

# TEKOÄLYN HALLINTAMALLIT

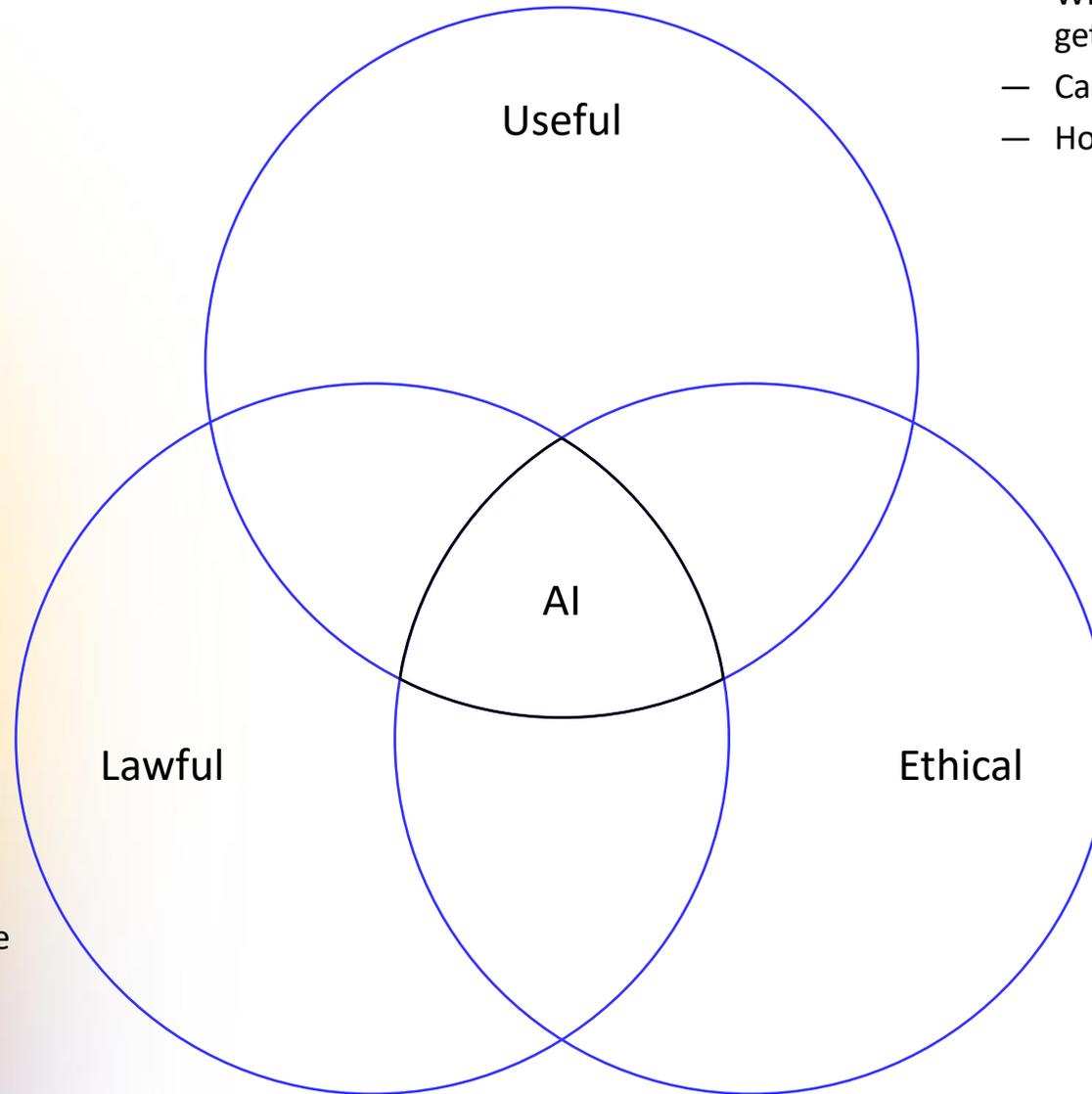
Vastuullisuus pitää rakentaa osaksi toimintaa  
ideasta toiminnan alasajoon asti

9.9.2022, Green ICT – huippuseminaari, VALO Hotel Helsinki

# Challenges of AI

Doubts in any of these can prevent AI project to even start!

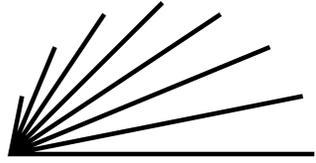
- Can we make decisions like this?
- Can we use data like this?
- Do we want to take legal risks?



- What kind of benefits do we get from it?
- Can we even build it?
- How much does it cost?

- Does it have ethical concerns?
- Can we control identified issues?
- Do we want to be seen like this?





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**COMPANIES DO NOT EVEN  
START AI PROJECTS!**

Why are they so careful?

# Algorithmic operations can fail

## Deliveroo scored riders with algorithm to prioritize orders

Italy: Court ruled against Deliveroo's rider algorithm, citing discrimination.



## Zillow AI algorithms estimated prices for home-flipping business

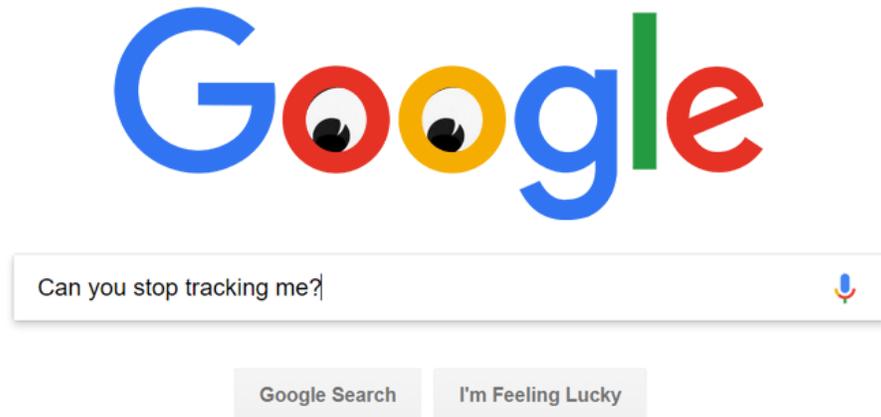
USA: Zillow reports \$880M loss on failed home-flipping business.



