Clevertronics Case Study – Power BI Adoption

Role: Business Intelligence Developer

The Business & Industry: Clevertronics is a leading Electronics manufacturing company specialising in emergency exit solutions. The Business has Subsidiaries in all the Australian States as well as NZ and UK and the products are sold all over the world. The business has key Divisions like Engineering, Procurement/Supply Chain, Manufacturing, QA & Product Management, Sales, Marketing and Finance. The business has experienced rapid growth since 2020 and is now scaling its technology rapidly.

My Role: I was part of this change through the newly created **Business Transformation Delivery** team, working closely with a Senior Software Developer, Product & Training Manager, System Administrator, and the Head of Transformations (Project Manager). In this team, I served as the dedicated data specialist

The Problem: Clevertronics' rapid expansion and expansion of led to fragmented systems, inconsistent reporting, and communication gaps between departments. The Melbourne Head Office struggled to obtain a clear, reliable view of sales and operations, as each region and country generated its own figures and reports. This lack of alignment made it difficult for leadership to track performance accurately and make timely business decisions.

I led the Analytics solution in 2 Stages-

Part-1(Getting Started with Automated Analytics) – Power BI reporting project

Primary Stakeholder: Head of Sales, CCO
Tools: Power BI, Outlook, Dynamics 365 CRM, Syteline ERP, Power BI Service (Fabrics)
Goal: Deliver a unified Power BI reporting system for Sales KPI tracking
Timeline: December 2024 – March 2025

The business originally used **Infor Syteline ERP** to align Product Engineering, Manufacturing, Sales, and Finance.

Due to **Syteline's CRM limitations**, Dynamics 365 CRM was introduced in 2018 to manage sales pipeline better.

This created a **split sales pipeline**:

- **Dynamics 365 handled** → Site/Lead generation → Opportunity tracking → Quoting → Closing Quotes (Win/Loss).
- **Syteline handled** → Sales Order → Order Processing → Order Fulfilment → Shipping & Delivery → Invoicing → Revenue Recognition → RMA.
- Sales team members **manually entered winning Quote IDs** from Dynamics into Syteline → prone to errors and misalignment.

Other departments adopted **specialised software** (budgeting, product management, customer service, HR), adding further fragmentation.

Key issues caused by fragmentation:

- Hard to identify true performance of sales team members.
- Sales-to-revenue mismatches of up to **$2 million**.
- Product-level sales data was unreliable because of rapid product changes.
- Manager-level reports often didn't match figures reported by their sales reps.
- Significant **manual effort** was required for report regeneration and summarisation across the hierarchy.
- Time was wasted trying to identify the **right metrics** and establish an accurate high-level sales picture.

Solution: The business **wanted to centralise sales reporting** in Power BI to close gaps caused by fragmented systems. I was tasked with delivering **29 reports** (to understand what type of reports look at **Figure 1**) along with a **monthly subscription system**, all **within three months**—timed before a major sales conference.

To achieve this, I built an interim solution **(Figure 2)** that stitched together multiple data sources. Since **proper data management and analytics tools were lacking**, I had to rely on a "make-do" architecture. **Dynamics CRM data was connected**, but all other sales-related data was manually emailed to me at month-end or on an ad-hoc basis. I cleaned and standardised this data using **Excel formulas** & "**Power Query**" and did manual quality checks, then pushed it into Power BI.

Reports were refreshed through a personal gateway and shared via the Power BI Service, where users could either access them directly or subscribe to receive dashboards as **PDF snapshots** via email. I also helped the whole sales team of over 120+ members onboard with **Power BI Pro** licenses and was responsible for managing them co-ordinating with a **System Administrator** and **external IT partner**.

