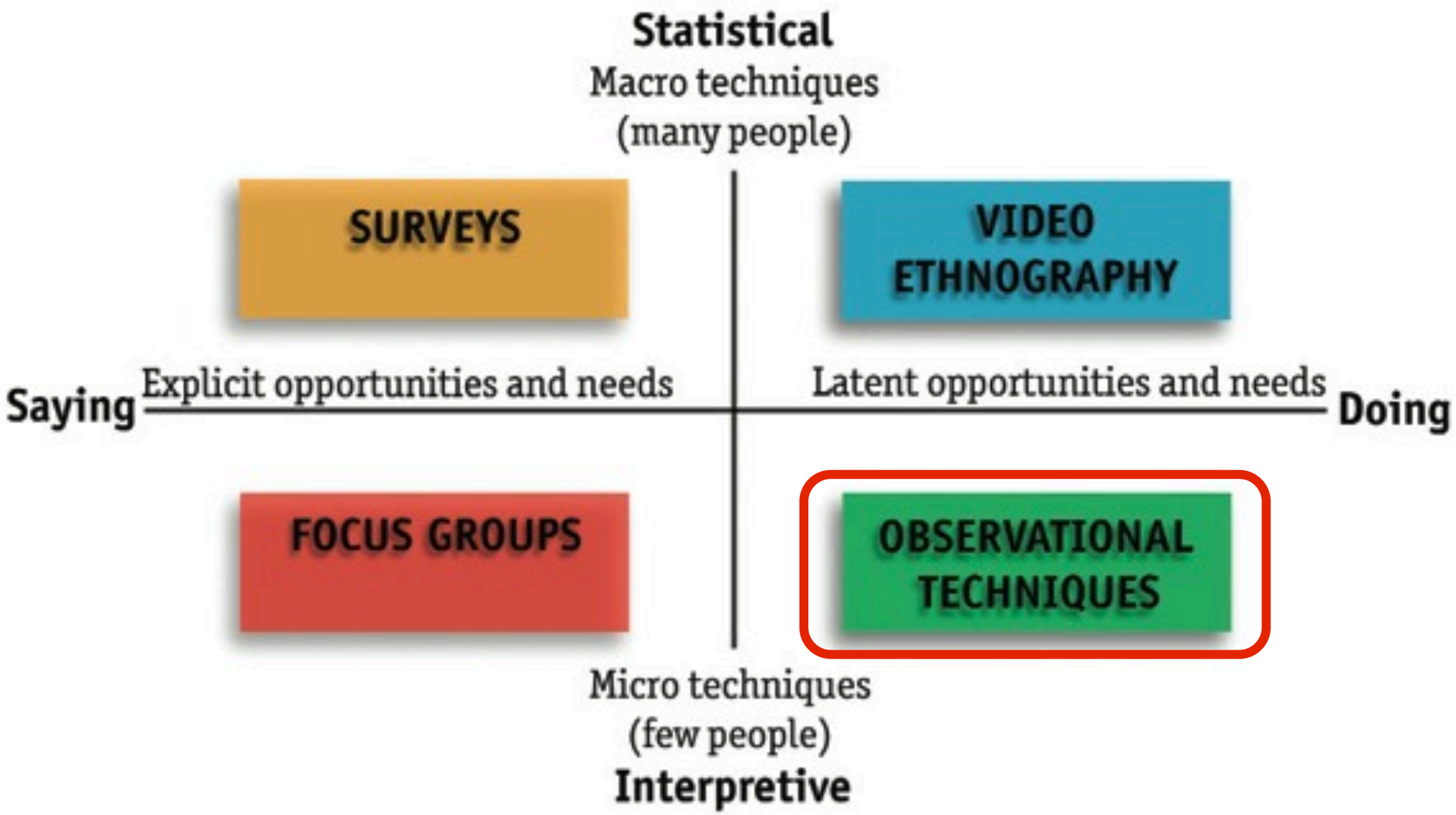

Elaboration
opportunity seeking
Reduction
decision-making
Design Process



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

People

source [7]


Statistical
Macro techniques
(many people)
SURVEYS
VIDEO ETHNOGRAPHY
Saying
Explicit opportunities and needs
Latent opportunities and needs
Doing
FOCUS GROUPS
OBSERVATIONAL TECHNIQUES
Micro techniques
(few people)
Interpretive

source: [8]

ANALYSIS

Definition of the system

What is the problem?

EVALUATION

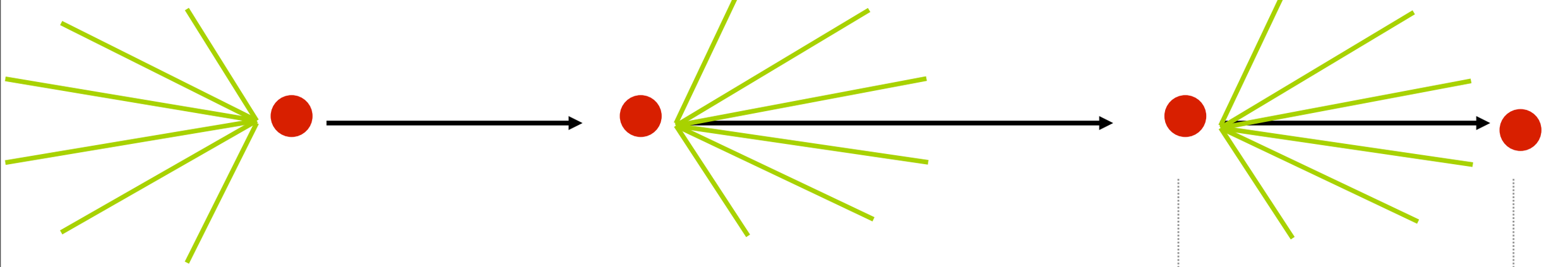
Possible alternatives

What future do we want?

SYNTHESIS

Design of final solutions

What do we implement?



The designer is a ‘problem-scouter’

The designer is a ‘story-teller’

The designer is an ‘executor’

source: [4]

Tools of Trade:

wikimedia creative commons

Interviews

Unstructured - are not directed by a script. Rich but not replicable.
Structured - are tightly scripted, often like a questionnaire. Replicable but may lack richness.

Semi-structured - guided by a script but interesting issues can be explored in more depth. Can provide a good balance between richness and replicability.

source: [8]

Running the interview

• **Introduction** – introduce yourself, explain the goals of the interview, reassure about the ethical issues, ask to record, present any informed consent form.

• **Warm-up** – make first questions easy and non-threatening.

• **Main body** – present questions in a logical order

• **A cool-off period** – include a few easy questions to defuse tension at the end

• **Closure** – thank interviewee, signal the end, e.g, switch recorder off.

source: [8]

Structuring frameworks to guide observation

- - The person. **Who?**
  - The place. **Where?**
  - The thing. **What?**

- **The Goetz and LeCompte (1984) framework:**
  - Who is present?
  - What is their role?
  - What is happening?
  - When does the activity occur?
  - Where is it happening?
  - Why is it happening?
  - How is the activity organized?

source: [8]

Day 1:
Morning Session:

1.) 9:20 Course Organisation &
Introduction Lecture

2.) 5 Minute Presentations

Afternoon Session:

3.) User Research in the Field

To Get 6 ECTS:

1.) Mandatory attendance
2.) Presentations (two with guests)
3.) Be an active member of your team
4.) Hand in the presentations and the video prototype
5.) Document, Document, Document

Blog:

1.) http://conceptdevelopmentlmu.wordpress.com

*each team creates an account @ wordpress.com

* use this suffix: cd2014x (x is your team no.)

* all accounts will get access to create posts

2.) Three posts: User Research, Concept, Videoprototype

Design challenge

The best project wins
a non-cash prize sponsored by

designaffairs

First Blog Post

* one photo & about 150 words abstract
*categories: WS1314; User Research, Team X
* deadline: wednesday 23:59

After the presentation:

Do field research (today & tomorrow & wed)

Gather back here: Thursday 9:00 (c.t.)

Thanks & Have Fun!

Thursday Bring:

* Videos & Audio (5 good Images per team)
* Each team one laptop with the data
* Transcript interviews (printed and PDF)
* Camera (one per team)

References:

[1] Buxton, W. Sketching User Experiences, *Morgan Kaufmann 2007.*
[2] Blom, J & Chipchase, J : Contextual and cultural challenges for user mobility research*, ACM Press 2005.*
[3] CHI´10 *Panel Discussion on User Research, 2010.*
[4] Copenhagen Institute of Interaction Design, *User Research Workshop 2008.*
[5] Jonas, W. A Scenario for Design, *MIT Press 2001.*
[6] Norman, D. The Psychology of Everyday Things, *Basic Books 1988.*
[7] Moggridge, B. Designing Interactions, *MIT Press, 2006.*
[8] Rogers, Y., Preece, J. & Sharp, H. Interaction Design, *Wiley & Sons 2011.*
[9] Saffer, D. Designing for Interaction, *New Riders 2009.*
[10] Walonick, D. Survival Statistics, *2004.*

Innovate

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Agenda

Day 1 - Thu Concept Development & Tools

Day 2 - Fri Tools

Day 3 - Mon Mid presentation

Agenda Day 4

9:15 -10:00	Introduction
10:00 - 12:30	Affinity Diagramming
12:30 - 13:00	Break
13:00 - 13:30	Opportunity Matrix
13:30 - 14:30	Solution Description
14:30 - 17:00	Group Presentation

What is a product?

What is a service?

What do they have in common?

Front Stage

http://www.markabull.com/wp-content/uploads/2011/01/stage.jpg

Back Stage

http://blog.entrepreneurthearts.com/etablog/wp-content/uploads/2010/08/backstage.jpg

Todays products need to be more than just being usable.

They need to serve your needs ...

... and deliver memorizable experiences.

Getting the right Design and the Design right...

What is Concept Development?

Definition & Focus

Concept Development is a **rapid-creative session** where all participants work and iterate through a **design-led process** to create valuable and tangible results.

Definition & Focus

It is made to **generate** product ideas, **validate** and **enhance** existing products or ideas, and to **find solutions** to all sorts of problems.

Related fields

Creativity
HCD/UCD
HCI
Design Thinking
Strategy
Innovation
Future Studies
Decision Making
Lean
Product Design
Service Design
User Experience Design
Teamwork/Collaboration

User Experience Design

User Experience Design

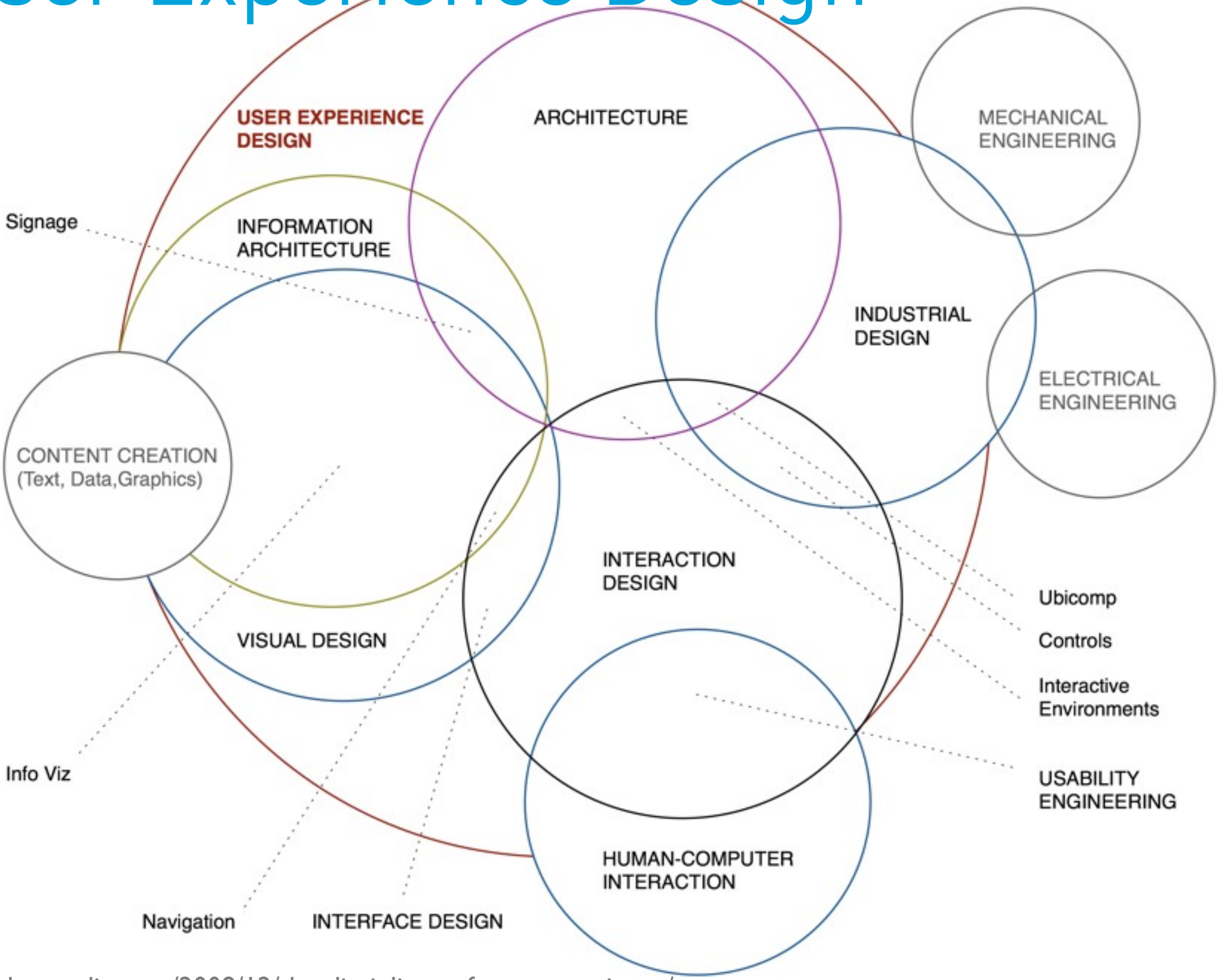
Focus is on the use/customer/people.

Takes business requirements into account.

Follows the User Centered Design process.

