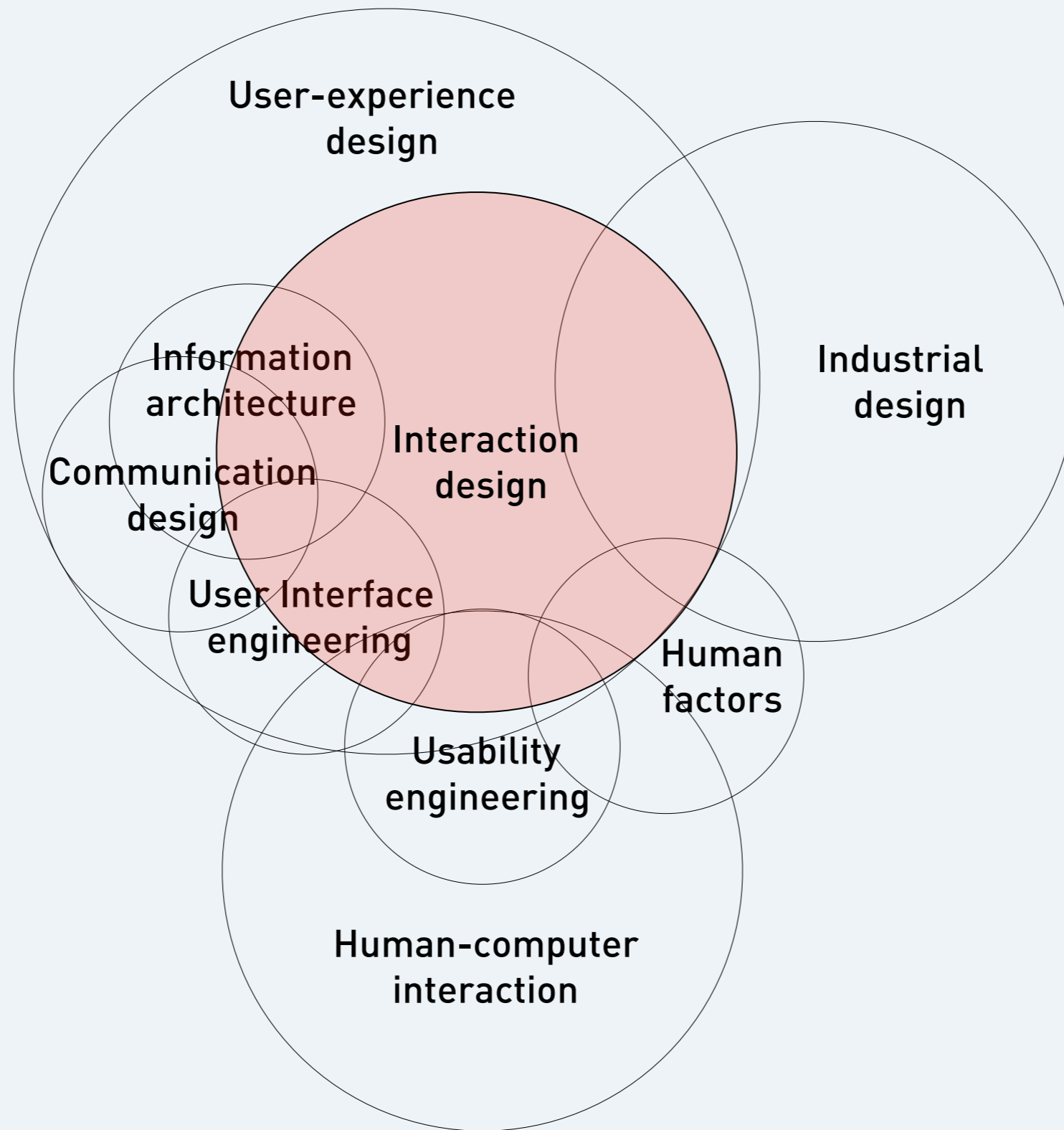




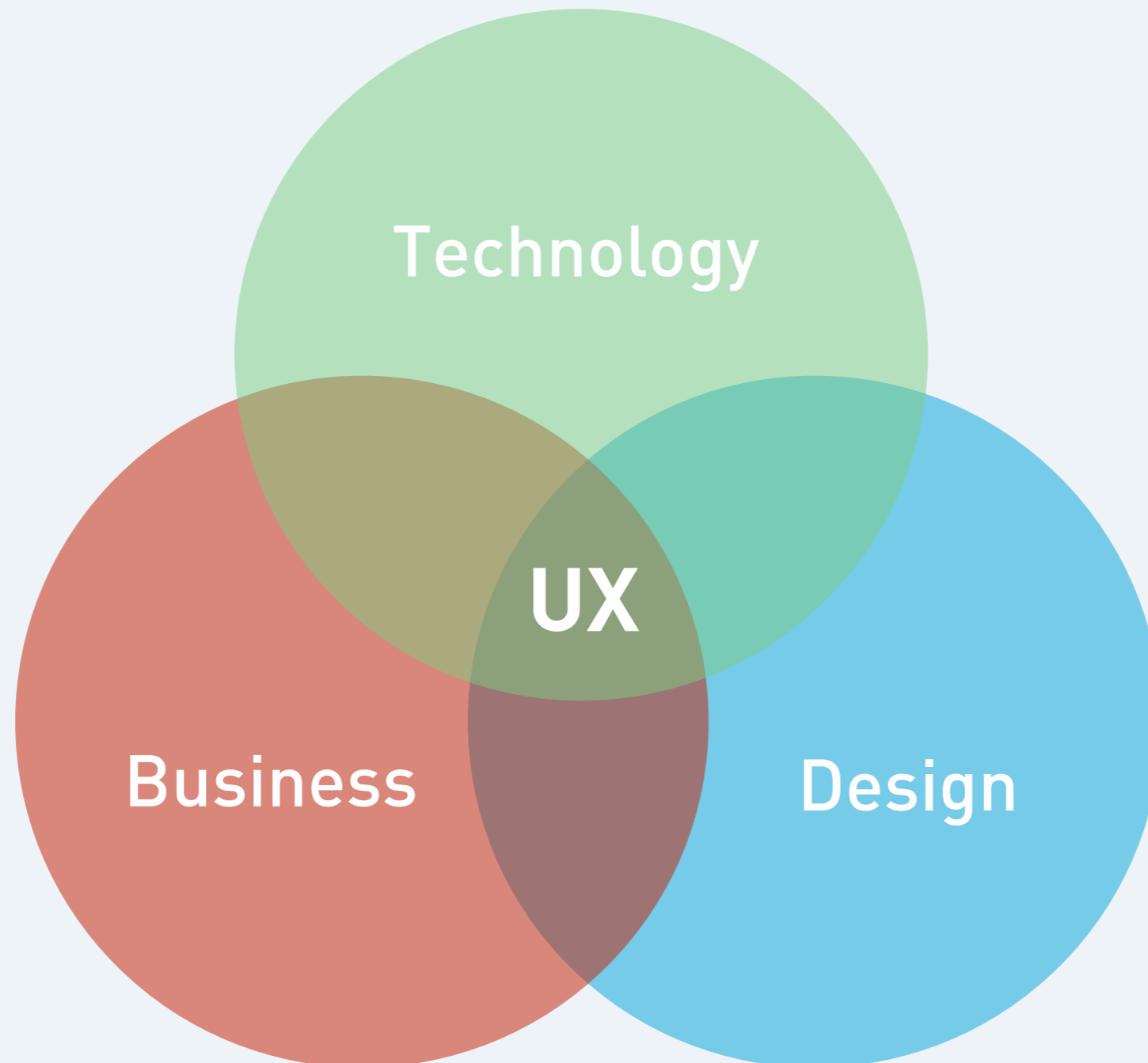
Welcome!

Designworkshop II

What are we doing here ?



User Experience Design



User Experience Design



Getting the right Design and the Design right...

Bill Buxton - Sketching User Experiences



Front Stage



Back Stage

<http://blog.entrepreneurhearts.com/etablog/wp-content/uploads/2010/08/backstage.jpg>

