Data - Driven Innovations In Supply Chain Management With Qlik Insights

1. INTRODUCTION

1. 1 Overview:

This focuses on data driven innovations from the INSIGHTS Qlik to improve supply-chain management. Their focus is on enhancing the transparency, productivity and accuracy of supply chain management which translates into superior operational performance and competitiveness.

1.2 Purpose:

The project will involve the embedding of Qlik Insightsin a number of key supply chain activities from demand forecasting, inventory management and logistics optimisation to supplier performance measurement and sustainability practices.

1.3 Technical Architecture:
    i.   Data Source
    ii.   Data Integration Layer
    iii.   Data Storage and Management
    iv.   Analytics and Processing Layer
    v.   Visualization and Reporting
    vi.   User Access and Security
    vii.   Collaboration and Integration

2. Define Problem/ Problem Understanding

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2.1 Specify The Business Problem:

Qlik aims to disrupt supply chain management with this project,leveraging data-driven insights.It helps improve operational efficiency and responsiveness by optimizing logistics, forecasting, and inventorymanagement through advanced analytics. The staff working with the supplychain management system was significantly helped by this kind of convert project to alter the whole landscape that existed, and it has been possible only through Qlik's superior data-driven insights. With stateof art analytics in place,it is striving to make transportation, forecasting and inventorymanagement counter the tide setting new benchmarks with operational efficiencyand response.

2.2 Business Requirements:

There are several key steps in implementing a complete data integration strategy for the Qlik- managedsupply chain. Start by identifying and collecting data from differentsources (inventory systems, warehouse management systems, transportation management system). Leverage Qlik data connectors to ease in data extraction and transformation State of Data Extract-Transform- Load process ensures conistentity and quality of the data Process begins with extracting transactional details from companies SAP System after end-of-period.

2.3 Literature Survey:

A review of literature on the topic data-driven insights for supply chain management reformation, and getting analytics better are proliferating research articlesexplicitly belong to tis endevour. Those including changing the face of traditional supply chain operation for data analytics as simplest-of-these will indeed help more from pivotal to ever-growing solutions.Qlik it will improve the visibility and control of supply chain systems, prove to be a worthwhile addition for logistics optimization, forecasting accuracy for inventory.

3. Data Collection

3.1 Collect the dataset:

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Data collection means it's a process of data gatheringand measuring the information, Extactionthe data to enables one to answer stated research questions, test hypotheses to generate insights from the data.

Downloading The Dataset from link given below :
https://www.kaggle.com/datasets/shashwatwork/dataco-smart-supply-chain-for-big-data- analysis/data

3.2 Connect Data with Qlik Sense:

To connect Data to Qlik Sense, follow these link:
https://drive.google.com/file/d/16e09wSiO6FMWnFATPn2mxxCygl0AmE9Z/view

4. Data Preparation

4.1 Prepare The Data For Visualization:

For Preparing the Visualizations, follow these link:
https://drive.google.com/file/d/1Qasv6EWheYXu4KDdzwSnGVwxZnjMhxlb/view
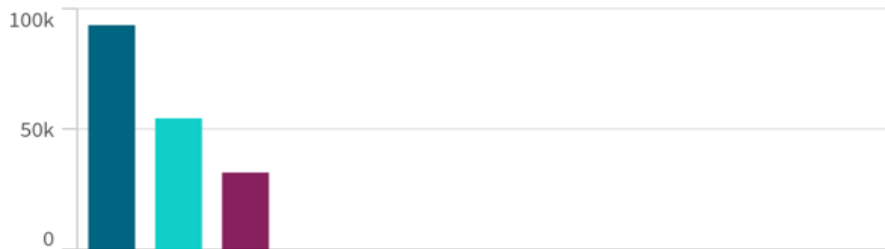
5. Data Visualizations
5.1 Visualizations:

