Design thinking

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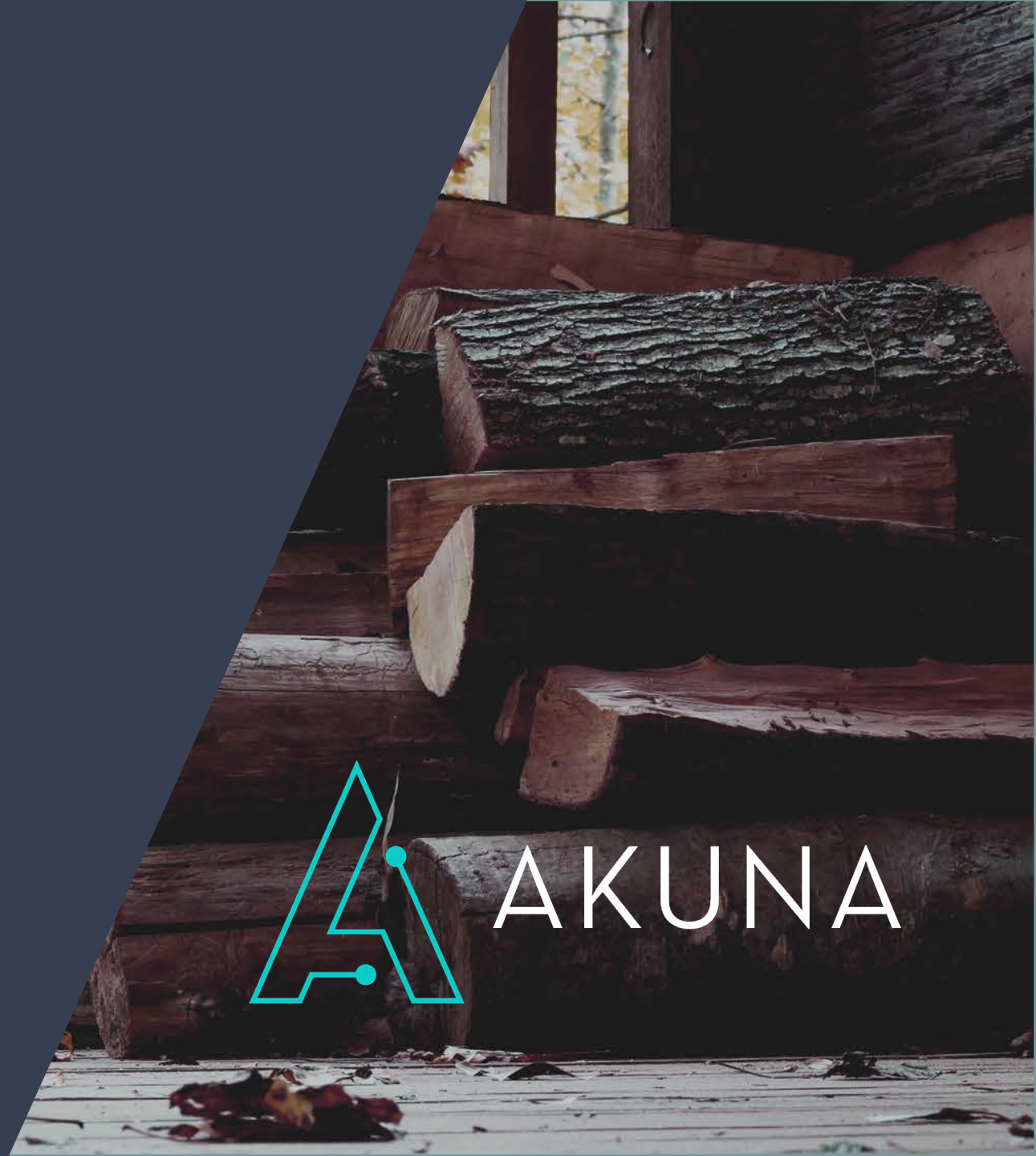

What is DESIGN?

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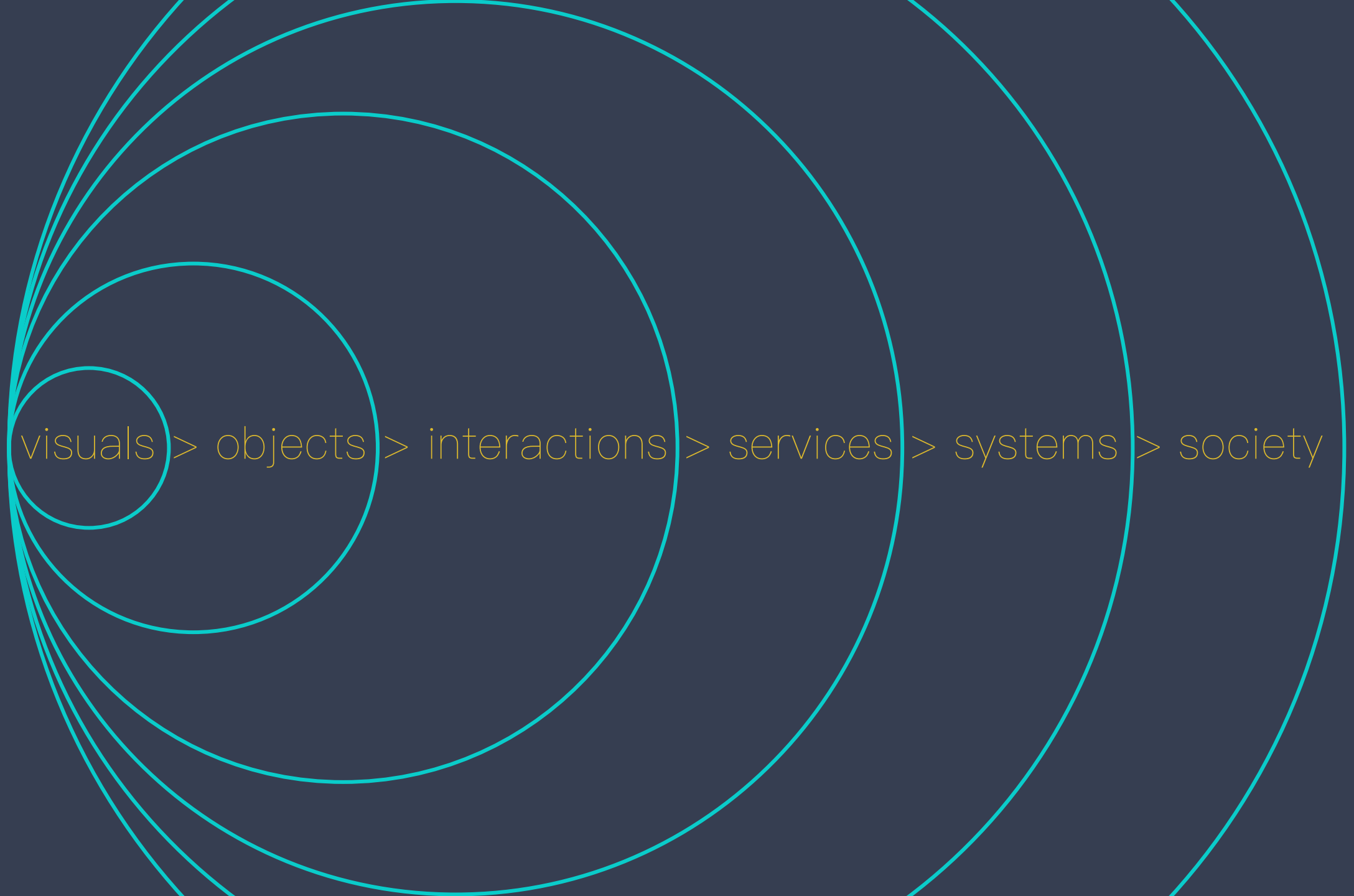
xerox

DESIGNER

Society
Business
Systems
Service
UX
Interaction
Industrial
Fashion
Graphic
Web

DESIGNER

AKUNA


visuals > objects > interactions > services > systems > society

Why design?

Article
McKinsey Quarterly
October 2018

The business value of design

By Benedict Sheppard, Hugo Sarrazin, Garen Kouyoumjian, and Fabricio Dore

Full Report (PDF–6MB)

How do the best design performers increase their revenues and shareholder returns at nearly twice the rate of their industry counterparts?

We all know examples of bad product and service design. The USB plug (always lucky on the third try). The experience of rushing to make your connecting flight at many airports. The exhaust port on the Death Star in *Star Wars*.

