# Our digital journey: How we transformed our business register

11. juni 2019 EBRA 2019 Conference

Danish Business Authority

# Our journey

## 2009

1. Organization focused on cases and inwards
2. Limited ability to change
3. Legacy IT and traditional IT development organization

## 2015

1. Customer-centric and modern service organization focused on educated case handling
2. Digital business development model
3. Modern IT platform and agile development organization

## 2018-2020

1. Customer centric & digital solutions based on stable and constantly evolving platform
2. Agil culture with a focus on continuos improvements
3. Datadriven insights and ”digital” laws, regulation and process

## 2020-

A data-driven agency contribution to digital growth

# What we do:
# making it easier to do business in Denmark

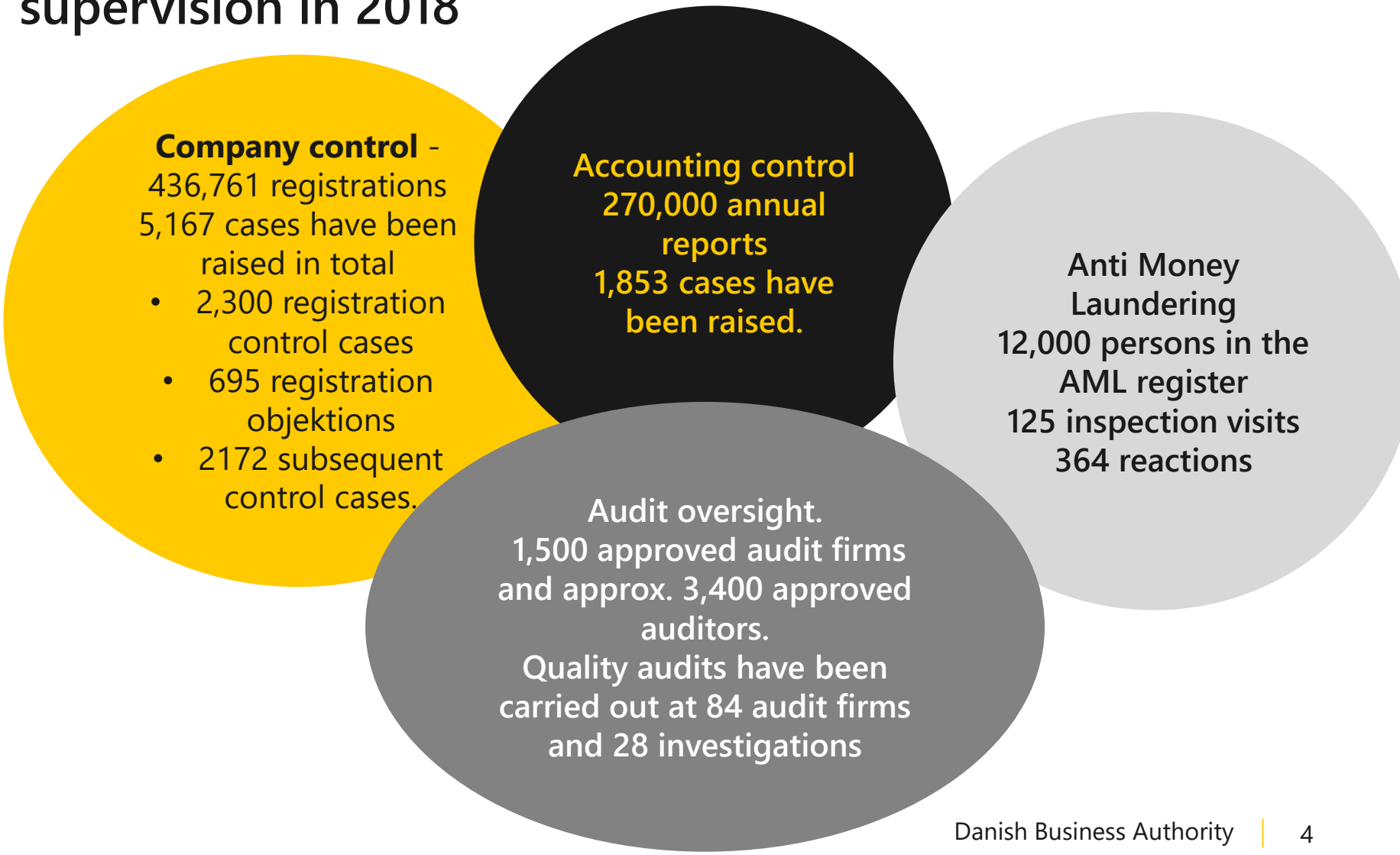
WORLD BANK GROUP

## Ease of doing business 2019

*Top 10 countries*

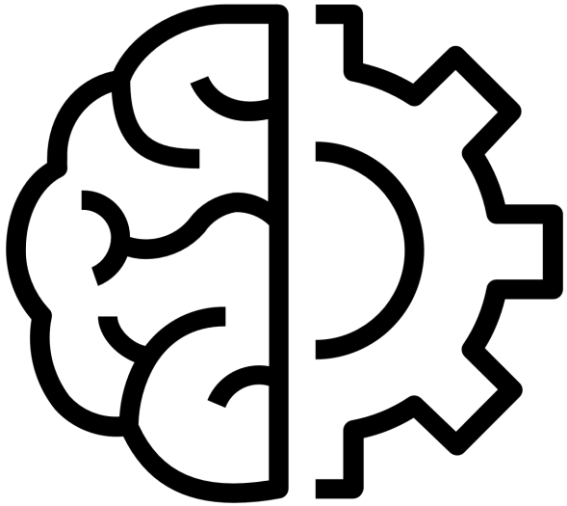
| | | | |
|---|---|---|---|
| 1 | New Zealand | 6 | Georgia |
| 2 | Singapore | 7 | Norway |
| 3 | Denmark | 8 | United States |
| 4 | Hong Kong | 9 | United Kingdom |
| 5 | South Korea | 10 | Macedonia, FYR |

# The most important key figures for the Danish Business Authority's business-oriented control and supervision in 2018



# What can we do with Machine Learning (ML)

- Help and guide users to make fewer mistakes
- Improve and scale our control and supervision
- Provide recommendations and personalize our solutions
- Improve our policy development with ML created insight



# ML LAB

- 12 data scientists
- New legislation
- Graph database + control tower
- First line of defence

# Example of ML-Driven Guide "Today": Receiving accounts

- When submitting accounts, the machine will monitor proactively on the accounting policies and accounting figures for buildings and equity interests
- Then the user will be warned and guided to not make mistakes
- The control will thus be scalable for ALL 270,000 annual reports, so that +10,000 errors will be released

# Example of ML-Driven control "Today":

- Signed documents (in production)
- Valuation reports
- Strawmen
- Cosigning Auditors
- Passport validation

# Example of control "tomorrow": Strengthened company control regarding VAT

By learning the machine to see patterns in public data sources we will be able to stop or delay companies that are expected to commit fraud.

