WorldWide Importers Analysis

STORY BEHIND PROJECT

REAL STORY VS FAKE STORY
REAL STORY
STORY
FAKE STORY

Database Description

The **Worldwide Importers Data** is a B2B dataset provided by Microsoft for training, testing, and demonstrating data management, data analysis, and reporting solutions covering areas such as:

- Sales
- Regions
- Customers(Business)
- Suppliers
- Payment Methods
- And more

Data Warehouse Construction

Not every table included in the analysis , so we had to choose only 8 tables from 20+ table in the database covering Invoices, customers ,regions and products.
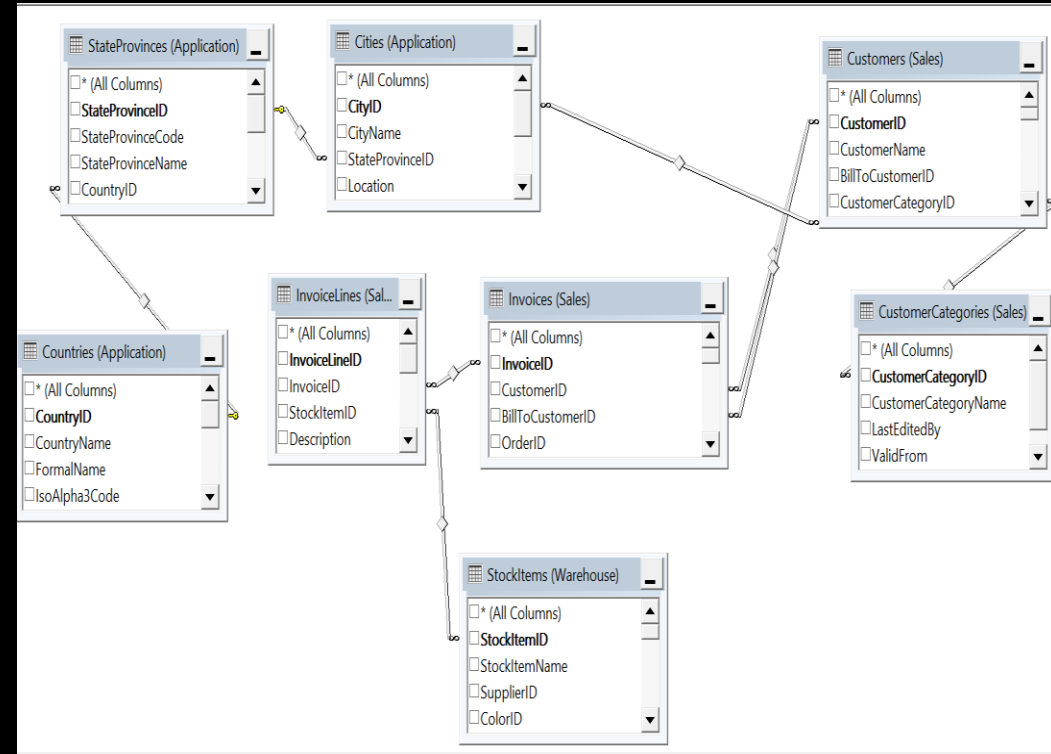
SQL DATA EXTRACTION

```sql
alter view v7 as
select Ci.CityID , ci.CityName,
SP.StateProvinceID , SP.StateProvinceName,
Cou.CountryID , Cou.CountryName,
C.customerID , C.CustomerName,
CC.CustomerCategoryID , Cc.CustomerCategoryName,
DM.DeliveryMethodID , DM.DeliveryMethodName,
I.InvoiceDate ,
IL.InvoiceID , IL.InvoiceLineID , IL.Quantity , IL.UnitPrice ,
IL.TaxAmount , IL.TaxRate , IL.LineProfit , IL.ExtendedPrice,
SI.StockItemID , SI.StockItemName
from Sales.InvoiceLines IL
join Sales.Invoices I
on IL.InvoiceID = I.InvoiceID
left join Application.DeliveryMethods DM
on DM.DeliveryMethodID = I.DeliveryMethodID
left join sales.Customers C
on I.CustomerID = C.CustomerID
left join Sales.CustomerCategories CC
on C.CustomerCategoryID = CC.CustomerCategoryID
left join Application.Cities Ci
on Ci.CityID = C.PostalCityID
left join Application.StateProvinces SP
on SP.StateProvinceID = Ci.StateProvinceID
join Application.Countries Cou
on Cou.CountryID = SP.CountryID
left join Warehouse.StockItems SI
on SI.StockItemID = IL.StockItemID
```