MCKINSEY QUARTERLY AUDIO

Separate the signal from the noise

This is design thinking

This is design **doing**

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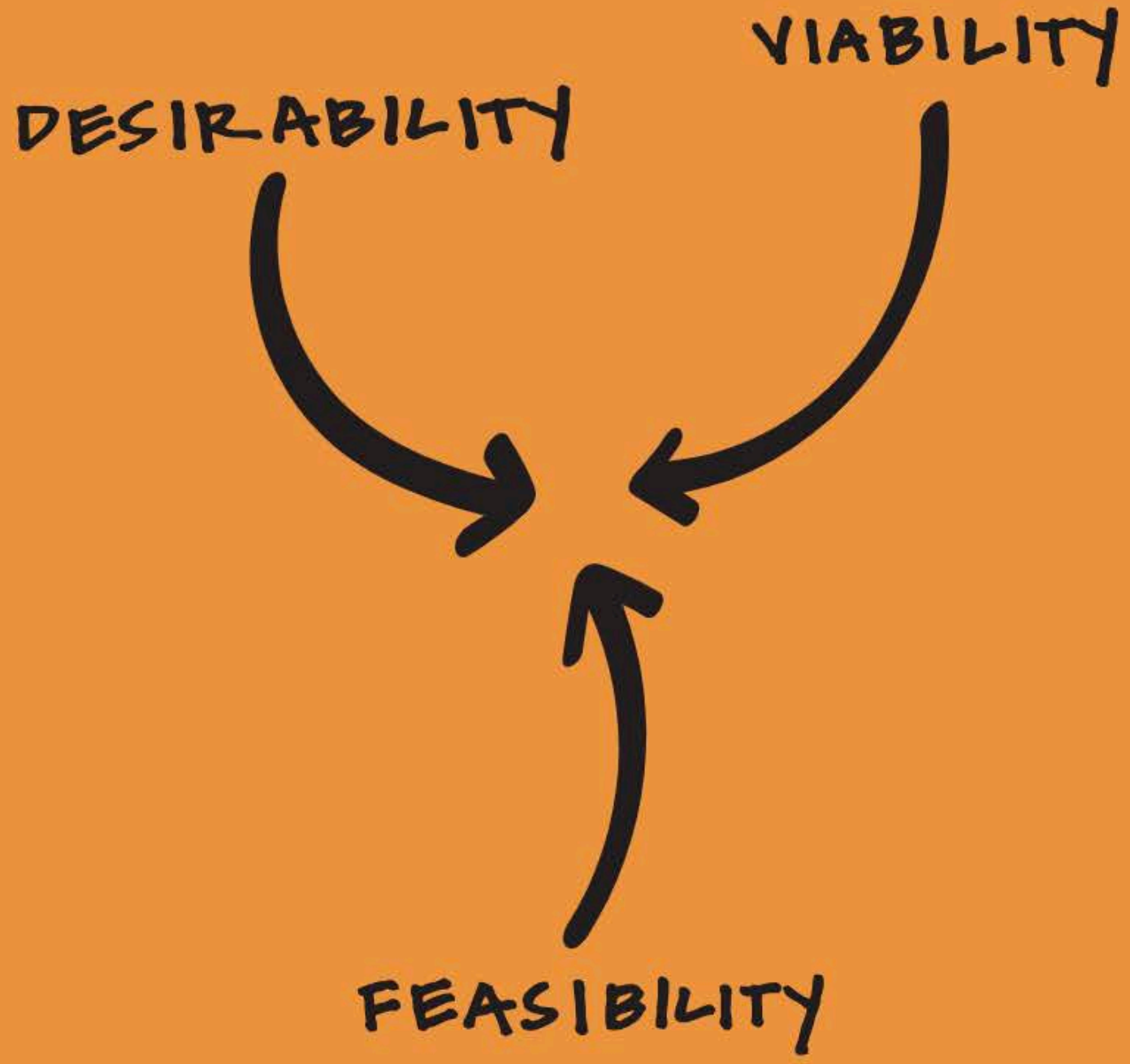
Design thinking.
Design for non-designers.

Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.

—TIM BROWN, EXECUTIVE CHAIR OF IDEO



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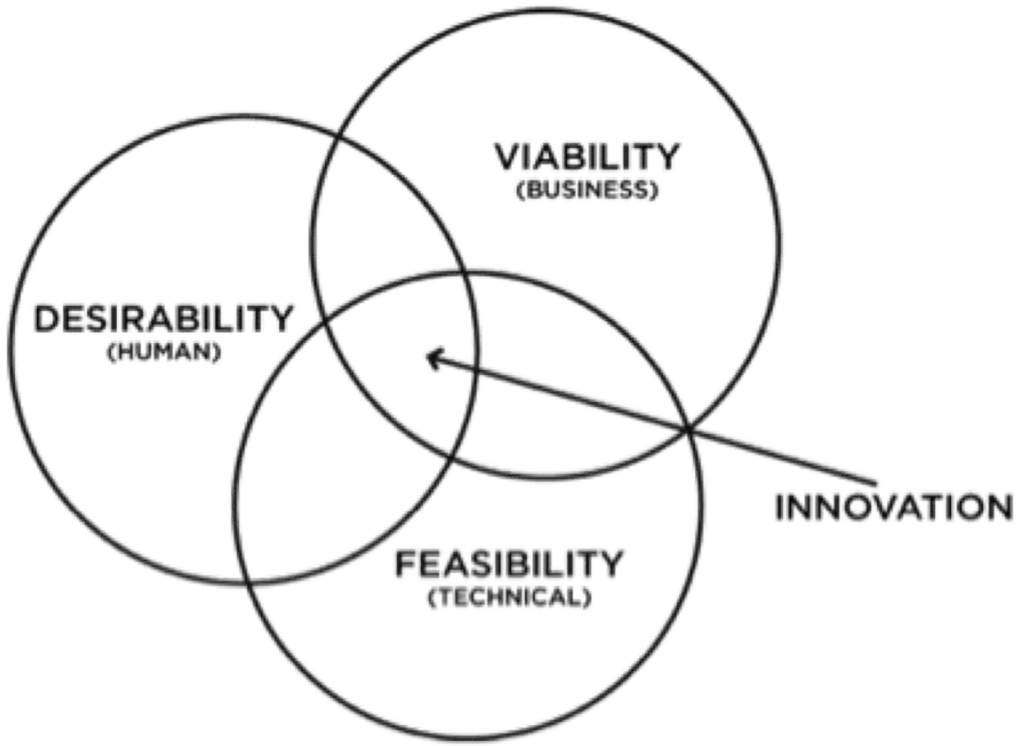

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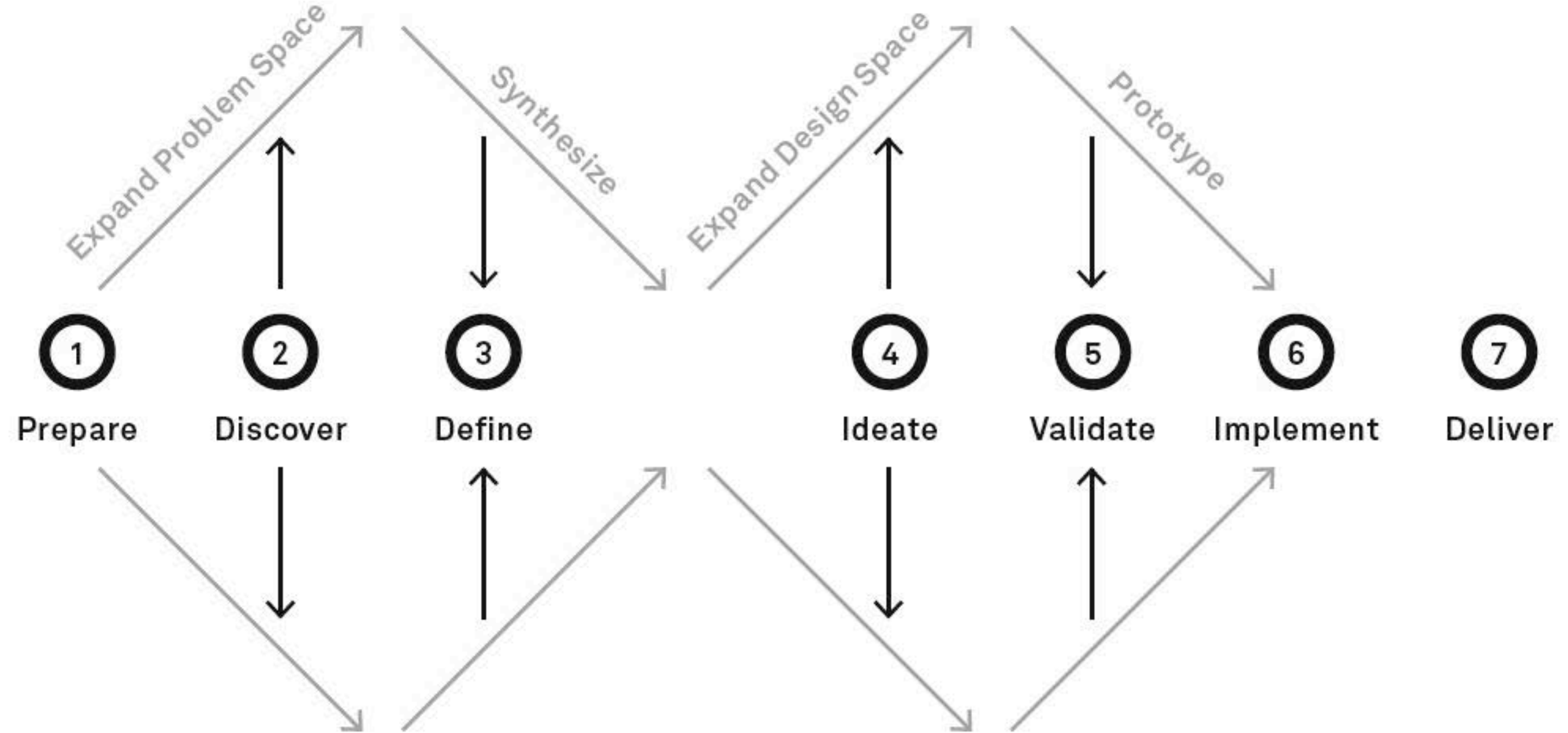
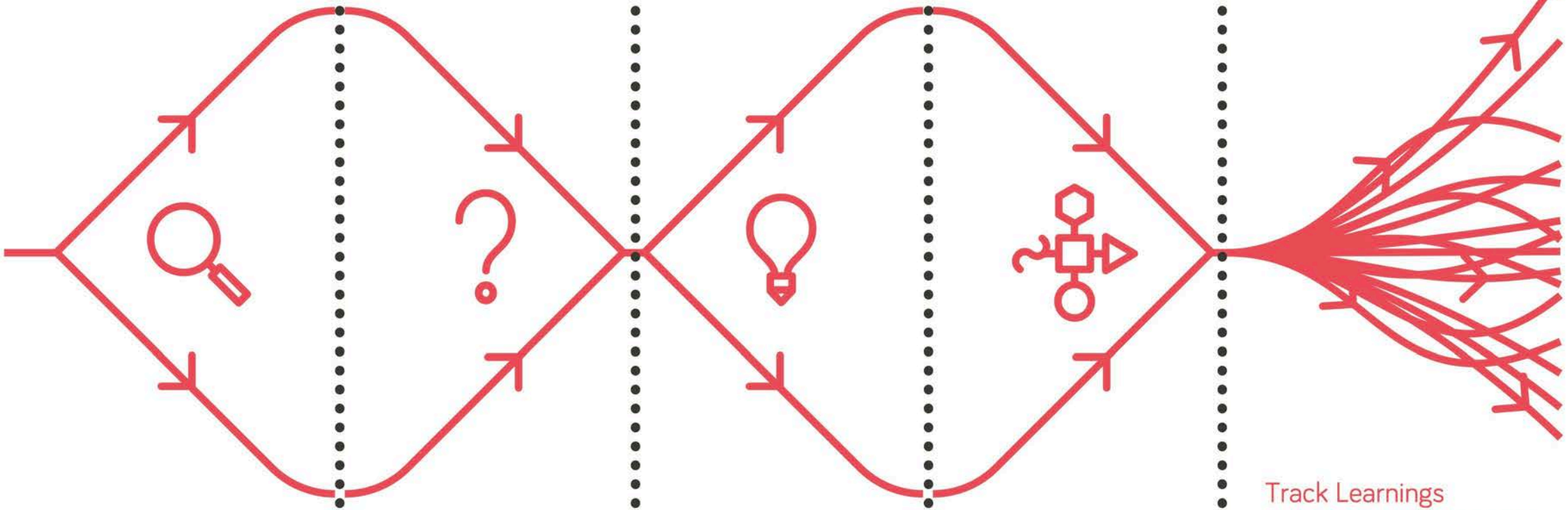
Double Diamond