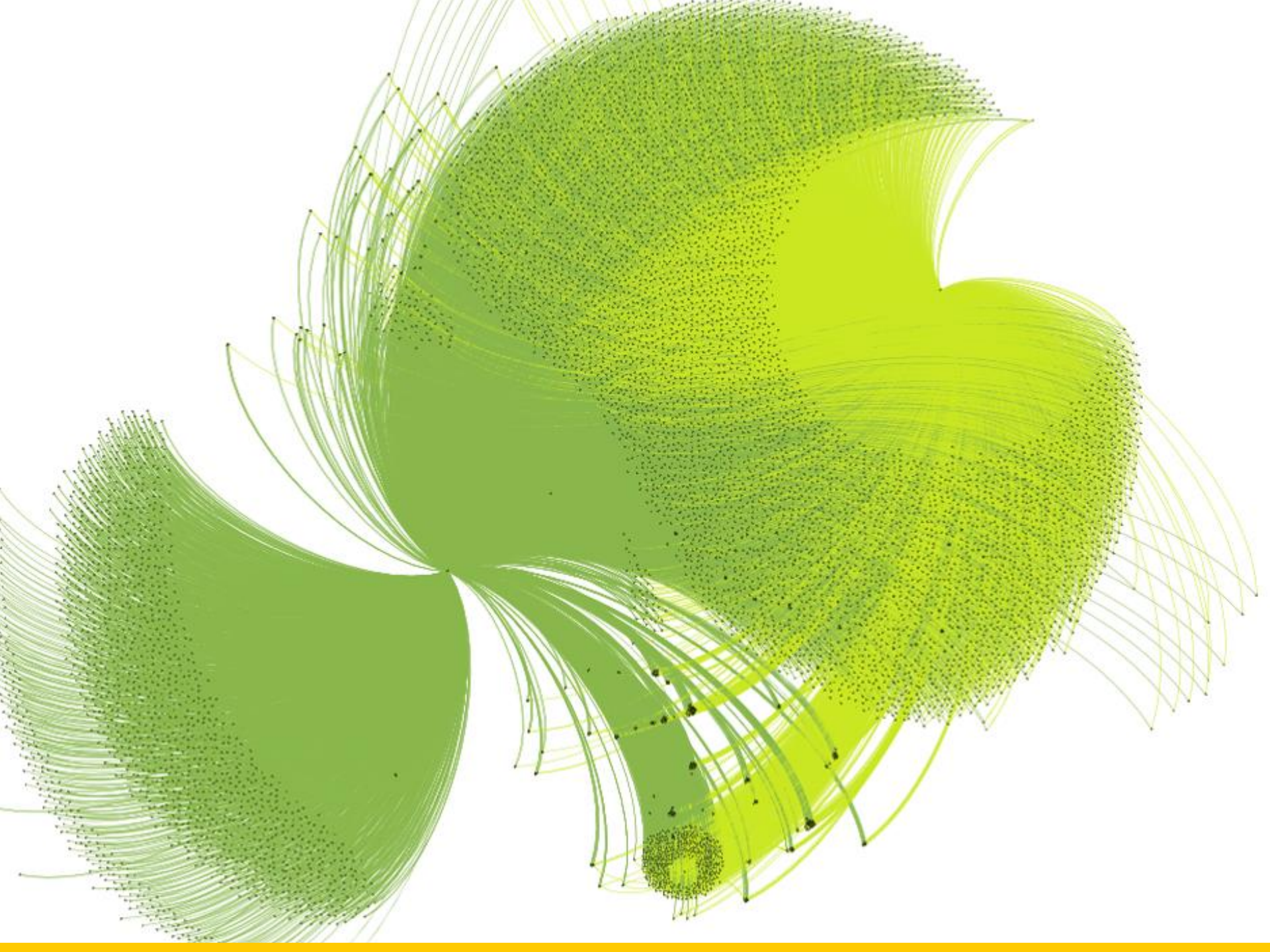
We do this by collecting our knowledge from:

