

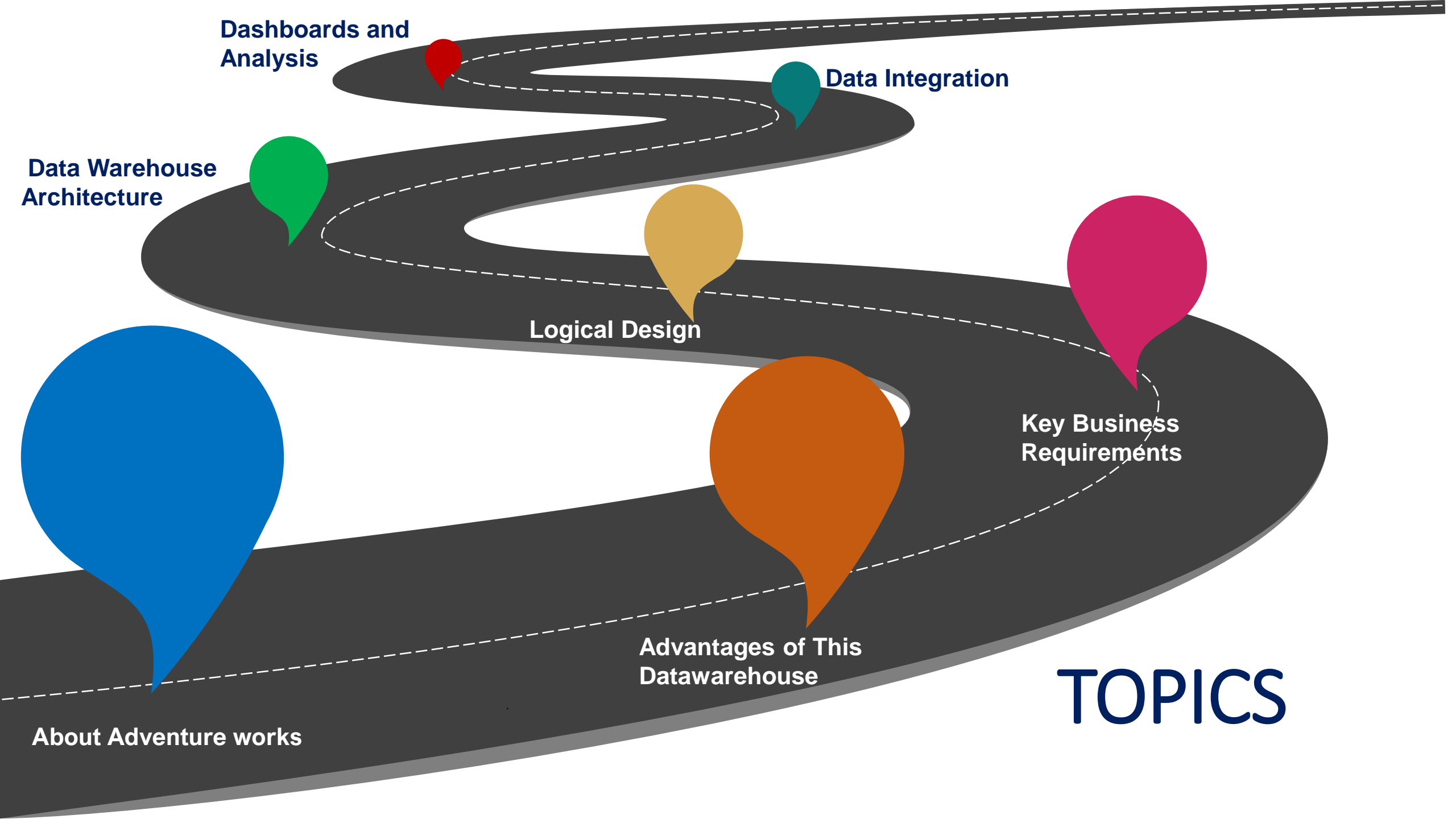
IS 6480 Data Warehousing Group Project Adventure Works Data

Group 5 – Cloud (Azure)



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About Adventure works

Data Warehouse
Architecture

Dashboards and
Analysis

Logical Design

Advantages of This
Datawarehouse

Data Integration

Key Business
Requirements

TOPICS

About Adventure works



Adventure Works is a fictional outdoor equipment and gear company specializes in selling products such as bikes, camping gear, and hiking equipment.



