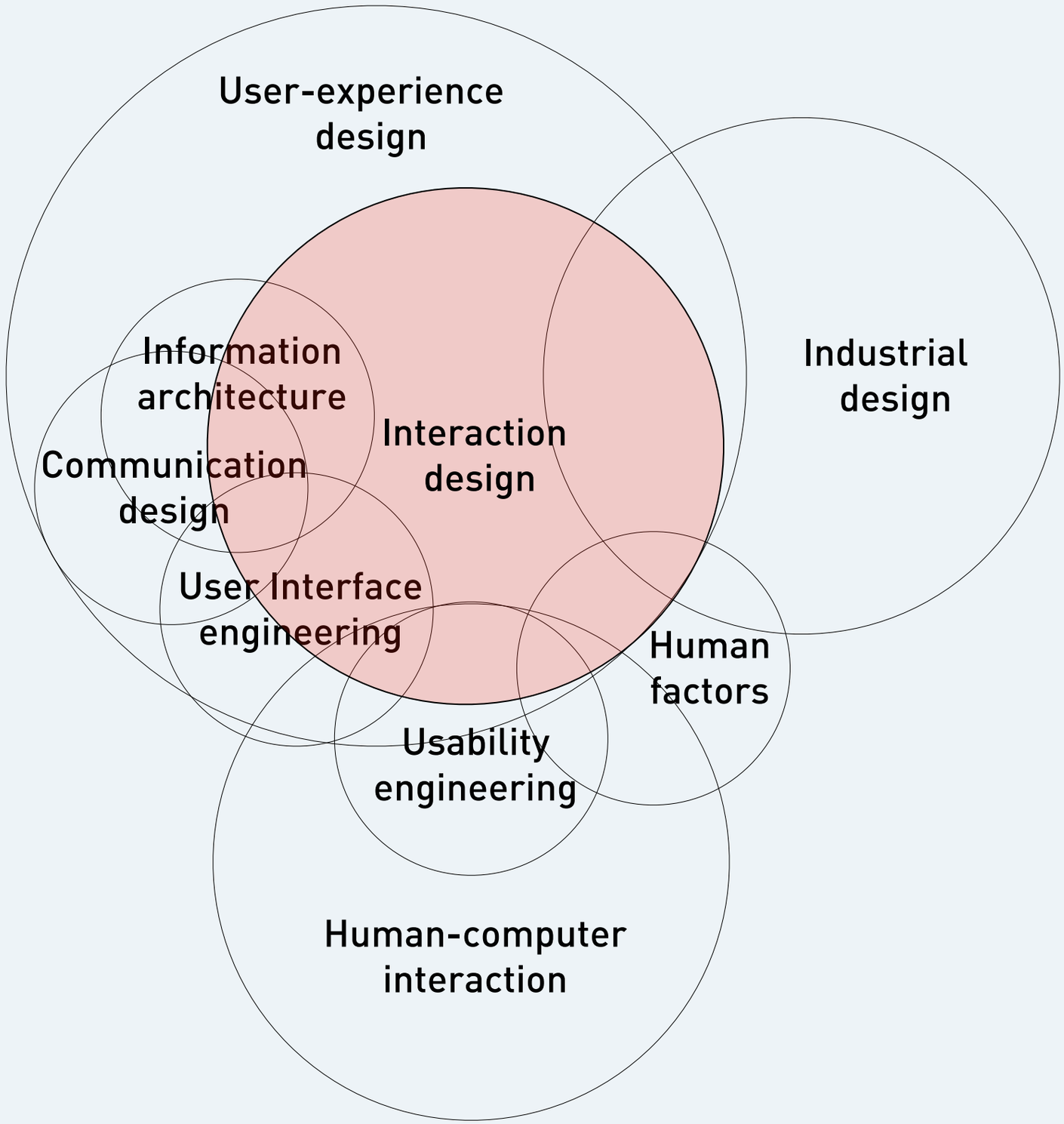
Welcome!

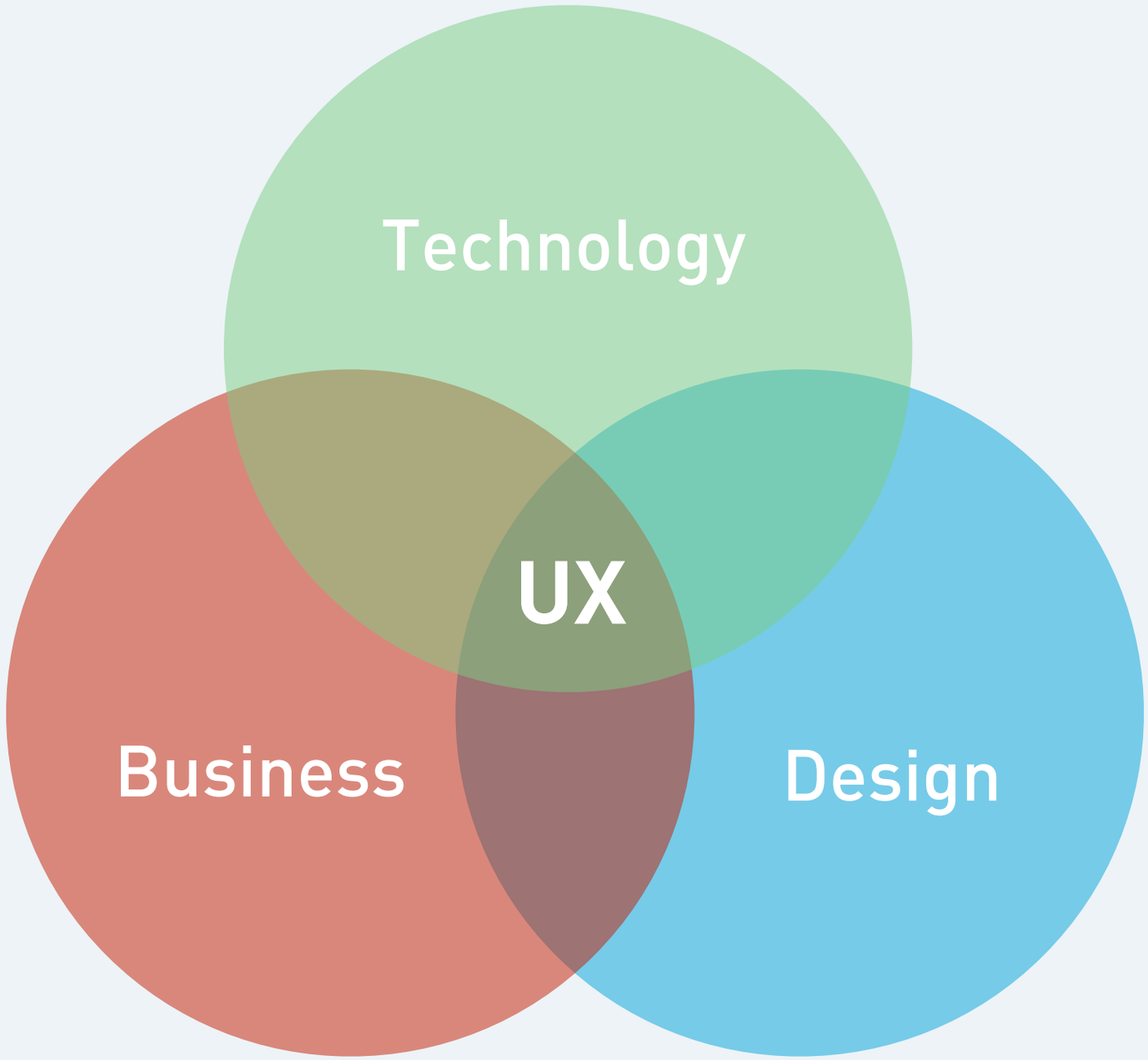
Designworkshop II

What are we doing here ?


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

source: [11]

User Experience Design



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http://semanticstudios.com

User Experience Design

©Peter Morville
http://semanticstudios.com

Getting the right Design and the Design right...

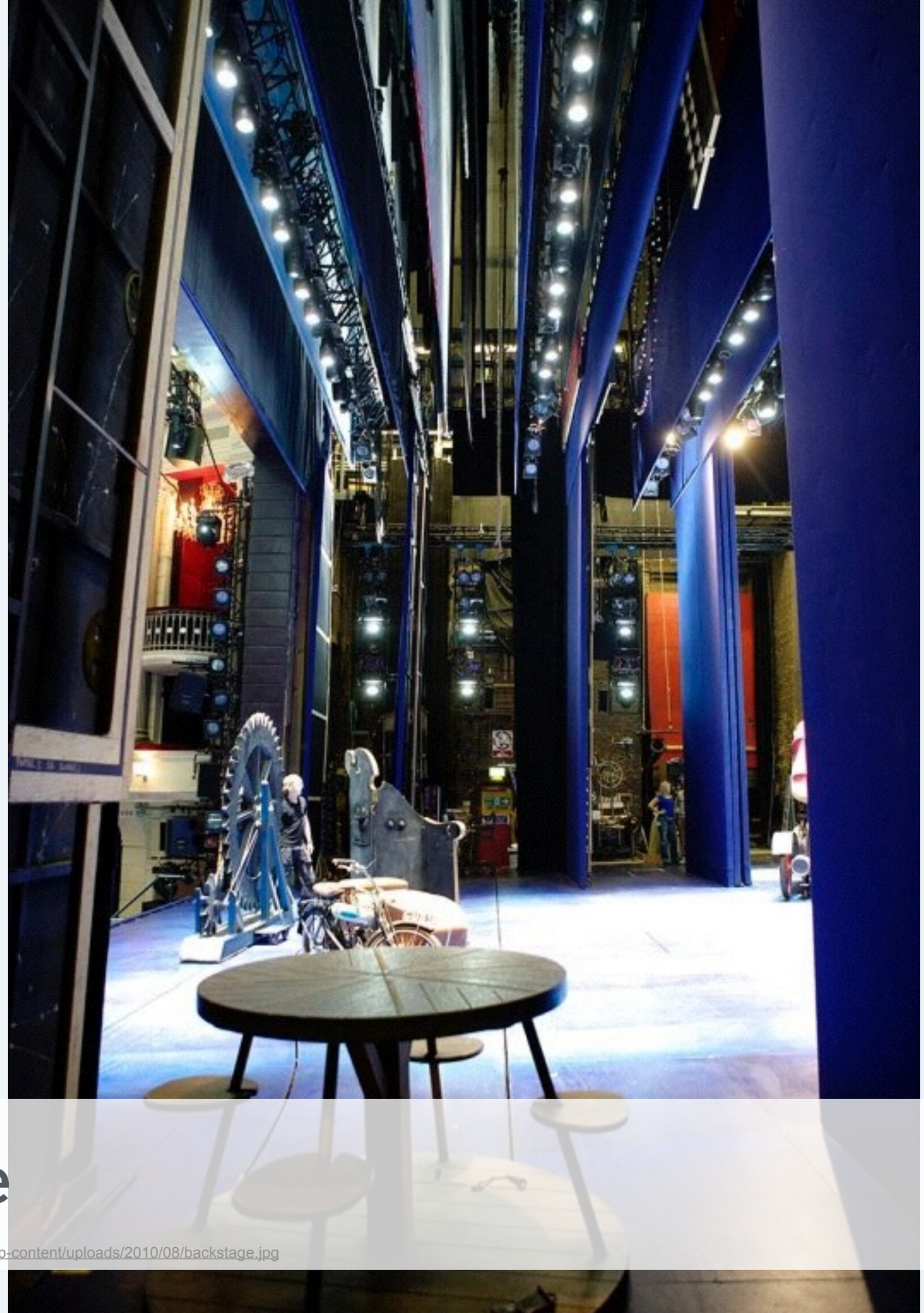
Bill Buxton - Sketching User Experiences

