Analyzing customer churn in Tableau

CASE STUDY: ANALYZING CUSTOMER CHURN IN TABLEAU



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What is a case study?

- Apply your skills
- No new concepts
- Solve a real-world problem



> Prerequisite courses:
>
> - Introduction to Tableau
> - Analyzing Data in Tableau
> - Creating Dashboards in Tableau

Data analysis flow in Tableau



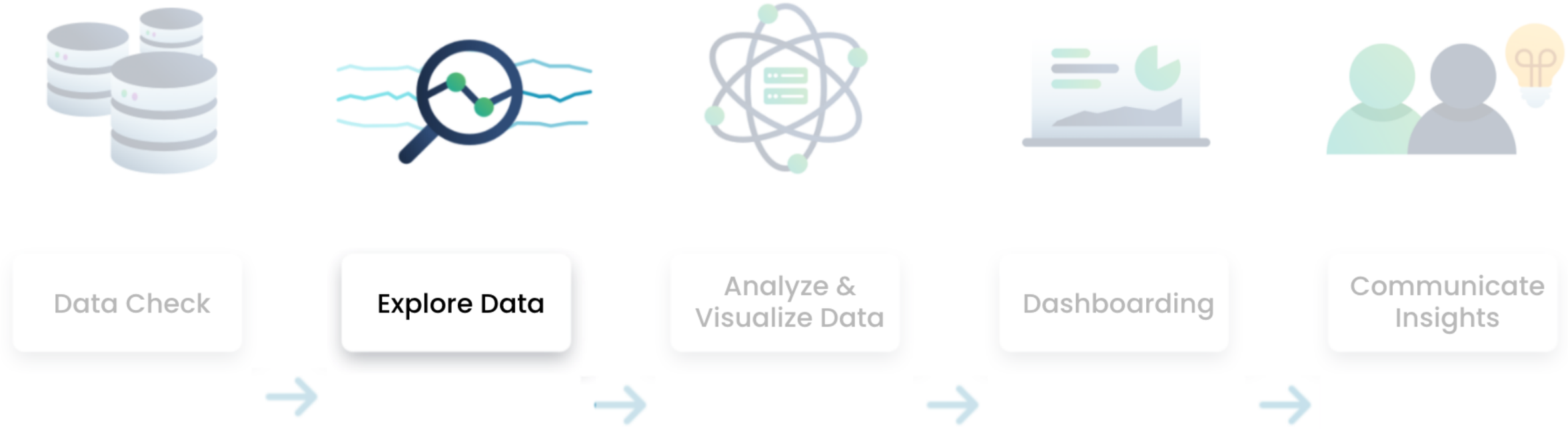
Data Check → Explore Data → Analyze & Visualize Data → Dashboarding → Communicate Insights

Data analysis flow in Tableau



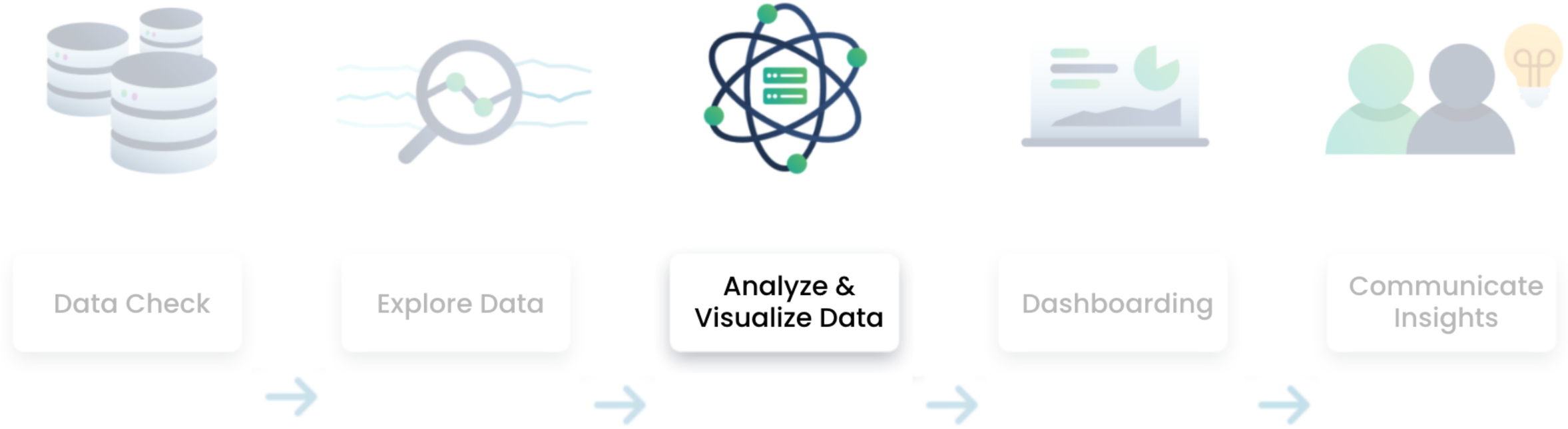
- Check for duplicate or missing values
- Do a sense check with other internal data sources