Adventure Works values include customer satisfaction, innovation, sustainability, and quality.



The company's motto is "Experience the Great Outdoors", emphasizing on providing customers with the tools and equipment they need to enjoy nature and outdoor activities.

Advantages of this Datawarehouse



Ø EFFICIENT QUERYING AND ANALYSIS OF SALES DATA FOR IDENTIFYING TRENDS AND OPTIMIZING MARKETING STRATEGIES, IMPROVING CUSTOMER RETENTION, AND INCREASING REVENUE.



Ø CONSOLIDATED DATA FROM VARIOUS SOURCES PROVIDING A COMPREHENSIVE VIEW OF BUSINESS OPERATIONS FOR INFORMED DECISION-MAKING.



Ø FILTER DATA BY VARIOUS CRITERIA SUCH AS DAY, MONTH, YEAR, AND CONTINENT, FOR TARGETED ANALYSIS AND INSIGHTS INTO SPECIFIC ASPECTS OF THE BUSINESS.

Key Business Requirements

Requirement Name	Short Description
Sales Performance	
Region vs sales data	Helps to shortlist regions to focus
Customer Income vs sales data	Helps to understand customer needs
Holiday vs sales data	Trends based on weekend vs weekdays
Product category vs sales data	Product categories from which profit can be increased
Returns	
Amount vs returns	Total loss due to returned goods
Returns products	Improve quality of highest returned product
Territory vs returns	Focus more on the region to understand consumer's needs