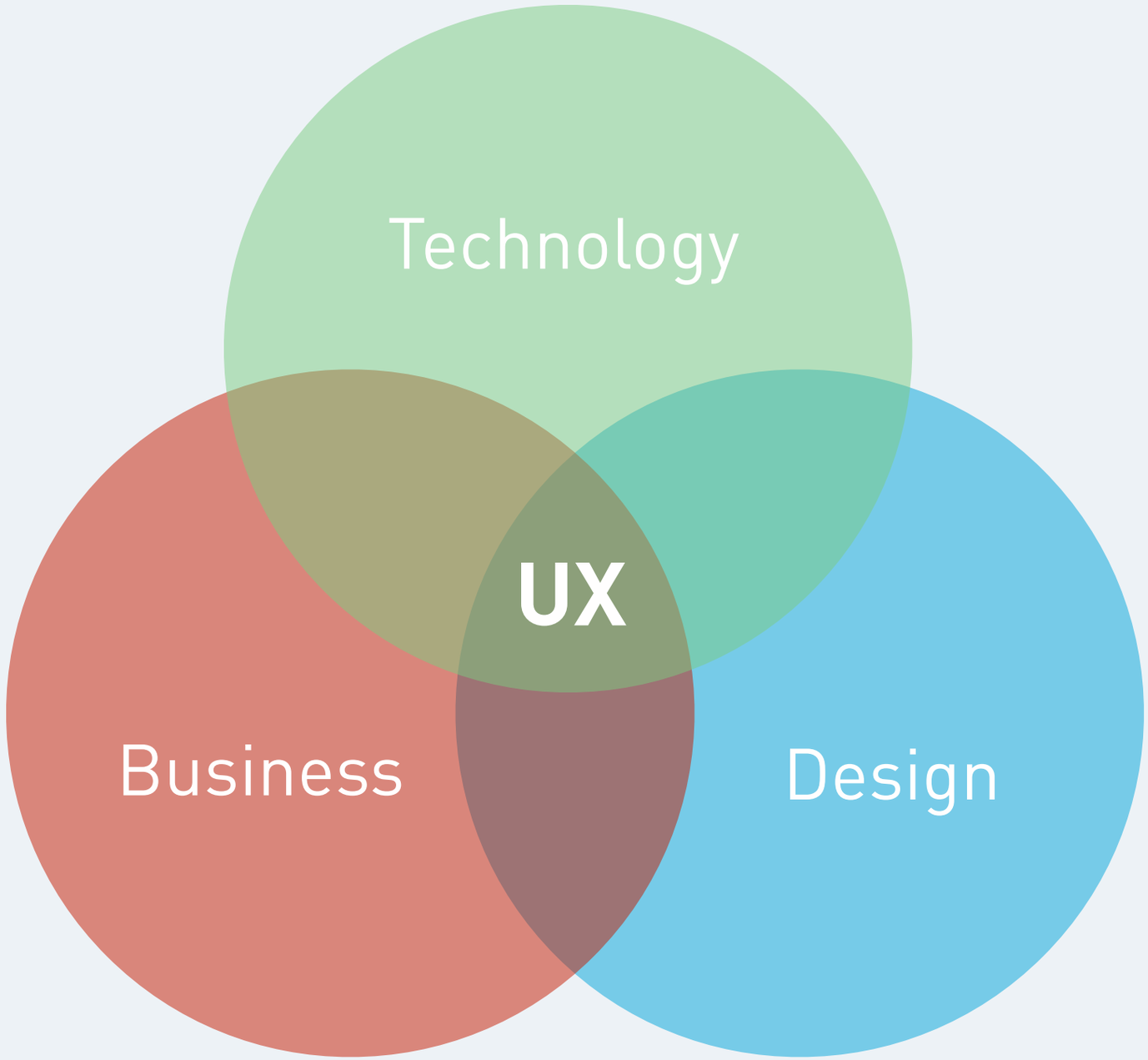
UX is a combination of several design disciplines.

User Experience Design



http://www.kickerstudio.com/2008/12/the-disciplines-of-user-experience/

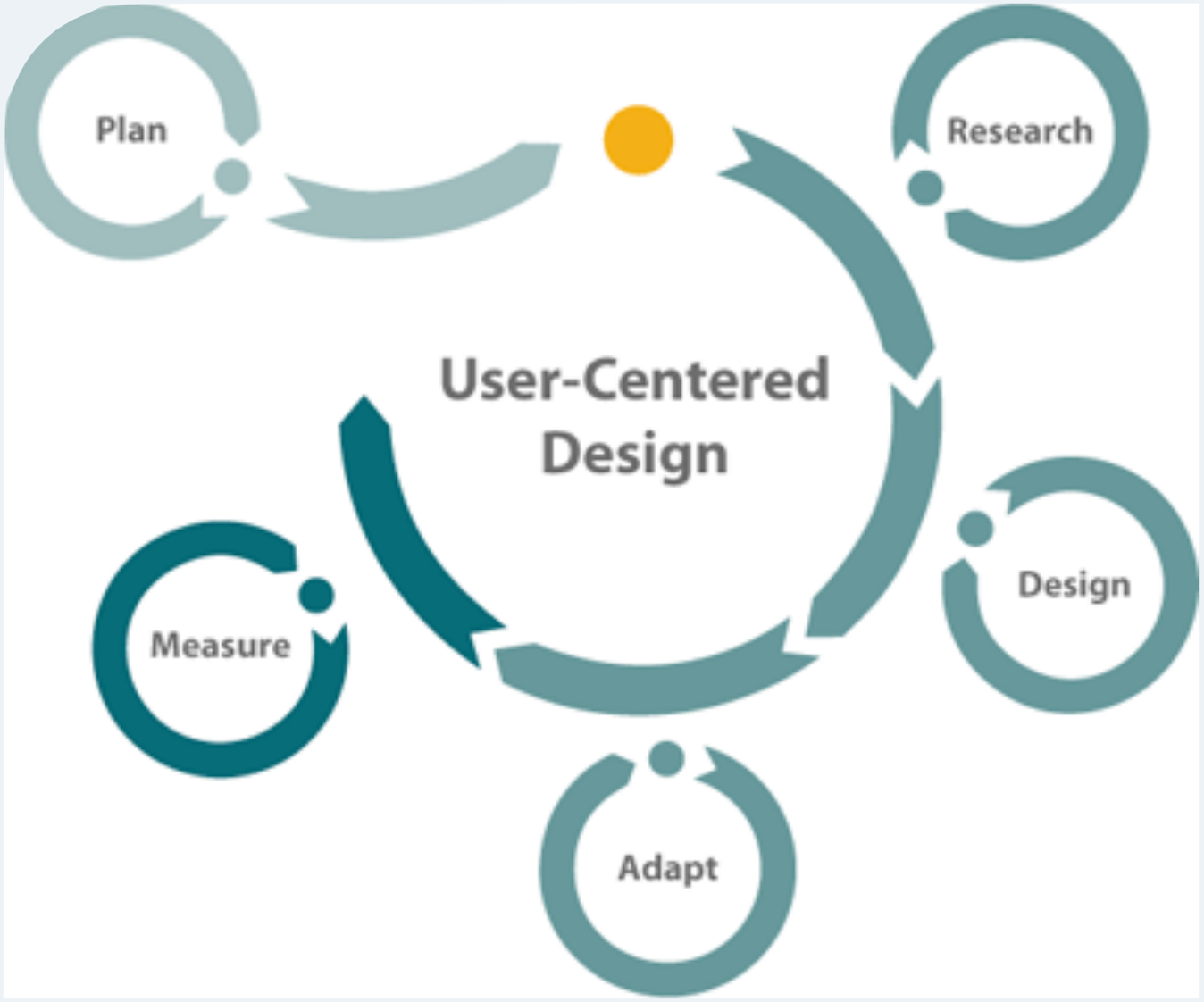
User Experience Design



User Experience Design

http://semanticstudios.com/publications/semantics/000029.php

User Experience Design - Process



http://www.sapdesignguild.org/resources/ucd_process.asp

What is Lean UX?

What is Lean UX?

Lean UX embraces the idea of **short iterations** focused on **measuring and learning to tackle complexity**.

http://epicbagel.com/defining-lean-ux/

What is Lean UX?

It removes departmental constraints
on design and communication,
allowing you to get truly close
to product strategy.

http://epicbagel.com/defining-lean-ux/

What is Lean UX?

Design solutions **no longer** become buried and diluted through **bloated deliverables**.

http://epicbagel.com/defining-lean-ux/

What is Lean UX?

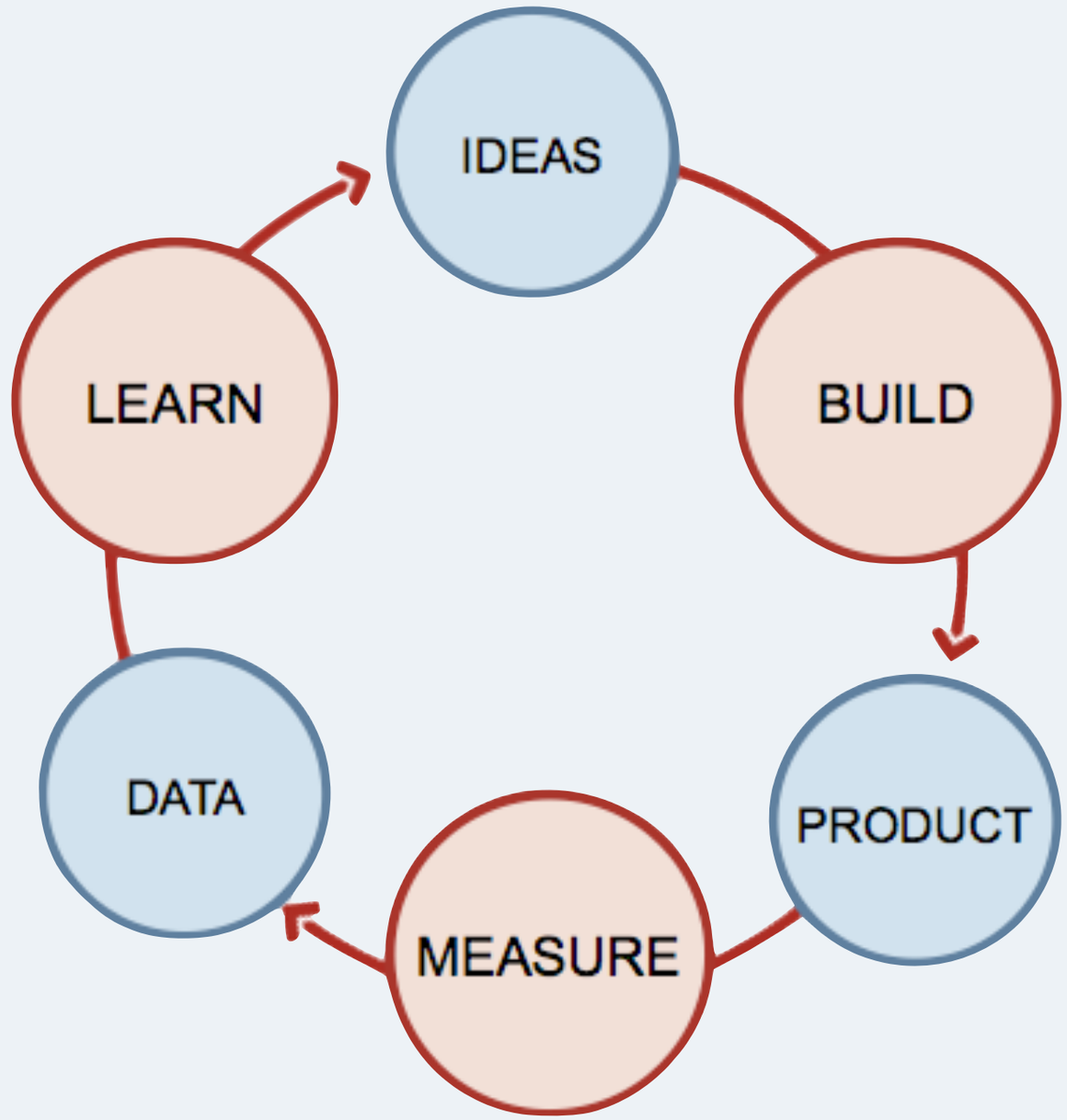
1. You create design **hypothesis**
2. You **test** it
3. You **learn** from the outcome, **focus** on **insights** than data

http://epicbagel.com/defining-lean-ux/

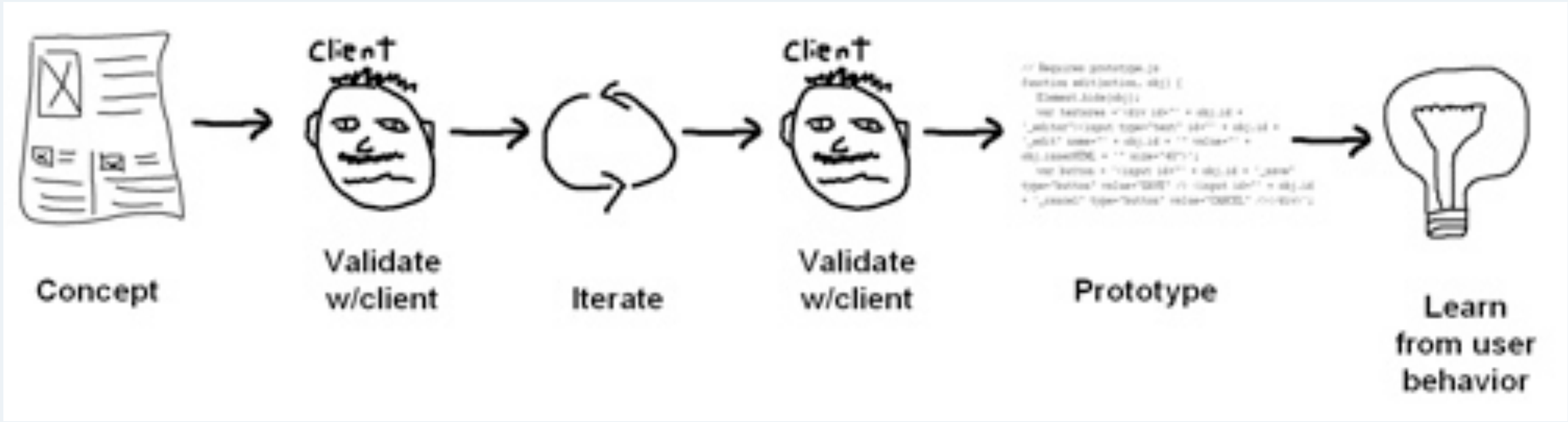
What is Lean UX?

Build-Measure-Learn

Lean Start-up
Methodology
by Eric Ries



What is LeanUX?

