

What is data culture?

INTRODUCTION TO DATA CULTURE



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Improve your fitness plan

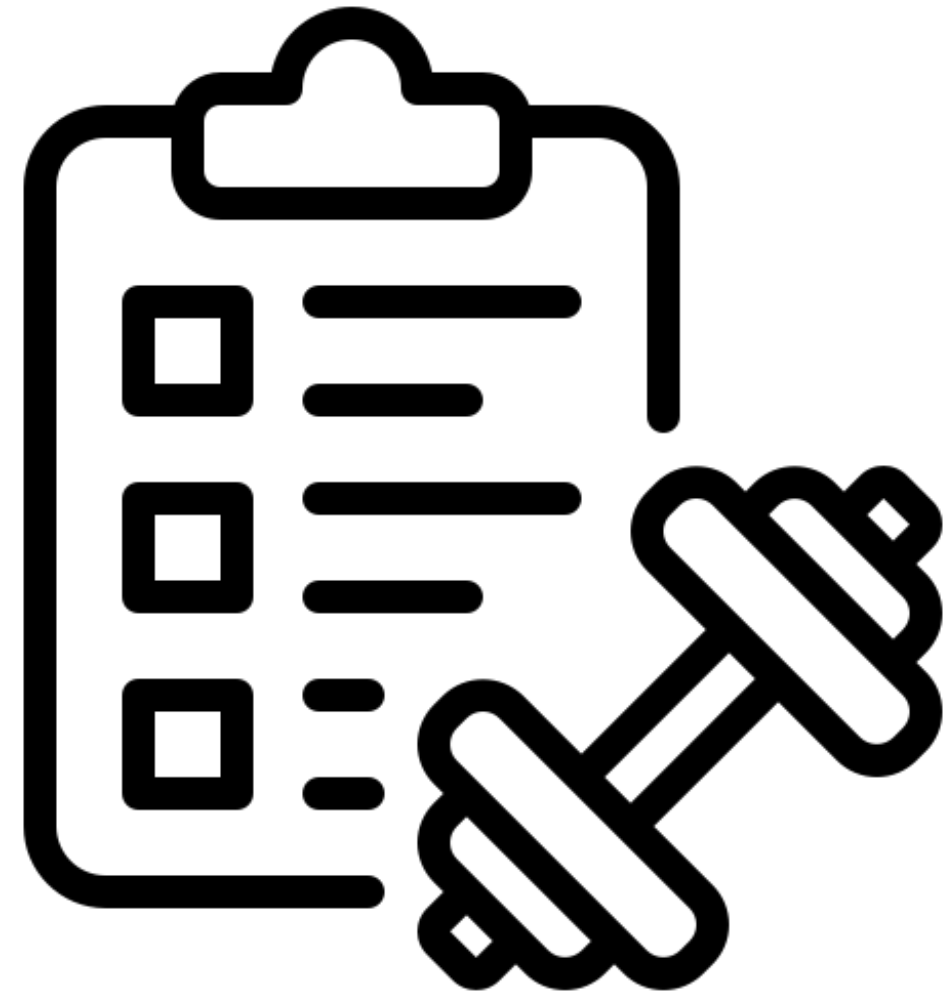


- Goal: improve fitness plan
- Data provided by personal fitness tracker:
 - Number of steps you take
 - Calories you burn
 - Amount of time you spend exercising
- Problem: no concrete plan to achieve the goal

¹ Icon made by Freepik from www.flaticon.com

Improve your fitness plan cont.

- Analyze your available data
- Understand the messages conveyed
- Communicate with others
- From **HAVING** data to **USING** data