User Interface



Visible

Behind the Scenes

Capturing



Transferring



Connecting



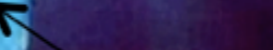
Coordinating



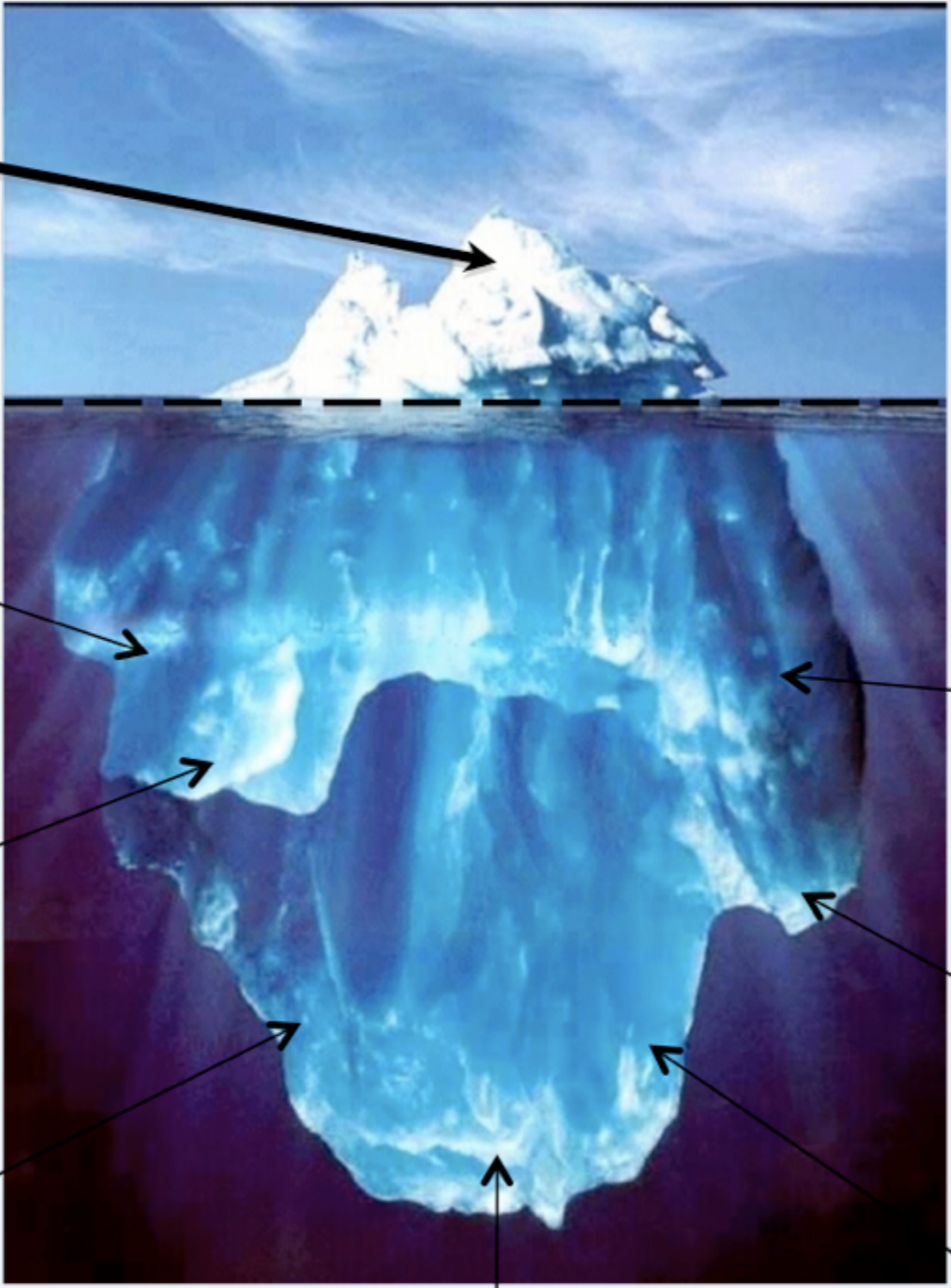
Combining



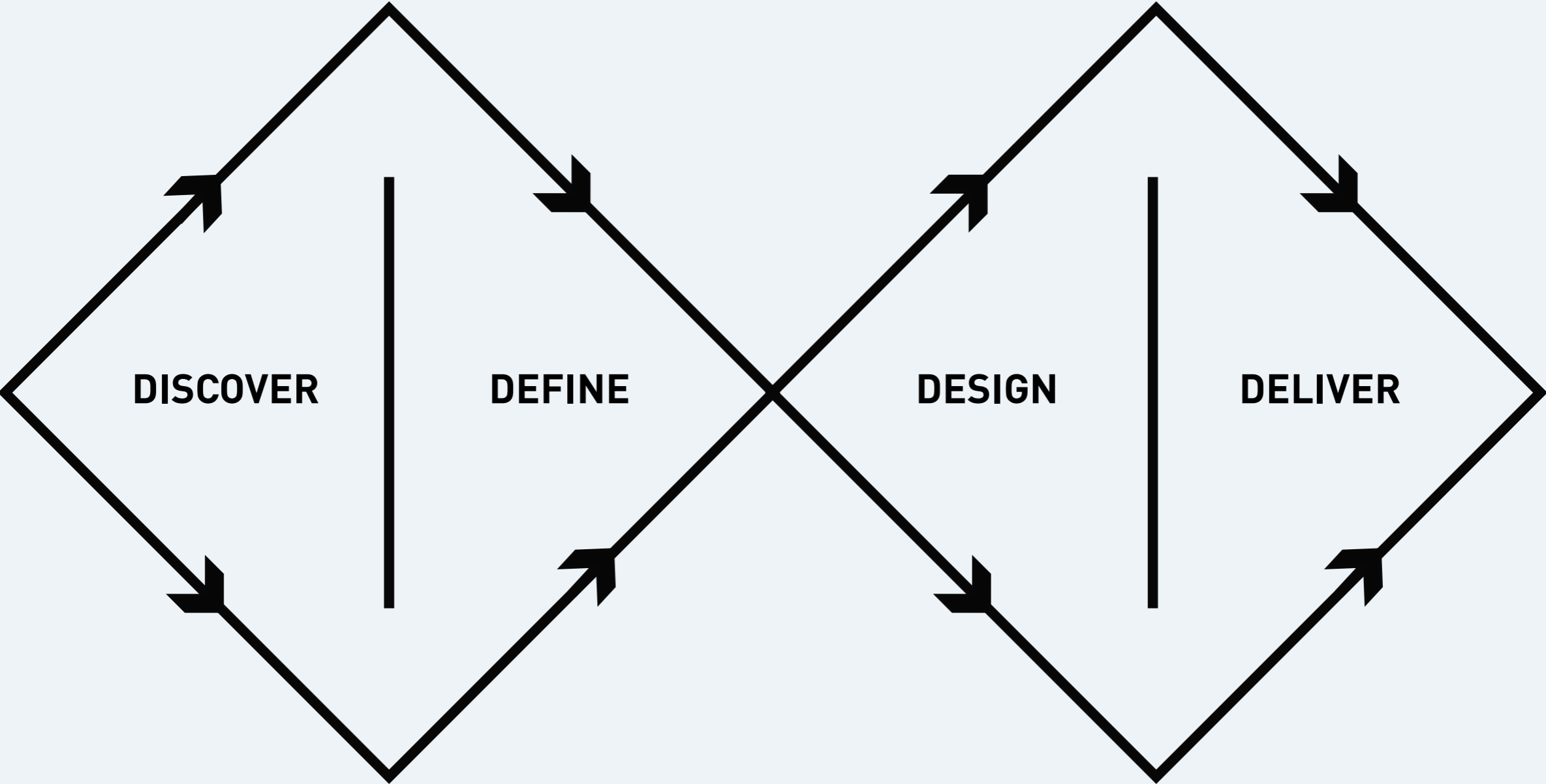
Storing