# Data processing can fail

## Google tracks everyone with personal surveillance

At 2020, Google was fined €100 million for tracking people illegally with cookies without a valid consent.



## H&M collected data about employees' families, religions, and health

At 2020, H&M, €35.3 million fine at Hamburg, Germany.



# Software projects can fail

## Sundhedsplatform aimed to deliver a modern EHR to Denmark

Denmark: After five years of dissatisfaction with the Health Platform: Scrap it!



## Helsinki aimed to modernize payroll system

Finland: Unpaid workers taken out high-interest payday loans and second-hand trading to cover daily expenses.



# Business purpose can fail

## Clearview AI collects public photos across internet to recognize faces

Europe: Several DPAs rule against Clearview AI's illegal photo processing, set fines and order deletion of data.



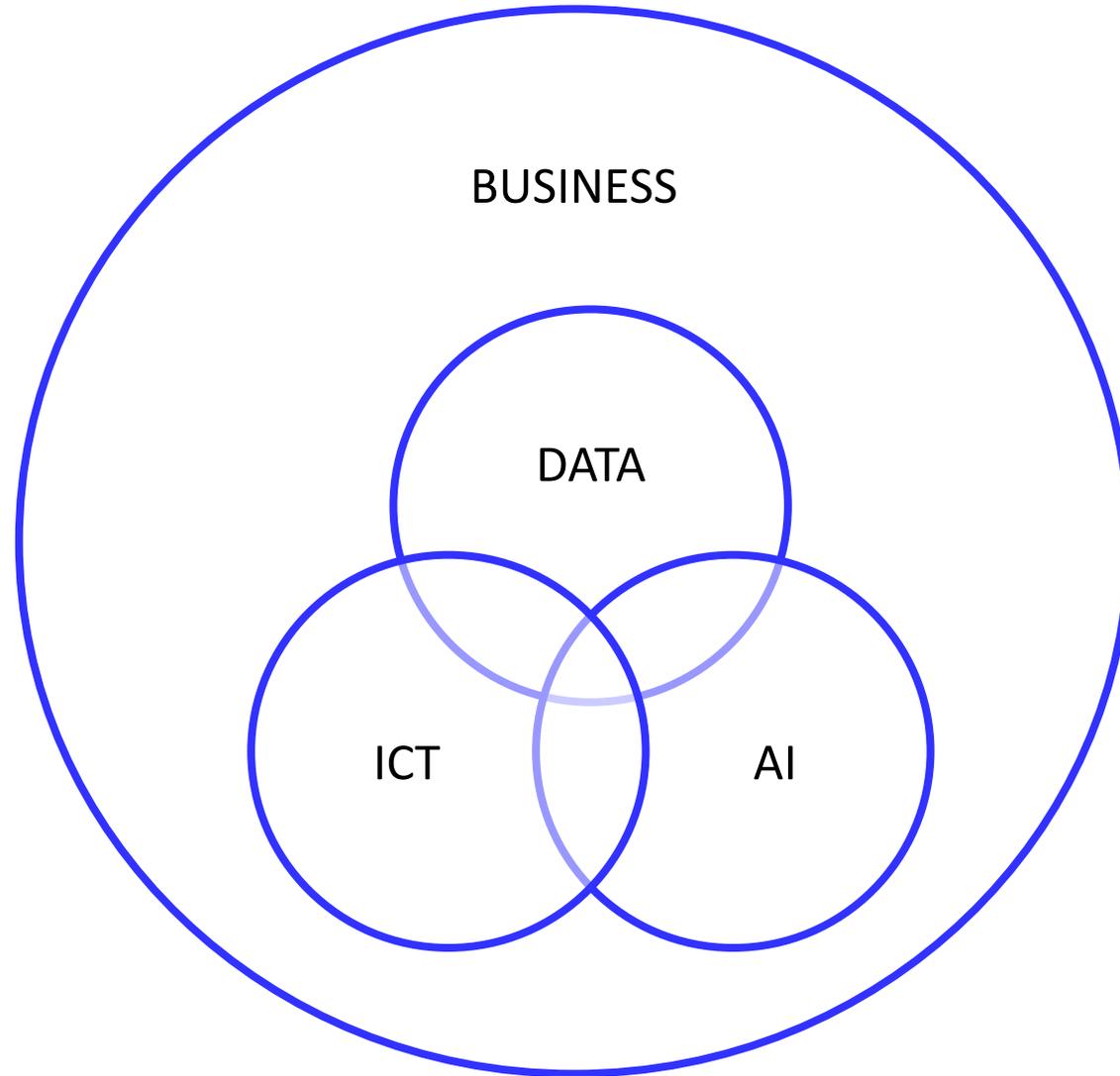
## Pentagon aims to analyse drone footage by classifying images of objects and people

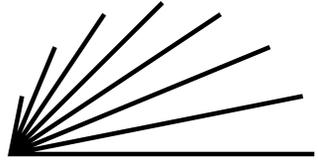
USA: Google to end controversial military AI work after employee backlash.



# Challenges of AI

Problems in any of these areas can make AI fail!



