

# Visualization in Power BI: Final Task

Home Assignment for Submission

## Analysis of the operating performance for e-commerce company

This task needs to be submitted for review. Read the task description and follow the steps below to complete the assignment.

### Topics mentioned

- ✓ Data cleaning and manipulation
- ✓ Data modeling
- ✓ Visualization in Power BI
- ✓ DAX formulas

### Task description

You work in a consulting group. Your client, an e-commerce company from Brazil, has requested a complete analysis of their operating performance. They want a detailed report covering three main parts: general dashboard, delivery performance, and product quality. Based on this analysis report, the company's management will decide the future development of the business.

The dataset contains information on 100k orders from 2016 to 2018 made at several marketplaces in Brazil. Various order data are recorded: from order status, price, payment, and freight performance to customer location and product attributes. Also, you have access to customer reviews. The geolocation dataset relates Brazilian zip codes to latitude/longitude coordinates.

It is actual commercial data that has been made anonymous; references to the companies and partners in the review text were replaced.



### What you need to do

#### Task 1 (Import Data)

- 1 Download the Dataset.
- 2 Import data to the PowerBI.

#### Task 2 (Data cleaning and transformation)

- 1 Replace blank values and drop duplicates (if they are in the data).
- 2 Add geolocation to customers and buyers.

#### Task 3 (Data modeling)

- 1 Create a data model that will represent the relationship between datasets.

#### Task 4 (Building a general dashboard)

- 1 Investigate the company's production volume, sales, and customer product ratings.

#### Task 5 (Exploring delivery performance)

- 1 Walk through the delivery performance, and find ways to optimize delivery times.
- 2 Calculate DAX measures for the seller's late dispatch and courier's late delivery.
- 3 Provide a written comment with your insights and recommendations.

#### Task 6 (Investigating product quality)

- 1 Discover product categories that are more prone to customer dissatisfaction.
- 2 Calculate DAX measures for bad reviews (those less than 3), and build a time series visualization.

#### In the end:

- ✓ Save the document as .pbix file and archive it before uploading it to the learning platform. If you not sure how to save the file properly, use this guide. If you not sure how to archive the file properly, use this guide.

### Tips and hints

- ✓ You can use 'Merge Queries' (on prefix\_code) to add latitude and longitude to sellers' and customers' datasets.
- ✓ For the delivery performance dashboard, calculate the number of minutes the order is processed and the number of days it takes for the order to be sent to a courier and delivered by a courier. Compare the estimated delivery date with the date the order was passed to a courier and where the delay happened. Assume that a courier must get a parcel at least five days before the estimated delivery date. If a courier receives it late, it is a disputable case; otherwise, if a parcel is delivered later than the estimated date, there is a delay.
- ✓ To show the product categories with the least scores (<3), you can change the visualization following the path: Options → Current file → Report settings → Visual options → Change default visual interaction from cross-highlighting to cross-filtering.

### Completion criteria

Use this checklist before assigning the homework to check if everything is done.

- ☐ The submitted .pbix file contains three dashboards (one dashboard for each task).
- ☐ The following elements appear at least once in the dashboards: bar or column chart, combination chart, scatter chart, map, and slicers.
- ☐ My measure calculations are correct and placed on the dashboard.
- ☐ The data model is correctly built on multiple datasets.
- ☐ The document is saved as .pbix file, archived and uploaded to the learning platform.

