ACCT 414 (SMU-X) Accounting Analytics Capstone

SMU SINGAPORE MANAGEMENT UNIVERSITY

GKE GROUP OF COMPANIES

BACKGROUND

GKE Corporation Limited (GKE) is a leading provider of integrated warehouse and logistics solutions dedicated to delivering effective solutions for its customers while generating value for its shareholders.

ROLE OF DATA ANALYTICS

By using data analytics, GKE can comprehensively analyse their sales & purchases which will allow them to better understand their customers and suppliers. From there, GKE can derive actionable insights.

PROBLEM STATEMENT

1. Many of their current processes are manual.

2. There is a lack of system to anticipate potential fluctuations in sales and purchases.

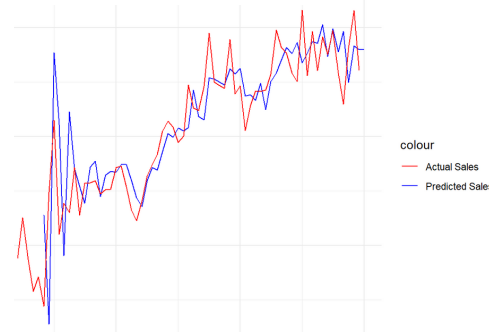3. The data sets are not organized and cleaned for proper analysis.

OUR OBJECTIVE

To help GKE:

1. Analyse past Warehouse and Transport Sales and Purchases.

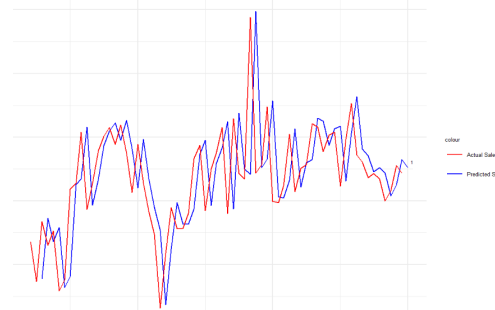2. Develop a model to forecast the following month's total Sales and Purchases.

OUR APPROACH

1. **DATA CLEANING**
Select the relevant data files followed by data.

2. **PREDICTIVE ANALYSIS**
Use R Studio to perform various regressions to derive the best model.

3. **DATA VISUALIZATION**
Use PowerBI to create a set of dashboards enabling GKE to get insights.

4. **RECOMMENDATION REPORT**
A summary of key insights from predictive analysis and visualization dashboard
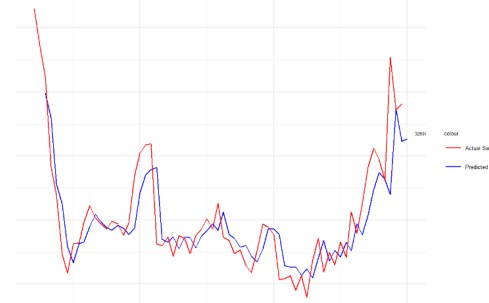
REGRESSION FORECAST

MONTHLY SALES | PER CHARGE | PER CUSTOMER

DASHBOARD

This is a sample of some of the visualizations that our group has created. By adjusting the filters, the user is able to derive specific insights from different years and companies depending on their needs.

OVERVIEW | WAREHOUSE - SALES 1.0

KEY INSIGHTS

1. **WAREHOUSE SALES**
Increase in sales over the years, presence of seasonality trend: February and April have a decrease in sales.

2. **TRANSPORT SALES**
Generally decreasing yearly, with no clear seasonality or trend, indicating sales are mostly adhoc.

3. **WAREHOUSE & TRANSPORT PURCHASES**
Decrease in purchases over the years, possibly due to efficient business practices.
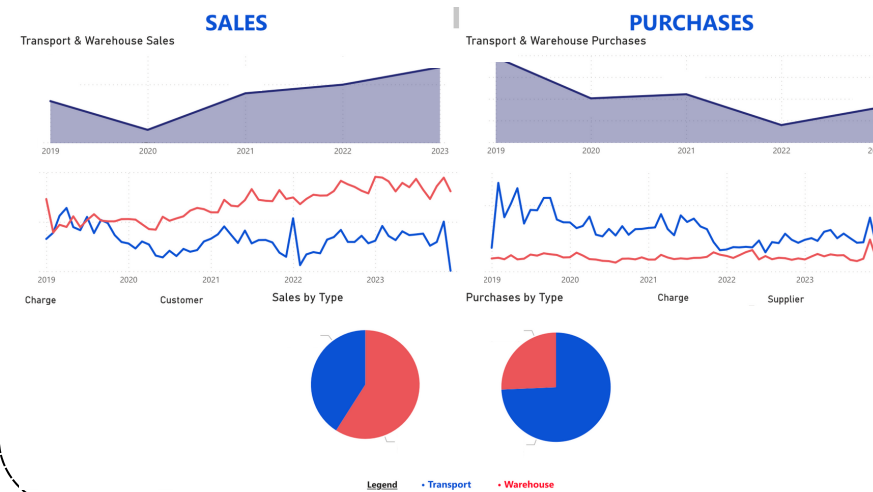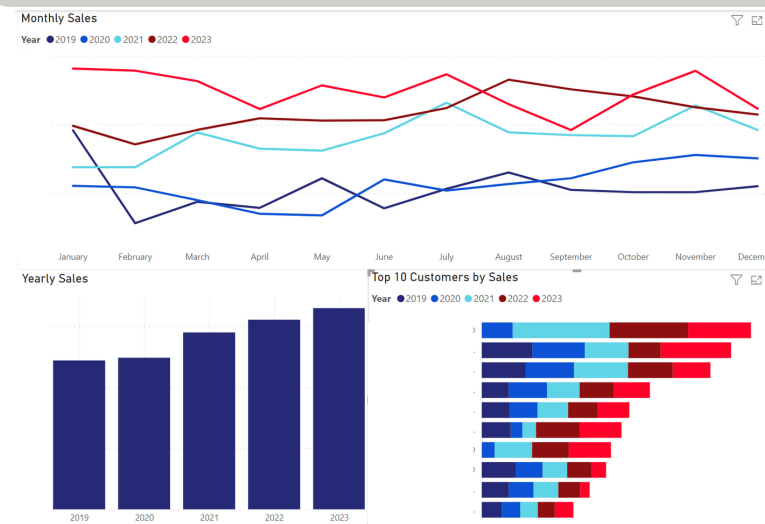
RECOMMENDATION

1. **DATA GOVERNANCE**
GKE can implement better data governance practices to ensure that their data is consistent and reliable for a more accurate data analysis.

2. **TARGET NEW SECTORS**
For Warehouse Sales, GKE could look into targeting the flower industry to cover February's dip as there is increased demand for flowers during Valentine's Day

3. **CUSTOMER RETENTION STRATEGIES**
To ensure that GKE has consistent stream of revenue, GKE could establish effective feedback mechanisms from its customers in order to identify areas of improvement to better align with customer preferences.

4. **INCREASE CROSS-SELLING EFFORTS**
GKE can encourage customers who use either the warehouse or transport services to also utilize the other service.

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