Forest Grove
Data-Driven Decision Making

Optimising technology to unlock insights that drive better business decisions

Forest Grove
Customer Conference 2023

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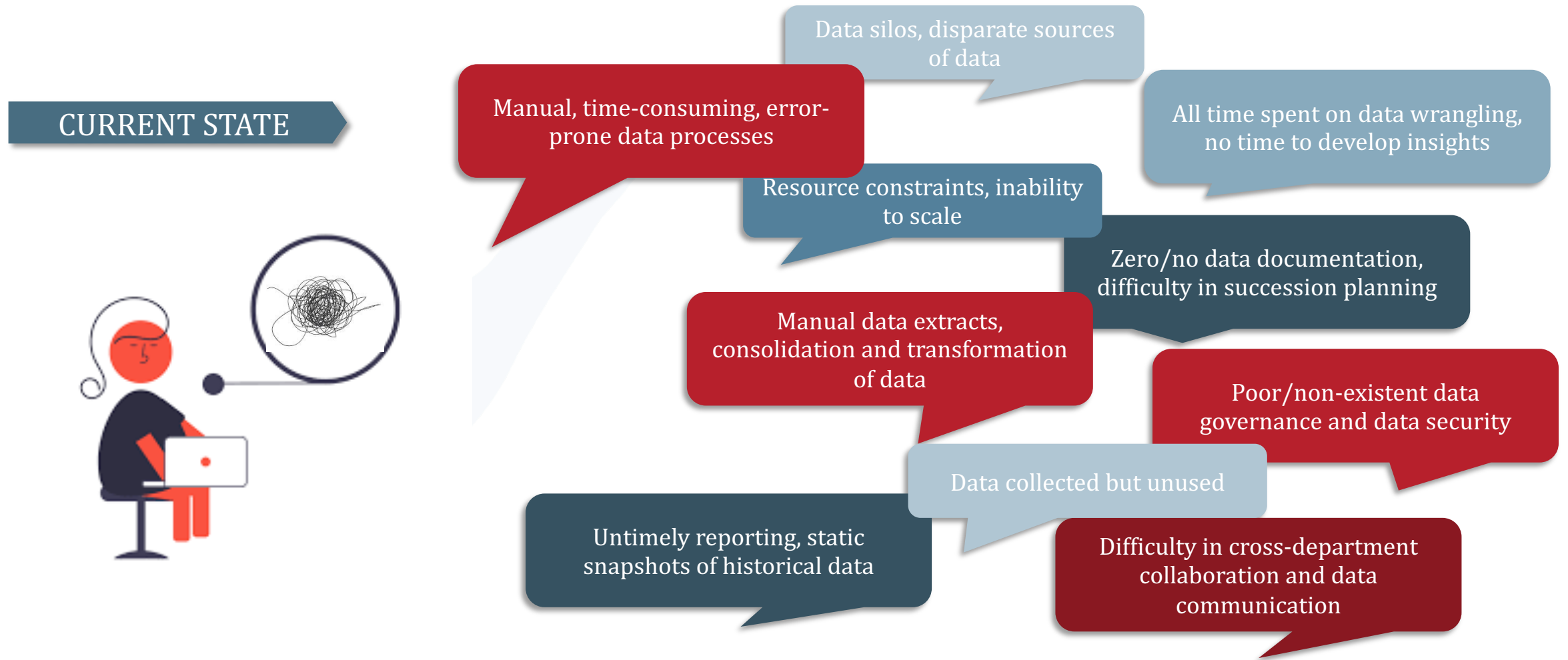# [D1S4.1] Connected Services - Integrating data sources for consistent access & delivery

Presented by:
Ross Gaskell - Director, Forest Grove

About the session:
Combining data from multiple sources into a single trusted and unified view is a critical cornerstone of modern organisations. It enables organisations to make informed decisions, improve operational efficiency, and gain a competitive advantage with consistent access to and delivery of your most important data. This presentation will showcase how our team can help you get the best out of your internal and external data sources. In addition, the Connected Services platform empowers your team to get in front of the game by taking advantage of the latest Data Science capabilities, including Machine Learning, Predictive Modelling and creating your own Custom Data Applications.