Data analysis flow in Tableau



- Ask yourself the right questions
- Build your first visualizations

Data analysis flow in Tableau



- Choose the right visualization to convey a message
- Perform more advanced analysis

Data analysis flow in Tableau



- Combine visualizations in one or more dashboards

Data analysis flow in Tableau

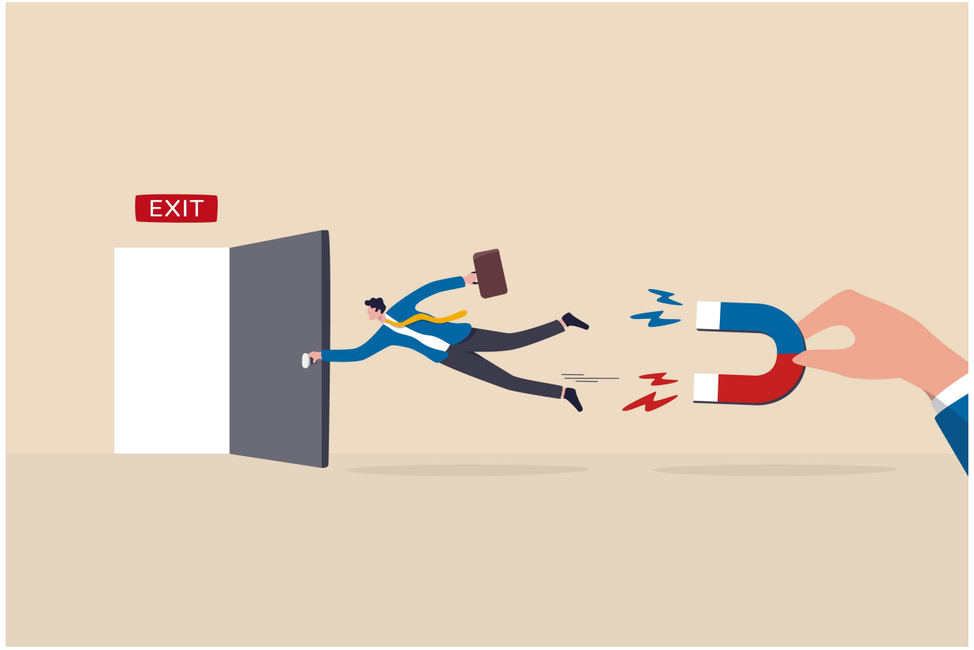


- Communicate your insights to stakeholders

The problem

Solving customer churn

- A fictitious dataset about churn from a Telecom provider (Databel)
- Your task: discover why customers are churning



Defining churn

> The **churn rate**, also known as the rate of attrition or customer churn, is the rate at which customers stop doing business with an entity

- Leaky bucket problem
- Keeping customers is easier than getting new customers
- Reducing churn is a priority for many companies



[1] https://www.investopedia.com/terms/c/churnrate.asp

Calculating churn

Simplified formula

```
Churn rate = customers lost / total number of customers
Churn rate = 10 / 100
10 / 100 = 10%
```

There are **multiple ways** to calculate churn

- Varies by industry and revenue model
- An e-commerce platform could e.g. define a churner as someone who hasn't made a purchase in the last 12 months

The data

Key characteristics

- Databel, a fictitious Telecom provider
- One big table containing 29 columns
- One row per **customer**
- Snapshot of the database at a specific moment in time



The data

Dimensions

Column name	Description
Customer_id	The unique ID that identifies a customer
Churn Label	Contains 'Yes' or 'No' to indicate if a customer churned.
Demographic fields	Age, Gender, State, ...
Premium plans	Unlimited Data, International Plan, ...
...	...

The data

Measures

Column name	Description
Total charges	Sum of all monthly charges
Monthly charge	The average of all monthly charges billed to the customer
Extra data charges	Extra charges for data downloads above the specified customer plan
Extra international charges	Extra charges for international calls for customers not on an international plan
Customer service calls	Number of calls made to customer service
...	...

Metadata sheet

Let's start analyzing!

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