Star Schema
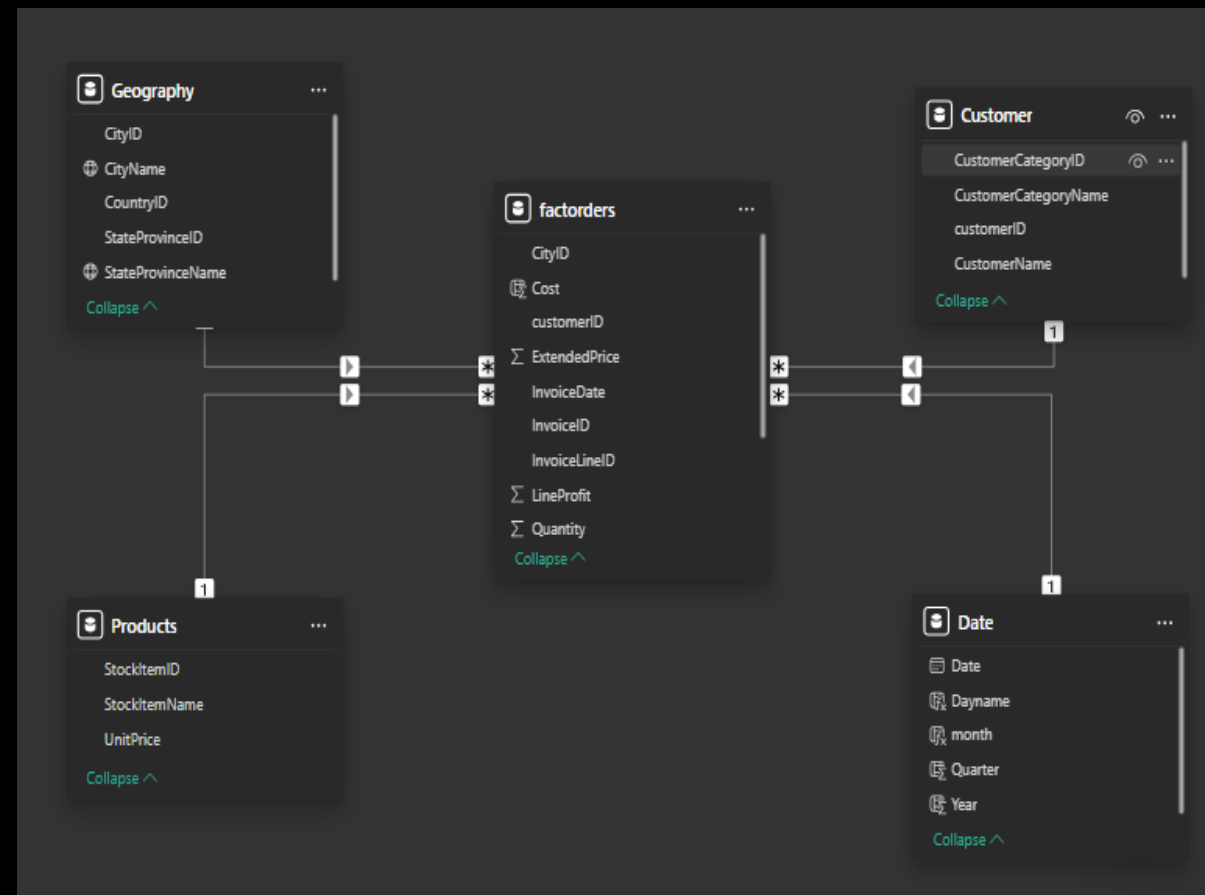
Dataset Overview

After the star schema construction, we have 5 tables:

- Customers(Dimension)
- Geography(Dimension)
- Date(Dimension)
- Stock(Dimension)
- Orders(fact)

Dimensions

- Customers table consists of two information: Customer name(business) , Customer Type(Business type)

- Stock: Table consist of the products that worldwide importers supplies to the companies

- Date Dimension: Table is generated from the order date column in the Orders fact table

- Geography: Worldwide importers data covers all the US states(49) and 665 city

Fact

Orders: table is the fact table that connects all the data warehouse with the Sales.