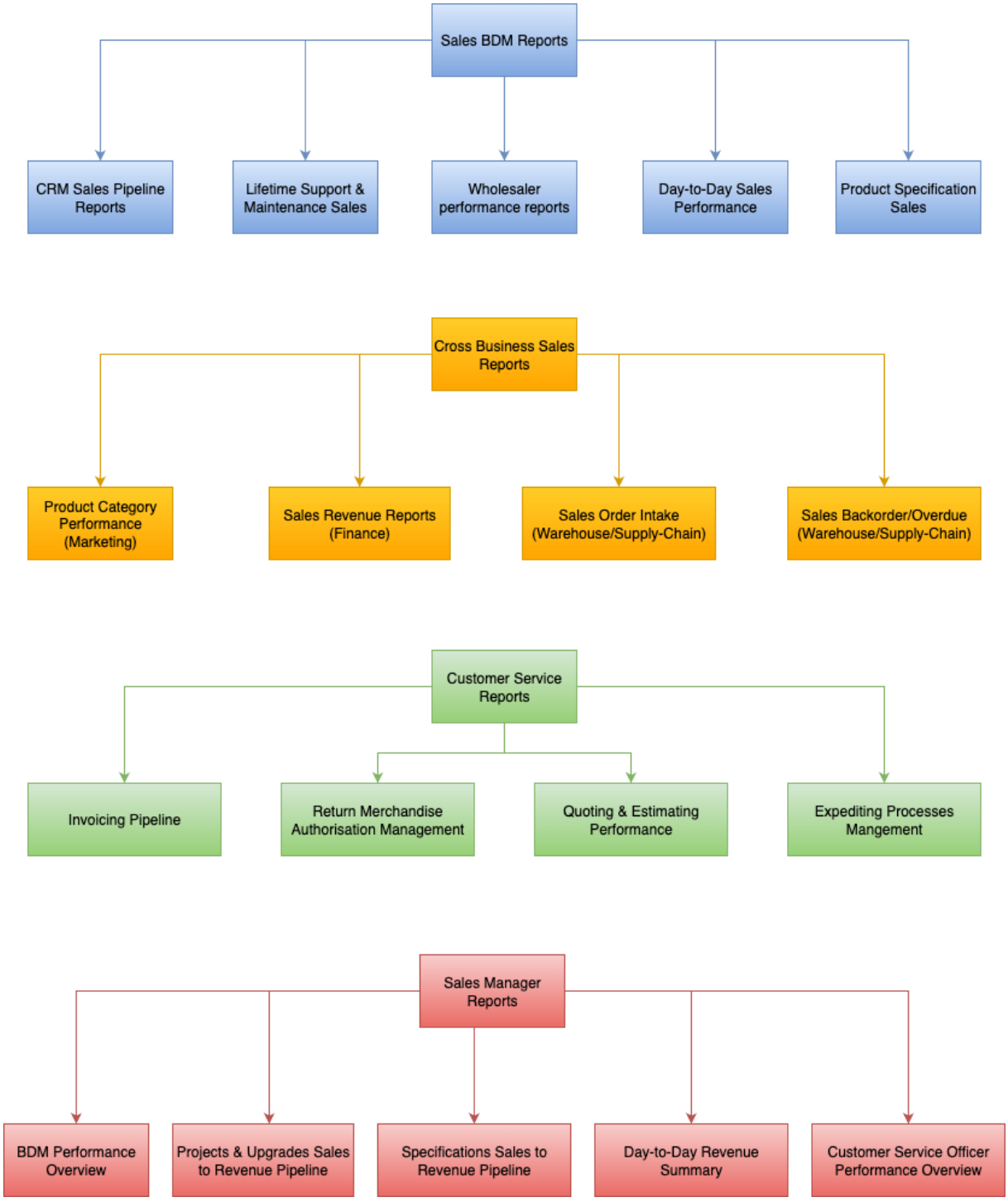

Fig-1: Clevertronics Power BI Reporting Categorisation

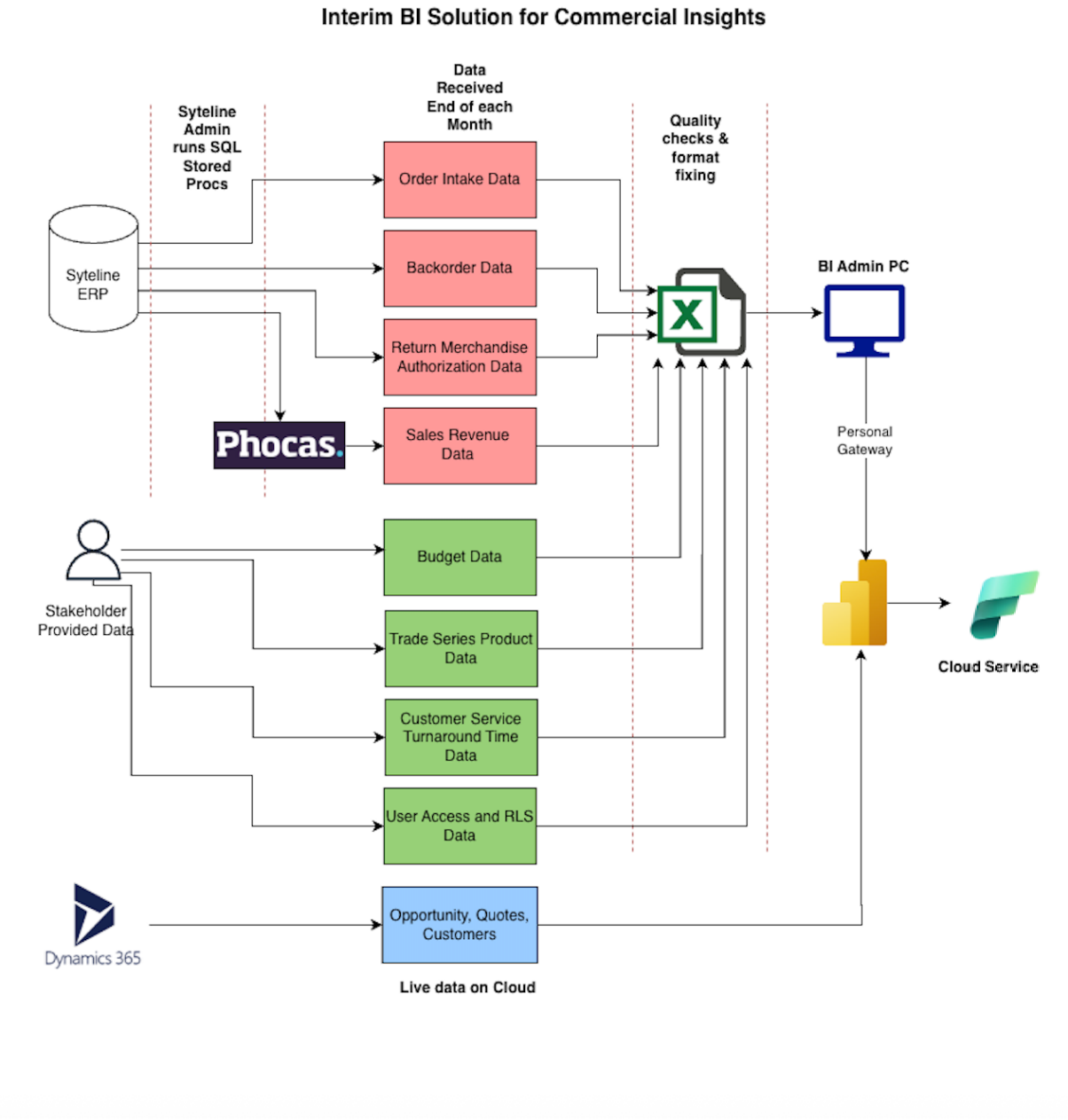

Fig-2: Clevertronics Power BI Reporting Categorisation

Problems This Interim Solution Solved

Problem	Before	After
1. Multiple designs & metrics.	Lots of excel reports created by various individuals with different design, currency & format.	Reports were categorised based on KPI types. BI Developer created one design and format for all reports. Automated currency and other metric conversion.
2. Multiple data sources.	Data was spread across Syteline database, ad-hoc spreadsheets, CRM systems.	Relevant and consistently tracked data were sent to and centralised by

Problem	Before	After
		the BI Developer into unified **Power BI semantic models**.
3. Delayed insights and business awareness	Excel reports had to be manually updated and emailed to multiple stakeholders at regular intervals. Many team members lacked timely visibility into business performance.	Updates flowed automatically through Power Query and Power BI refreshes, with scheduled subscription emails ensuring all team members stayed informed.
4. Data privacy	Reports and data would circulate through various departments and team members before reaching recipient.	**Row-Level Security (RLS)** makes sure users get data at the right level sent to them.
5. Can't cross analyse data from various sources easily	Difficult to trace the full flow from lead → quote → order → stock availability → invoice → revenue due to disconnected systems.	Power BI **Data model** unified these sources for cross analysis.

Part-2 (Becoming More Automated, Better Management & More Scalable) – Onboarding Data Warehouse, NetSuite ERP & Celigo ETL tool for Power BI reporting

Primary Stakeholder: Head of Sales, CCO, Head of Business Transformations

Tools: Power BI, SharePoint, Dynamics 365 CRM, SSMS, SSIS, Power BI Service (Fabrics), Celigo, NetSuite

Goal: To remove reporting management overhead

Timeline: April 2025– September 2025

NetSuite Project & New Problems:

To eliminate system fragmentation and centralise all business functions, the **NetSuite ERP project** was initiated at the end of 2022. By **April 2025**, most integrations for NetSuite were completed, and all sales and cross-departmental data that was previously emailed to me was also now available in the **NetSuite cloud database**. The Business now had new problems related to analytics and the following architecture solved it:

