**NORTHWIND TRADERS**

### Project Overview

This is my capstone project where I have to create a visually appealing and user-friendly dashboard using Power BI that communicates key performance metrics for Northwind Traders effectively. The major objective of this project is to generate insights into customer behavior, sales patterns, and employee performance to aid decision-making processes. It will cover sales analysis, customer segmentation, inventory trends, and employee performance, consolidating data from multiple tables for a comprehensive view of the company's operations. The report will empower stakeholders to make data-driven decisions by offering valuable insights and facilitating data exploration through interactive visualizations and dynamic filters. The expected impact is to revolutionize how Northwind Traders interacts with its data, enabling the company to remain competitive and drive its business forward in the wholesale market landscape.

**Dataset Description**

The Northwind database contains the sales data for a fictitious company called “Northwind Traders,” which imports and exports specialty foods from around the world.

### Table Explanations

#### **Customers Table**

This table stores information about the company's customers. It includes fields for customer ID, company name, contact name, contact title, address, city, region, postal code, country, phone, and fax.

#### **Employees Table**

This table stores information about the company's employees. It includes fields for employee ID, last name, first name, title, title of courtesy, birth date, hire date, address, city, region, postal code, country, home phone, extension, photo, notes, reports to, and photo path.

### Orders Table

This table stores information about the company's orders. It includes fields for order ID, customer ID, employee ID, order date, required date, shipped date, ship via, freight, ship name, ship address, ship city, ship region, ship postal code, and ship country.

#### **Order Details Table**

This table stores detailed information about the items within each order. It includes fields for order ID, product ID, unit price, quantity, and discount.

#### **Products Table**

This table stores information about the company's products. It includes fields for product ID, product name, supplier ID, category ID, quantity per unit, unit price, units in stock, units on order, reorder level, and whether the product is discontinued.

#### **Suppliers Table**

This table stores information about the company's suppliers. It includes fields for supplier ID, company name, contact name, contact title, address, city, region, postal code, country, phone, fax, and home page.

#### **Shippers Table**

This table stores information about the company's shipping companies. It includes fields for shipper ID, company name, and phone.

#### **Categories Table**

This table stores information about the product categories. It includes fields for category ID, category name, and description.

### Problem Statements

### After reading, deep understanding and analyzing all the data tables, there are the following problem statements for each table dataset that I have noticed which can be helpful in making data- driven decisions and generating insights.

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| **ORDER DETAILS** |
| Total number of orders received by company. |
| Distribution of orders based on discount. |
| Top 5 order id’s ordered maximum quantity of products. |
| Identifying the total quantity of products ordered as per product id. |
| Relation b/w product id, unit price & discount |
| Top 5 order id’s that have got maximum discount. |
| Top 5 order id’s that have got minimum discount. |
| Average discount given as per product id’s |

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| **CATEGORY** |
| Major categories in which company deals. |
| Types of food products in particular category. |

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| **CUSTOMERS** |
| Total number of customers per country. |
| Top countries with highest number of customers. |
| Major cities with highest number of customers. |
| Geographical representation of countries in which company operates. |
| Number of cities for each country in which company operates. |

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| **ORDERS** |
| Total number of orders shipped as per country. |
| Total number of distinct customers who have ordered. |
| Number of distinct customers as per country. |
| Geographical representation of countries where orders are shipped. |
| Top 5 cities where the orders are shipped maximum. |
| Top 5 customers who have ordered maximum number of orders. |
| Orders that are shipped late than the required date. |
| Relation b/w ship date, required date and order date. |
| Sorting the shipper id’s based on faster service. |

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| **SUPPLIERS** |
| Total number of suppliers |
| Number of suppliers as per different country. |
| Countries with maximum number of suppliers |
| Geographical representation of countries of different suppliers. |
| Major cities with maximum number of suppliers |

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| **EMPLOYEE TABLE** |
| Number of employees from each country. |
| Geographical representation of cities in which company have employees. |
| Total number of employees in a particular city. |
| Major designations (titles) of employees working. |

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| **PRODUCTS** |
| Total number of products sold by company. |
| Number of different products sold by company under each category. |
| Number of different products supplied by a particular supplier. |
| Top 5 product id’s with maximum units in stocks. |
| Top 5 product id’s with minimum units in stock. |