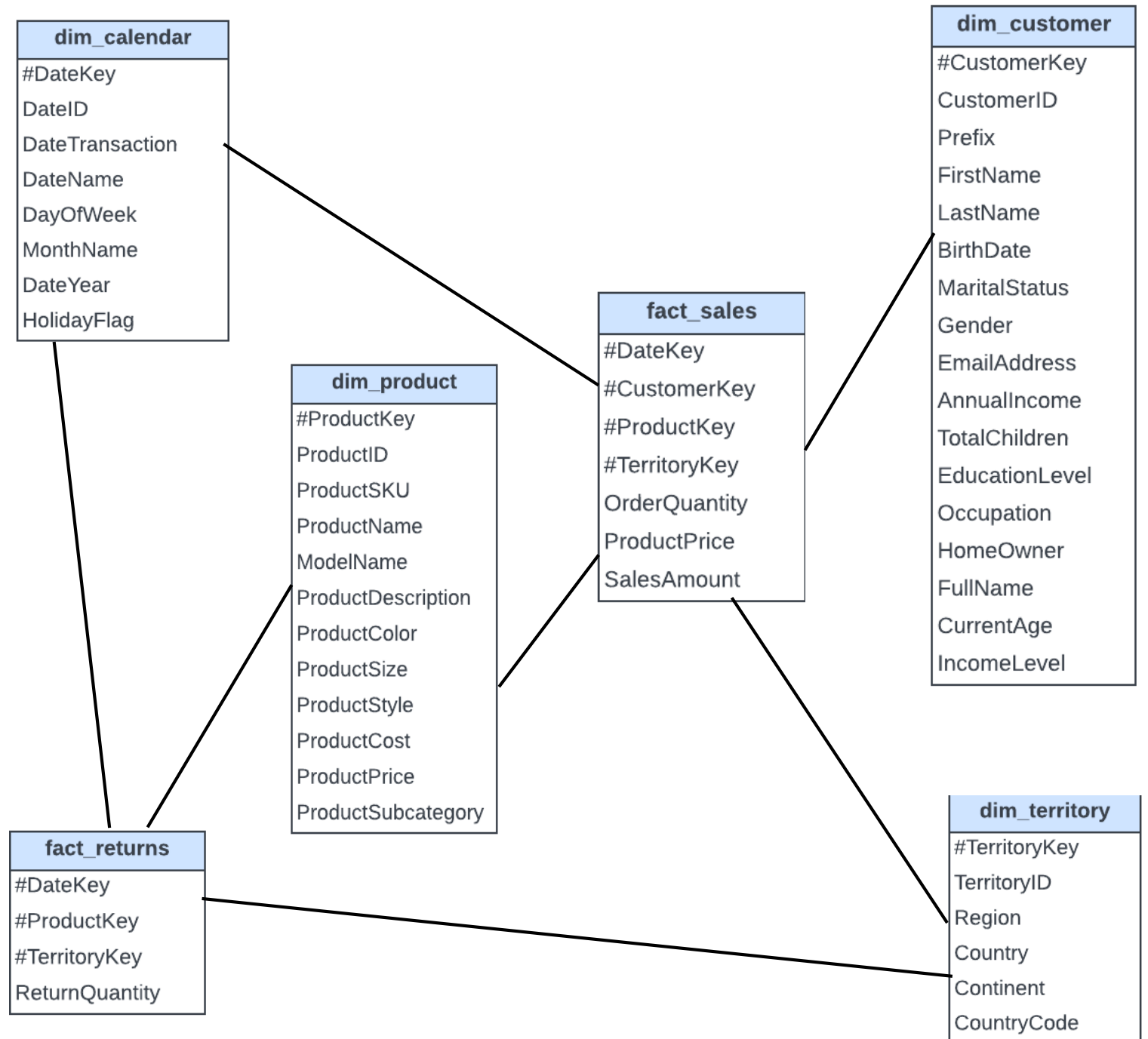
Logical Design

DIMENSION TABLES:

