Personal Computer
Touch Pad
Laptop
Remote Monitoring
Smart Phone
Mini Note
Remote Server
Data base

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THE ROLE OF DATA AND INFORMATION IN BUSINESS PROCESSES

- Why data is crucial in modern business:
  - Facilitates strategic decision-making
  - Enhances efficiency and competitiveness
  - Enables customer personalization

INTRODUCTION

- Overview of topics covered:
- Understanding data and information
- Data generation and manipulation tools
- The impact of data on business success
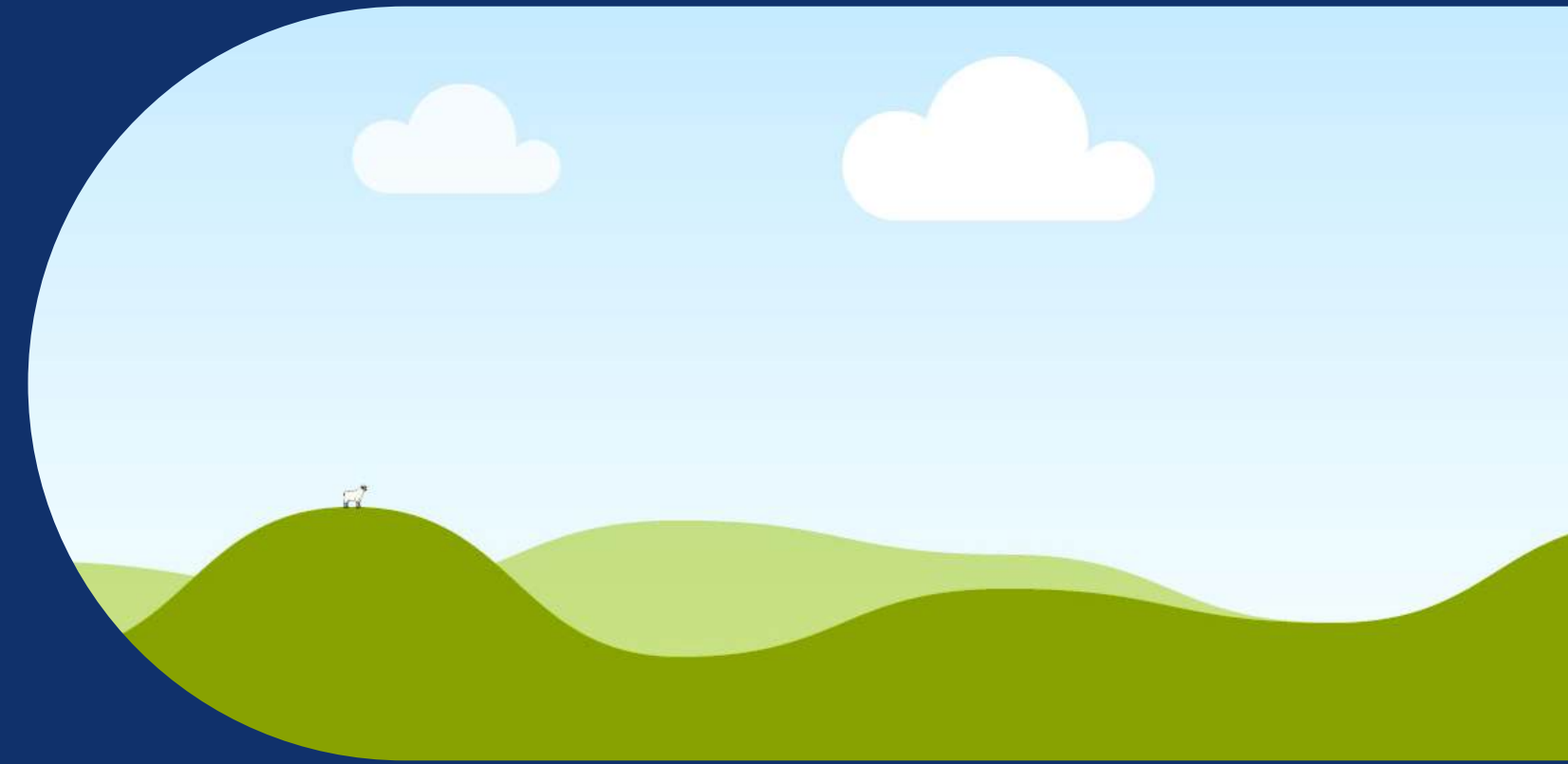- Human- and machine-generated data
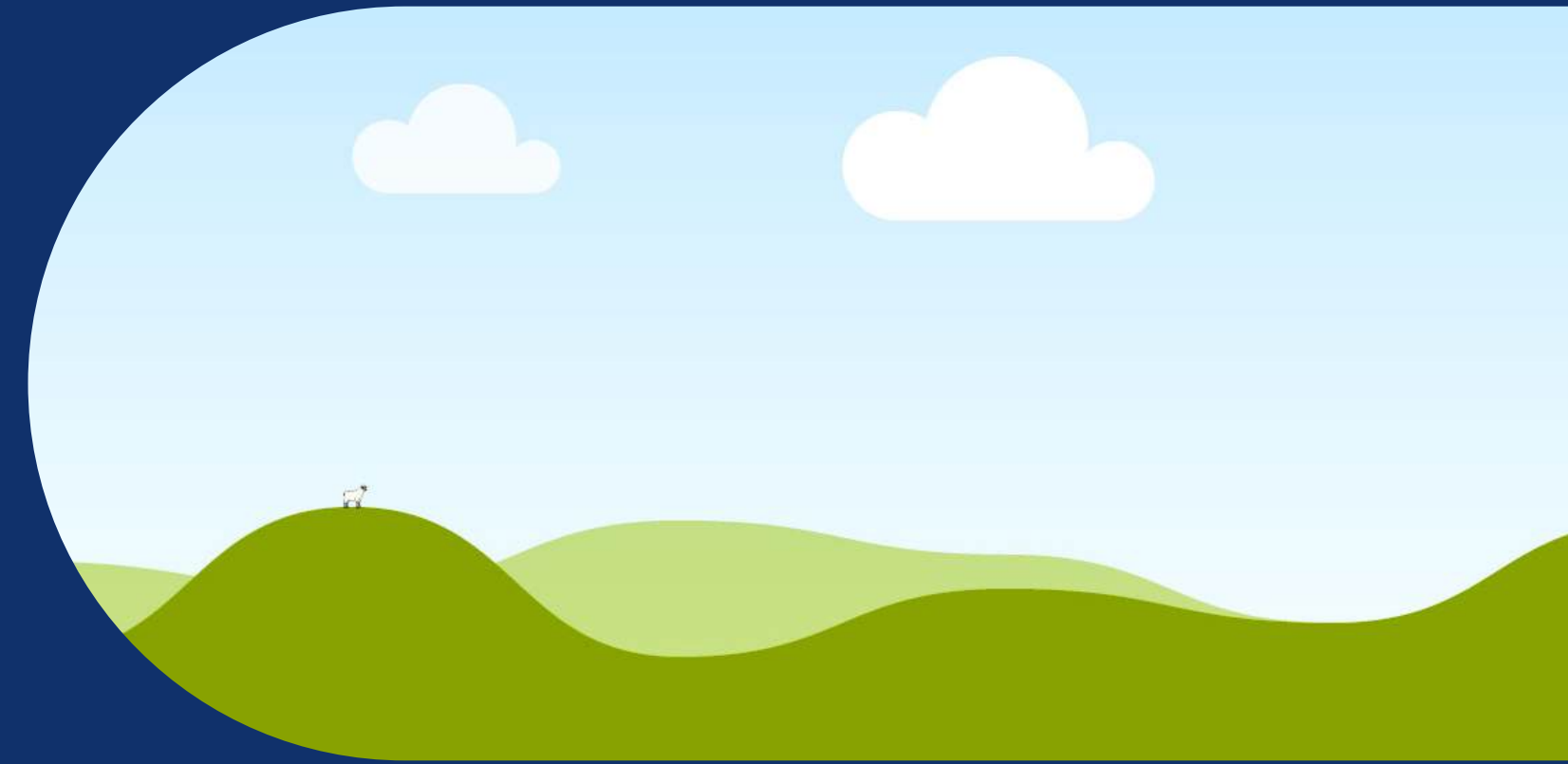
WHAT IS BUSINESS DATA?

