Diagnostic Analytics

Outline

Diagnostic Analytics

Why / When?

Techniques and Tools

Case Study

4 Types of Data Analytics

DESCRIPTIVE ANALYTICS

DIAGNOSTIC ANALYTICS

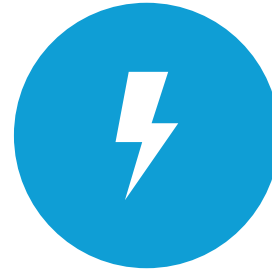PREDICTIVE ANALYTICS

PRESCRIPTIVE ANALYTICS

Research Questions

WHAT HAPPENED?

WHY DID IT HAPPEN?

WHAT WILL HAPPEN?

WHAT IS A DECISION?

Why Diagnostic Analytics?

Investigate the root cause.

Understand trends and patterns.

Make more informed data-driven decisions.

Unexpected drop in revenue.

Shift in customer behavior.

Investing more in a particular marketing strategy.

When Diagnostic Analytics?

- Retail product popularity
- Explaining customer churn
- Reduce Attrition

When Diagnostic is Analytics recommended?

ADVANTAGES

- Goes beyond simply looking at patterns to find root cause of problems.

- Helps you get value from your data by enabling deeper search for answers.

- Enables better business decision-making and growth.

DISADVANTAGES

- It focusses only on historical data: "Why something happened in the past?"

- It does not provide actionable future insights.

- Further advanced analysis like predictive & prescriptive is required before business actions.