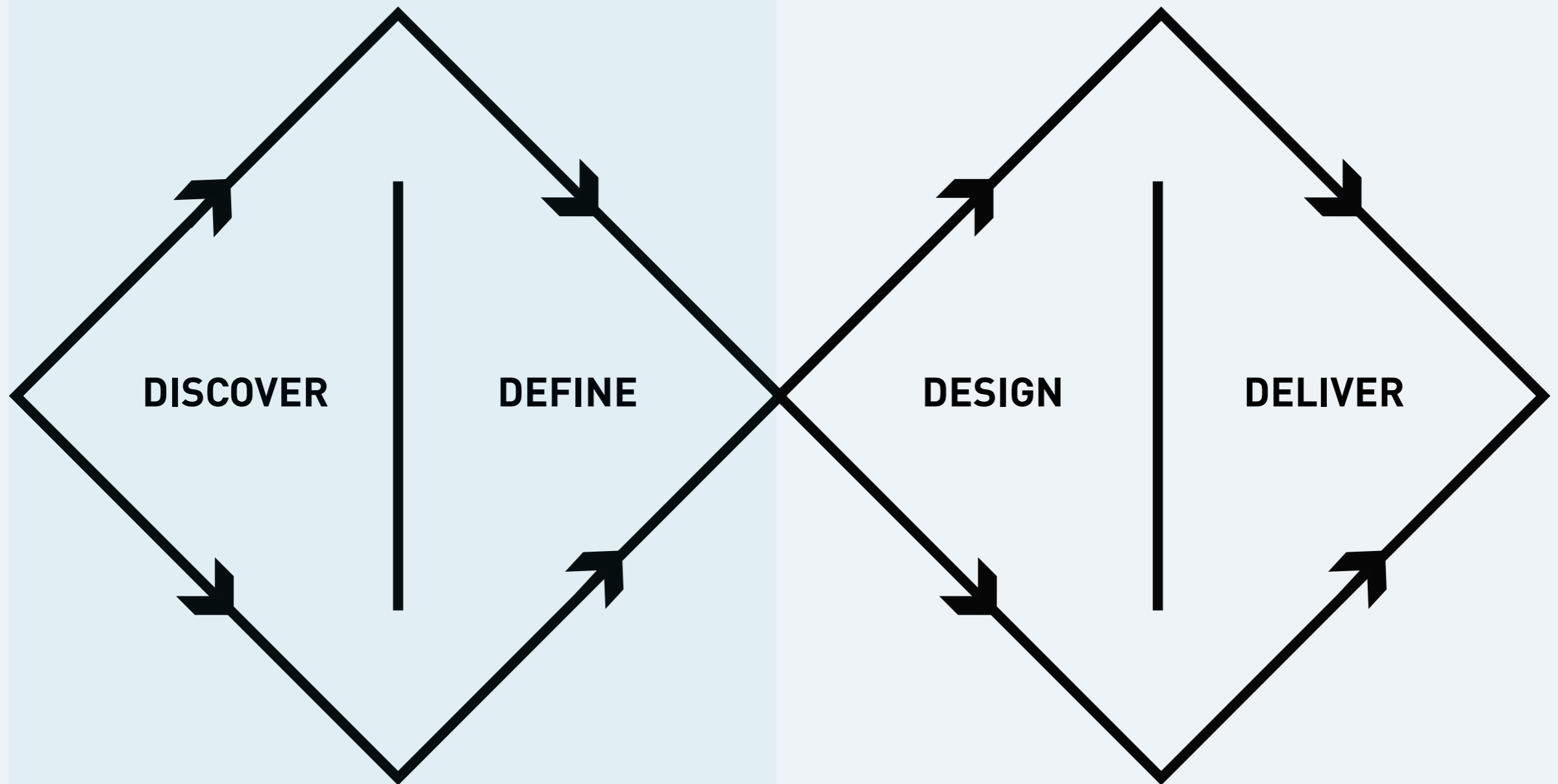
Contextualizing



Double Diamond

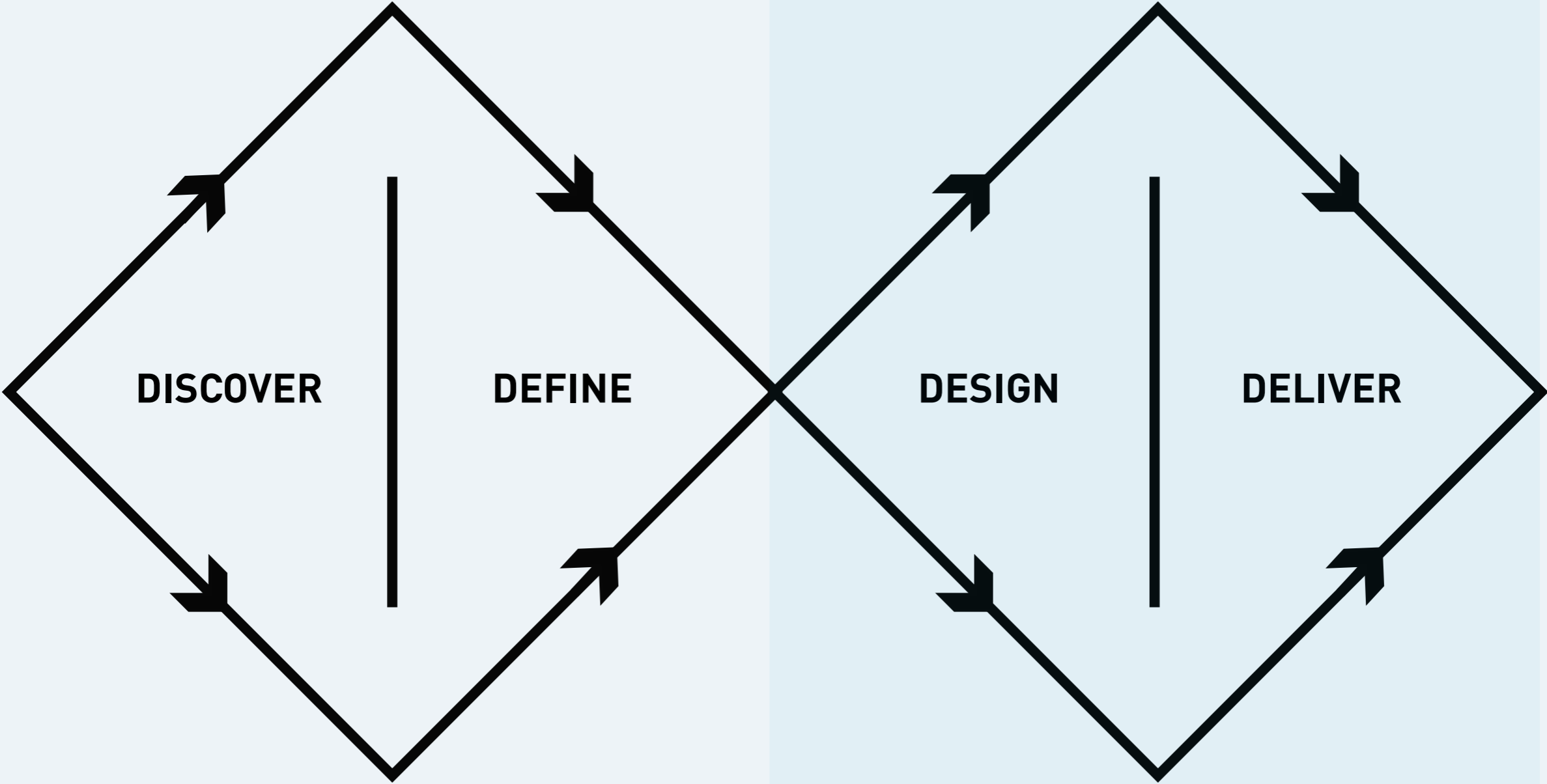


Double Diamond



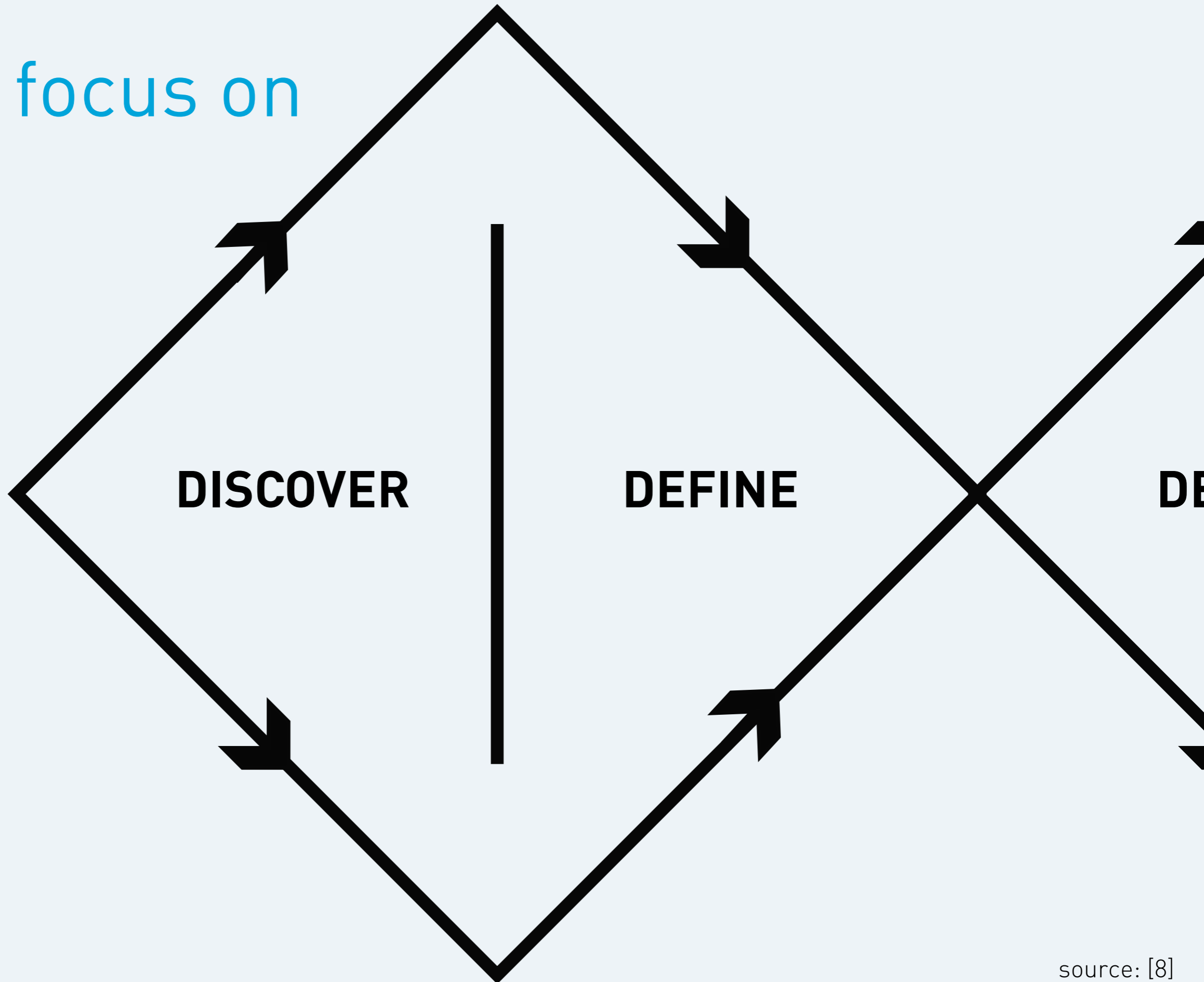
Why? and How?

Double Diamond

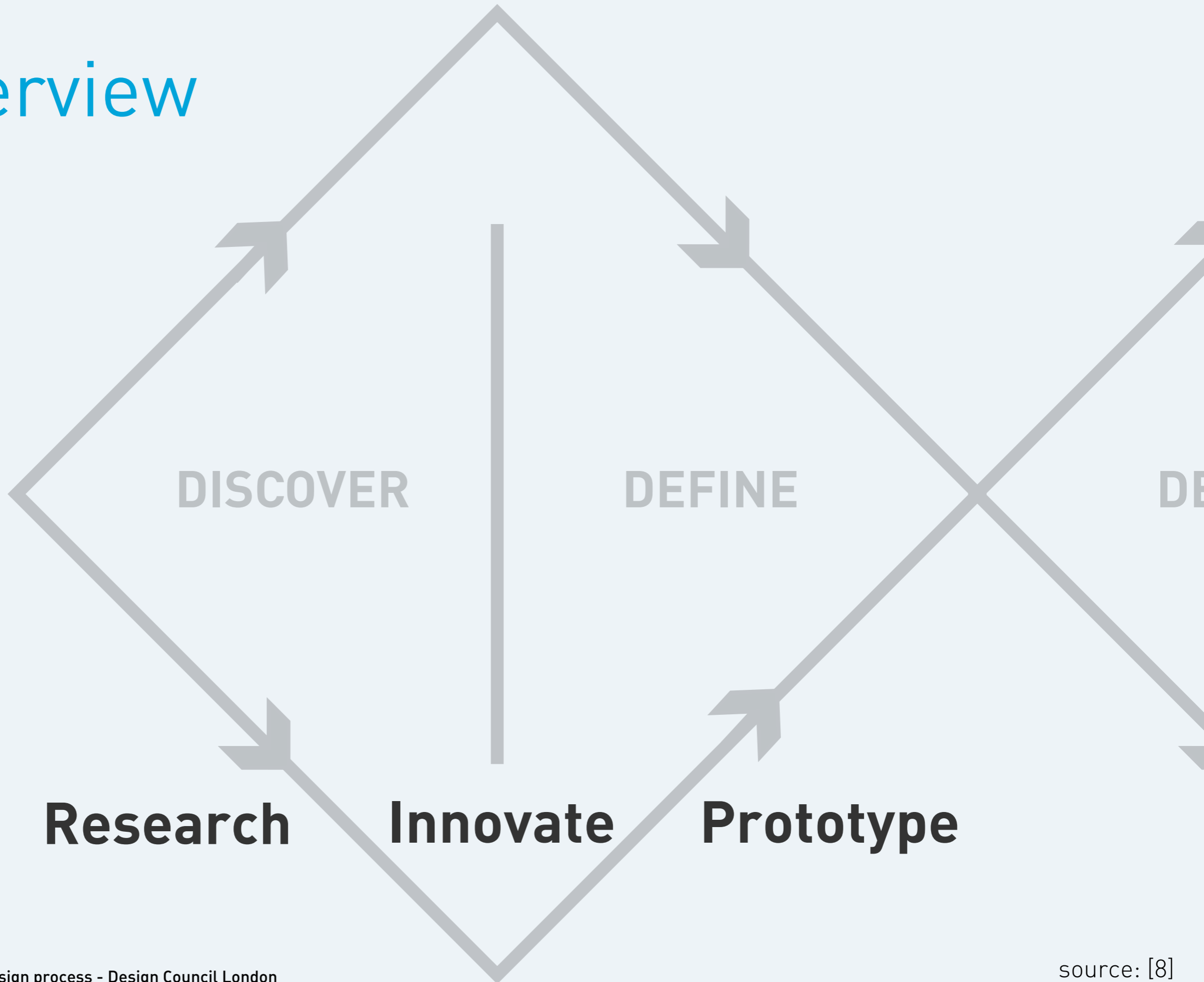


What?