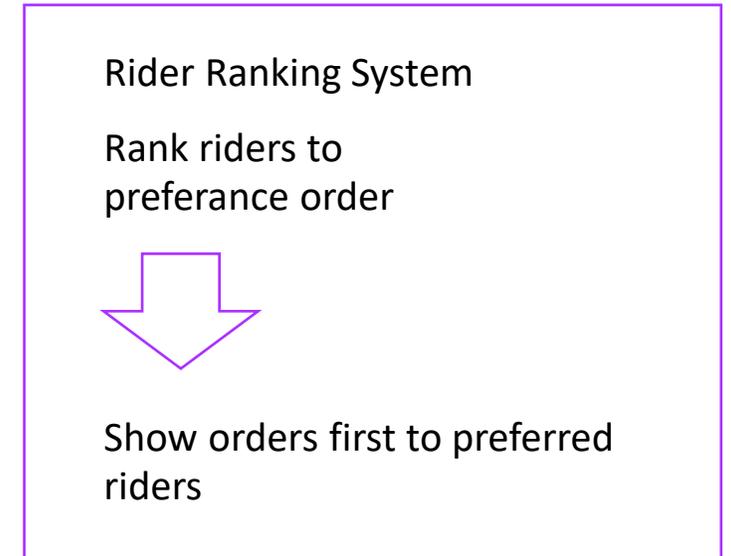
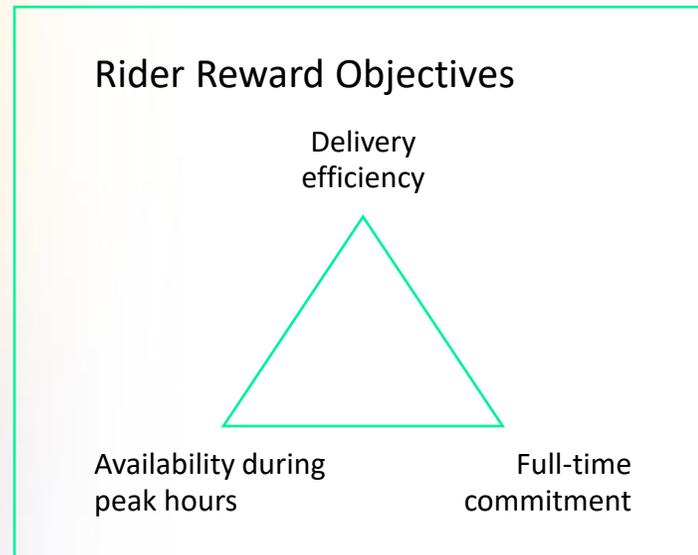
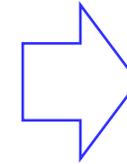
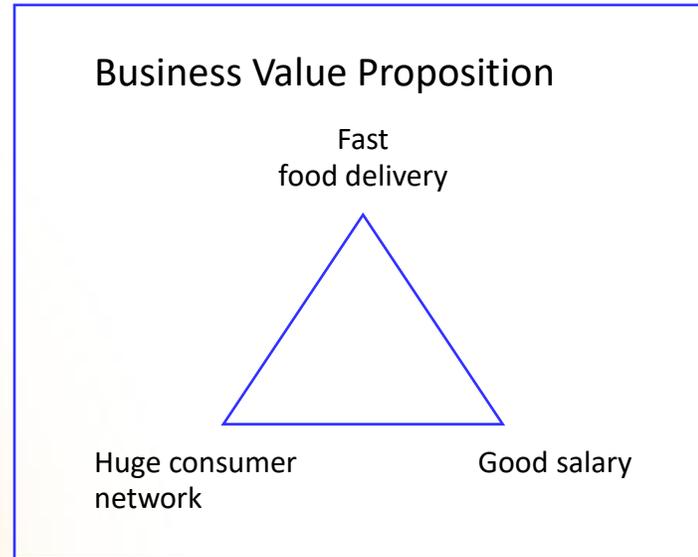


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**YOUR AI IS FAILING!**

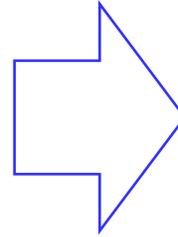
Why this is happening?

# Deliveroo business model and rider-algorithm



## Rider-ranking algorithm violates labour laws

In January 2021,  
an Italian court ruled  
against Deliveroo's rider-  
ranking algorithm, citing  
discrimination.



Deliveroo representatives noted  
the company does not agree with the  
ruling and confirmed the shift-ranking  
system linked to the algorithm is no longer  
in use in the market.



