



POWER BI SUPPLY CHAIN PROJECT



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01.

INTRODUCTION



- This project analyses supply chain data to provide clear insights into supplier performance, product quality, inventory movement, and overall operational efficiency. Using interactive Power BI dashboards, the report highlights key metrics (KPIs), trends, and patterns that support informed decision-making.
- The presentation summarises the most important findings and visualisations, helping stakeholders identify strengths, address challenges, and optimise the supply chain process.

01. INTRODUCTION



01. DATA
COLLECTION

03. DATA
ANALYSIS

02. DATA
CLEANING

04. DATA
VISUALIZATION



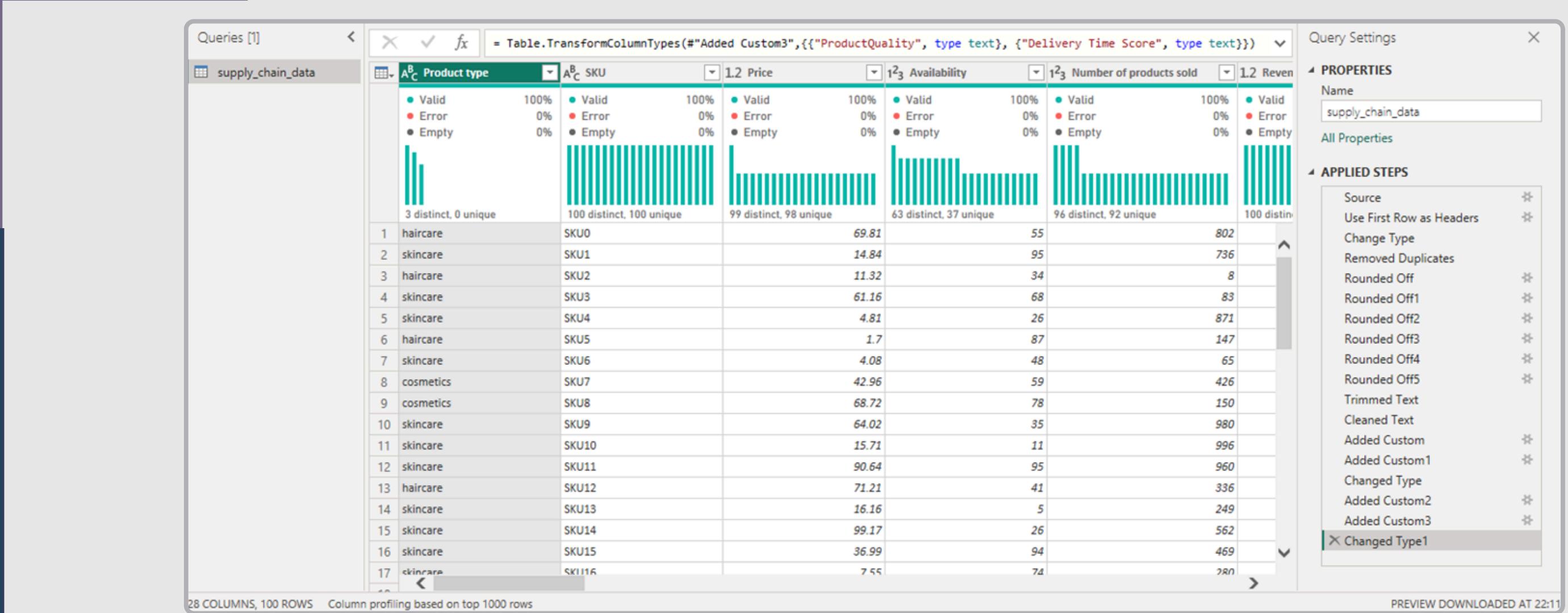
02.

DATA CLEANING AND NORMALIZATION

- Data Cleaning is the first step in the project. And in my team's opinion, the data cleaning process is the most important step.
- Cleaned data is essential for building high-quality insights.

02.