We focus on



Overview



Overview



Get to know your problem/
subject

Gather insights about the
user and their life

Collect artefacts &
impressions

Record tasks

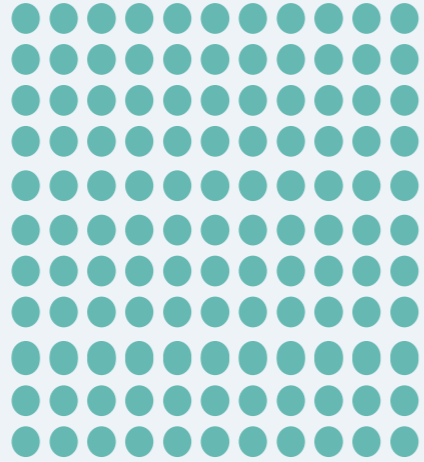
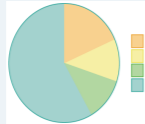
Research

**In design research we are driven by a
need for a deeper understanding**

Susan Dray - Dray & Associates, Inc., USA

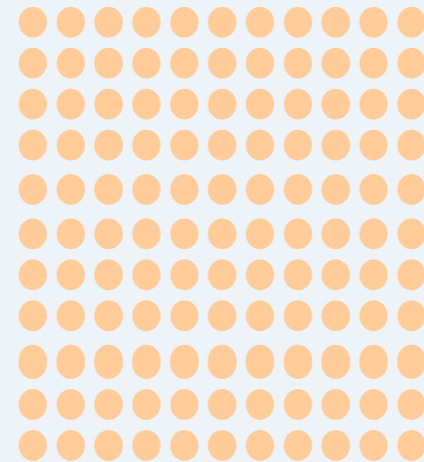
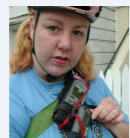
subjects truth inspiration

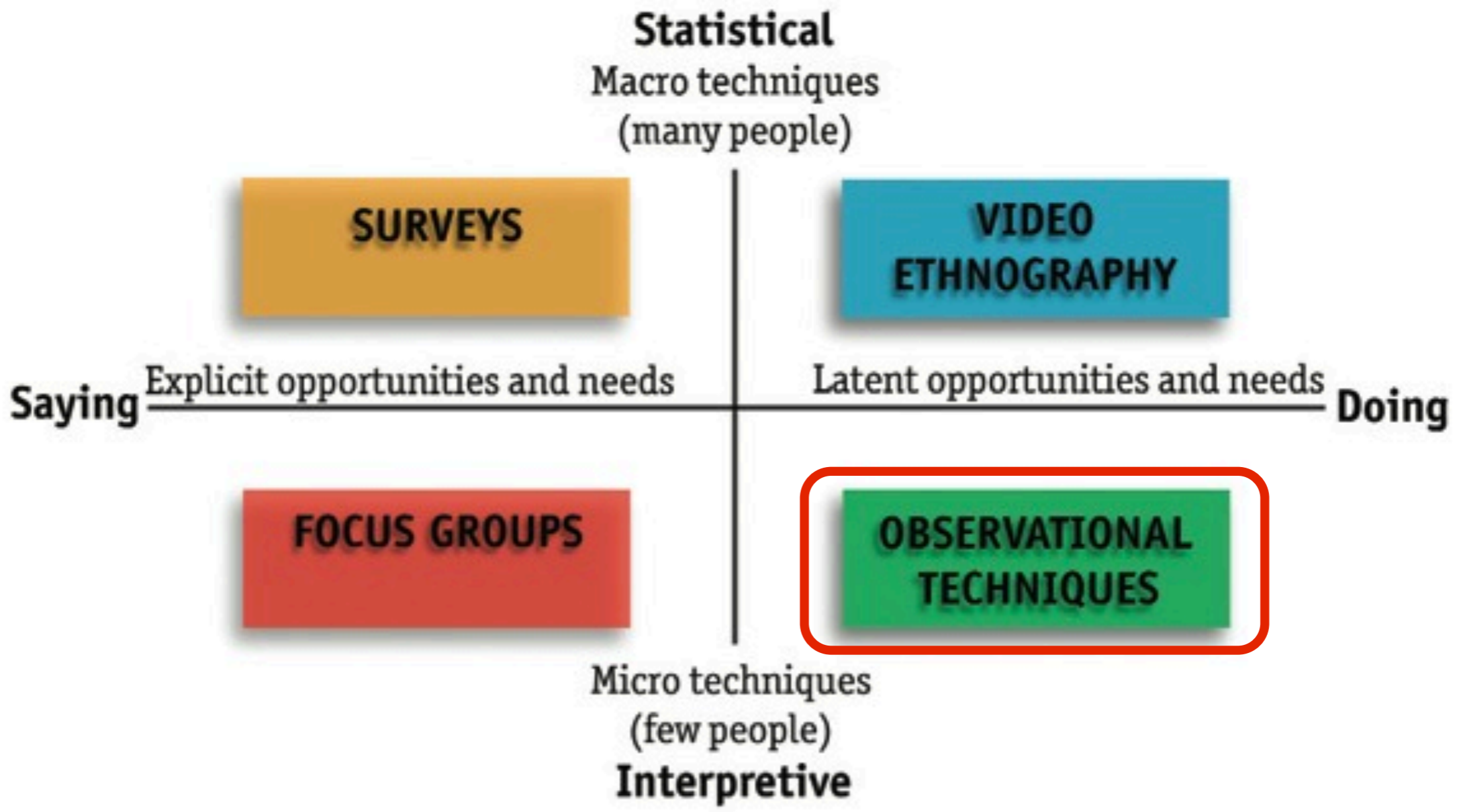
traditional market research

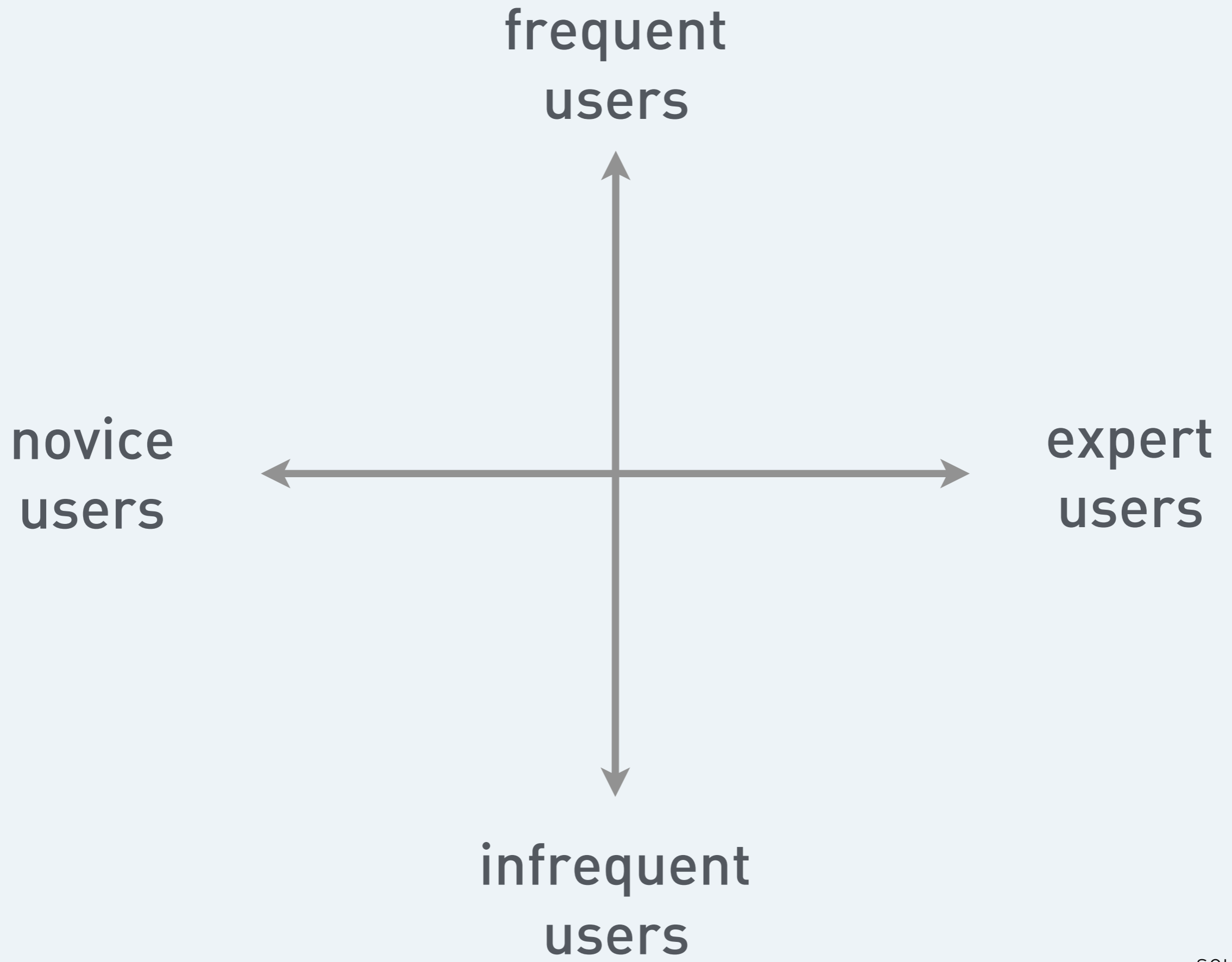


(?)