source: [1]

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

User Interface

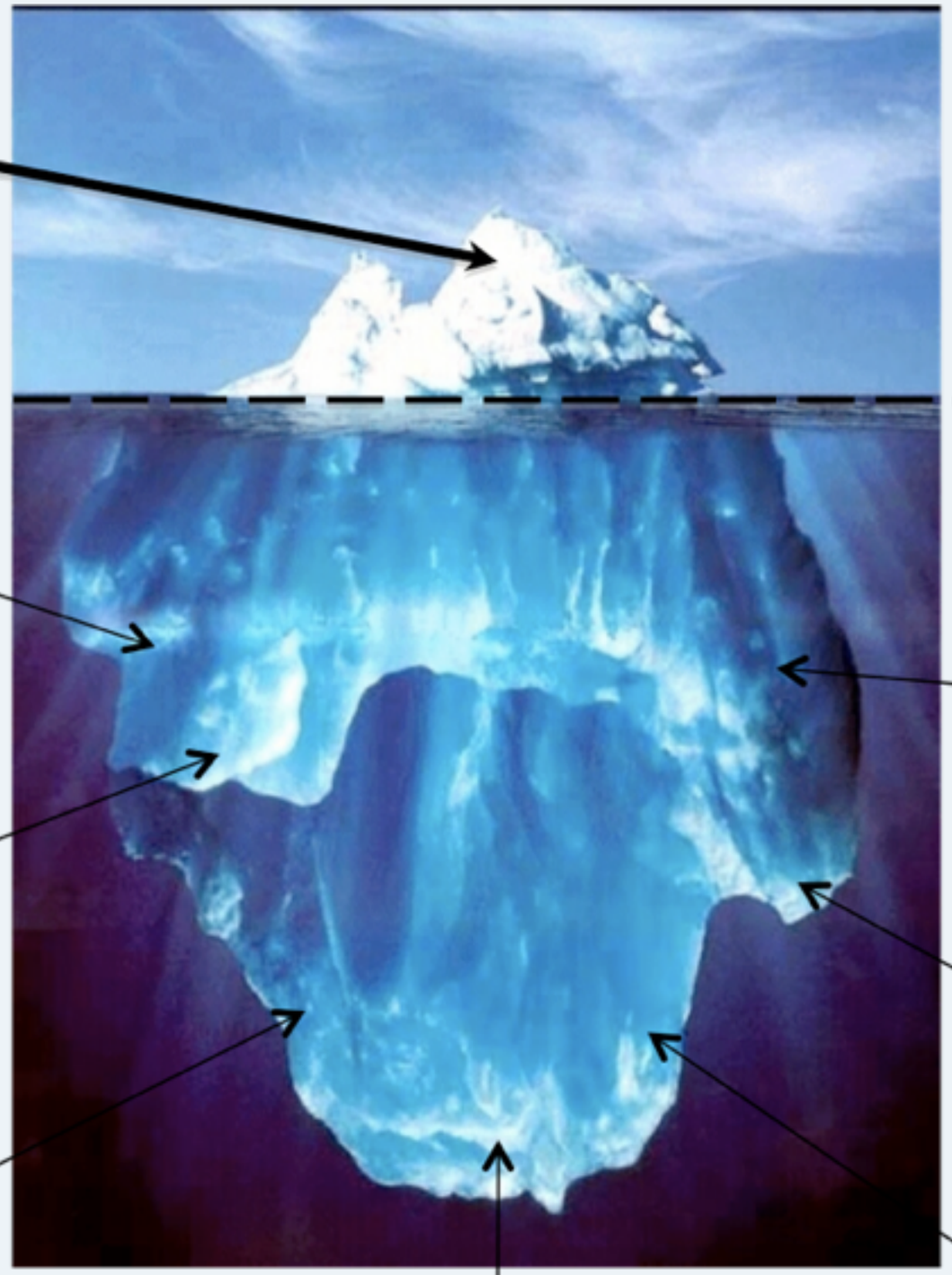
Visible

Behind the Scenes

Capturing

Connecting

Combining



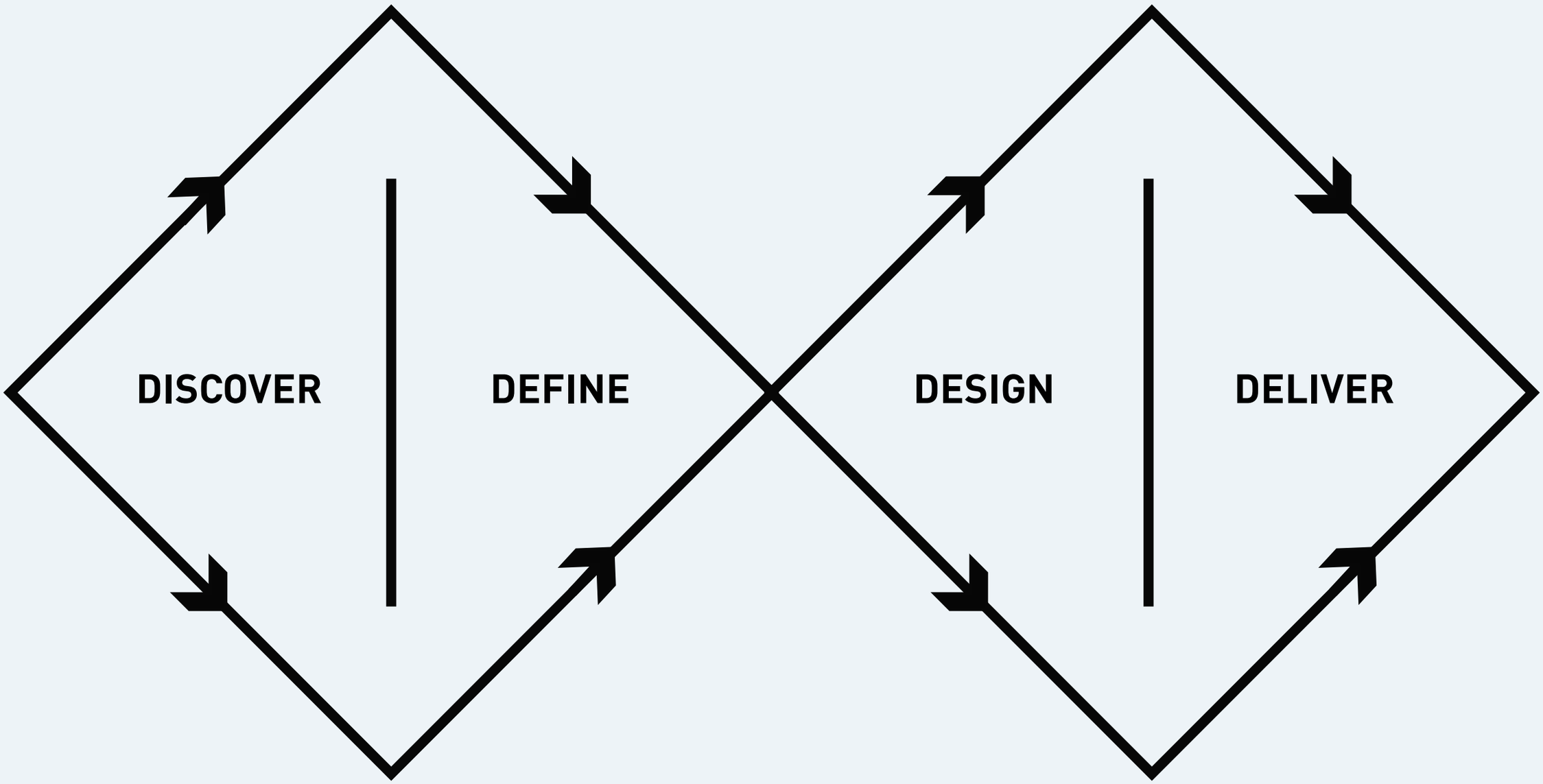
Contextualizing

Transferring