DATA CLEANING AND NORMALIZATION



The screenshot shows the Power BI Power Query editor interface. On the left, the 'Queries [1]' pane lists a single query named 'supply_chain_data'. The main area displays a table with 17 rows and 7 columns. The columns are: Product type, SKU, Price, Availability, Number of products sold, and Revenue. Each column has a summary bar at the top indicating the count of distinct and unique values. The 'Availability' column shows 63 distinct values and 37 unique values. The 'Number of products sold' column shows 96 distinct values and 92 unique values. The 'Revenue' column shows 100 distinct values. The 'Product type' column has 3 distinct values: 'haircare', 'skincare', and 'cosmetics'. The 'SKU' column has 100 distinct values. The 'Price' column has 99 distinct values. The 'Availability' column has 63 distinct values. The 'Number of products sold' column has 96 distinct values. The 'Revenue' column has 100 distinct values. The 'Query Settings' pane on the right shows the following applied steps:

- Source
- Use First Row as Headers
- Change Type
- Removed Duplicates
- Rounded Off
- Rounded Off1
- Rounded Off2
- Rounded Off3
- Rounded Off4
- Rounded Off5
- Trimmed Text
- Cleaned Text
- Added Custom
- Added Custom1
- Changed Type
- Added Custom2
- Added Custom3
- Changed Type1

PREVIEW DOWNLOADED AT 22:11

Power BI's Power Query was used to clean and prepare the data by removing duplicates, fixing data types, handling missing values, and standardising fields.



03. QUESTIONS AND KPIs METRICS



Data Overview

The dataset contains 100 records and 24 columns covering key aspects of the supply chain. Data completeness is 100% (no missing values).

Main categories include:

- Products
- Inventory & Orders
- Logistics
- Suppliers & Manufacturing
- Financial & Cost Data
- Customer Info

Key Performance Indicators (KPIs)

- Total Revenue
- Top 5 Products by Revenue
- Average Defect Rate per Supplier
- Manufacturing Efficiency
- Inventory Turnover Ratio
- Average Shipping Cost per route
- On-Time Delivery Rate Quality Control KPIs
- Defect Rate
- Inspection Pass Rate
- Total Supply Chain Cost

