

The Digital Ethics Compass

DESIGN MATTERS JP 2022

Rasmus Sanko

Chief Strategy Officer



Charlie Tango

Who we are and what we do

01

We assist businesses and organisations that are passionate about their field of expertise and aspire to excel digitally.

We accomplish this by designing and implementing user centric, data driven products and services of the highest quality.

Together we create modern, digital businesses and organisations that provide meaning and value for society as well as individuals.



CHARLIE TANGO

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CHARLIE TANGO

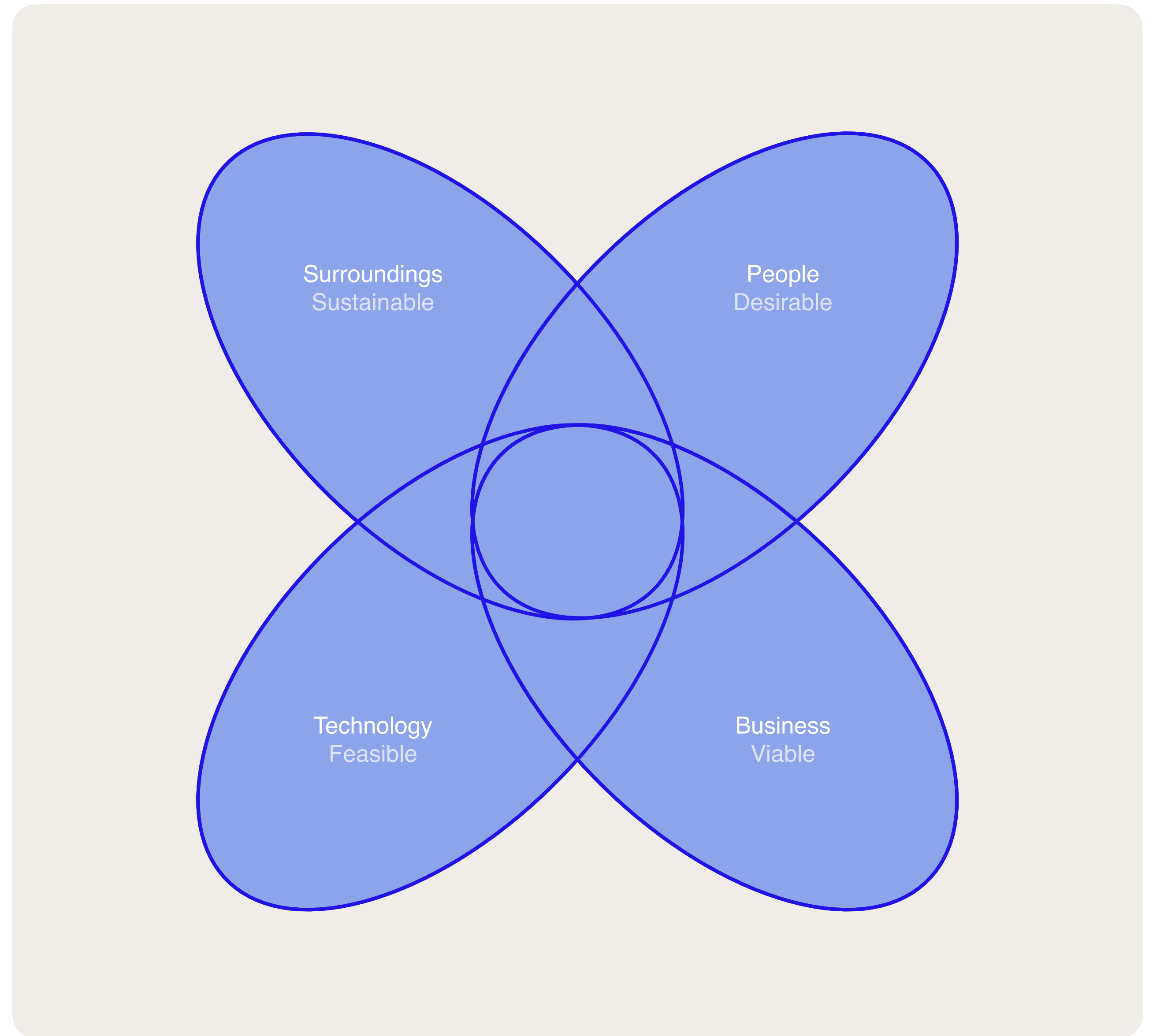


CHARLIE T

TUPAC.

Coca-Cola

Design approach



Insight driven & user centric



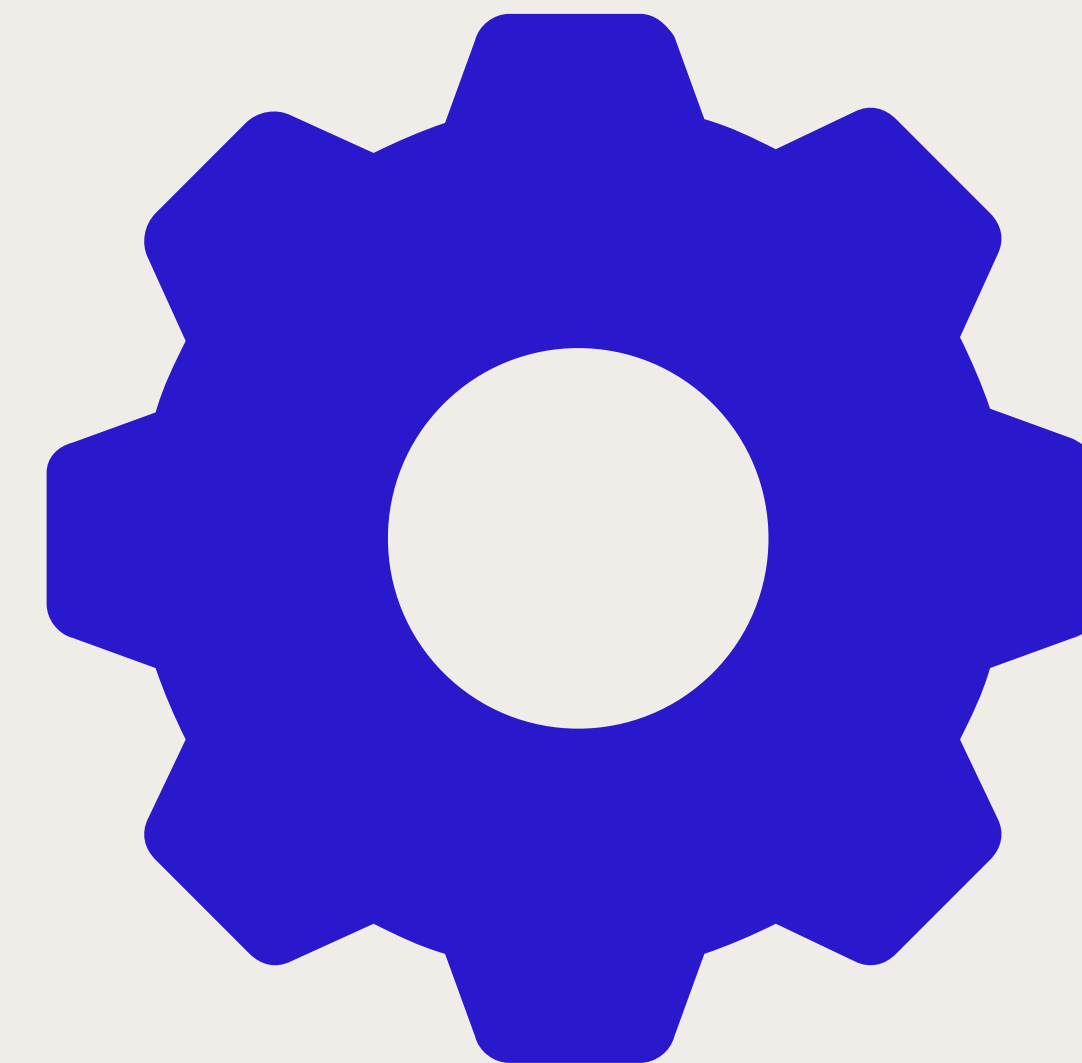
Co-creating, conceptualising & validating