Coordinating

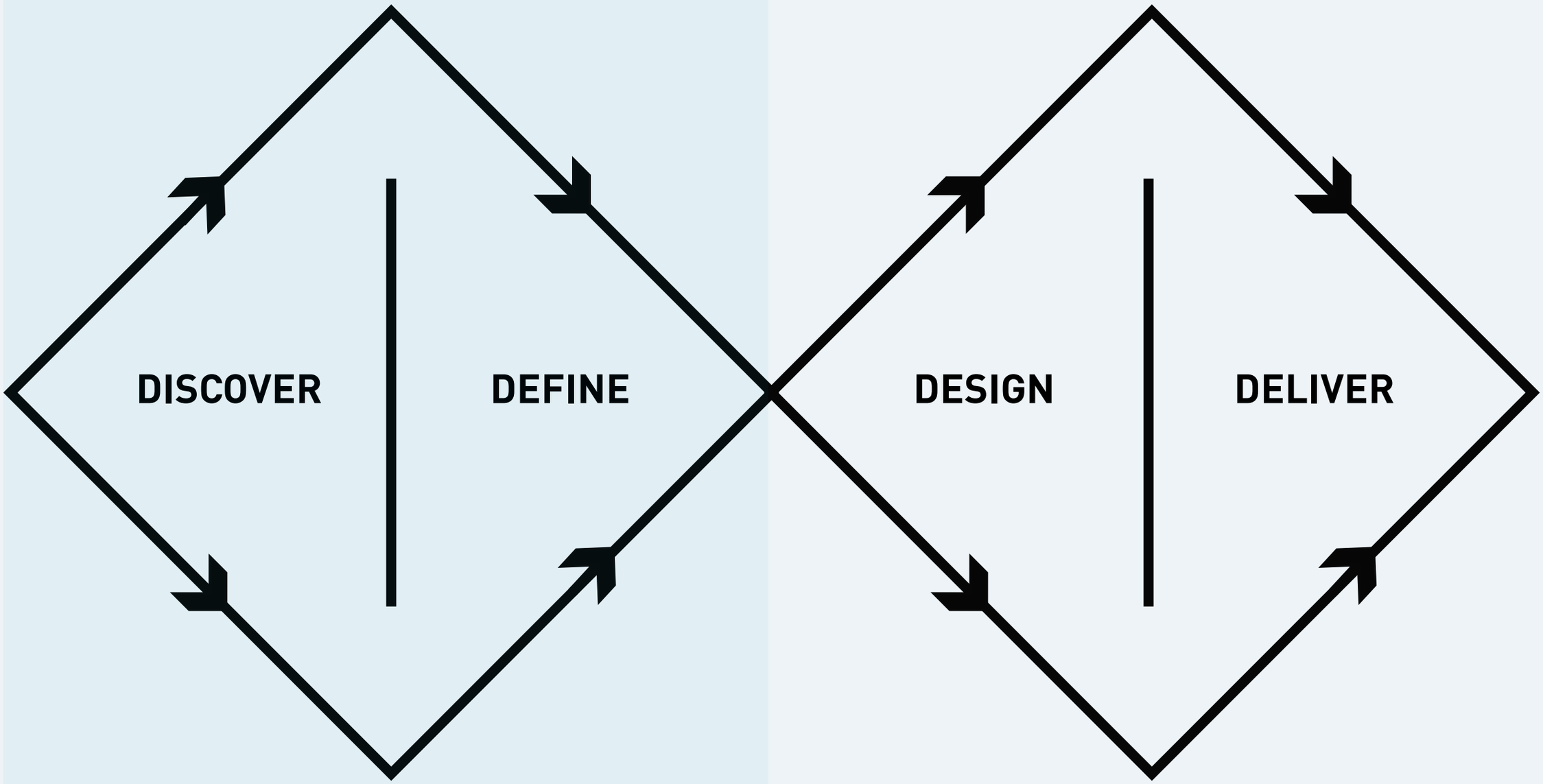
Storing

Double Diamond



source: [8]

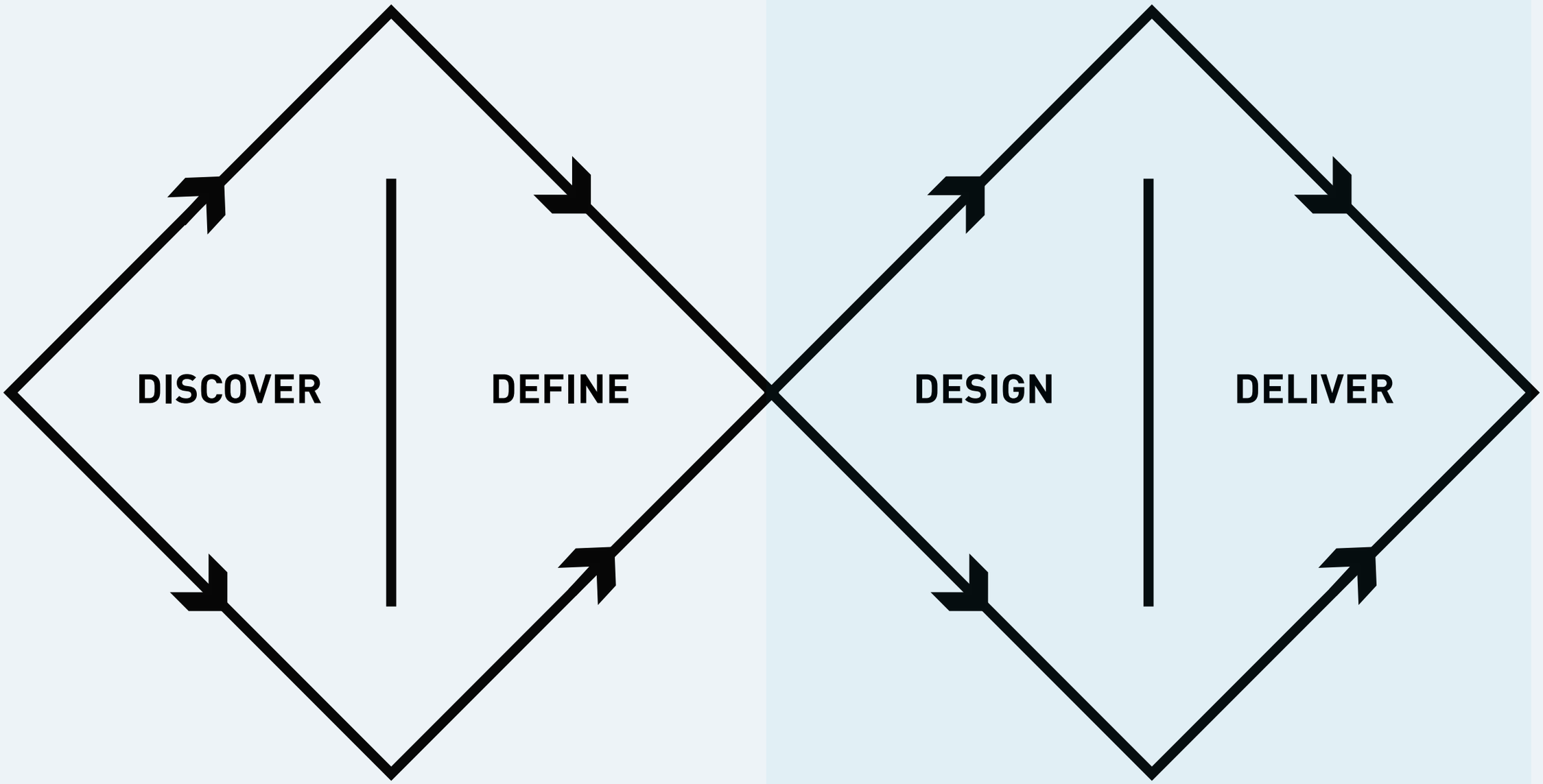
Double Diamond



Why? and How?

source: [8]

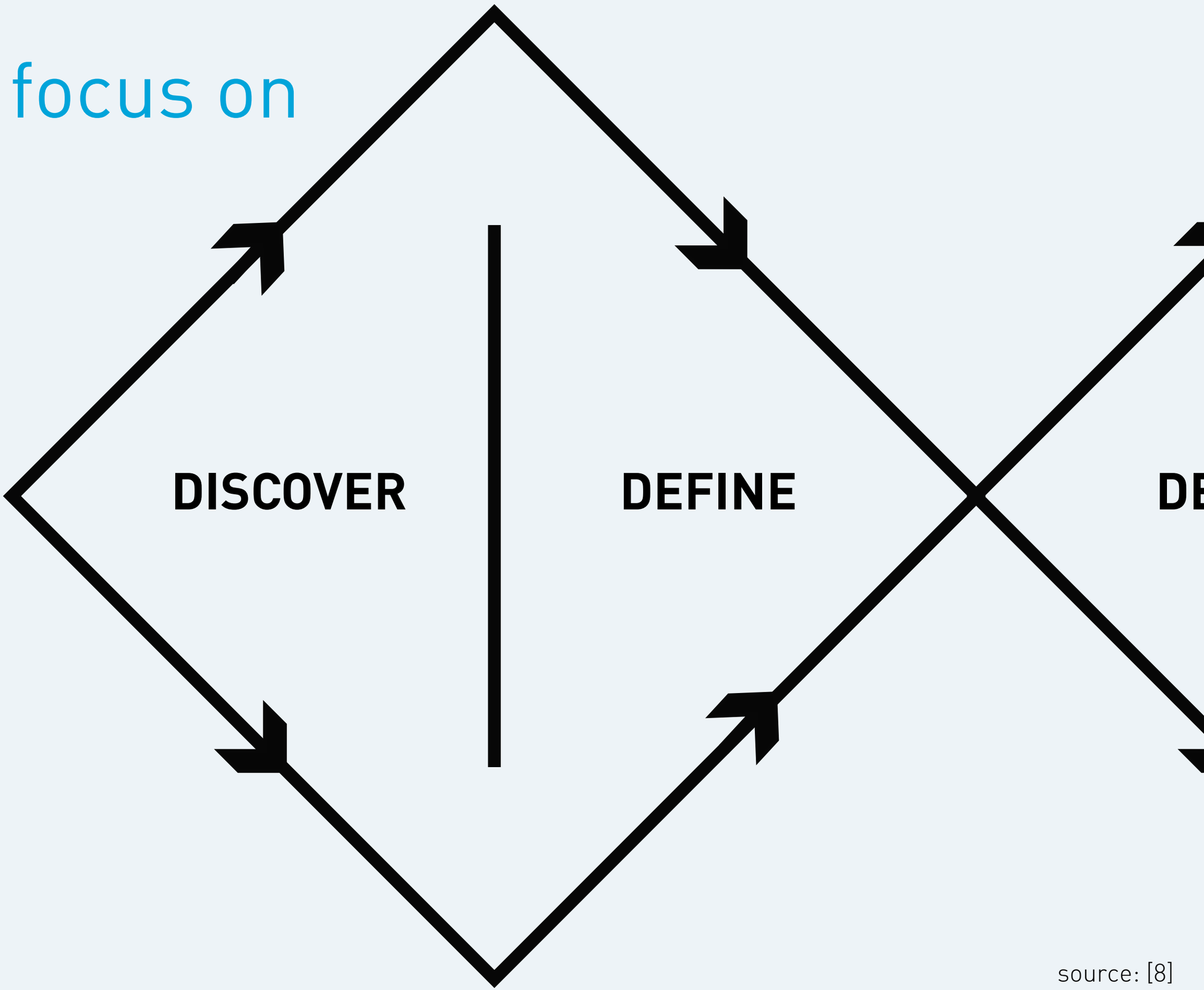
Double Diamond



What?