Overview



Products

Suppliers & Shipping

Total Profit
572.32K

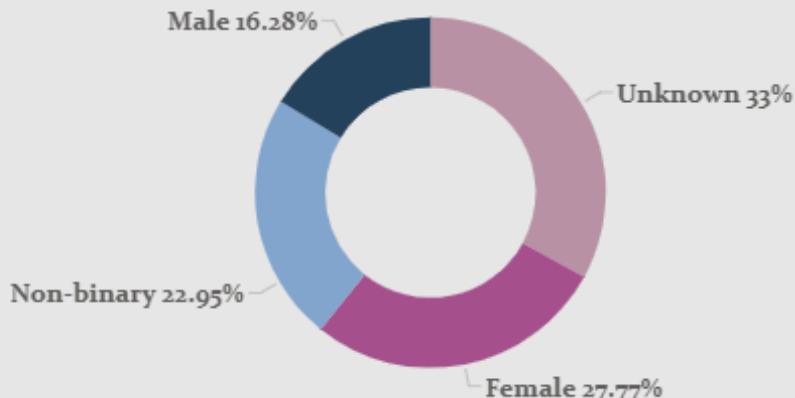
Total suppliers
5

No. of Products
100

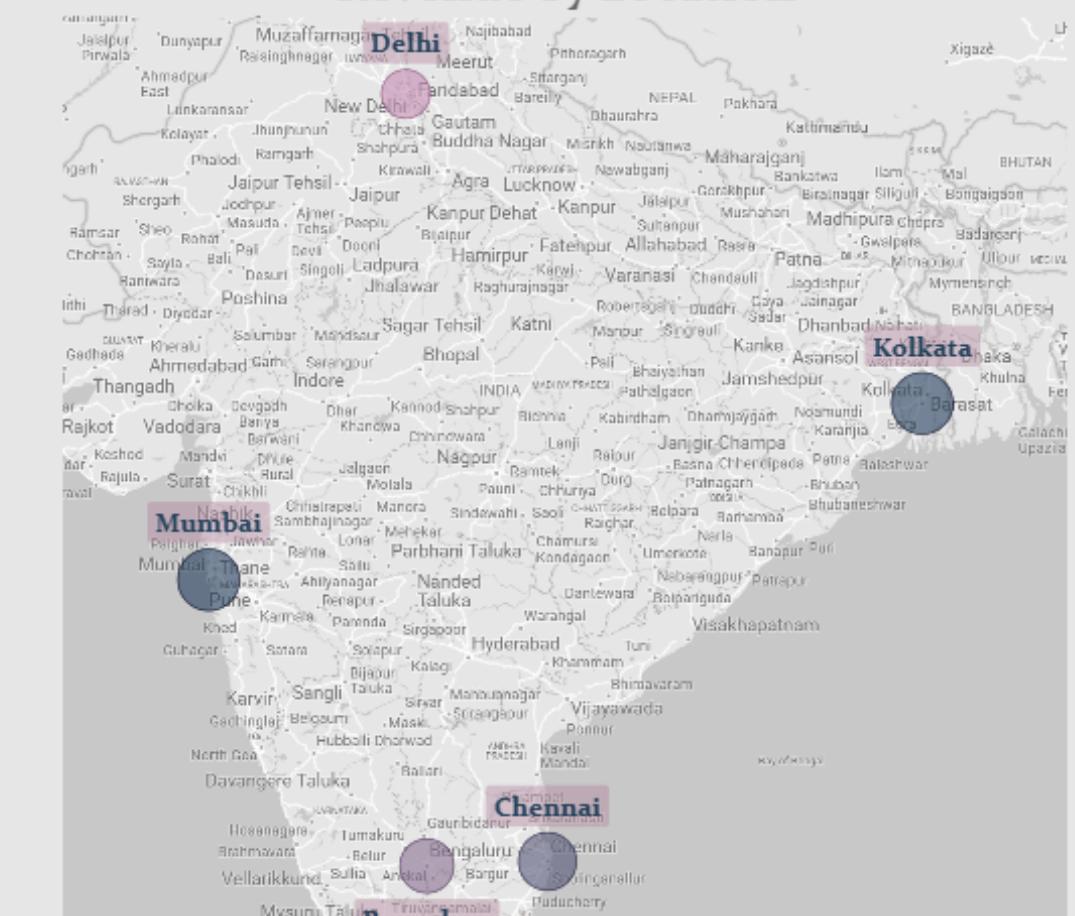
No. of categories
3

No. of Carriers
3

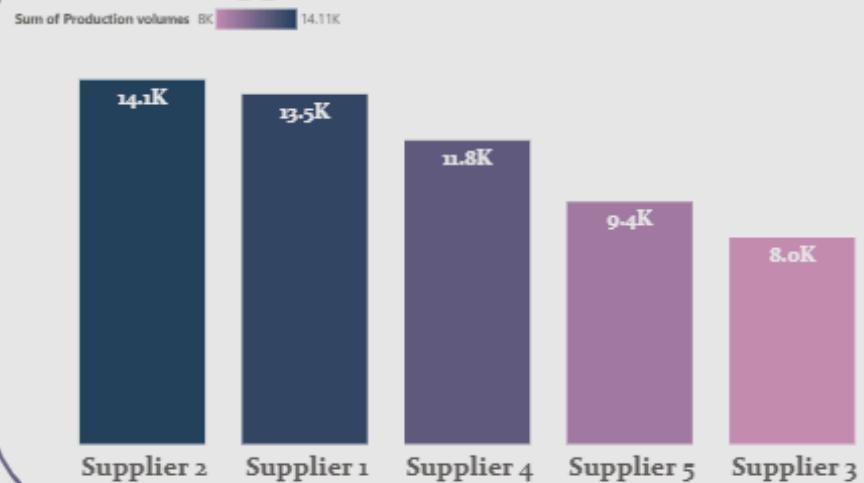
Products bought by Customer Demographics



