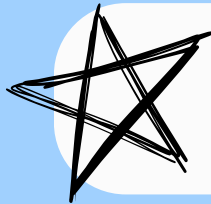


Data Warehouse Design And Analysis Report



STAR SCHEMA

DATA CLEANING



SALES TABLE

Removed record with negative quantity sold value to ensure data accuracy

HIRE TABLE

Removed records with invalid dates where End_Date was earlier than Start_Date in the hiring table.

STAFF TABLE

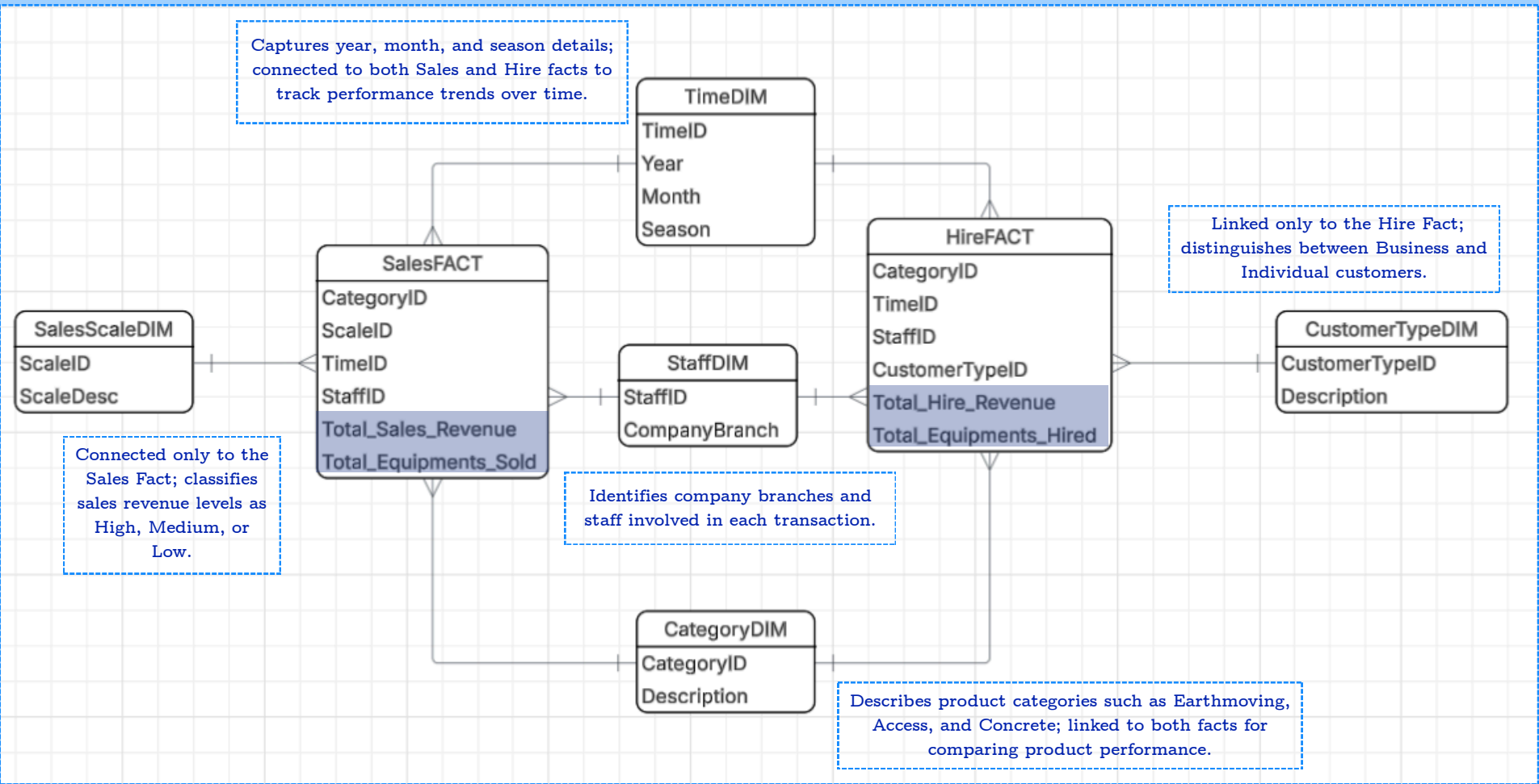
Deleted invalid entry Staff_ID = 51 — exceeded total staff count (50).