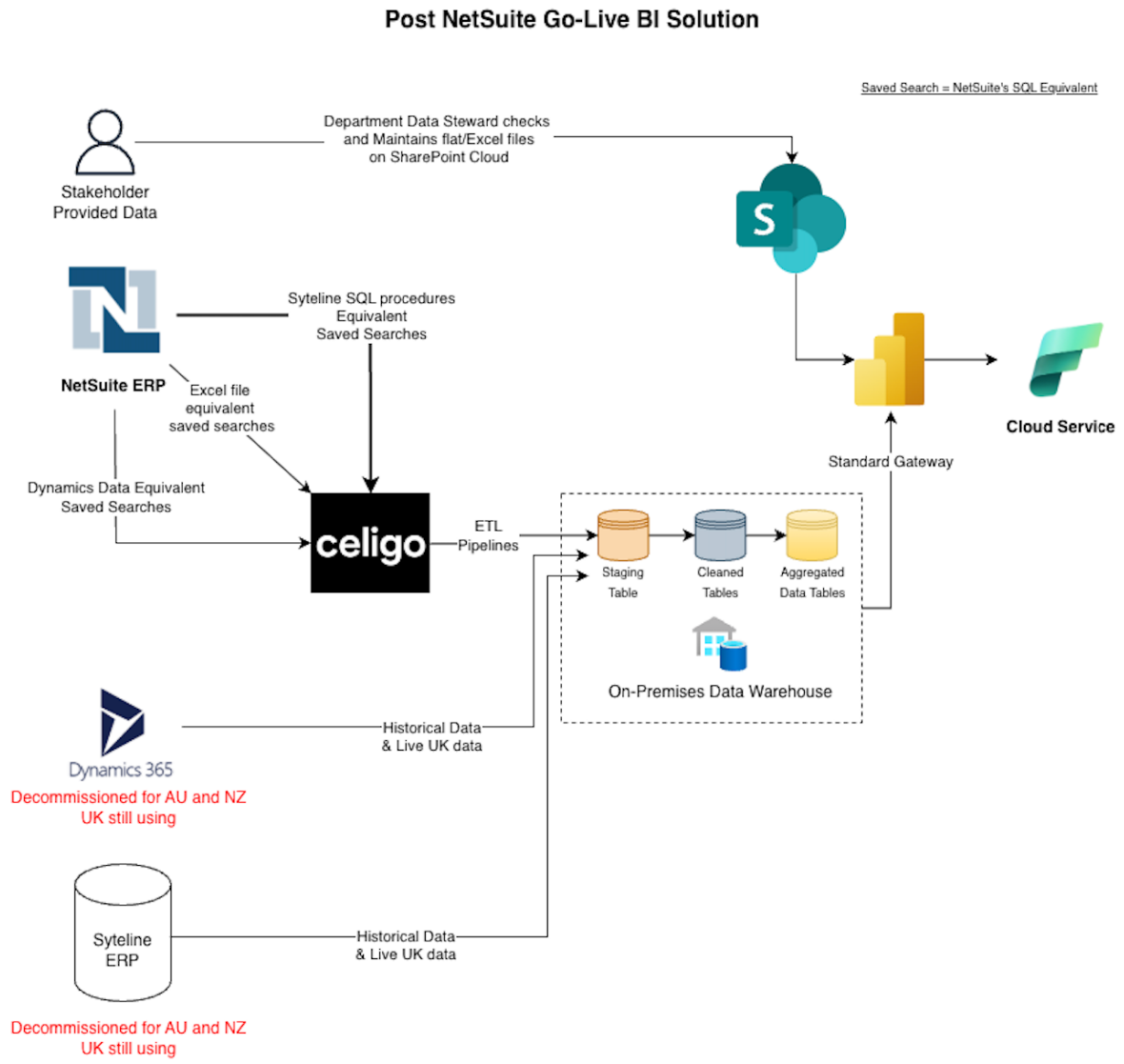

Fig-3-: Clevertronics Post NetSuite Go-Live Reporting simplification and optimisation

Challenge	Solution
Integrating new NetSuite ERP data on top of ongoing PBI reports	Built **NetSuite Saved Searches** to replicate Syteline, Dynamics 365, and flat file tables ensuring all new transactional data flowed consistently into Power BI reports.
Combining historical and new transactional data	Proposed converting an unused server into an **on-premises SQL Data Warehouse** (SSMS) to store and serve historical datasets for ongoing BI analysis.
Loading large volumes of historical data quickly &	Implemented **Celigo ETL pipelines** to automate migration of both historical and live NetSuite data into the Data

Challenge	Solution
Overcoming NetSuite ERP Analytics limitations	Warehouse. Embedded reports into NetSuite via **iFrame portlets** to overcome its native analytics limitations.
Slow report performance due to complex DAX and data models	Introduced a **Medallion (Staging → Silver → Gold)** architecture and shifted heavy data transformations to Datawarehouse SQL Server, simplifying data models & optimising report refresh & "iframe" loading times.
Ongoing flat file management and data ownership	Appointed a **Sales Data Steward** and migrated flat-file sources to **SharePoint Cloud**, enabling better version control and data ownership.
Report refresh dependency on developer's machine	Replaced the personal gateway with a **standard on-premises data gateway**, allowing fully automated 24/7 data refreshes from the Data Warehouse Server.

With these new changes **reporting** became fully **cloud-based, optimised, scalable, no longer dependent on manual processes or individual ownership.** Additionally, I have also helped the team with Data migration into NetSuite ERP, custom visual creation with python, unified Budget vs Performance report **in parallel** to this project.

Currently I am working on converting the 34 reports and counting into a few key reports to reduce manual maintenance of all the reports.