Two main tasks



Improve the user experience



Streamline and automate workflows

Digital transformation

Key areas for the modern organisation

01

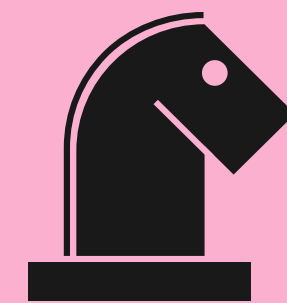
Frictionless
Operation Model

02



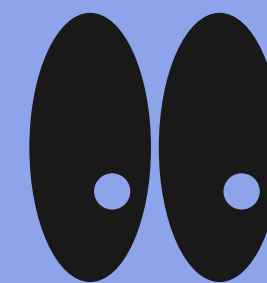
Experience
Design

03



Platform Strategy
& Implementation

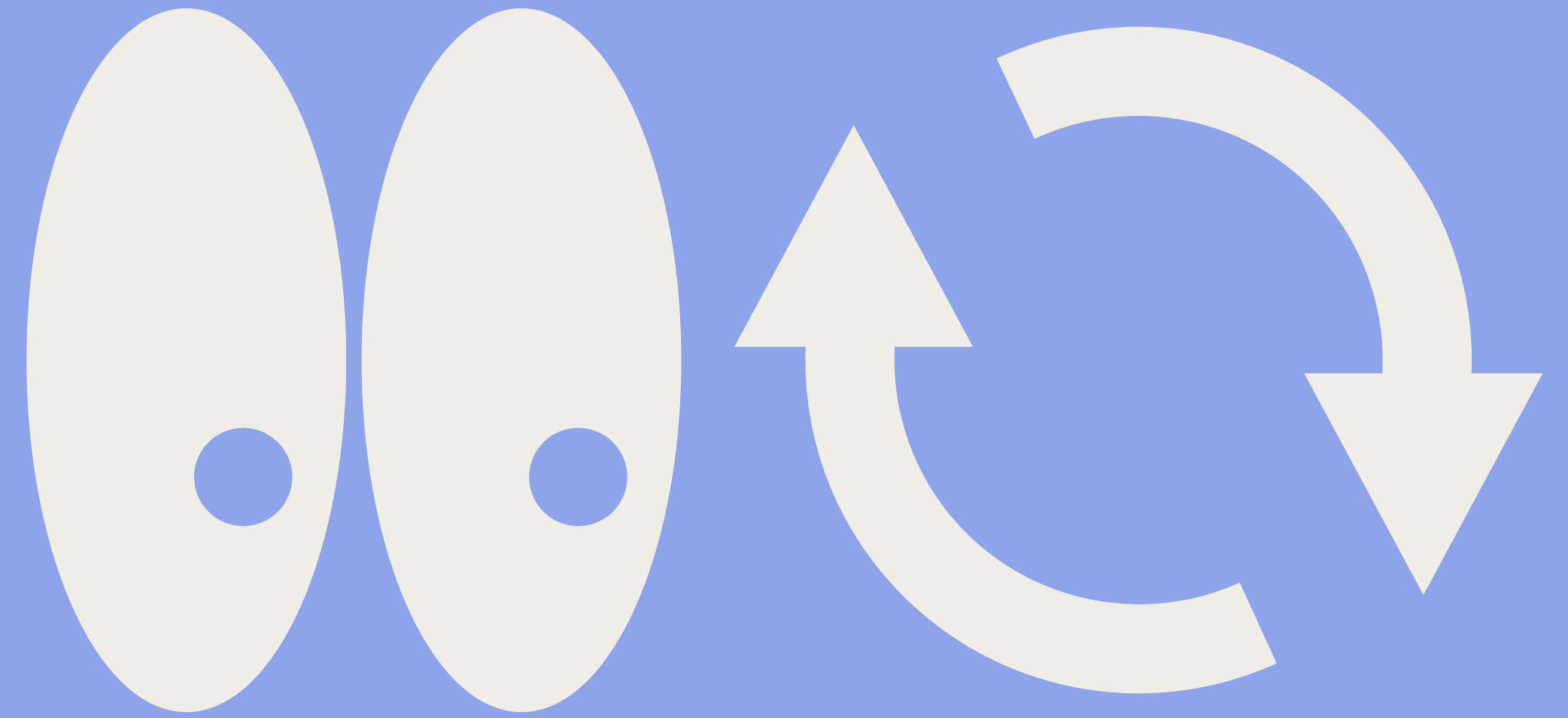
04



Data-driven
decision-making

05

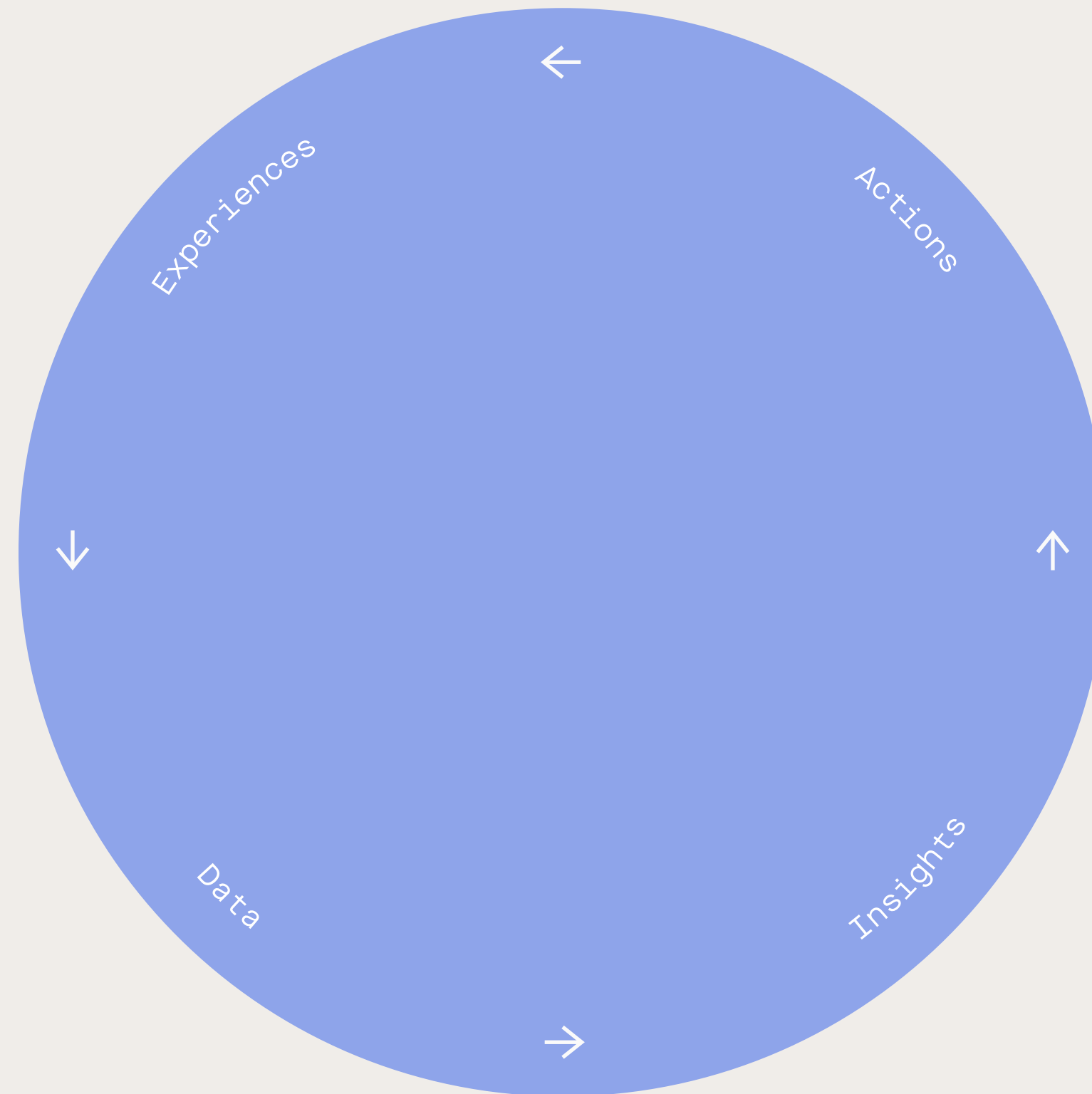
Engineering
Culture



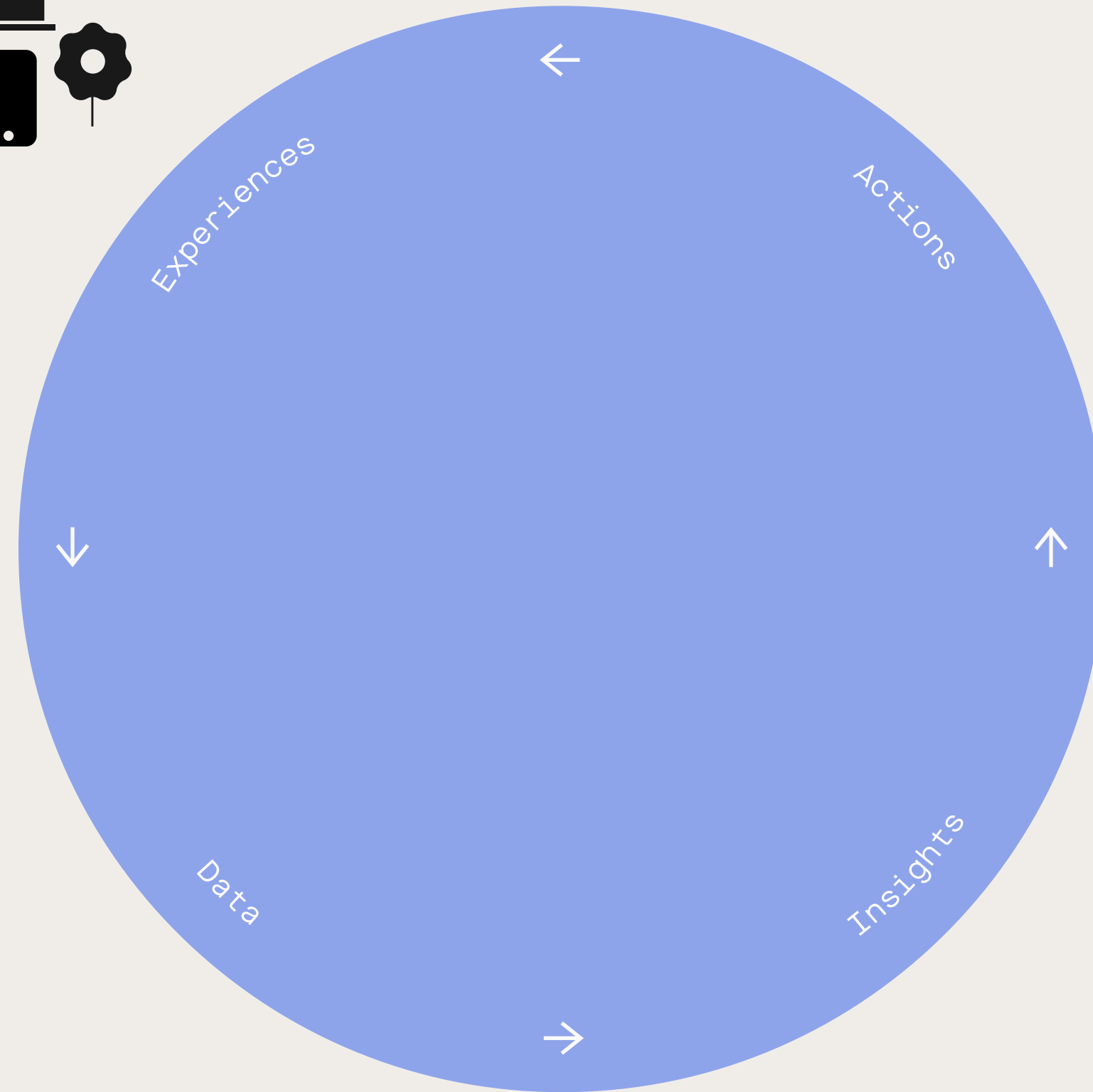
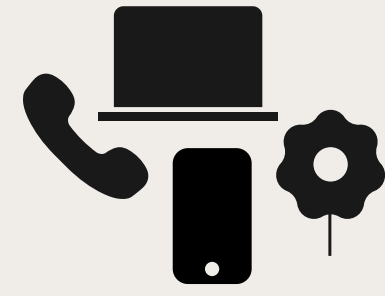
How Might We