CUSTOMER TYPE TABLE

Removed duplicate record for Customer_Type = 'Business' to maintain data consistency.

CATEGORY TABLE

Removed Row 15 due to NULL value in Category Description



INCREASING GRANULARITY

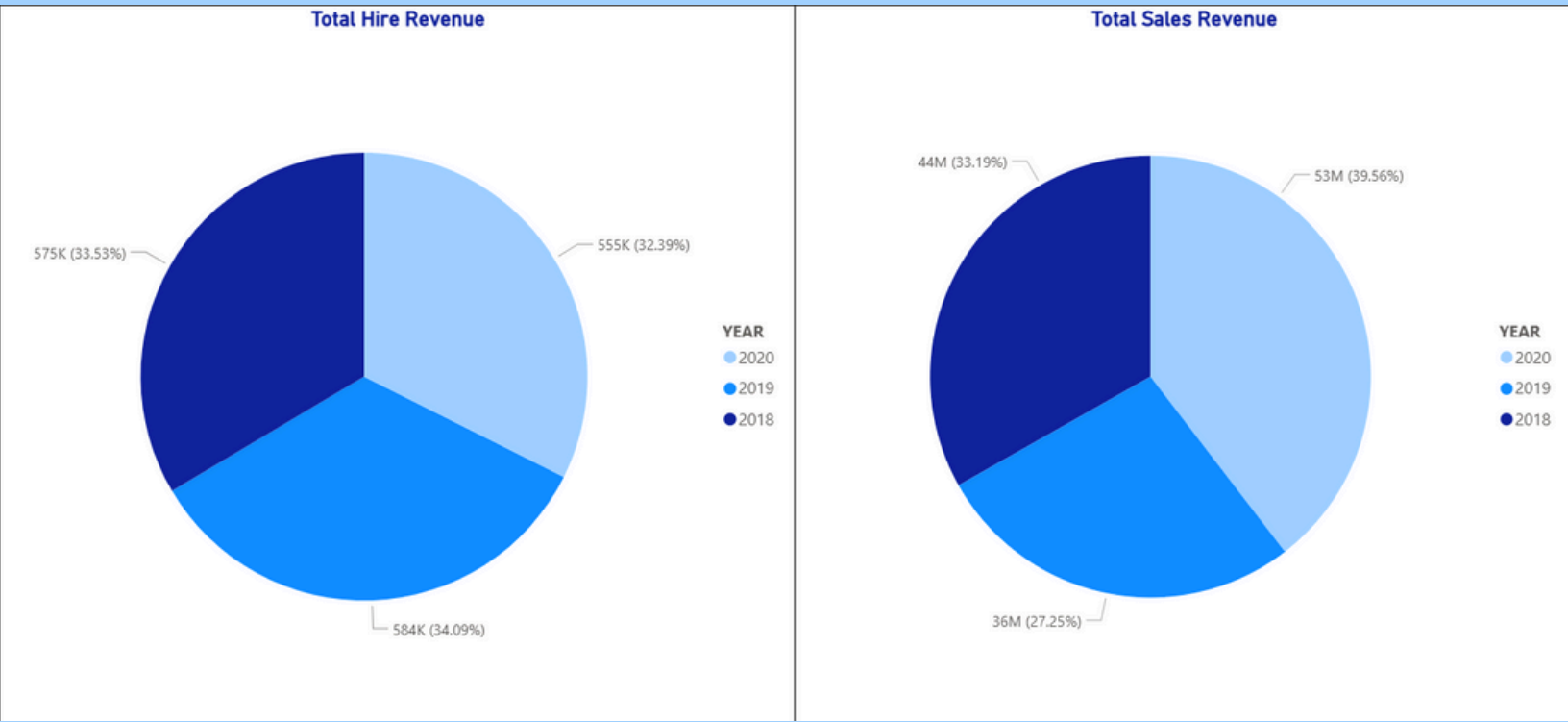


Add an Equipment Dimension: Include equipment-level data such as equipment id , manufacturer, and production year. This allows tracking of specific items rather than just categories.