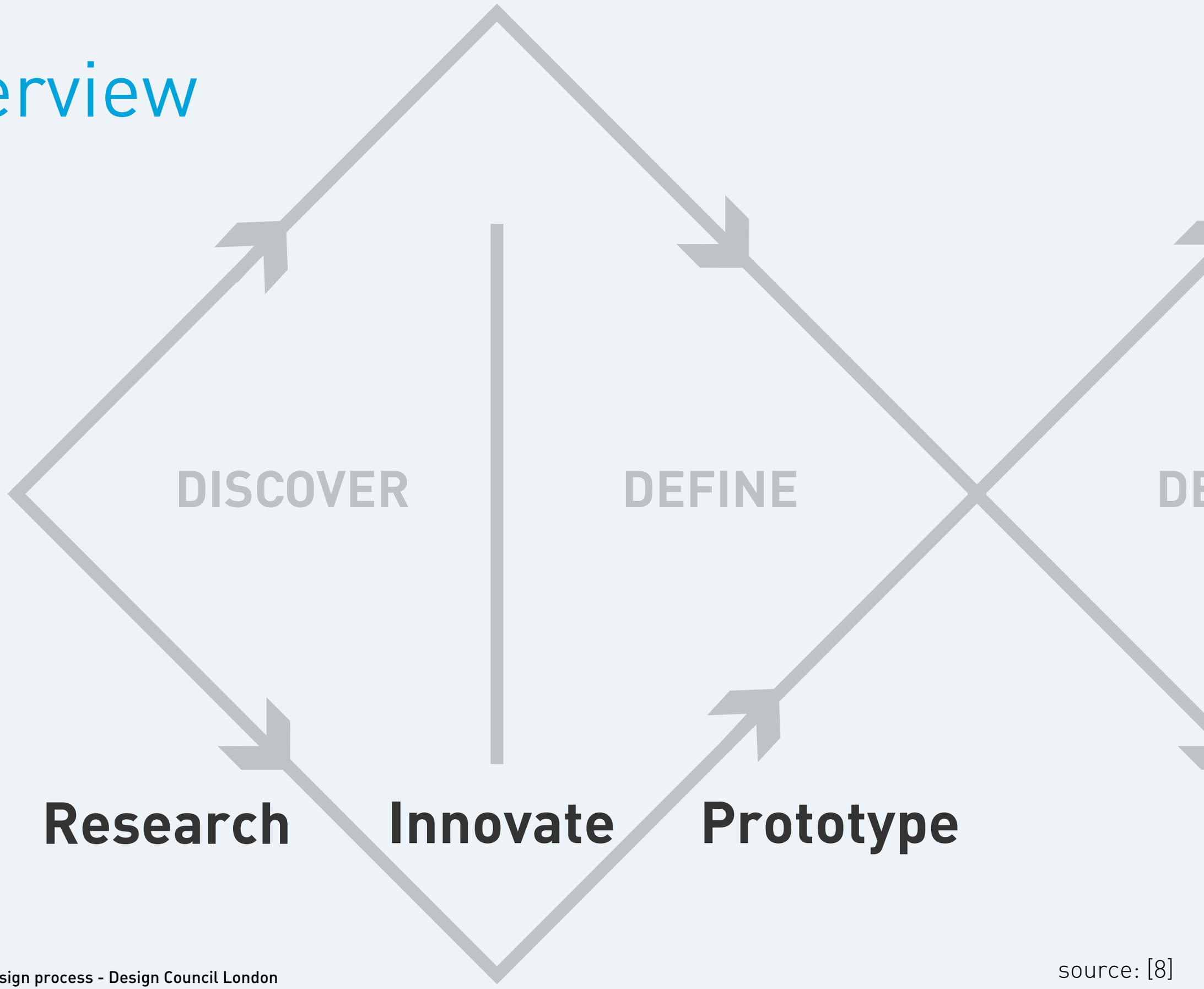
source: [8]

We focus on



source: [8]

Overview



© A study of the design process - Design Council London

source: [8]

Overview

Get to know your problem/ subject

Gather insights about the user and their life

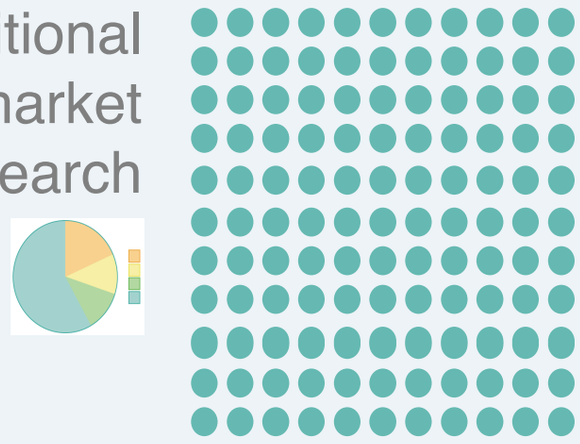
Collect artefacts & impressions

Record tasks

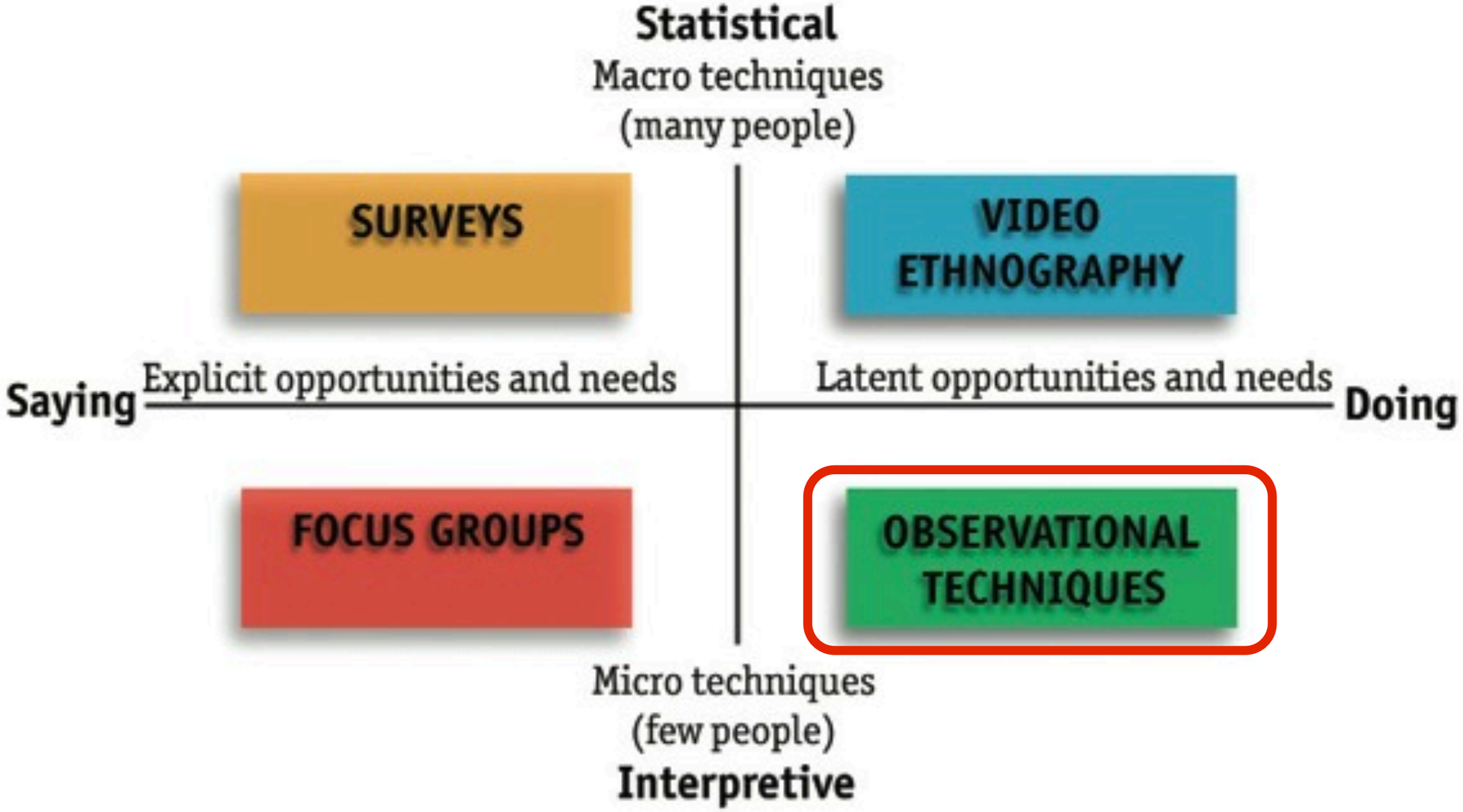
In design research we are driven by a need for a deeper understanding