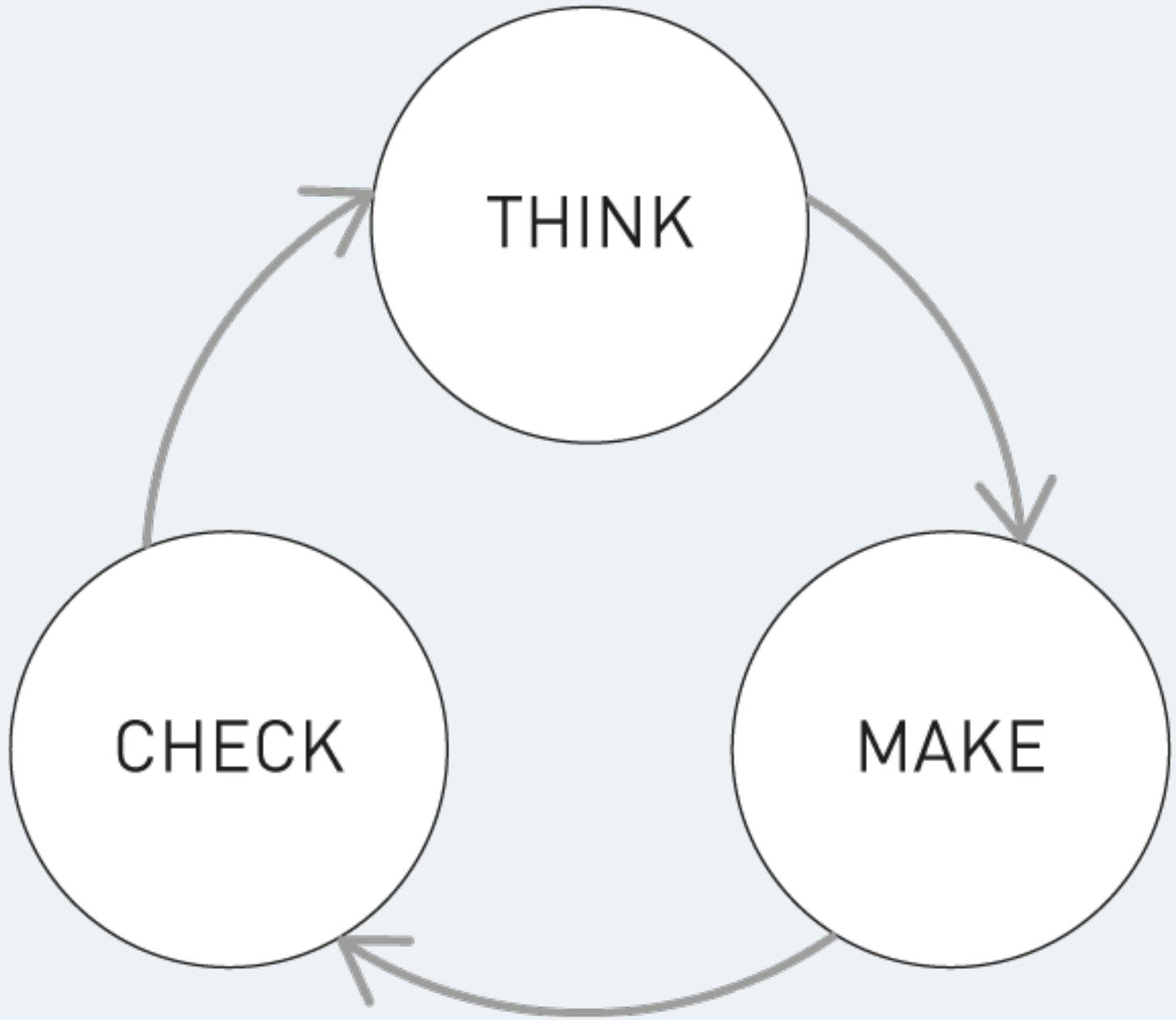


http://uxdesign.smashingmagazine.com/2011/03/07/lean-ux-getting-out-of-the-deliverables-business/

What is LeanUX?

Think
Make
Check

by Janice Fraser



What is LeanUX?

10 Principles from LUXR

Design + Product Management + Development = 1 team
Externalize!
Goal-driven & outcome-focused
Repeatable & routinized
FLOW: think -> make -> check
Focus on solving the right problem
Generate many options
Decide quickly what to pursue & hold decisions lightly
Recognize hypotheses & validate them
Research with users is the best
source of information & inspiration

http://luxr.co/10_principles_of_lean_user_experience

Design Thinking

Design Thinking

Design thinking refers to the methods and processes fo**r investigating ill-defined problems**, acquiring information, analyzing knowledge, and positing solutions in the design and planning fields

“Zoomed out vs. Zoomed in”

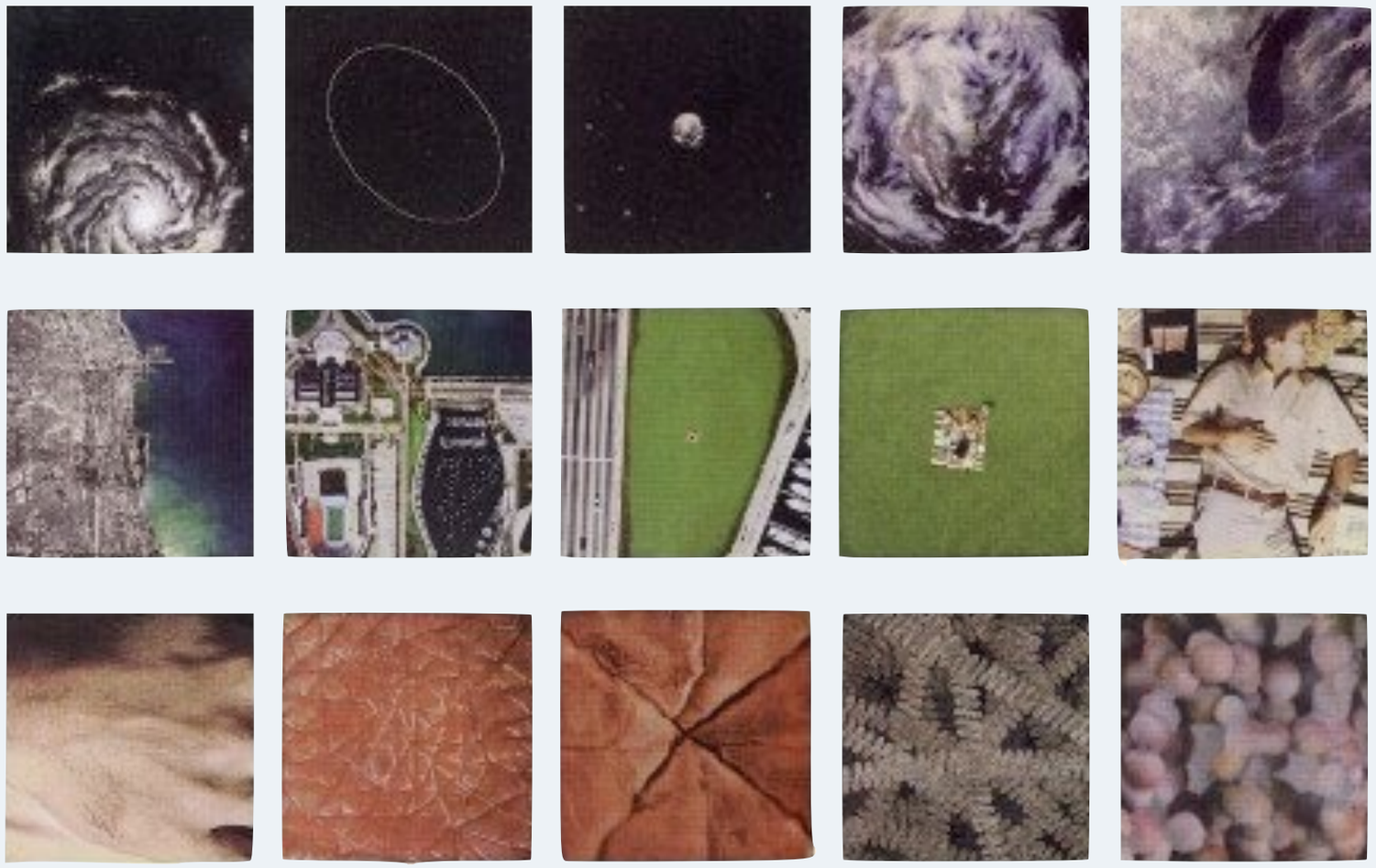
Zoomed Out vs. Zoomed In

Zoom Out vs. Zoom is a way of design thinking.

Interactions designers are often facing increasingly complex situations.

Zooming in and out makes them flexible and helps to define on which level to intervene.

Zoomed Out vs. Zoomed In



Holistic

User

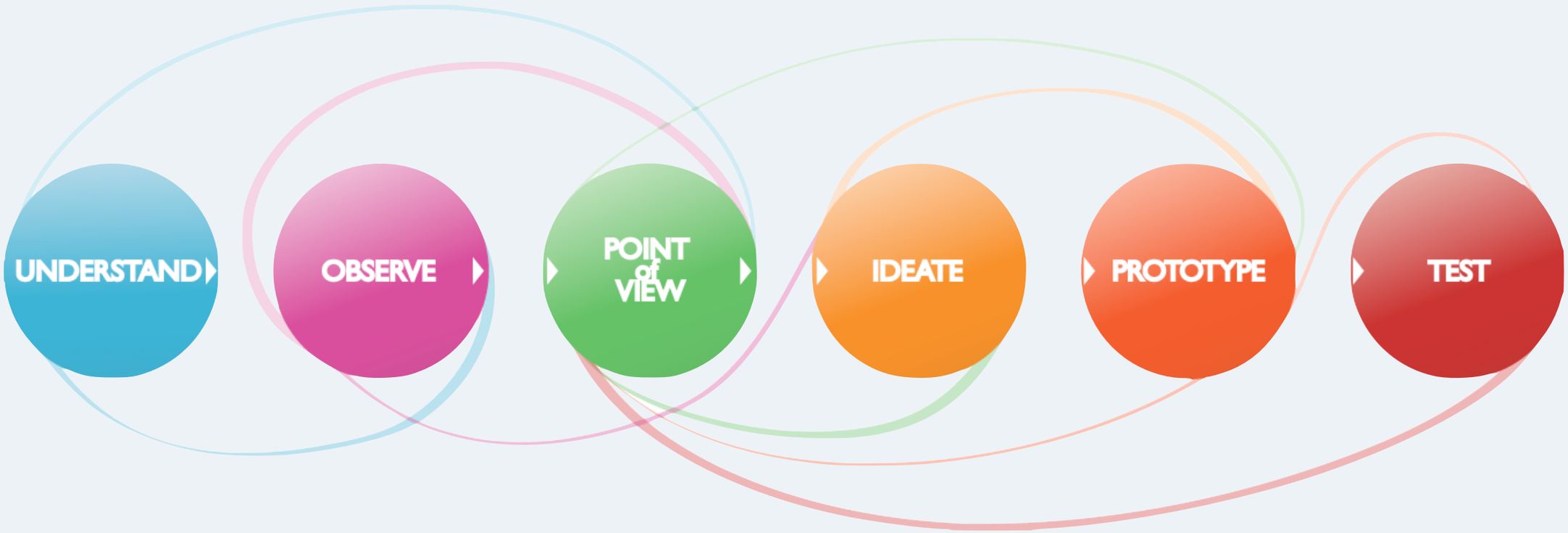
Technology

Design Thinking

Design thinking is generally considered the ability to combine:

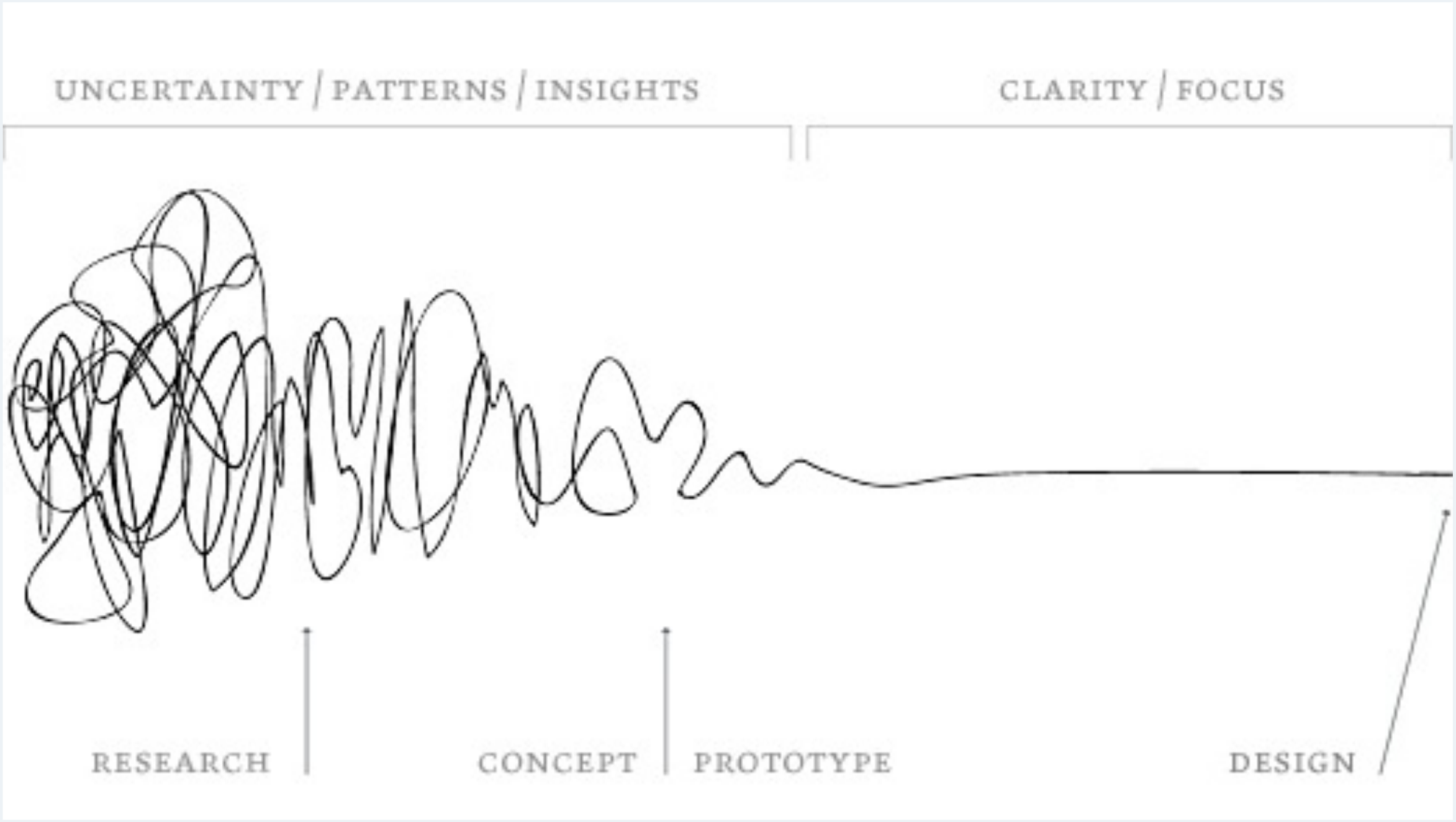
empathy for the context of a problem,
creativity in the generation of insights and solutions, and
rationality to analyze and fit solutions to the context.