Data Driven Products & Services

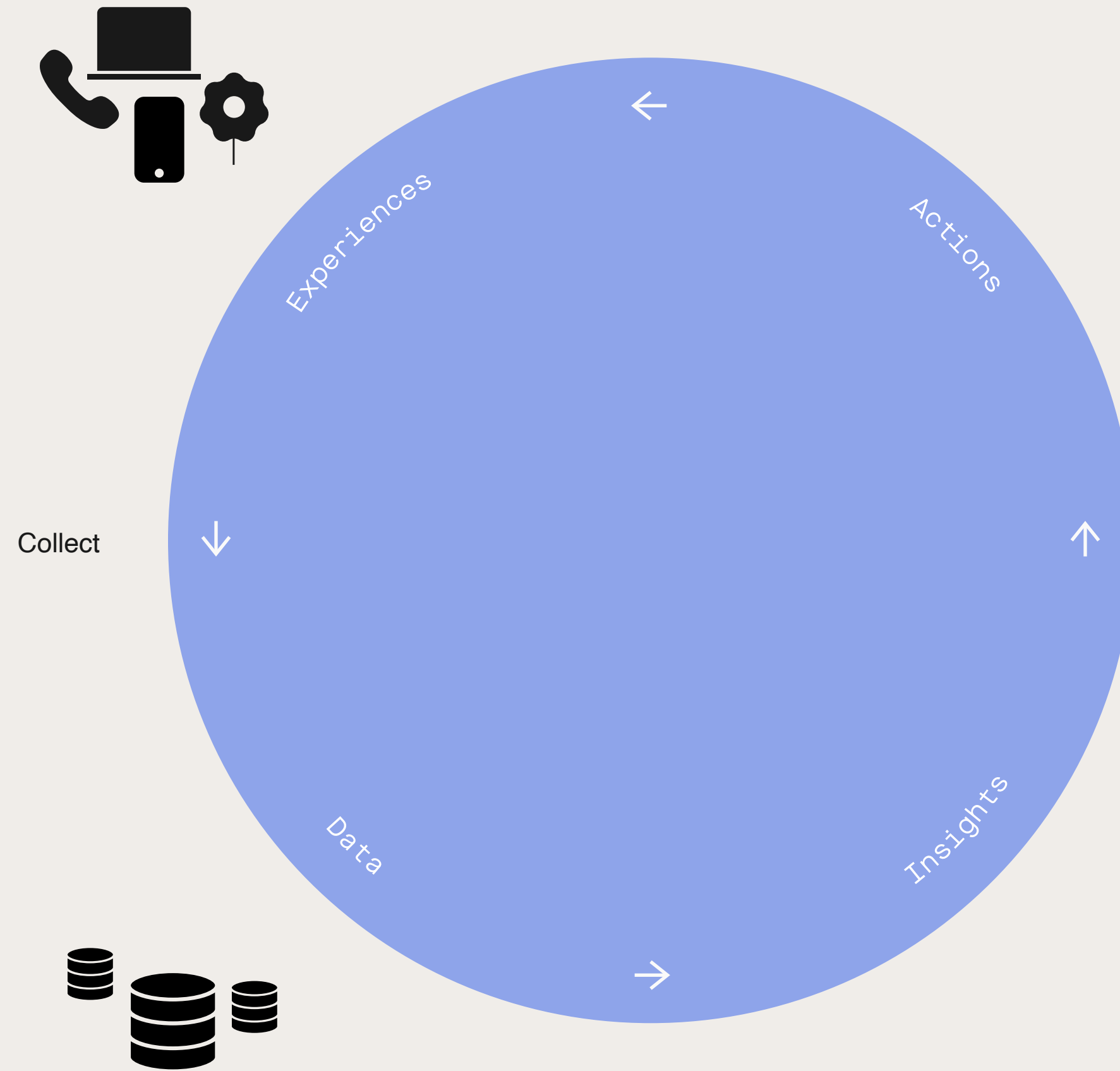
Data Driven Products & Services



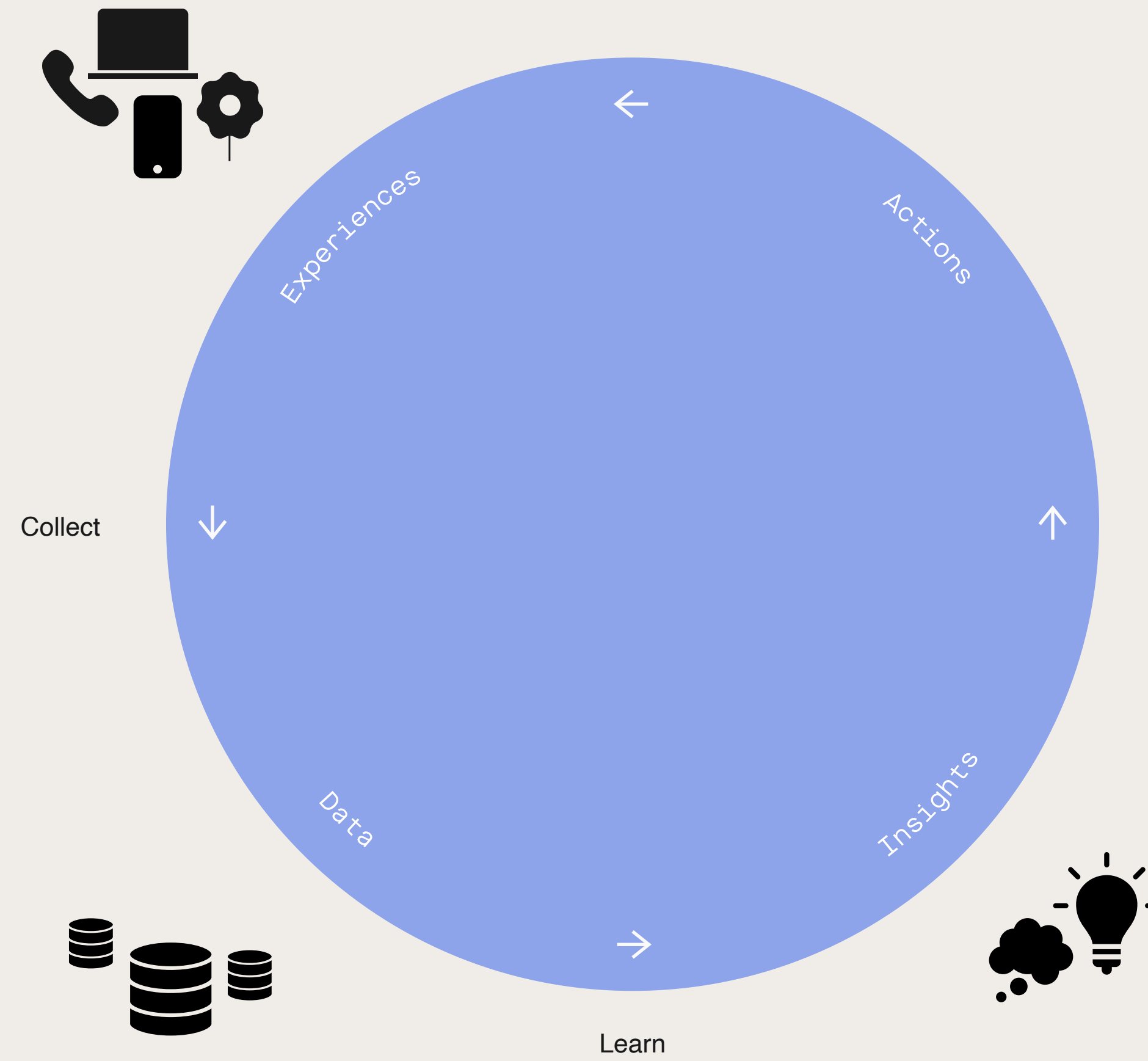
Data Driven Products & Services



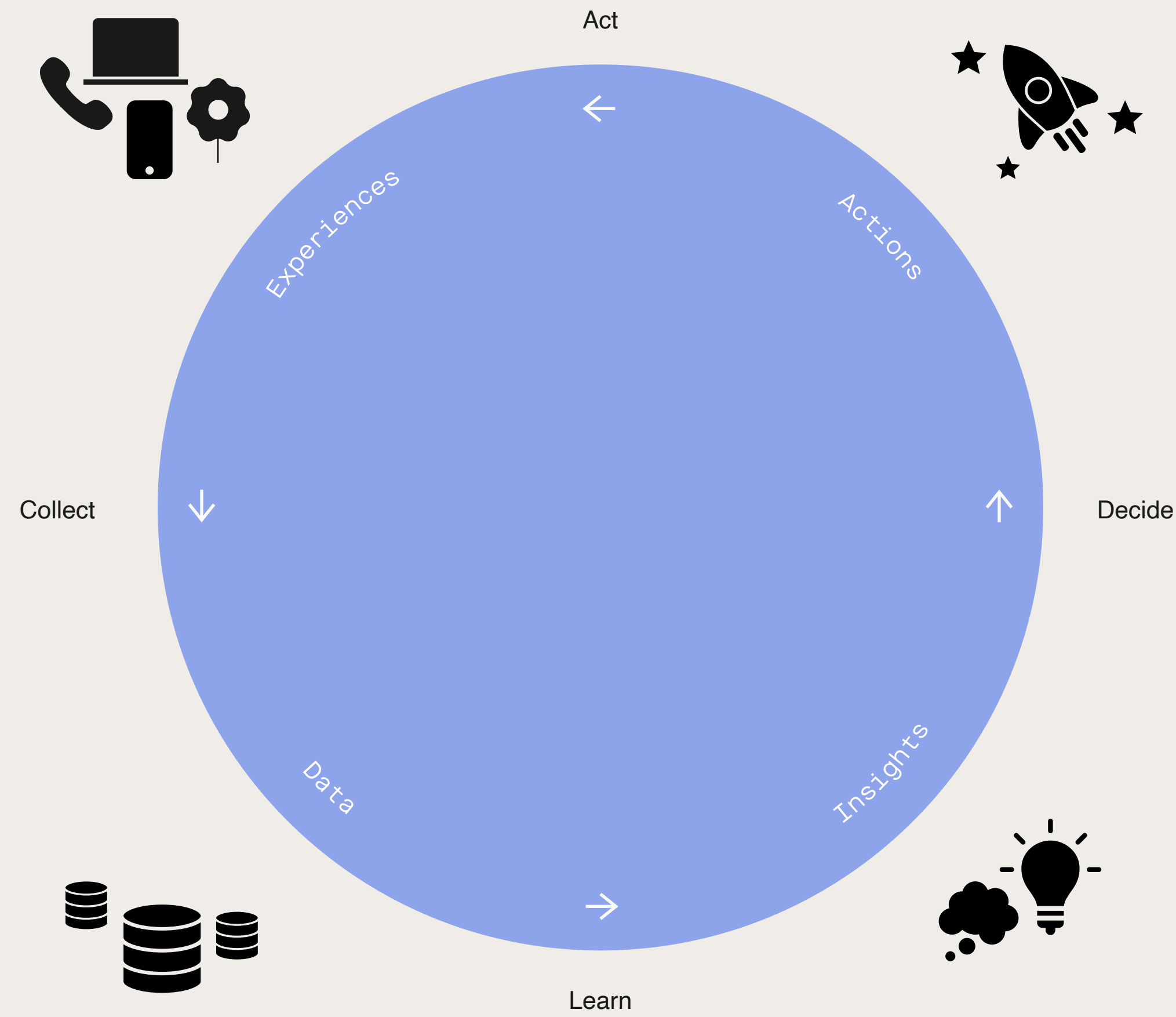
Data Driven Products & Services



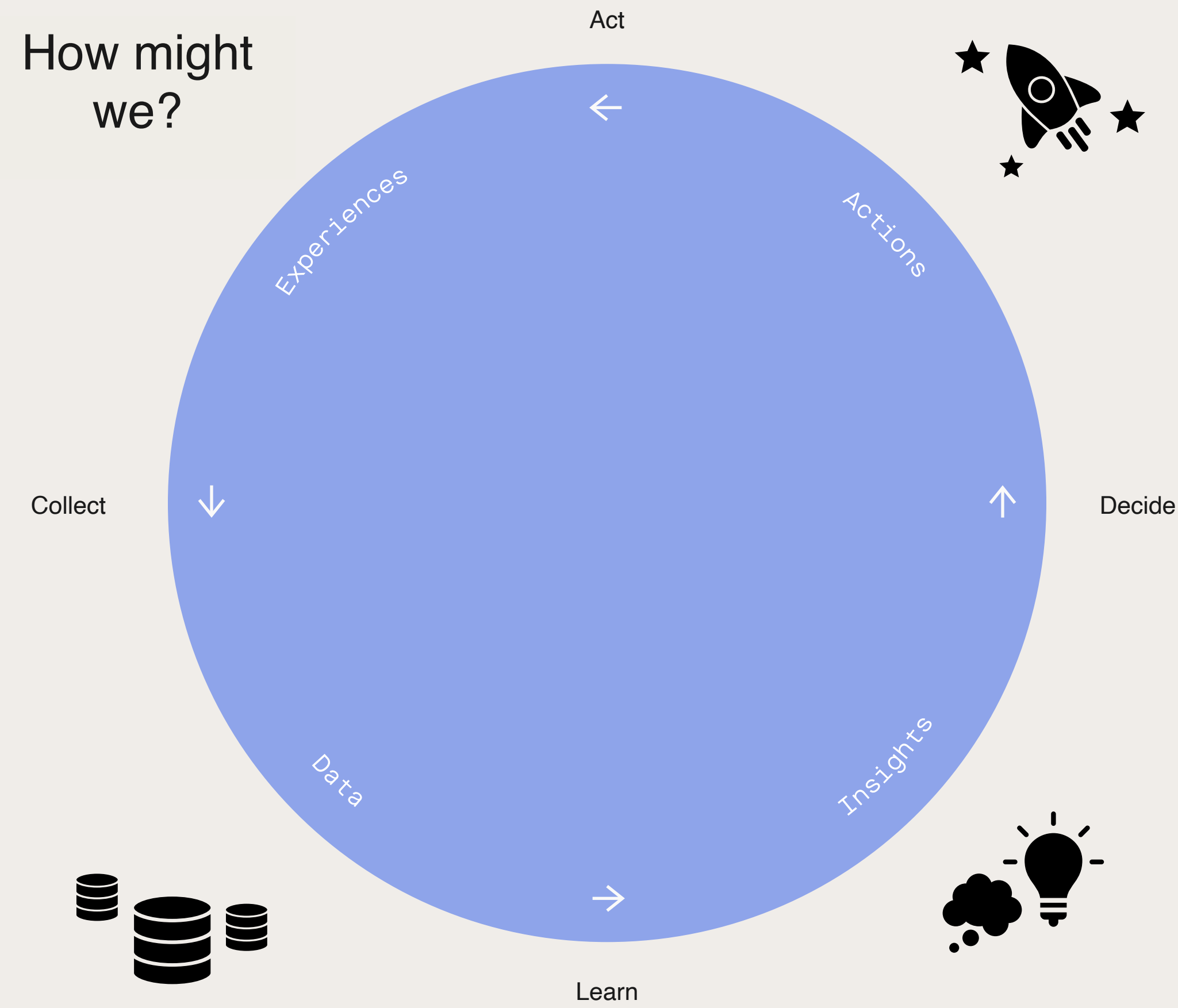
Data Driven Products & Services



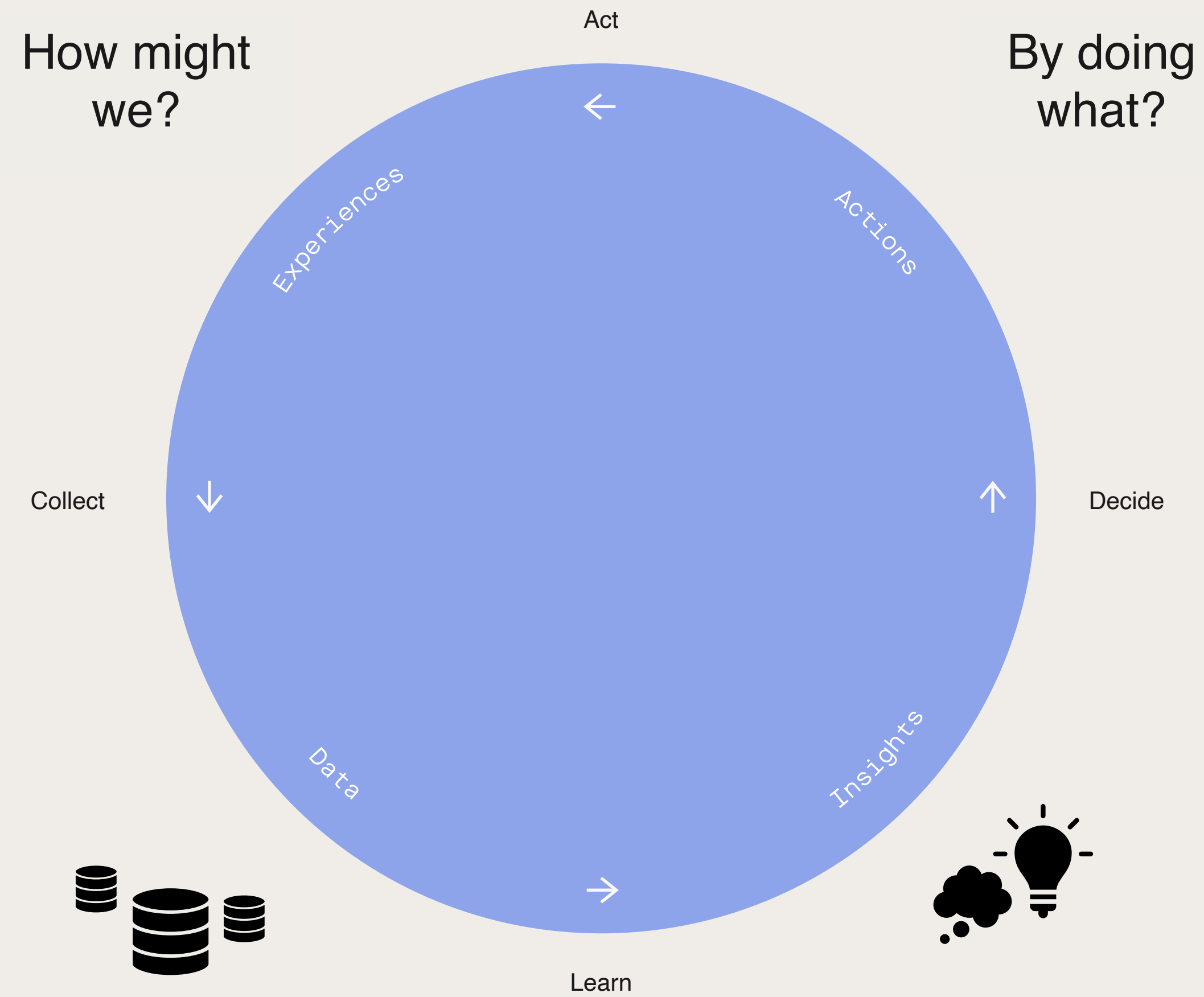
Data Driven Products & Services



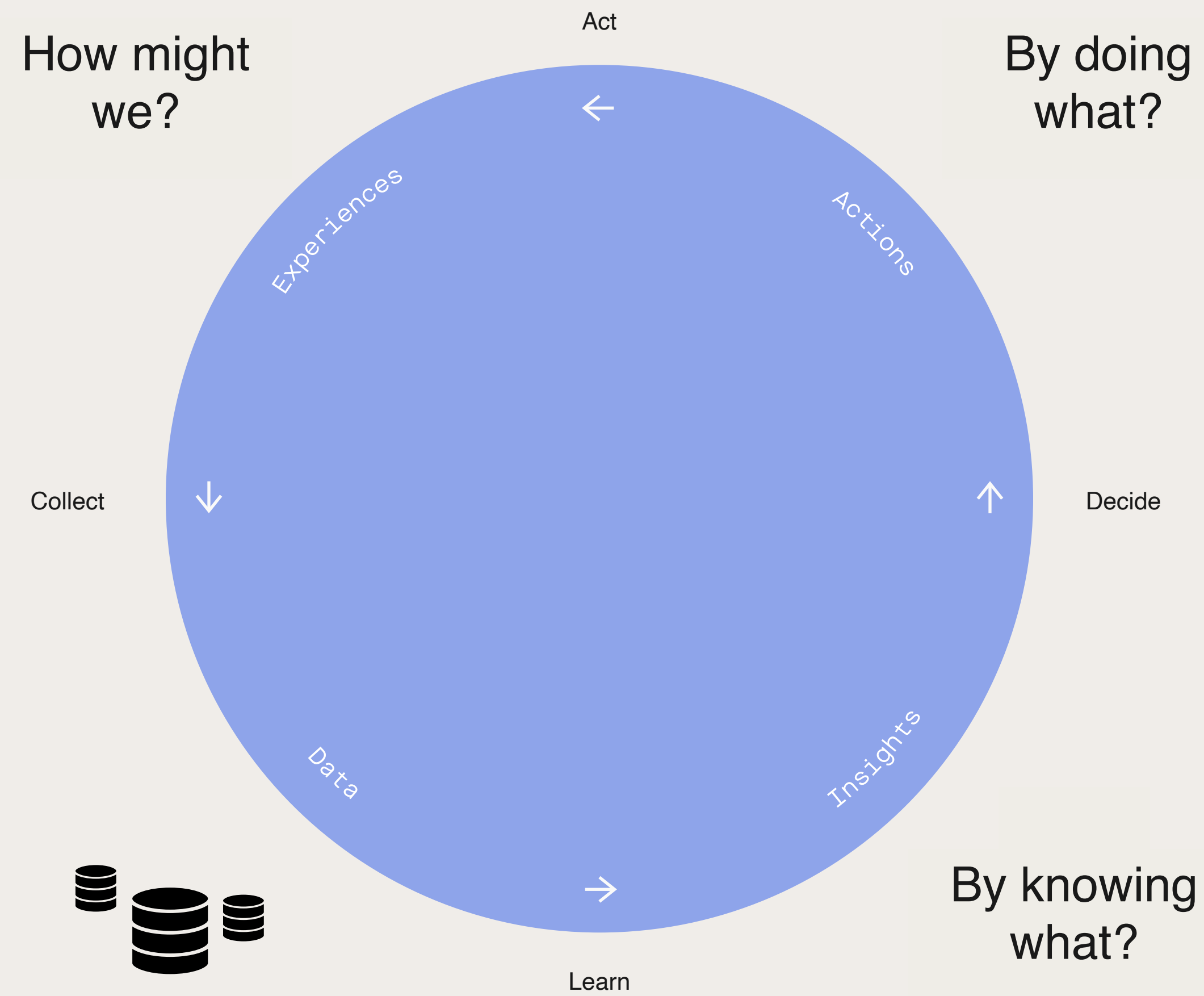
Data Driven Products & Services



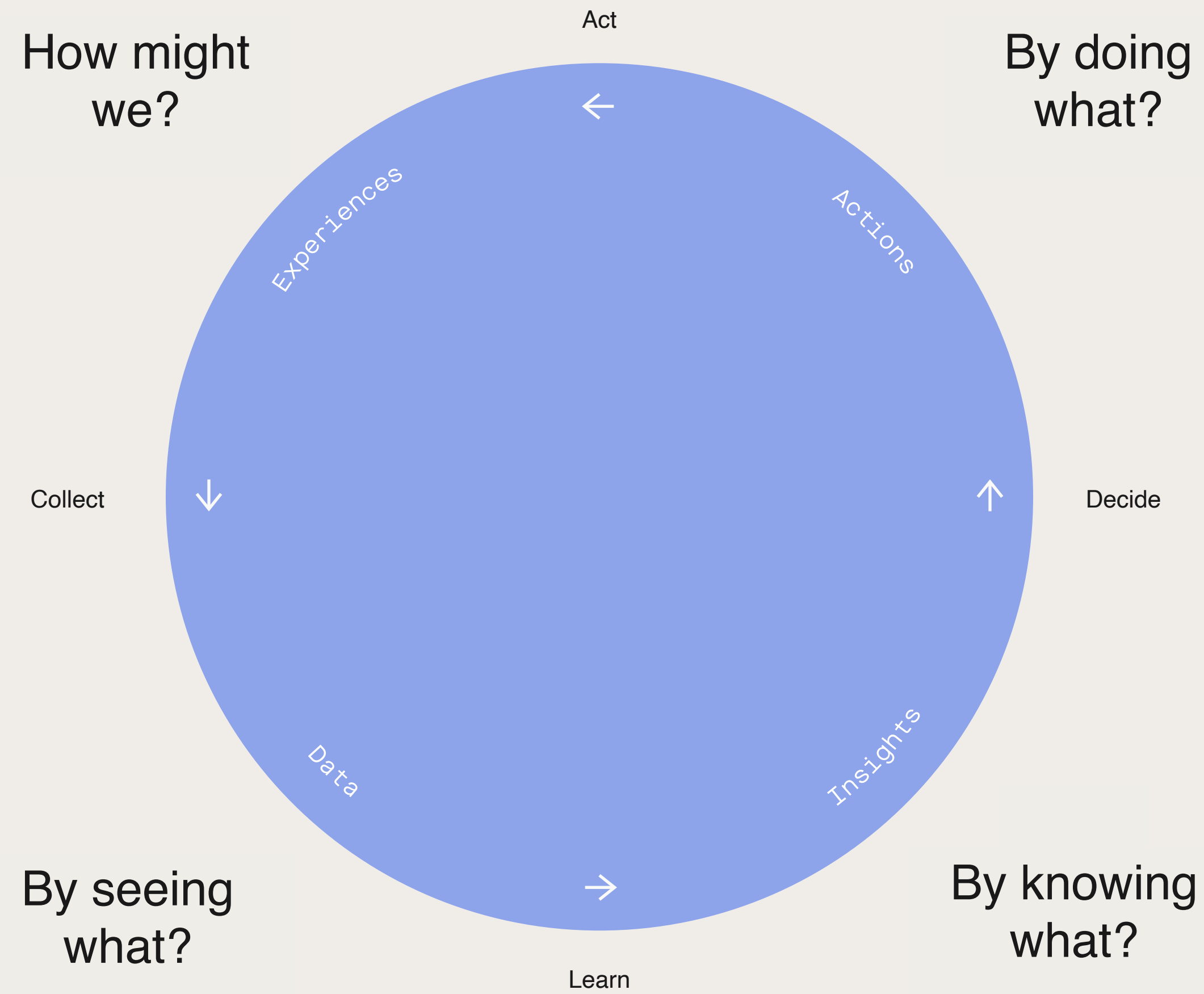
Data Driven Products & Services



Data Driven Products & Services



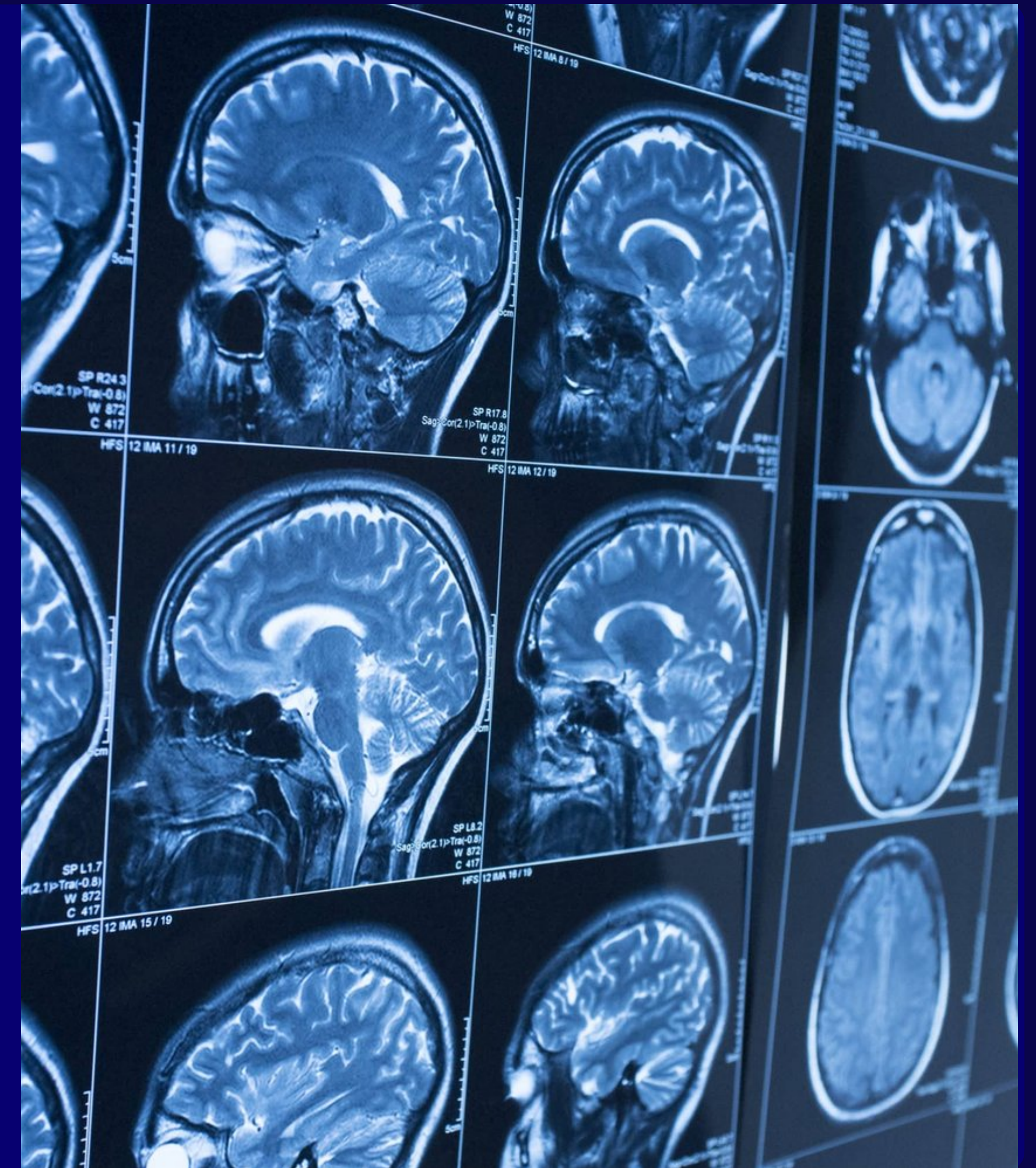
Data Driven Products & Services



RAIT

Radiologisk Artificial