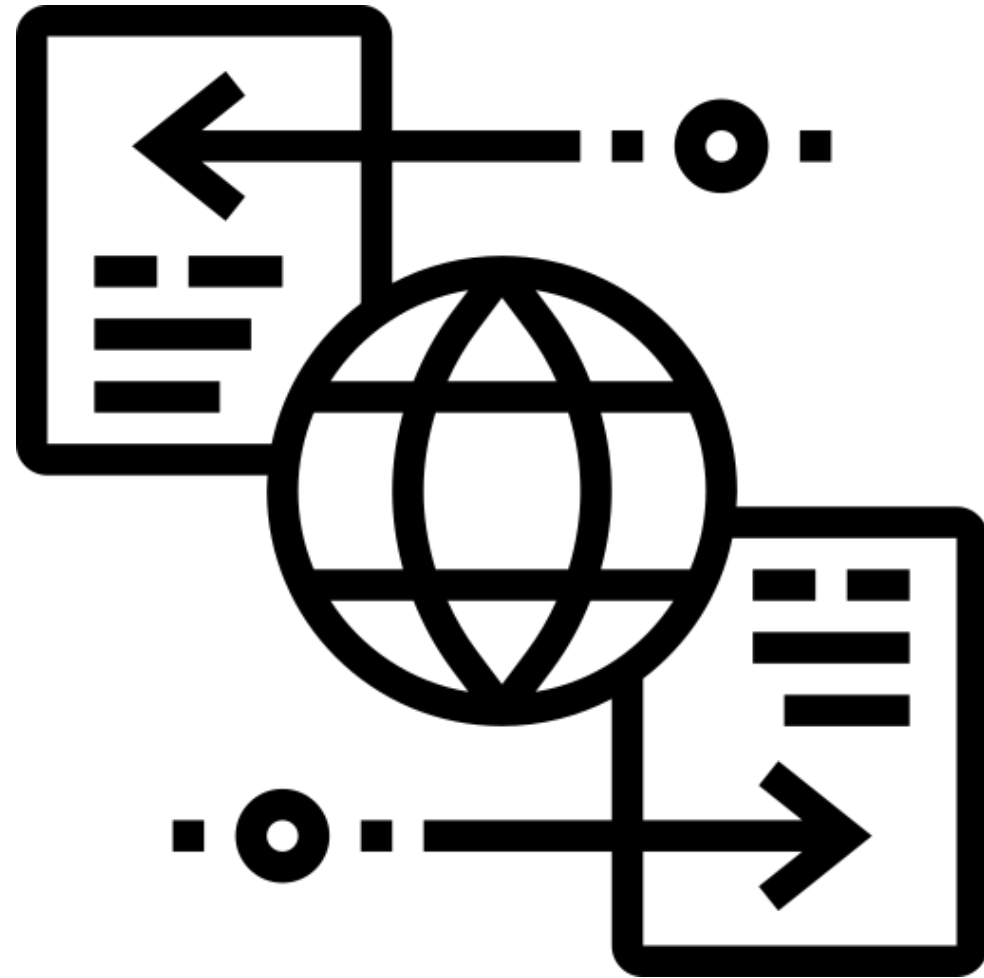
¹ Icon made by nawicon from www.flaticon.com

Data culture in a nutshell



- **COLLECTIVE** behavior and mindset within an organization toward using data
- Applies to **ALL** industries and **ALL** stakeholders
 - Regardless of technical acumen (e.g. HRs)
 - Business sizes are irrelevant