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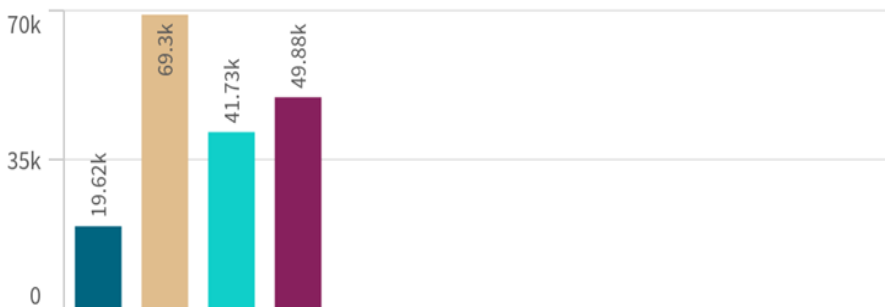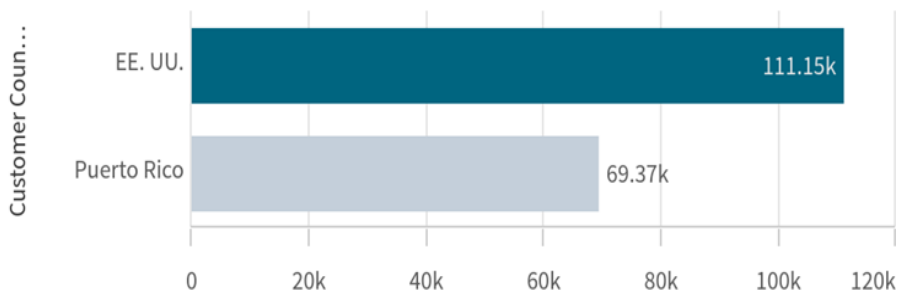## Total Items placed by customer in country

Puerto Rico 38.4%

61.6% EE. UU.