Design Thinking - Process

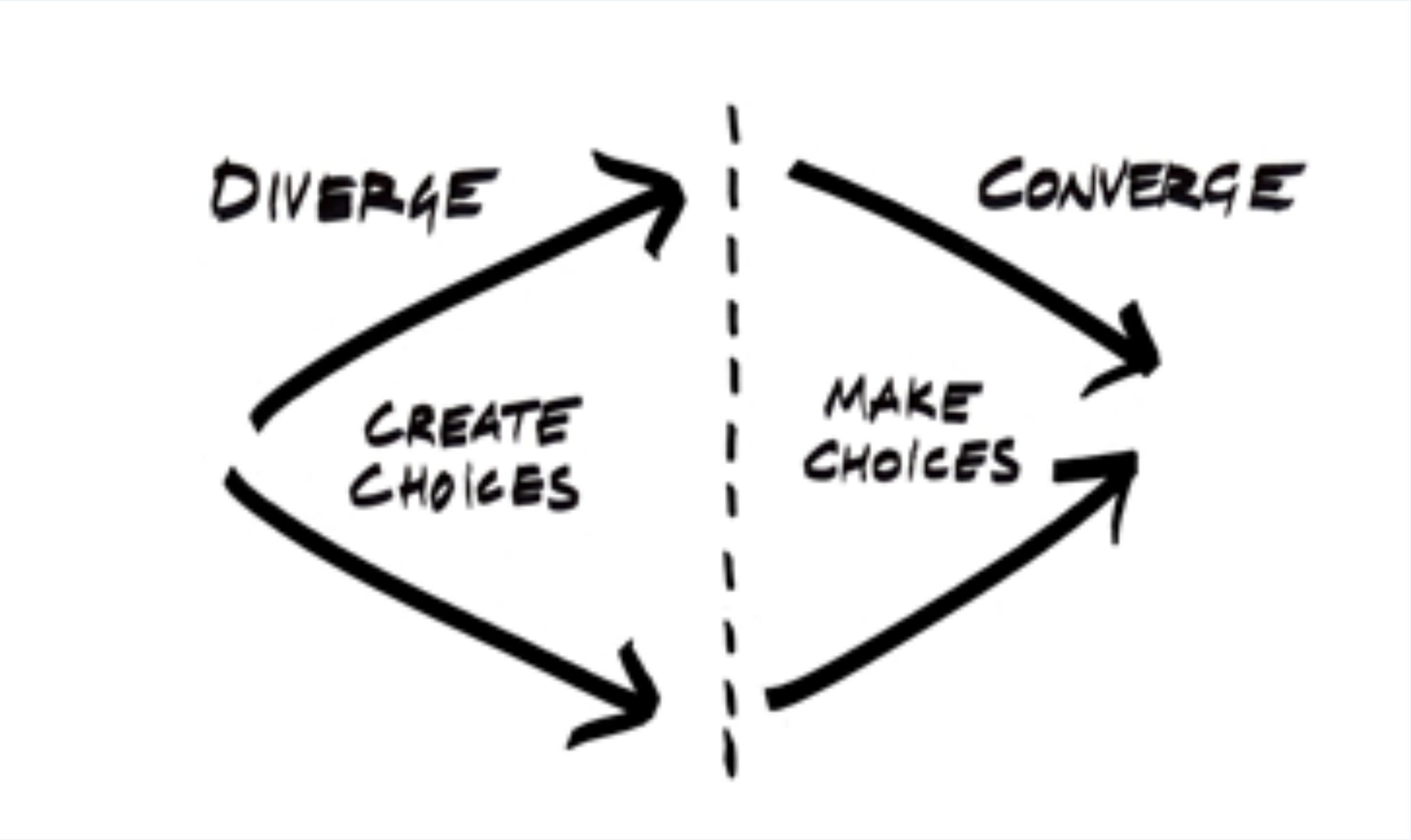


Concept Development Process

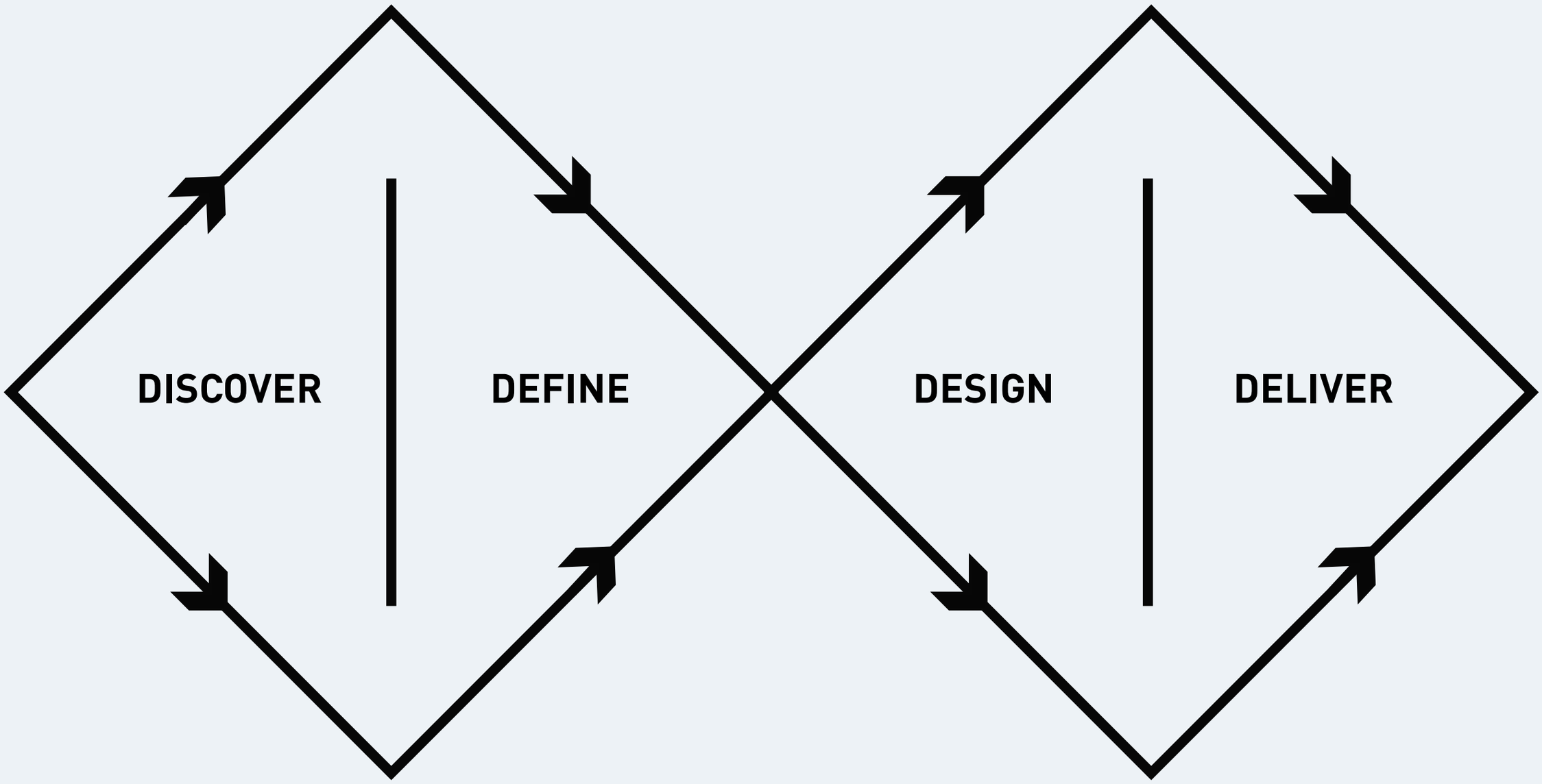
The creative process.



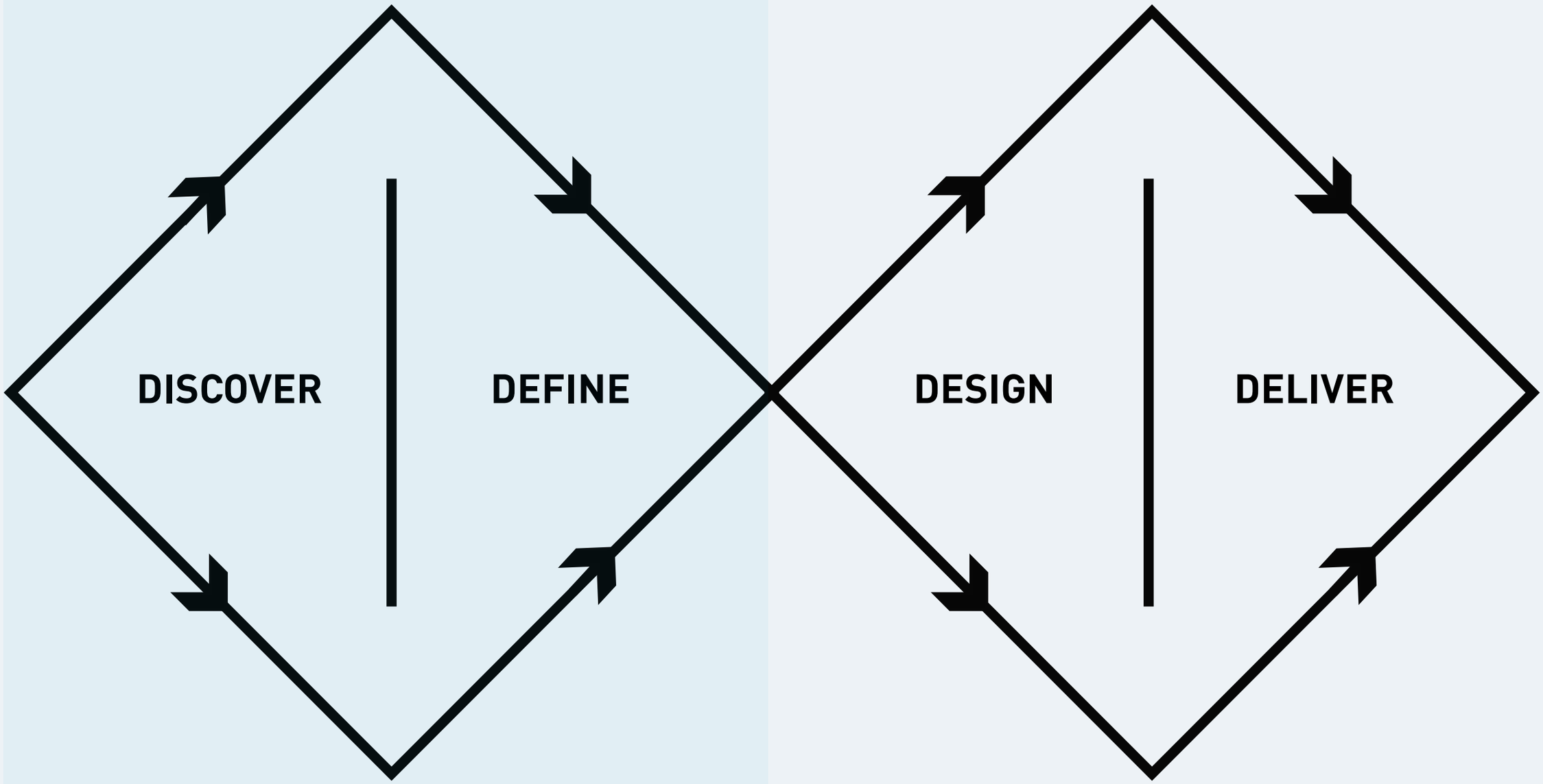
The basis.



