# Application of Power BI in Big Data Analytics Assessment

**Instructions**

- Answer **ALL** questions.

- Put a reasonable number of visualizations on each page.

- Rename each page using the question number(s).

- Save the Power BI file using your **FULL NAME** and advise when you are done for your file to be collected in the USB.

- Switch your laptop to **Airplane mode** for the duration of the assessment.

- **No Phones allowed**

- No other window/application should be open on your computer except the Power BI Desktop application and the file with the assessment questions.

- Time allocated in **2 hours**.

- Work quietly and independently.


AfroSense Global is a South African shop that sells used goods to different parts of the world. The shop has consulted you to do the following on their sales data (**AfroSense Sales Data**) in Power BI Desktop.

**\*Dataset provided in the training room.**

1. Clean and shape the dataset as necessary.                    [3]
2. Remove the Postal Code column.                               [1]
3. Add a column in the **Sales** table that shows how long it took the shop to process each order from the order date to the shipping date.     [4]

4. Add a new column in the **Sales** table that shows the **Profit Margin**.

   *Profit Margin = Profit / Sales x 100*                                    [2]

5. Create comprehensive reports to show the following insights:

   a. The product that incurred the most shipping cost.                     [2]

   b. Market in which the Medium order priority was most applied.           [2]

   c. The market where most orders are realised per year.                   [2]

   d. Profit per category and sub-category per year.                        [2]

   e. The total number of orders that the shop fulfilled each year.         [2]

   f. Total number of orders returned?                                      [2]

   g. The Segment with the most customers.                                  [2]

   h. Annual Profit and a 5-year forecast of the Profit.                    [4]

   i. The average time taken by the shop to process orders, from
      receiving the order to shipping the order.                           [2]

   j. A KPI showing how the business is performing against the
      following set targets each year:

      i.   Sales: R2,800,000.                                              [4]

      ii.  Profit: R1,000,000.                                            [4]

      iii. Orders: 53,000.                                                [4]

      iv.  Shipping costs: R350,000.                                      [4]

      v.   Profit Margin: 33%                                            [4]