- Definition: Raw facts and figures collected from various sources.
- Examples:
    - Sales transactions
    - Customer demographics
    - Website traffic data

WHAT IS INFORMATION IN BUSINESS?

- Definition: Processed, structured, and analyzed data providing meaningful insights.
- Example: Analyzing sales trends over time to improve forecasting.

TYPES OF DATA USED IN BUSINESS

- Transactional Data: Purchase records, invoices, receipts.
- Customer Data: Contact details, preferences, feedback.
- Marketing Data: Campaign performance, conversion rates.
- Social Media & Web Analytics Data: Engagement metrics, website visitor behavior.
- Financial Data: Revenue reports, expense tracking, profit margins.

DATA AND INFORMATION SUPPORTING BUSINESS PROCESSES

- Helps businesses make informed decisions
- Enhances customer satisfaction through tailored experiences
- Boosts revenue and profitability
- Aids in problem-solving with data-driven insights
- Optimizes business processes for efficyienc

HOW DATA SUPPORTS DECISION-MAKING

- Real-time analytics: Immediate access to key business metrics.
- Predictive modeling: Forecasting trends and potential risks.
- Data-driven strategy planning: Using data to guide business growth.

HOW DATA IMPROVES CUSTOMER SATISFACTION

- Personalized marketing campaigns
- Understanding customer behavior
- Enhancing support services based on customer needs

HOW DATA INCREASES REVENUE AND PROFITS

- Identifying profitable markets
- Reducing operational costs through efficiency improvements

HOW DATA HELPS WITH PROBLEM-SOLVING

- **ROOT CAUSE ANALYSIS FOR BUSINESS CHALLENGES**

- **PROCESS IMPROVEMENT THROUGH DATA INSIGHTS**

HOW DATA IMPROVES BUSINESS PROCESSES

- Automation of workflows
- Continuous performance monitoring

HOW DATA IS GENERATED

- Transactional records from business operations
- Customer interactions via online and offline channels
- Marketing campaigns generating engagement data
- Web analytics tracking user behavior

USAGE OF DATA IN BUSINESS

- Decision-making based on factual insights
- Targeted marketing and customer engagement
- Risk management through predictive analytics
- Performance monitoring for operational efficiency
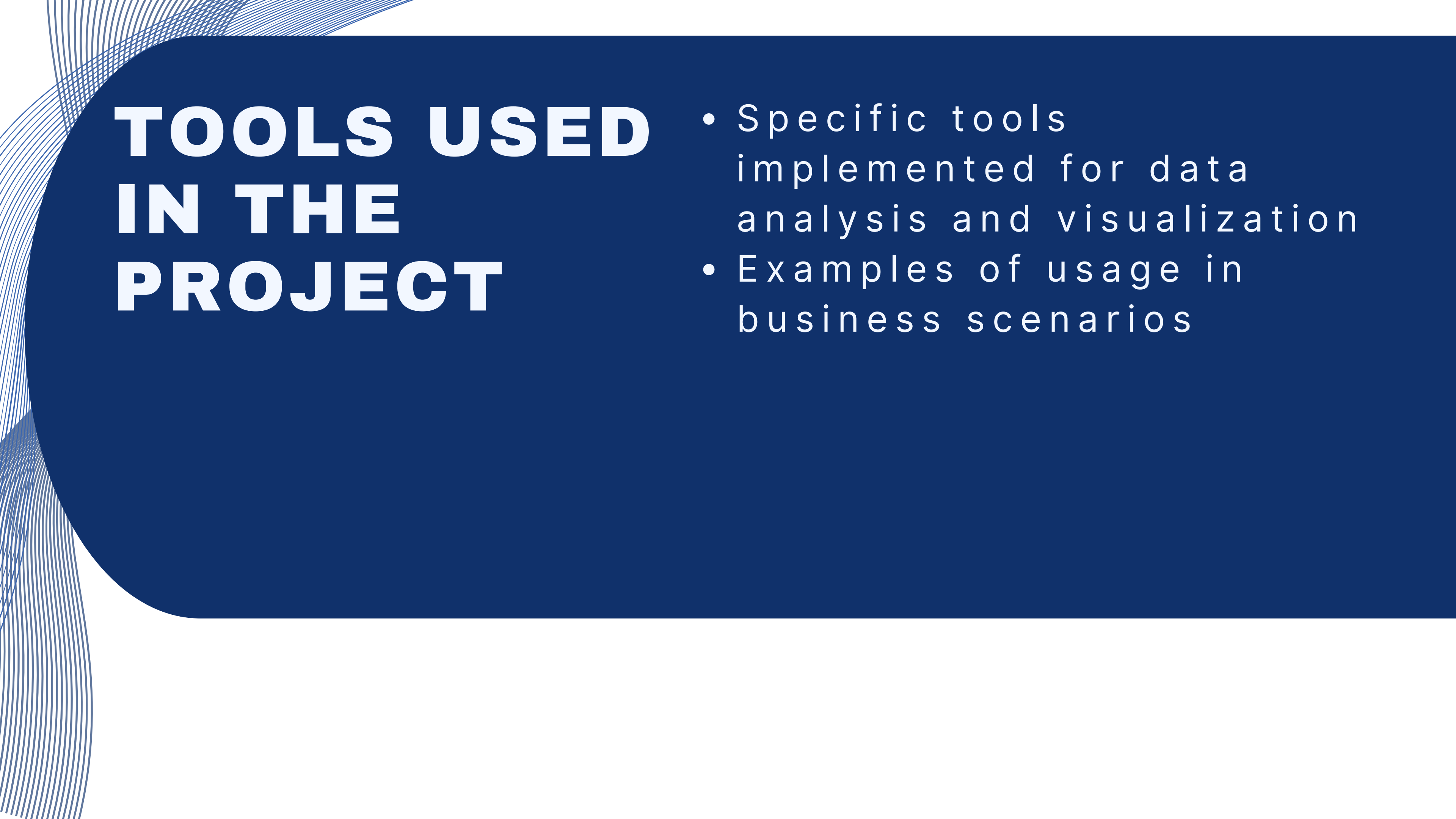
TOOLS FOR DATA PROCESSING