Double Diamond

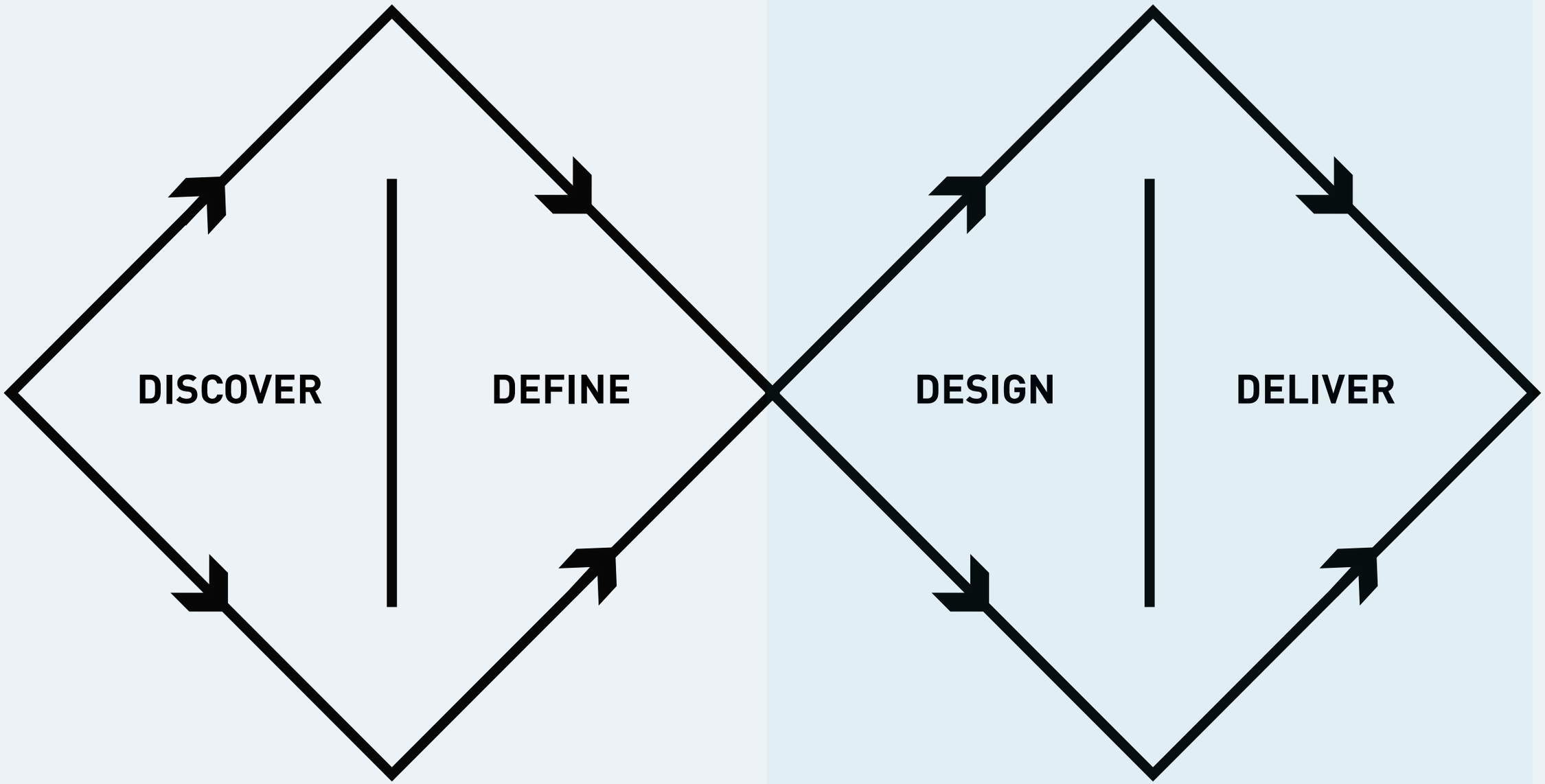


Double Diamond



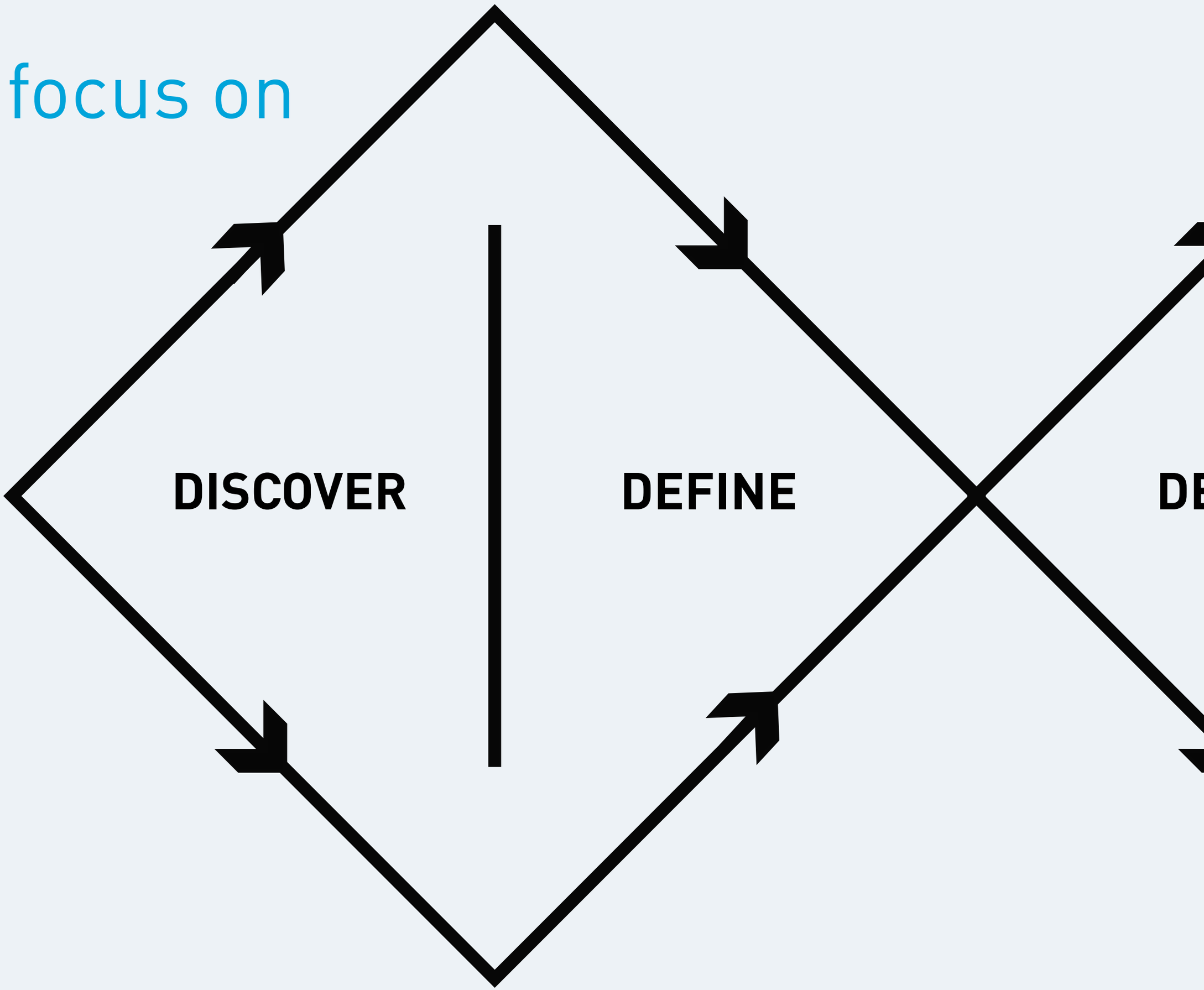
Why? and How?

Double Diamond

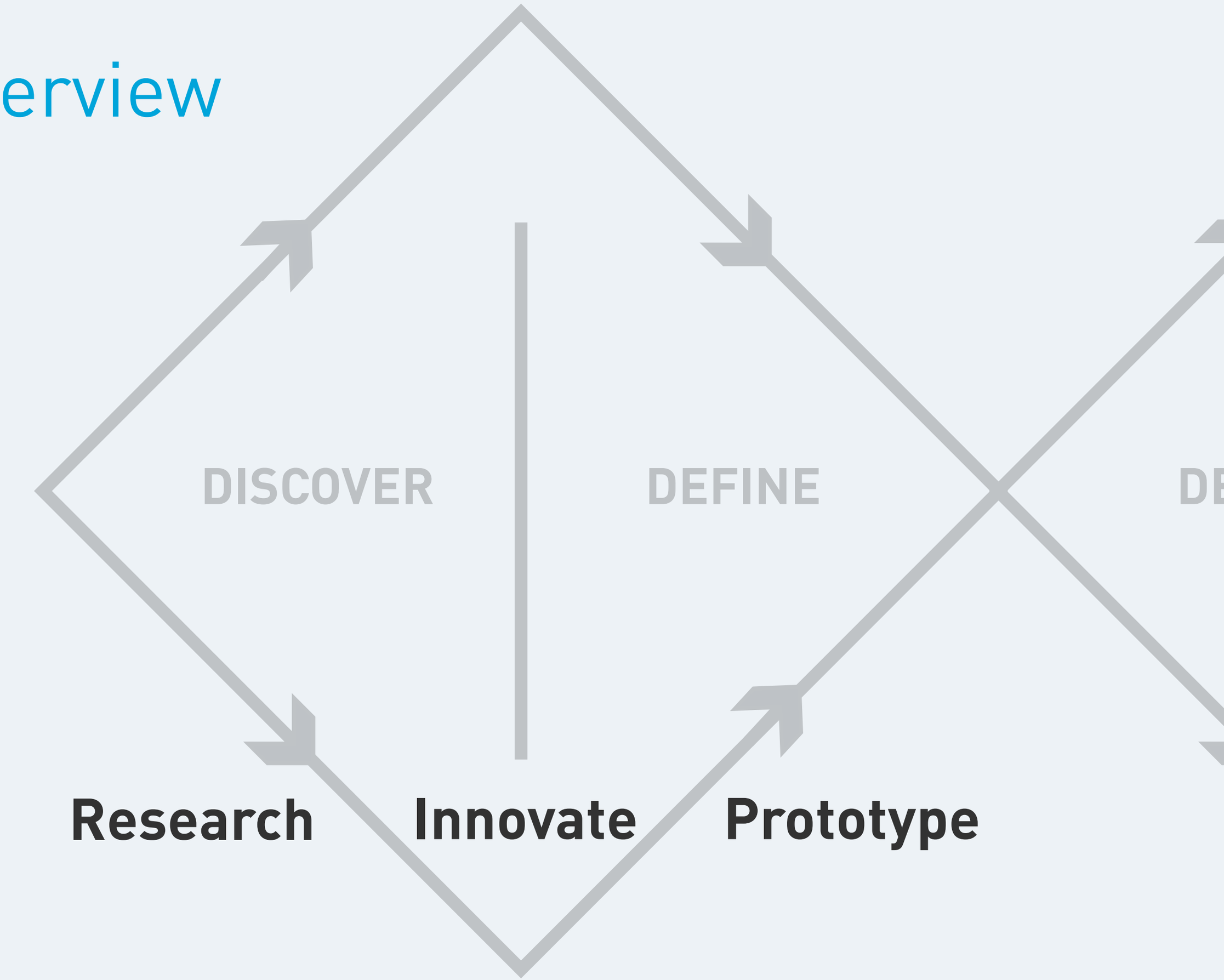


What?