empathic research









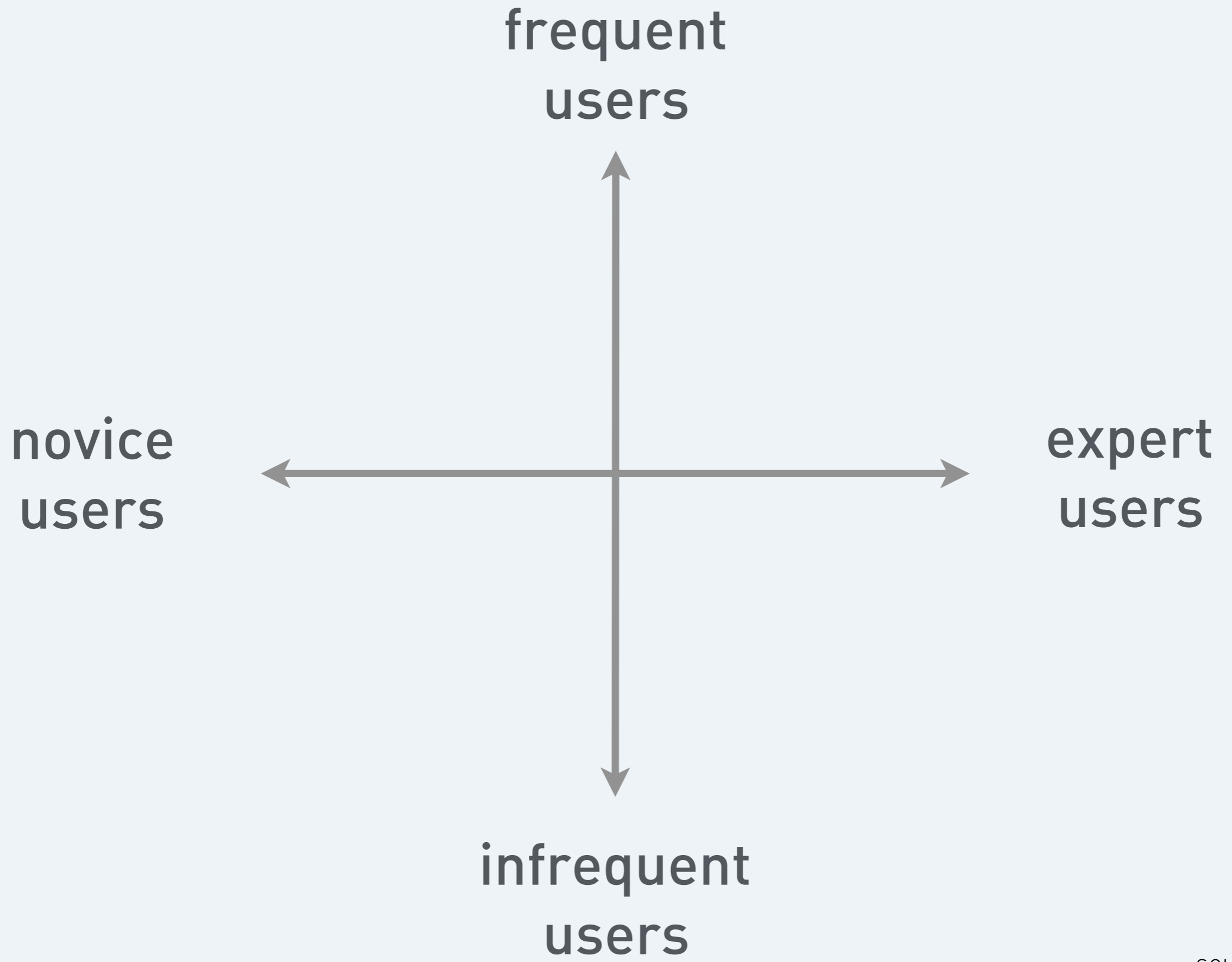
BMW i8 Cockpit



BMW i8 Cockpit



BMW i8 Cockpit



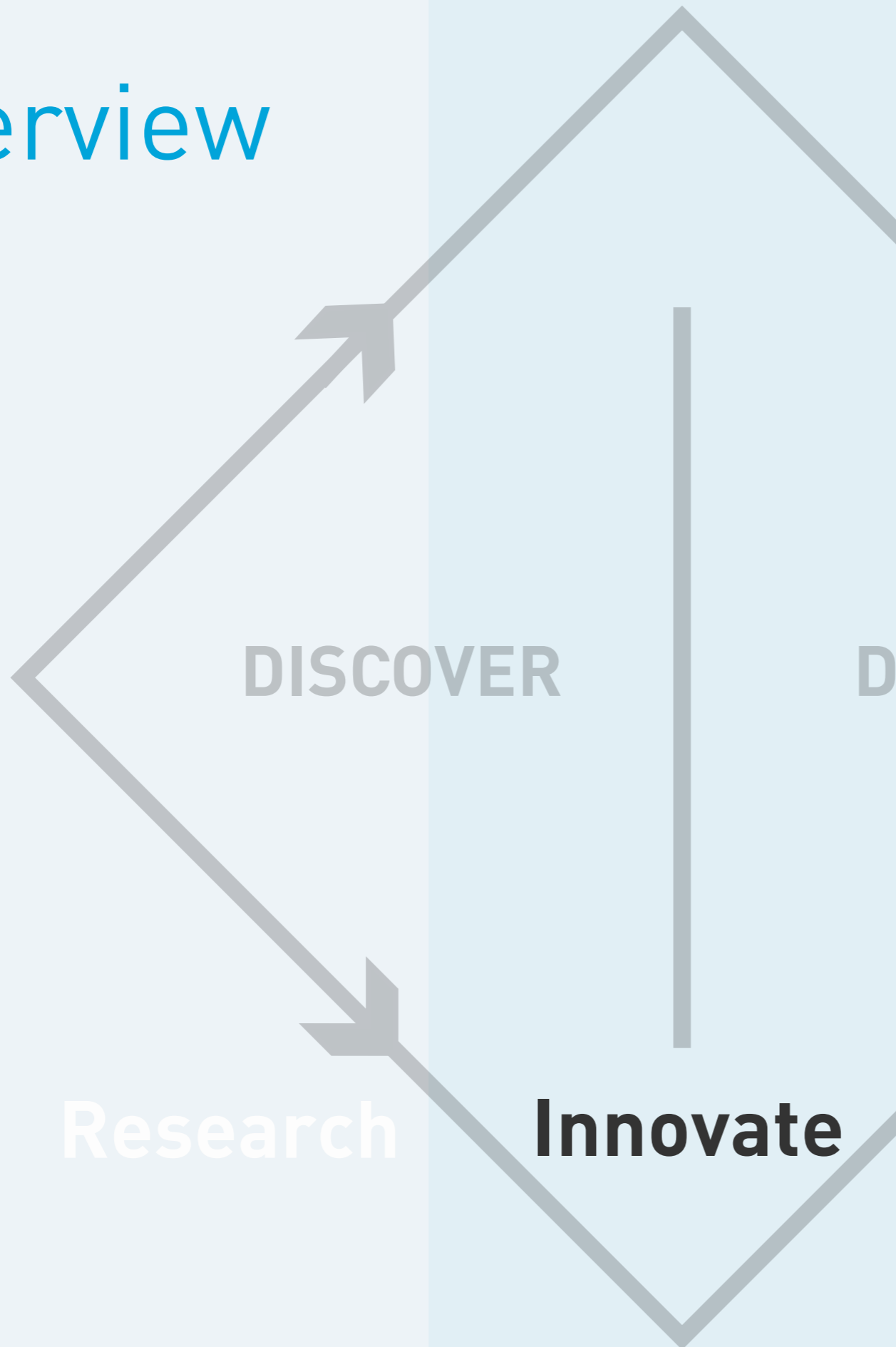


BMW DTM Racing Cockpit

http://2.bp.blogspot.com/_SM9A_sqVGgM/S9XON6I_WtI/AAAAAAAAADww/HcrQgfpuHgl/s1600/Audi+R15+Plus+Cockpit.jpg

Different, usage contexts, user types
and usage frequency will require
dedicated solutions.