- Microsoft Excel: Data entry, analysis, and visualization.
- SQL: Database management and querying.
- Power BI: Interactive business intelligence reporting.
- Tableau: Advanced data visualization and insights.
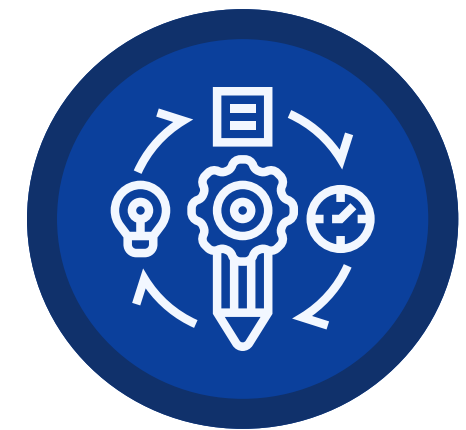
TOOLS USED IN THE PROJECT

- Specific tools implemented for data analysis and visualization
- Examples of usage in business scenarios

DATA VISUALIZATION IN POWER BI

- Overview of Power BI capabilities
- Benefits of using Power BI for data analytics

DASHBOARD 1

- Visual representation of sales metrics
- Key insights derived from the dashboard

DASHBOARD 2

Top Selling Products

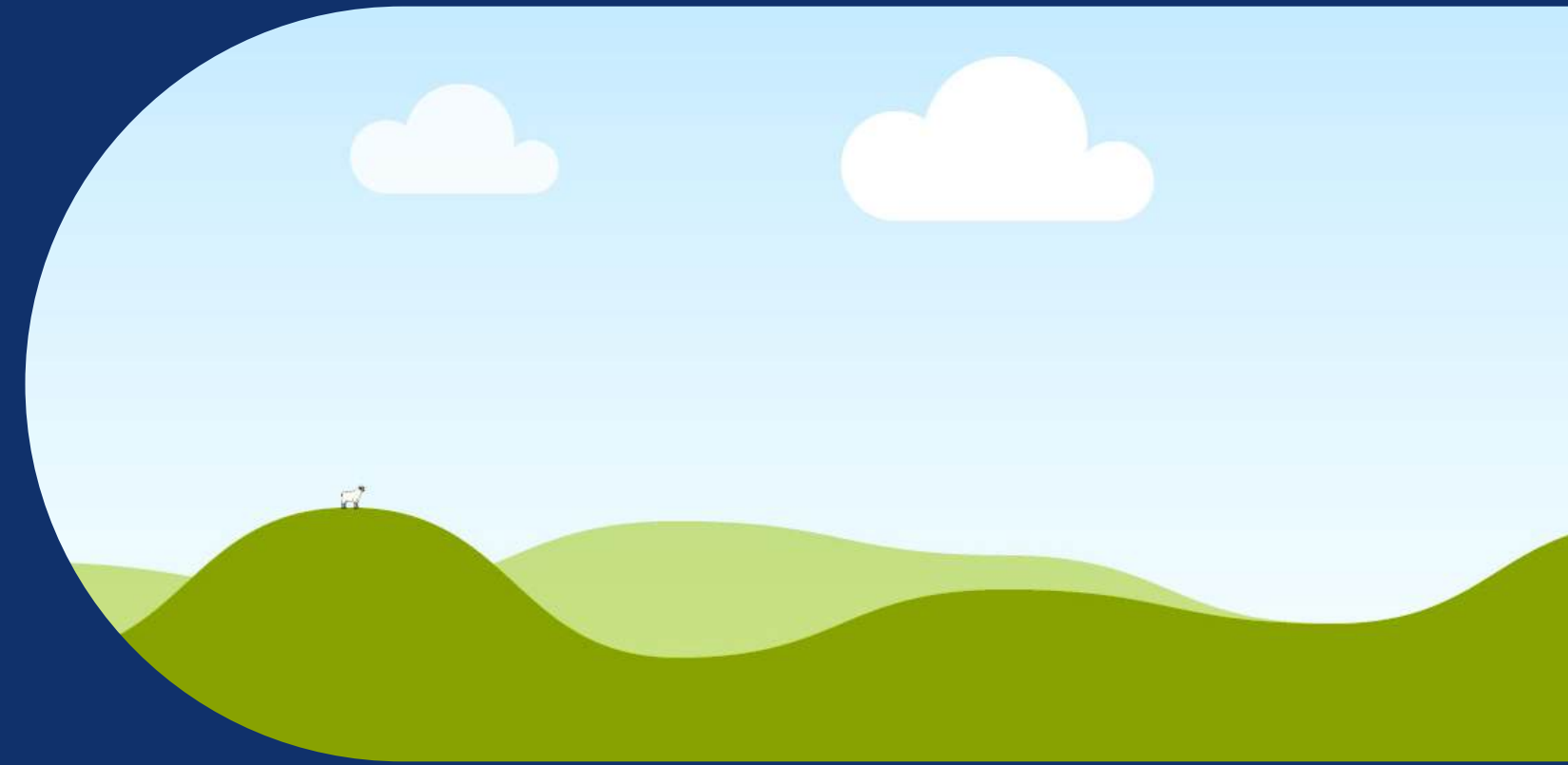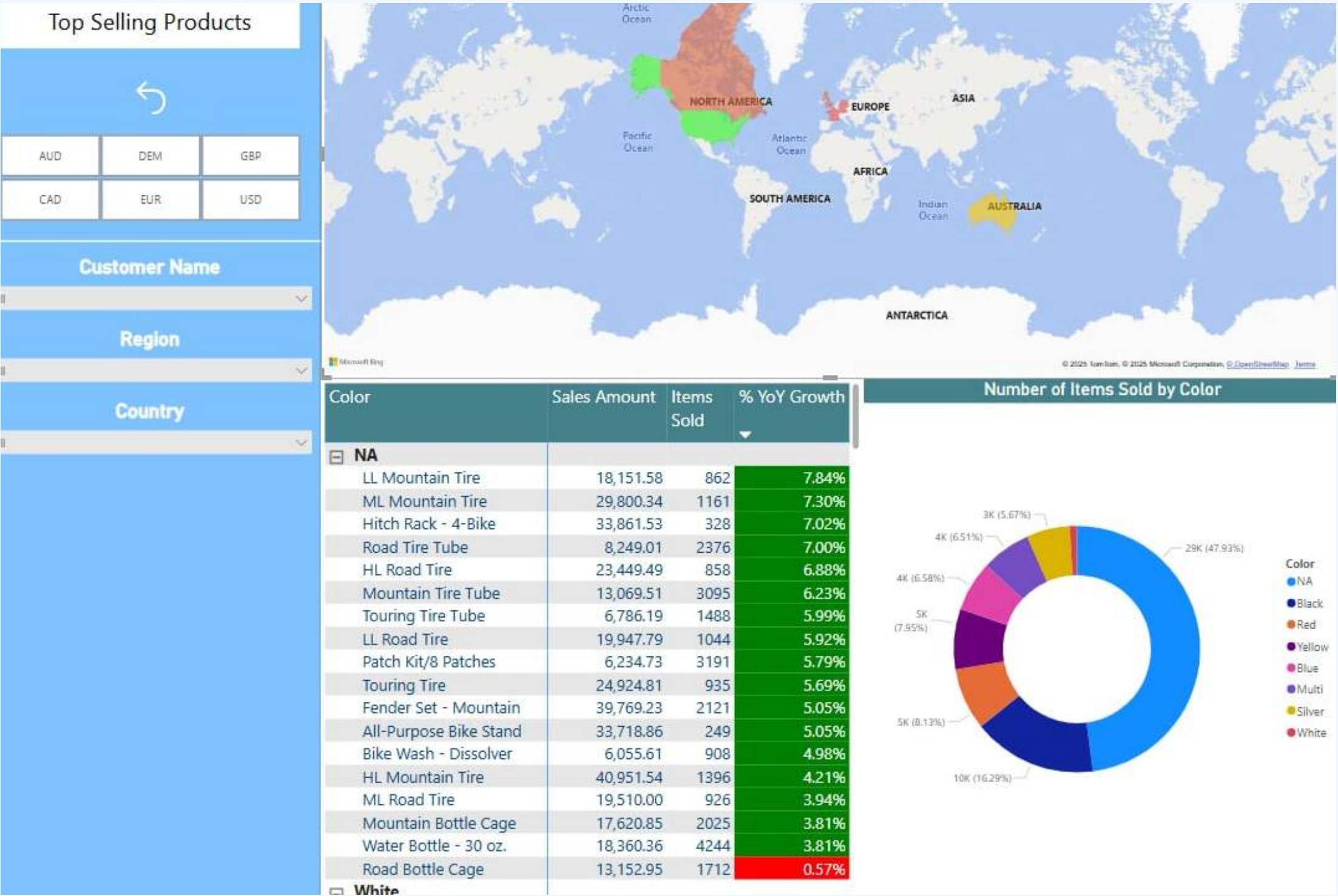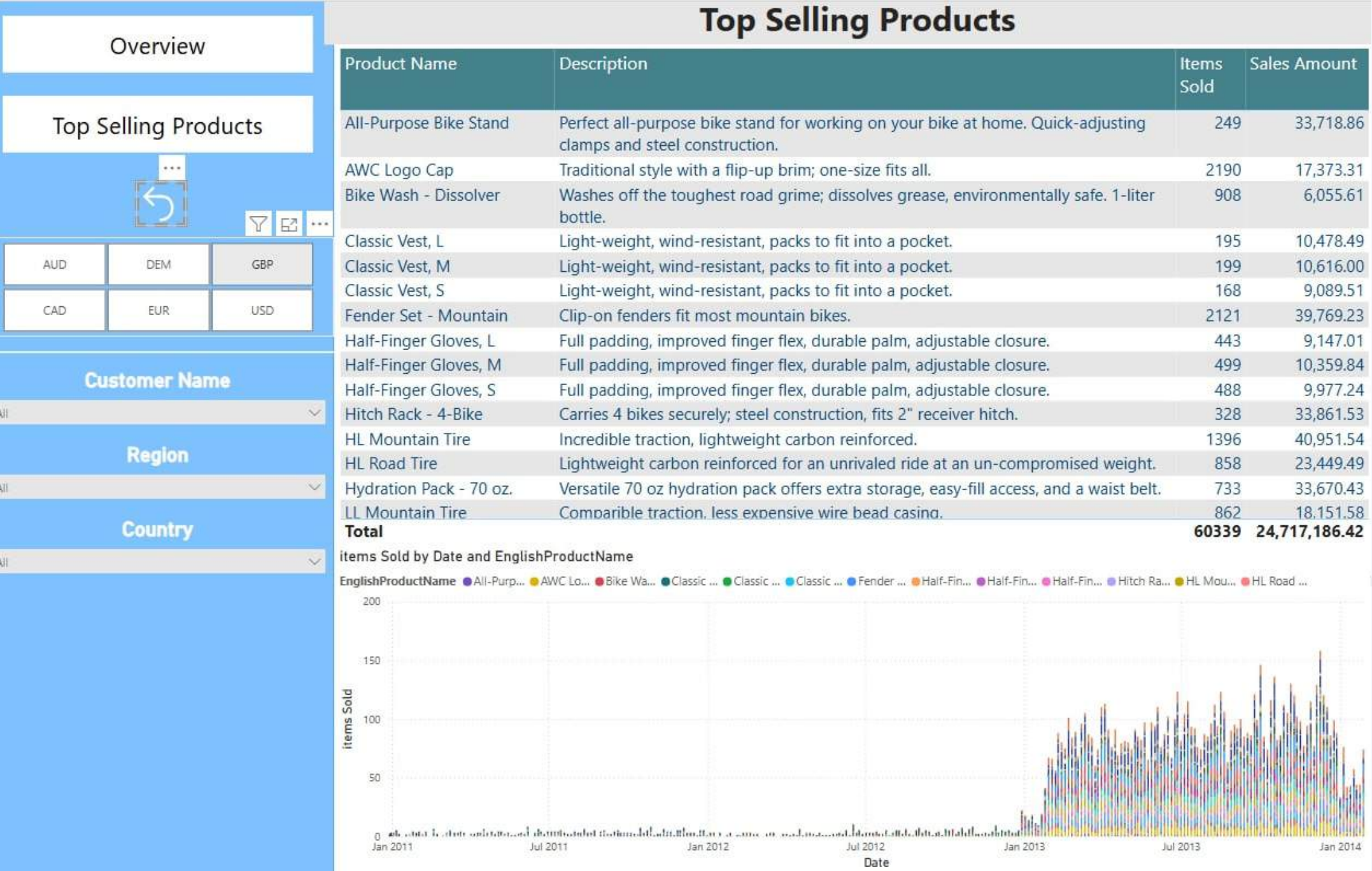| Product Name	Description	Items Sold	Sales Amount
