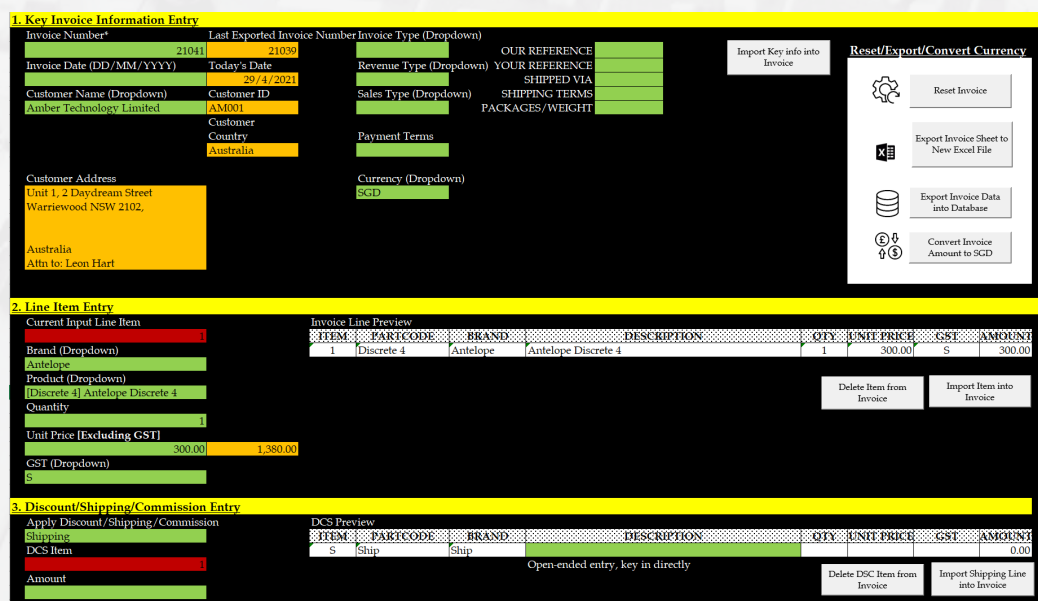


Problem Area 1: Data Management

SSL Asia is an SME with cost constraints and does not adopt Enterprise Resource Planning (ERP) system. Hence, the company carries out a manual way of recording sales and inventory data on Excel spreadsheets on a quarterly basis.

Issue: Current recording process of inventory inflows and outflows are largely manual and prone to error.

Solution 1: Invoicing, Sales and Inventory (ISI) Management Tool with Microsoft Excel VBA



1. Key Invoice Information Entry

Invoice Number* 21041 21039
 Last Exported Invoice Number
 Invoice Type (Dropdown)
 Invoice Date (DD/MM/YYYY) Today's Date 29/4/2021
 Revenue Type (Dropdown) YOUR REFERENCE
 Customer Name (Dropdown) Customer ID
 Customer Address
 Customer Country Australia
 Payment Terms
 Currency (Dropdown) SGD

2. Line Item Entry

Current Input Line Item
 Brand (Dropdown)
 Product (Dropdown)
 Quantity
 Unit Price (Excluding GST)
 GST (Dropdown)