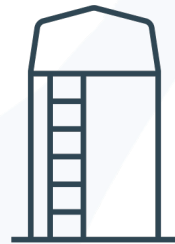# Common data frustrations and risks experienced by organisations

CURRENT STATE

Data silos, disparate sources of data

Manual, time-consuming, error-prone data processes

All time spent on data wrangling, no time to develop insights

Resource constraints, inability to scale

Zero/no data documentation, difficulty in succession planning

Manual data extracts, consolidation and transformation of data

Poor/non-existent data governance and data security

Data collected but unused

Untimely reporting, static snapshots of historical data

Difficulty in cross-department collaboration and data communication
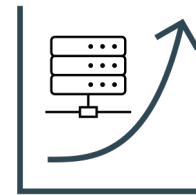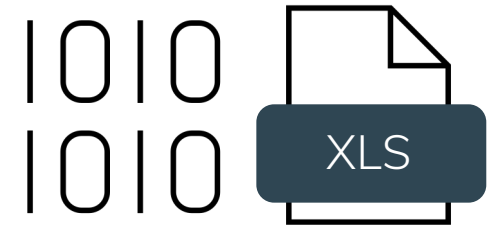
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Common data and system challenges

Disparity of Systems

Siloes

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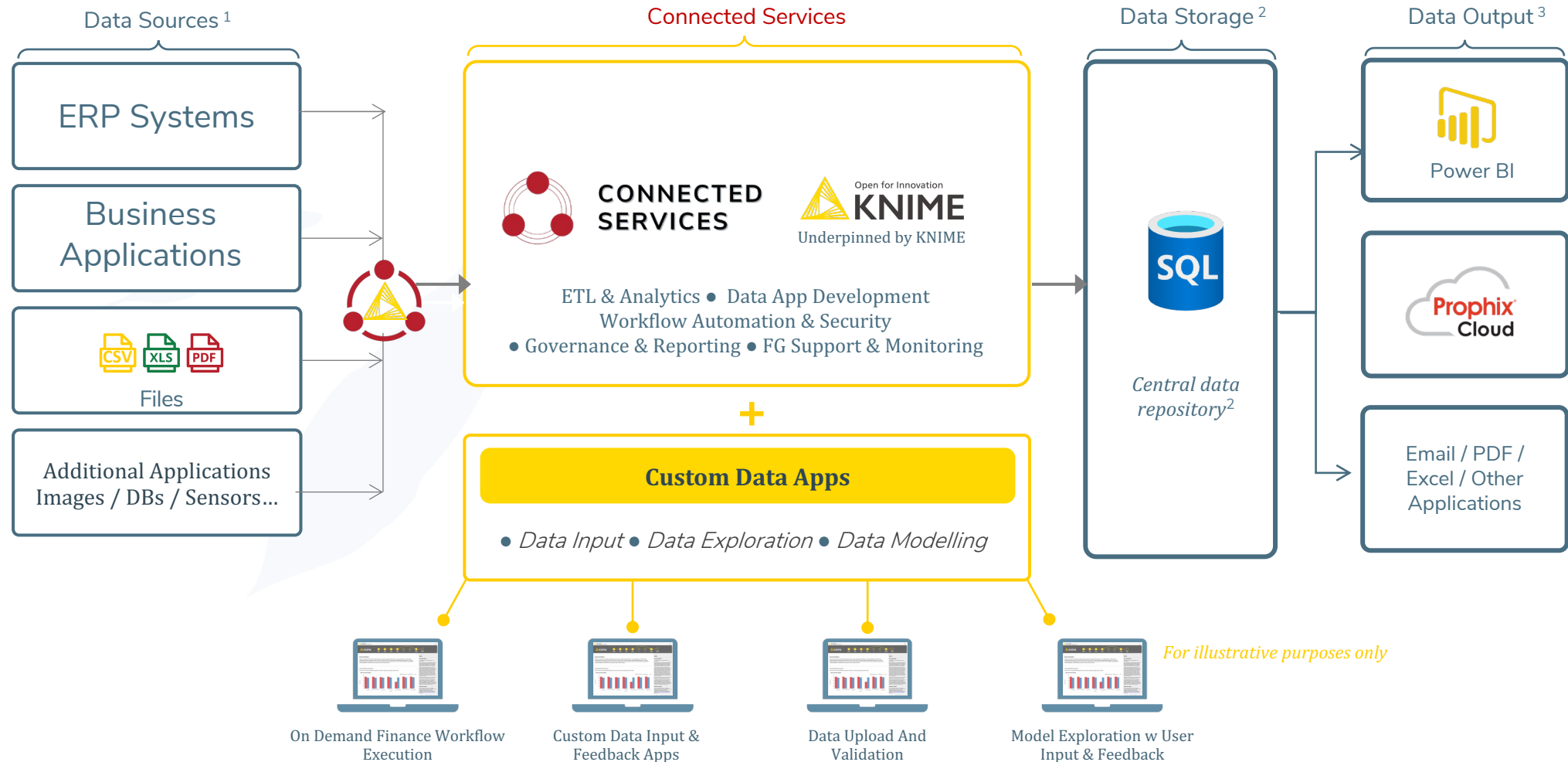
Traditional Tools