It consists of all keys that connects with the dimension tables and some measures like unit price, units sold, Cost , Sales , profit

Business Questions and Key Areas Analysis

We focused on:

Overall Performance & Profitability

- **Show KPIs: Total Sales, Quantity, Orders and Profit margin and Other KPIs that show overall performance**

Customer Behavior Sales Analysis

- **Which customer segment (e.g., supermarket, corporate, computer store, gift store, novelty shop) is generating the highest revenue and profit?**

- **What are the purchasing patterns for top customer categories over the year?**

Product Sales Analysis: Top and Bottom 10 by Quantity and Sales for each segment

Regional Sales Analysis:

- **Which states are leading in sales, and what is the growth trend across different geographic areas?**

- **Are there underperforming states with growth potential, and what strategies could be employed to drive engagement in these areas?**

WORLD WIDE IMPORTERS ANALYSIS

Home Page	Customer Analysis	Product Analysis	Regional Analysis

198.04M	9M	71K	85.73M	43.29%	2.81K
Total Sales	Total Quantity	Total Orders	Total Profit	Profit Margin	AOV

WORLDWIDE IMPORTERS ANALYSIS

Overview

KPIs:

- **Total Sales**: $198.04M
- **Total Quantity Sold**: 9M units
- **Total Orders**: 71K
- **Total Profit**: $85.73M
- **Profit Margin**: 43.29%
- **Average Order Value (AOV)**: $2.81K
- **Average Quantity Per Order:** 127 item

Insights:

- A healthy profit margin (43.29%) indicates efficient cost management or high-value products.

- The high average order value suggests the business may cater to bulk purchasers and B2B customers rather than individual consumers as we talk before

- With substantial total orders and quantities, this business operates on a large scale, suggesting widespread distribution channels.

CUSTOMER SALES BEHAVIOR ANALYSIS

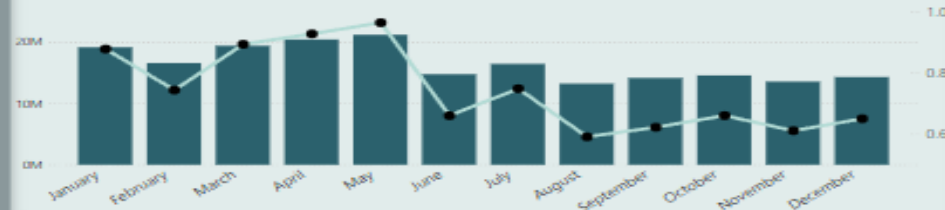| 16.51M Supermarket Sales	13.15M Corporate Sales	13.29M Computer Store Sales	13.43M Gift Store Sales	141.66M Novelty Shop Sales

2013	2015
2014	2016

Total Quantity & Average TaxAmount by Customer Type

(bar and line chart: Novelty Shop, Supermarket, Gift Store, Computer Store, Corporate)

Total Orders by Month

(area chart: January–December)

Total Sales & Total Quantity by Month

(bar and line chart: January–December)

Total Sales by Quarter

- 1 2 3 4

42.49M (21.46%)
55.21M (27.88%)
43.89M (22.16%)
56.44M (28.5%)