Susan Dray - Dray & Associates, Inc., USA

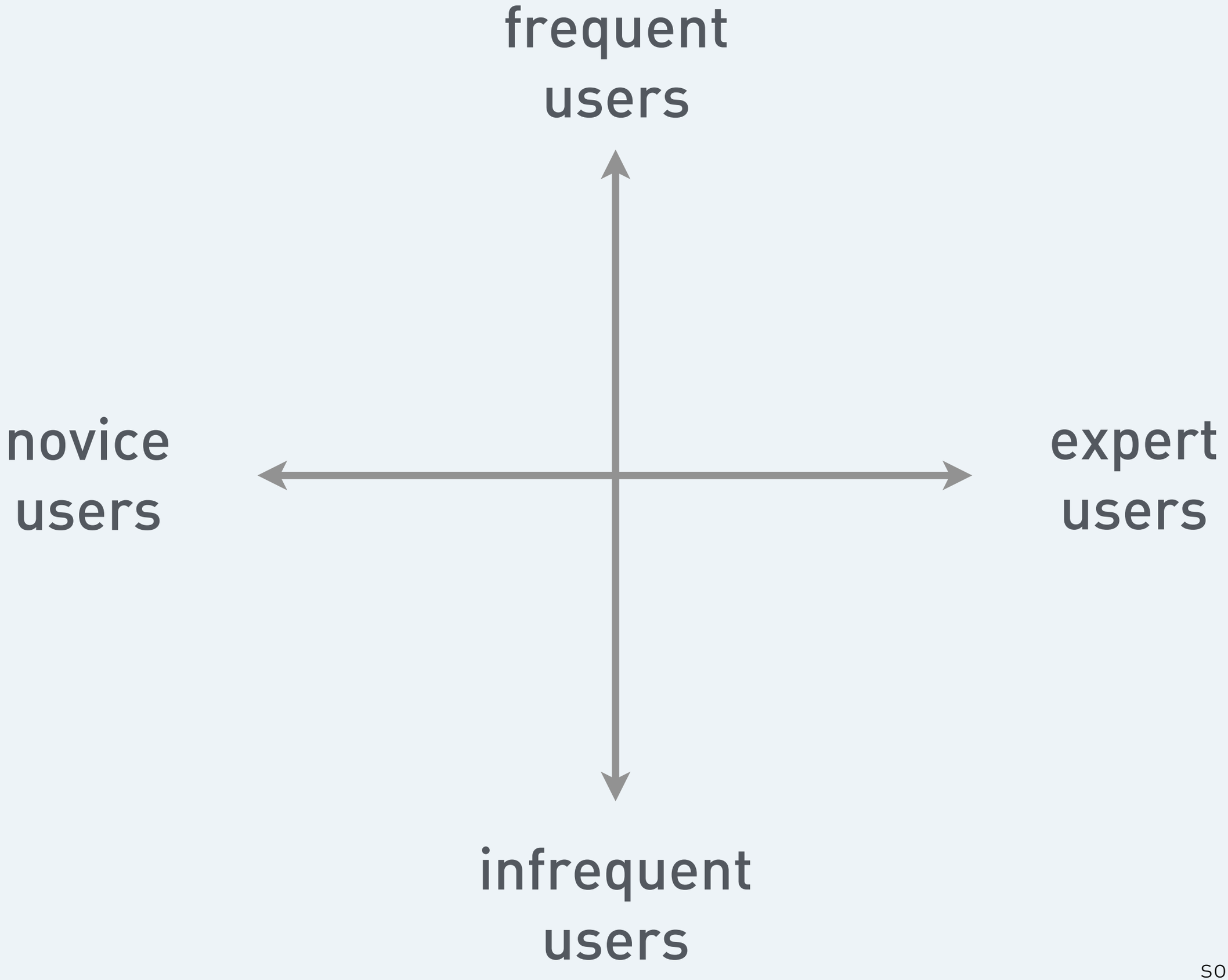
source: [3]

	subjects	truth	inspiration
traditional market research			(?)
empathic research			

source: [6,9]


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: [9]

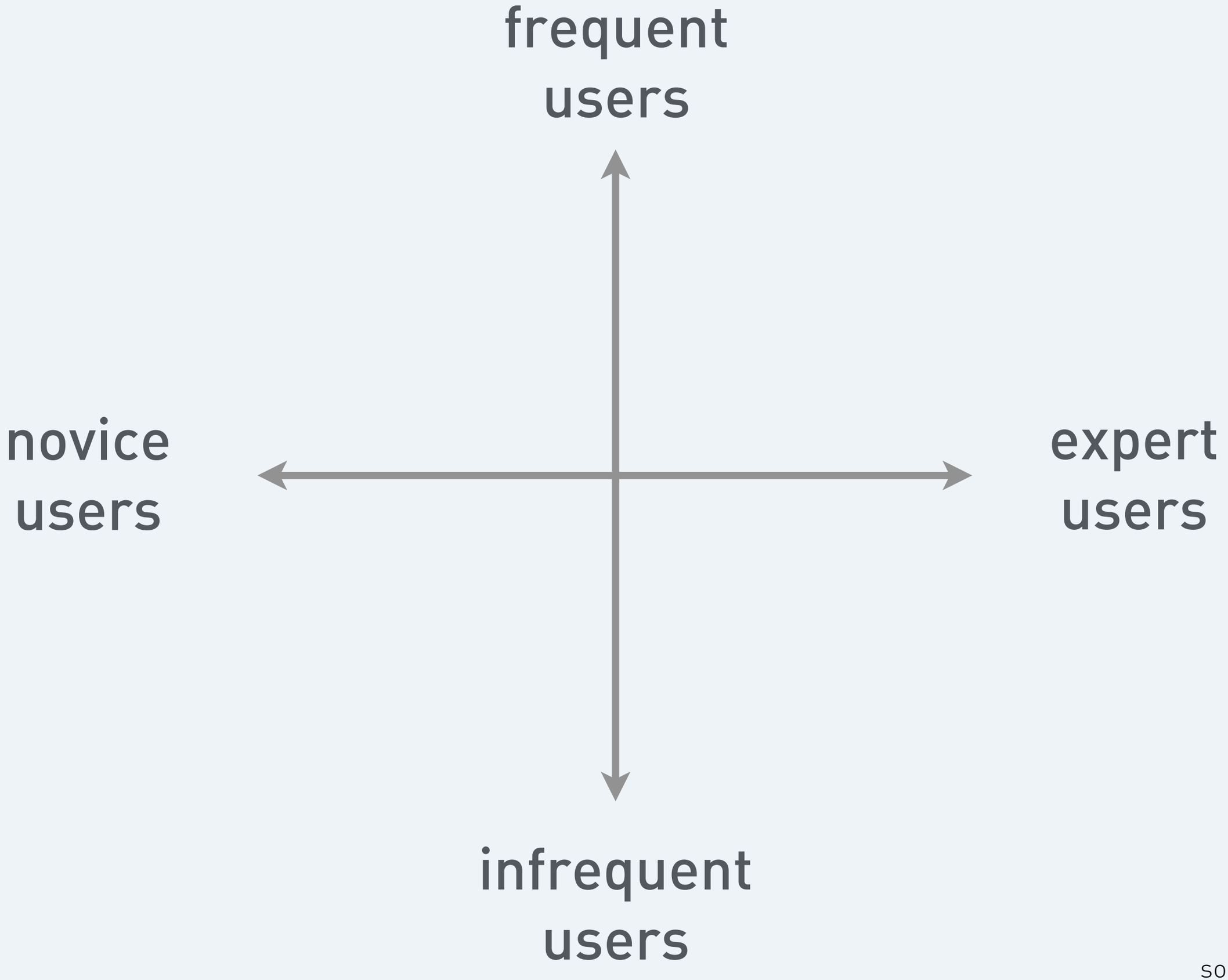

frequent
users
novice
users
expert
users
infrequent
users

source: [2,4]

BMW i8 Cockpit

BMW i8 Cockpit

BMW i8 Cockpit


frequent
users
novice
users
expert
users
infrequent
users

source: [2,4]

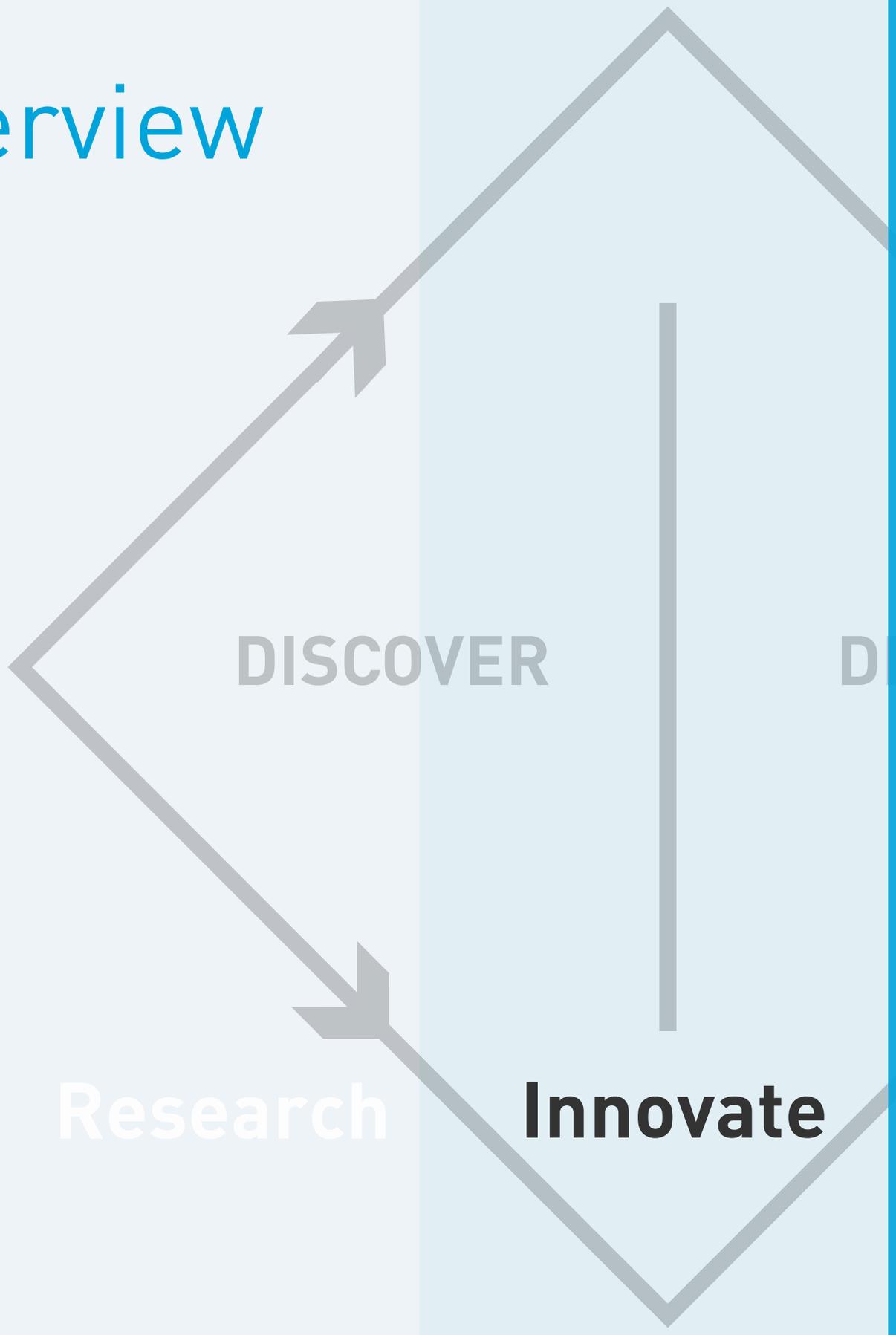
BMW DTM Racing Cockpit

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

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

source: [7]