# Complex challenges in seemingly simple rider ranking

Trade-off  
reward efficient young  
males vs punish single  
parent mothers

Compliance  
to labour and other laws

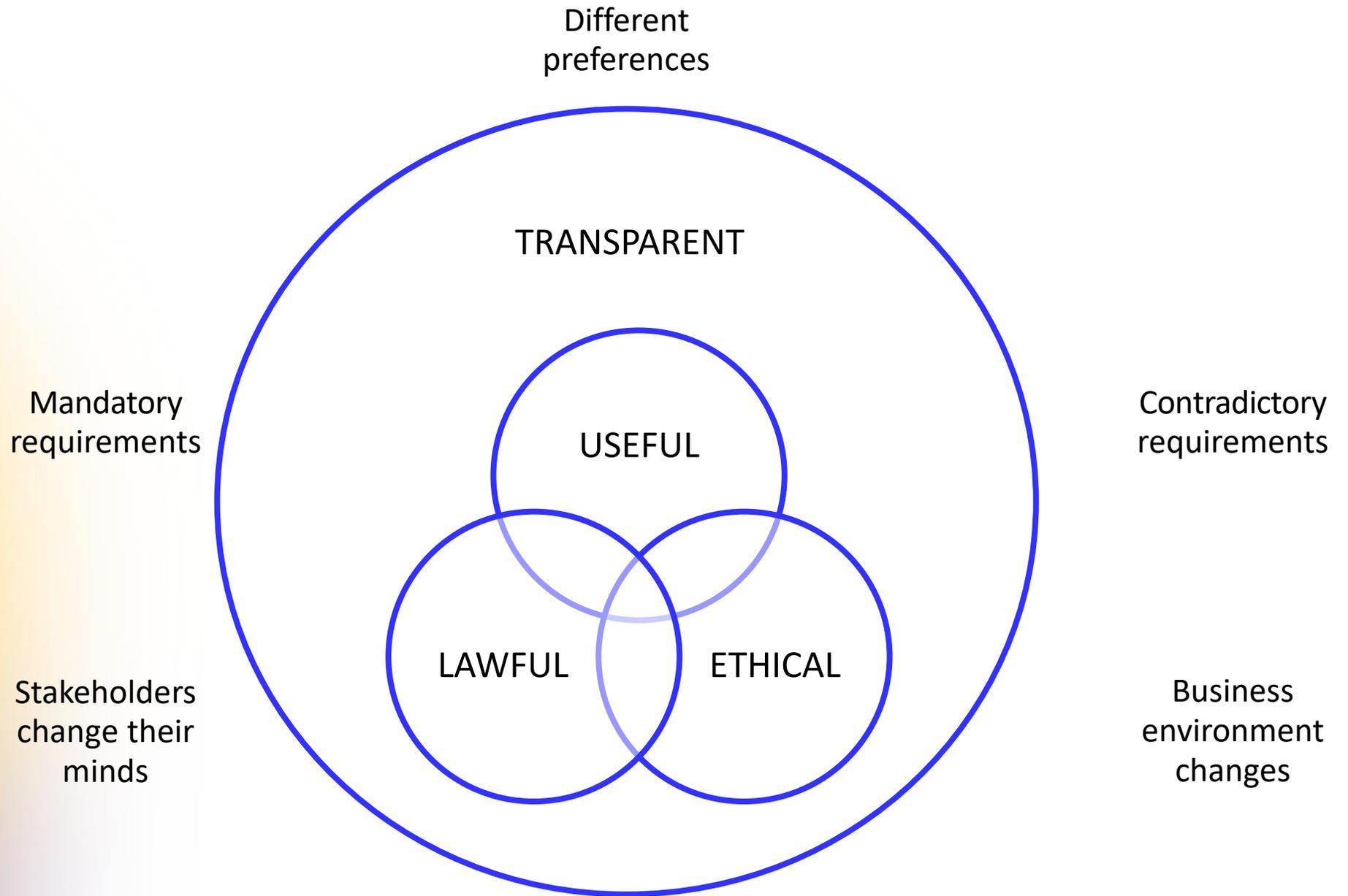
Transparency  
to data and algorithmic  
decisions

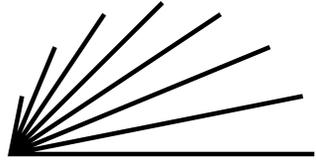
Contradictions  
rider as partner vs  
rider as employee



Responsible AI is a multi-dimensional dilemma

The devil is in the details!



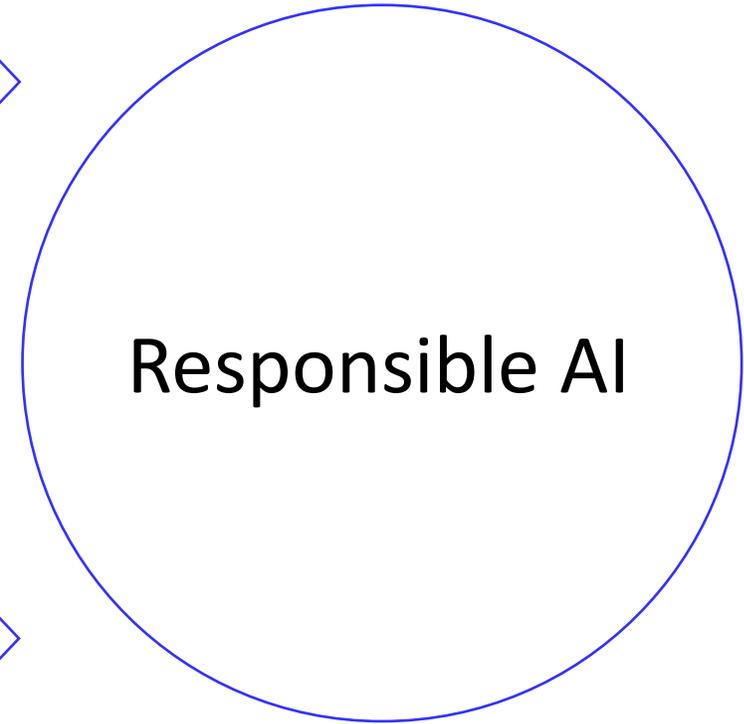
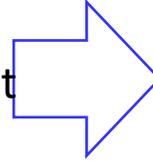


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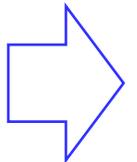
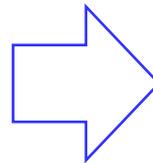
HOW TO MAKE COMPLEX  
AND FAILING AI IDEAS AND  
PROJECTS WORK?

Because the problem  
is so complex

Govern **end-to-end lifecycle** from  
AI business idea to final phase-out

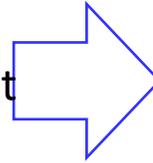


Governance must **balance utility,  
ethics and compliance**  
with multi-disciplinary expertise



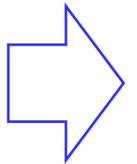
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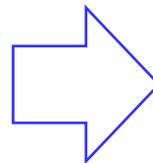


- Start from business case design.
- You often can't fix stuff that should not have been built in the first place.