Top 10 Customers by Sales

Customer	Sales
Tailspin Toys (Inguadona, …	0.44M
Tailspin Toys (Minidoka, ID)	0.43M
Mauno Laurila	0.42M
Wingtip Toys (Sarversville, …	0.42M
Nasrin Omidzadeh	0.42M
Tailspin Toys (Long Meado…	0.41M
Ingrida Zeltina	0.41M
Wingtip Toys (San Jacinto, …	0.41M
Laszlo Gardenier	0.41M
Camille Authier	0.41M
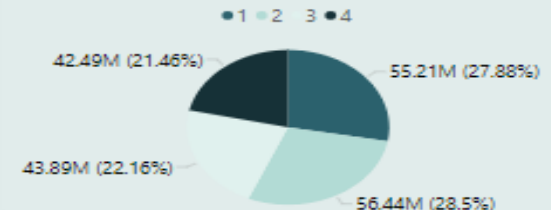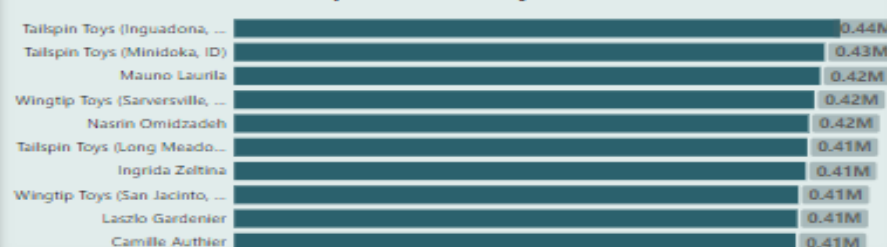
Bottom 10 Customers by Sales

Customer	Sales
Ivana Hadrabova	57K
Amet Shergill	56K
Ganesh Majumdar	54K
Kalyani Benjaree	51K
Amrita Ganguly	48K
Luis Saucedo	46K
Sylvie Laramee	44K
Agrita Abele	26K
Jibek Juniskyzy	15K
Anand Mudaliyar	8K
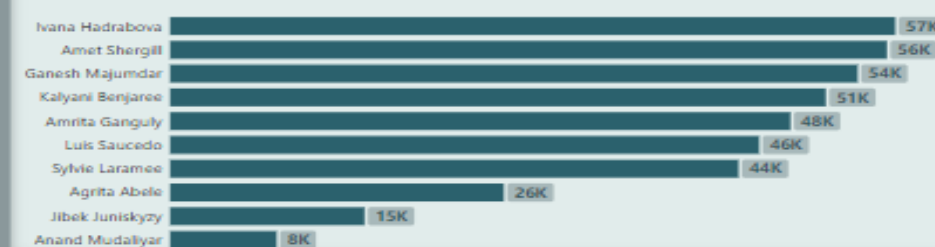
Total Sales by Customer Category

- Computer Store Corporate Gift Store Novelty Shop Supermarket

16.51M (8.34%)
13.29M (6.71%)
13.15M (6.64%)
13.43M (6.78%)
141.66M (71.53%)
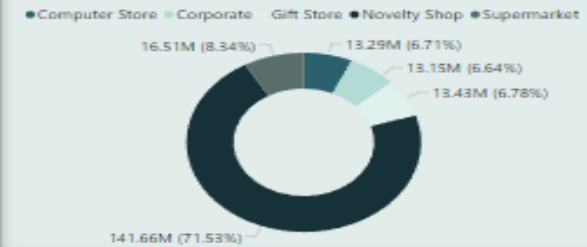
Customer Sales Behavior Analysis

Overview:

- **Sales by Category:**
  - Supermarket: $16.51M
  - Corporate: $13.15M
  - Computer Store: $13.29M
  - Gift Store: $13.43M
  - Novelty Shop: $141.66M (highest)

- **Monthly Trends:**
  - Orders and sales peak in certain months, with noticeable declines around September and November.
  - Highest sales are observed in the first and second quarters, particularly in Q2.

- **Top Customers by Sales:**
  - Includes customers like Tailspin Toys and Wingtip Toys, indicating potential key accounts.

Insights:

- The Novelty Shop segment dominates sales, highlighting a strong market presence in unique or specialty items.

- Fluctuating monthly sales indicate potential seasonal demand, suggesting the need for stock adjustments and marketing alignment during peak seasons.

- Key accounts drive significant revenue, making them crucial to maintain through personalized service or exclusive offers.

Recommendations:

- Increase marketing efforts in high-sales months and consider discounts in low-demand periods to smooth revenue.