All-Purpose Bike Stand	Perfect all-purpose bike stand for working on your bike at home. Quick-adjusting clamps and steel construction.	249	33,718.86
AWC Logo Cap	Traditional style with a flip-up brim; one-size fits all.	2190	17,373.31
Bike Wash - Dissolver	Washes off the toughest road grime; dissolves grease, environmentally safe. 1-liter bottle.	908	6,055.61
Classic Vest, L	Light-weight, wind-resistant, packs to fit into a pocket.	195	10,478.49
Classic Vest, M	Light-weight, wind-resistant, packs to fit into a pocket.	199	10,616.00
Classic Vest, S	Light-weight, wind-resistant, packs to fit into a pocket.	168	9,089.51
Fender Set - Mountain	Clip-on fenders fit most mountain bikes.	2121	39,769.23
Half-Finger Gloves, L	Full padding, improved finger flex, durable palm, adjustable closure.	443	9,147.01
Half-Finger Gloves, M	Full padding, improved finger flex, durable palm, adjustable closure.	499	10,359.84
Half-Finger Gloves, S	Full padding, improved finger flex, durable palm, adjustable closure.	488	9,977.24
Hitch Rack - 4-Bike	Carries 4 bikes securely; steel construction, fits 2" receiver hitch.	328	33,861.53
HL Mountain Tire	Incredible traction, lightweight carbon reinforced.	1396	40,951.54
HL Road Tire	Lightweight carbon reinforced for an unrivaled ride at an un-compromised weight.	858	23,449.49
Hydration Pack - 70 oz.	Versatile 70 oz hydration pack offers extra storage, easy-fill access, and a waist belt.	733	33,670.43
LL Mountain Tire	Comparible traction, less expensive wire bead casing.	862	18,151.58
Total		**60339**	**24,717,186.42**