Responsible AI



Governance must **balance utility, ethics and compliance**  
with multi-disciplinary expertise



- Build multi-disciplinary expertise.
- You need to understand details and their relations to each other.



Session 3-1: What Data and AI High Performers Are Doing Differently? The Research Might Surprise You



<https://cdoiq2022.org/>

→ Show Agenda

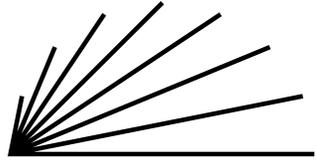
## AI maturity: Mastering the craft

<p><b>Champion AI as a strategic priority</b></p> <p>for the entire organization, with full sponsorship from leadership</p>	<p><b>Invest heavily in talent</b></p> <p>to get more from AI investments</p>	<p><b>Industrialize AI tools and teams</b></p> <p>to create an "AI core"</p>	<p><b>Design AI responsibly, from the start</b></p>	<p><b>Prioritize long and short-term AI investments</b></p>
			04	05

Accenture research findings seem to agree with Siili's advises

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What does AI governance  
mean in practice?

## AI Governance and Auditing-Project

We are part of a research program lead by a consortium of Finnish universities, public institutions, and private companies – AI Governance and Auditing (AIGA).

The Siili's AIGA project research focus is to investigate how to identify, design, implement, and use ethically and legally acceptable, transparent AI solutions for sustainable business value.

HYBRID-SEMINAR – JOIN TO LEARN&DISCUSS

<https://ai-governance.eu/>

<https://ai-governance.eu/final-seminar/>

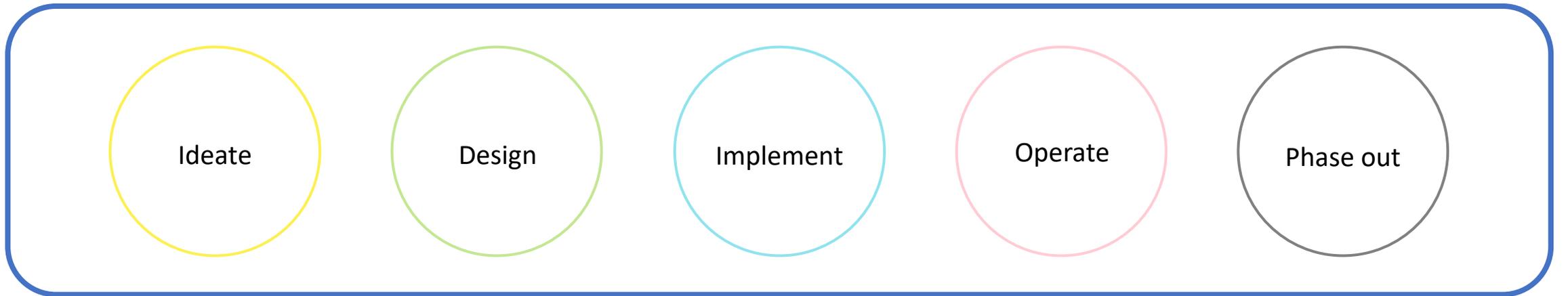


AIGA Partners: University of Turku, University of Helsinki, DAIN Studios, Loihde Advisory, Solita, Siili Solutions, Zefort, OP Group, and the Finnish Tax Administration.



# GOVERNANCE

“Do the right things”



“Do the things right”