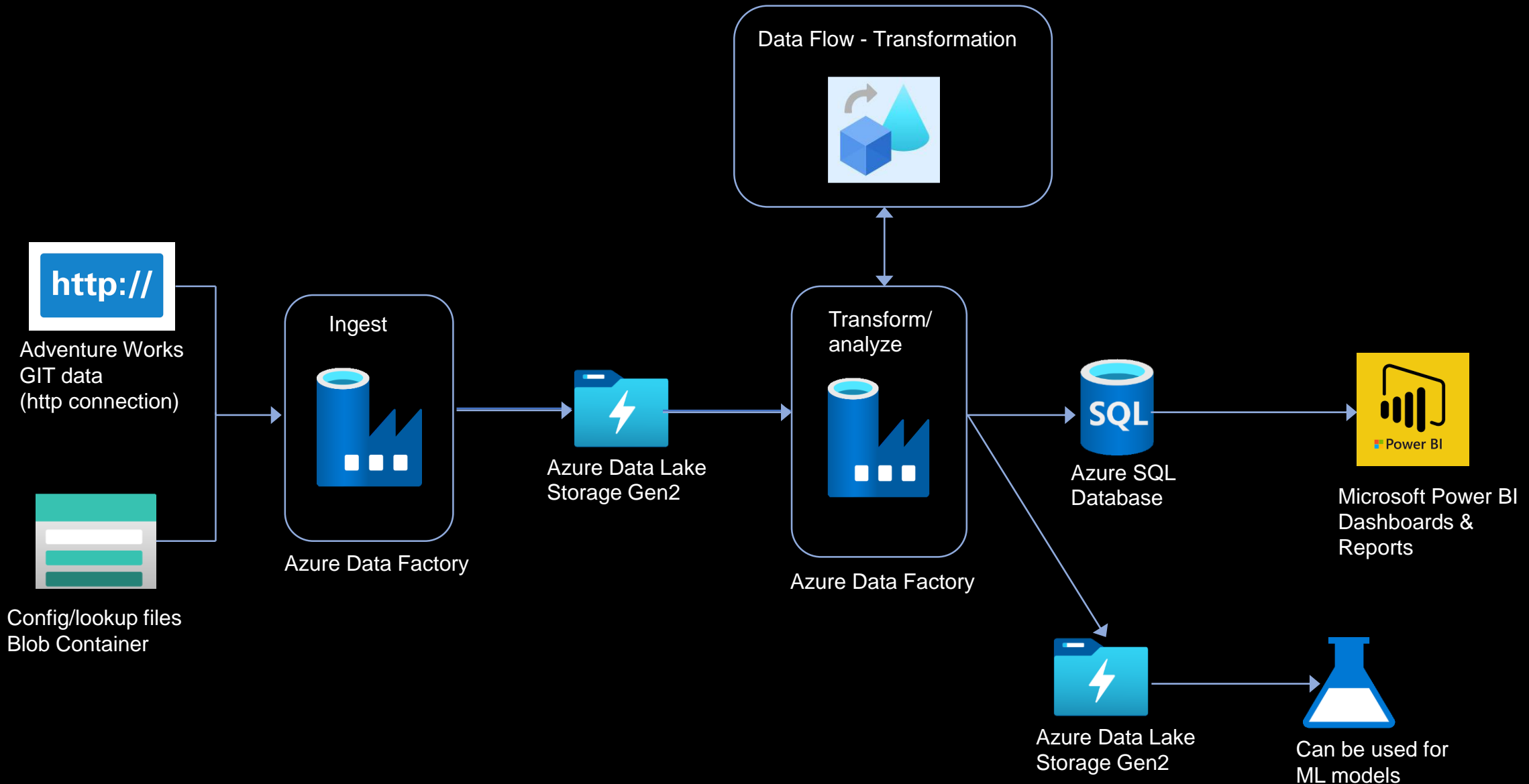
DIM_CUSTOMER
DIM_PRODUCT
DIM_TERRITORY
DIM_CALENDAR