Techniques

Clean
Summarize
Report
Visualize

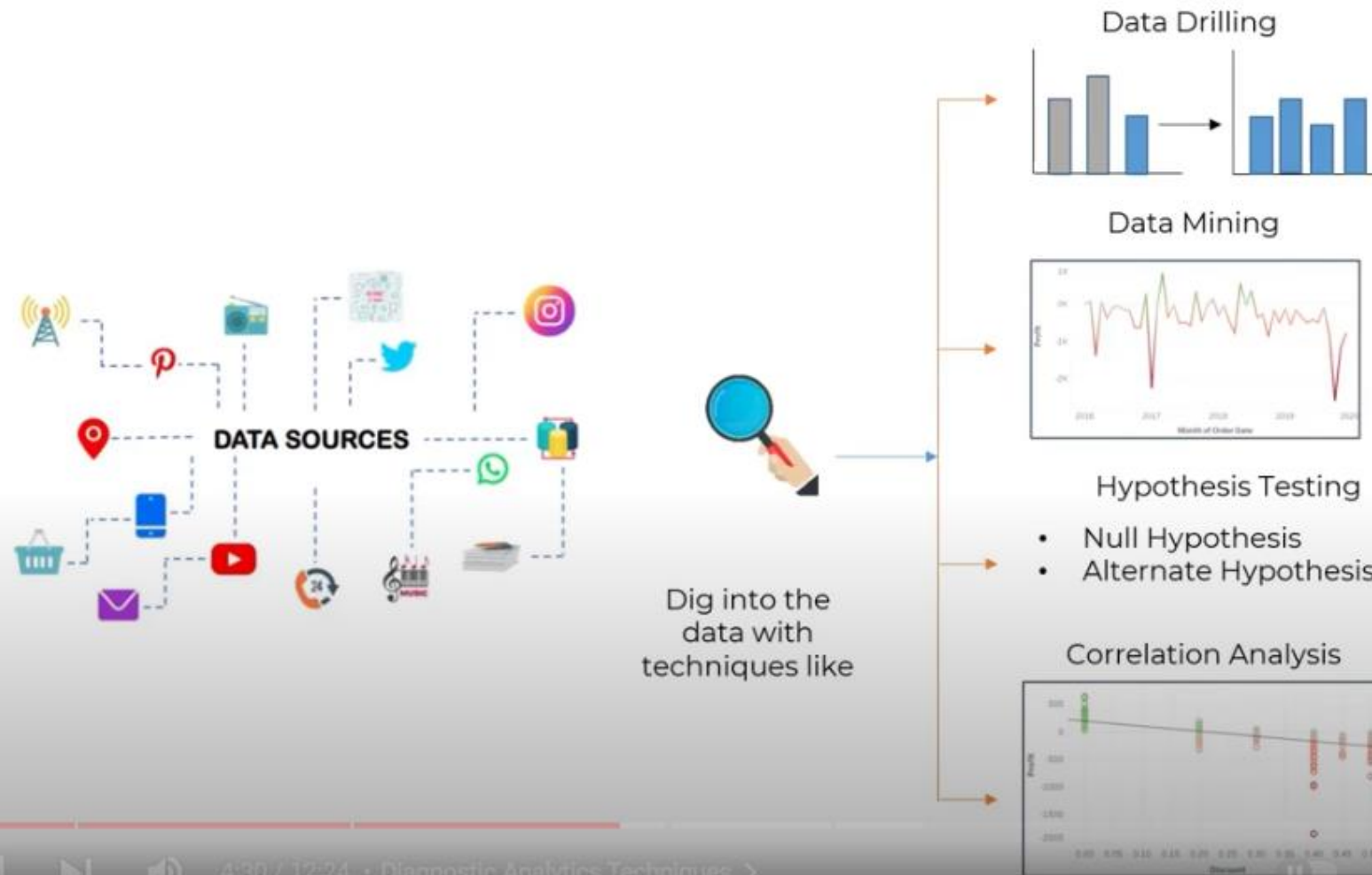Data Discovery
Hypothesis Testing
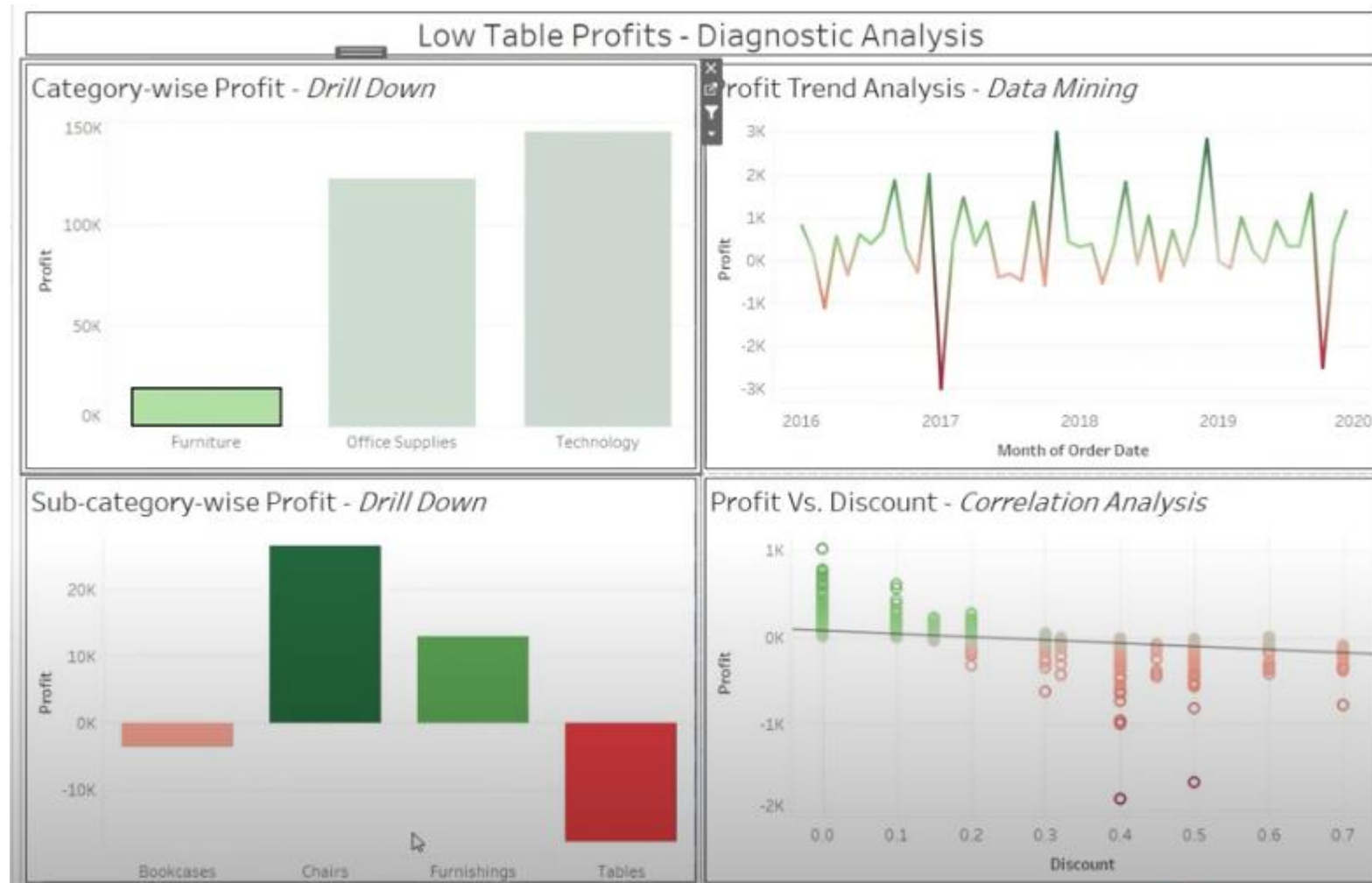Drill Down
Correlation