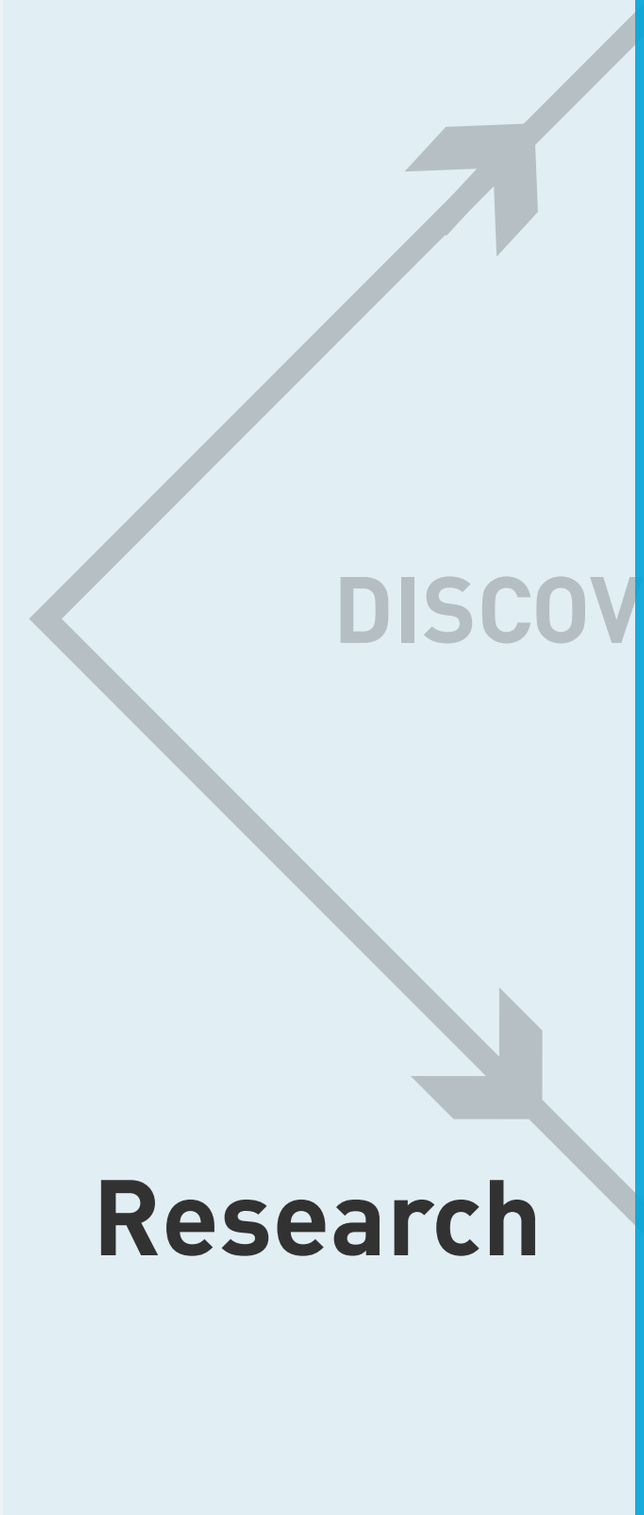
We focus on



Overview



Overview



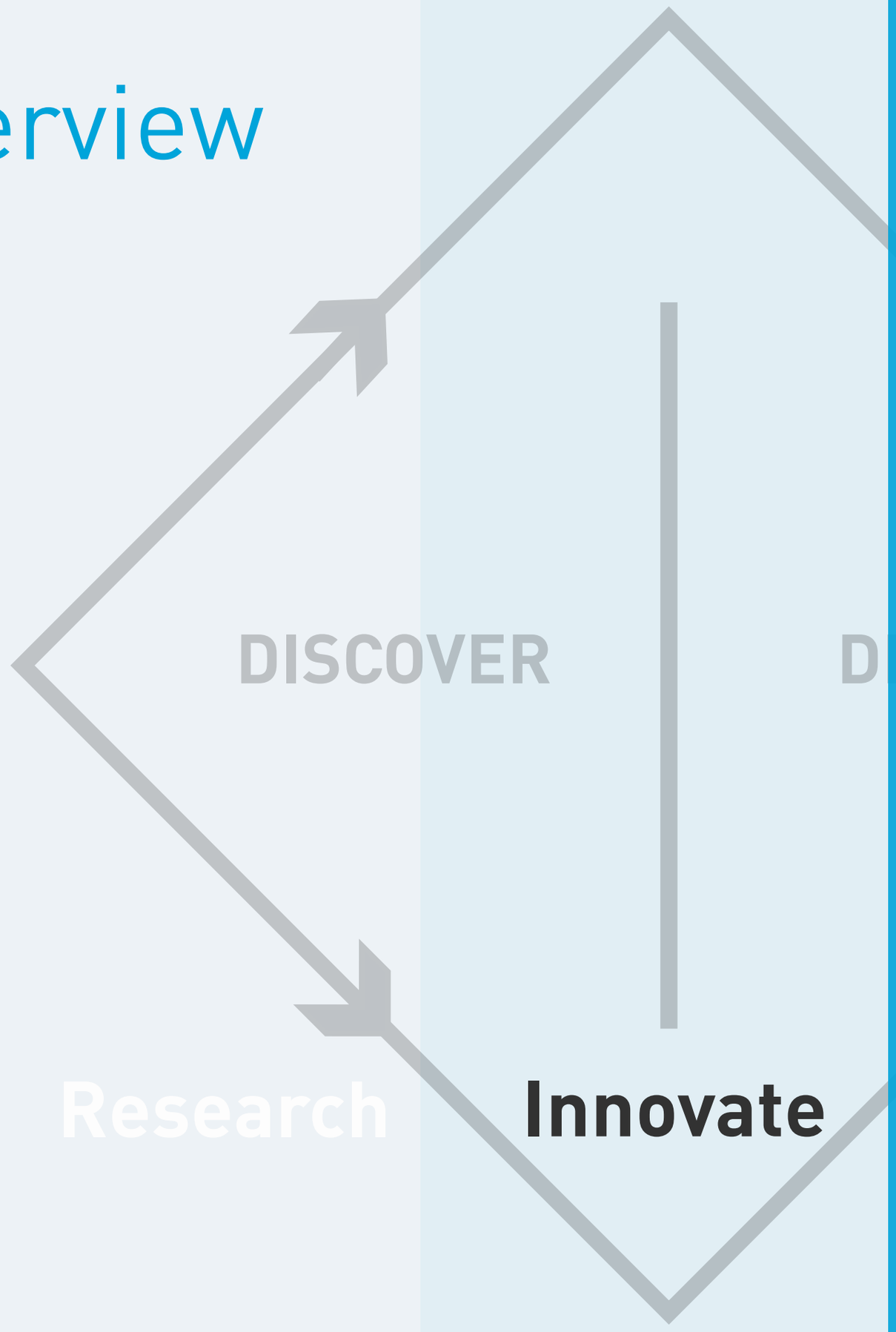
Get to know your problem/ subject

Gather insights abour the user and their life

Collect artifacts & impressions

Record tasks

Overview



Make sense of your data

Identify important facets

Keep all players in mind

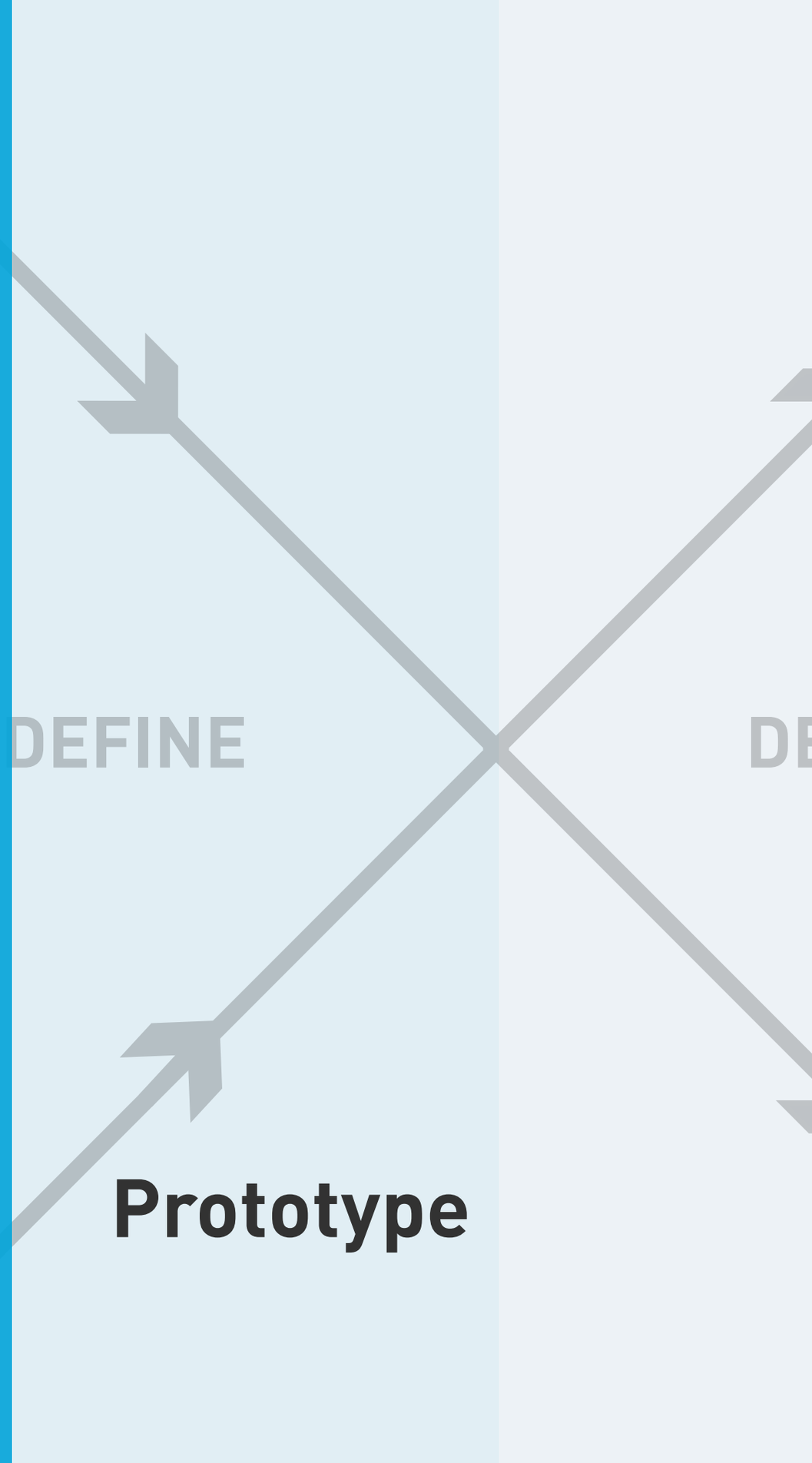
Collect and prioritize ideas

Develop & validate solutions

Overview

Tell a story

Make it tangible



Concept Development

5 Principles

Concept Development
5 Principles

1 - Stay user/consumer focused

Watch them. What are they doing? What are their daily problems and hurdles?

Focus and follow on their needs.

Try to identify their habits and their workarounds to make their lives easier.

Concept Development
5 Principles

2 - Gather a diverse team to succeed

It is good to have multiple perspectives to the world!

Only a diverse group of people is able to look at a problem from different perspectives as their backgrounds and experiences are different.

Concept Development
5 Principles

3 - Be flexible / Stay low-fi as long as possible

Do not waste energy by creating
hi-fi work as you are working through
the CD process!

If you are not emotionally attached to a
piece of work you can easily let go.

Concept Development
5 Principles

4 - Short time frames

Set yourself constraints!

If you set a time limit your output and work will be more focussed and you will not be distracted by too many influences.

This principle lets you stay focussed!

Concept Development
5 Principles

5 - Show and tell as often as possible

Present your ideas and findings
often to the whole group or others.

Gather feedback and make use of it
in the next iteration

Stop.

We are about to enter the „Innovate“ Phase!

Tool-Kits

IDEO Method Cards

http://www.ideo.com/work/method-cards/

Learn Look Ask Try

Scenarios

HOW: Illustrate a character-rich story line describing the context of use for a product or service.

WHY: This process helps to communicate and test the essence of a design idea within its probable context of use. It is especially useful for the evaluation of service concepts.

Learn Look

Bodystormi

HOW: Set up a sc
roles, with or wit
on the intuitive r
by the physical e

WHY: This metho
generate and tes
behavior-based c

nForm

http://nform.com/tradingcards/

TRADING CARDS

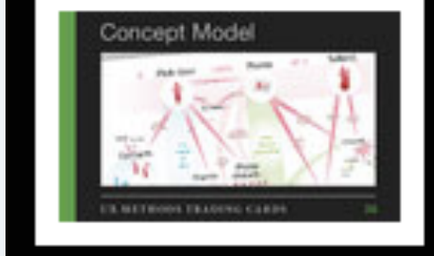
User experience trading cards. Created for the IA Summit in 2007, 2008 and 2009.

2009 Series

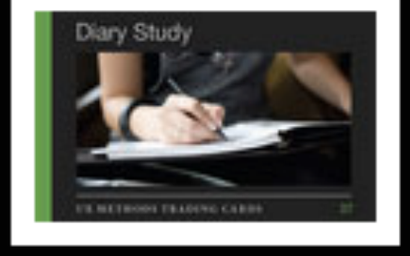
A/B Testing
#33

Affinity Diagram
#34

Collaborative Inspection
#35

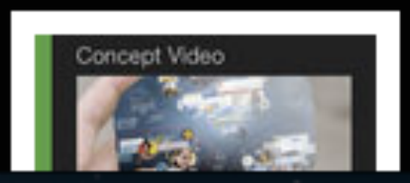


Concept Model
#36



Diary Study
#37

Five Sketches™
#38



Concept Development Tool-Kit

Creative tools to solve problems

Affinity Diagram

Opportunity Mind Map

Solution description & validation

Swim-lanes

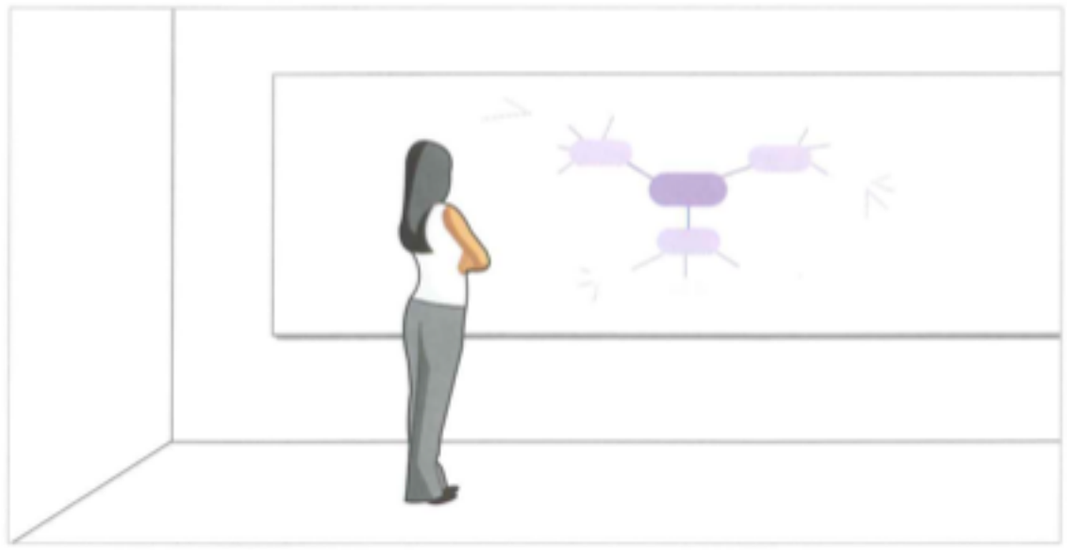
Scenarios

Storyboards

Affinity Diagram

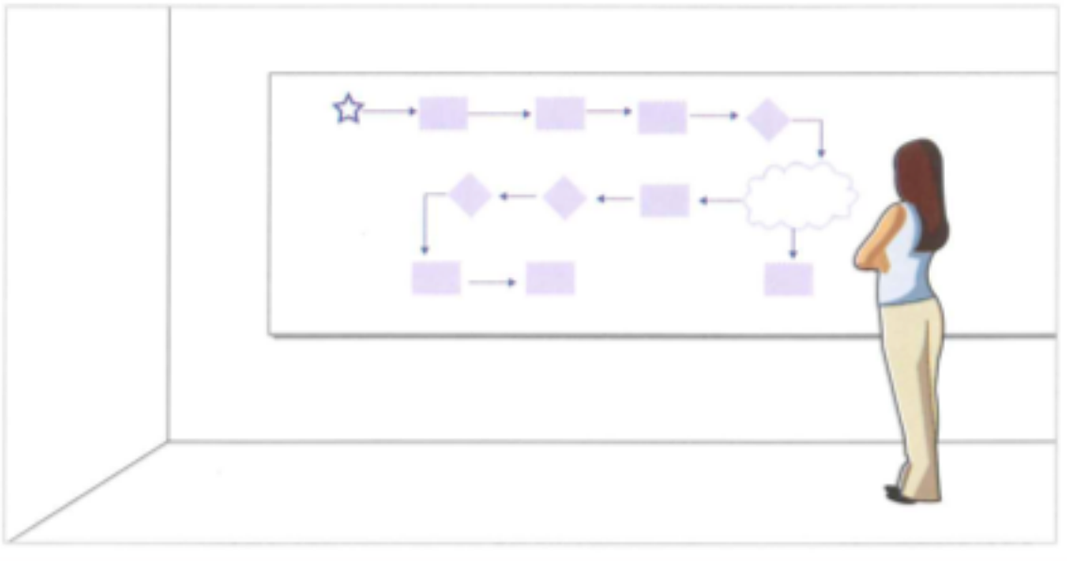
Make sense of collected data

http://wiki.fluidproject.org/download/attachments/2395197/100_1885.JPG



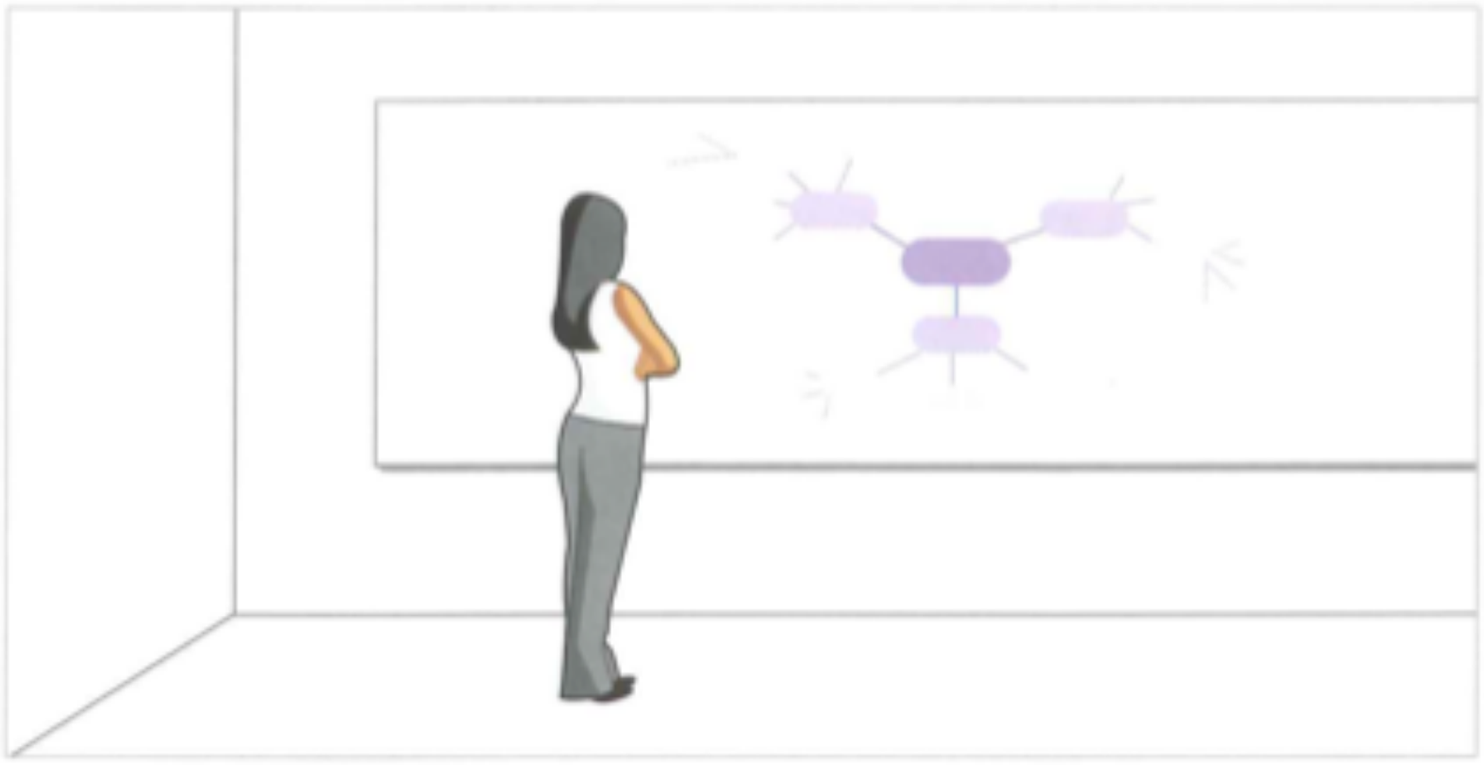
1.Brainstorming Webs

2. Affinity Diagrams



3. Flow Diagram

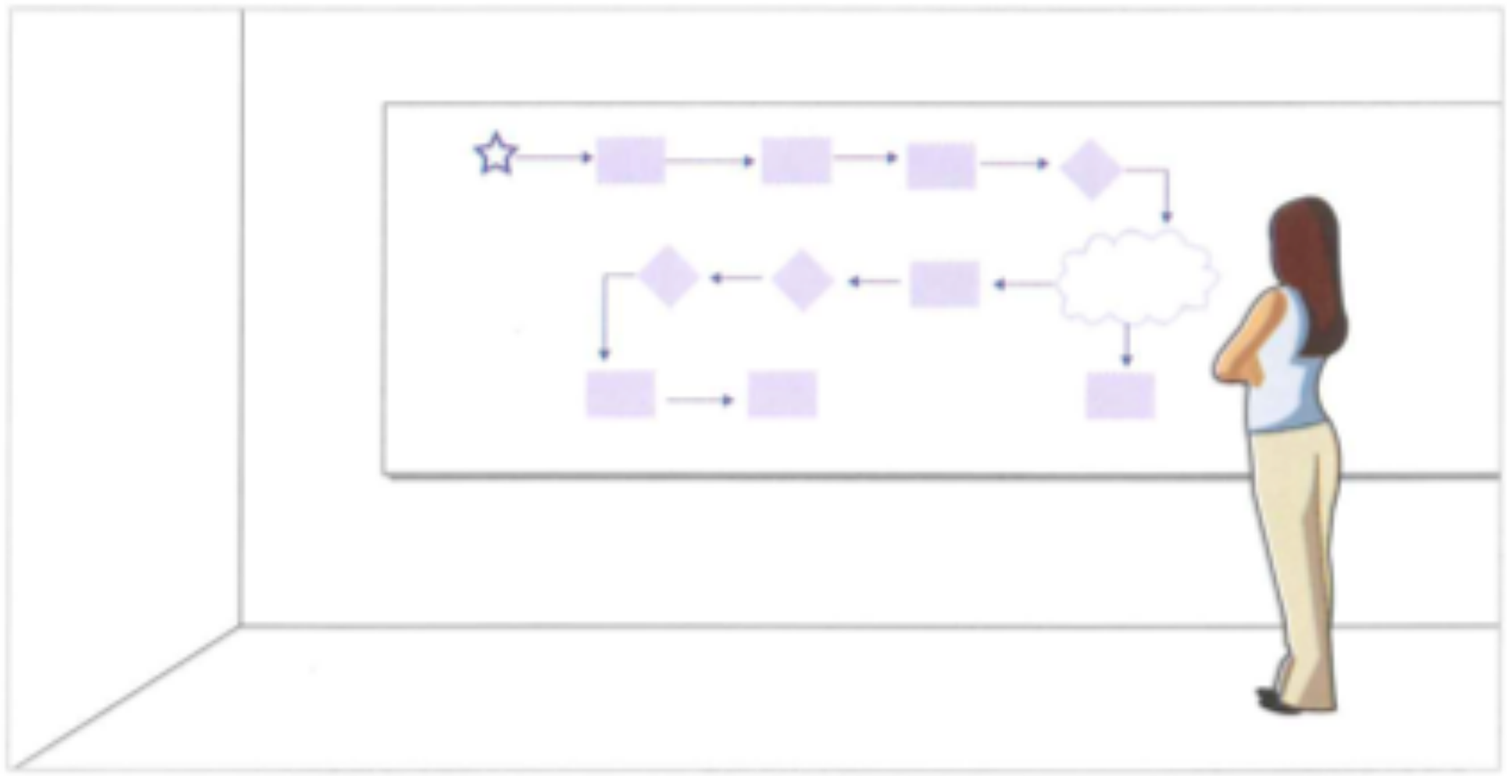
Brainstorming Webs



Used when developing a central concept or question

Can be build by identifying the center first, then all of the extensions

Flow Diagram



Represent a series of events, actions or processes of different actors
Usually have a beginning and an end point