- Invest in CRM strategies for top customers to encourage repeat purchases.

- Conduct further analysis on the Novelty Shop category to identify why it outperforms others and replicate its success in other segments.

PRODUCT SALES ANALYSIS

Home Page	Customer Analysis	Product Analysis	Regional Analysis

2013	2015		Select all	Corporate	Novelty Shop
2014	2016		Computer Store	Gift Store	Supermarket

Top 10 Item by Sales

Item	Sales
Air cushion machine (Blue)	12.8M
32 mm Anti static bubble wrap (Blue) ...	7.3M
10 mm Anti static bubble wrap (Blue) ...	7.3M
20 mm Double sided bubble wrap 50m	7.1M
32 mm Double sided bubble wrap 50m	7.1M
10 mm Double sided bubble wrap 50m	6.8M
20 mm Anti static bubble wrap (Blue) ...	6.7M
32 mm Anti static bubble wrap (Blue) ...	3.3M
Void fill 400 L bag (White) 400L	3.3M
20 mm Anti static bubble wrap (Blue) ...	2.8M

Bottom 10 Item by Sales

Item	Sales
Developer joke mug ...	84K
Developer joke mug ...	84K
DBA joke mug - I will...	83K
Developer joke mug ...	83K
Developer joke mug ...	83K
Developer joke mug ...	83K
DBA joke mug - SELE...	82K
DBA joke mug - min...	81K
Packing knife with m...	75K
Packing knife with m...	66K

Top 10 Item by Quantity

Item	Quantity
10 mm Anti static bubble wrap (Blue) ...	64K
32 mm Anti static bubble wrap (Blue) ...	61K
32 mm Anti static bubble wrap (Blue) ...	60K
20 mm Double sided bubble wrap 50m	58K
Void fill 400 L bag (White) 400L	57K
20 mm Anti static bubble wrap (Blue) ...	57K
10 mm Double sided bubble wrap 50m	57K
32 mm Double sided bubble wrap 50m	55K
20 mm Anti static bubble wrap (Blue) ...	55K
Air cushion machine (Blue)	6K

Bottom 10 Item by Quantity

Item	Quantity
Packing knife with metal insert blade...	30.4K
Packing knife with metal insert blade...	27.0K
Developer joke mug - inheritance is t...	5.6K
Developer joke mug - there are 10 ty...	5.6K
DBA joke mug - I will get you in orde...	5.6K
Developer joke mug - old C develop...	5.6K
Developer joke mug - understanding...	5.6K
Developer joke mug - when your ha...	5.6K
DBA joke mug - SELECT caffeine FRO...	5.5K
DBA joke mug - mind if I join you? (B...	5.4K

Product Sales Analysis

Overview:

- **Top-Selling Products**:
    - Air Cushion Machine: $12.8M
    - Various bubble wrap items are also top sellers, suggesting a focus on packaging supplies.

- **Bottom-Selling Products**:
    - Items like developer joke mugs have lower sales, with a maximum of $84K.

- **Top Products by Quantity**:
    - Bubble wrap items dominate both in sales and quantity, indicating their high demand.

Insights:

- Bubble wrap and air cushion machines are essential products, likely due to demand in packaging, potentially for e-commerce or logistics industries.

- Lower-selling items, like novelty mugs, have limited appeal, suggesting these are niche products or poorly marketed.

Recommendations:

- Continue focusing on high-demand packaging products and explore expanding the line to similar items.

- For low-selling novelty items, consider targeted marketing to reach the appropriate customer base or bundle these with other products to increase sales.