from *Intersection* by Milan Guenther, www.intersectionbook.com
based on a model by the UK Design Council



DISCOVER

Immersion
Questionnaires
Interviews
Self-Documentation
Meetings
User Experience Observations

DEFINE

Interpret Your Findings
Find Meaning
Identify Themes
Tell Stories
Sort + Condense
Define Insights
Frame Opportunites
Set 'Design Challenge'

DEVELOP

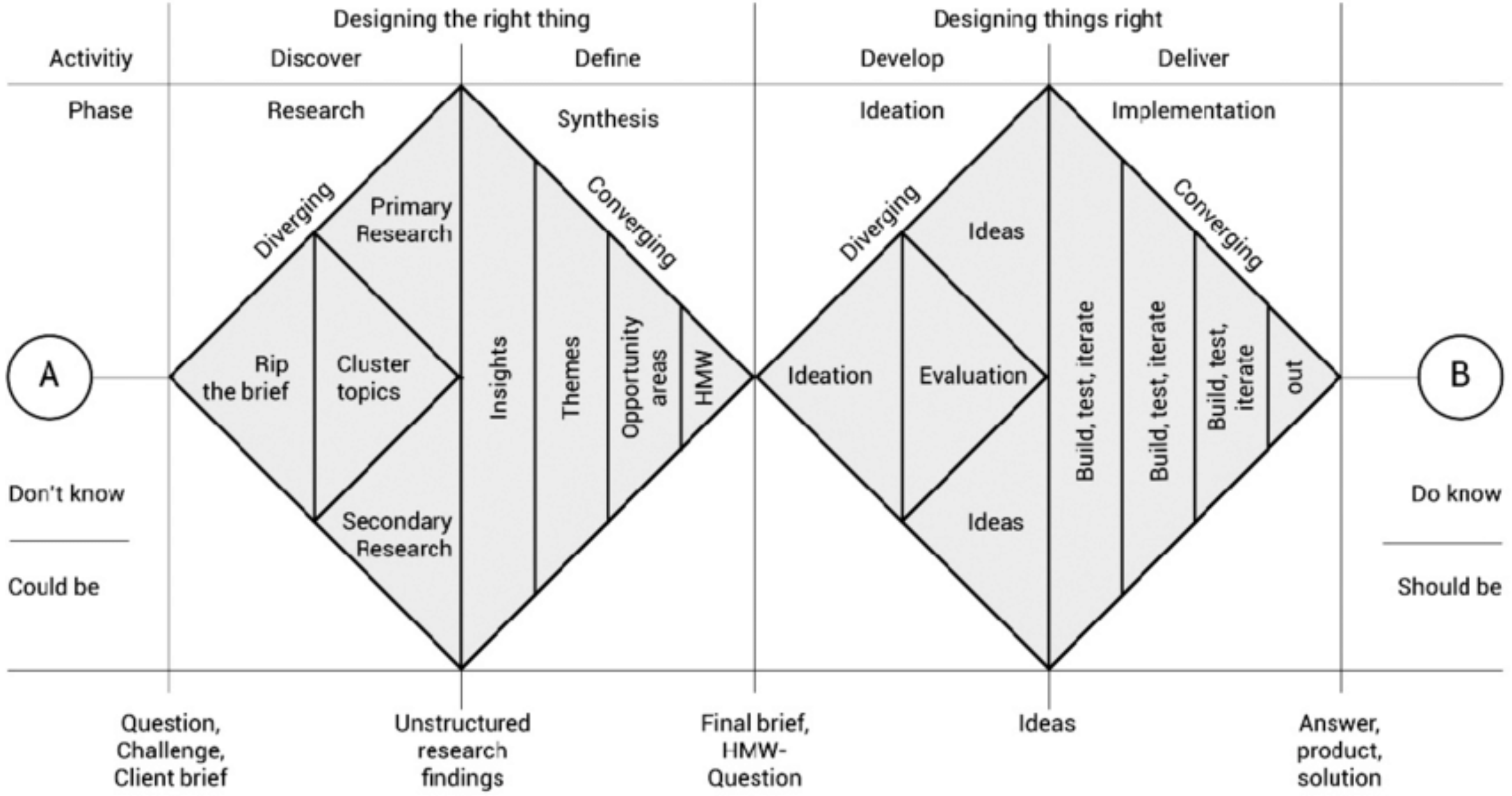
Brainstorm
Jam/Charrette
Designing
Visual
Tactile
Experiential
Sketching
Graphic Recording

DELIVER

Making + doing
Role-Play
Prototyping
Storytelling
Pitch Document
Get Feedback
Capture Learnings
Define Success

EVOLVE

Track Learnings
Celebrate Achievements
Plan Next Steps
Building Partnerships
Engaging Others
Scale-Up
Deepen Roots
Remind People what Changed
(even if changes are subtle)
Build Network



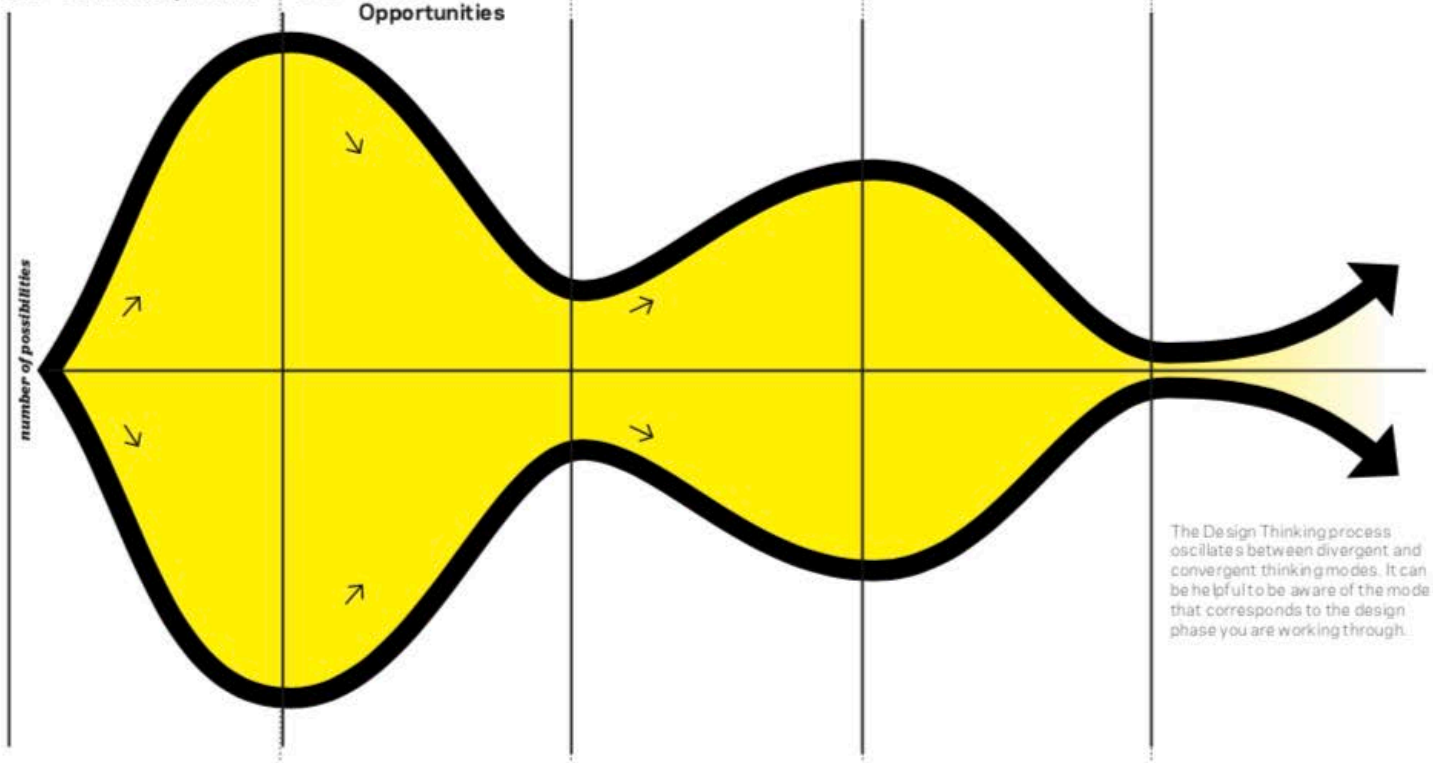
Double Diamond framework (Nessler, 2018)

