BUSINESS PROCESS SUPPORT

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INTRODUCTION

In today's data-driven world, data and information are essential for optimizing business processes and making informed decisions. This presentation explores how ABC Manufacturing uses data to improve operations, enhance customer satisfaction, and drive growth. We will focus on data generation, tools like Power BI, and the impact of data on real-world business processes.

HOW DATA AND INFORMATION SUPPORT BUSINESS PROCESSES

- Key Content
- Types of Data
- Value of Data

HOW DATA AND INFORMATION SUPPORT BUSINESS PROCESSES

Key Content

- Data: Raw, unprocessed information collected from sources such as sales transactions and customer interactions.
- Information: Processed data that provides context and supports decision-making.

HOW DATA AND INFORMATION SUPPORT BUSINESS PROCESSES

Types of Data

- Transactional Data: Records of business transactions (e.g., sales data).
- Customer Data: Information about customers, including demographics and preferences.
- Marketing Data: Data related to marketing campaigns (e.g., click-through rates).
- Social Media and Web Analytics Data: Insights from platforms like Facebook and Google Analytics.

HOW DATA AND INFORMATION SUPPORT BUSINESS PROCESSES

Value of Data

- Improved Decision-Making: Data-driven decisions are more accurate and reliable.
- Customer Satisfaction: Understanding customer needs leads to better service.
- Revenue Growth: Data helps identify new opportunities and optimize operations.

DATA GENERATION AND TOOLS FOR MANIPULATION

01 How Data is Generated

02 Tools for Data Processing

03 Application in the Project

DATA GENERATION AND TOOLS FOR MANIPULATION

How Data is Generated

- Transactional Data: Generated through sales, purchases, and inventory management.
- Customer Data: Collected via surveys, loyalty programs, and online interactions.
- Marketing Data: From campaigns, social media, and website analytics.
- Machine-Generated Data: Produced by sensors, IoT devices, and web servers.

DATA GENERATION AND TOOLS FOR MANIPULATION

Tools for Data Processing

- Microsoft Excel: For basic data analysis and visualization.
- SQL: For managing and querying databases.
- Power BI: For creating interactive dashboards and reports.
- Tableau: For advanced data visualization.

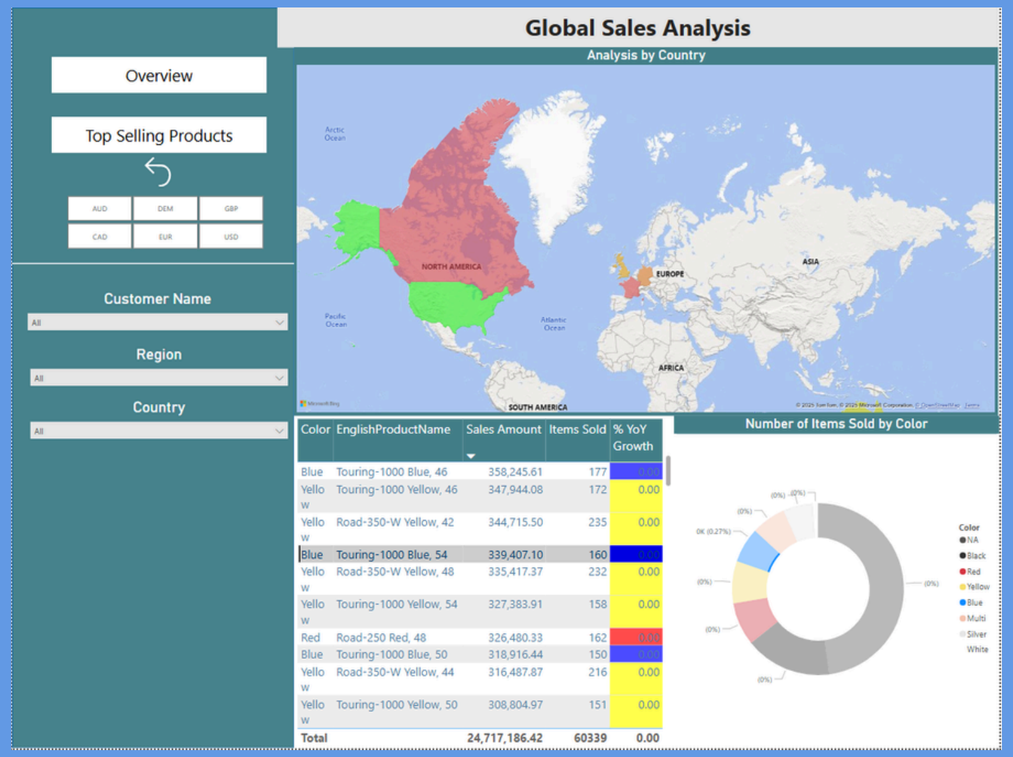
DATA GENERATION AND TOOLS FOR MANIPULATION