Analysis on customer segment

Mode of payment

19.62k   69.3k   41.73k   49.88k

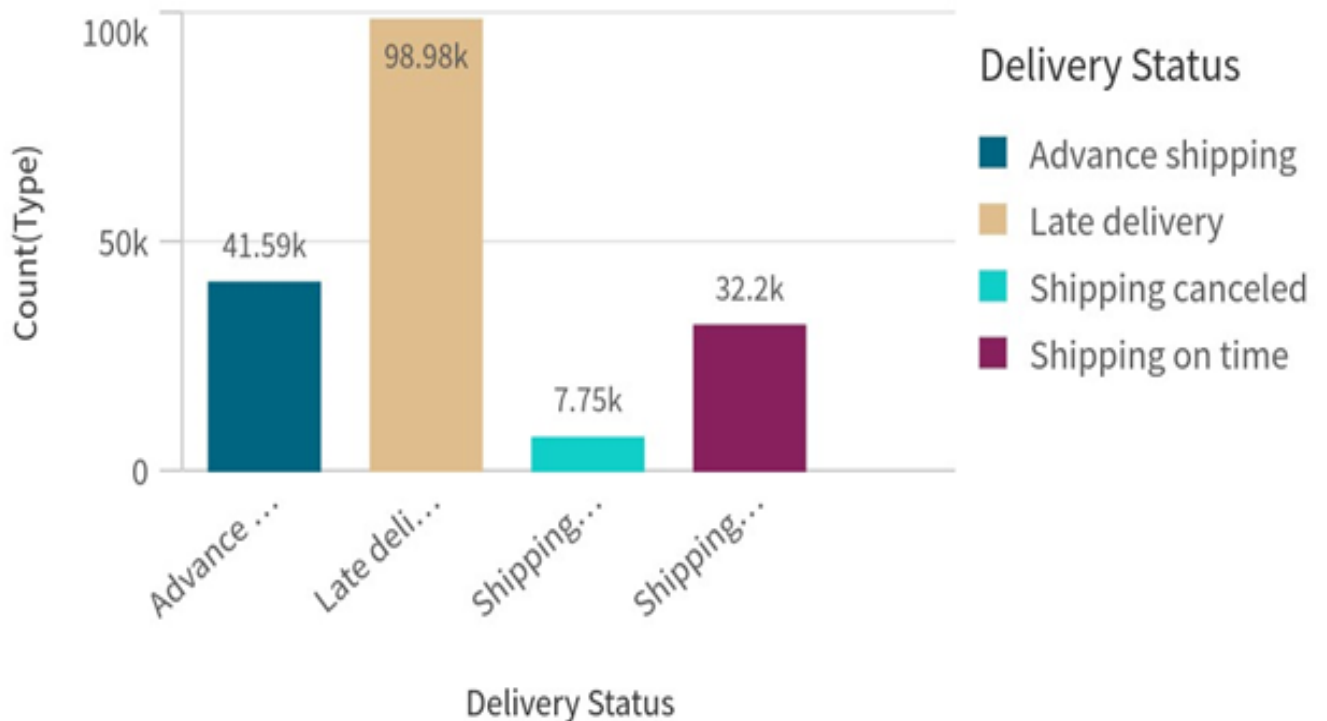## Customer purchase by city

EE. UU. — 111.15k