Intelligence Testcenter

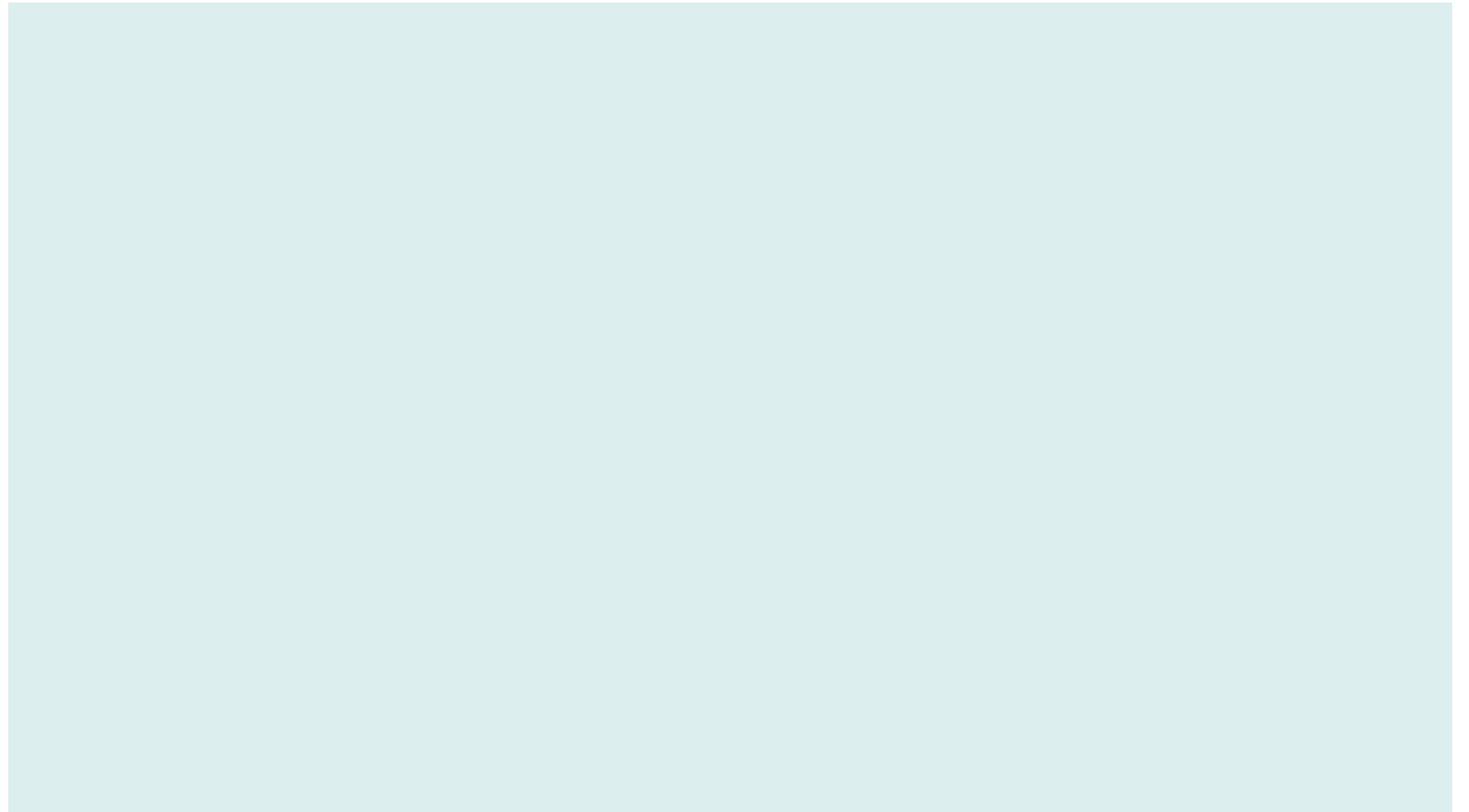
RAIT
RADIOLOGICAL AI TESTCENTER



Voter Declarations



FINALIST
2022



Citizen Proposals



Coloplast

DANISH
DESIGN
AWARD

FINALIST
2022



red dot design award



The Digital Ethics Compass

What, why and how

02

The Scandinavian design tradition is about people





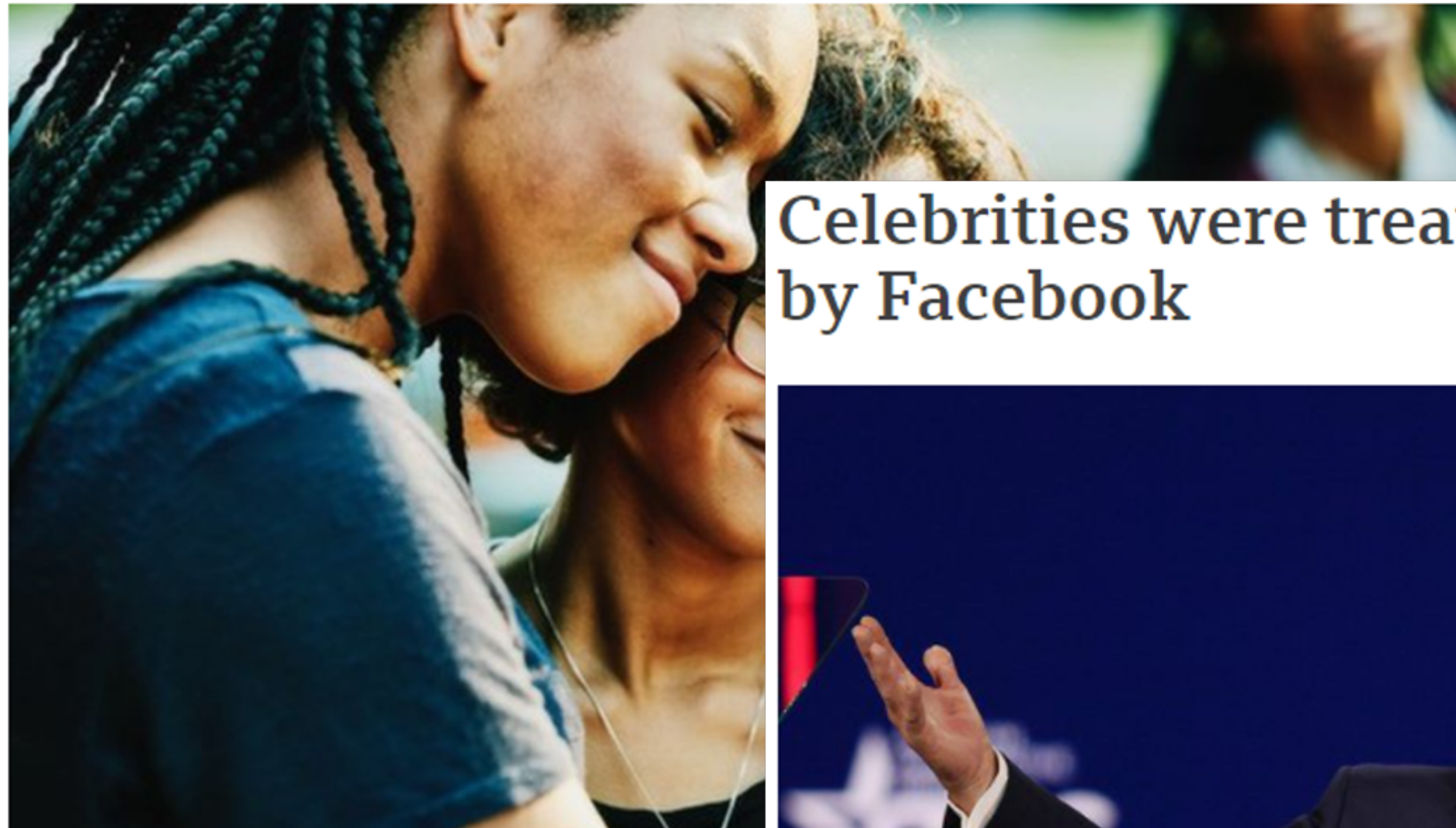




We are becoming more &
more digital and automated

We are constantly
making decisions with
ethical consequences

Facebook knew Instagram was 'toxic' for teens



According to Facebook, people's relationship with social media

Celebrities were treated differently by Facebook



19

This was programmed by someone.