Items Sold by Date and EnglishProductName

EnglishProductName ●All-Purp... ●AWC Lo... ●Bike Wa... ●Classic ... ●Classic ... ●Classic ... ●Fender ... ●Half-Fin... ●Half-Fin... ●Half-Fin... ●Hitch Ra... ●HL Mou... ●HL Road ...

Overview

Top Selling Products

AUD	DEM	GBP
CAD	EUR	USD

Customer Name

All

Region

All

Country

All

- Visual representation of sales metrics
- Key insights derived from the dashboard

ASSESSMENT ON THE IMPACT AND VALUE OF DATA

- How data influenced previous client projects
- Real-world examples of business process improvements

HUMAN- AND MACHINE-GENERATED DATA

- Definition & comparison
  - Human-generated: Surveys, manual data entry.
  - Machine-generated: IoT sensors, AI-generated logs.
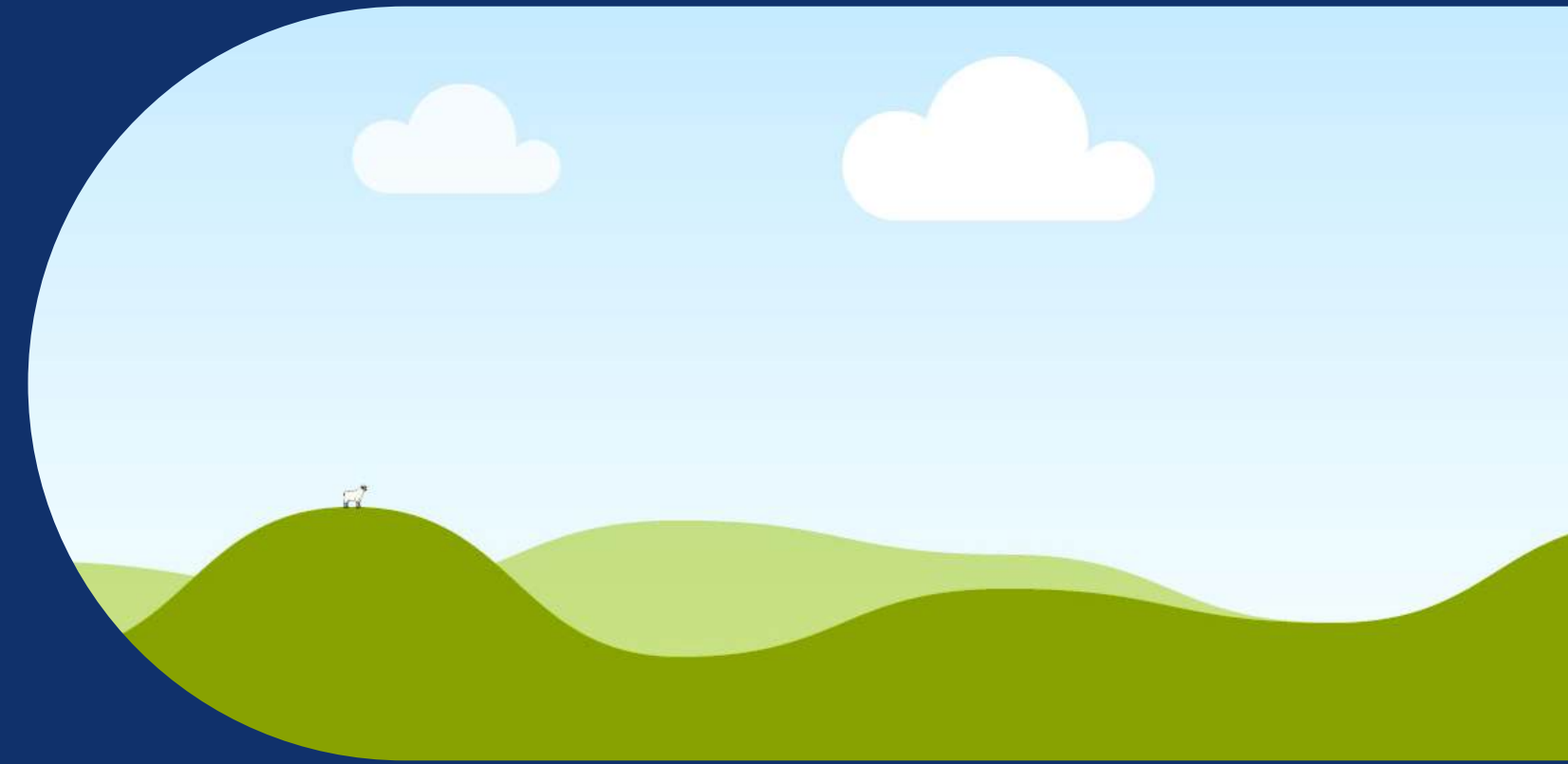- Examples from real-world business applications

HUMAN-GENERATED DATA MECHANISMS

- Methods for collecting human-generated data:
- Surveys and feedback forms
- Customer reviews and testimonials
- Employee reports and manual data entries

MACHINE-GENERATED DATA MECHANISMS

- Automated data sources:
- IoT sensors monitoring environmental conditions
- AI-driven data collection and analysis
- System logs from enterprise software

TOOLS FOR HUMAN- AND MACHINE-GENERATED DATA

01

- Excel & Google Sheets: Manual data entry and processing.
- Apache Kafka: Real-time data streaming and processing.

WHY THESE MECHANISMS AND TOOLS ARE ESSENTIAL

- Ensuring accurate data collection for analysis
- Enabling businesses to extract meaningful insights
- Improving decision-making efficiency

EXAMPLES OF DATA-DRIVEN DECISION MAKING

- Predictive maintenance using IoT-generated data
- Targeted marketing campaigns using customer segmentation

CASE STUDY USING DATA TO OPTIMIZE BUSINESS PROCESSES

Real-life example of how data improved operational efficiency

CHALLENGES IN DATA UTILIZATION

- Data security and privacy concerns
- Issues with integrating and managing data silos

FUTURE TRENDS IN BUSINESS DATA USAGE

- The role of AI and machine learning in business intelligence
- Growth and adoption of big data and cloud analytics

SUMMARY

- The importance of data-driven decision-making
- How businesses gain a competitive edge through effective data management

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LICERIA & CO.

THANK YOU

FOR YOUR ATTENTION

02 May, 2024