Revenue by Location



Suppliers Production Volume



04.
CHARTS AND DASHBOARDS



Overview

Suppliers & Shipping

Products Insights

Total COGS
4.73K

Stock Balance
5K

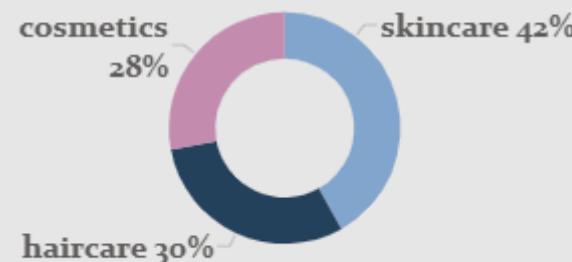
Inventory Turnover
9.65

Reorder Frequency
1.03

Inspection Pass rate
0.23

Avg. Defect rate
2.28

Profit by Product Type



Top 5 products in Revenue

SKU51	9,866.47
SKU38	9,692.32
SKU31	9,655.14
SKU90	9,592.63
SKU2	9,577.75

Bottom 5 products in Revenue

SKU69	1,752.38
SKU57	1,605.87
SKU78	1,292.46
SKU86	1,229.59
SKU59	1,061.62

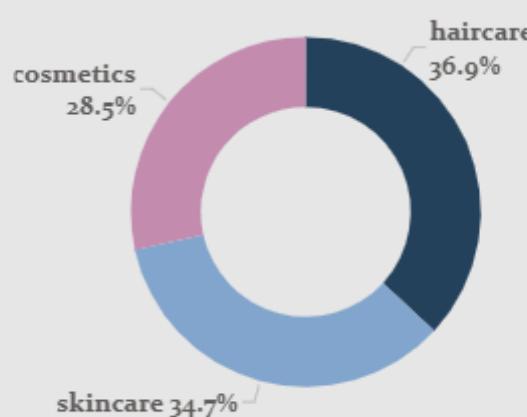
Products' SKU

All

Products' Type

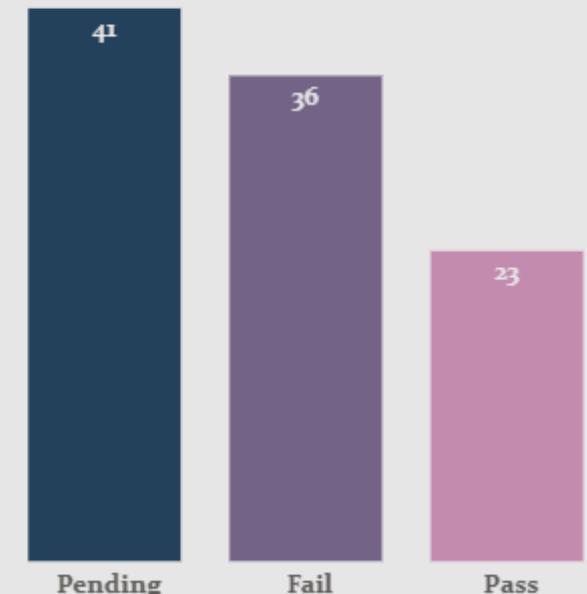
All

Avg. Defect Percentage by Type



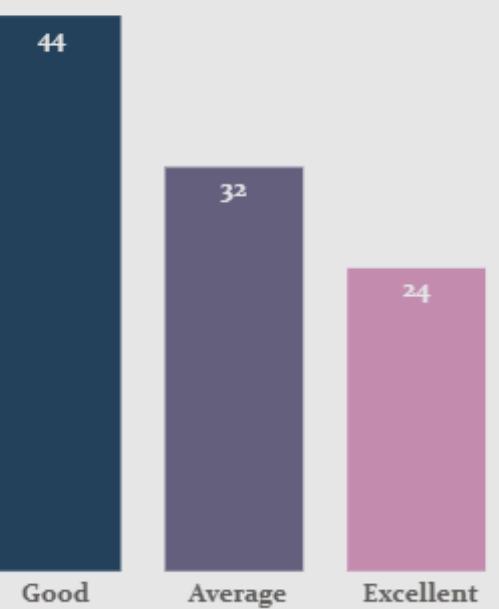