Overview



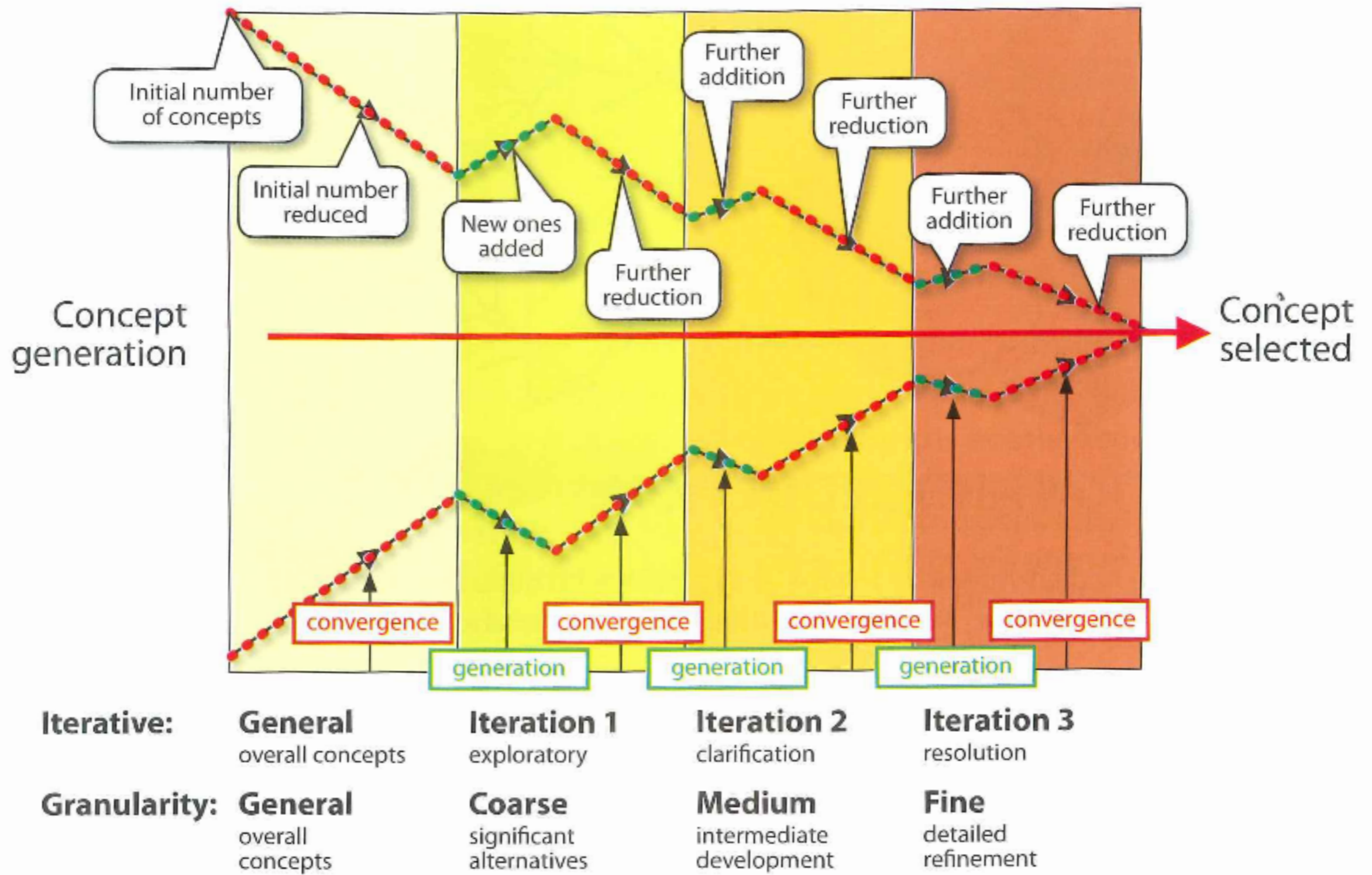
Make sense of your data

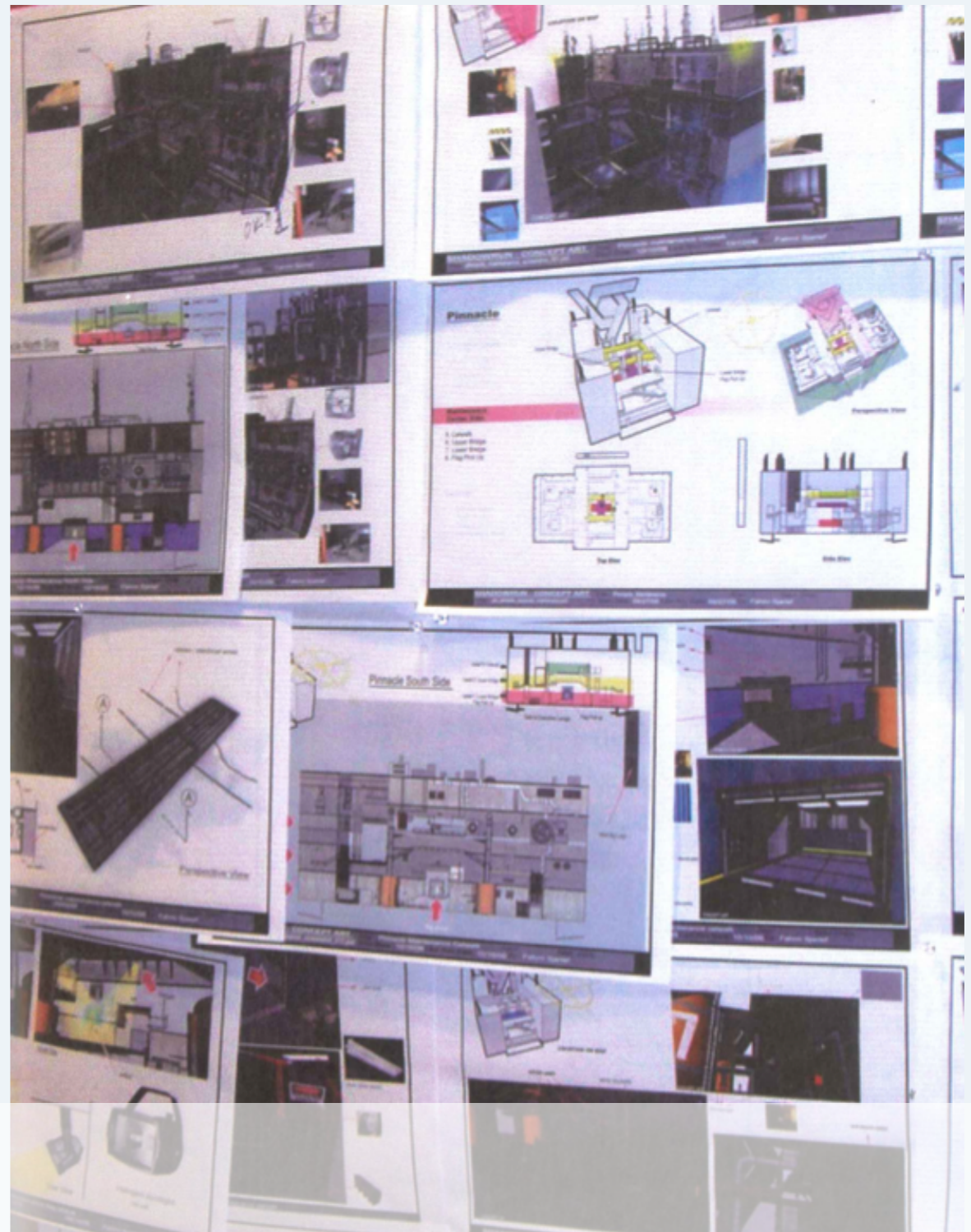
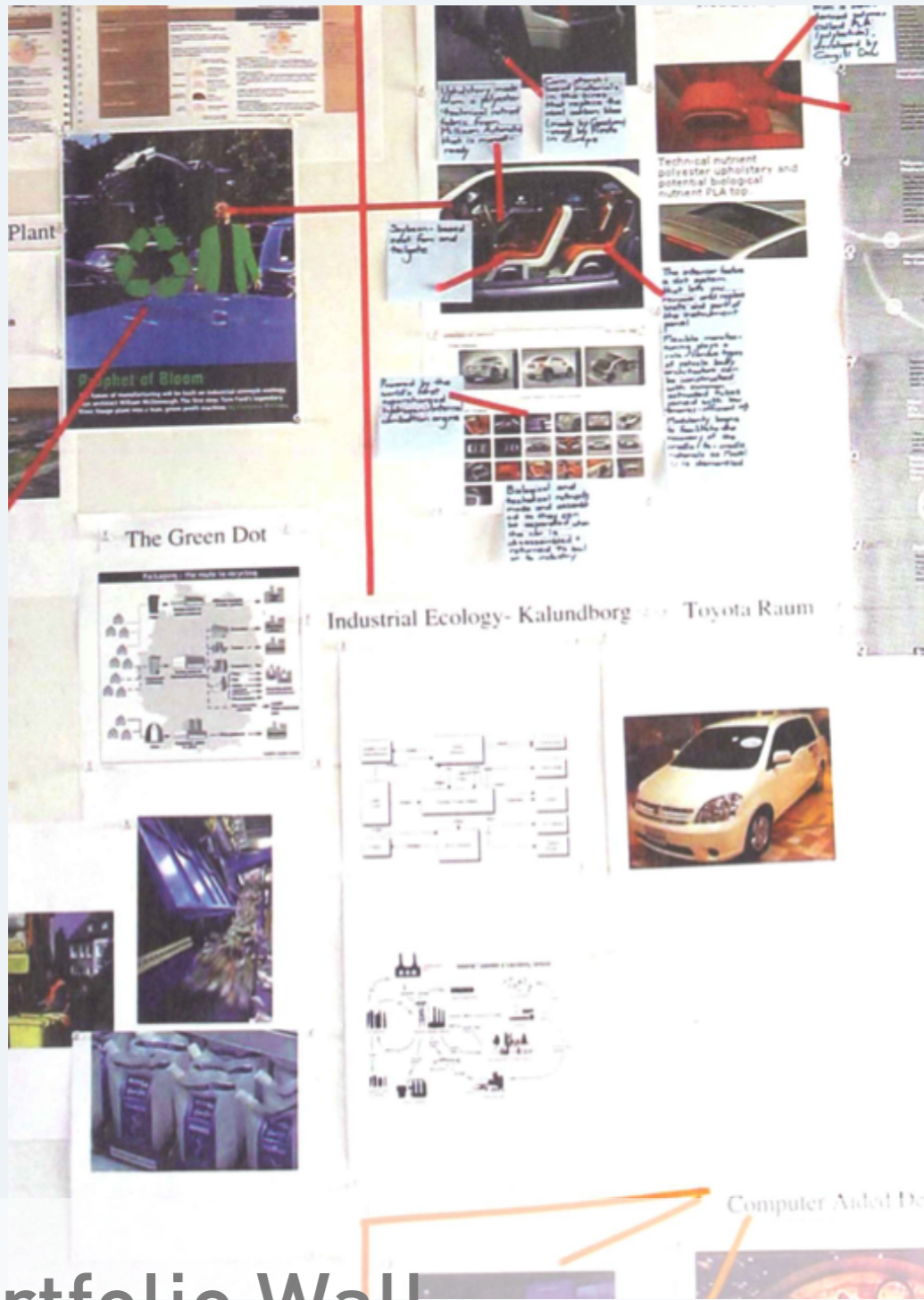
Identify important facets

Keep all players in mind

Collect and prioritise ideas

Develop & validate solutions





Portfolio Wall

Competitive Analysis / Current Interface

Four different adjustments just to make AC right the way you like it.

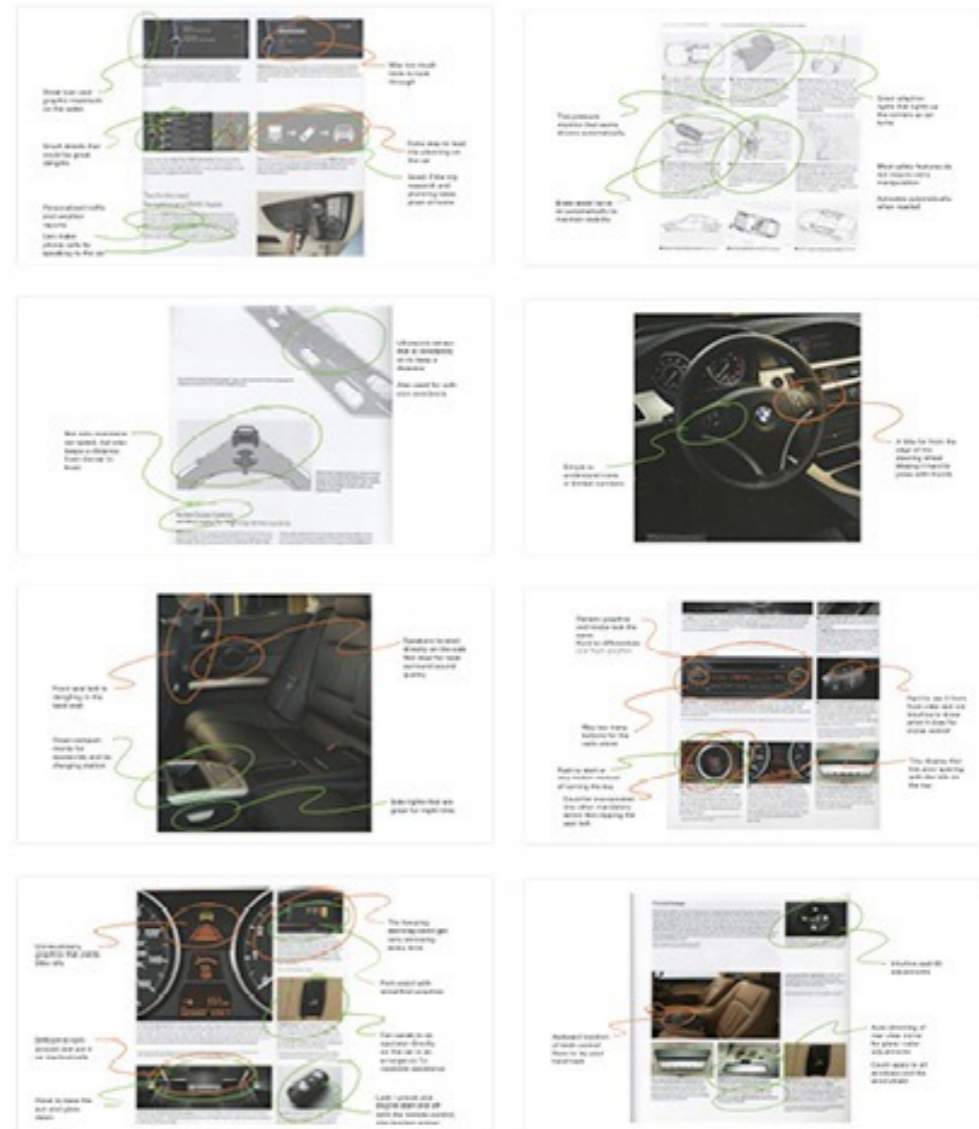
Too many buttons Buttons could be simplified and grouped further.

AC adjustments do not show up on navigation screen.

Turning Knob for the screen on top is far back; Poor ergonomic.



Buttons with simple icons are centralized at a convenient location.



What is working?

- Screen does not need to be at the same place as control.
- Tactile feel of button/Button grouping
- Buttons with simple icons
- Use of color, materials, textures, and lights can improve information hierarchy.