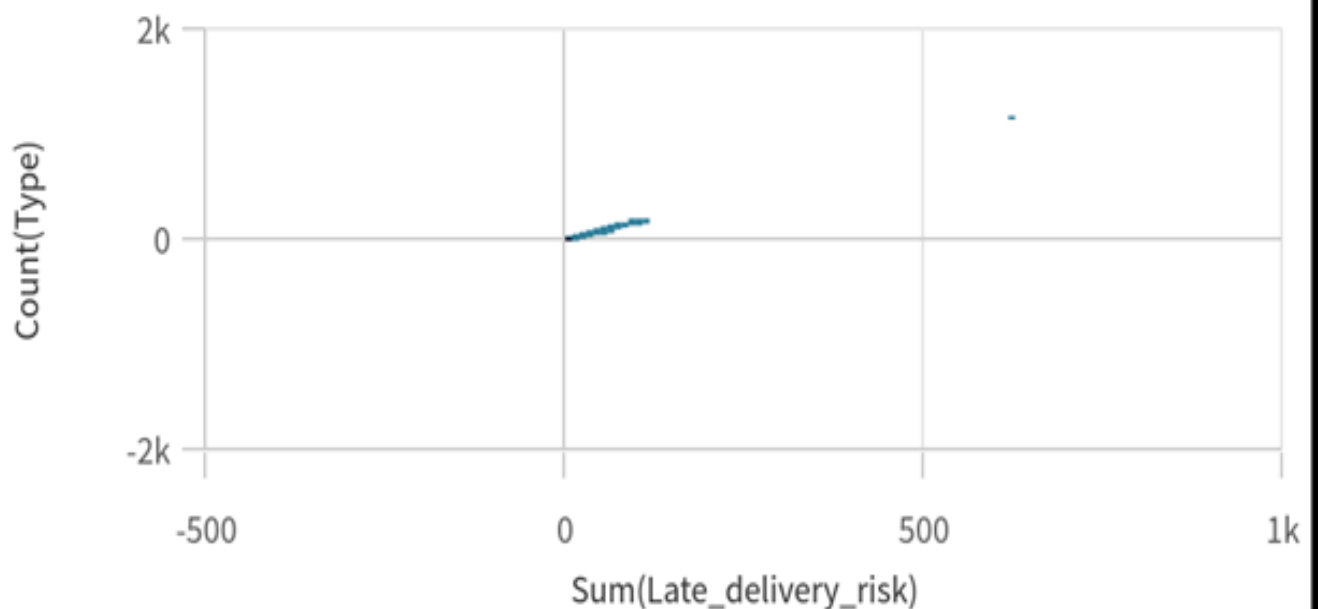
Puerto Rico — 69.37k

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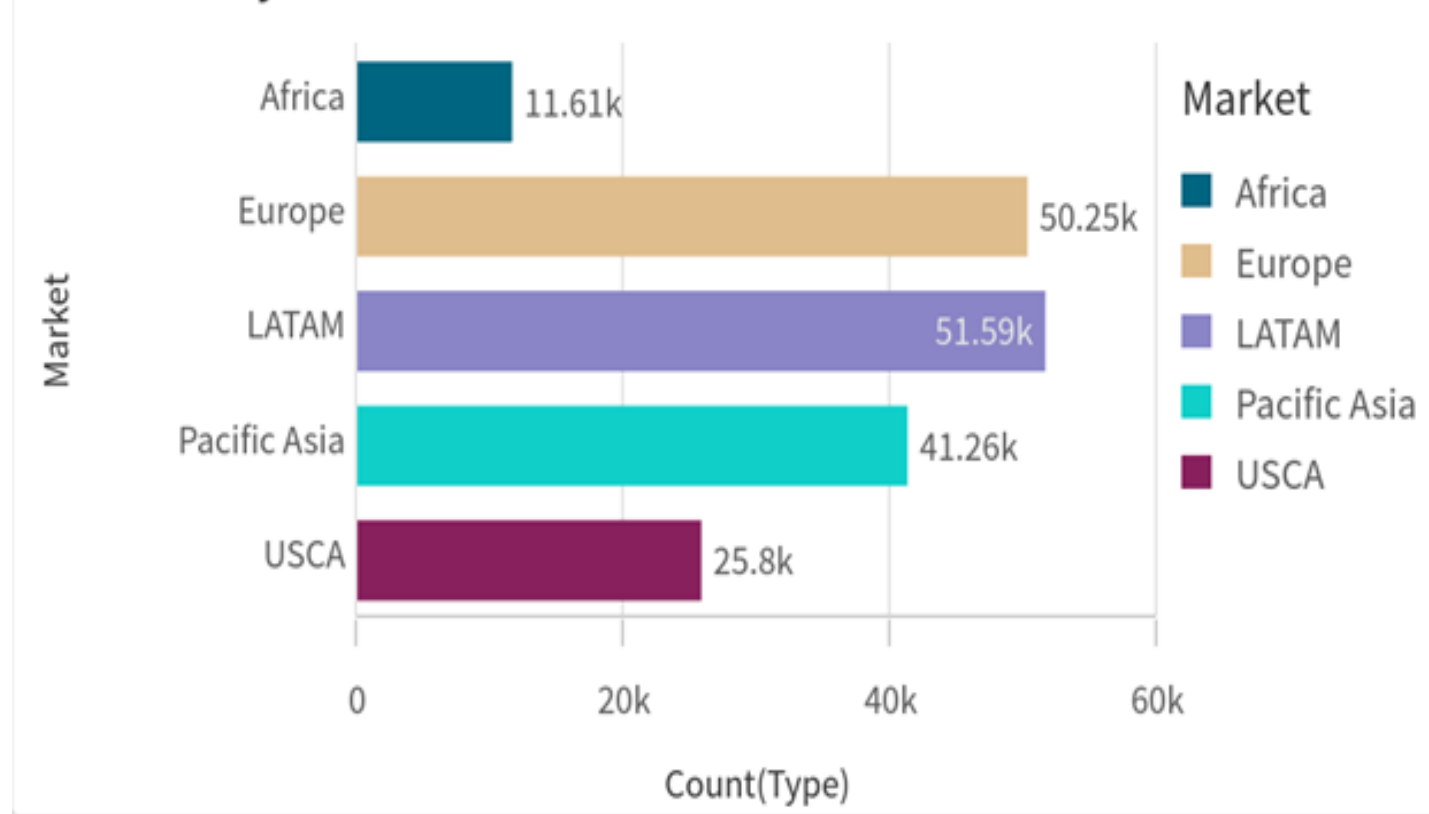
Delivery status of orders