Affinity Diagram

Communicate a hierarchy or relationships between main and supporting ideas
Can be constructed from “bottom up” or “top down”

Affinity Diagram

What?

It is a method for sorting
and making sense of data.

Data points can be recorded on sticky notes
and sorted into logical groups.
It could be employed as an individual or
group exercise

Affinity Diagram

Why?

You can experiment with different arrangements to see which makes the most sense.

Affinity Diagramming helps to expose crucial relationships and patterns in data that may not be initially apparent.

Affinity Diagram

Guidelines

Every little counts!

Use all data you gathered and cluster it into meaningful groups.

Have your user in mind and also try to shape their personas as you add, cluster and think about your data.

Affinity Diagram

Concept Development
Affinity Diagram

Team

An affinity diagram helps to synthesize large amounts of data by finding relationships between ideas. The information is then gradually structured from the bottom up into meaningful groups. From there you can clearly "see" what you have, and then begin your analysis. When you work through the process of creating relationships and working backward from detailed information to broad themes, you get an insight you would not otherwise find.

Process

1. Brainstorm or use your recorded research data to identify ideas, issues, processes or other aspects
2. Record each finding on cards or post-it notes
3. Look for related ideas and/or findings
4. Sort notes or cards into groups untill all cards have been used
5. Repeat this as many times as needed
6. Add labels to themes if appropriate
7. Draw connections between findings and themes

How to cluster and model data.

Everyone reads through the post-its and arragnes them.

Everyone is allowed to re-order

Group post-its into themes.

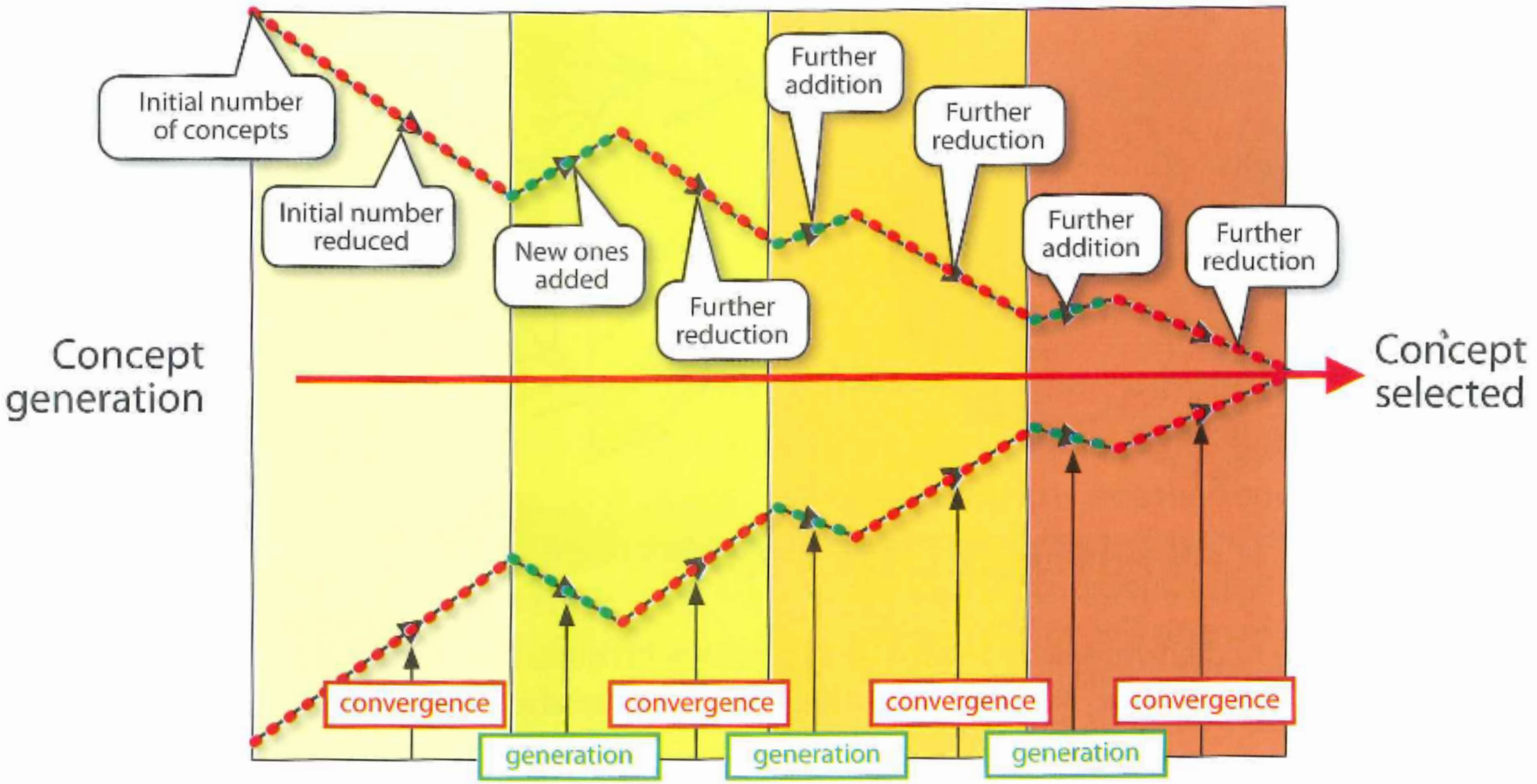
Name and discuss the themes

BREAKOUT SESSION 1

10:00–12:30

gather back at 13:00

Opportunity Mind Map



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

Opportunity Mind Map

What?

Organizing aspects of the project and mapping areas of opportunities for innovation.

Opportunity Mind Map

Why?

The map becomes a tool for teams to have early conversations about where it is more interesting for potential solutions to be developed.

Opportunity Mind Map

Guidelines

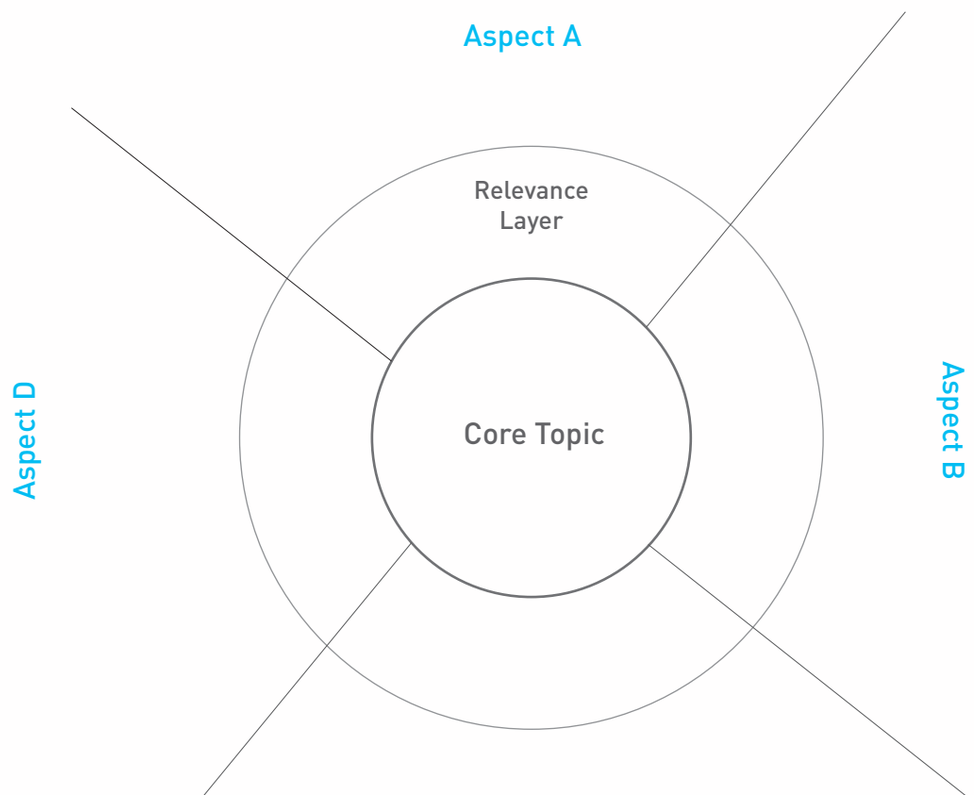
Step 1 Define the core topic and related aspects.
Step 2 Map the core topic and related aspects.
Step 3 Explore opportunities around the core topic.
Step 4 Refine the map according to attributes.
Step 5 Analyze the map and recognize areas for further exploration.

Opportunity Mind Map

Concept Development

Opportunity Mind Map

Organizing aspects of the project and mapping areas of opportunities for innovation.



Solution description & validation

Solution description & validation

What?

A short description of the core idea and a look at its User need, Approach, Benefit and Competition.

Solution description & validation

Why?

Writing a pitchable summary of the idea and looking at its **User need**, **Approach**, **Benefit** and **Competition** forces us to think about the idea and to develop a **pitchable and tangible description**.

Solution description & validation

Guidelines

To create a good summary of your idea you need to name the idea‘s most valuable and core solutions and facets which makes it unique.

Solution description & validation

Concept Development

Solution description & validation

Team

When designing solutions designers are often confronted with countless innovative ideas that need to be synthesized and bundled into dedicated value propositions. While the concepts of customer value and value propositions are admittedly a bit abstract, the NABC (Need, Approach, Benefit, Competition) framework can help to better understand and sharpen the value proposition of your product or service.

The framework has been developed by Curtis Carlson and William Wilmot and has been summarized in their book “Innovation – The Five Disciplines for Creating What Customers Want”.

ELEVATOR PITCH

NEED

What is the important customer and market need?

APPROACH

What is the unique approach for addressing this need?

Prepare a **5 min** presentation for **14:30**

include: Elevator Pitch, Customer/ User, Need, Approach, Benefit

1 slide each.

Email slides to
sebastian.loehmann@ifi.lmu.de

Presentations

Gather back tomorrow
at **9 c.t.**

Workshop

Concept Development

Lecturer: Alexander Wiethoff & Andreas Butz
Tutorials and Organization: Sebastian Löhmann
External Lecturer: Kalle Kormann-Philipson (INNUID)
Industry Partner: Designaffairs Munich

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

Agenda Day 2

9:15 - 9:30 Recap and Tools

9:30 - 11:00 Swim-lane Diagram

11:00 - 12:30 Scenarios

12:30 - 13:00 Break

13:00 - 17:00 Storyboards

Recap

What happened yesterday?

Swim-lanes
Map identified processes

Sum_of_Marc - Flickr

Swim-lanes

What?

A diagram that shows parallel streams for user, business, and technical process flows. Arranged for each core product scenario or activity. Provides foundation for use cases

Swim-lanes

Why?

Ensures alignment and integration of task flow with business process and technical requirements. Allows understanding of all components of a specific process in one document, while allowing clearer separation, responsibility, and delegation.

Swim-lanes

Guidelines

Identify involved people, systems and tools

Break the process into single steps/actions

Visualize the process

Swim-lanes

Concept Development Team

Swim-lanes

The swim-lane flowchart differs from other flowcharts in that processes and decisions are grouped visually by placing them in lanes. Parallel lines divide the chart into lanes, with one lane for each person, group or subprocess. Lanes are labelled to show how the chart is organized. In the accompanying example, the vertical direction represents the sequence of events in the overall process, while the horizontal divisions depict what subprocess is performing that step. Arrows between the lanes represent how information or material is passed between the subprocesses. [http://en.wikipedia.org/wiki/Swim_lane]

Process

1. Identify involved people, systems and tools
2. Break the process into its single steps / actions
3. Visualize the flow of the process - connect people, systems and tools depending on their involvement in the process over time.
4. Look for patterns (here you could try to streamline the process)

How to create a task map and analysis it using the swim-lane layout?

Each player (person, system or tool) gets a "lane".
Each action gets associated to a players "lane" in relation to time. The steps get connected.
Patterns should emerge.

BREAKOUT SESSION 4

09:30-11:00

Scenarios

Scenarios

What?

A scenario is a story about someone (usually your users) using whatever is being designed to carry out a specific task or goal.

Scenarios

Why?

Creating a scenario sets you into the users position and helps you to understand and the user‘s experience.

Scenarios

Guidelines

Scenarios can be very detailed, all the way to very high level but should at least outline the ‘**who**’, ‘**what**’, ‘**when**’, ‘**where**’, ‘**why**’, and ‘**how**’ of the usage.

In the end it has to be a story that let the reader understand and engage with the user and the proposed solution.

Scenarios

Concept Development Team

Scenarios

1. Choose a scenario

Take one of your key tasks/features that your users will be doing/using and answer the following questions: What must someone do to be able to use the proposed feature? What are the really key tasks from a user and business perspective?

For example, for an ecommerce website you might use buying an item as a scenario. Note down some context for the scenario. For each scenario that you map out it's important to consider and make a note of the: **who**; **what**; **where**; **why**; and **how often** of the scenario. For each step you'll want to capture the following on different post-it notes use notation such as '(s)' for a step and '(q)' for questions to distinguish the different types of information: What the user does.