- Streamline inventory by reducing quantities of slow-moving products and reallocating resources to top sellers.
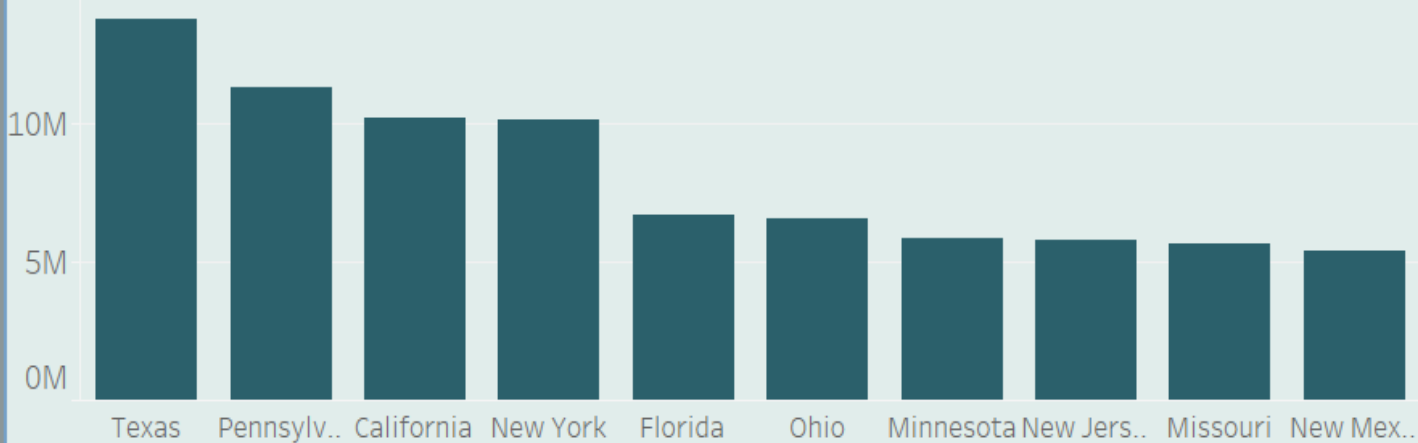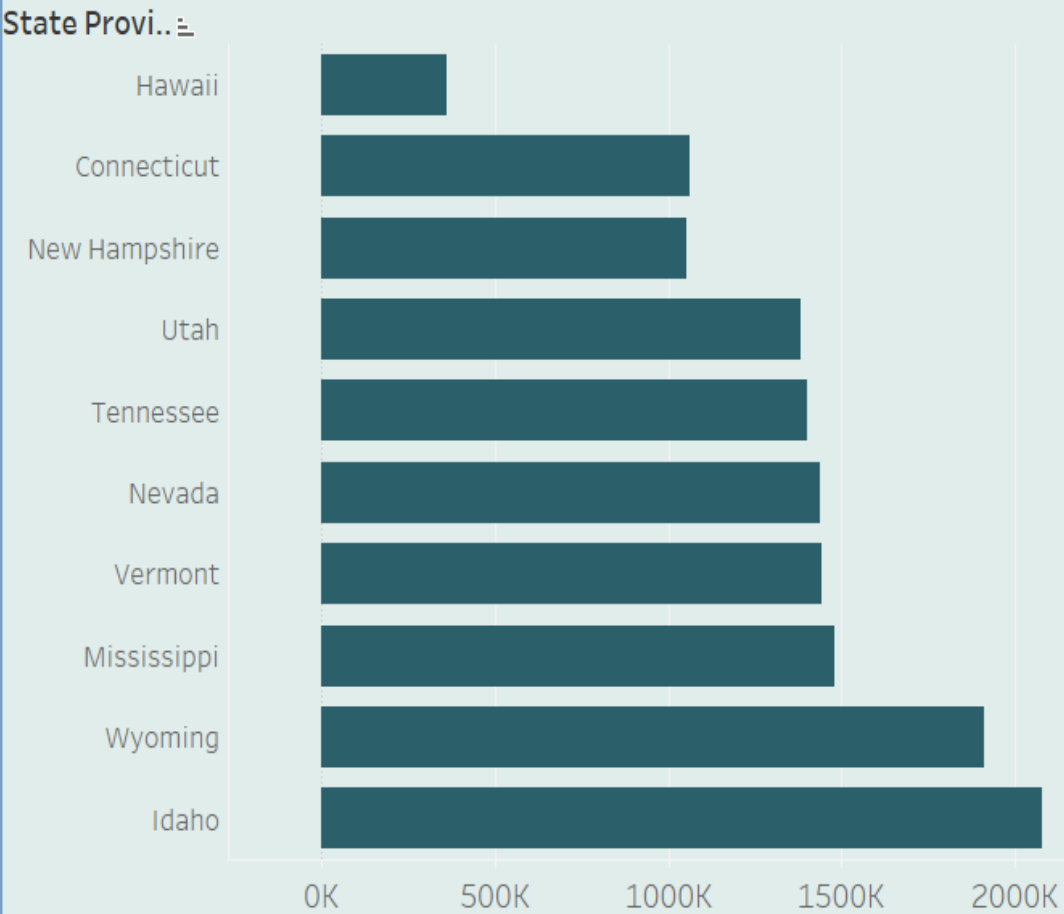
REGIONAL ANALYSIS

