Application Case 1.1: Sabre Helps Its Clients Through Dashboards and Analytics
https://youtu.be/cibyP6UNoq8?feature=shared

1. What is traditional reporting? How is it used in the organization?
The traditional reporting process is a manual process of collecting and aggregating financial and other information. Organizations have used this timeconsuming process as a way to obtain information for making decisions. However, the resulting presentations may be flat, slow to develop, and difficult to apply to specific situations.
2. How can analytics be used to transform traditional reporting?
Analytics can enable real-time decision support and deliver information to a userfriendly dashboard. Users of a dashboard such as the one provided by Sabre's Enterprise Travel Data Warehouse can see at a glance a 360-degree view of the company's overall health generated from various data sources. Many stakeholders in the organization can request data needed for particular types of decisions, and the graphical user interface makes the information easily understandable.
3. How can interactive reporting assist organizations in decision making?
When a system incorporates interactive drill-down capabilities, users can select the data they need for evaluating a specific kind of performance and making decisions in a particular function or situation. For example, the airlines using the Sabre system can focus on data about sales performance (ticketing, seats sold, etc.) and operational performance (flight movement, inventory, etc.). This flexibility encourages decision makers to use data in support of their decisions.

Other case studies:
1hour - Customer Satisfaction Analysis | Case Study Using PowerBIhttps://youtu.be/6thFY-JgfpM?feature=shared

1hour - UBER Drive Case Study | Data Analysis Using Excel
https://youtu.be/e6lIOVIb_eY?feature=shared

Application Case 1.2: Silvaris Increases Business with Visual Analysis and RealTime Reporting Capabilities

1. What was the challenge faced by Silvaris?
Because of the fast-paced nature of the industry, it was necessary to create a system that provided real-time information that was coupled with its existing systems.
2. How did Silvaris solve its problem using data visualization with Tableau?
The use of Tableau allowed them to create real-time visualizations of data without creating a separate reporting system.

Application Case 1.3: Siemens Reduces Cost with the Use of Data Visualization

1. What challenges were faced by Siemens' visual analytics group?
The group was tasked with creating comprehensive reporting systems that were to be used across multiple internal groups and systems.

2. How did the data visualization tool Dundas BI help Siemens in reducing cost?
The solution allowed Siemens to use multiple data dashboards that could assist users in identifying issues early, so they could be quickly addressed.

Application Case 1.4: Analyzing Athletic Injuries

1. What types of analytics are applied in the injury analysis?

The analytics used data about the type of injury, action taken, healing start and end dates, players' position, activity, onset, and game location. The data were used to classify healing time into five periods and to associate healing time with players' positions, severity of injury, and treatment offered. That provided information for creating neural network models using player and injury data to predict healing time in terms of the five categories.

2. How do visualizations aid in understanding the data and delivering insights into the data?

Visualizations provide a great tool for gaining the initial insights into data, which can be further refined based on expert opinions. Visualizations also aid in generating ideas for obscured business problems, which can be pursued in building predictive models.

3. What is a classification problem?

Classification is a technique used in developing predictive analytical applications. In this example, various kinds of data, such as severity of injury and healing time, were classified for purposes of making decisions about how to handle injuries and which players might be available to play in the future.

4. What can be derived by performing sequence analysis?

Drawing sequence rules can predict the relationship among types of data in this case, the relationship among the injuries and the various body parts afflicted with injuries.

Application Case 1.5: A Specialty Steel Bar Company Uses Analytics to Determine Available-to-Promise Dates

1. Why would reallocation of inventory from one customer to another be a major issue for discussion?

This would be an important consideration because of promised delivery times, and potential penalties if deliveries were missed for existing/previous customers.

2. How could a DSS help make these decisions?

A DSS would have the ability to examine all current stocks of goods (as well as incoming stocks) and perform cost-benefit analysis on potential changes to existing delivery promises.

Application Case 1.6: CenterPoint Energy Uses Real-Time Big Data Analytics to Improve Customer Service

1. How can electric companies predict possible outage at a location?

By tracking the status of hardware, it may be possible to identify issues or clusters of issues that statistically may predict outages.

2. What is customer sentiment analysis?

Customer sentiment analysis categorizes and evaluates customer opinion by types of emotion.

3. How does customer sentiment analysis help companies provide a personalized service to their customers?

By understanding customer sentiment, the company is able to customize communications to customers.