FACT TABLES:

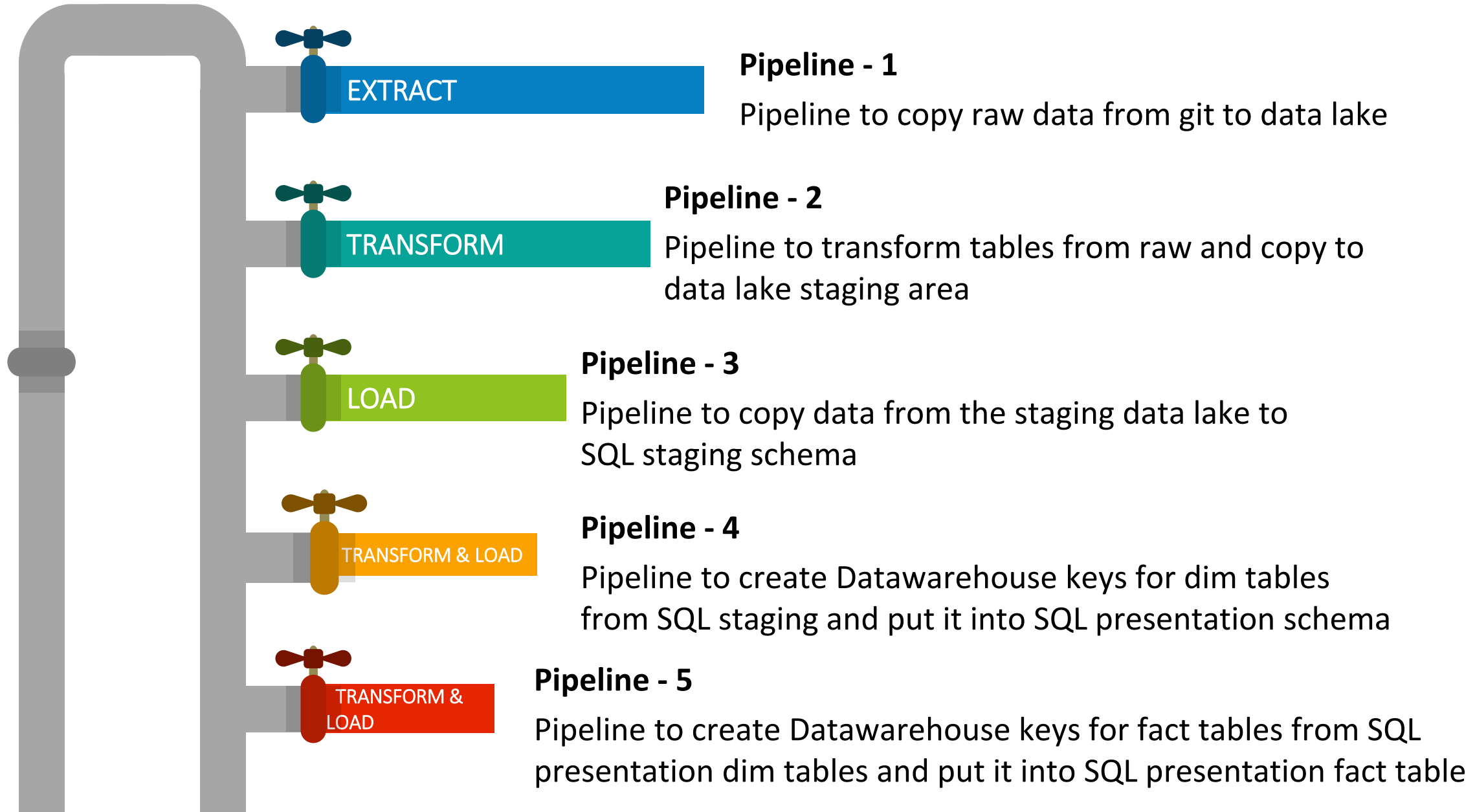
FACT_SALES
FACT_RETURNS



Data Warehouse Architecture



DATA INTEGRATION: PIPELINES IN DATA FACTORY





Dashboards and Analysis

- Executive Dashboard
- Employee Dashboard

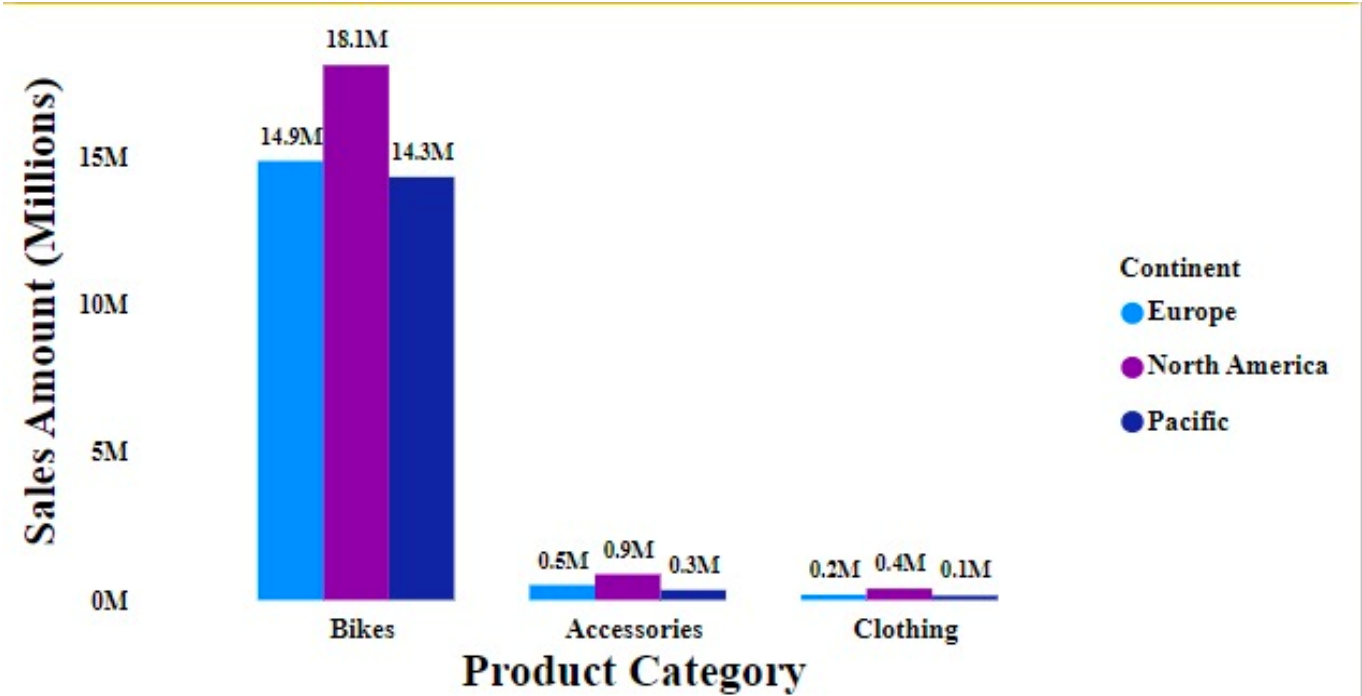
Executive Dashboard

- Sales Trend Analysis : Quarterly Sales Performance
