Introduction to the case study

DATA LITERACY CASE STUDY: REMOTE WORKING ANALYSIS

Maarten Van den Broeck
Senior Content Developer at DataCamp

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Why a case study?

- Apply data literacy skills
- Practice data literacy concepts
- Solve a real-world business problem

Prerequisite course:

- Introduction to Data Literacy

Setting: improving remote working policy

- Polaris Tech wants to improve its remote working policy
- A survey was conducted among their employees about their habits and needs
- You have been engaged as a consultant to help analyze the survey and provide insights
- **Your team:**
  - Data scientist: technical tasks
  - HR expert: subject matter expert
- **Your tasks:**
  - Find out how remote working is currently experienced
  - Provide recommendations on possible problems and challenges

The data: remote working survey

Employee info	Remote working habits	Remote working barriers	Remote working advantages
Birth year	Remote working frequency	Lack of skills	Productivity
Seniority	Remote working preference	Bad workspace	Increased activity
Type of household	Regular breaks	Poor management	Well-being
Gender	...	...	...

Defining analytical questions

- Good analytical questions:
  - Break the main business problem down into manageable chunks
  - Can lead to specific, actionable recommendations

> Can we distinguish different remote working profiles?
>
> - Do they differ in remote working habits?
> - Do they differ in remote working needs?

Let's practice!

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From problem to insights

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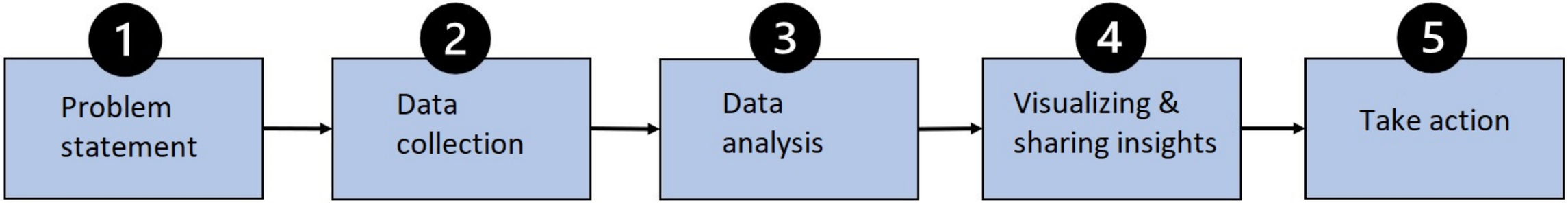
The data-driven process



Things to consider

- Quantitative vs. qualitative variables
  - Influences the kinds of graphs, statistics, and analysis methods available
  - Typically, a dataset contains a mix of both
- Selecting the right type of analytics
  - Depends on the objectives of the analysis
  - Look at your analytical questions to guide your choice

Quantitative vs. qualitative variables

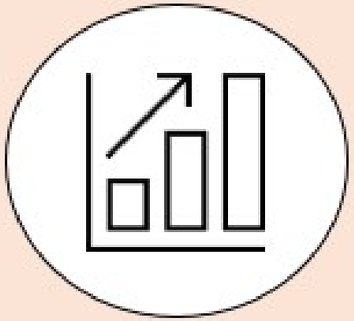
Quantitative variables

- Describes something with (only) numbers
- Can be measured or counted
- Mathematical operations like summing or multiplying are possible
- Example: distance from work to home

Qualitative variables

- Describes something with categories
- Can be observed
- Mathematical operations are not meaningful unless using ranks or counts
- Example: the type of transport taken to go to the workplace

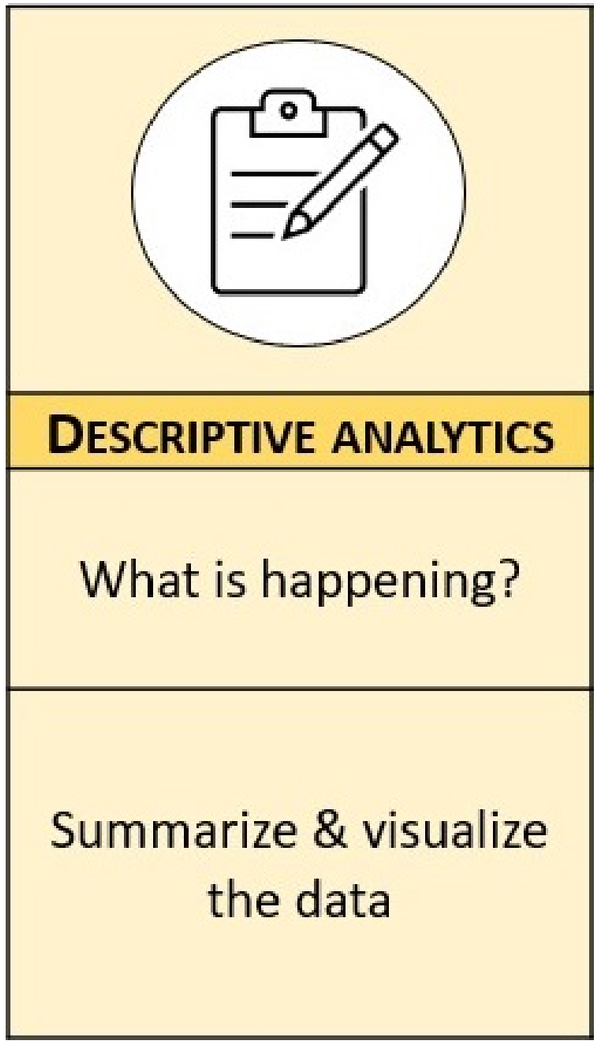
Types of analytics

			
DESCRIPTIVE ANALYTICS	**DIAGNOSTIC ANALYTICS**	**PREDICTIVE ANALYTICS**	**PRESCRIPTIVE ANALYTICS**
What is happening?	Why is it happening?	What will happen?	What should we do?
Summarize & visualize the data	Find root causes of events	Identify possible outcomes and the probability that they will happen	Determine the best course of action given the outcome we want to achieve

Selecting the right type of analytics

Can we **distinguish** different remote working **profiles**?

- Do they differ in remote working habits?
- Do they differ in remote working needs?



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