## SPRINT 5:

## Level 1

You are asked to build ONE Power BI page to carry out the following processes and answer the related business questions.

**1. KPI – Total transaction amount per year**

Your company is interested in evaluating the total transaction amount over the years.  
To achieve this, you are asked to create a Key Performance Indicator (KPI).  
This KPI must clearly visualize the business goal of reaching a total of $25,000 per year.

**2. DAX Measure – Average transaction amount (2021)**

The marketing team asks you to create a new DAX measure that calculates the average transaction amount for the year 2021.  
Display this average in a gauge visual, and remember that the company has a target of 250 transactions.

**3. Repeat for 2022**

Repeat the same procedure as in the previous step, but for the year 2022.

**4. KPI – Number of companies per country**

Create a KPI that shows the number of companies per country involved in transactions.  
The business goal is to have at least 3 participating companies per country.  
You will need to use DAX to calculate and clearly display this information.

**5. Clustered column chart – Monthly sales**

Create a clustered column chart showing the total sales per month.  
The company’s goal is to reach at least $10,000 per month.

**6. Repeat sales chart for total amount**

Create another clustered column chart to reflect the total amount of sales per month, with the same goal of at least $10,000 per month.

**7. User-level analysis**

You are asked to dig deeper into user transactions and present the information in a clear, understandable format.

In a table, include the following:

* Full name of users (you’ll need to create a new column that combines first and last names)
* Age of the users
* Average transaction amount in euros
* Average transaction amount in dollars (conversion: 1 euro = 1.08 dollars)

You must also highlight the users who had an average of:

* 300 euros or more
* 320 dollars or more

**Level 2**

You are asked to build ONE Power BI page to carry out the following processes and answer the business questions.

**1. Monthly trend of transactions in 2021**

The marketing team wants to analyze the monthly trend of transactions made in 2021.  
They want to understand the variation by month, and visualize the business target of at least $12,500 in transactions per month.

You must identify which months did not meet the goal. If necessary, use two visuals.

**2. Focus on Germany**

Your company wants a deeper understanding of transactions made in Germany.  
You’re asked to create DAX measures and visuals that show the average sales in Germany.

Keep in mind:

* The company has a target of 250 euros annually
* Configure the visual with a minimum value of 100 and a maximum of 350 to better reflect performance

You will need to deliver and present a one-page PDF report analyzing Germany’s performance. Keep this in mind.

**Level 3**

To complete this level, you will need the user table and the product table, which must be related to your fact table.

You can find the necessary CSV files in the Sprint 4 task resources. Load them with Power Query and add them to the SQL model.

Note:  
For the product table, you must find a solution to relate it to the list of product IDs stored in the product\_ids column of the transactions CSV. Use Power Query for this.

You are asked to build ONE Power BI page to carry out the following processes and answer the related business questions.

**1. In-depth user transaction analysis**

The marketing team wants to analyze user transactions in more detail. You are asked to create multiple visuals that include:

* Key statistical measures for relevant variables to understand user transaction behavior
* Number of products purchased by each user
* Average purchases per user, and highlight which users have an average purchase > 150 and which do not
* Most expensive product purchased per user
* Geographic distribution of users

You are expected to adjust each visual to improve readability and clarity.  
As you work, carefully evaluate which variables are relevant to effectively communicate the required information.

## SPRINT 6:

## ****Level 1****

You are asked to build **ONE Power BI page** to carry out the following tasks and answer the related business questions.

### ****1. Average sales by country and year****

The company needs to assess **international sales performance**.  
You are asked to create a **visual** that displays the **average sales broken down by country and year** in one chart.  
You must **highlight the averages below 200 euros per year**.

### ****2. Sales percentage by country****

The company wants an overview of **transactions made in each country**.  
Create a **visual** that shows the **percentage of total sales by country**.

### ****3. Sales difference between 2021 and 2022****

Design a **visual indicator** in Power BI to **analyze the sales difference** between **2022 and 2021**, by country.  
The goal is to **understand how sales changed in different countries** and identify any significant increases or decreases.

### ****4. Number of declined transactions per country****

Create a **visual** that counts the **number of declined transactions per country** to evaluate the **operational efficiency**.  
The company expects **fewer than 5 declined transactions per country**.

### ****5. Geographic distribution of sales****

The company wants to understand the **geographic distribution of sales** in order to identify **regional patterns and opportunities**.  
Choose the **most appropriate visual** to show this information.

### ****6. Presentation and interpretation of the visuals****

Your manager has asked you to **prepare a presentation** for your team that **summarizes all the visuals created** so far.  
You must **provide an interpretation** of the insights shown in the visuals.  
You may present general results or focus on a specific case (e.g. **Spain’s results**).

## ****Level 2****

You are asked to build **ONE Power BI page** to carry out the following tasks and answer the business questions.

### ****1. Interactive filter by year****

Your task is to implement an **interactive filter** that allows users to **select sales by year**.

### ****2. Sales analysis by month****

Management is interested in a more detailed view of **monthly sales**.  
You are asked to **adjust the visuals** to display **sales information per month**.

### ****3. Total sales and number of transactions****

Create visuals that show the **total amount of sales** and the **number of transactions**.  
If necessary, use **two separate visuals.**

### ****4. Sales vs declined transactions****

Create a visual that clearly shows the **amount of sales made** and the **number of declined transactions.**

### ****5. Descriptive statistics of companies****

Select a visual that displays the **descriptive statistics of the companies** that made transactions.  
Be sure to **show the total for each statistic.**

## ****Level 3****

To complete this level, you will need the **user table** and the **products table**, and you must relate them to your **fact table**.

You will find the necessary **CSV files** in the **Sprint 4 task resources.**  
Load them using **Power Query** and integrate them into the **SQL model.**

**Note:**  
For the **products table**, you must find a way to relate it to the list of product\_ids stored in the transactions **CSV file**.  
Use **Power Query** to handle this relationship.

### ****1. In-depth analysis of users and products****

The company wants to **deepen the analysis of the users** involved in transactions and the **products sold**.  
You are asked to create a series of visuals that will help **strategically improve marketing campaigns** and **increase sales**.  
Your dashboard must include:

* **Personal information of the users**
* **Number of completed and declined transactions** per user

The company expects each user to have **at least 10 transactions per year** and **fewer than 2 declined transactions per year**

* **Identification of the cheapest and most expensive product** purchased per user, including **price**
* **Geographic distribution of users**
* **Average number of purchases made**
* **Year filter**: The user must be able to **filter the data to view a single year**
* **User selector**: Add a **selector to view the data of a specific user**, and check that it works correctly