PHASES

1	2	3	4	5
DISCOVERY	INTERPRETATION	IDEATION	EXPERIMENTATION	EVOLUTION
I have a challenge. *How do I approach it?*	**I learned something.** *How do I interpret it?*	**I see an opportunity.** *What do I create?*	**I have an idea.** *How do I build it?*	**I tried something new.** *How do I evolve it?*

STEPS

1-1 Understand the Challenge	2-1 Tell Stories	3-1 Generate Ideas	4-1 Make Prototypes	5-1 Track Learnings
1-2 Prepare Research	2-2 Search for Meaning	3-2 Refine Ideas	4-1 Get Feedback	5-2 Move Forward
1-3 Gather Inspiration	2-3 Frame Opportunities			



The Design Thinking process oscillates between divergent and convergent thinking modes. It can be helpful to be aware of the mode that corresponds to the design phase you are working through.

https://designthinkingforeducators.com/

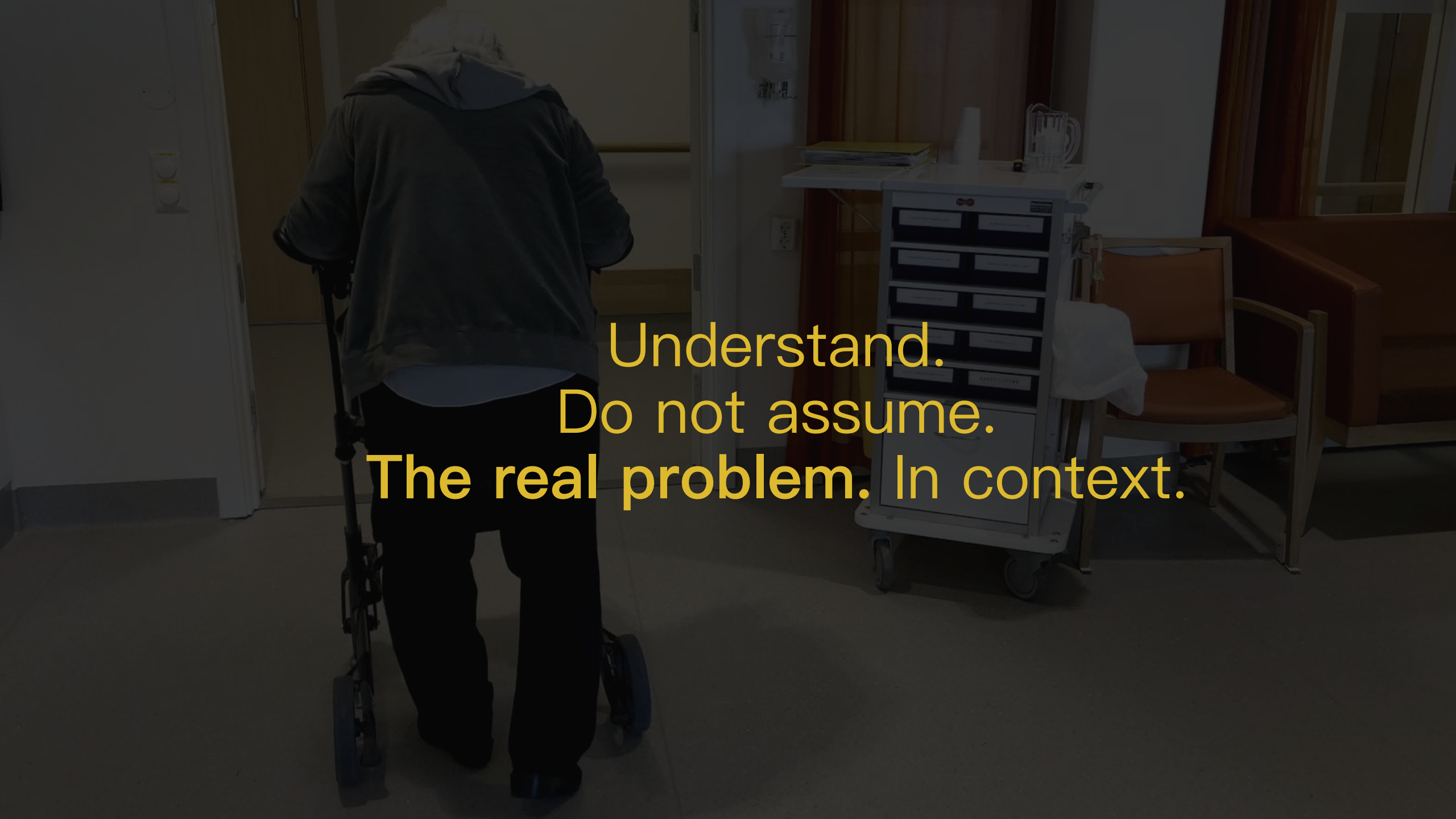
Putting **the human** back in the loop.

Or in the IT project.

Empathy. Understand. Mentalisation.

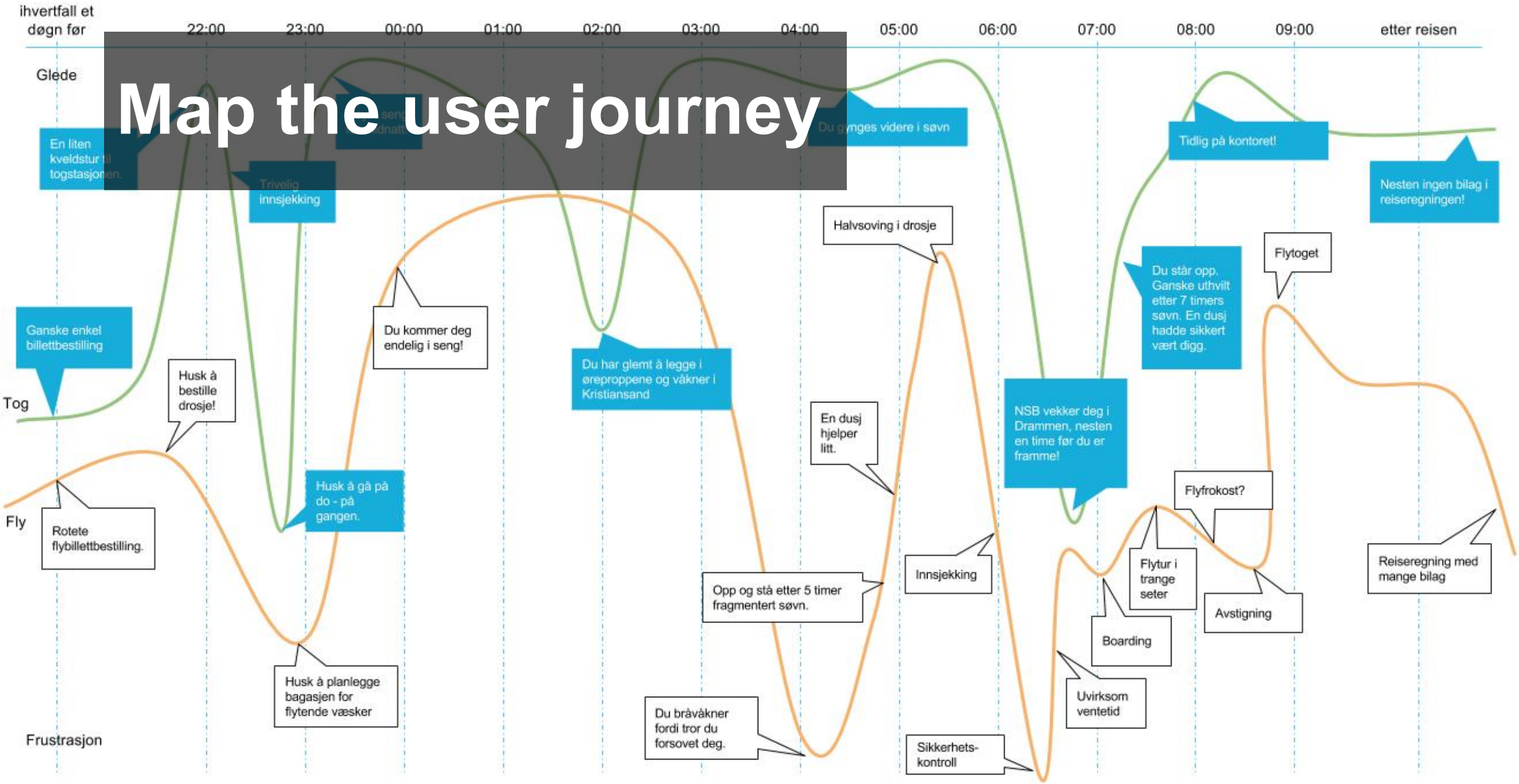
Photo by Loyal Deighton on Unsplash

User-centered
Step into their shoes!