Raeschell Niakya Wakiesha Sumata Latrella Sahirah Keytra
Resheda Tashenia Flisha Quitalla Kolethia Kesia Dabratzi
Snicka Chalay Rovetta Meosha Tamikka Nakia Mirmala Tanika
Jemelah Laneeda Lkiesha Sonyette Contrennia Jacinda Khadija
Ginnette Tynette Veneitte Talana Keshia Lennette Salathia
Peninnah Chanteria Roneshia Coletta Mishayla Tawana
Shamecca Lakesha Inetha Tenera Desibrace Coletha Keesha
Drwilda Shiqundia Queenlana Delinda Ayanna Malique Argirtha
Fekisha Sharnell Jamaka Tetelalisa Khepri Claretta Hairothea
Caprolanda Niakya Demetra Sumatra Neema Cleastine
Tashondria Lashon Natacha Shadelle Theresia Valkisha Bethena
Kianna Nichelle Shemika Everloyce Sharkesha Jenise Ziondrea
Latanza Noella Syretta Ghalyah Shalako Jilisa Tafreesa Sheritta
Keyah Latifah Charisa Renneda Quonish Kiyanka Tanisha
Shonta Shennelle Mandisa Tonisha Kenisha Makayla Narie
Jerrica Shontel Felisha Tizza Moniqua Lashae Tinisha Tawonda
Shanita Shonek Hazline Jazmin Shkise Tiara Shranda Sakura
Ronisha Anaijah Raeschell Sha'Shauna Gerschell Zorayah
Evaretta Malyaia Qadeera Camesha Tynisha Briahna NaTasha
Schanta Curtisa La'tonia Kalia Oryntha Mikayla Ebonee Chantel
Quentera Keziah Shekila Cludetta Aaleah Ebony Danette
Shanice Takira Sharee DeNisha Nalsya Tekena Thomeka
Malvina Laquinda Sharleene Nekasa Kwadi Ja'Tovia Rashida
Anunnaki Nashira Faizah Shayna Lethia Phelisa Dronellar
Meechala Hynifah Nikia Shiann Akllah Shamiyah Shatora
Larrika Lavetta Meosha Jaterra Zeldra Natanya Daleshawna
Shawanna Lateatha E'monie Destine Kamildh Denisha Carlette
Glenshler Deecoily Shantil Tamala Tamielya Nakeisha Tamisha
Khlana Schnika Charnell Tiyon Shantelle Jzonque Ca'tina
Joscalyn Shawnya Shalonda Ra'Nece Chalandra Taloria
Tiffanique Tanachi Jakyra Zanaysha Chieboni Aivaye Jakerria
Janieka Raenette Michel'le YeEtta Chanell Jawon Ronette
Kawanda Seechanna Denishia Senalka La-a . . . Harlow Bristol

A collage of dozens of Black names marked as misspelled by Microsoft Word's built-in spell checker. 2016, Pluralism, Deborah Roberts. Serigraph on Paper.

TECH / AMAZON / ARTIFICIAL INTELLIGENCE

Amazon reportedly scraps internal AI recruiting tool that was biased against women

The secret program penalized applications that contained the word "women's"

By [James Vincent](#) | Oct 10, 2018, 7:09am EDT

NEWS | 24 October 2019 | Update [26 October 2019](#)

Millions of black people affected by racial bias in health-care algorithms

Study reveals rampant racism in decision-making software used by US hospitals – and highlights ways to correct it.

[Heidi Ledford](#)



Black people with complex medical needs were less likely than equally ill white people to be referred to programmes that provide more personalized care. Credit: Ed Kashi/VII/Redux/eyevine



What's ethical anyway?





“The one who
is very strong,
should also be
very nice”

Pippi Longstocking,
by Astrid Lindgren



**INDUSTRIENS
FOND** FREMMEK DANSK
KONKURRENCEEVNE
The Danish Industry Foundation



Dansk Industri

petersvarre.dk

Dansk Design Center

1508TM

CHARLIE TANGO

Flip Stud!

A customer experience
company

DATAETHICS



Manyone[®]



elektronista

holo

Danske Bank

C Corti

Det Digitale Etikkompas

02. Gør I det bevidst svært for brugere at finde eller forstå information eller funktionalitet?

02. Gør I det bevidst svært for brugere at finde eller forstå information eller funktionalitet?

Digital design handler om at gøre det nemt for brugeren at finde og bruge funktioner i et produkt. Det er vigtigt at tænke på brugervenlighed og brugervenlighed. Det er vigtigt at tænke på brugervenlighed og brugervenlighed. Det er vigtigt at tænke på brugervenlighed og brugervenlighed.

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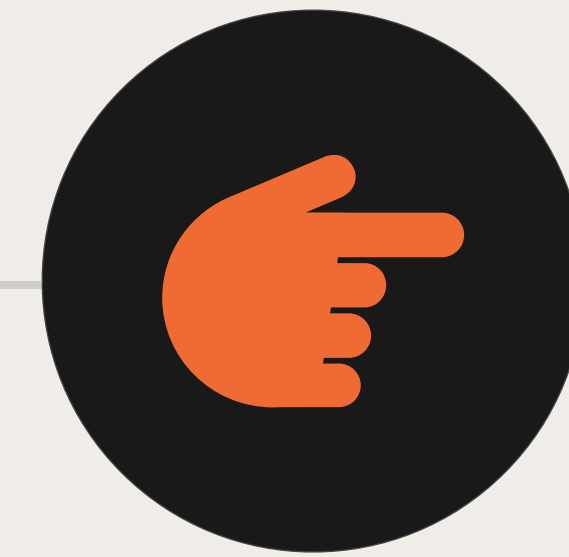




Scoping



2x workshops



Continuing
the work



KVALITET/EFFEKT

TECH. KYAL

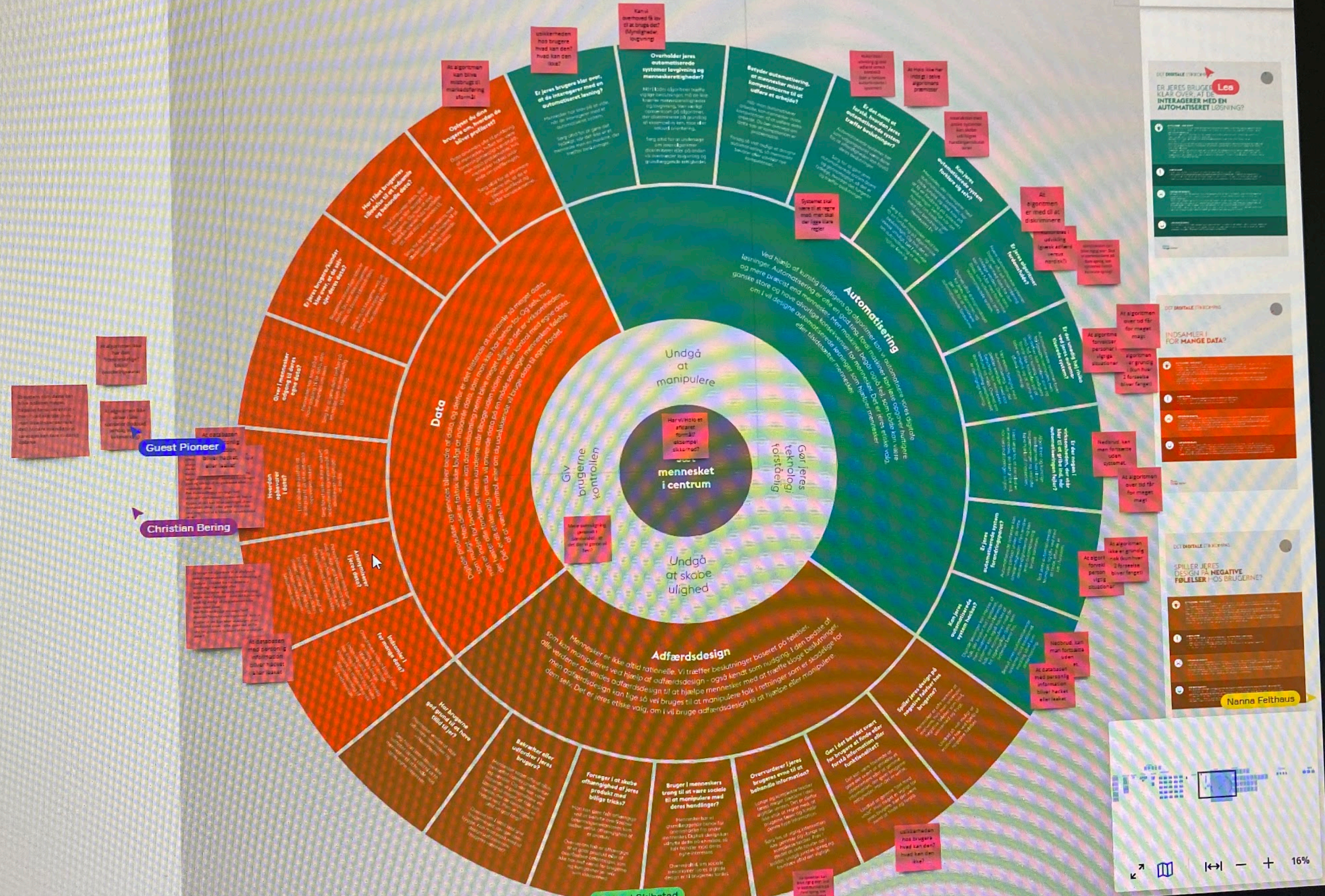
FAGPROFESJON
ERSPERVIDEN

DET DIGITALE
ETIKKOMPAS

GEMENSISTENHED
Tilværdi Produkt

BRUK AF DATA
+ Skævtal/SIFFER

CHRISTOFFER



Nanna May Felthaus



Rasmus Sanko



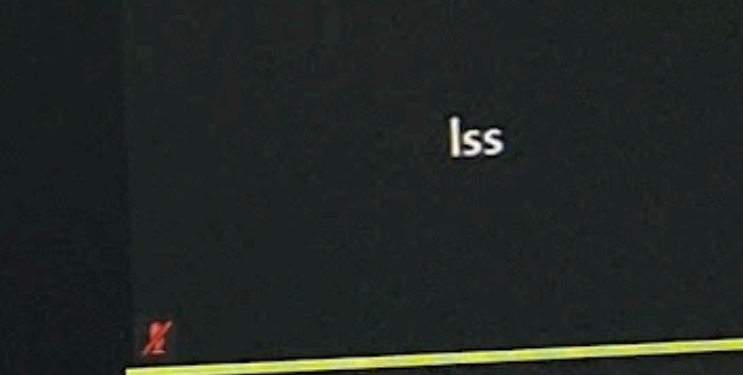
Christian Bering (Holo)



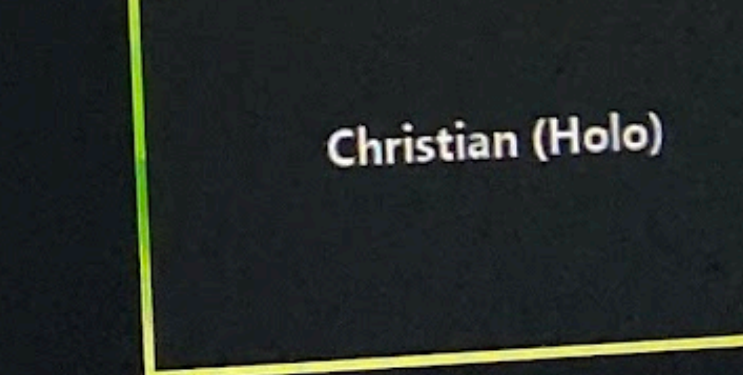
Michael Skibsted



Celina Thomsen



Iss



Christian (Holo)

DET DIGITALE CHECKUP
ER JERES BRUGER KLAR OVER AT DE INTERAGERER MED EN AUTOMATISERET LØSNING?

1. Er jeres brugere klar over, at de interagerer med en automatiseret løsning?
2. Er jeres brugere klar over, at de interagerer med en automatiseret løsning?
3. Er jeres brugere klar over, at de interagerer med en automatiseret løsning?

DET DIGITALE CHECKUP
INDSAMLER I FOR MANGE DATA?

1. Indsamler I for mange data?
2. Indsamler I for mange data?
3. Indsamler I for mange data?

DET DIGITALE CHECKUP
SPILLER JERES DESIGN EN NEGATIVE RØLE FOR JERES BRUGERE?

1. Spiller jeres design en negativ rolle for jeres brugere?
2. Spiller jeres design en negativ rolle for jeres brugere?
3. Spiller jeres design en negativ rolle for jeres brugere?

The Digital Ethics Compass is a tool that...