Inspection results by Product Count

Sum of Production volumes 12.61K 25.52K



Products' Quality

Sum of Production volumes 12.69K 24.5K



04.
CHARTS AND DASHBOARDS

Suppliers & Shipping Insights



Avg. Shipping Cost
5.55

On Time Shipping %
86%

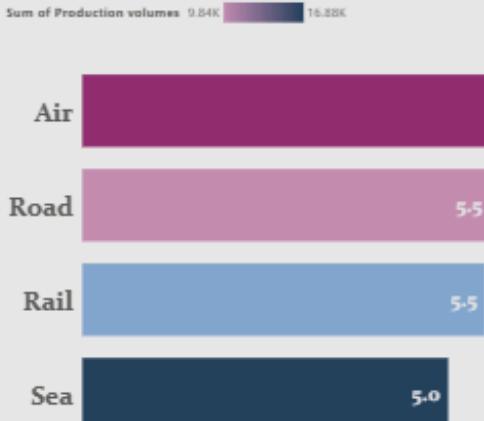
Manufacturing Efficiency
38.45

Total Production volume
57K

Overview

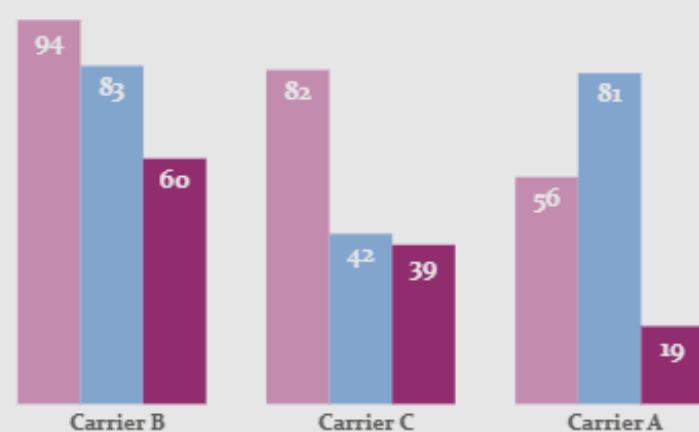
Products

Avg. Cost of Transportation Mode



Shipping Carriers' Cost by Routes

● Route A ● Route B ● Route C

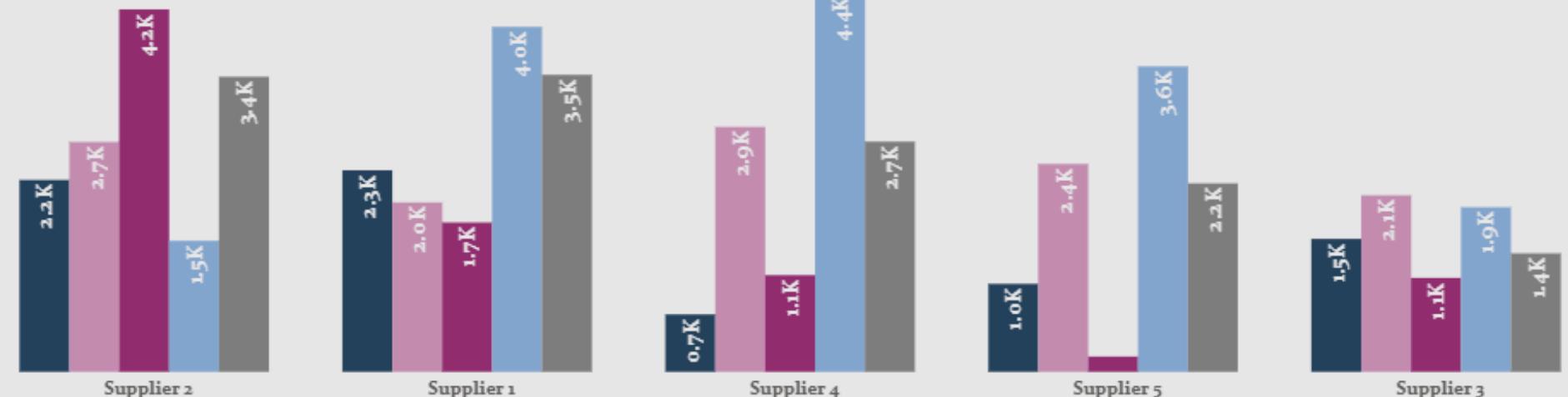


Suppliers' Avg. Defect rate



Production Volume by Supplier and Location

● Bangalore ● Chennai ● Delhi ● Kolkata ● Mumbai



04.
CHARTS AND DASHBOARDS

THANK YOU