Understand.
Do not assume.
The real problem. In context.

Design is a **holistic approach.**

The entire picture.


ihvertfall et døgn før
22:00
23:00
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
etter reisen
Glede
Tog
Fly
Frustrasjon
Map the user journey
En liten kveldstur til togstasjonen.
Trivelig innsjekking
Du gynges videre i søvn
Tidlig på kontoret!
Nesten ingen bilag i reiseregningen!
Ganske enkel billettbestilling
Husk å bestille drosje!
Du kommer deg endelig i seng!
Du har glemt å legge i ørepropppene og våkner i Kristiansand
Halvsoving i drosje
Du står opp. Ganske uthvilt etter 7 timers søvn. En dusj hadde sikkert vært digg.
Flytoget
En dusj hjelper litt.
NSB vekker deg i Drammen, nesten en time før du er framme!
Flyfrokost?
Husk å gå på do - på gangen.
Rotete flybillettbestilling.
Innsjekking
Flytur i trange seter
Avstigning
Reiseregning med mange bilag
Opp og stå etter 5 timer fragmentert søvn.
Boarding
Husk å planlegge bagasjen for flytende væsker
Uvirksom ventetid
Du bråvåkner fordi tror du forsovet deg.
Sikkerhets-kontroll

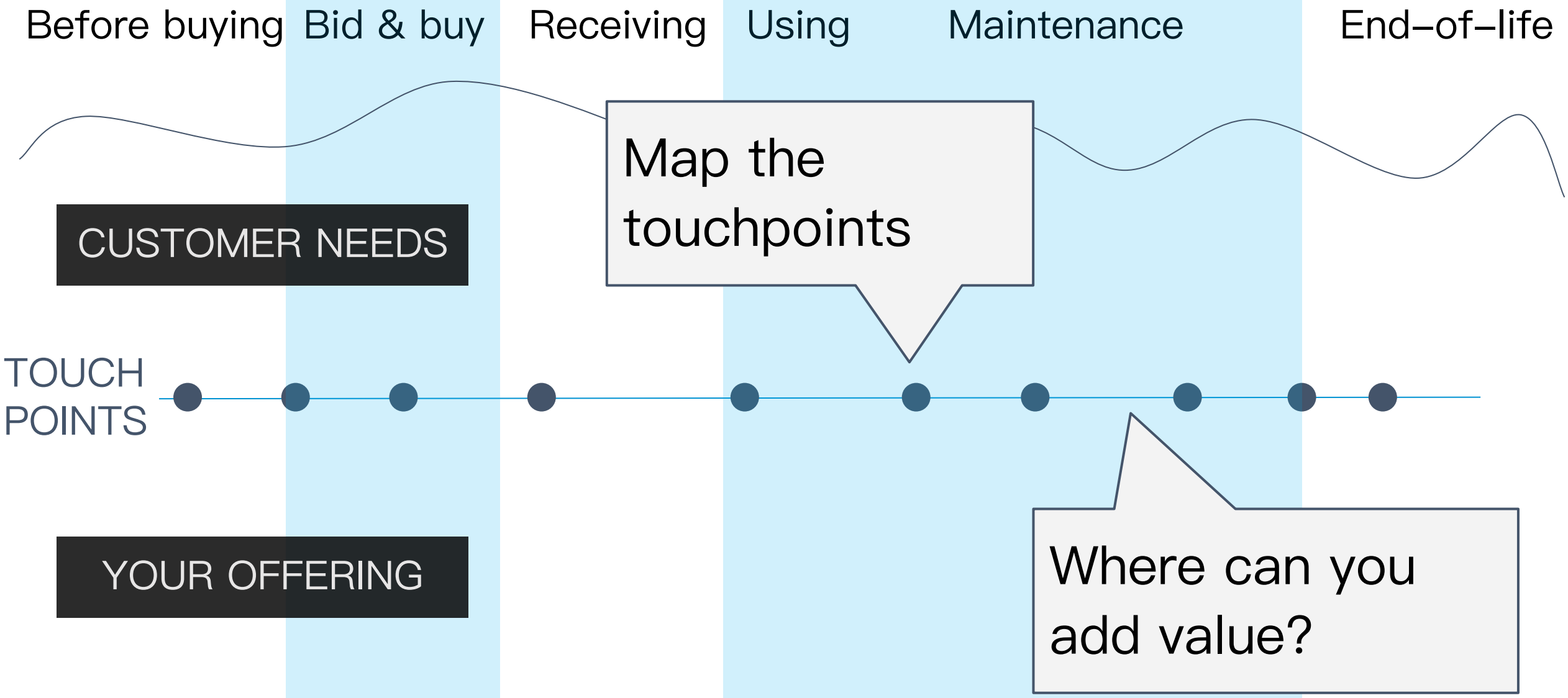
Reframing the question.

Open questions. The five whys.
Observe.

How well do you know
your own business?

How well do you know your **customers' needs**?

Photo by Elevate on Unsplash



Great Pipes customer journey

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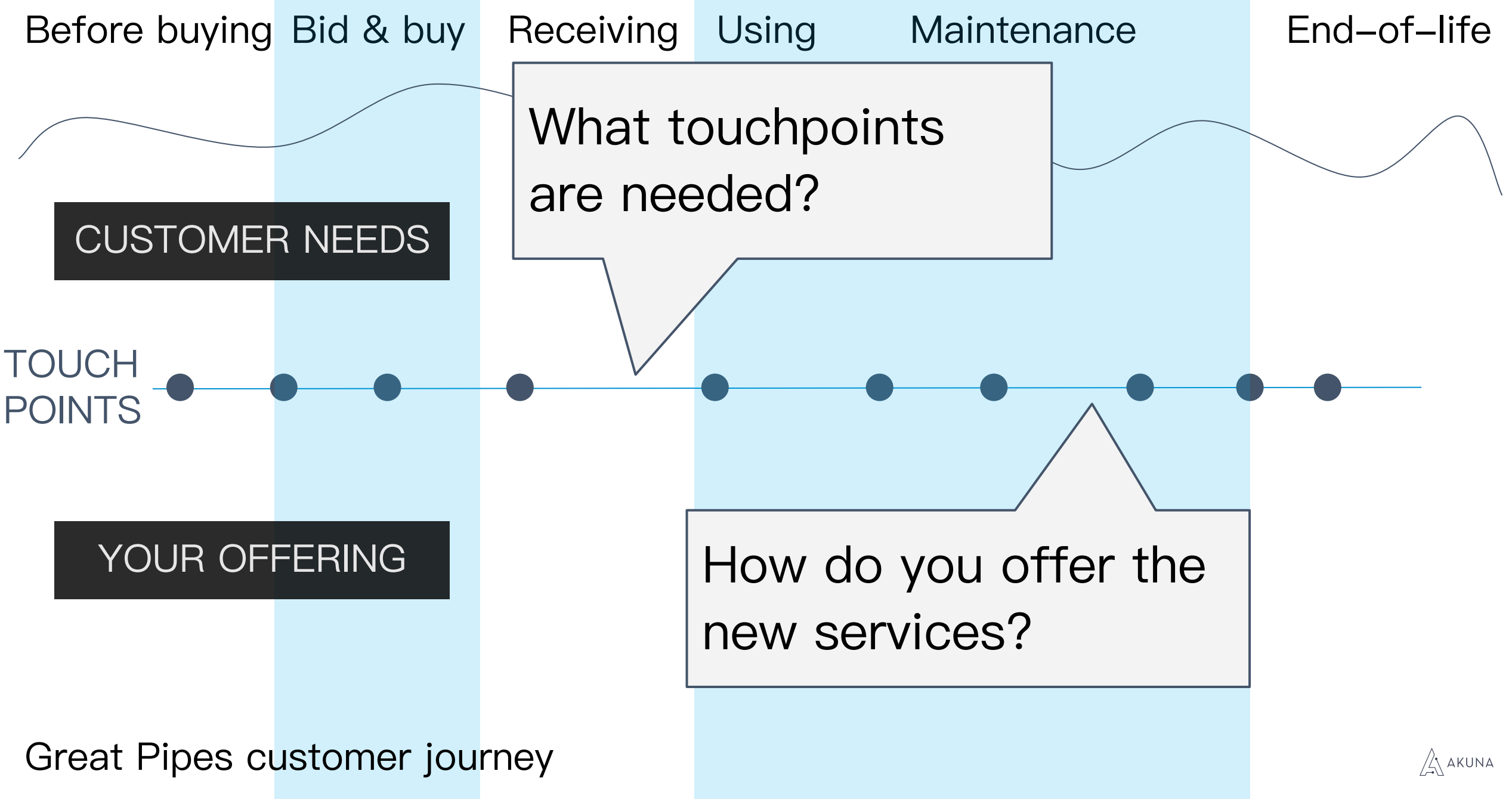

Great Pipes customer journey

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The user is not God.