- Sales Performance by Product Category and Continent
- Sales Performance by Customer Demographics
- Top 10 Product by Sales
- Product Returns by Continent
- Analysis through Product Category and Holiday Flag Filters
- Power BI Dashboard: Executive Dashboard

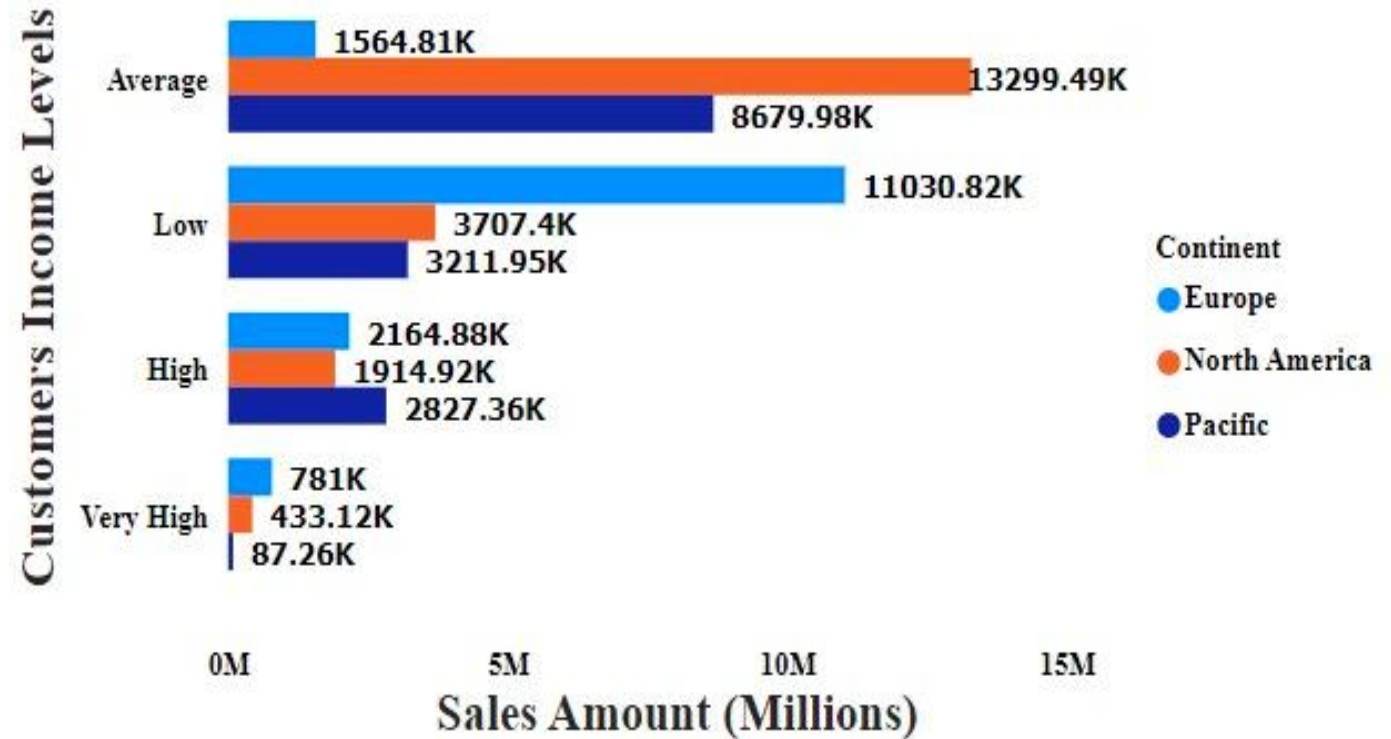
Sales Trend Analysis : Quarterly Sales Performance