Application in the Project

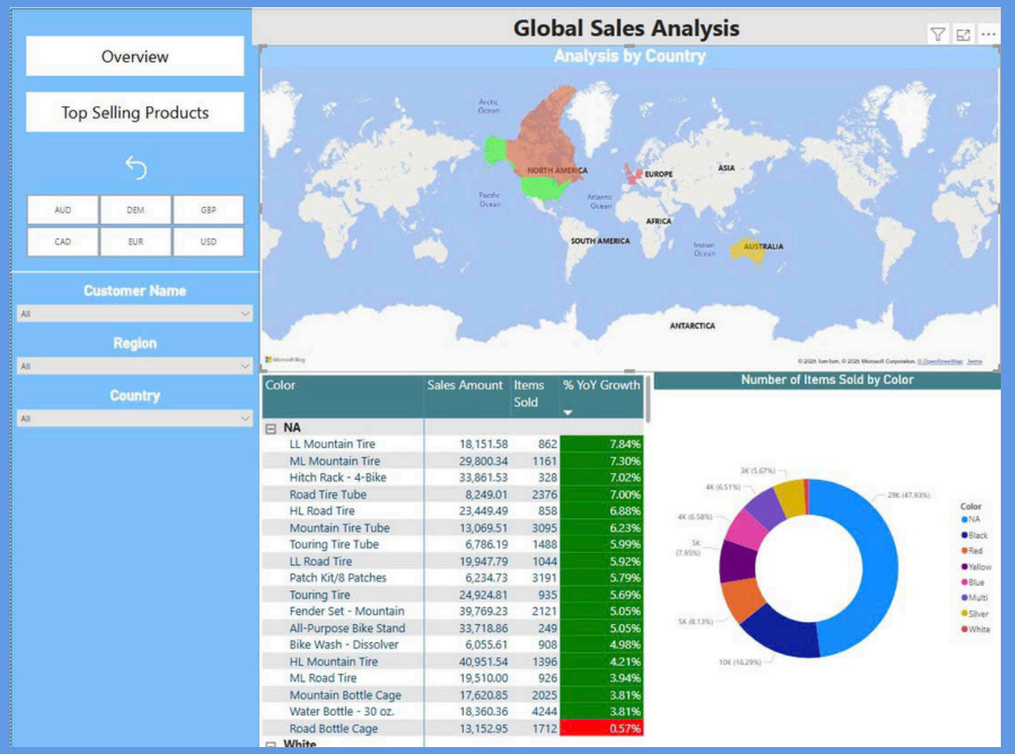
- Power BI was used to create dashboards for sales trends and customer behavior, helping ABC Manufacturing make data-driven decisions.

IMPACT AND VALUE OF DATA IN REAL-WORLD BUSINESS PROCESSES

GLOBAL SALES ANALYSIS



TOP SELLING PRODUCTS



HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Human-Generated Data

Machine-Generated Data

Tools for Processing

Importance

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Human-Generated Data

Definition

Human-generated data is created through manual input by individuals. This type of data is often qualitative and provides context and insights that are difficult to capture through automated systems.

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Human-Generated Data

Tools for Processing Human-Generated Data

- Microsoft Excel: Widely used for organizing and analyzing survey data or employee records.
- Google Forms: A tool for creating surveys and collecting responses, which can then be exported to Excel or other analysis tools.
- Qualitative Analysis Software: Tools like NVivo or MAXQDA are used for analyzing textual data from surveys or social media posts.

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Human-Generated Data

Examples

- Customer Surveys: Feedback collected from customers about their experiences and preferences.
- Employee Records: Data entered by HR departments, such as performance reviews and attendance records.
- Social Media Posts: Comments, reviews, and posts on platforms like Facebook, Twitter, and Instagram.

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Machine-Generated Data

Definition

Machine-generated data is produced automatically by systems, devices, or sensors without human intervention. This type of data is typically quantitative and generated in real-time, making it ideal for monitoring and automation.

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Machine-Generated Data

Tools for Processing Machine-Generated Data:

- Hadoop: A framework for processing and storing large volumes of data, particularly useful for handling real-time data from sensors or IoT devices.
- Apache Spark: A tool for real-time data processing and analytics, often used for analyzing streaming data from web servers or IoT devices.
- Cloud Platforms: Services like AWS, Google Cloud, and Microsoft Azure provide tools for collecting, storing, and analyzing machine-generated data at scale.

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Machine-Generated Data

Examples

- Sensor Data: Data from sensors in manufacturing plants, vehicles, or IoT devices, such as temperature, pressure, and motion.
- Web Server Logs: Data automatically logged by web servers, such as page views, click-through rates, and session durations.
- IoT Devices: Data from smart home appliances or wearable fitness trackers, such as steps taken, heart rate, and sleep patterns.

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Importance of Both Data Types in Business Processes

Human-Generated Data

- Offers qualitative insights that help businesses understand customer preferences, employee satisfaction, and market trends. For example, customer surveys provide detailed feedback that can guide product development and marketing strategies.

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Importance of Both Data Types in Business Processes

Machine-Generated Data

- Provides real-time, quantitative data that enables businesses to monitor operations, predict trends, and automate processes. For example, sensor data from manufacturing equipment can be used to predict maintenance needs and prevent downtime.

HUMAN- AND MACHINE-GENERATED DATA MECHANISMS

Real-World Example

Netflix combines human-generated data (ratings, reviews) with machine-generated data (viewing history, search queries) to recommend personalized content. This approach enhances user experience and drives engagement, showcasing the power of integrating both data types.

CONCLUSION

In conclusion, data and information drive better decisions, efficiency, and customer satisfaction. Tools like Power BI transform raw data into actionable insights, helping businesses optimize processes and grow. Addressing challenges like data security and ethics is key to success. ABC Manufacturing's case shows how data improves inventory, marketing, and sales.

THANK YOU