What is NOT working?

- Appropriate position for frequently used buttons is important.
- Too many buttons are intimidating.
- Buttons are scattered and not intuitive position.
- Touchscreen requires too much attention.
- Buttons rely on small icons/text which is hard to read.

Competitive Analysis

Trends Insight

- More wireless connectivity to information and to others.
- More seamless integration between digital and physical world.
- Devices are more content driven and user centric.
- Better customization capabilities and mobile computing is more prevalent.

Interior Comforts

Communication between Driver and Passengers

Taking the comfort to the next higher plane, models like the 2007 Ford Expedition have ensured better communication between passengers from first to third row by using improved materials in the carpet and other features.

Sound Insulation from Exterior

The SUV provides more insulation behind the dashboard and door panels, thick glass and a steady roof panel, thus preventing itself from blocking the sounds.



Competitive Analysis

Literaturrecherche

Google / Google Scholar

<http://scholar.google.de>

ACM Digital Library

<http://portal.acm.org/dl.cfm> -> BibTex, Referenzen, Verweise

Citeseer

<http://citeseer.ist.psu.edu/cs>

IEEE Xplore

<http://ieeexplore.ieee.org/Xplore/guesthome.jsp>

Literaturrecherche

Zugriff auf diverse Literaturdatenbanken (ACM, IEEE) über LRZ-VPN und -Proxy:

<http://www.lrz-muenchen.de/services/netzdienste/proxy/browser-config/>

Zugriff auf das ACM Portal und IEEE über LRZ-Proxy:

<https://docweb.lrz-muenchen.de/cgi-bin/doc/nph-webdoc.cgi/000110A/http/portal.acm.org/portal.cfm>

Zugriff auf Zeitschriften:

<http://docweb.lrz-muenchen.de/>

Webrecherche

Techblogs:

engadget.com

ted.com

Zugriff auf Zeitschriften:

<http://docweb.lrz-muenchen.de/>

Overview

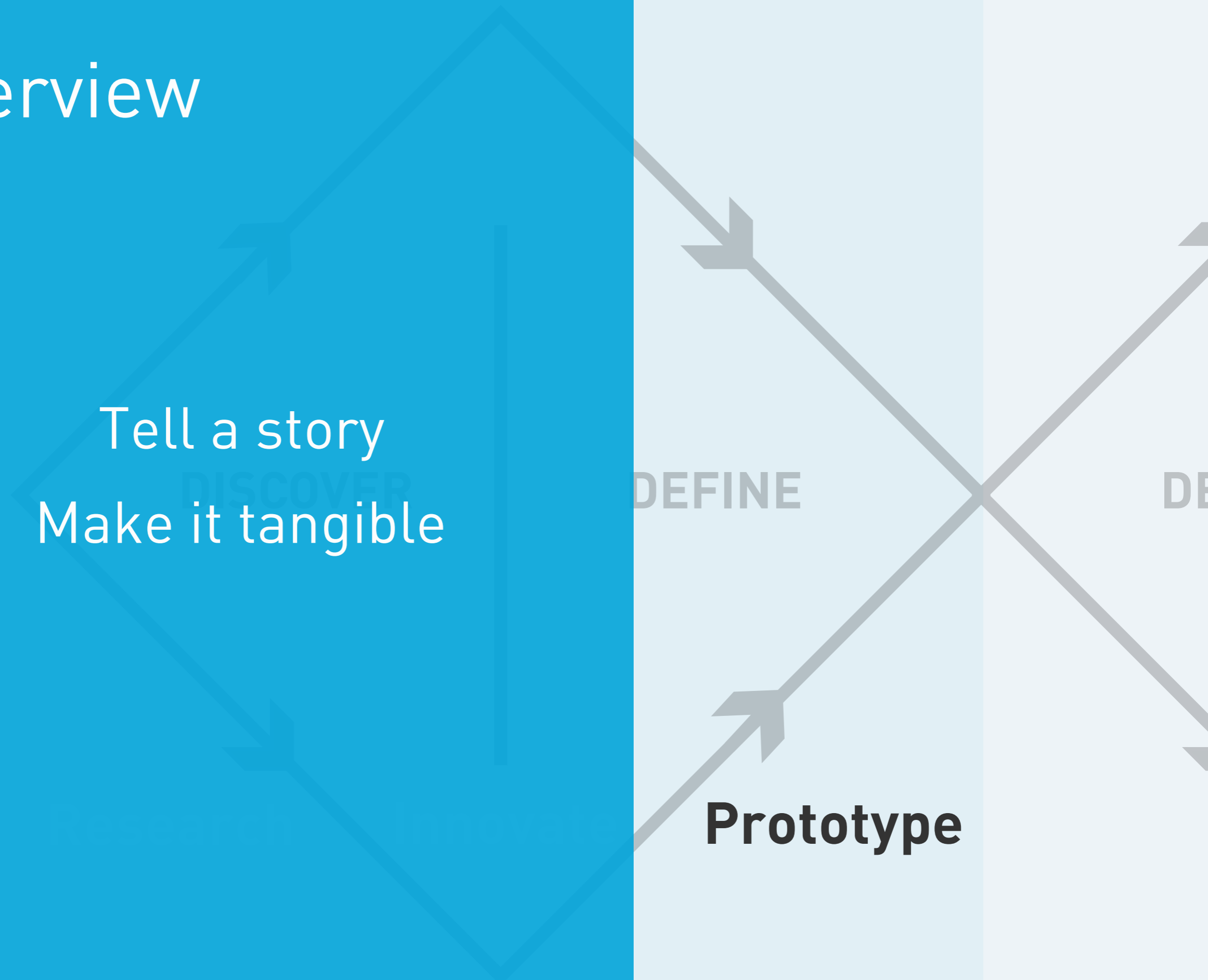
Tell a story
Make it tangible

DISCOVER

DEFINE

DE

Prototype



For the Designer: Exploration
Visualisation
Feasibly
Inspiration
Collaboration

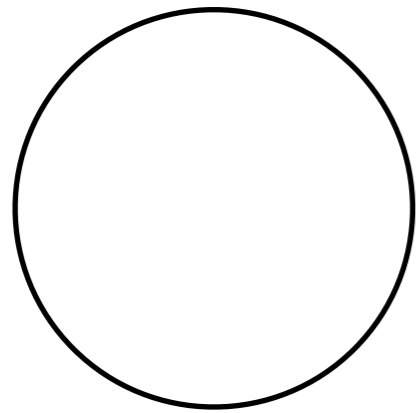
For the End User: Effectiveness / Usefulness
A change of viewpoint
Usability
Desirability

For the Producer: Conviction
Specification
Benchmarking

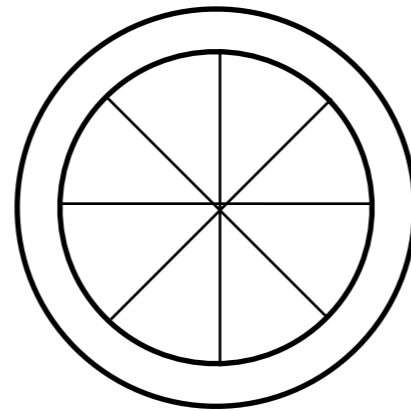
It's really hard to design products by focus groups. A lot of times, people don't know what they want until you show it to them.