Sales Performance by Product Category and Continent



Sales Performance by Customer Demographics



Top 10 Product by Sales

Product Name
Mountain-200 Black, 38
Mountain-200 Black, 42
Mountain-200 Black, 46
Mountain-200 Silver, 38
Mountain-200 Silver, 42
Mountain-200 Silver, 46
Road-150 Red, 48
Road-250 Black, 48
Road-250 Black, 52
Road-250 Red, 58

Product Returns by Continent

Category Name	Europe	North America	Pacific	Total
Accessories	338	569	223	1130
Bikes	146	158	125	429
Clothing	69	144	56	269
Total	553	871	404	1828

Analysis through Product Category and Holiday Flag Filters

Product Category		Holiday Flag
<input type="checkbox"/>	Accessories	0
<input type="checkbox"/>	Bikes	
<input type="checkbox"/>	Clothing	1
<input type="checkbox"/>	Components	

Employee Dashboard

- Top Customers by Average Order Value
- Return Quantity by Product Category and subcategory
- Order Quantity vs Return Quantity
- Single Cards and Filters
- Power BI Dashboard: Employee Dashboard

Top Customers by Average Order Value

Full Name	Average Order value	Email Address	Income Level
MR. BENJAMIN SHAN	3,578.00	benjamin33@adventure-works.com	Low
MR. BRANDON ZHANG	3,578.00	brandon20@adventure-works.com	Average
MR. CAMERON HENDERSON	3,578.00	cameron0@adventure-works.com	Average
MR. CARSON JENKINS	3,578.00	carson5@adventure-works.com	Low
MR. CHRISTIAN BUTLER	3,578.00	christian29@adventure-works.com	Low
MR. COLE RICHARDSON	3,578.00	cole11@adventure-works.com	Low
MR. IAN EDWARDS	3,578.00	ian38@adventure-works.com	Average
MR. IAN HENDERSON	3,578.00	ian45@adventure-works.com	Average
MR. IAN WILSON	3,578.00	ian8@adventure-works.com	Low
MR. ISAIAH EDWARDS	3,578.00	isaiah23@adventure-works.com	Average
MR. JACK ZIMMERMAN	3,578.00	jack24@adventure-works.com	Low
MR. JAMES MILLER	3,578.00	james81@adventure-works.com	Low
MR. JARED MOYER	3,578.00	jared16@adventure-works.com	Average