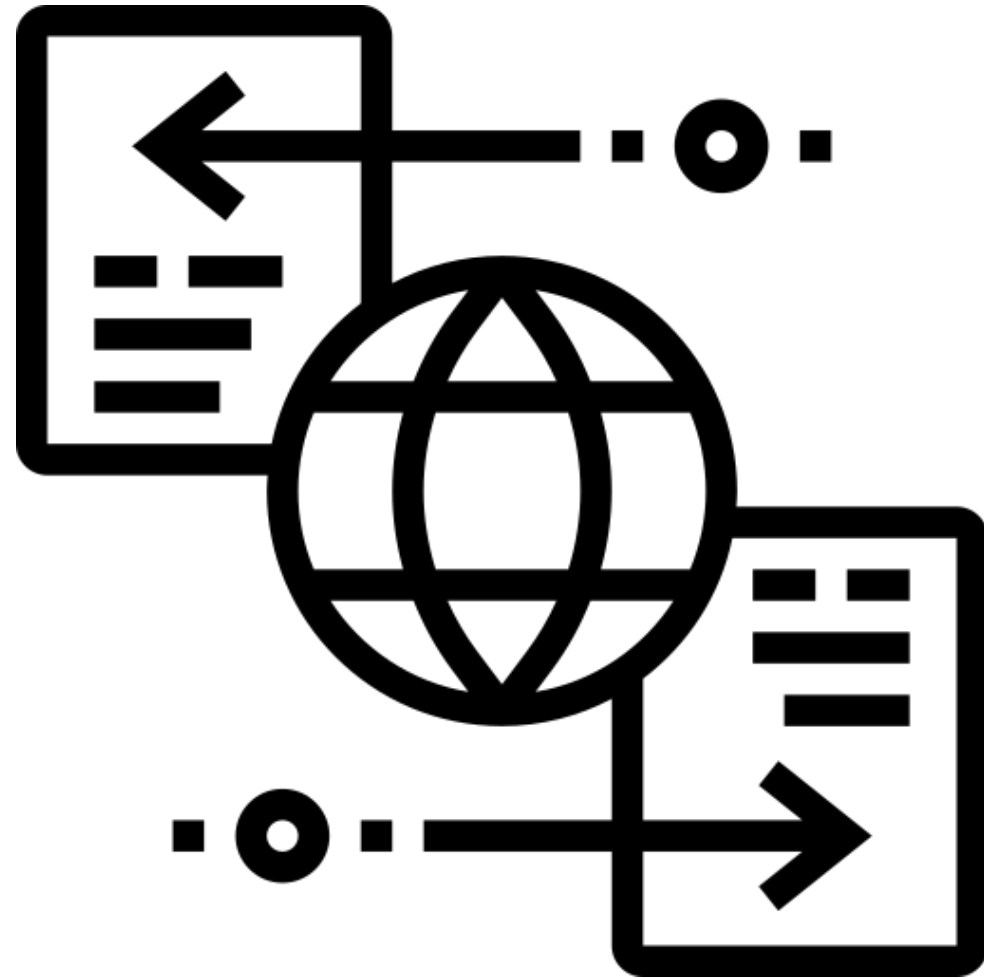
Key components of data culture (1)



- Making data-driven decisions
 - Evaluate strategy
 - Identify opportunities
 - Measure success
 - Evidence over intuition or opinion

¹ Icon made by Eucalyp from www.flaticon.com

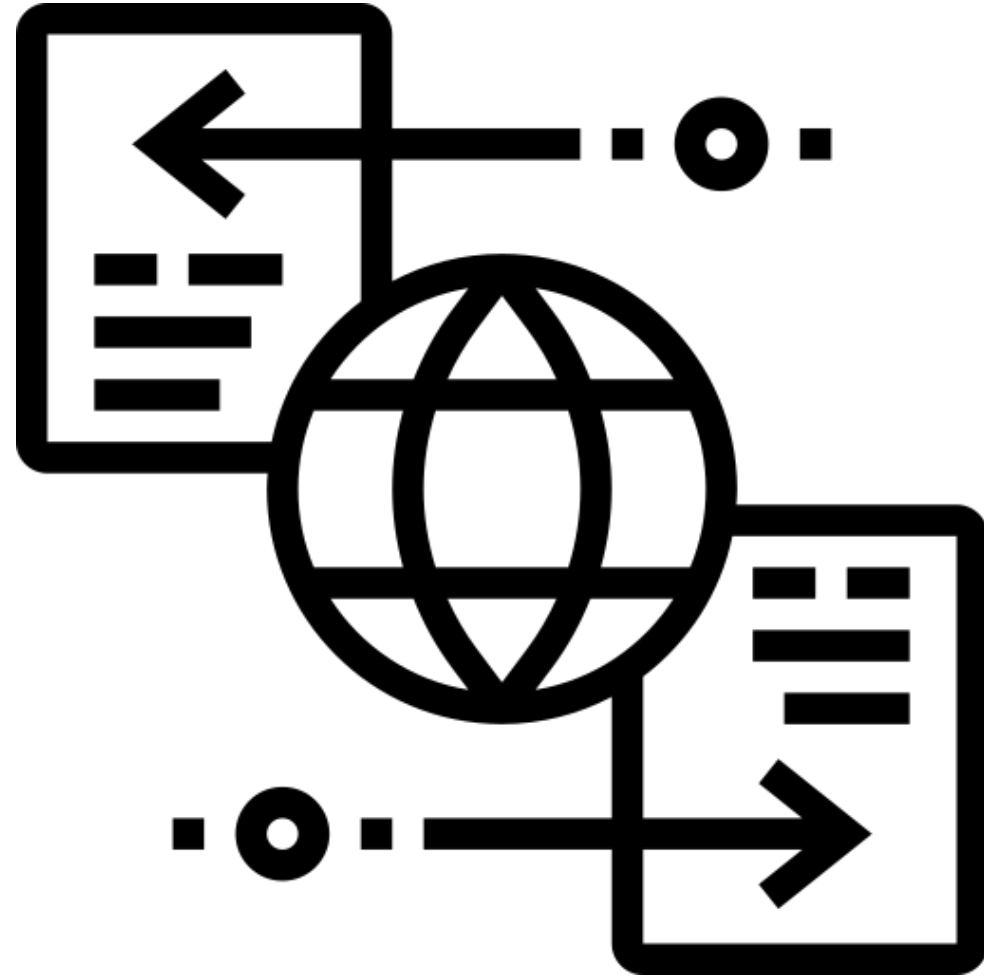
Key components of data culture (2)