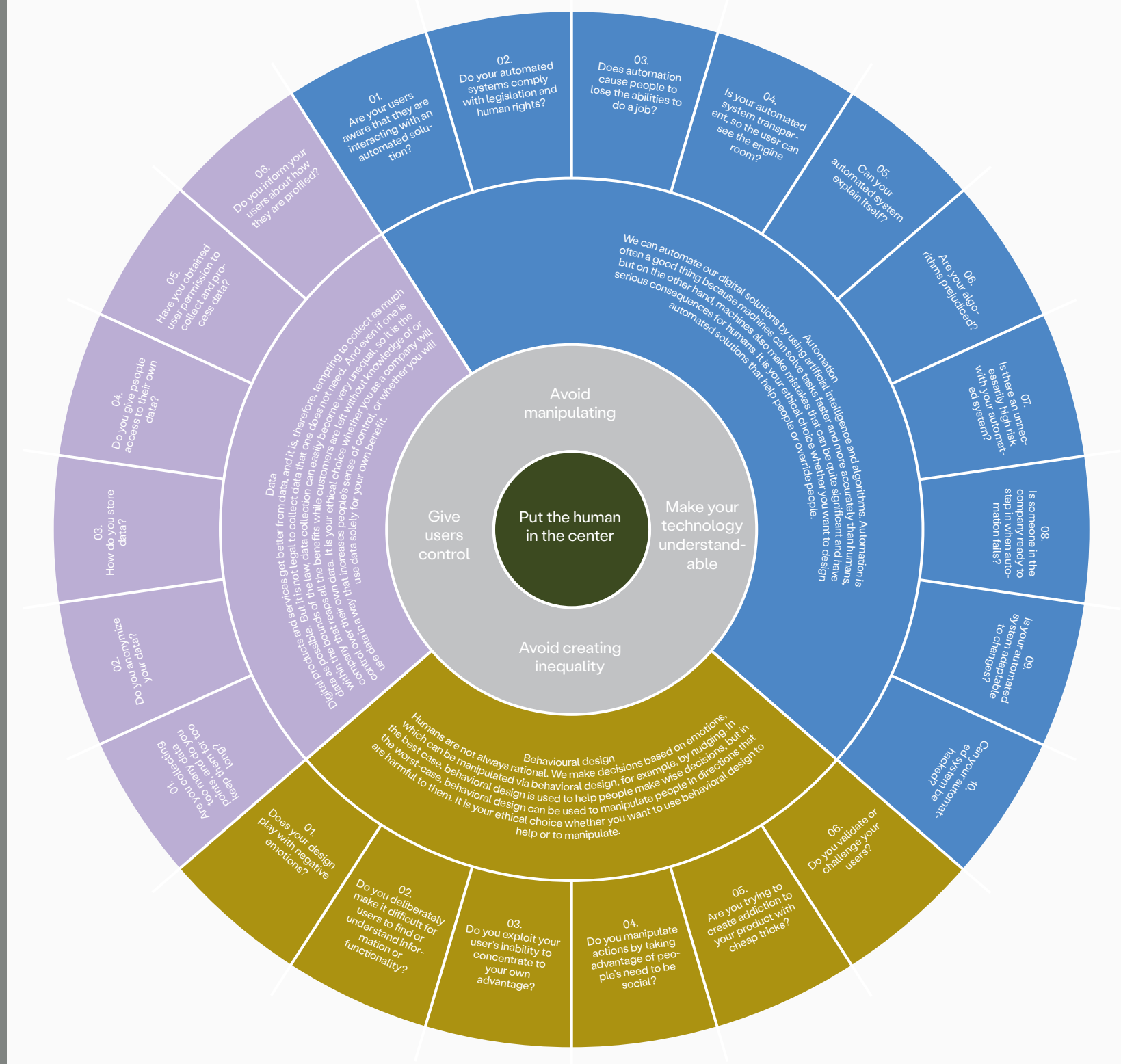
Helps companies create a shared focus on, understanding of and vocabulary around ethics

Provides companies with a framework for working with and securing an ethical focus in relation to concrete products and services

Gives us a chance to talk about ethics

The *Digital* Ethics Compass

DDC



How do you use the Ethics Navigator and the knowledge cards?

The Ethics Navigator is a checklist that helps you ask ethical questions about your digital solutions and designs. You can use it to quickly get answers to ethical questions, but it can also be included as a working tool in workshops or design courses where you want to ensure that ethics are involved in the development of the digital solution.

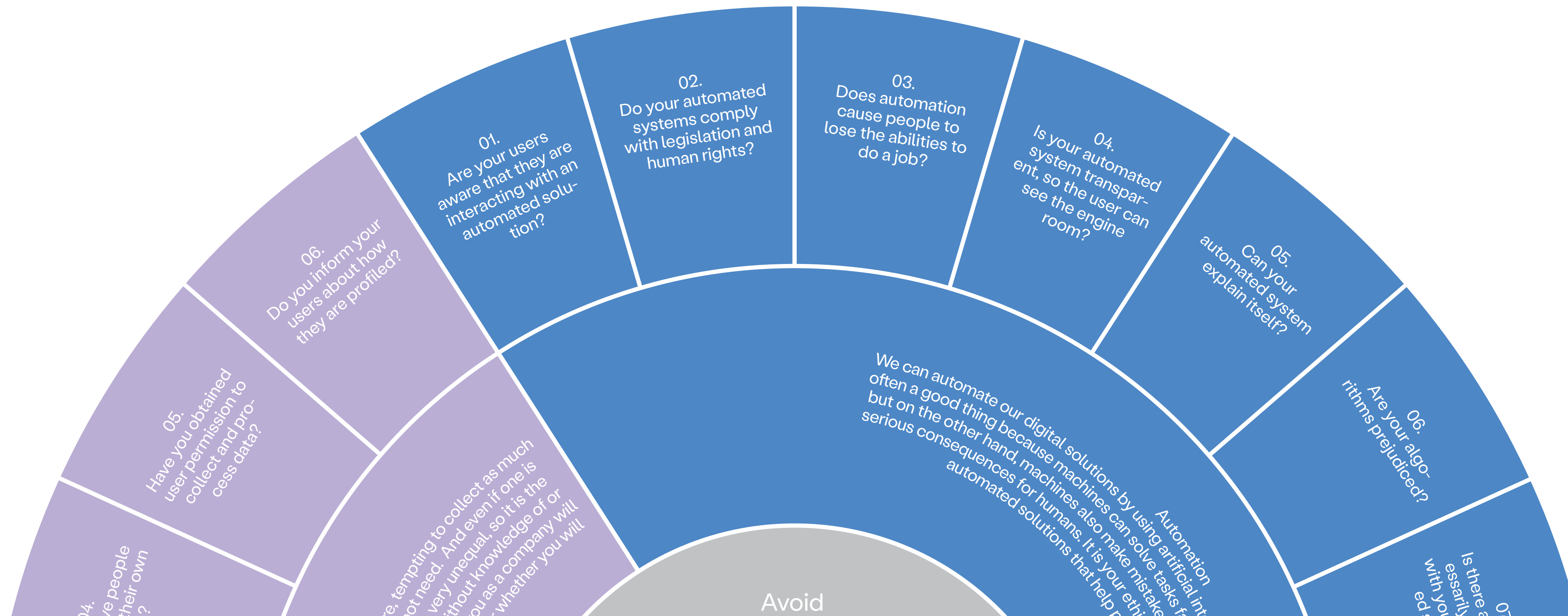
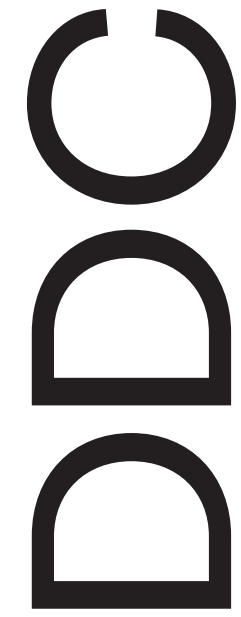
You should memorize them and always keep them in mind when working with digital solutions. All five principles are explained by an in-depth knowledge card.

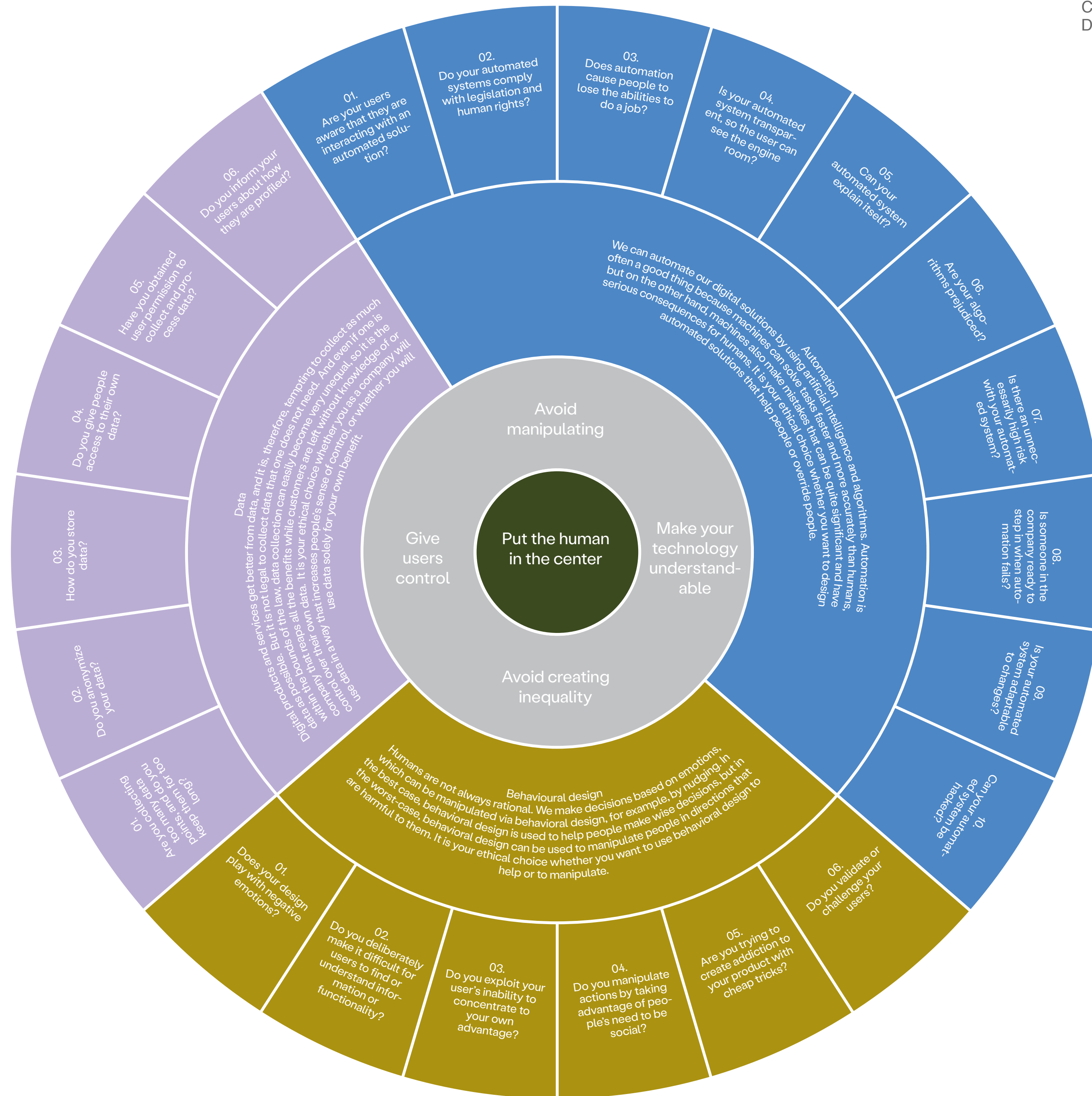
In the outer ring of the Ethics Navigator, you will find 22 ethical questions which are divided into the three categories of data, automation, and behavioral design. The questions try to challenge you to think ethics and responsibility into your digital designs. It is far from all the questions that will be relevant to your solution, but there will almost always be at least a few questions that can challenge you and set thoughts in motion. For each of the 22 questions, you will find an associated knowledge card, which elaborates on the meaning of the question, which provides concrete design recommendations, and which describes a good and a bad example from the real world.

ddc.dk

Danish Design Center

The *Digital* Ethics Compass





Give
users
control

Put the human
in the center

Make your
technology
understand-
able

But... of the law, data collection can...
bounds of the benefits while custom...
that reaps all the benefits while custom...
that their own data. It is your ethical choi...
er their own data that increases people's sense...
in a way use data solely for your own...

Give
users
control

Put the human
in the center

will
will

ed solutions
nu

Avoid
manipulating



M A I

the human
center

Make your
technology
understand-
able

and algorithms. Automation is
more accurately than humans,
quite significant and have
whether you want to design
override people.

Avoid creating
inequality

Humans are r
ch can

on emotions,
udging. In
s. br

Data

Digital products and services get better from data, and it is, therefore, tempting to collect as much data as possible. But it is not legal to collect data that one does not need. And even if one is within the bounds of the law, data collection can easily become very unequal, so it is the company that reaps all the benefits while customers are left without knowledge of or control over their own data. It is your ethical choice whether you as a company will use data in a way that increases people's sense of control, or whether you will use data solely for your own benefit.

Give
users
control

Humans are
the best at
the world



02. How do you anonymize user data?

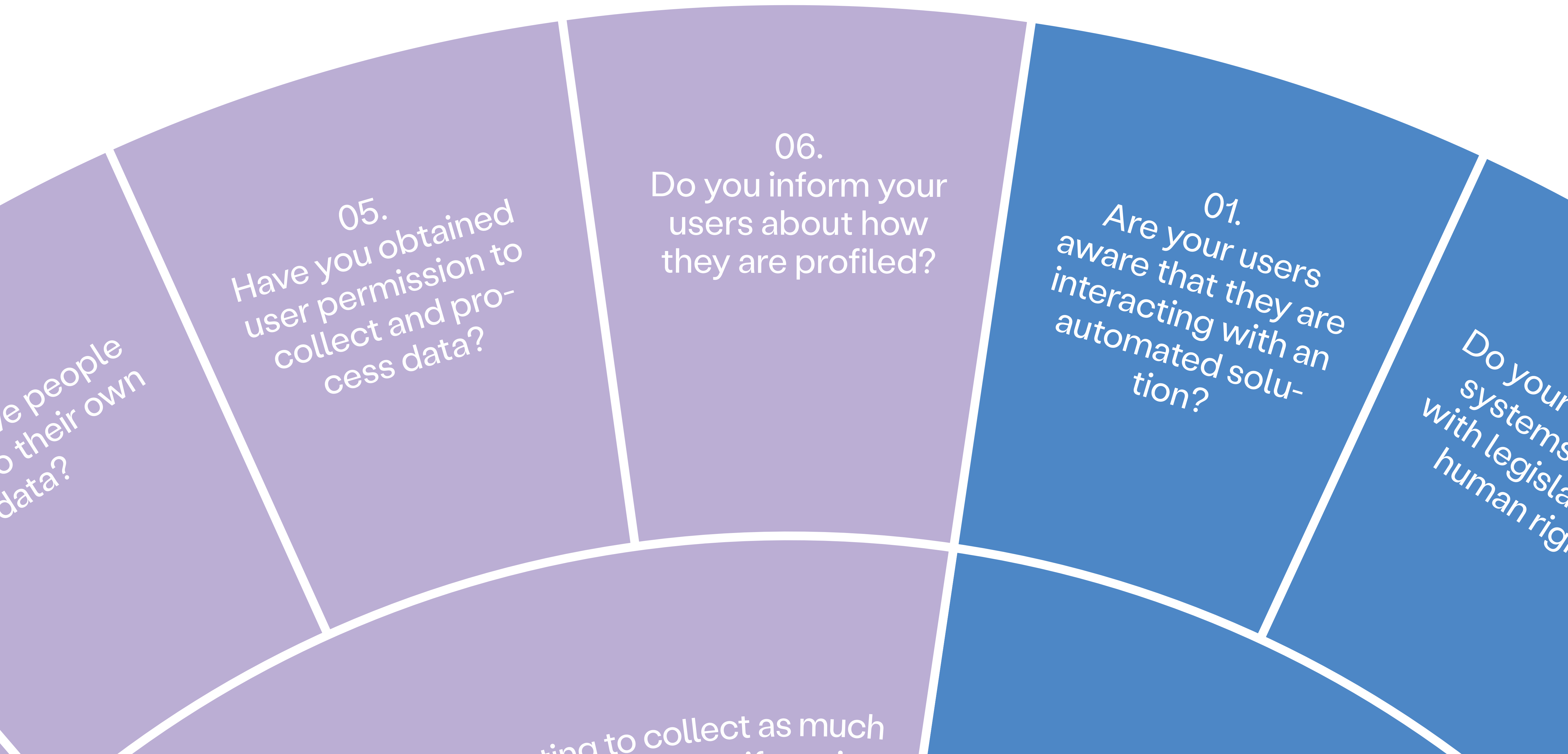
03. How do you store data?