The designer is.

Organise insight. Find patterns.

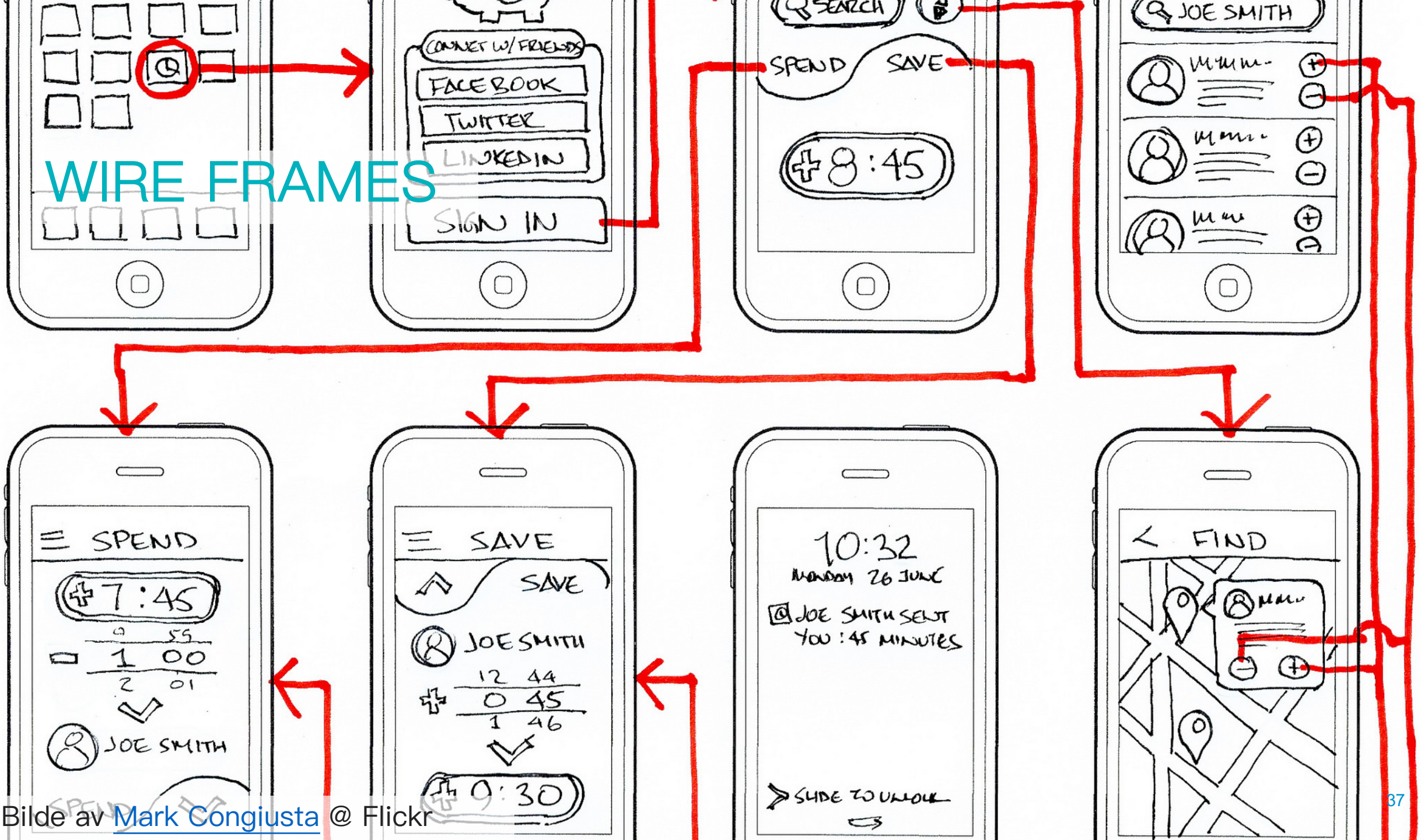
Start doing.

Experimentation

Prototype
everything

Prototype early. **Learn faster.**
Reduce risk.

WIRE FRAMES



Bilde av Mark Congiusta @ Flickr

Build a prototype
and test it.
From desktop to 1:1 mockup
WASHING MACHINE
FUZZY LOGIC CONTROL

REALISTIC

RELEVANT

Photo by Brian Patrick Tagalog on Unsplash

Photo by Sebastian Unrau on Unsplash

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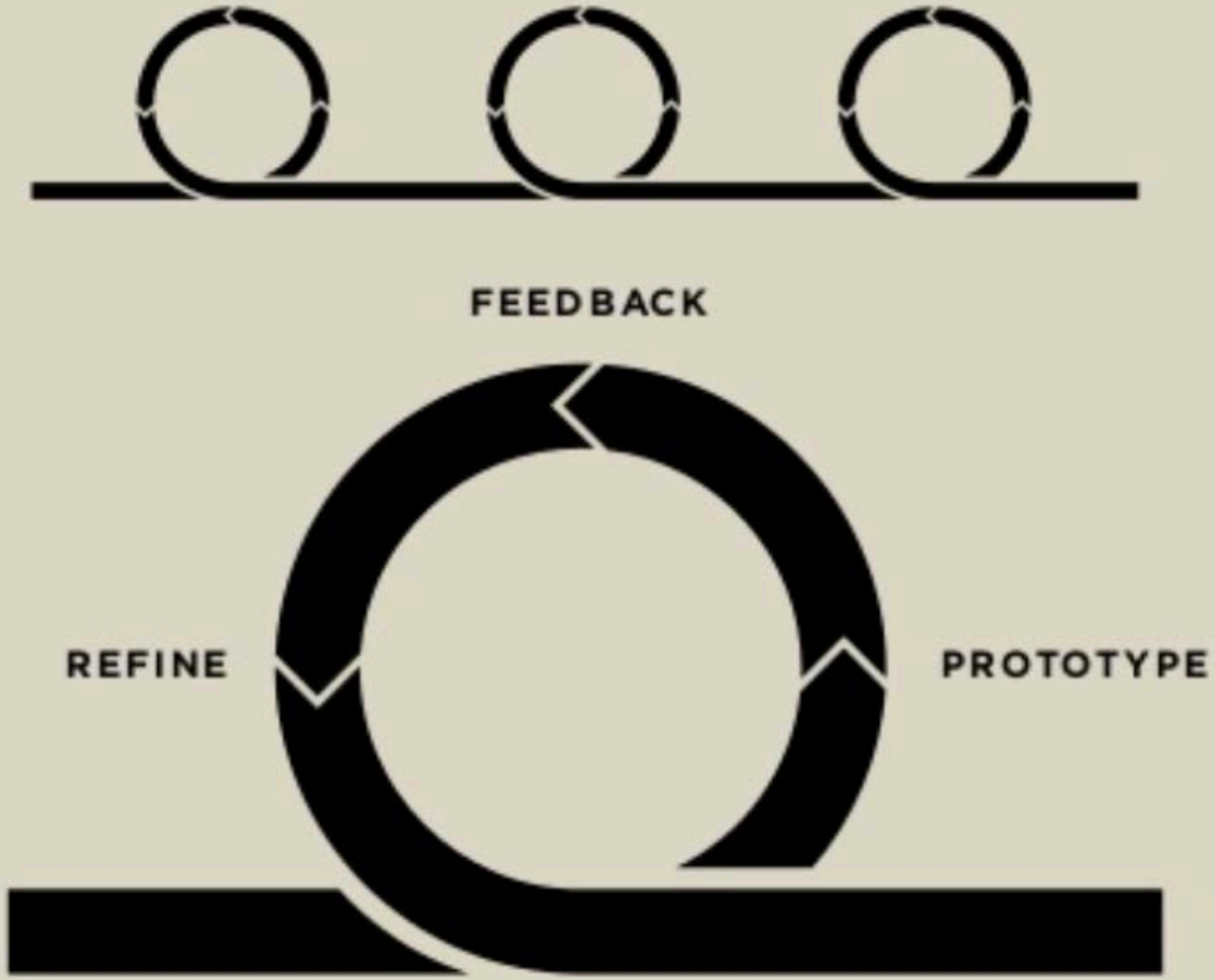
Design for implementation.



Iterate. Iterate. Iterate *again*

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PROTOTYPE

- Early. 0–stage
- Validate need.
- Validate core functionality.
- Simple. Easy to change, improve. Development in iterations.
- It is obvious that it is not the final solution.
- Short term.
- Little training.
- Inexpensive

PILOT

- Phase 2 or later.
- Larger scale testing.
- Implementation in organisation.
- More refined. MVP. Changes possible.
- Looks like the final solution we believe in.
- Self–going with some duct tape. Long–term testing.
- Training will be given
- More demanding.

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Design for impact.

Easier with a people-centric approach.

Social

Design for sustainability

People, planet, profit

One word.