- Prioritizing data literacy
 - Be able to read, interpret, and analyze data
 - Requires long-term commitment
 - Organizational-wide effort!

¹ Icon made by Eucalyp from www.flaticon.com

Key components of data culture (3)



- Encouraging continuous experimentation and development
 - Test innovative ideas
 - Learn from failures
 - Quickly adapt to changes
 - Helps evaluate innovative ideas' effectiveness
 - Helps identify improvement areas

¹ Icon made by Eucalyp from www.flaticon.com

Data culture benefits

Benefits:

- Enhanced decision-making
- Improved operations
- Achieved business goals

Let's practice!

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Why build a data culture?

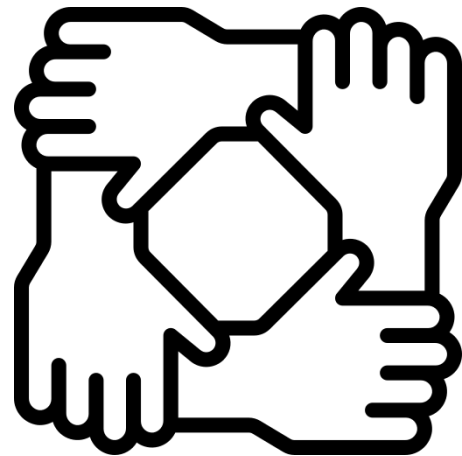
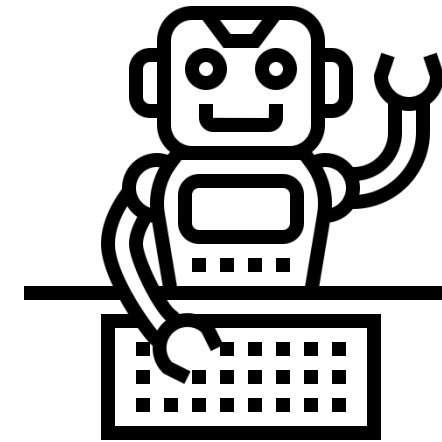
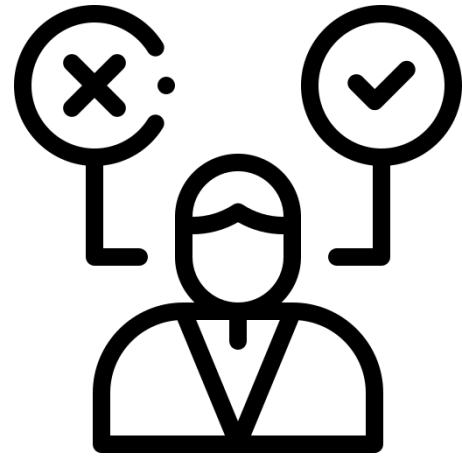
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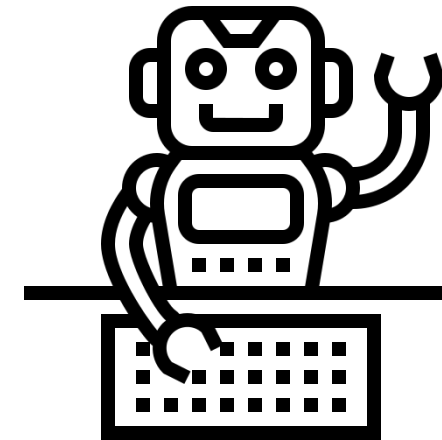
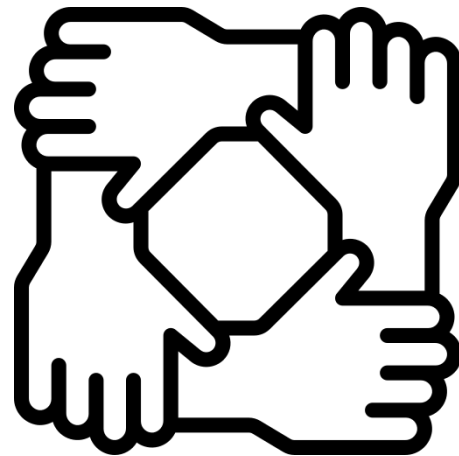
Efficiency booster!