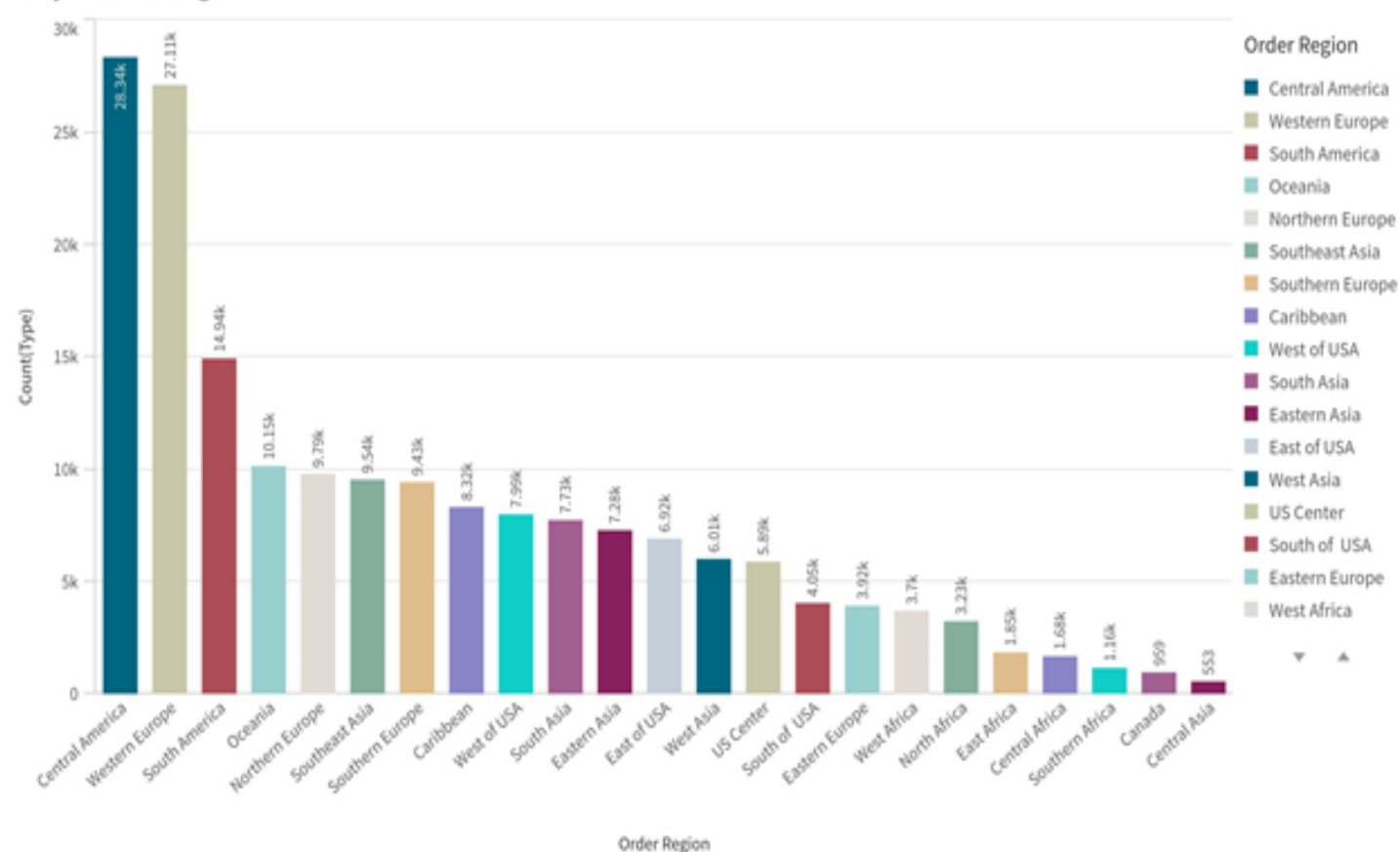## Analysis on benefit per order

Providing overview of 22k dimension values.