# MANAGEMENT



**You need this!**

## BUSINESS TRANSFORMATION LIFECYCLE

STRATEGY

PLAN

OPERATE

IMPROVE

PHASE OUT

**Business transformation can create value!  
ICT-driven projects tend to fail!**

Ideate

Design

Implement

Operate

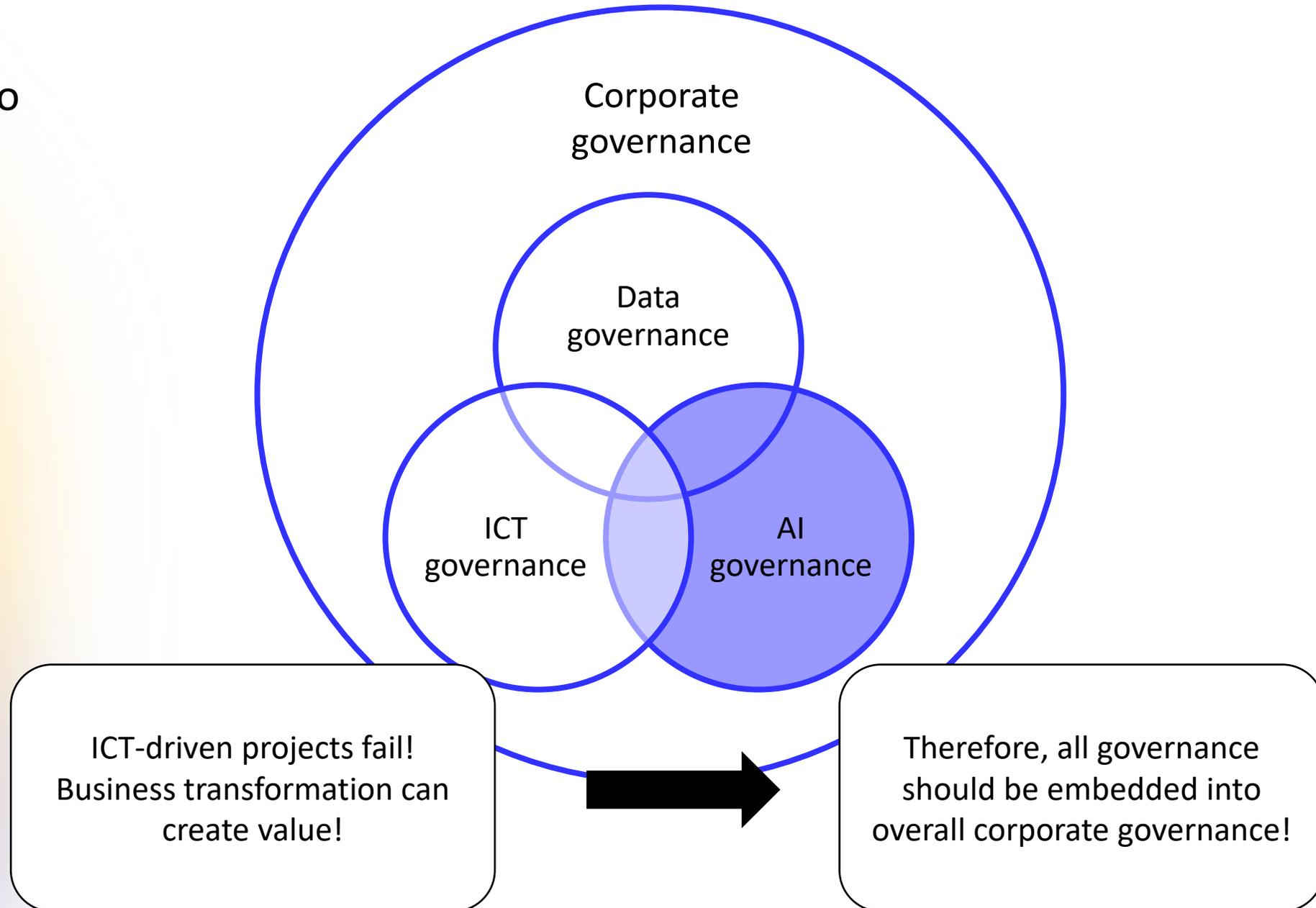
Phase out

## AI SOLUTION DEVELOPMENT LIFECYCLE

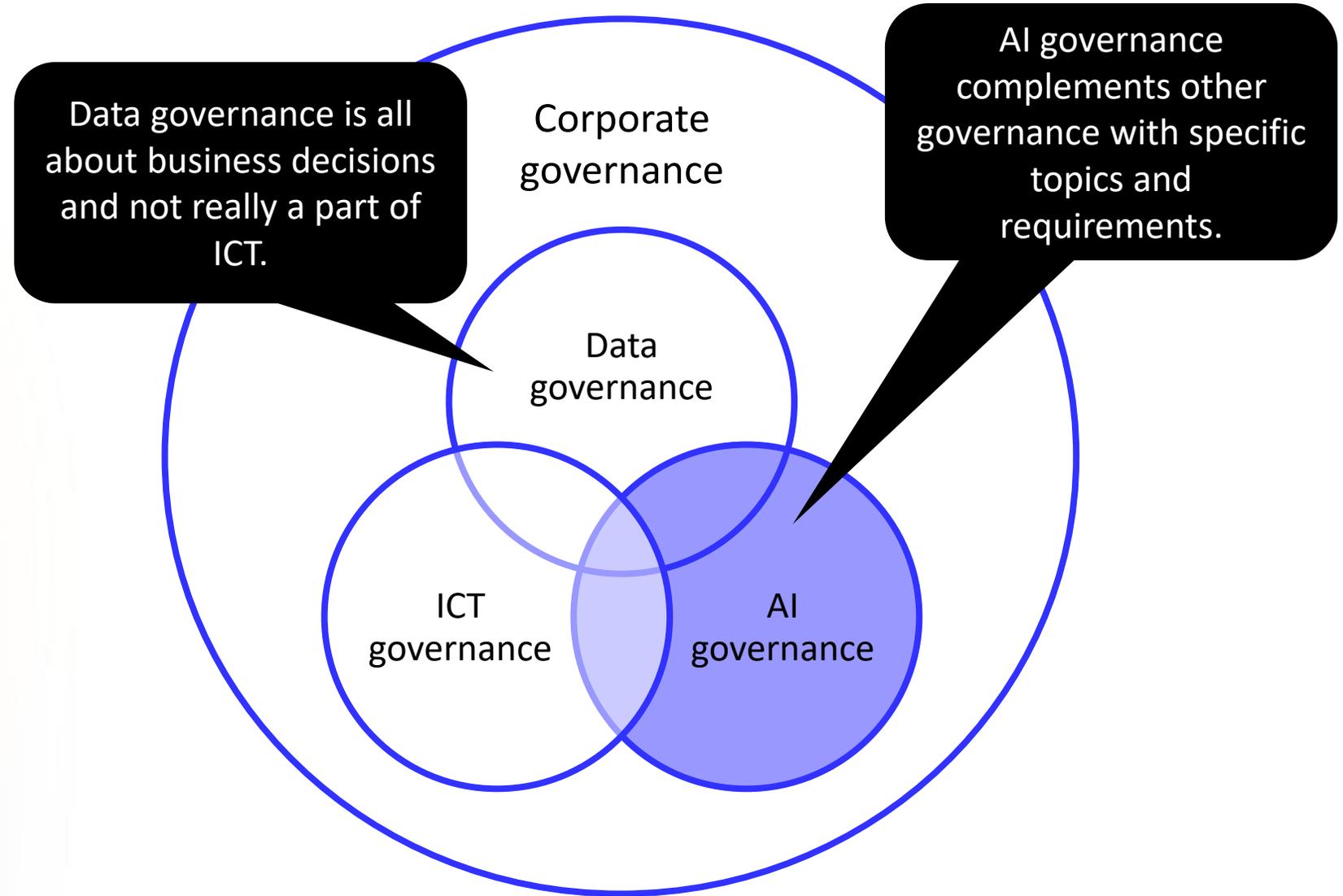
**This is not enough!**

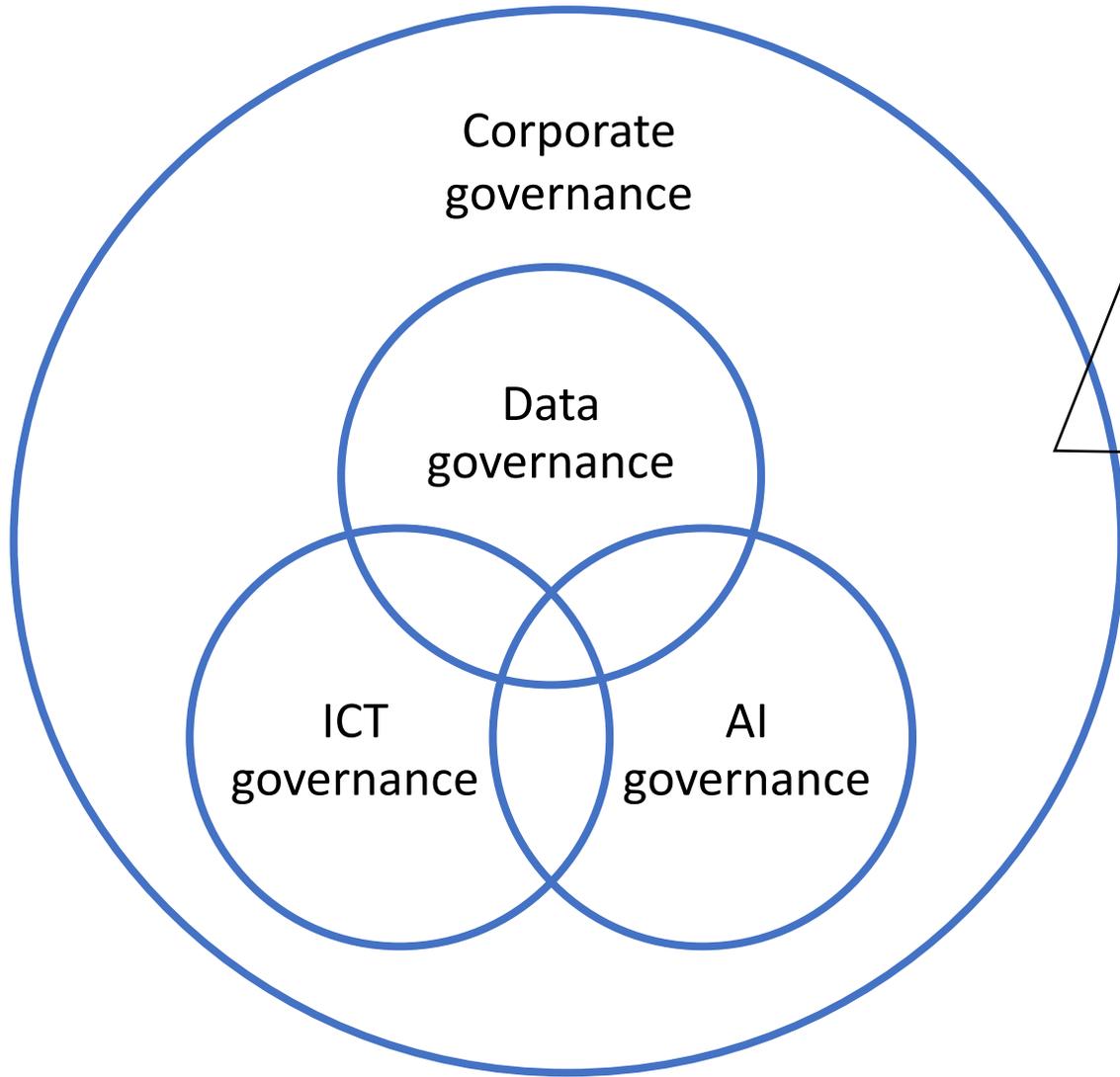


Embed AI governance to existing organization culture



Use so called Non-Invasive (Data) Governance to embed new topics to existing structures and culture.





## GOVERNANCE MEANS

### Organization

- Roles and responsibilities
- Processes and practices

### Activities

- Quality, compliance and risk management
- Issue resolutions

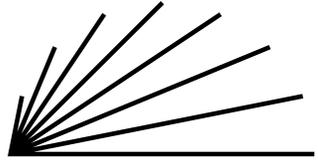
### Rules

- Strategies
- Policies and standards

### Communication

- Communication
- Training

<b>A few examples of AI Governance and Auditing project's Governance check items.</b>				<b>CHECK</b>
AI system	System pre-development	System ID	The developer and users should have a AI system repository which contains information on all AI systems operated or used by the organization. Once the organization commences development work or deploys an AI system, the organization should assign the AI system a unique identifier and enter it into the AI repository.	Yes, exists
Algorithms	Algorithm pre-development	Algorithm purpose	Understanding how the AI systems and its components work is key to sustainable AI development. The organization should define and document the intended purpose of all algorithmic components in an understandable way at the beginning of the development process. The purpose definition should guide the development processes and build on the risk and impact analysis outcomes and contain an ethical analysis of benefits and risks of deploying the AI application, if relevant.	Yes, exists
Algorithms	Algorithm operations	Algorithm performance monitoring	Effective, continuous performance monitoring is crucial to sustainable AI use. Thus, the developer and user should implement and document the outcomes of the performance monitoring it performs.	Yes: performance No: accuracy
Risks and impact	Risk and impact analysis	Discrimination risk identification	Discrimination risk arises always when the AI system treats a person different from another and the AI system user cannot demonstrate that the different treatment was not based on the person's age, origin, nationality, language, religion, belief, opinion, political activity, trade union activity, family relationships, state of health, disability, sexual orientation or other personal characteristics. Discrimination-related risks should be carefully identified, analyzed, and documented.	Yes: age, origin, nationality. No: Several checks missing.