¹ Icons made by Freepik, Eucalyp, Smashicons, and Vectors Tank from www.flaticon.com

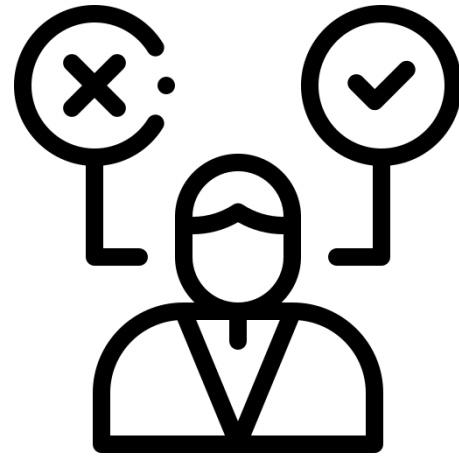
Efficiency booster!

- Robust data management and storage tools made possible
- Enhanced decision-making processes

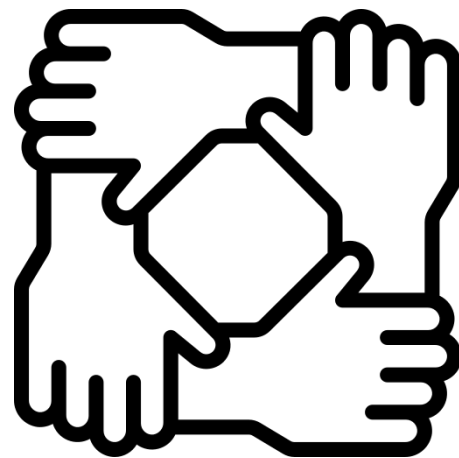


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Efficiency booster!

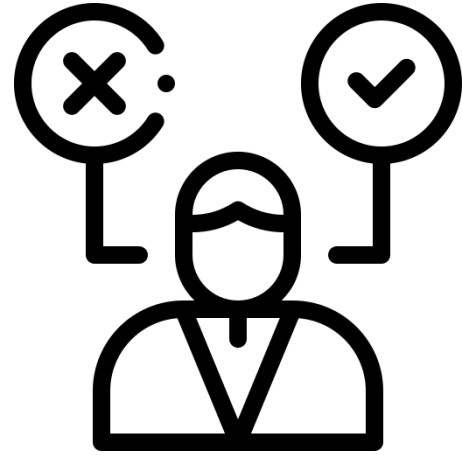


- Achieve automation of processes
- Freeing-up employees from data collection, analysis, and reporting