- CVR
- SKAT's VAT reports and VAT controls
- eIndkomst
- Annual Accounts

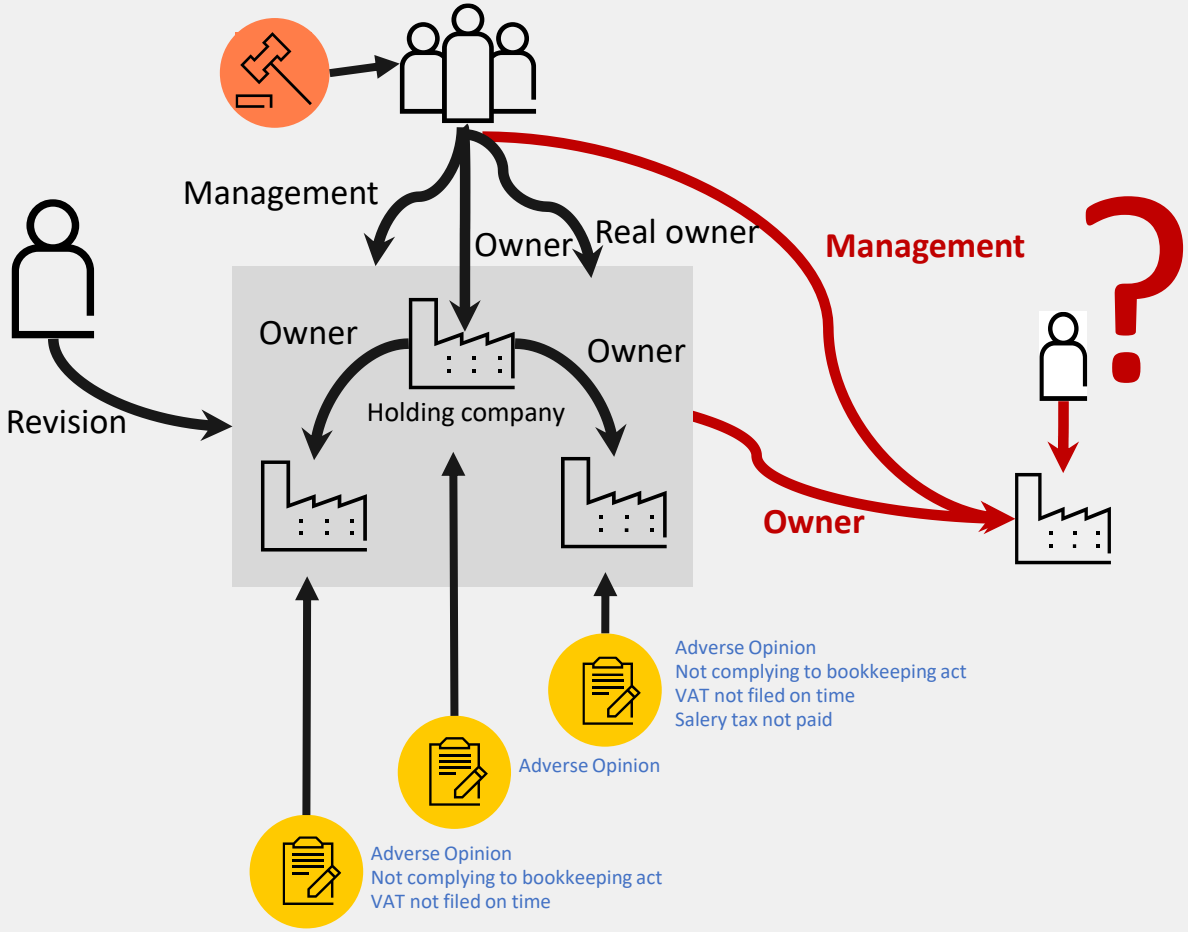
... and other data sources

> Costs: 20 million DKK p.a.

> Possible reducered VAT-fraud: 1,2 billion DKK p.a.

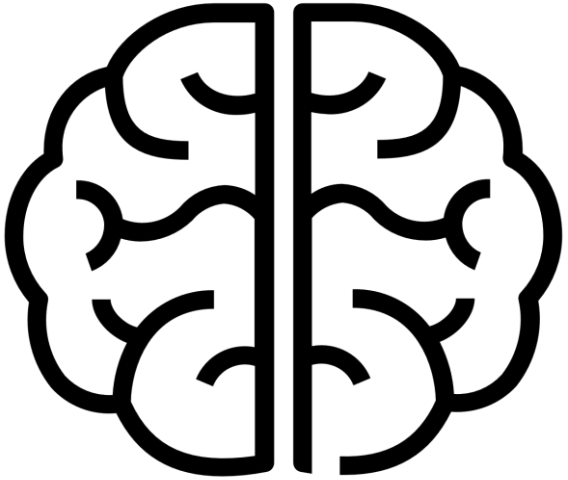


# Example of control:
# Strengthened company control regarding VAT



# What is complicated?

- Streaming of data (and GDPR)
- Machine learning as discipline
- Reacting in real-time
- Business use of pattern recognition
- The size of the "net masks"