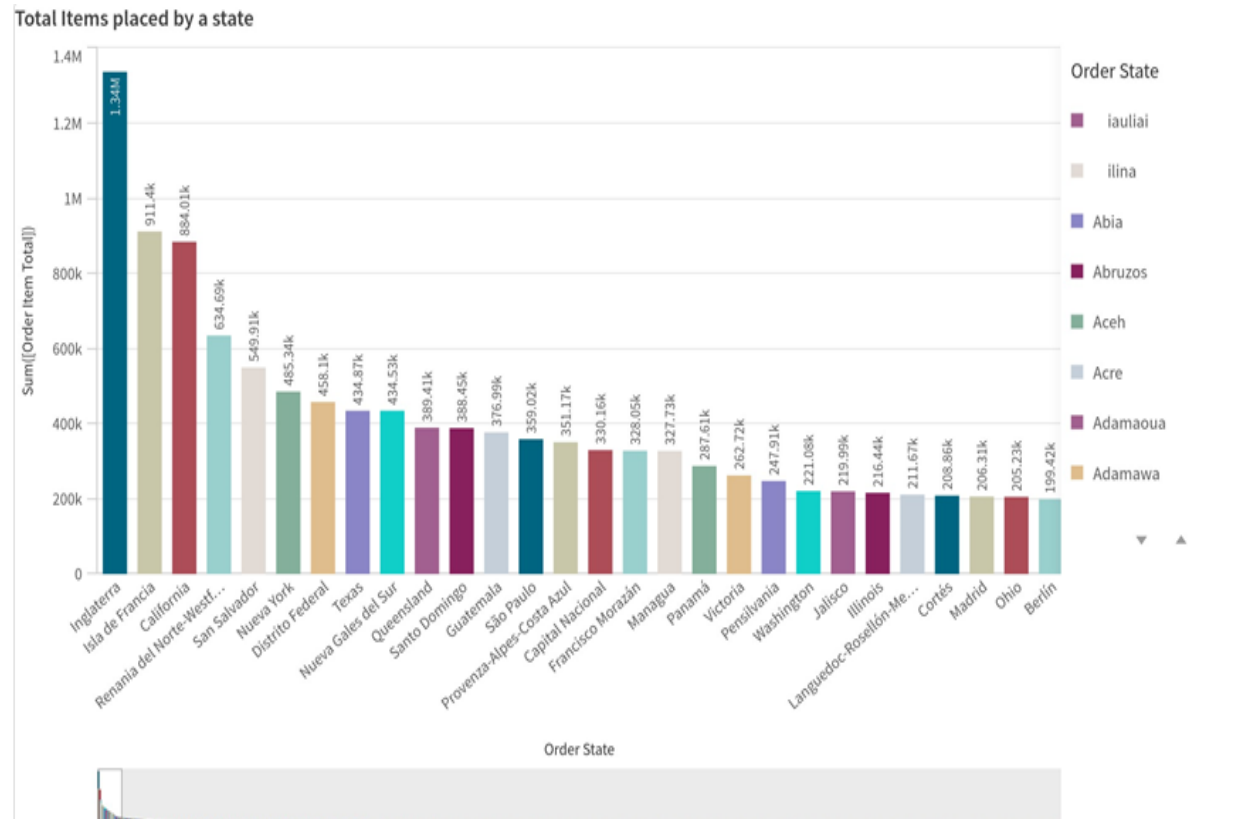# Data - Driven Innovations In Supply Chain Management With Qlik Insights
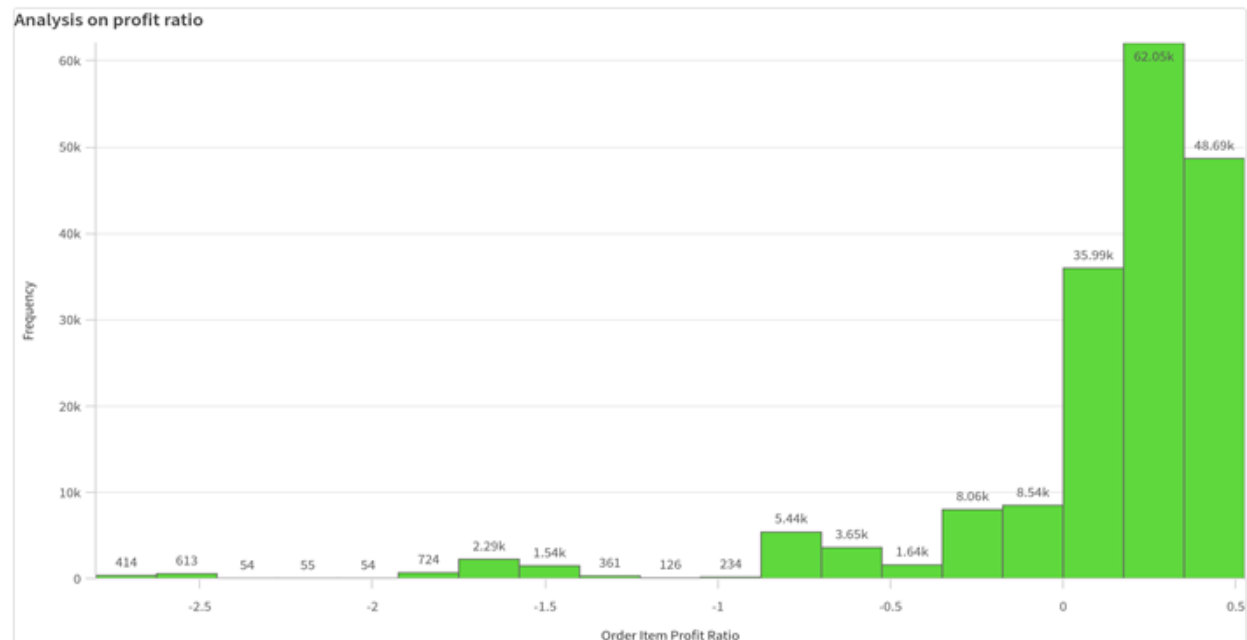
Market Analysis