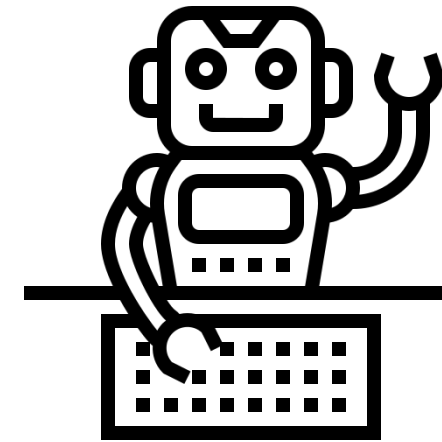


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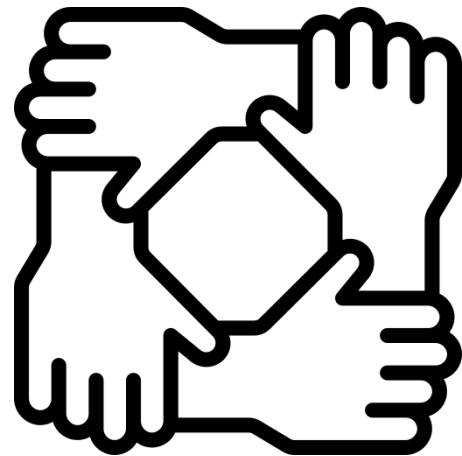
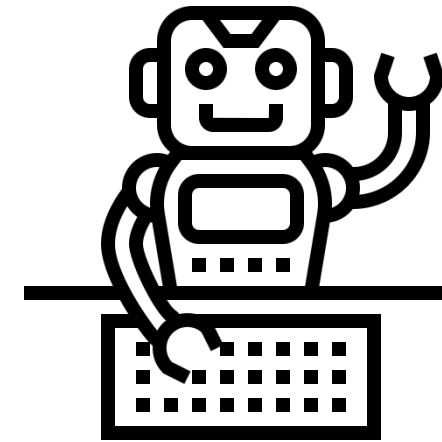
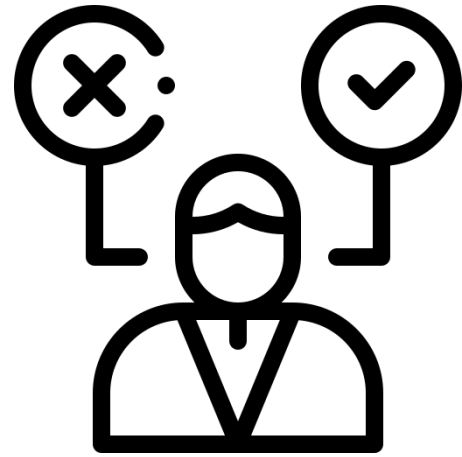


- Encourage effective collaborations between individuals
- Lead to innovative solutions and approaches



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Efficiency booster!



- Effective allocation of resources
- More resources directed at tasks with higher business value

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ROI of data

- Significant return on investment
- Chance for growth and higher profit margins
- Data can help...
 - Identify new revenue streams
 - Optimize processes
 - Reduce costs



The Netflix example

Data storage and management

- Netflix handles a vast quantity of data
- Amazon Web Service (AWS) enables large volume storage
- Facilitates large volume streaming

Automation

- Cloud-based automation framework
- Netflix Test Studio (NTS)
- Automatically testing applications at scale



¹ Netflix Research

The Netflix example cont.

Collaboration

- Advanced data analytics tools
- Inform business teams

Resource allocation

- Enhance movie and TV show personalization
- Optimize content and marketing strategies



¹ Netflix Research

Let's practice!

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Challenges along the way

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Challenges exist

- Building a data culture is essential for business success
- The process will be challenging!



Classifying challenges

People Challenge

- The human aspects of an organization
- Examples:
 - Data silos
 - Data literacy
 - Data ethics

Process Challenge

- The systems, procedures, workflows
- Examples:
 - Data quality
 - Data privacy
 - Data security

People - data silos

- Occur when information is isolated within teams or departments
- Hamper collaboration, limit organizational understanding
- Example:
 - Ford's siloed data storage
- Solutions:
 - Centralized data team/data management system



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People - data literacy

- Reluctance to gain new skills and adapt to changing data trend
- Failure to invest in long-term commitment
- Example:
 - Assume all employees have the same level of data literacy
- Solutions:
 - Customized training program
 - Continuously monitoring and refining

People - data ethics

- Responsible, fair, and transparent data usage
- Example:
 - Amazon's biased hiring algorithm
- Solutions:
 - Establish clear ethical guidelines
 - Foster open discussion



Process - data quality

- Data needs to be:
 - Accurate
 - Reliable
 - Up-to-date
- Example:
 - Uber's "Greyball" resulted in severe consequences
- Solutions:
 - Implement data validation process
 - Leverage automated data cleansing tools

Process - data privacy & security

- Extended data usage may lead to overlook of data privacy and data security
- Protecting sensitive information maintains customer trust and avoid potential breaches
- Example: 2017 Equifax data breach
- Solutions:
 - Implement access controls
 - Apply encryption techniques
 - Conduct regular security checks



¹ <https://www.wsj.com/articles/equifax-to-add-more-buy-now-pay-later-plans-to-credit-reports-11639915203>

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