3. Discount/Shipping/Commission Entry

Apply Discount/Shipping/Commission
 DCS Item
 Amount

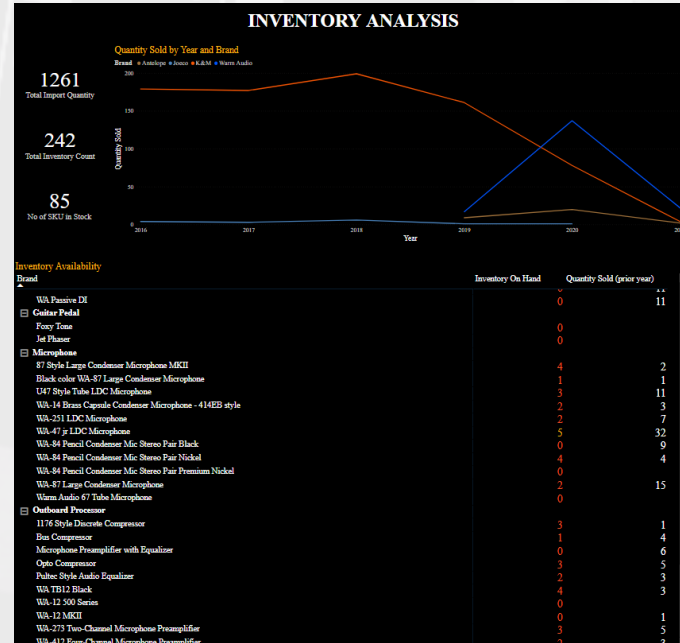
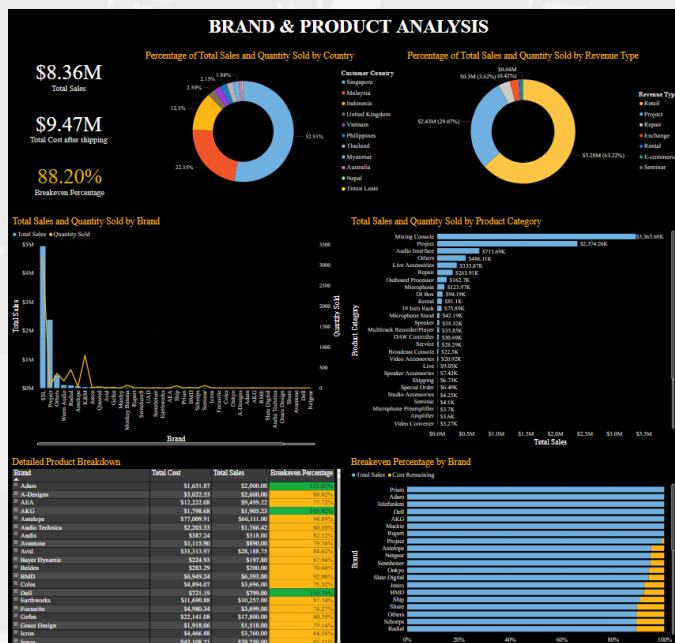
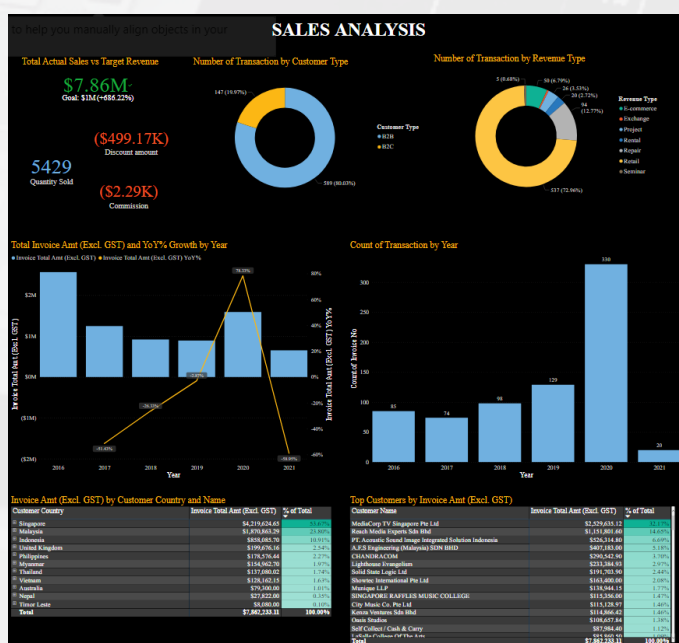
Problem Area 2: Operations & Decision Making

Increasing demand in SSL's products attributed to growth in the audio technology industry as well as the rapid expansion of product range resulting in more SKUs coming on board.

Issue: The general manager who oversees sales and operations carried out decision-making based on business know-how and existing data was not fully capitalised to capture the market trend more accurately.

ISI Management Tool is a one-stop solution to handle and streamline the Invoicing, Sales, and Inventory Management processes. Processes are semi-automated with the use of VBA macros. Firstly, invoices are generated using macros and information from a centralised database. Generated invoices can be quickly exported and saved separately. Secondly, the information generated from invoices is imported into the database where they can easily be integrated into the Power BI Dashboard for reporting. Lastly, the inventory on hand is updated using information from the generated invoice.

Solution 2: Interactive Dashboard with Microsoft Power BI



The team's main purpose in building a dashboard is to help the management of SSL Asia make more informed decisions regarding its sales and purchases process. Various Key Performance Indicators such as Sales over time, Sales by brand, geography and channel, Top customer analysis, Breakeven percentage, and Inventory holding are incorporated into the dashboard to measure and evaluate how effectively SSL Asia has achieved its key targets set out by the management. Useful functionalities in the dashboard such as filter and drill-down improve the efficiency and make the dashboard more interactive.

Limitations

There was insufficient data to perform predictive analysis that will yield meaningful result for SSL Asia. Hence, the team did not utilise supervised or unsupervised learning methods in this project.

Insights & Key Takeaways

The team learned that it is crucial to understand the nature of the client's business to design a useful and value-adding solution. Overall, the objectives of this project have been met after numerous close consultations with the client and continuous guidance from the professors.