Overview



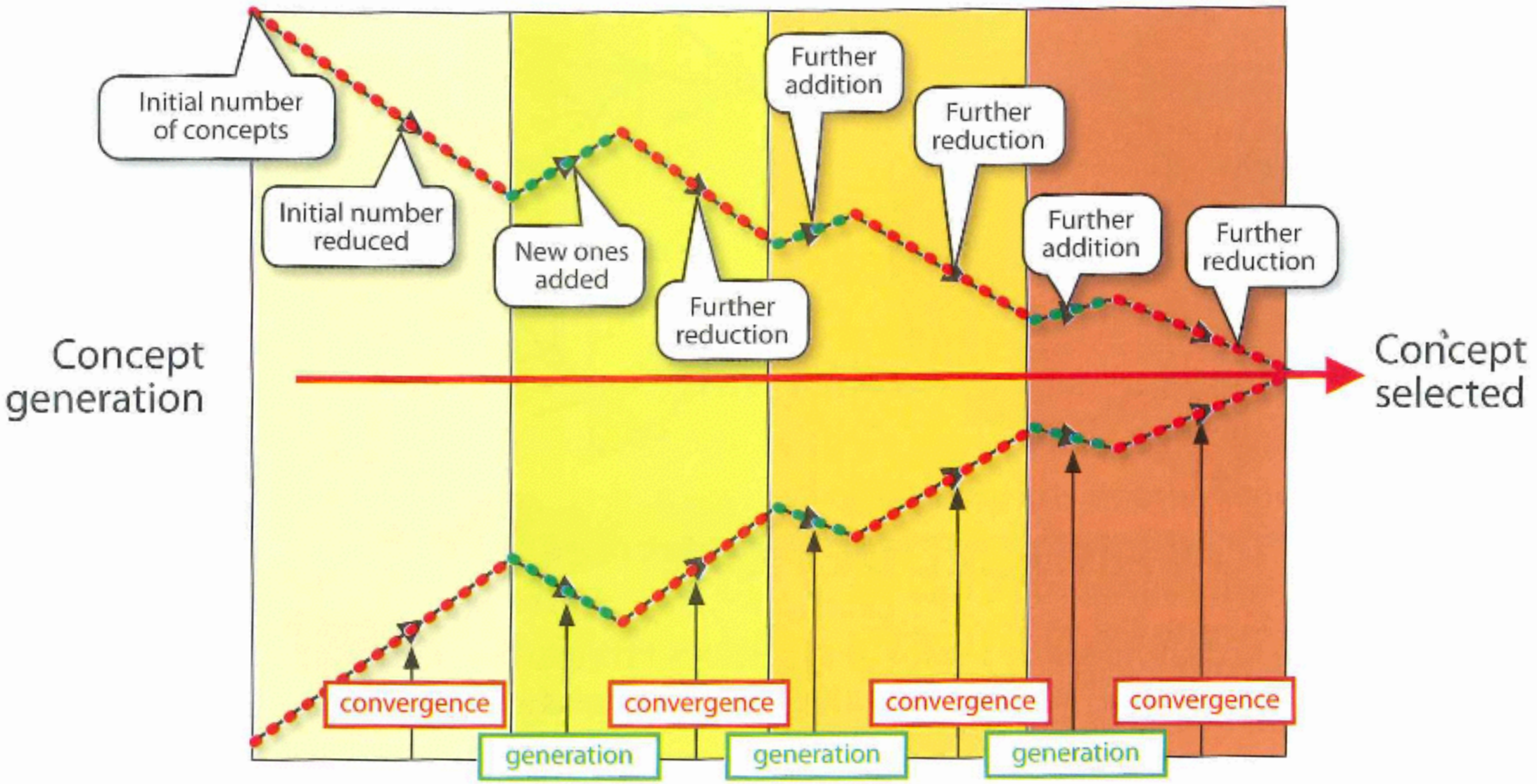
Make sense of your data

Identify important facets

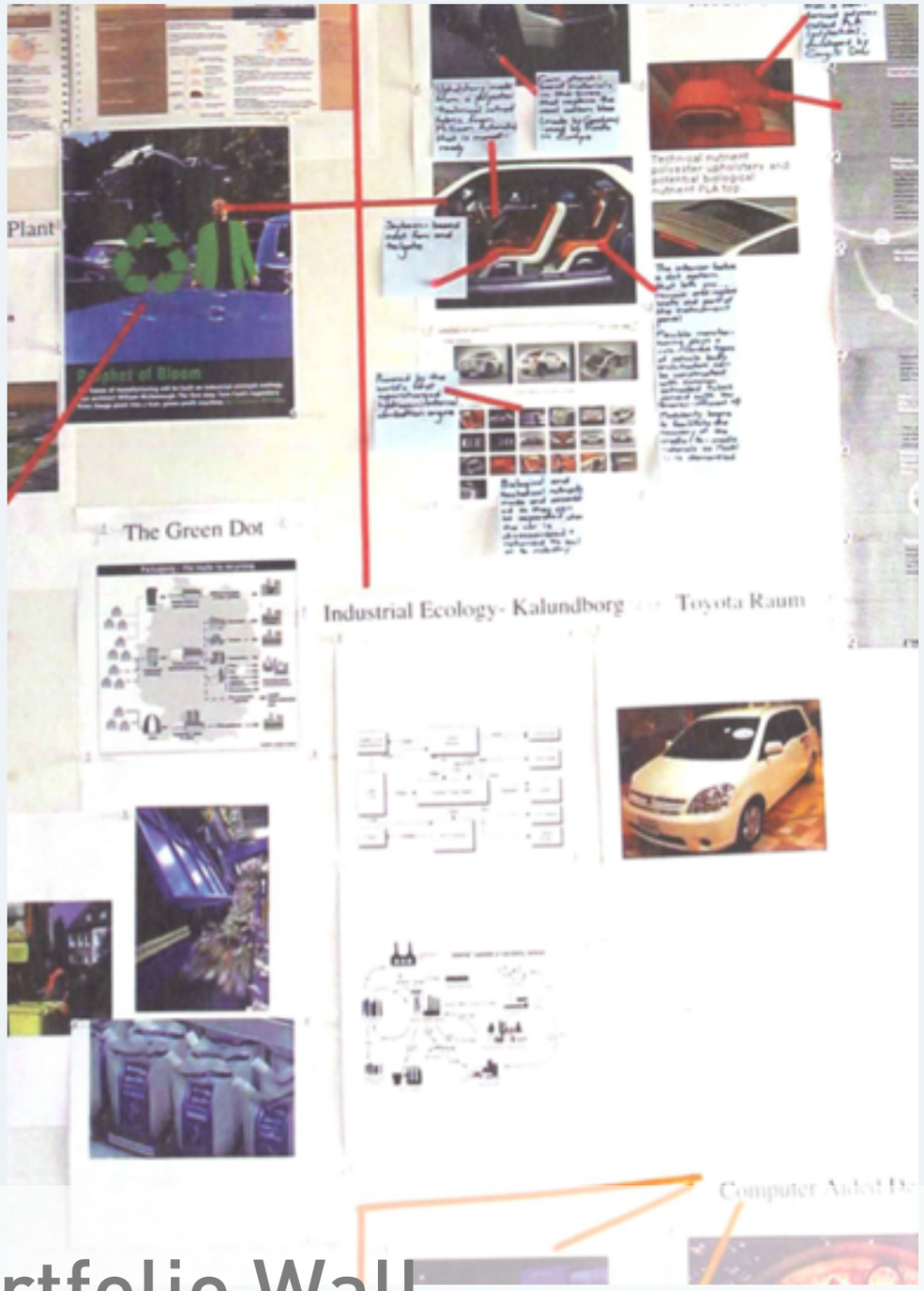
Keep all players in mind

Collect and prioritise ideas

Develop & validate solutions


Initial number of concepts
Initial number reduced
New ones added
Further reduction
Further addition
Further reduction
Further addition
Further reduction
Concept generation
Concept selected
convergence
convergence
convergence
convergence
generation
generation
generation
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

source: [1]



Portfolio Wall

source
[1]

Competitive Analysis/Current Interface

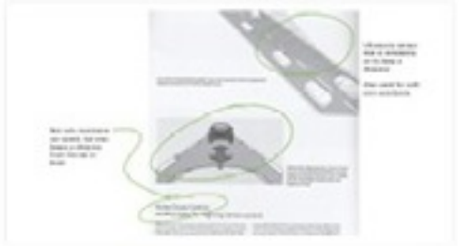
Four different adjustments
just to make AC right the way you like it.

Too many buttons
Buttons could be siplified 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.



Competitive Analysis

What is working?
- Screen does not need to be at the same place as control.
- Tactile feel of button/Button grouping
- Buttons on steering wheel
- Use of color, materials, textures, and lights can improve information heirarchy.