04. Do you give people access to their own data?

05. Have you obtained user permission to collect and process data?

06. Do you allow users to delete their data?

Data
...atter from data, and it is, therefore, tempti
...t data that one does



Avoid creating inequality

Digital products
data as possible
within the
company
control of
use data

Behavioural design
Humans are not always rational. We make decisions based on emotions, which can be manipulated via behavioral design, for example, by nudging. In the best case, behavioral design is used to help people make wise decisions. In the worst-case, behavioral design can be used to manipulate people in directions that are harmful to them. It is your ethical choice whether you want to use behavioral design to help or to manipulate.

01.
Our design
negative
?

02.
Do you deliberately
make it difficult
users

03.

04.

05.
Are you trying to
create addiction to
product with
links?



01.
Does your design
play with negative
emotions?

02.
Do you deliberately
make it difficult for
users to find or
understand infor-
mation or
functionality?

03.
Do you exploit your
user's inability to
concentrate to
your own
advantage?

04.
Do you manipulate
actions by taking
advantage of peo-
ple's need to be
social?

...that
behavioral design to

04.
manipulate
by taking
of peo-
to be

05.
Are you trying to
create addiction to
your product with
cheap tricks?

06.
Do you validate or
challenge your
users?

10.
Can your automat-
ed system be
hacked?

09.
automated
adapted
changes?



Digital

are harmful to the

02. Do you and your data

01. Are you collecting too many data points, and do you keep them for too long?

01. Does your design play with negative emotions?

02. Do you deliberately make it difficult for users to find or understand information or functionality?

03. Do you exploit your user's inability to concentrate on your own advantage?

How do you store data?

Digital

are harmful to the



Novotel Paris Les Halles ★★★★★

Paris City Center, Paris – Show on map – Subway Access

31 people are looking right now

Booked 27 times in the last 6 hours

Great Value Today

Double Room

In high demand – only 7 rooms left on our site!

Risk Free: You can cancel later, so lock in this great price today!

See our last available

Very 2,454

Behavioural design

DDC



Recommendations

- Think about whether you use fear, uncertainty, and doubt as motivation in your design.
- Be especially careful with fear messages based on knowledge about the user.
- Think about whether you can turn negative communication positive.
- Be aware that false information such as "only one product left" may be false.



The bad example

Many hotel booking websites use messages that tell the user that x number of people have already booked and that you need to hurry to book at the price shown. Users are scared that the offer and dream trip will disappear or that the price will double any minute. This practice is in itself

unethical because it uses fear and insecurity to motivate users. But it can also be outright illegal if the stated deadlines and bookings are not truthful. Many booking sites have been in the spotlight of the competition authorities because of this practice.



The good example

Tobi is a Danish startup that helps parents invest their children's savings. Their message is that it is far more efficient to invest their child's savings than to leave it in a regular bank account. They use comparisons to show what this difference can mean when the children turn 18, but they do not use fear in these messages.

They use concrete examples, but they do not tell stories about how horrible it will be to be 18 years old without child savings in a world where a two-bedroom apartment in Copenhagen will cost 10 million Danish kroner (or well over a million pounds or euros).

02. Do you deliberately make it difficult for users to find information on functional

e the e
room?

in wh
mation fa

Automation

We can automate our digital solutions by using artificial intelligence and algorithms. Automation is often a good thing because machines can solve tasks faster and more accurately than humans, but on the other hand, machines also make mistakes that can be quite significant and have serious consequences for humans. It is your ethical choice whether you want to design automated solutions that help people or override people.

g
Make your
technology
rstand-
le

Automation
people to
abilities to
do a job?

04.
Is your automated
system transpar-
ent, so the user can
see the engine
room?

05.
Can your
automated system
explain itself?

06.
Are your algo-
rithms prejudiced?

Is there
essarily
with your a
ed syste

Automation
our digital solutions by using artificial
intelligence machines

• Is your algo-
prejudiced?

07.
Is there an unnec-
essarily high risk
with your automat-
ed system?

08.
Is someone in the
company ready to
step in when auto-
mation fails?

09.
Is your automated
system adaptable
to changes?

Can your
ed system
hacked

and algorithms. Automation is
tely than h

04. Can your automated system be transparent to the user can you take the user into the engine room?

05. Can your automated system explain itself?

06. Are your algorithms prejudiced?

07. Is there an unnecessarily high risk with your automated system?

08. Is some comparison step in which information is compared?

Automation by using artificial intelligence

Holo



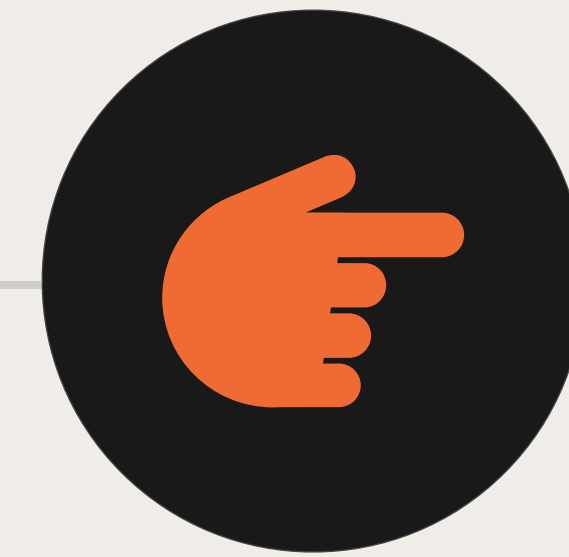




Scoping



2x workshops



Continuing
the work

The actual service or solution

THE DIGITAL ETHICS COMPASS

DESCRIBE YOUR SOLUTION

Write five lines about your (selected) digital product:

- Which problem does the product solve?
- How does the product solve the problem?
- Who are the users of the product?

Behavioural algorithm via video, audio and sensor technologies

Collecting data about the passengers with the purpose of creating a safe environment on the buses. Data is collected via video, audio and sensor systems that store behavioural data.

Over time a database will be created, saving examples of previous conclusions.


Pitfalls: Data can be personalised and thus used against the customers themselves. Discrimination based on data and behaviour. Emotional and direct marketing etc.

Danish Design Center

20 questions to get started


20 questions from the ethics professor

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20 questions to get started

20 questions from the ethics professor


DDC




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Does your solution represent a future you want to strive towards? Why / why not?

DDC



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DDC

20 questions to get started

20 questions from the ethics professor


DDC



Danish Design Center

Does your solution represent a future you want to strive towards? Why / why not?


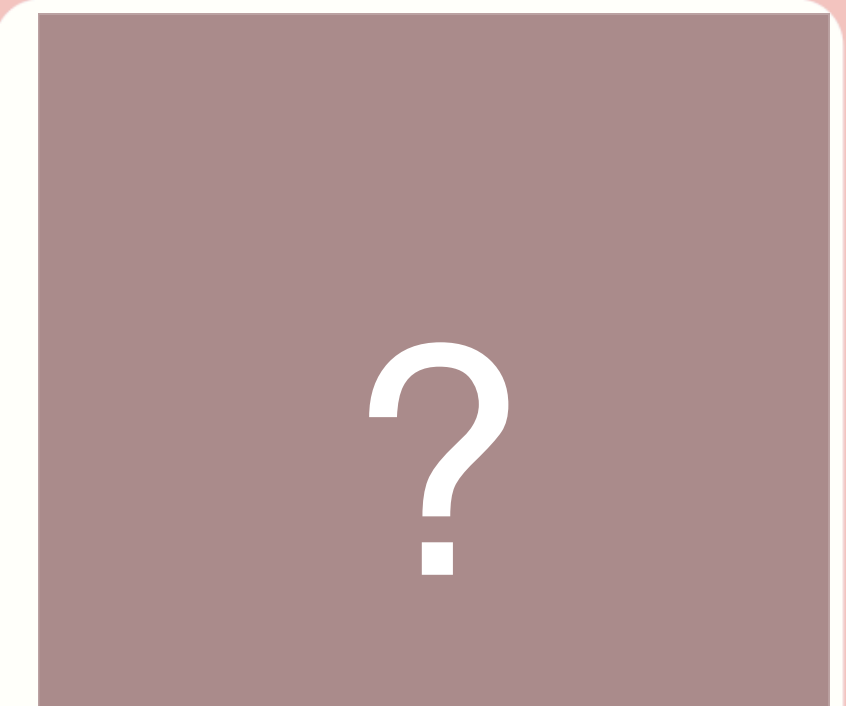

DDC



Danish Design Center

Could your solution be a part of an episode in Black Mirror (a dystopian science fiction series)? Try to imagine the plot

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Who is affected... or excluded from?

THE DIGITAL ETHICS COMPASS

STAKEHOLDERE EXERCISE

Direct

Users, designers,
administration, purchasers

Stakeholder
The passenger

Stakeholder
Safety driver

Stakeholder
**Supervision /
Remote
Control Center**

Indirect

Neighbors, friends, family,
groups of interest, society

Stakeholder
**Authorities /
legis**

Stakeholder
Clients / PTAs

Stakeholder
Relatives

Stakeholder
**Police /
emergency**

Stakeholder
**People living
in the areas we
operate**

Excluded

Disabled, poor, not near
relations

Stakeholder
**People that do not
Comply with our
travel policy**


How would you
users rate your
service? Best /
Worst?

THE **DIGITAL ETHICS COMPASS** **GAME BOARD**

Stakeholder

Relatives

Rating



Ethics principles

**Avoid
creating
inequality**

Write a **review**

Danish Design Center


How would you
users rate your
service? Best /
Worst?

THE **DIGITAL ETHICS COMPASS** **GAME BOARD**

Stakeholder

Relatives

Rating



Ethics principles

**Avoid
creating
inequality**

Write a **review**

This is great, thank you :)

Danish Design Center


How would you
users rate your
service? Best /
Worst?

THE **DIGITAL ETHICS COMPASS** **GAME BOARD**

Stakeholder

Relatives

Rating



Ethics principles

**Avoid
creating
inequality**

Write a **review**

Danish Design Center

How would you
users rate your
service?
Best/worst

THE **DIGITAL ETHICS COMPASS****GAME BOARD**Write a **review**

Hi Holo.

I am writing to you because I have had a bad experience with my son who has been using your buses. I have been contacted by the police. They say that your algorithm has seen him do something illegal on the bus. I can assure you that it wasn't him. The event they talk about happened Sunday morning at 4:30, but my son was away with me that day. I think it's completely insane that your algorithm does not have the correct overview of the people using your service, and thereby can mistake people and information of such importance. As a result, my son has now had a very bad experience with the police. I hope you will strongly consider improving your product. At least we're done using your bus service!

Regards

Danish Design Center

THE DIGITAL ETHICS COMPASS

DIAGNOSIS EXERCISE

Identify the **three most critical risks**
your solution can cause

1.

Short term: Biased behaviour - treating someone unfairly.

Long term: Being part of creating an unfair society.
Bad for business.

2.

Short term: Misuse of data.

THE DIGITAL ETHICS COMPASS

ACTION EXERCISE

Describe what you **will do** to remedy the most critical risks.
Select **what kind of action it is**.

1. More specific contracts with suppliers, specifying focuses and actions with regards to the risk of bias.

Organization

Legal

Business model

Technology

Design

Other

2. Secure a continued focus on the risk on biased behaviour in Holo.

Outputs

Ethics manifest

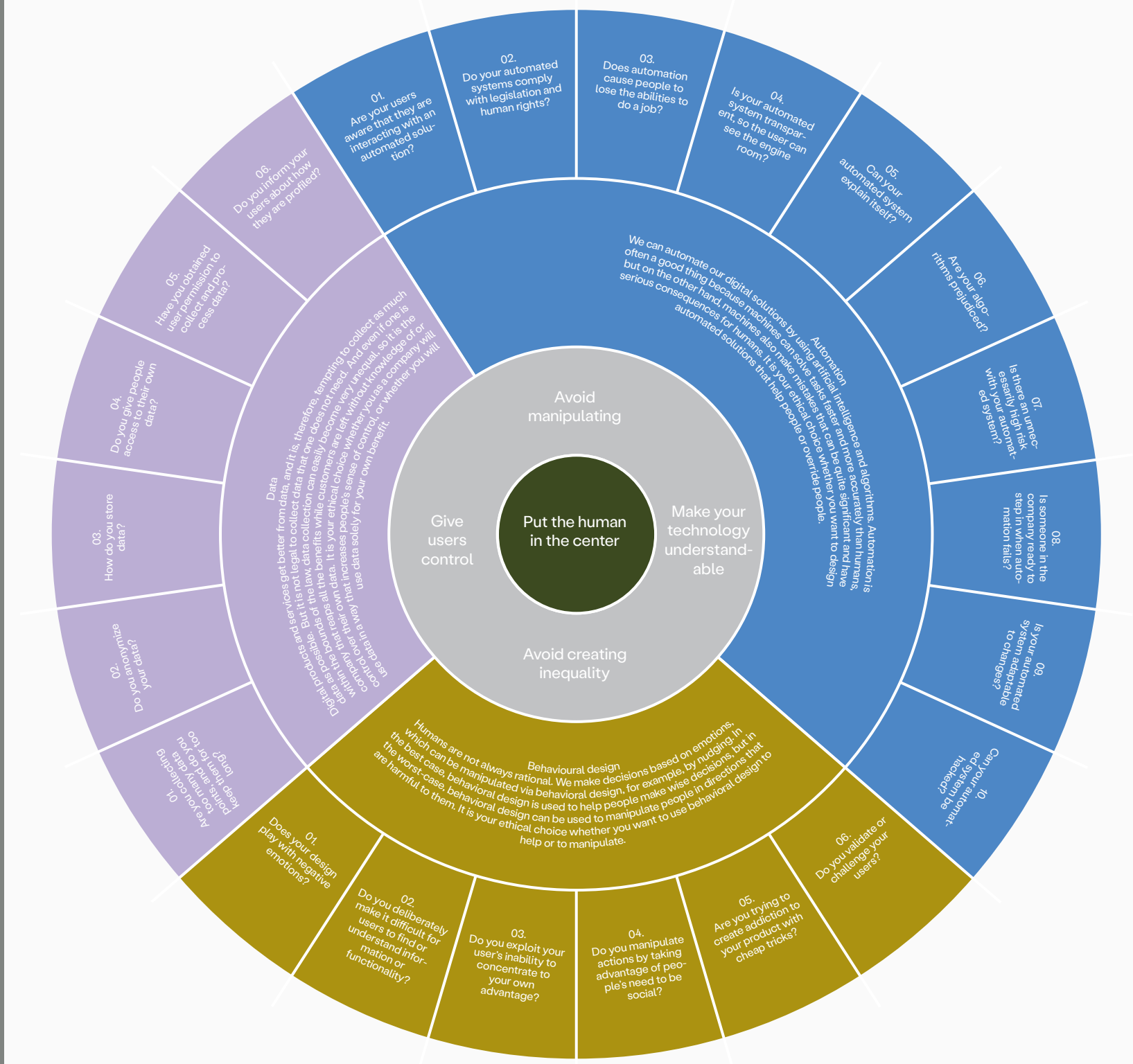
Preparing for ethics certificates

Roadmap for working with ethics

Starting up a process for working with ethics

The Digital Ethics Compass

DDC



How do you use the Ethics Navigator and the knowledge cards?