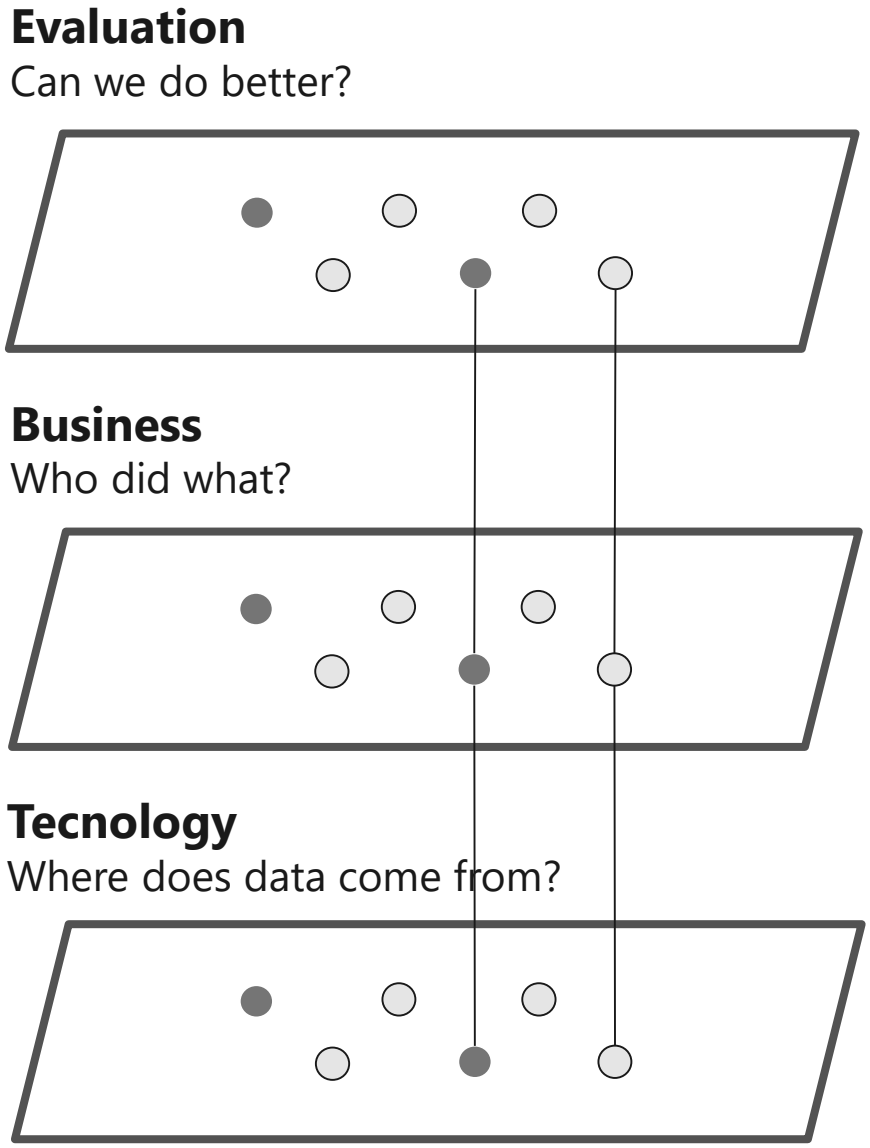
# Traceability in data

Data and data life cycle must be:

- Healthy
- Transparent
- Explainable
- Traceable

- and of course treated safely

So now and in the future, we know why and how we have made a decision and conduct sound management.



# Questions?