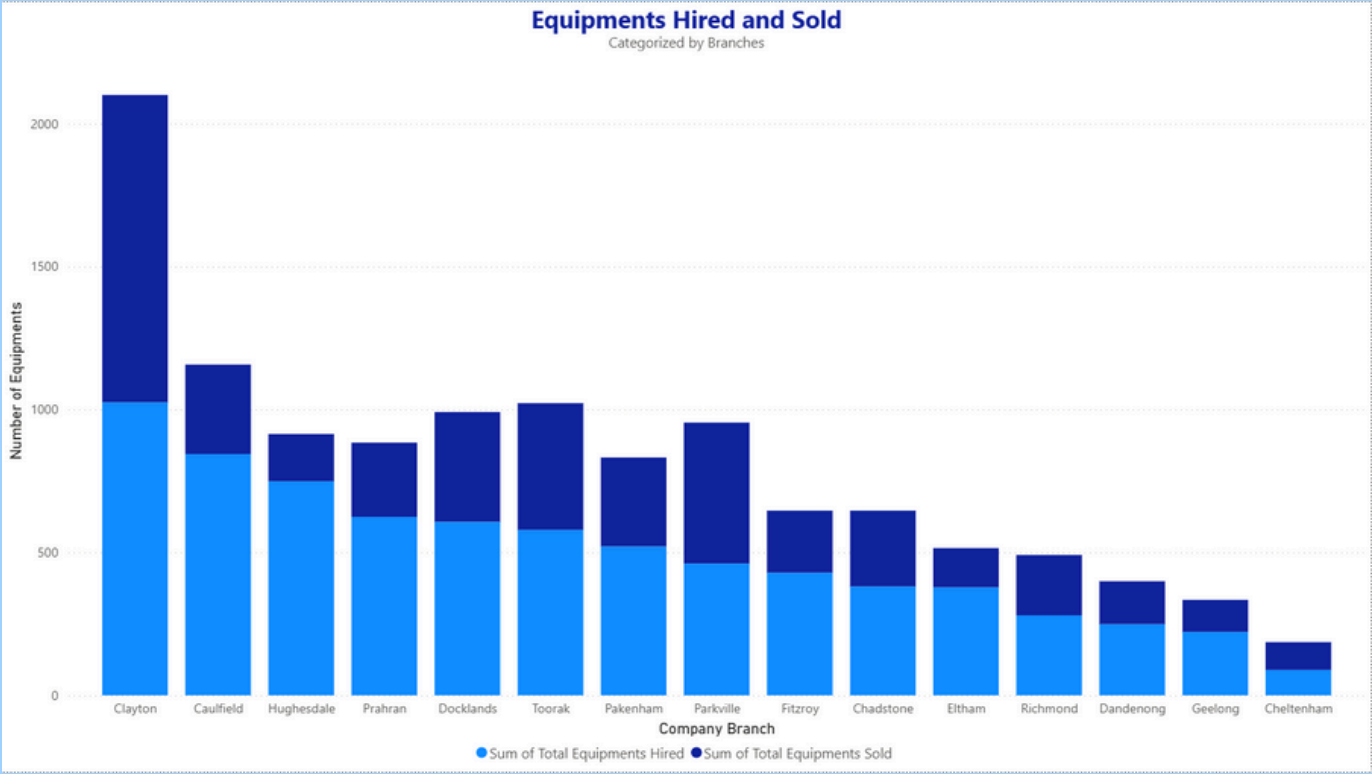
Add a Customer Dimension: Helps identify repeat customers and analyze purchase or hire trends based on customer type or demographics.

Expand the Staff Dimension: Incorporate details like gender ratio to support deeper branch and staff performance analysis.