REFUSE

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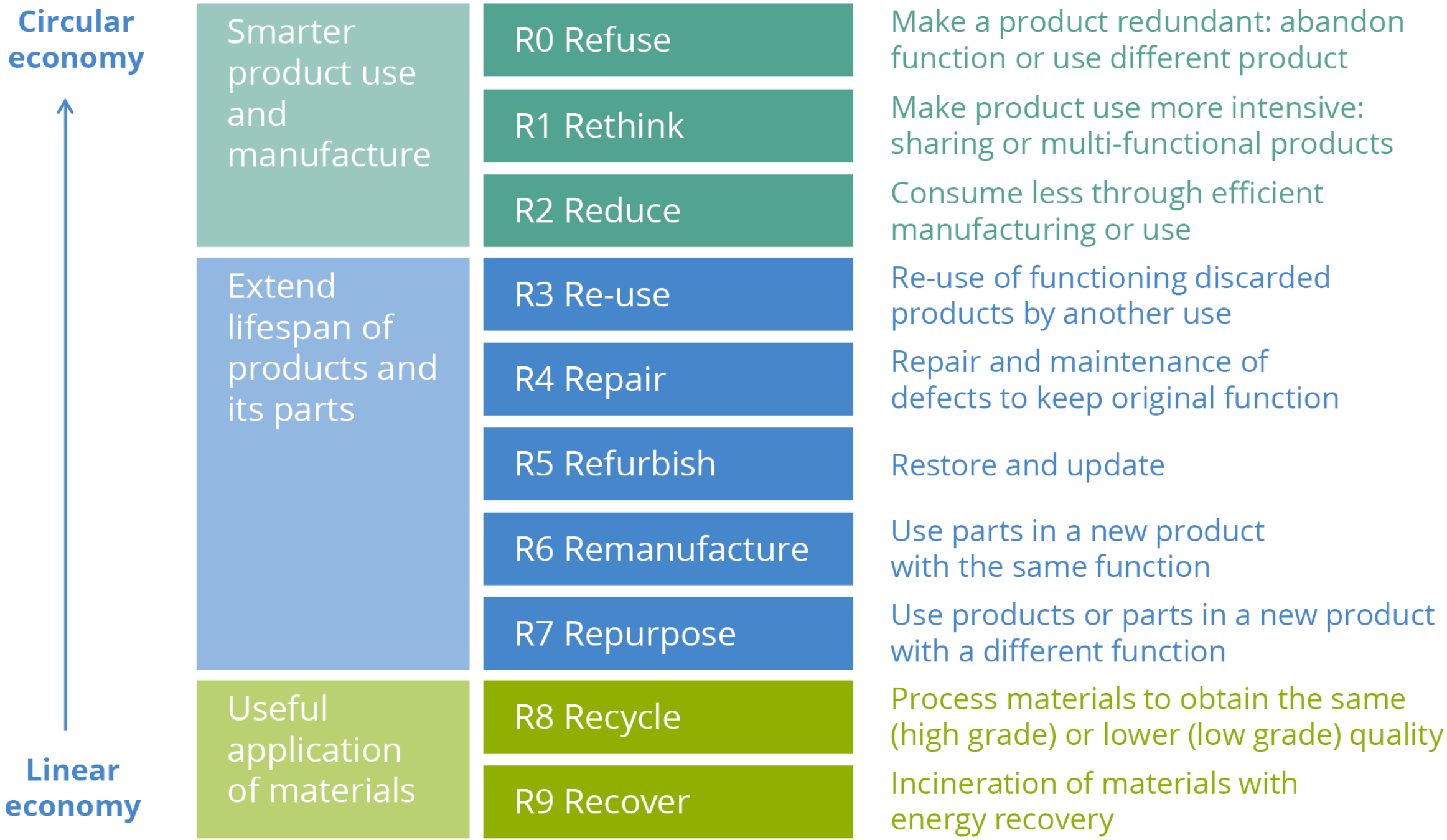
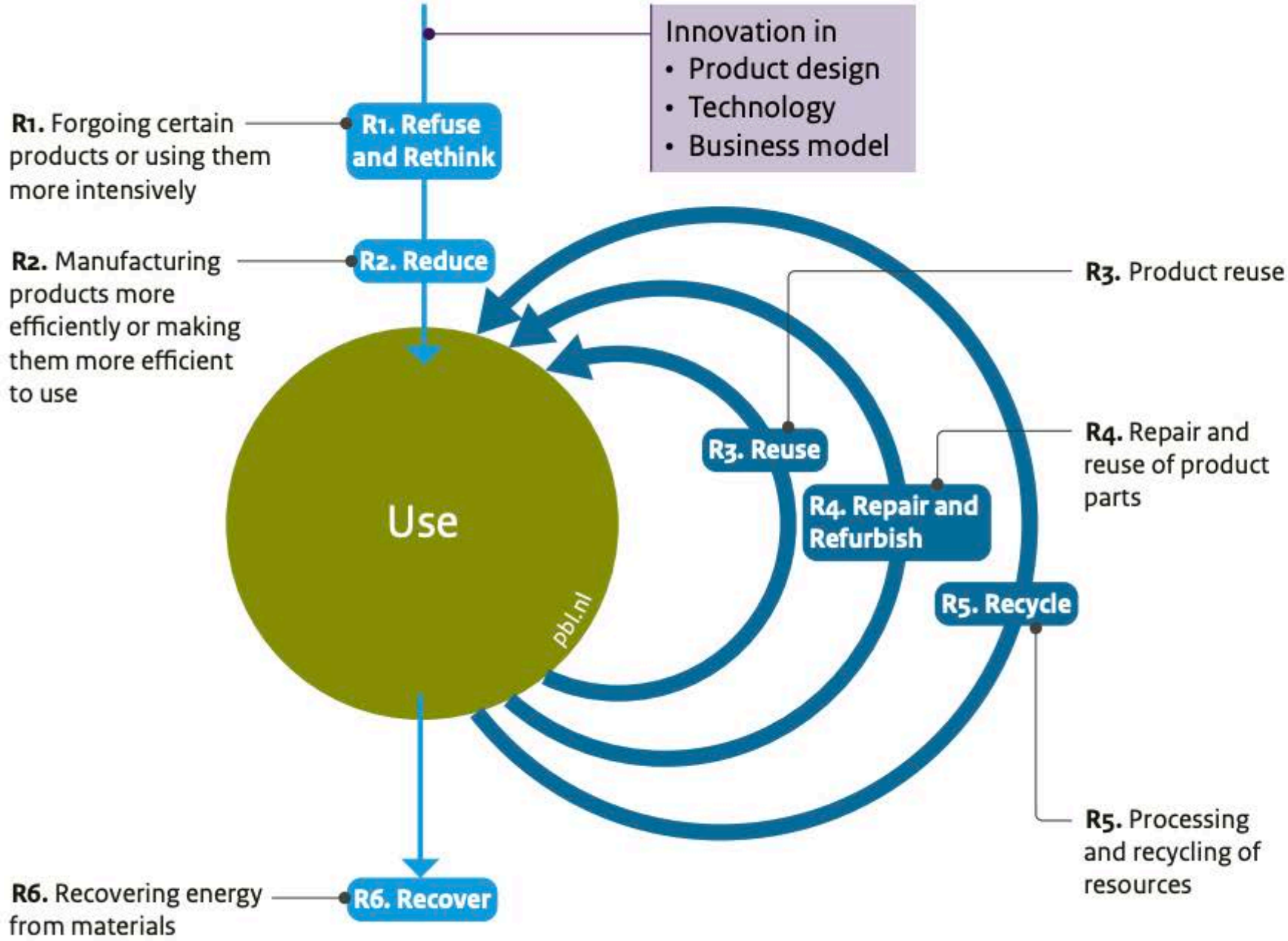
Circular design.



Circular economy strategies. Source: PBL (2017). Circular economy: measuring innovation in the product chain, J.Potting, M. Hekkert, E. Worrell et al.

R-ladder of circularity strategies



Source: PBL

Design a service.

Pump, valve, pipe as a service.

Toolbox.

THIS IS
SERVICE
DESIGN
THINKING.

O'REILLY
THIS IS
SERVICE
DESIGN[1]
DOING.
APPLYING SERVICE DESIGN THINKING
IN THE REAL WORLD
A PRACTITIONERS' HANDBOOK
[1] for design thinking, UX design, (customer) experience design,
(service) marketing, entrepreneurship, (business) design,
human-centered design, and of course service design – or whatever
you call what you're doing ...

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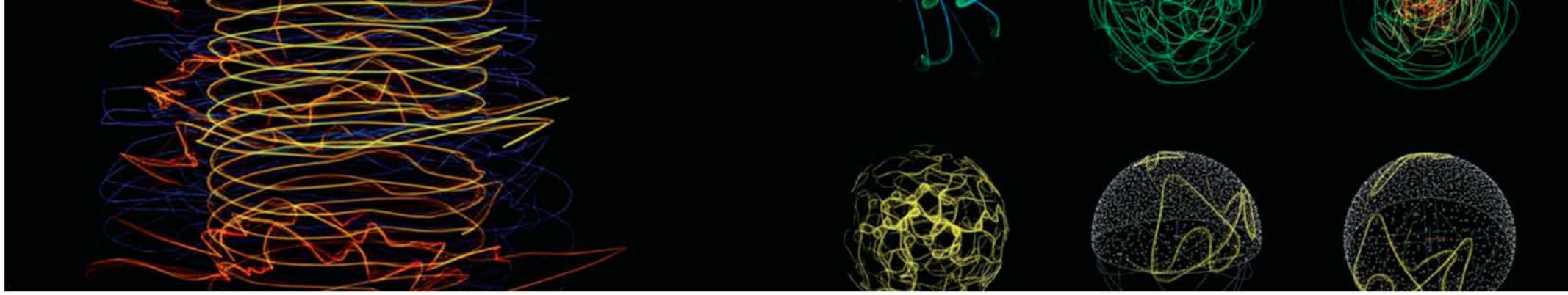


ARTWORK: THE OFFICE FOR CREATIVE RESEARCH SPOTLIGHT (NOA YOUNSE), BAND, PRELIMINARY VISUALIZATION

ORGANIZATIONAL CULTURE

Design Thinking Comes of Age

by Jon Kolko

FROM THE SEPTEMBER 2015 ISSUE

SUMMARY | SAVE | SHARE | COMMENT 17 | TEXT SIZE | PRINT | $8.95 BUY COPIES

There's a shift under way in large organizations, one that puts design much closer to the center of the enterprise. But the shift isn't about aesthetics. It's about applying the principles of design to the way people work.