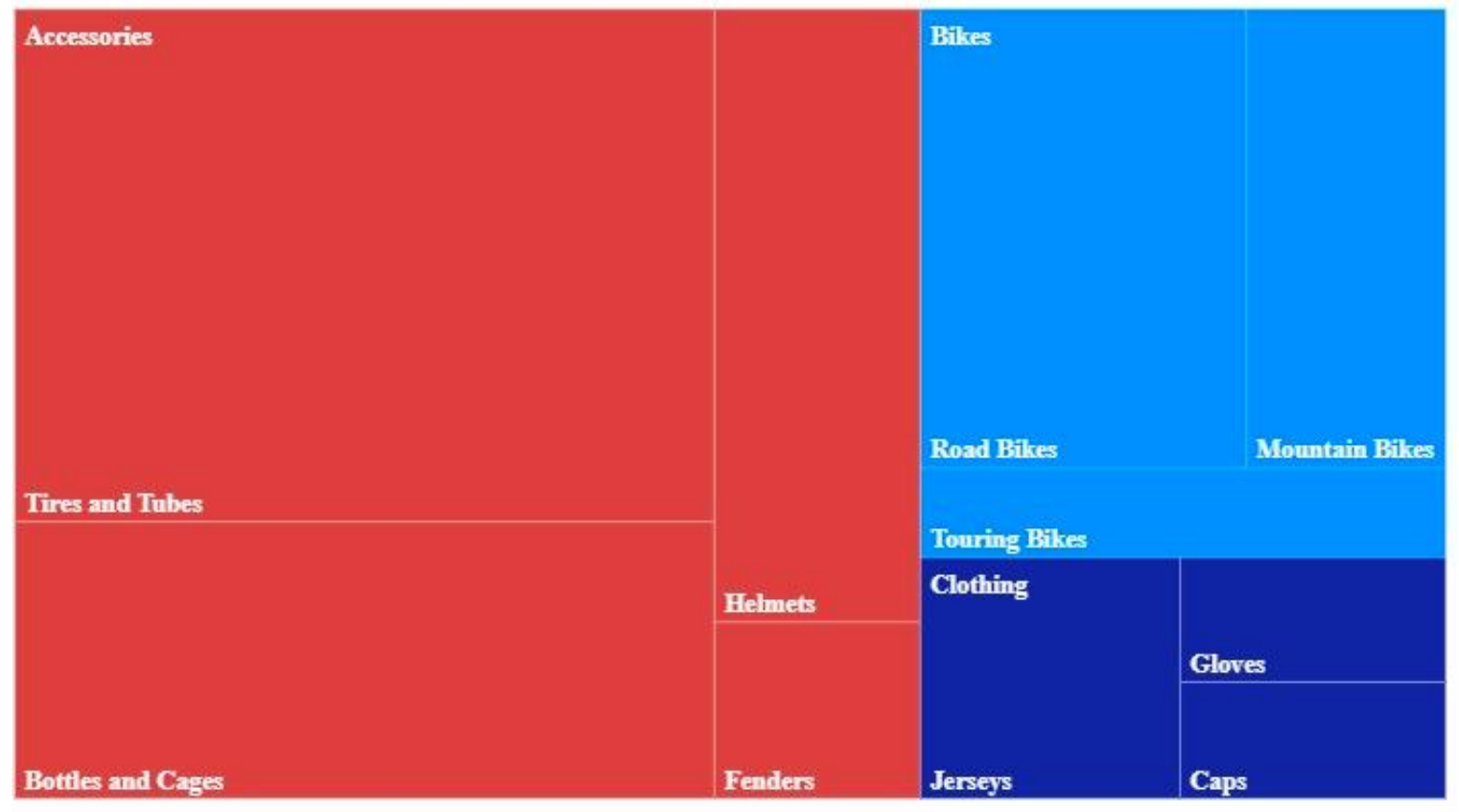
Ordered Quantity vs Return Quantity

Accessories		
115618	1130	1.16%
Sum of OrderQuantity	Sum of ReturnQuantity	Percentage of Returns

Bikes		
27858	429	1.49%
Sum of OrderQuantity	Sum of ReturnQuantity	Percentage of Returns

Clothing		
24872	269	1.41%
Sum of OrderQuantity	Sum of ReturnQuantity	Percentage of Returns

Return Quantity by Product Category & Sub Category



Single Cards and Filters for Employee Dashboard

Total Sales Amount

49.70M

Total Amount for Return Products

734.67K

Day

All

Month

All

Year

All

Continent

Europe

North America

Pacific



THANK YOU