Steve Jobs

Fidelity v. Resolution



low resolution
low fidelity



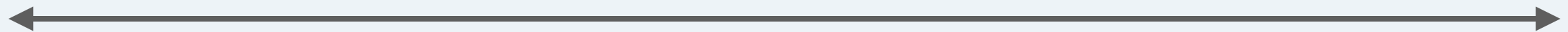
high resolution
low fidelity



high resolution
high fidelity

Low Fidelity

High Fidelity



Open Discussion

Sharp Opinions

Prompting Required

Self Explanatory

Quick and Dirty

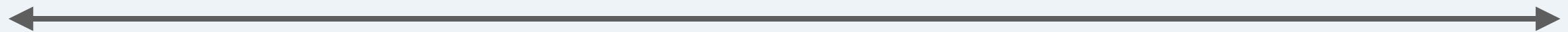
Deliberate and Refined

Early Validation

Concrete Ideas

Low Resolution

High Resolution



Less Details

More Details

Focus on core interactions

Focus on the whole

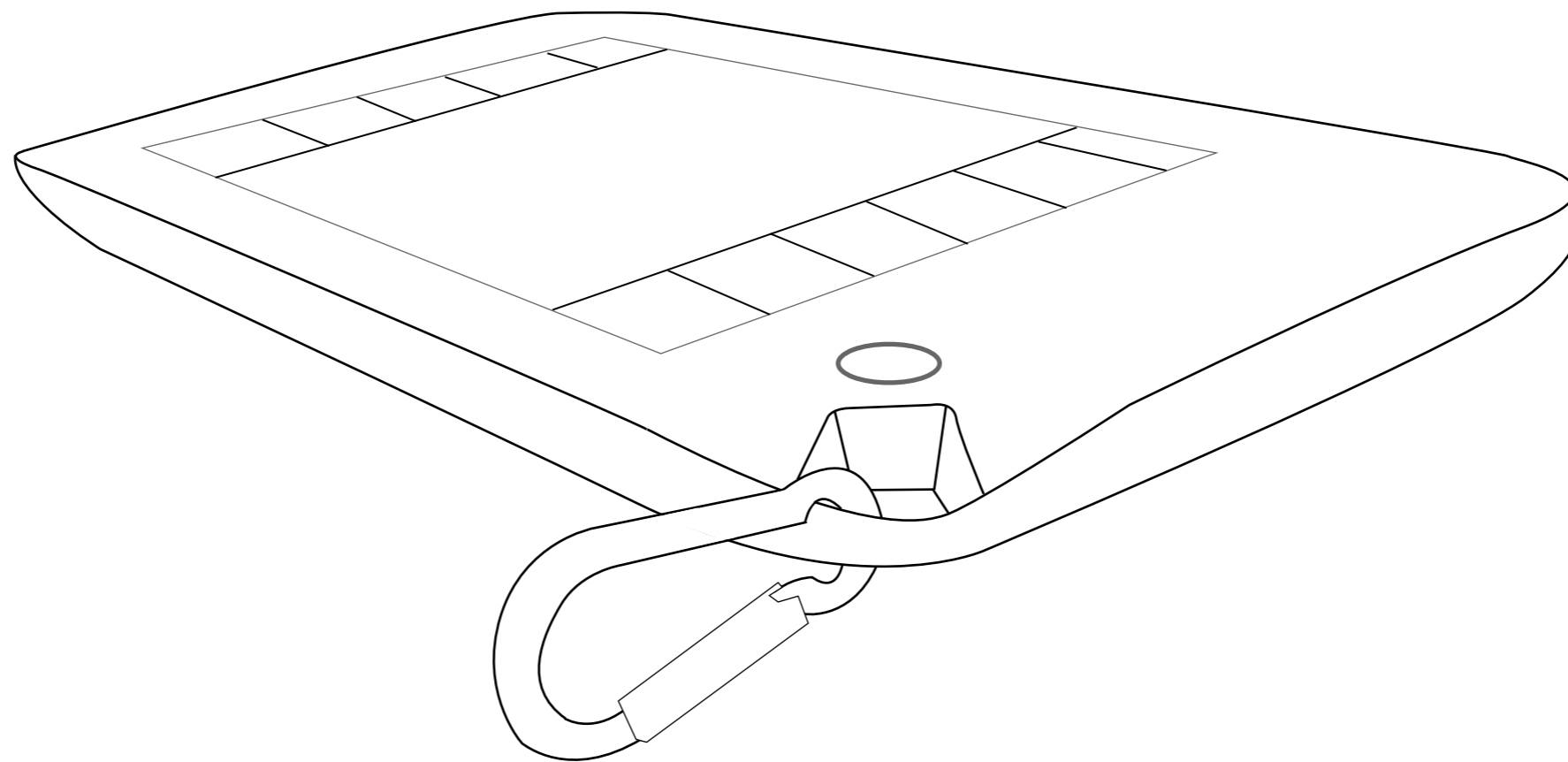
Quick and Dirty

Deliberate and Refined

Early Validation

Concrete Ideas

1st Iteration
low-res/low-fi

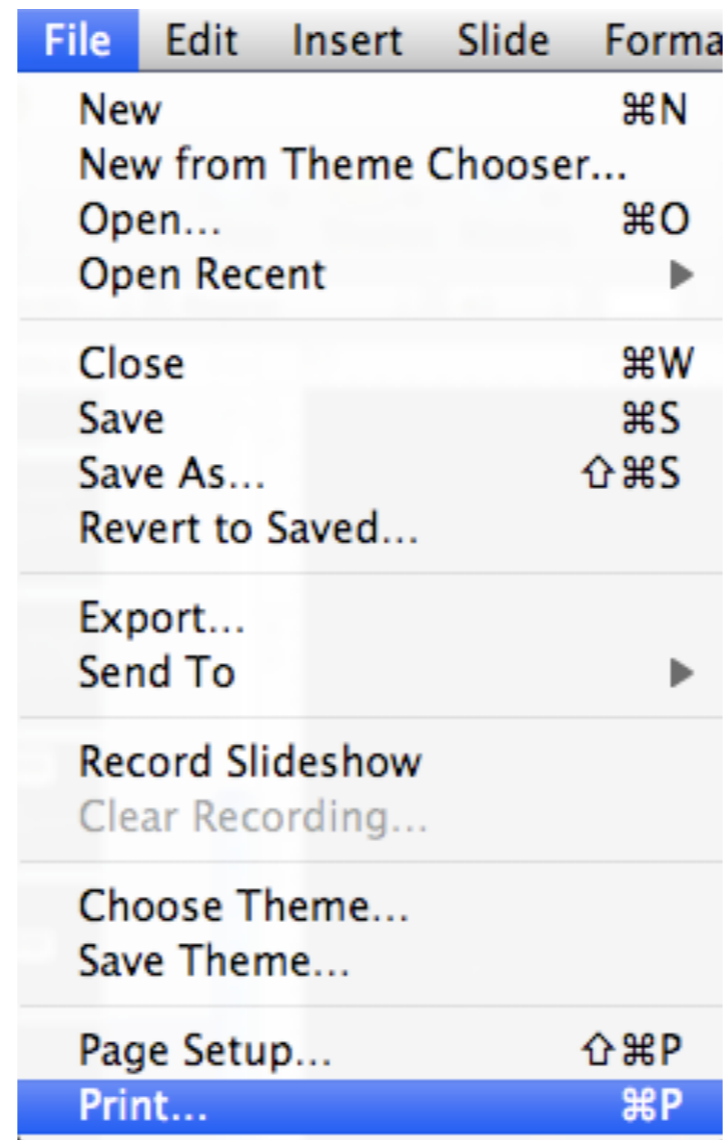


4th Iteration
high-res/high-fi





80/20 rule



A principle for setting priorities: users will use 20% of the features of your product 80% of the time. Focus the majority of your design and development effort (80%) on the most important 20% of the product.

OVERVIEW

The Course

Approach

Tackling a real world interaction design challenge by:

- Applying an iterative design process in all phases from research to final prototype
- Working in teams

The Goal

A final presentation that includes milestone deliverables for each phase and a self-explanatory and functioning prototype* at the end of the semester.

*transportable, maximum size of a standard desk

Workshop Theme:

BEYOND THE SCREEN

In-car interaction concepts
across soft- and hardware

With the rise of digitalization, screens are widely replacing knobs, buttons and other haptic interaction methods.



<http://www.digitaljournal.com/img/9/1/2/2/9/7/i/5/5/2/o/ajeedashboard8.jpg>

<http://2.bp.blogspot.com/-C05lp2Ctv8c/UzqTdr1z0il/AAAAAAGBk/YG5VxARksA4/s1600/tesla-model-s-cockpit.png>

In-/ output is reduced to the size of the screen while the complexity of interaction possibilities/ information has risen.

Hauptmenü

15:42

tagessch...

Multimedia

Radio

Telefon

Navigation

Office

ConnectedDrive

Fahrzeuginfo

Einstellungen



Emotional interaction experiences (e.g. haptical) are being uniformed as the diversity of form and materials are reduced to the one universal touch screen experience.



Workshop Theme:

- > What kind of new interactions concepts in the car can merge hard- and software?
- > How can they support ease of usability, the conveying of information and an emotional experience specifically for in-car interactions?

Your grades (per team!)

- Attendance of & participation in meetings
- 4 deliverables: in time, complete
- Strength of conceptual work (deliverables 1,2)
 - Quality of research
 - Is your concept solving the problem you framed?
 - Is your concept merging hard- and software?
 - Is it supporting ease of usability, conveying information, an emotional experience?
 - How innovative is your concept?
- Strength of prototyping (deliverables 3,4)
 - Does it make the idea experienceable?
 - Does it work? Is it self-explanatory?
 - How well was user feedback carried out and incorporated?
- Presentation
 - How crisp could you bring your work across?
 - Presentation skills, material

Milestones & Deliverables

A horizontal timeline is shown with a green bar. The months 'October', 'November', 'Dezember', and 'January' are labeled below the bar. A red triangle points to the start of the green bar in October. A callout box with a gradient background and a blue border points to this triangle. The text inside the box reads 'NOW: Kick off'.

NOW: Kick off

October

November

Dezember

January

Milestones & Deliverables: Research

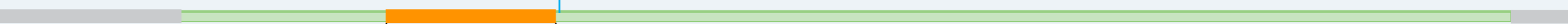
31/10 Research Presentation

October

November

Dezember

January



Milestones & Deliverables: Concept



Milestones & Deliverables: Low-Fi Prototyping

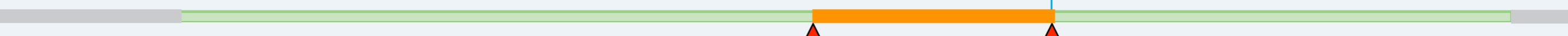
12/12 Low-Fi Prototype & User Testing

October

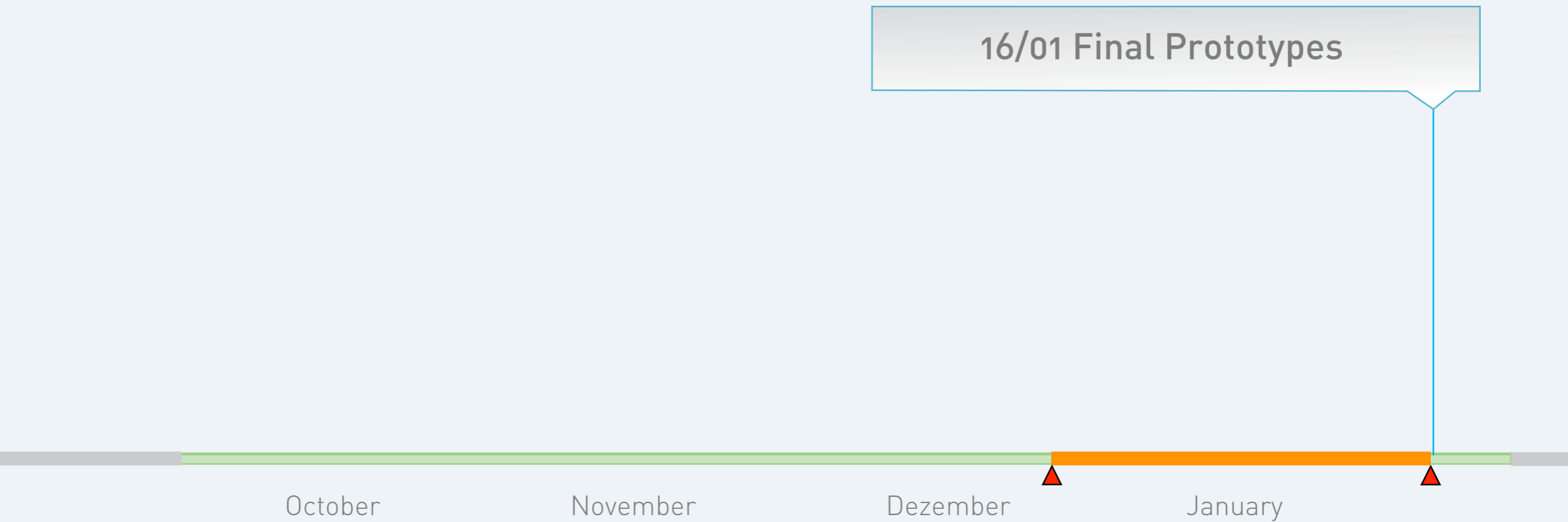
November

Dezember

January



Milestones & Deliverables: High-Fi Prototype



Milestones & Deliverables: Final Presentation

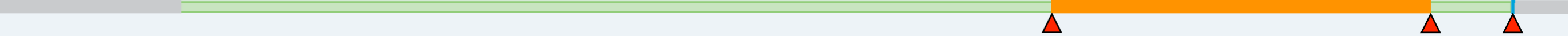
30/01 Final Presentation

October

November

Dezember

January



Until 24.10.16

Review Research: Problem Framing & Use Case

- Desk Research on interaction concepts & existing applications (mobility context and beyond)
- Analysis of current and previous in-car interactions (e.g. self-testing,...)
 - > e.g. visit “Deutsches Museum or BMW Museum”
 - > do self experience with a car sharing service (e.g. DriveNow)
- 5 Slides with images + one video self exploration

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.