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How to succeed with AI?

# Responsible algorithmic operations are ethical and legally compliant from the start

## ~~Deliveroo scored riders with black box algorithm~~

Italy: Court ruled against Deliveroo's rider algorithm, citing discrimination.



## Wolt promotes transparent and fair rider empowerment

Finland: Company publishes algorithmic transparency report promoting transparency and empowerment.



# Responsible data processing is ethical and legally compliant from the start

## ~~Google tracks everyone with deceptive personal surveillance~~

At 2020, Google was fined €100 million for tracking people illegally with cookies without a valid consent



Can you stop tracking me?



Google Search

I'm Feeling Lucky

## Pedigree detects pets without tracking customers personal lives

Reported 34.4% lower cost per actively viewed ad and led to an increase in regional sales by 29%.



# Responsible business process is ethical and legally compliant from the start

~~Clearview AI collects publicly available photos across internet for its facial recognition service.~~

Europe: Several DPAs rule against Clearview AI's illegal photo processing, set fines and order deletion of data.



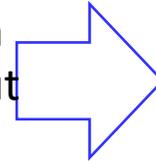
French tax authorities using AI software have found thousands of undeclared private swimming pools.

France: In a year, it has uncovered 20,356 pools with typical 200 euro yearly tax resulting into 4M yearly income.

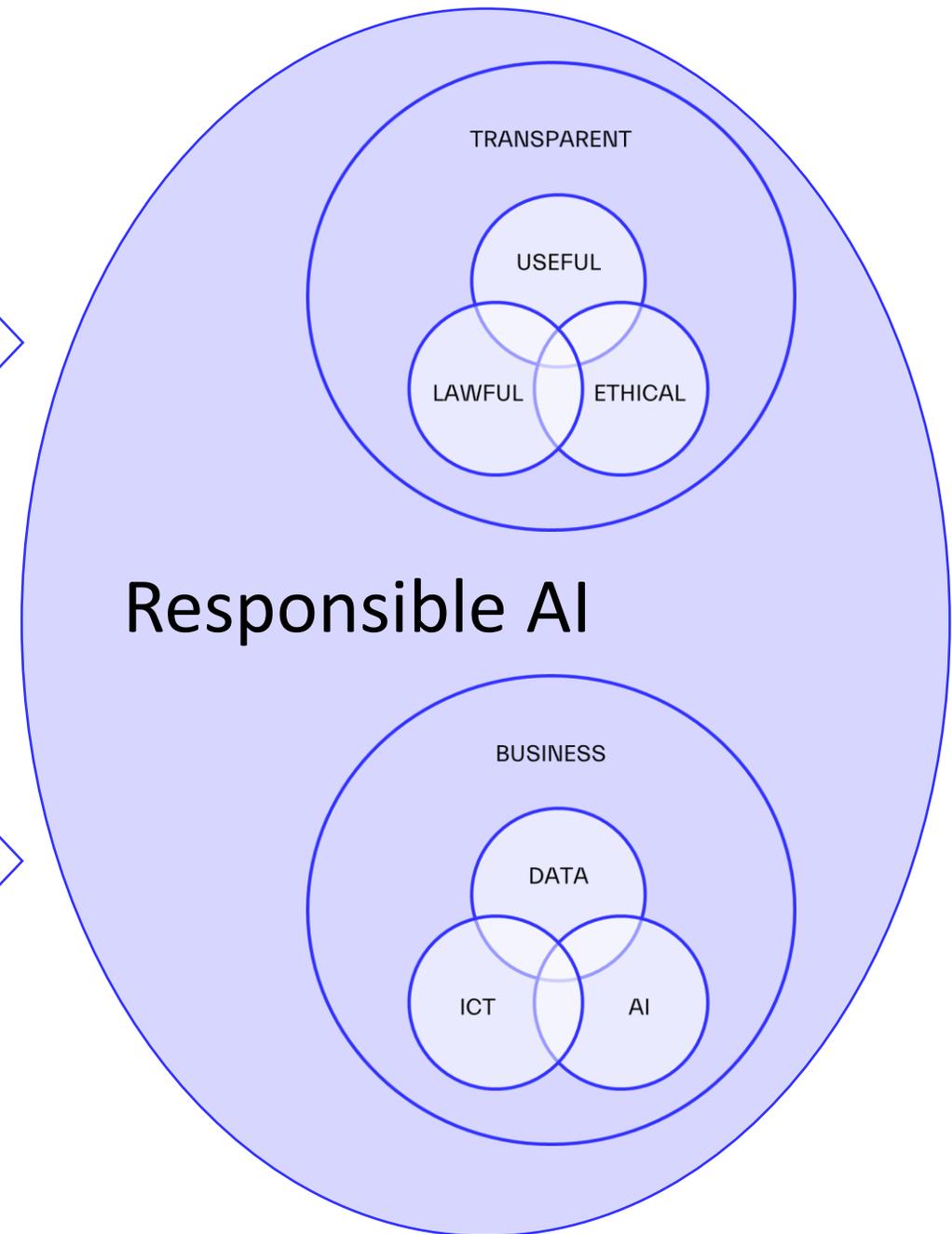
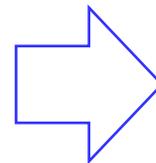


# To succeed with AI

Govern **end-to-end lifecycle** from  
AI business idea to final phase-out



Governance must **balance utility,  
ethics and compliance**  
with multi-disciplinary expertise



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## BIO

Sami Laine is competence lead in Siili Solutions Oyj. He has been working in data management practitioner, consultant, researcher, and teacher roles for 20 years in several business sectors. During these years, he has been also an active advocate promoting quality and ethical perspectives in data management and business decision-making. He is also the vice-president of DAMA Finland ry and MIT CDOIQ Symposium program committee member.