Analysis on order region

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Analysis on profit ratio
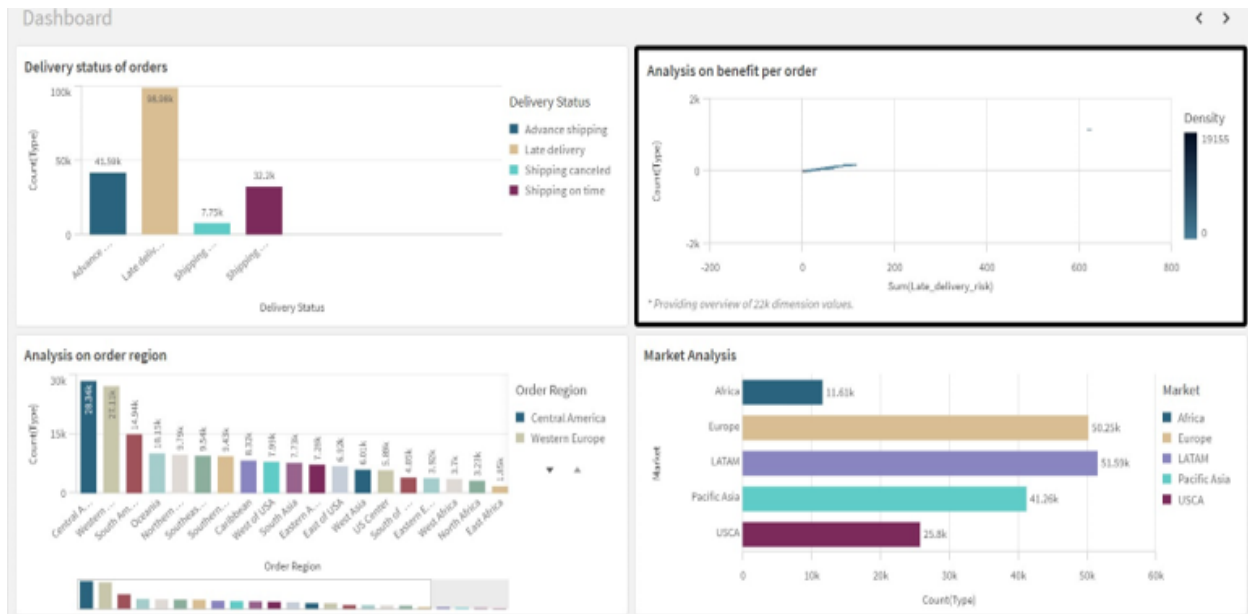

Total Items placed by a state

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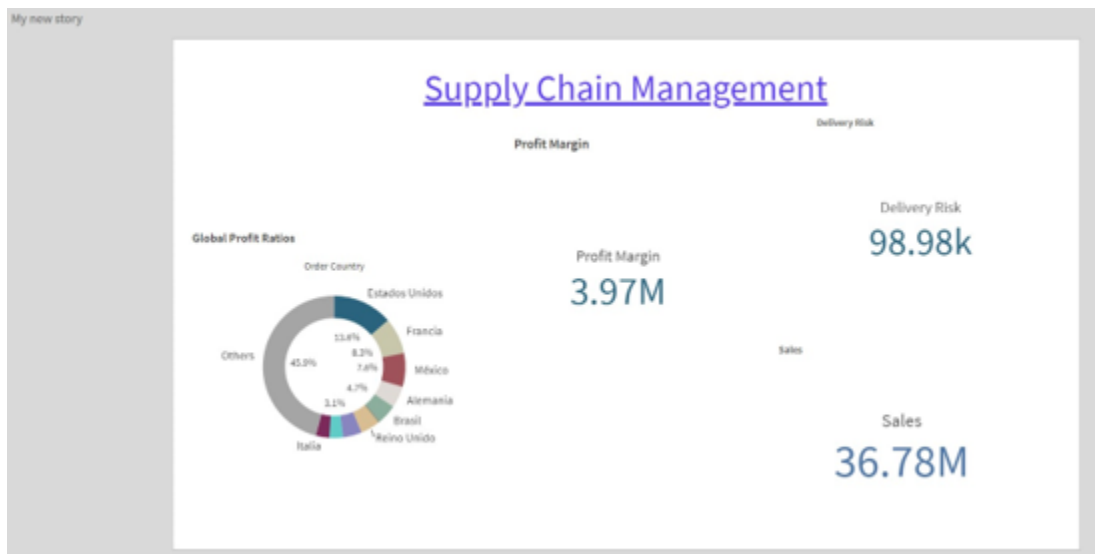
6. Dashboard