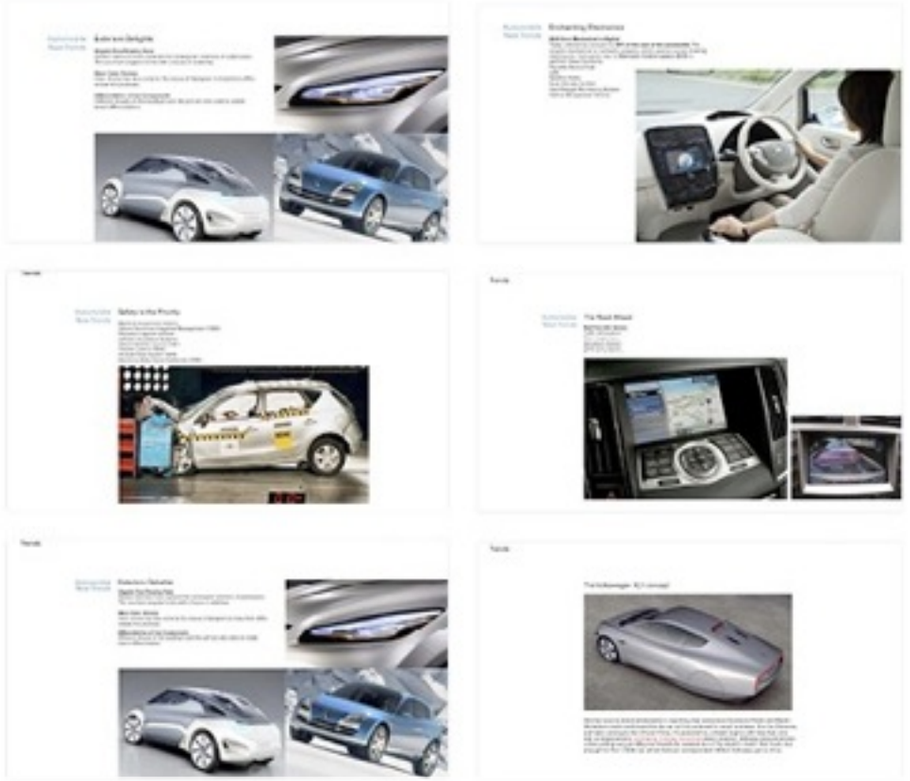
What is NOT working?
- Approprlate position for frequently used buttons is important.
- Too many buttons are intimidating.
- Buttons are scattered and not intuitive position.
- Touchscreen requires too much attention.
- Buttons rely on small icons/text which is hard to read.

http://www.jeongyounchoi.com/27891/291635/home/ux-ui-design-clover-car-interface-design

Competitive Analysis / Car Trends

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 prevalaent.



Competitive Analysis

http://www.jeongyounchoi.com/27891/291635/home/ux-ui-design-clover-car-interface-design

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

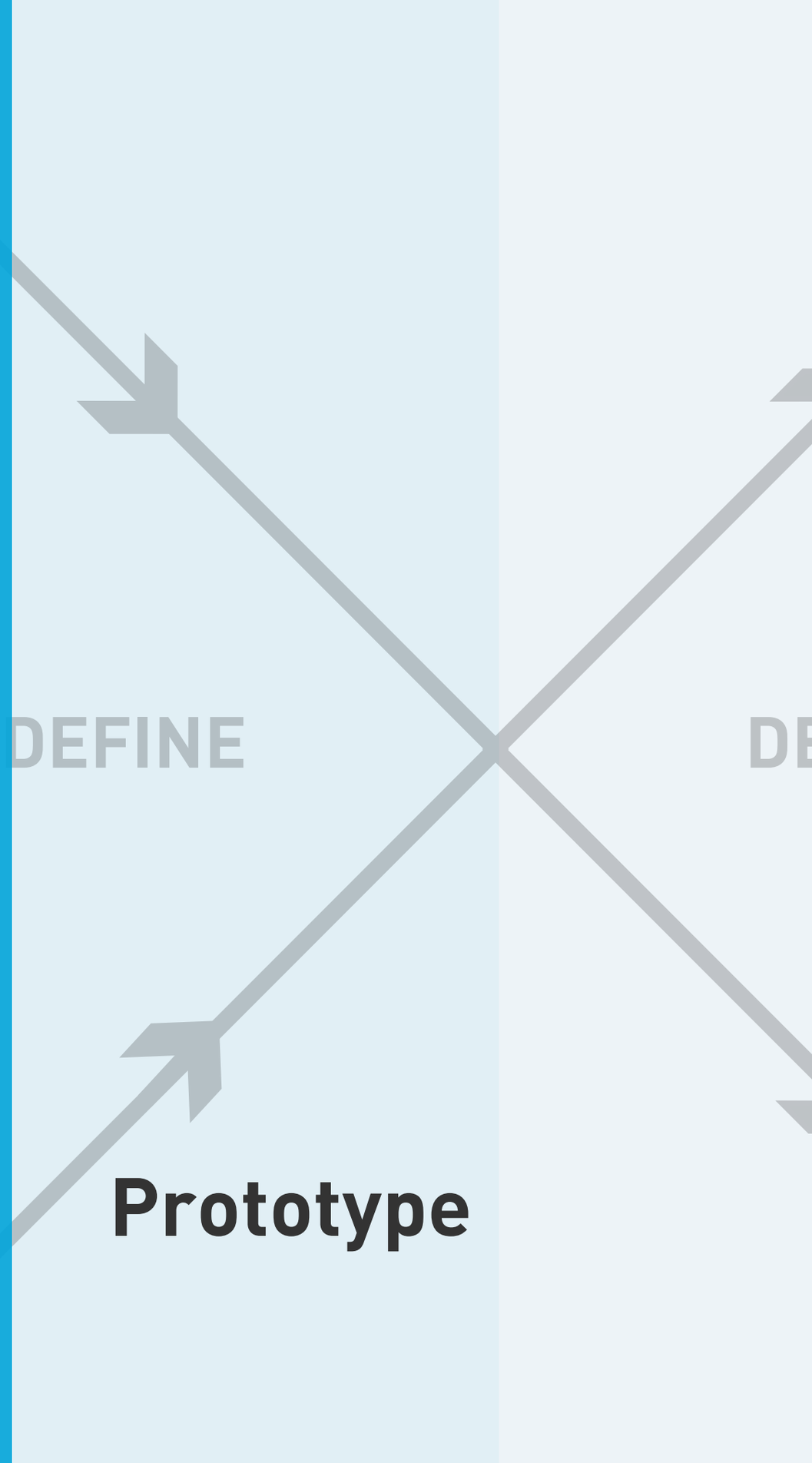
Techblogs:
engadget.com
ted.com

Zugriff auf Zeitschriften:
http://docweb.lrz-muenchen.de/

Overview

Tell a story

Make it tangible



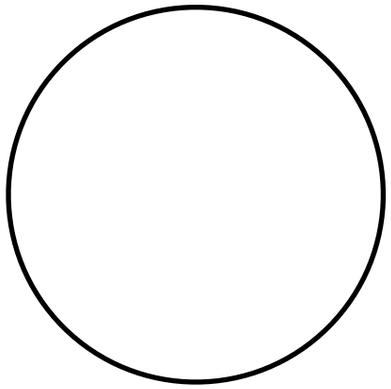
For the Designer:	Exploration Visualisation Feasibly Inspiration Collaboration
For the End User:	Effectiveness / Usefulness A change of viewpoint Usability Desirability
For the Producer:	Conviction Specification Benchmarking

source: [5]

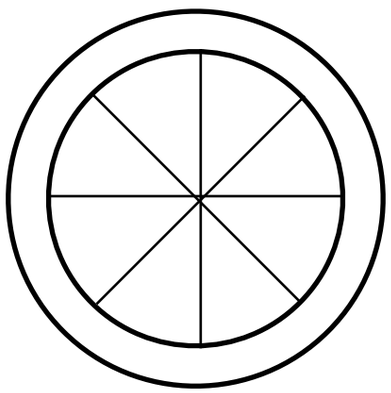
It’s really hard to design products by focus groups. A lot of times, people don’t know what they want until you show it to them.

Steve Jobs

Fidelity v. Resolution



low resolution
low fidelity



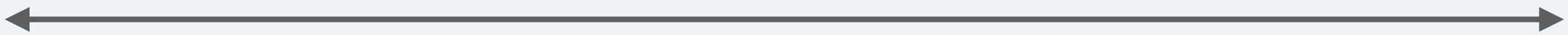
high resolution
low fidelity

high resolution
high fidelity

source: [5]

Low Fidelity

High Fidelity

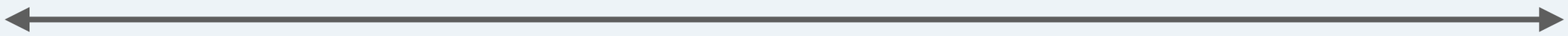


Open Discussion	Sharp Opinions
Prompting Required	Self Explanatory
Quick and Dirty	Deliberate and Refined
Early Validation	Concrete Ideas

source: [5]