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Connected Services Overview

Below is a high-level solution overview of a comprehensive data connection services solution using Connected Service. KNIME is the 'backbone' of Connected Services and responsible for all data integrations and required transformations.

Data Sources [1]

- ERP Systems
- Business Applications
- Files (CSV / XLS / PDF)
- Additional Applications Images / DBs / Sensors…

Connected Services

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Underpinned by KNIME

ETL & Analytics ● Data App Development
Workflow Automation & Security
● Governance & Reporting ● FG Support & Monitoring

+

Custom Data Apps

● Data Input ● Data Exploration ● Data Modelling

On Demand Finance Workflow Execution

Custom Data Input & Feedback Apps

Data Upload And Validation

Model Exploration w User Input & Feedback

For illustrative purposes only

Data Storage [2]

SQL

Central data repository[2]

Data Output [3]

- Power BI
- Prophix Cloud
- Email / PDF / Excel / Other Applications

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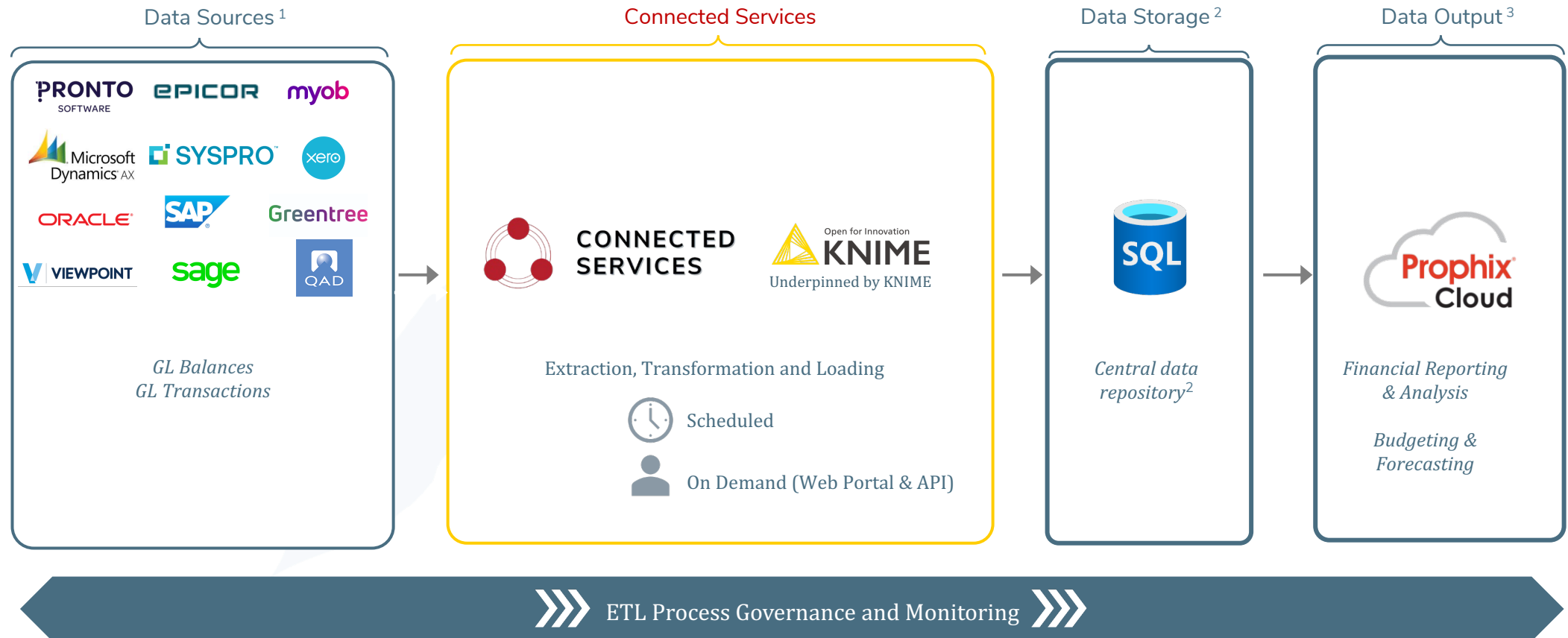Data-Driven Decision Making