Remember to focus on what happens, not necessarily how it happens. For example, Paul brings up a larger image of a bouquet of flowers that he thinks his Mum would like.

Any comments or information that you feel is important at this step. For example, you might want to make a note that there might be alternative images available for a bouquet of flowers, such as a front and side shot.

Any questions or assumptions that arise are this step that you'll want to resolve. For example, will the images for flowers all be the same size and aspect ratio?

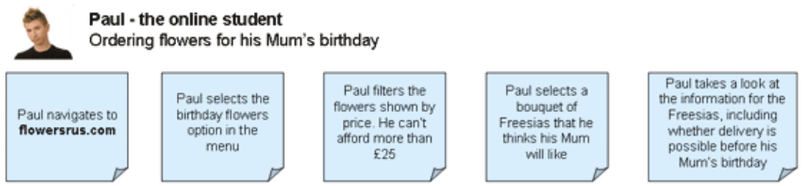
Any ideas or good suggestions that people have. For example, it would be good to allow Paul to zoom in on an image so that he can see the bouquet of flowers in more detail.

2. Map the scenario

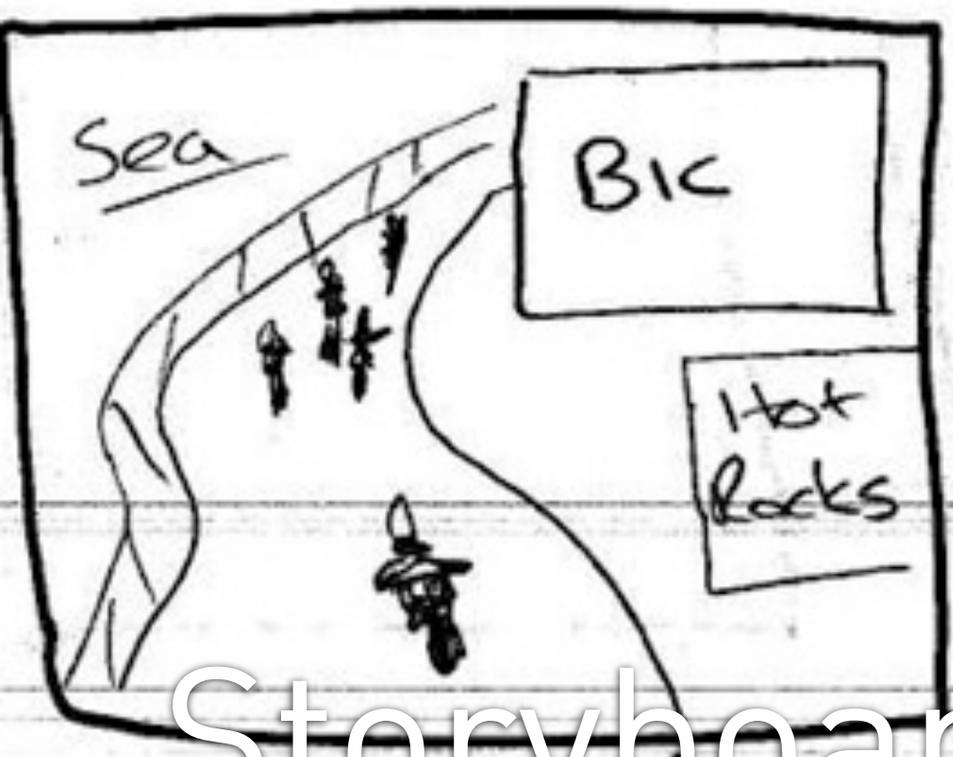
Use Post-its to map out each step horizontally, from left to right and details, such as comments, ideas and suggestions vertically below the associated step. It's important to stick steps at the top so that someone can follow the scenario by reading the top row left to right. Initially you want to keep the steps relatively high-level but each iteration should reveal more details.

3. Iterate

4. Capture your Scenario



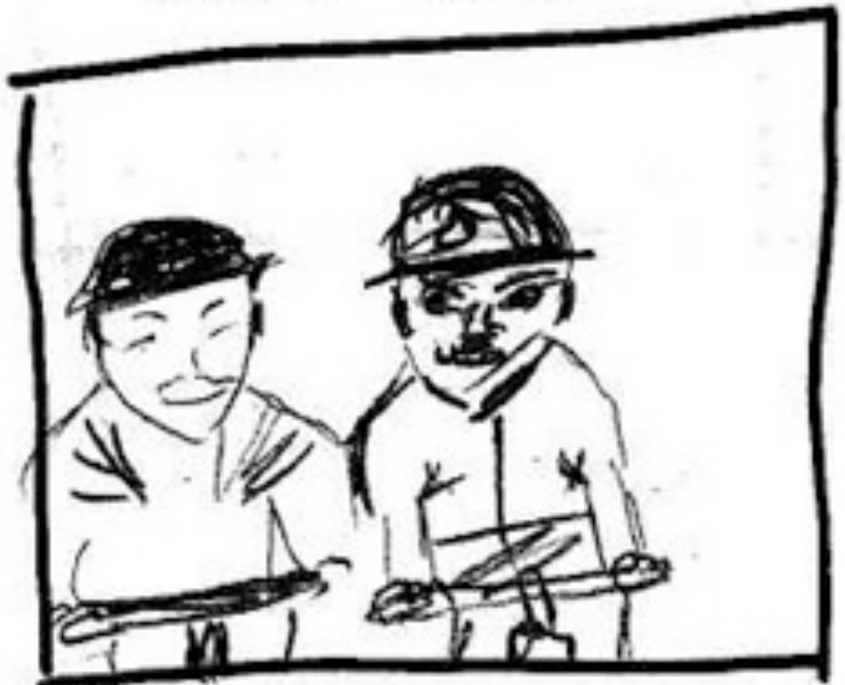
Viral Video Storyboard (modified due to locat

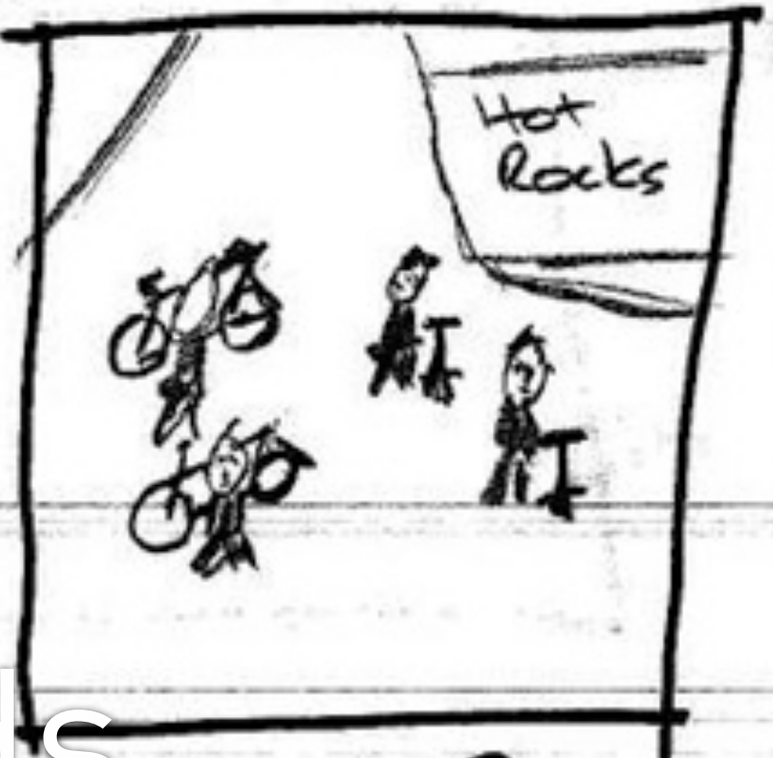


Storyboards

Shot 1

Note: Zoom out as cyclos come down the hill.



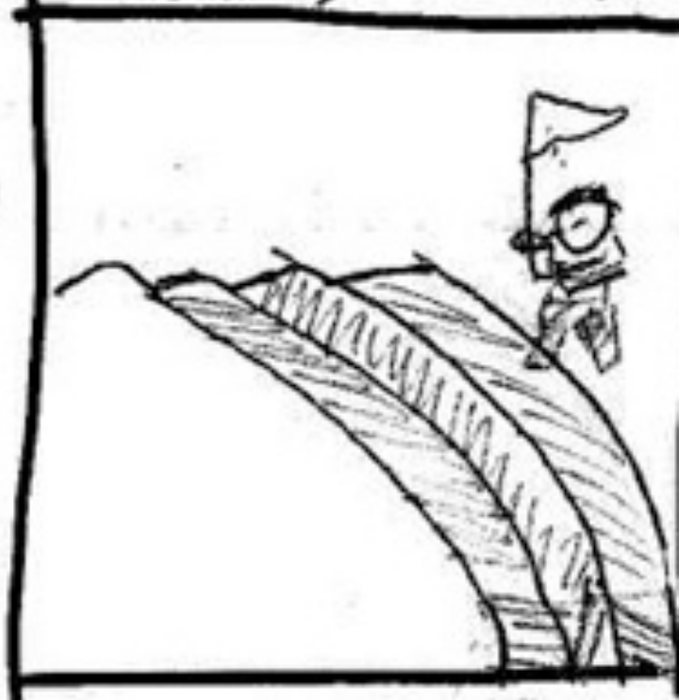


Shot 2

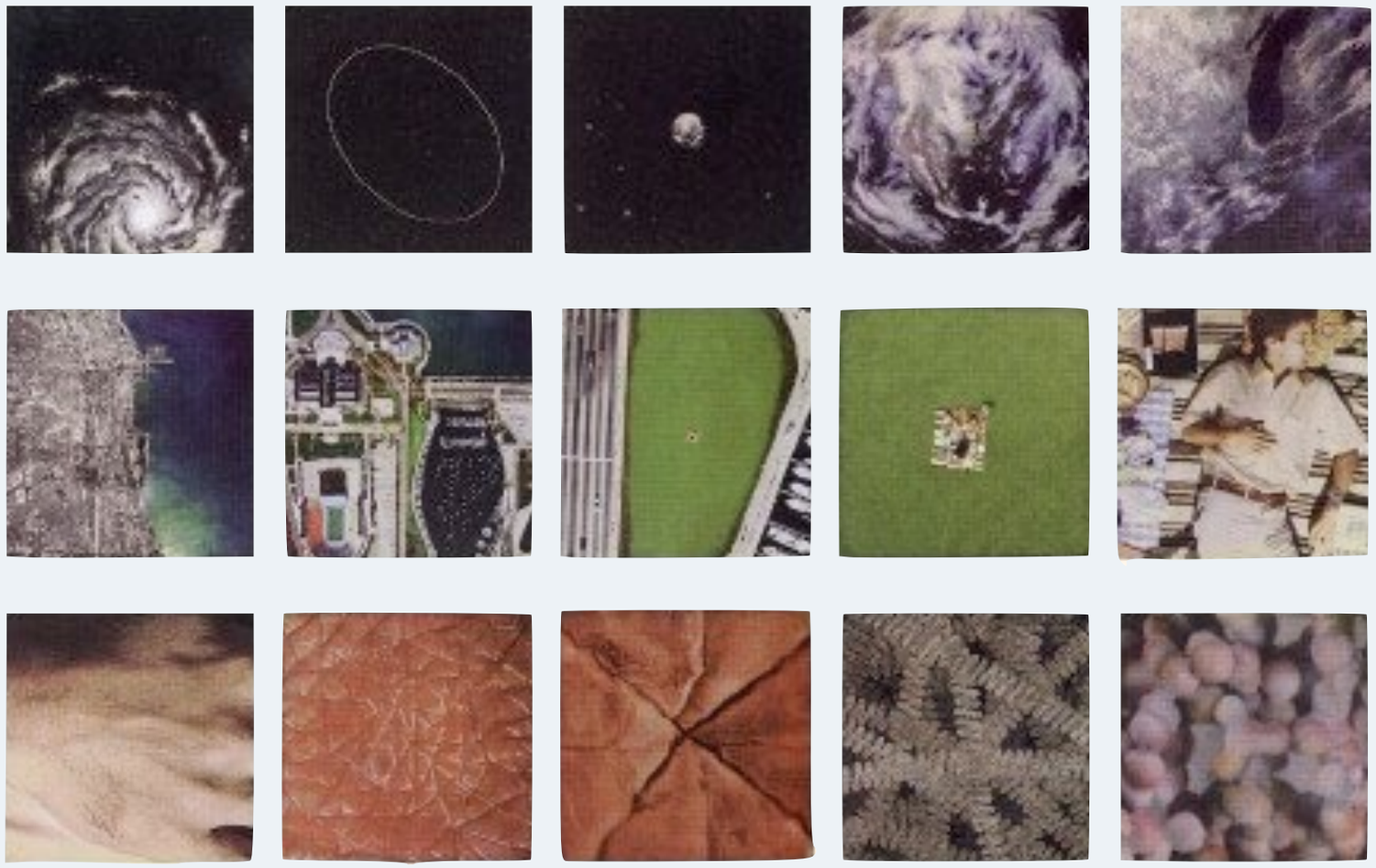
Note: As the cyclist walk thier bikes around us filming.

Shot 3

Note: Close up of the Flag Carrier following the car.



Zoomed Out vs. Zoomed In



Holistic

User

Technology

Storyboards

What?

Storyboards are the basis to understand a solution within the **world of your users**. It adds **real-world contexts** that involve place, people, and other potentially informative ambient artifacts to an identified process of your solution.

Storyboards

Why?

Storyboards **enable to learn** about unexpected things, and embedding that context into your design efforts helps keep them grounded in the reality of the users' lives.

Further it lets you **focus** on the **core aspects** of a process.

Storyboards

Guidelines

Be simple! Use your Scenario as a basis and reduce it to **six key aspects** you need to show.

Communicate what your idea is about. Focus on one or two core solutions and tell your audience about the impact your idea has and when it will be used best.

Storyboards

Concept Development
Storyboard

Team

Problem (2 Frames) - Solution (3 Frames) - Benefit (1 Frame)

Be simple. You don't need to be able to draw. Stickman and camera movements will do the job!

BREAKOUT SESSION 6

13:00-16:00

prepare 3 storyboards
in teams of 2

gather back at 16:00

Mid Presentation (Monday)

5 Minutes + Q&A with Guests

Suggestion:
What are you building and for whom ?
(User Research/Group and Elevator Pitch)

How does a user experience your solution ?
(Can be 6 Keyframe Storyboard)
(all effects allowed)

Deliverables:

Deadline UniWorX 16.03.14 23:59

-PDF Slides

Second Blog Post

- one photo & about 150 words abstract
- categories: WS1314; Concept, Team X
- deadline: sunday 23:59

Thanks and have fun!

We will be around till 5 (feedback on demand)

References:

[1] Buxton, W. Sketching User Experiences, Morgan Kaufmann 2007.
[2] Benyon, D. Designing Interactive Systems: A comprehensive Guide to HCI and interaction design Addison Wesley 2010.
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[5] Snyder, C. Paper Prototyping, Morgan Kaufmann 2003.
[6] Stevens, G. UX Lecture Series University of Siegen 2010.