Low Resolution

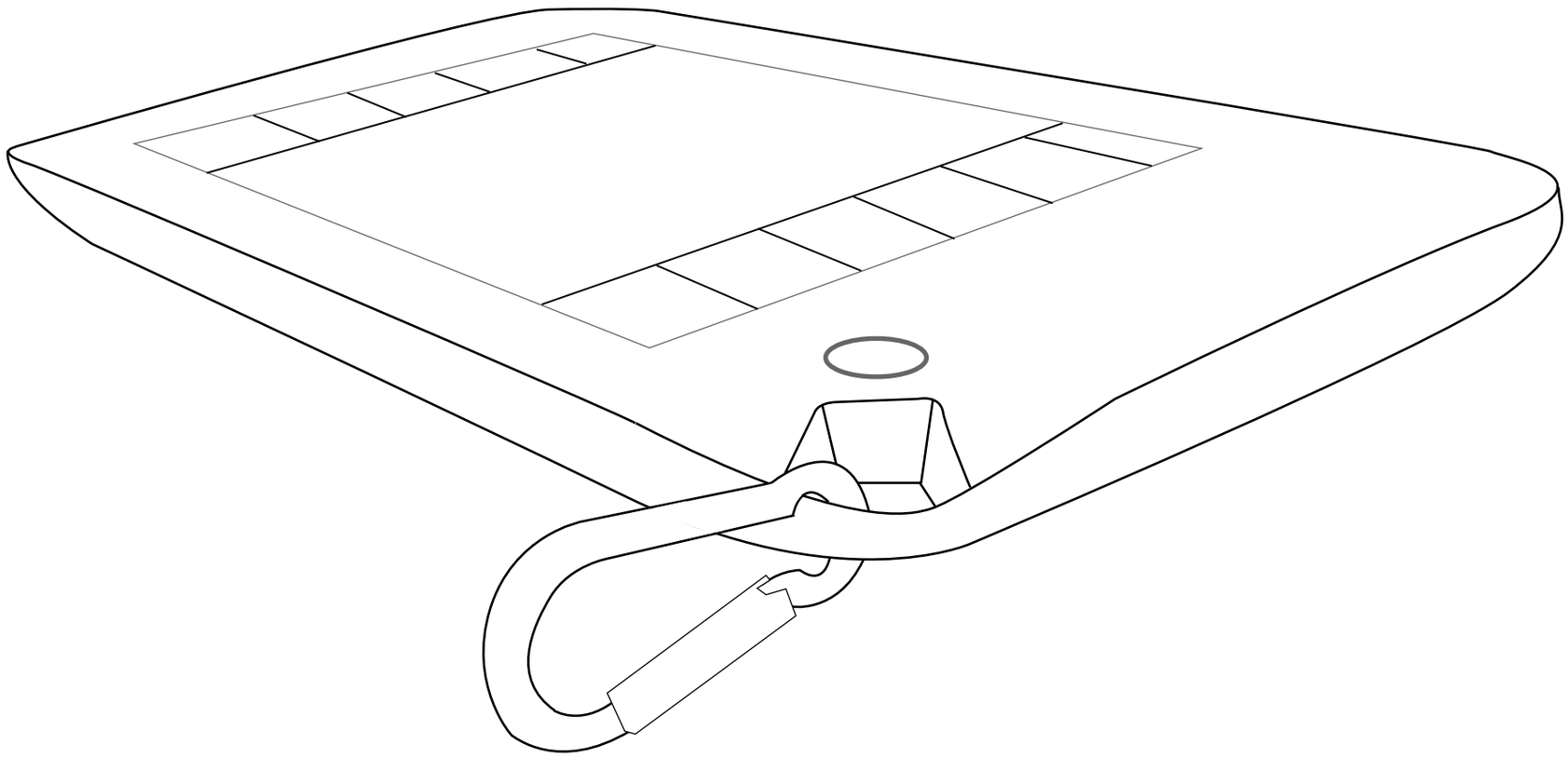
High Resolution



Less Details	**More Details**
Focus on core interactions	**Focus on the whole**
Quick and Dirty	Deliberate and Refined
Early Validation	Concrete Ideas

source: [5]

1st Iteration
low-res/low-fi

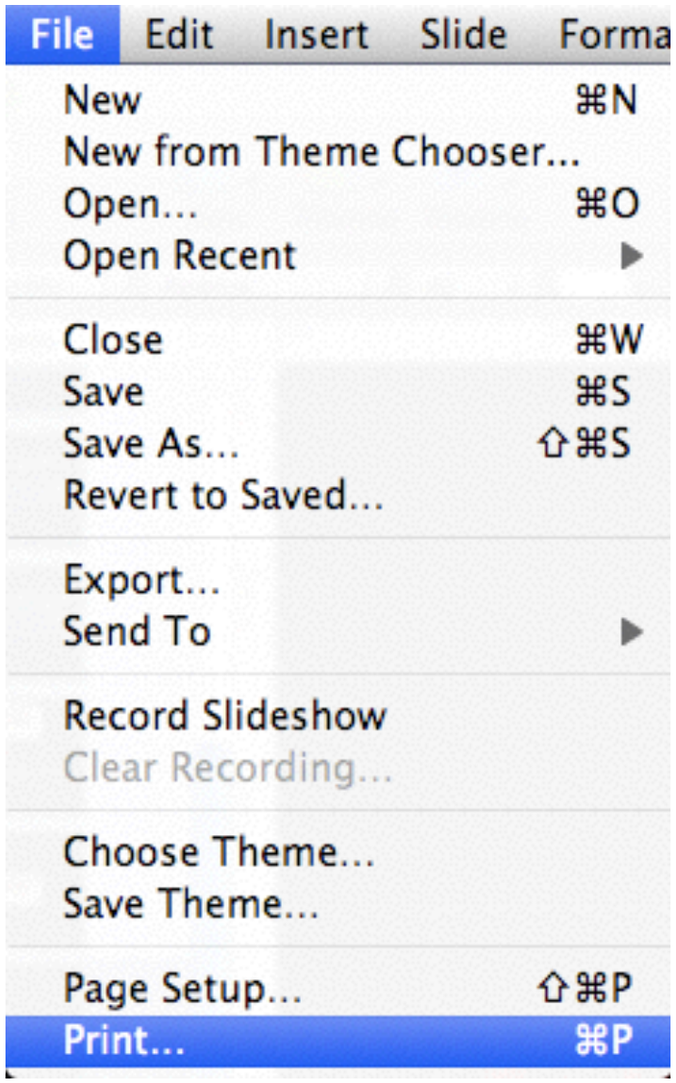


4th Iteration
high-res/high-fi

80/20 rule

http://www.swissknifeshop.com/media/catalog/product/cache/1/image/5e06319eda06f020e43594a9c230972d/v/m/vm_53831--91_sol_front_ax1000.jpg

source: [7]



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.

source: [7]

OVERVIEW

The Course

Workshop Theme:

Shape changing surfaces – merging digital and physical information

Now: Desk & Field Research

April

May

June

July

27/04 Data & Concept Draft

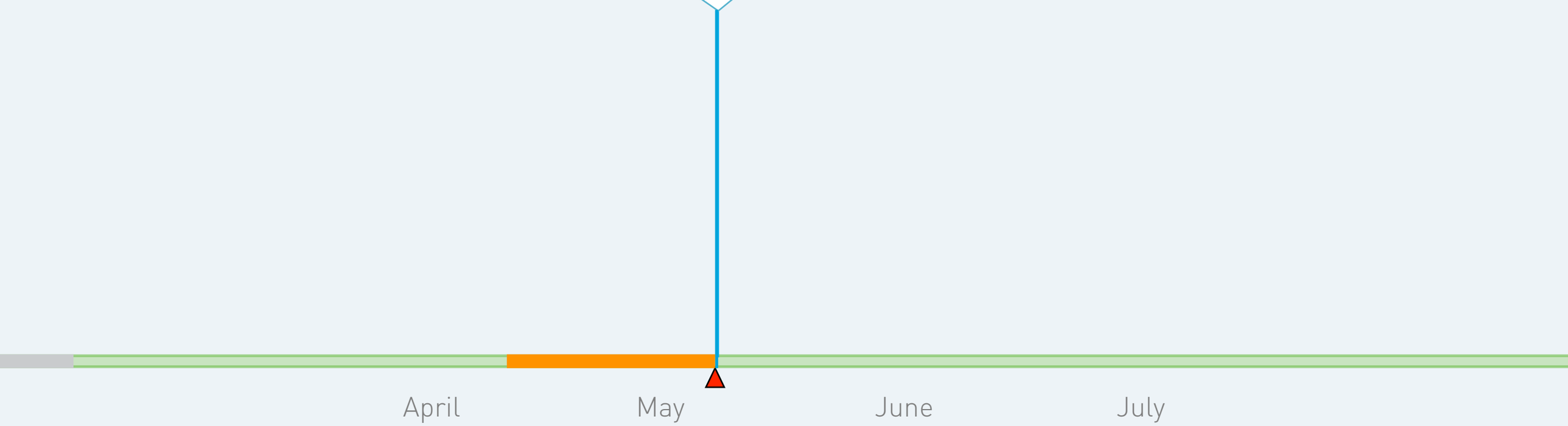
April

May

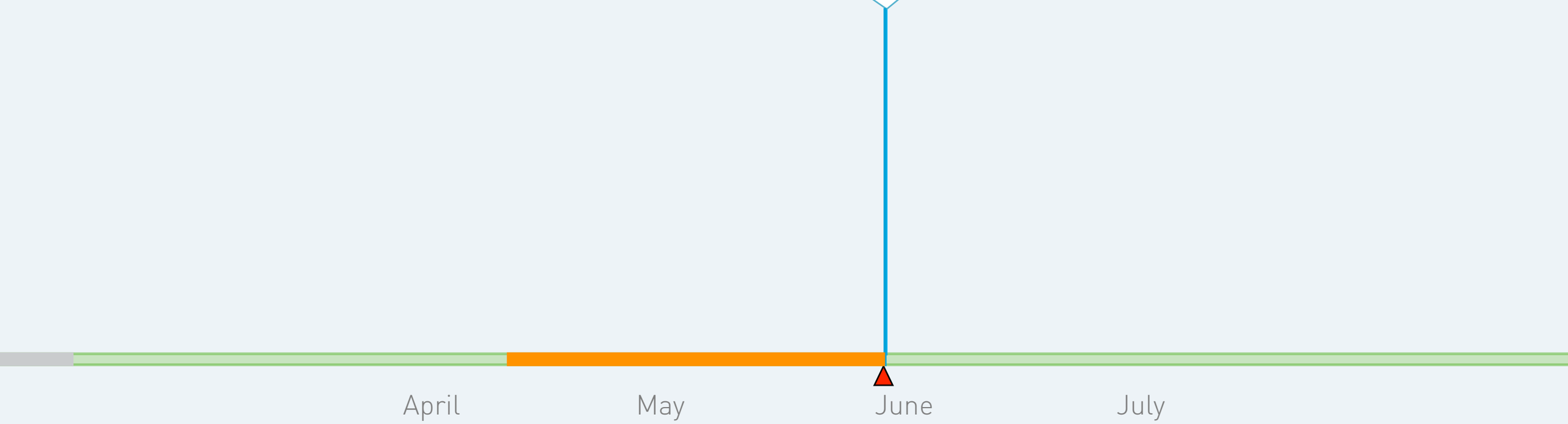
June

July

04/05 Design Concepts



01/06 Initial Prototypes



29/06 Final Prototypes

April

May

June

July

13/07 Final Presentation

April

May

June

July

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.

source: [3]