Connected Services Methodology

Connected Services is not just data pipelines extracting, transforming, and loading the data. There is a methodology to support any data blending or integration that can fit any use case.
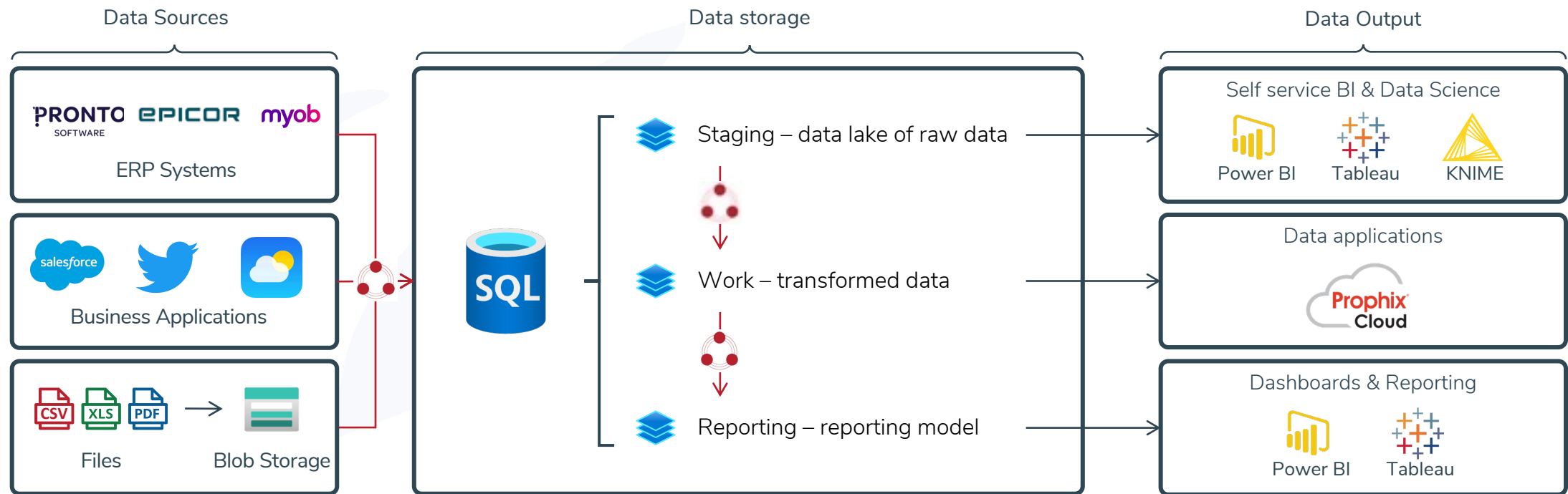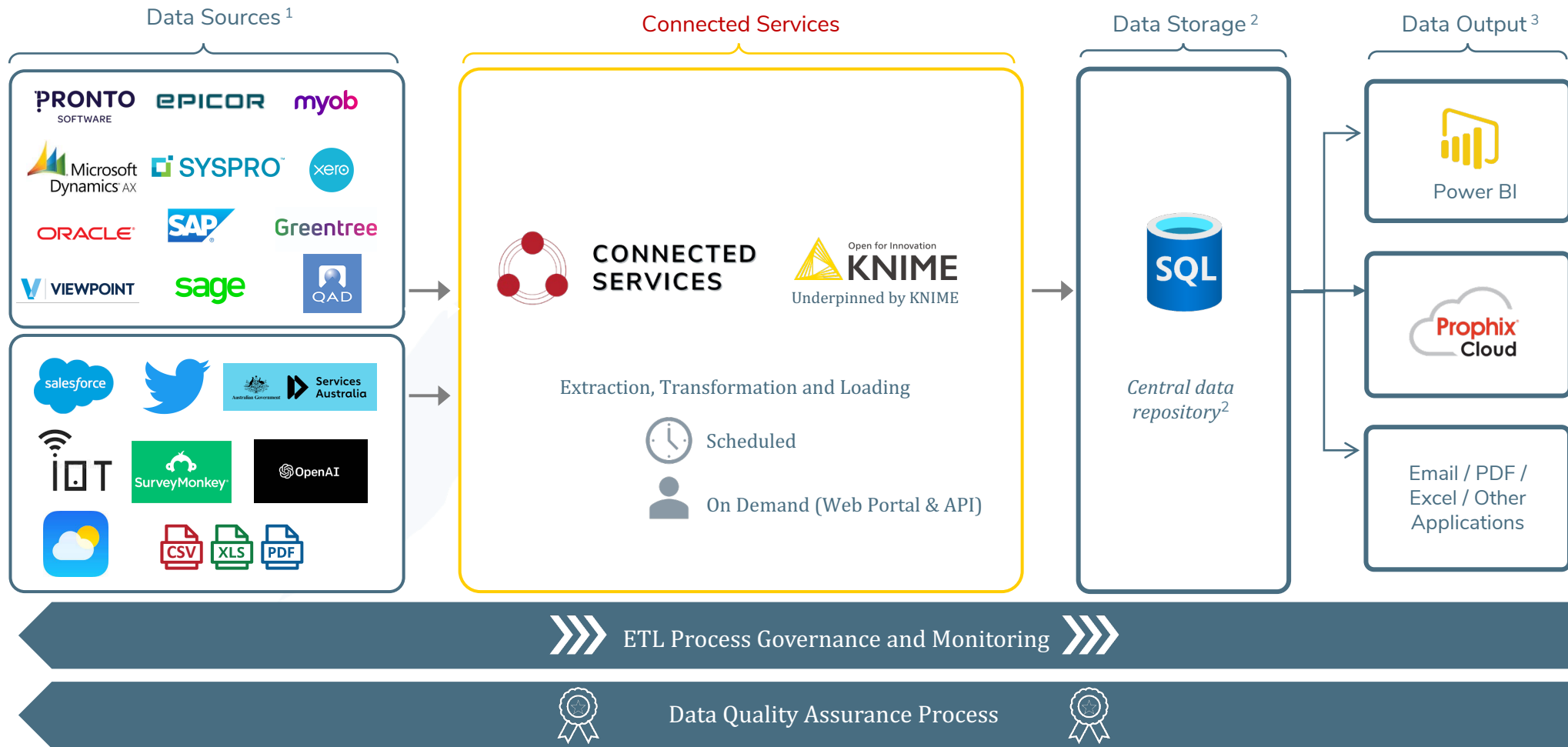
Connected Services – Level 1