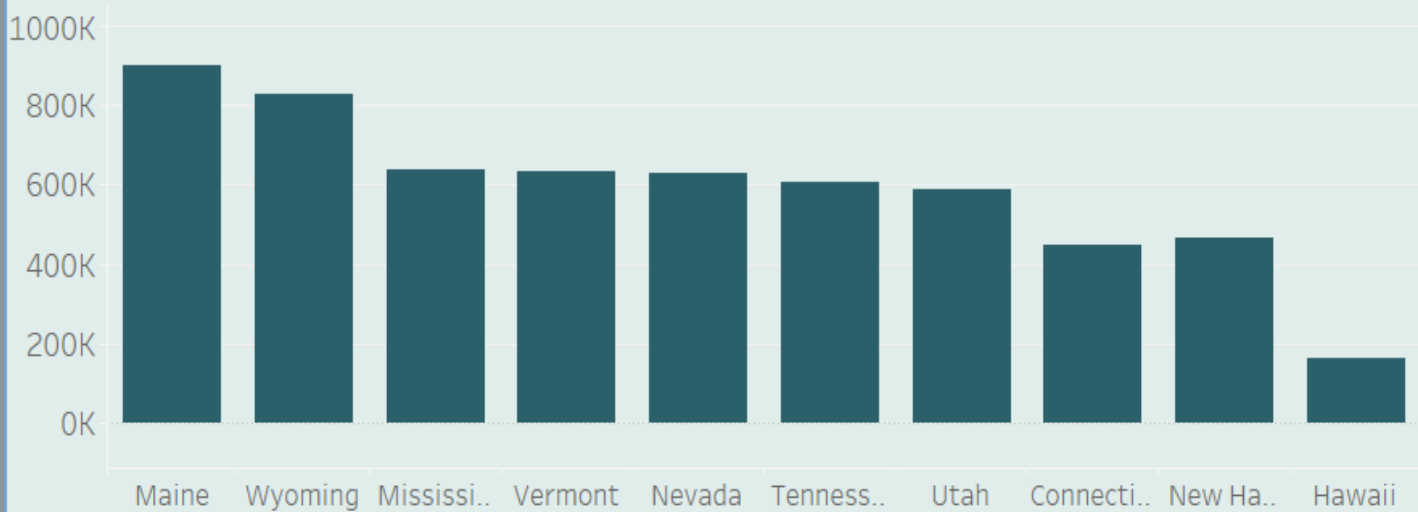| #States	#Cities
49.0	655.0

Bottom 10 States by Sales

State Provi.. ≡

Hawaii
Connecticut
New Hampshire
Utah
Tennessee
Nevada
Vermont
Mississippi
Wyoming
Idaho

0K   500K   1000K   1500K   2000K

Top 10 States by Sales

10M

5M

0M

Texas   Pennsylv..   California   New York   Florida   Ohio   Minnesota   New Jers..   Missouri   New Mex..