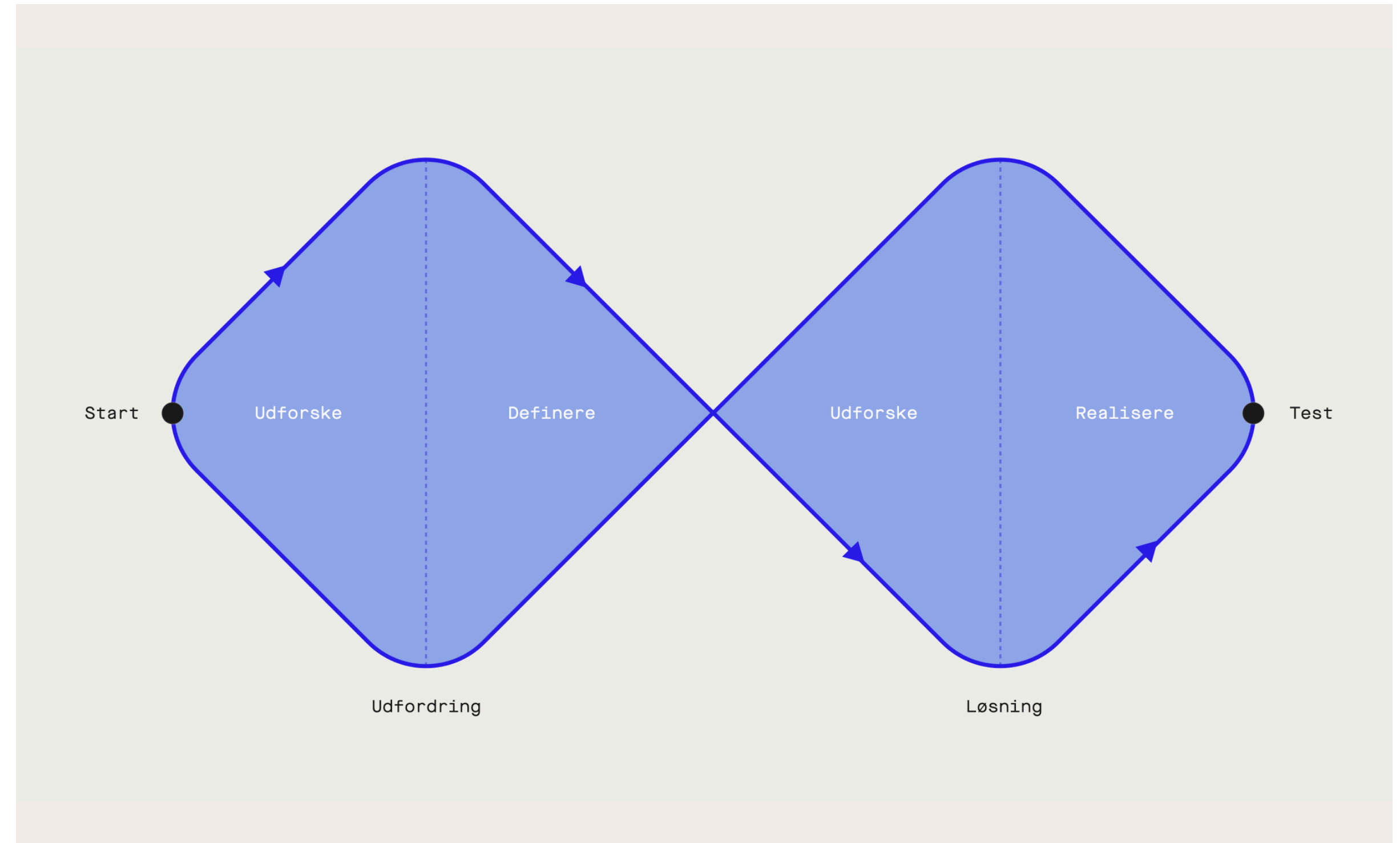
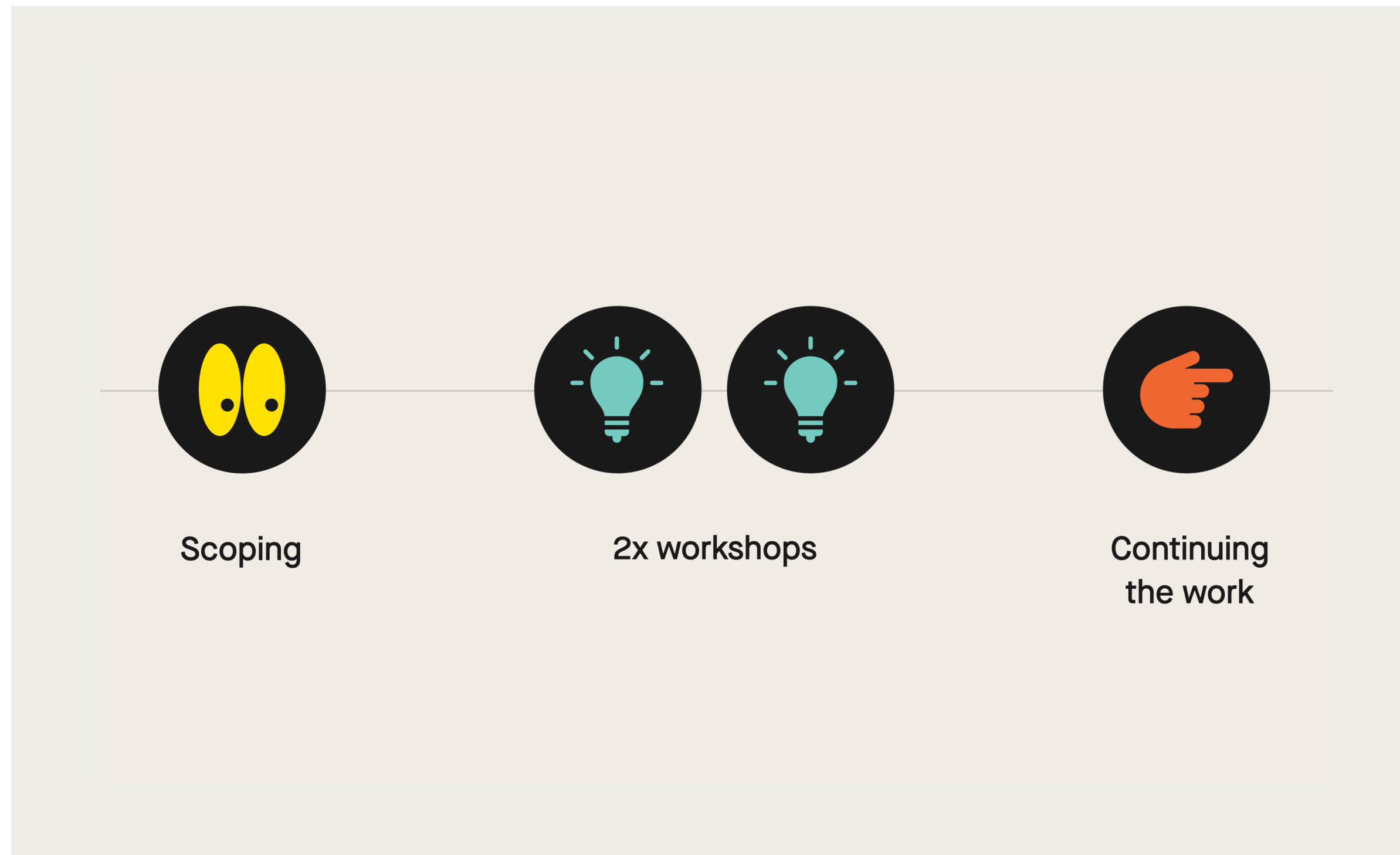
The Ethics Navigator is a checklist that helps you ask ethical questions about your digital solutions and designs. You can use it to quickly get answers to ethical questions, but it can also be included as a working tool in workshops or design courses where you want to ensure that ethics are involved in the development of the digital solution.

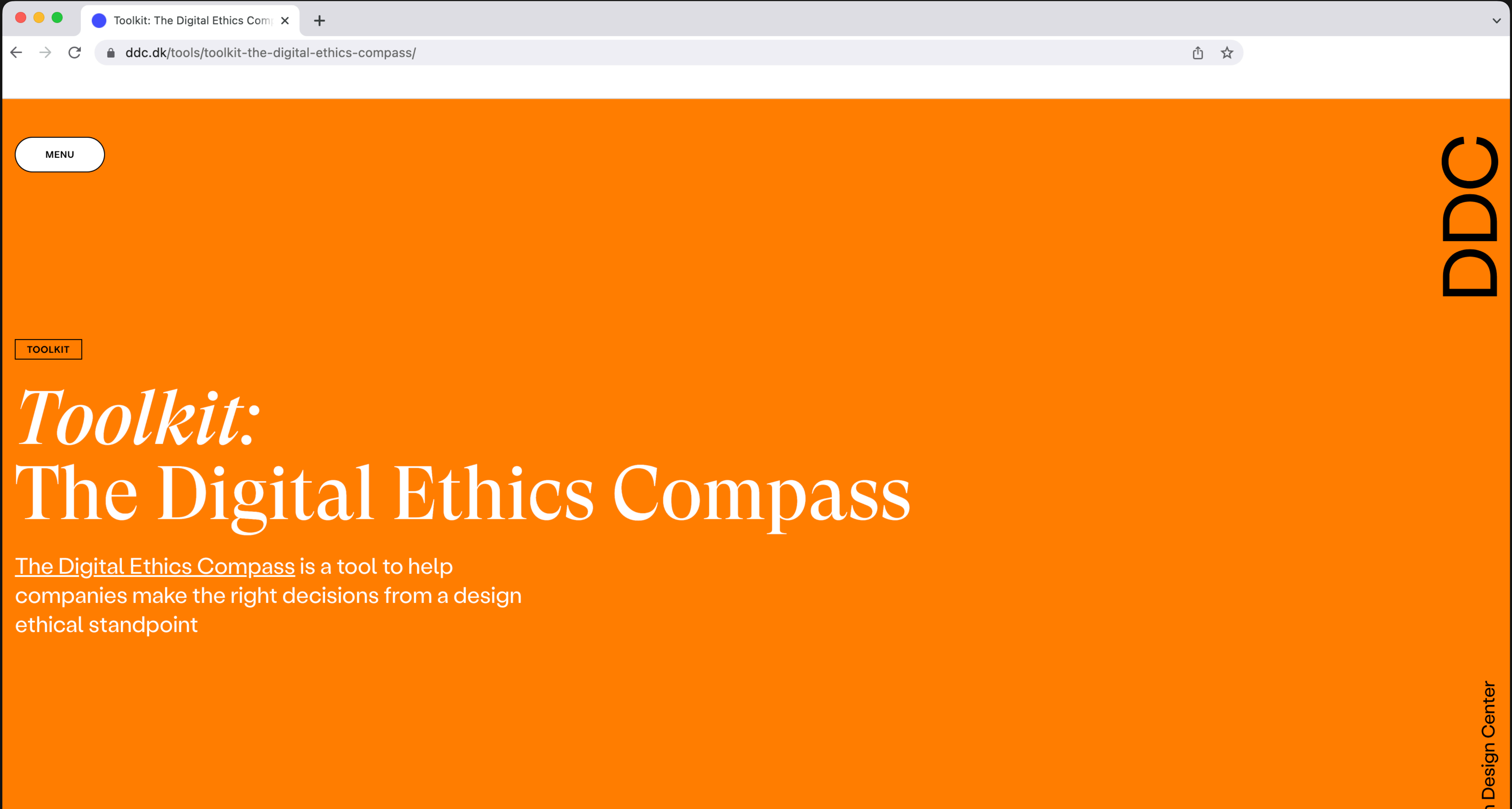
You should memorize them and always keep them in mind when working with digital solutions. All five principles are explained by an in-depth knowledge card.

In the outer ring of the Ethics Navigator, you will find 22 ethical questions which are divided into the three categories of data, automation, and behavioral design. The questions try to challenge you to think ethics and responsibility into your digital designs. It is far from all the questions that will be relevant to your solution, but there will almost always be at least a few questions that can challenge you and set thoughts in motion. For each of the 22 questions, you will find an associated knowledge card, which elaborates on the meaning of the question, which provides concrete design recommendations, and which describes a good and a bad example from the real world.

In the middle of the Ethics Navigator, you will find the five basic principles of responsible and ethical digital design.

So, what now?





MENU

TOOLKIT

Toolkit: The Digital Ethics Compass

The Digital Ethics Compass is a tool to help companies make the right decisions from a design ethical standpoint

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Thank You

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