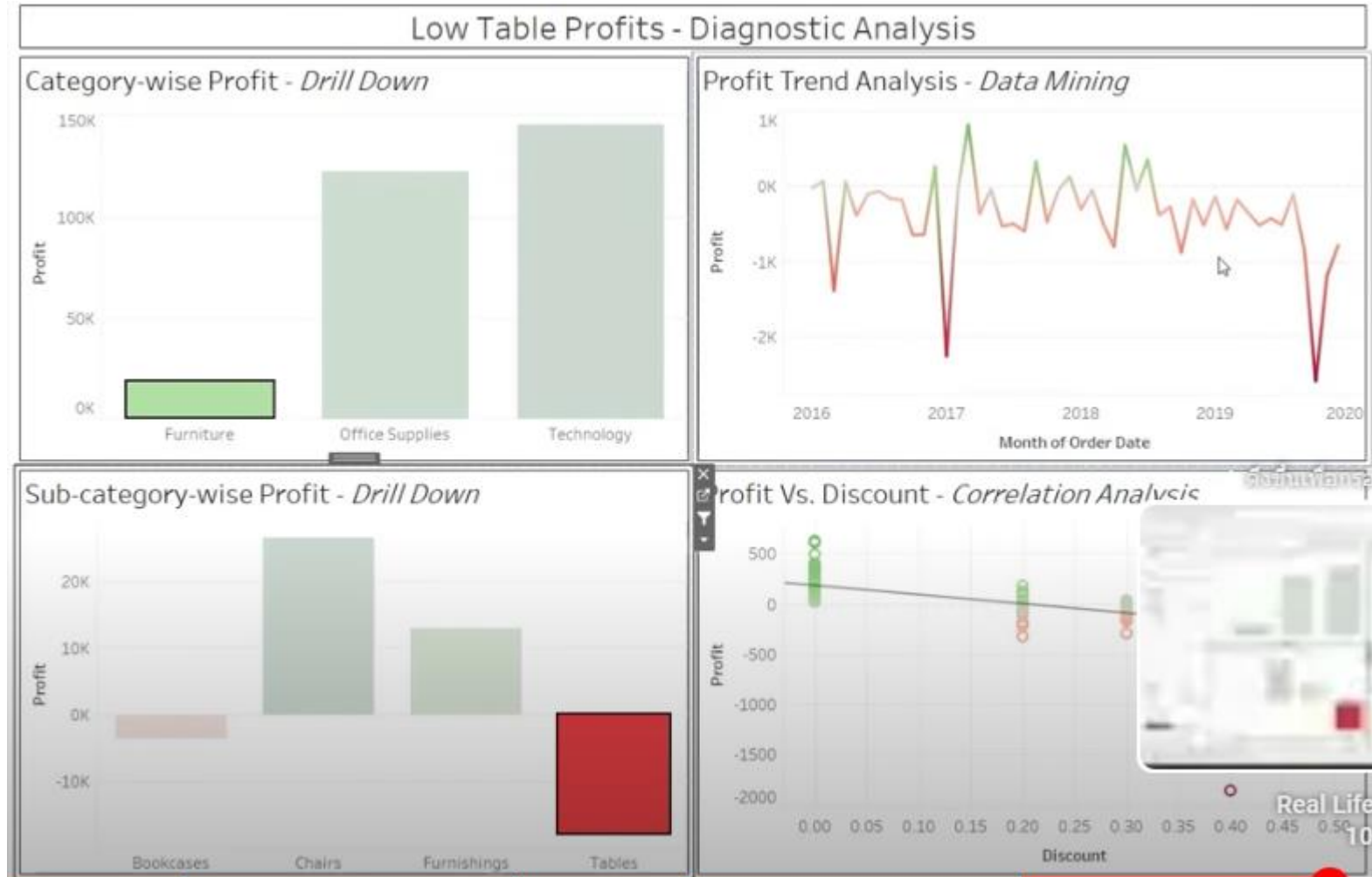What will happen?

What is a decision?

Techniques in Diagnostic Analytics

Case 1

Case 1 (Cont.)

References

- https://www.selecthub.com/business-intelligence/predictive-descriptive-prescriptive-analytics/#What_Are_Descriptive_Analytics
- https://www.youtube.com/watch?v=vdIldcU8XMU