6.1 Responsive and Design of Dashboard

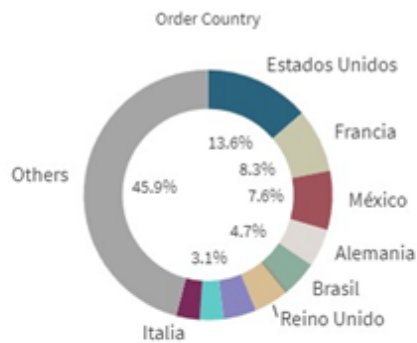# Data - Driven Innovations In Supply Chain Management With Qlik Insights
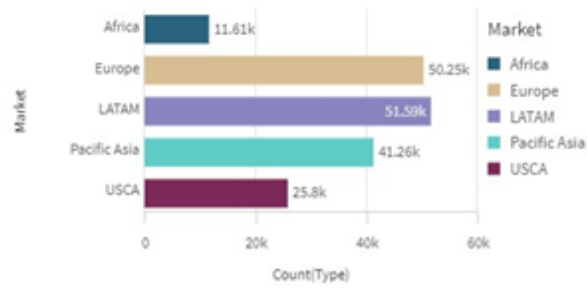

6.2 Design of Story:

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Global Profit Ratios

Order Country

Estados Unidos

Francia

13.6%
8.3%
7.6%
4.7%
3.1%

México

Alemania

Brasil

Others
45.9%

Reino Unido

Italia

Top 10 countries with their highest Profit Ratios.

Market Analysis

Market	Count(Type)
Africa	11.61k
Europe	50.25k
LATAM	51.59k
Pacific Asia	41.26k
USCA	25.8k

Market
- Africa
- Europe
- LATAM
- Pacific Asia
- USCA

Total Items placed by customer in country

Puerto Rico
38.4%

61.6%
EE. UU.
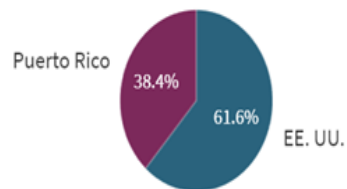
Items Placed by Customers.

Mode of payment

70k

69.3k
41.73k
49.88k
19.62k

35k

0
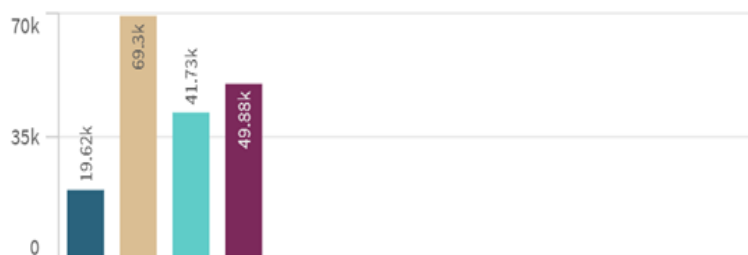
Using of Payment Modes.

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7. Report

7.1 Report Criteria

7.1.1 Data Preparation

7.1.1.1 Data Integration

7.1.1.2 Data Modelling

7.1.2 Desgining the Report

7.1.2.1 Choosing the Right Metrics

7.1.2.2 Report Layout and Visualization

7.1.2.3 Visualization best practices

7.1.3 Report Creation in Qlik Sense

7.1.3.1 Building the Report

7.1.3.2 Advanced Features

7.1.4 Testing and Validation

7.1.5 Distribution and Sharing

7.1.6 Continuous Improvement

8. Performance Testing

8.1 Amount of Data Rendered

The Amount of data rendered in a report using Qlik insights are very depending on several factors,the complexity of the data models, volume of data, no.of visualizations, and interactivity required.

1. Volume if Data

2. Data Models

3. Visualizations

4. Interactivity

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8.2 Utilization of Data Filters

When using Qlik Insights, it is important to get the most out of your data filters both to control the amount of data rendered and more optimally drive user interactions. Filters enable you to visually analyzeand organize differentparts of the supply chain so that you can focus solely on data which is pertinent to a relevantsubset. The definitiveguide to the use of data filtersin Qlik Insights Using these data filters in Qlik Insightshelps the user interact and analyze data, making insights more accurate and actional. With the ability to finely tune filters, you can tailor these capabilities and create a native-like experience for Qlik applications whilst also maintaining control over performance and scalability.

8.3 Number of Visualzations

1. Global Profit Ratios
2. Total Items placed by customer in country
3. Total Items placed by a state
4. Analysis on customer segment
5. Mode of payment
6. Customer purchaseby city
7. Delivery statusof orders
8. Analysis on benefit per order
9. Analysis on profit ratio
10. Market Analysis

9. Conclusion

The Qlik Insights for supply chain success is a testament to data-driven innovation at work, delivering unprecedented levels of operational efficiency, visibility, and decision-making. Qlik Insights seamlessly and securely integrates multiple datasets using sophisticated analytical techniques to provide end users

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with a 360 degree view of current insights for improved decision-making, processoptimization, and overallbusiness productivity.