**Data analysis case study 1:**

**Background**

A medium-size multinational pharmaceutical company (Company X: client) having a strong presence in the psychiatry segment has an originator product (Product A: asset) whose patent will expire in January 2024 (patent expiration would allow other companies to introduce a true copy or generic version of Product A leading to price competition). Company X wants to understand the impact of generic entry in Product A, so that they can develop strategies to mitigate the increased competition due to generic entry.

**Objective**

The goal for Cortris Consulting is to support client in understanding the impact of generic entry on the innovator product using comparator products (products from other companies not same as Product A, for which patent had expired and operate in similar market conditions), so that our client can decide to develop, invest and further execute their marketing strategy. Hence, the data analysis project stream has the following sub-objectives leveraging the comparator product data:

* Develop baseline forecast for Product A (volume).
  1. From current annual sales (2020) to yearly sales one year (2023) prior to generic entry (January 2024).
  2. Sales forecast (annual) following generic entry, Year 1 (2024), year 2 (2025), year 3 (2026), year 4 (2027) and year 5 (2028).

**Data toolbox**

The following datasets are being provided for doing the analysis:

1. Sales data for asset (Product A).
   1. 48 months data up to Dec 2020.
2. 4 comparator products.
   1. Minimum 24 months sales data prior to generic entry (either authorized generic or generic from another company)
   2. Minimum 60 months sales data post generic entry (either authorized generic or generic from another company)

**Reporting**

You are required to report your analysis as follows:

1. Your analysis, findings and conclusions in a Power point template, using graphs, tables and other visual illustrations as required. Guidelines for power point report:
   1. Executive summary of findings and recommendations (1 or 2 slide maximum)
   2. Appendix (no slide limit)
      1. Slides to support your analysis which answering the case study objectives.
      2. Slides detailing your assumptions and limitations behind the analysis (forecast, pricing, and timing).
      3. Slides detailing which analytical and statistical tools (formulas or algorithms or models) you have used for the different analysis including your assumptions and limitations such as data limitations, advantage or limitations to compare different analytical and statistical tools (formulas or algorithms or models) used by you.
2. Excel file containing the following:
   1. All analysis used by you for delivering on the Objectives of the case study.
   2. Explanation of formulas, algorithms or models used and their comparison.

**Timelines**

Research, analysis and report finalization - 2 working days for delivering the analysis methodology, final delivery – 5 working days

Preferably use Python and Power BI for the analysis