This new approach is in large part a response to the increasing complexity of modern technology and modern business. That complexity takes many forms. Sometimes software is at the center of a product and needs to be integrated with hardware (itself a complex task) and made intuitive and simple from the user's point of view (another difficult challenge). Sometimes the problem being tackled is itself multi-faceted: Think about how much tougher it is to reinvent a health care delivery system than to design a shoe. And sometimes the business environment is so volatile that a company must experiment with multiple paths in order to survive.

WHAT TO READ NEXT

Design Thinking

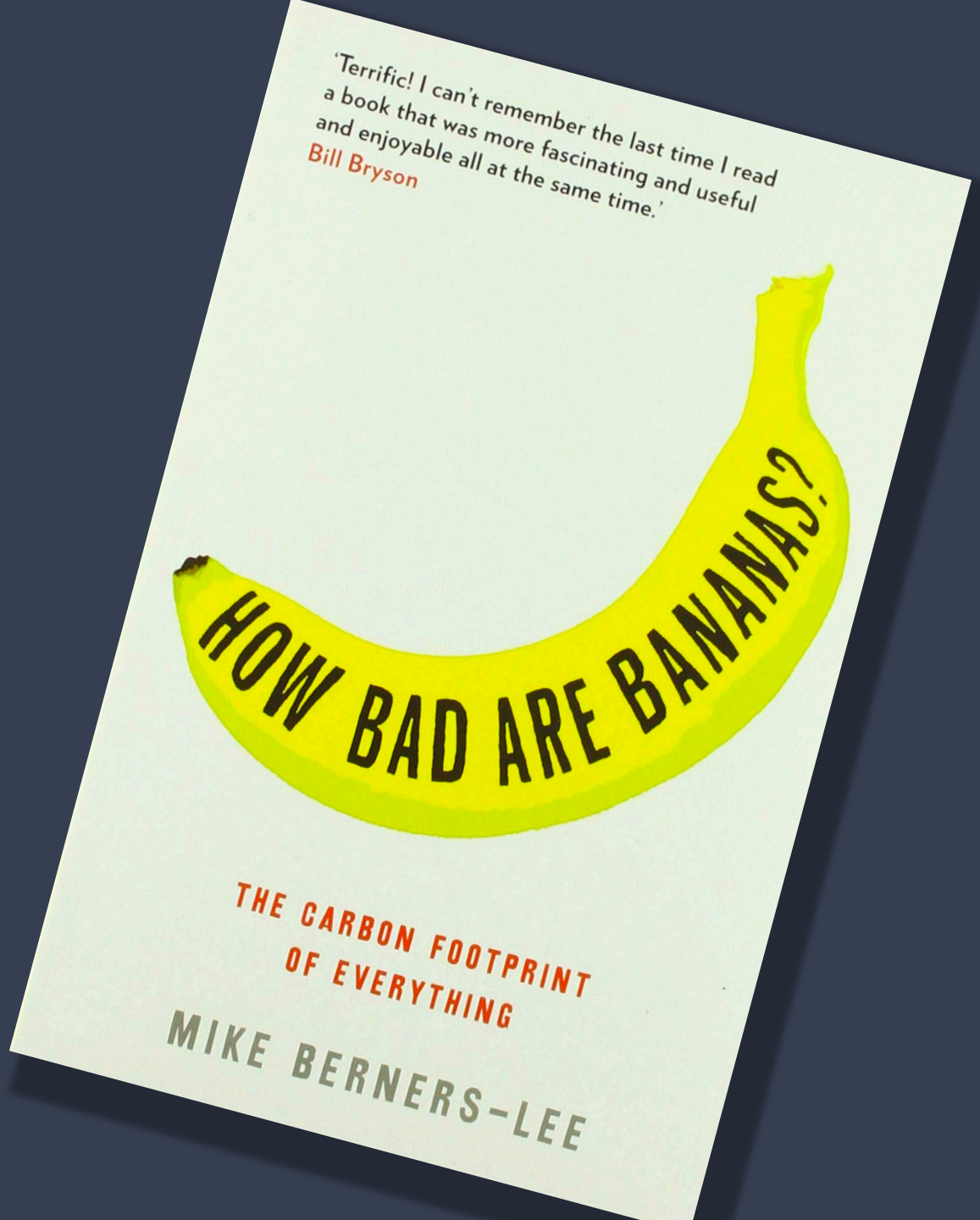
Design for Action

Design as Strategy

VIEW MORE FROM THE

September 2015 Issue

EXPLORE THE ARCHIVE


'Terrific! I can't remember the last time I read a book that was more fascinating and useful and enjoyable all at the same time.'
Bill Bryson
HOW BAD ARE BANANAS?
THE CARBON FOOTPRINT OF EVERYTHING
MIKE BERNERS-LEE

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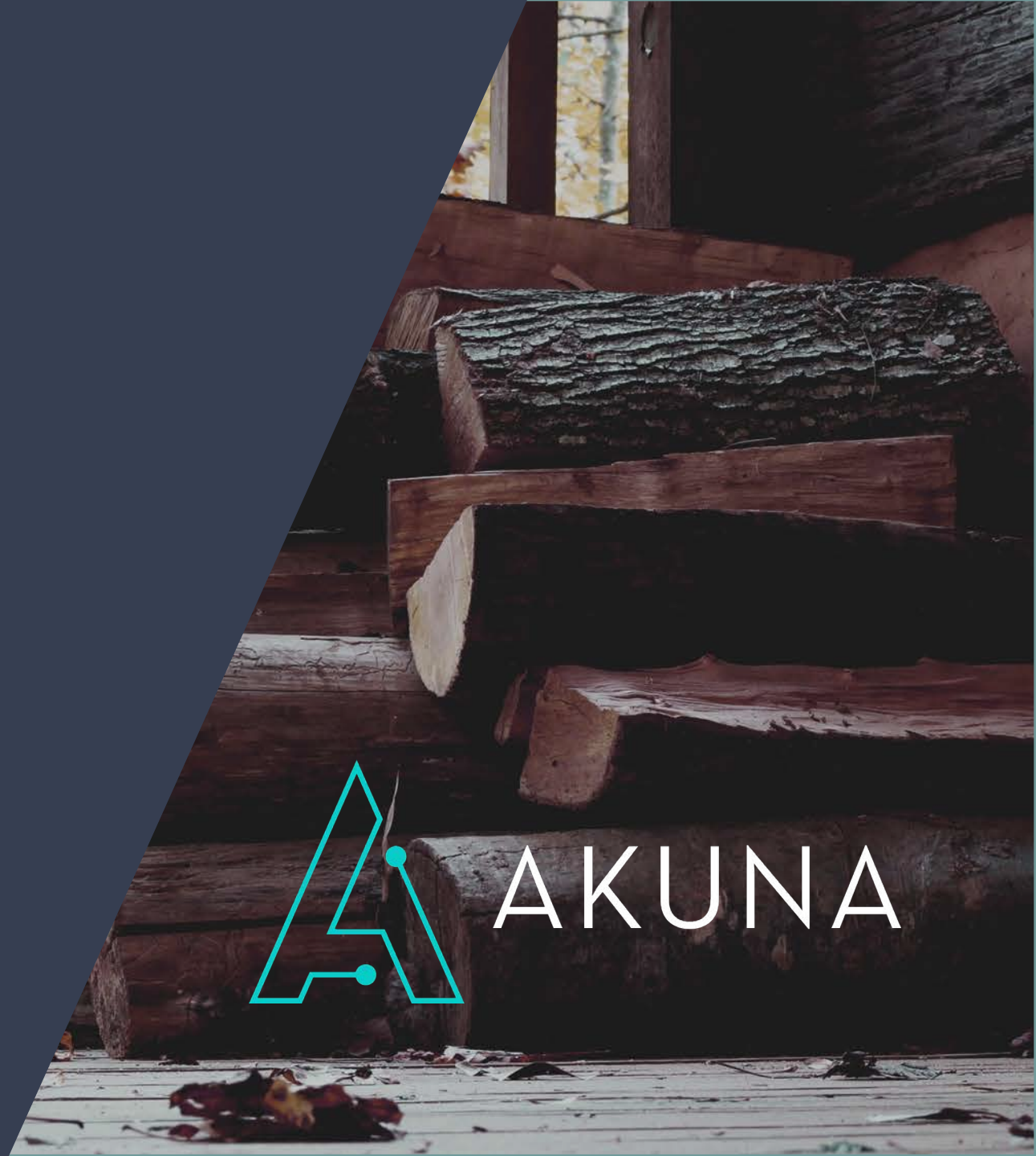
Get out of the building.
That’s where
the magic is

Hire a designer.



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