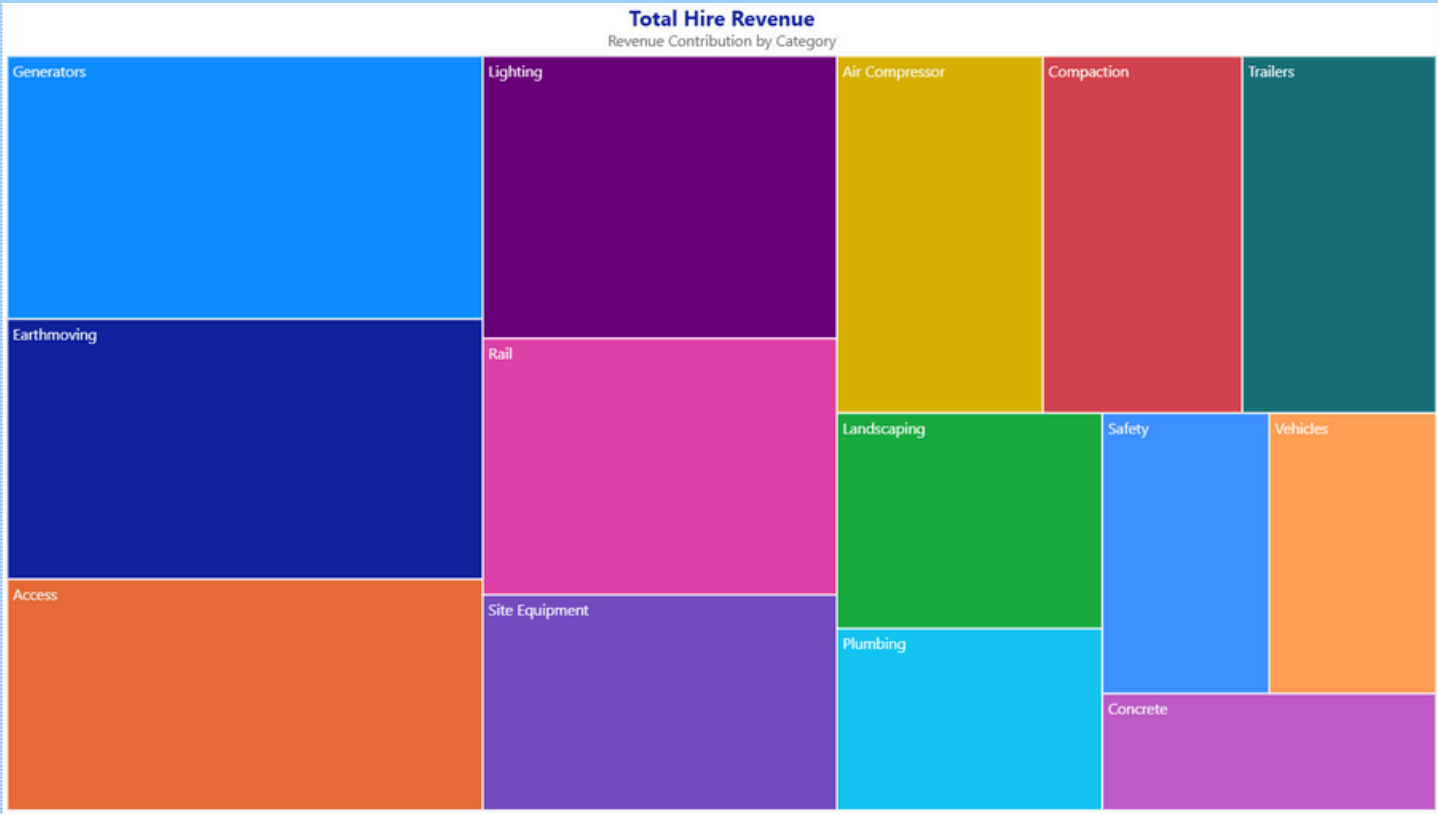
ANALYSIS



The pie charts show hire and sales revenue from 2018–2020. Hire revenue stayed stable, while sales revenue dipped in 2019 but rose sharply in 2020, surpassing hire revenue.



The stacked bar chart shows hire and sales activity across MonEquip branches in Victoria. Clayton had the highest activity, Cheltenham the lowest. Most branches recorded more hires than sales, except Clayton and Parkville. Overall, hires slightly outpaced sales.



Top hire revenue came from Generators, Earthmoving, and Access, while Concrete contributed the least. For sales, Earthmoving and Landscaping led revenue, with Site Equipment performing lower. Overall, Concrete performed better in sales, while Generators and Access remained stronger in hire.