Bottom 10 States by Profit

1000K

800K

600K

400K

200K

0K

Maine   Wyoming   Mississi..   Vermont   Nevada   Tenness..   Utah   Connecti..   New Ha..   Hawaii
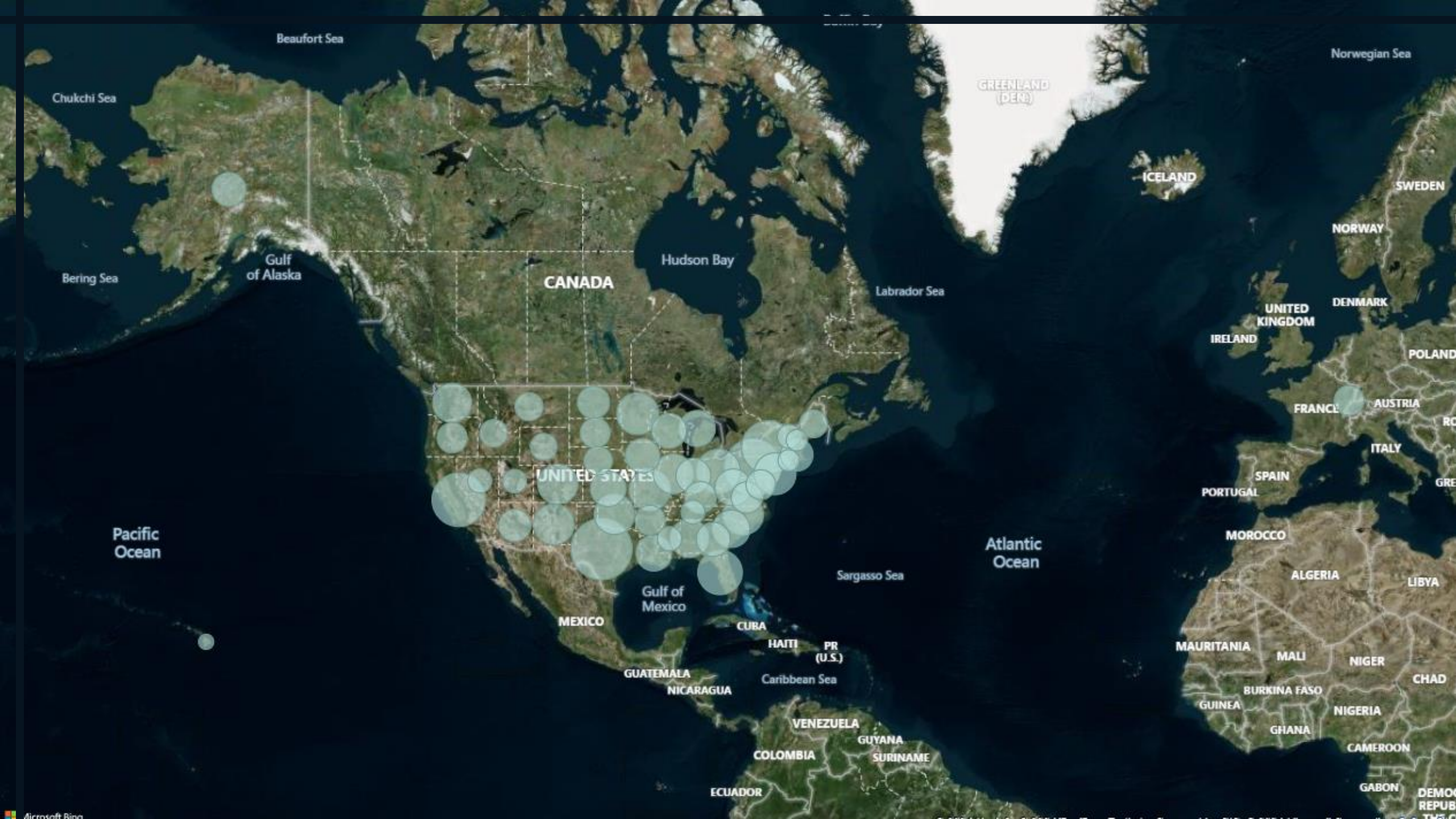
Regional Analysis

- There are 9 states and 655 cities, which is a wide geographic coverage, indicating a broad analysis of regional performance.

- Hawaii is the bottom state by sales and that can be explained by that Hawaii is a small state with only few cities

- Texas is the top state by Sales with more than 12M Sales

- Hawaii is the bottom state by sales

- There is no negative values which is so good for Worldwide importers company

- Sales distribution by state, bubble size represent the Sales