Connected Services Level 1 focuses on the ETL process which extracts GL balances and GL transactions for your relevant ERP / Accounting applications. These processes can be scheduled to run on a regular basis as well as being executed on demand. The GL balances and transactional data is transformed as required stored in a central data repository before being made available to the Prophix Cloud Application.

Data Sources [1]　　　　　Connected Services　　　　Data Storage [2]　　　Data Output [3]

GL Balances
GL Transactions

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Extraction, Transformation and Loading

Scheduled

On Demand (Web Portal & API)

SQL — Central data repository[2]

Prophix Cloud — Financial Reporting & Analysis

Budgeting & Forecasting

ETL Process Governance and Monitoring

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Connected Services – Level 2

Connected Service Level 2 incorporates additional data sources and applies your relevant data quality assurance rules. This data is then made available via the central data repository to enable reporting, analysis and visualisations across various platforms, including Power BI, Tableau, Prophix Cloud, flat files and other applications as required.

Data Sources [1]

Connected Services

Data Storage [2]

Data Output [3]

PRONTO SOFTWARE   epicor   myob

Microsoft Dynamics AX   SYSPRO   xero

ORACLE   SAP   Greentree

VIEWPOINT   sage   QAD

salesforce   Twitter   Australian Government Services Australia

IoT   SurveyMonkey   OpenAI

CSV   XLS   PDF

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Extraction, Transformation and Loading

Scheduled

On Demand (Web Portal & API)

SQL

Central data repository[2]

Power BI

Prophix Cloud

Email / PDF / Excel / Other Applications

ETL Process Governance and Monitoring

Data Quality Assurance Process

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Data Governance - Data Comparison

Project Code	Data Match	Consolidated - Cost	Cost Base - Cost	Delta Value
840530	✗	$1,085,770.74	$3,757,312.18	$2,671,541.44
900238	✗	$8,123,654.00	$8,129,979.59	$6,325.59
844710	✗	$23,671,633.00	$23,671,633.42	$0.42
841110	✗	$37,197,332.96	$37,197,333.31	$0.36
833010	✗	$14,550,918.24	$14,550,918.59	$0.35
204120	✗	$9,093,004.00	$9,093,004.03	$0.03
100010	✓	$1,772,062.92	$1,772,062.92	$0.00
101110	✓	$513,695.40	$513,695.40	$0.00
101130	✓	$9,685,910.16	$9,685,910.16	$0.00
102110	✓	$24,443.41	$24,443.41	$0.00
102150	✓	$369,320.52	$369,320.52	$0.00
102160	✓	$728,009.28	$728,009.28	$0.00
102190	✓	$532,379.69	$532,379.69	$0.00
102200	✓	$30.96	$30.96	$0.00
202110	✓	$1,873,719.38	$1,873,719.38	$0.00
204110	✓	$566,087.40	$566,087.40	$0.00
205110	✓	$1,113,766.83	$1,113,766.83	$0.00
210160	✓	$2,820.84	$2,820.84	$0.00
222190	✓	$1,333,902.02	$1,333,902.02	$0.00
222250	✓	$2,660,820.98	$2,660,820.98	$0.00
222310	✓	$919,885.67	$919,885.67	$0.00
Total	**228**	**$297,062,038.92**	**$299,739,906.71**	**$2,677,867.79**

Project Code Filter

All

Delta Filter

All

Delta 8

delta
- No Delta
- Delta

No Delta 228
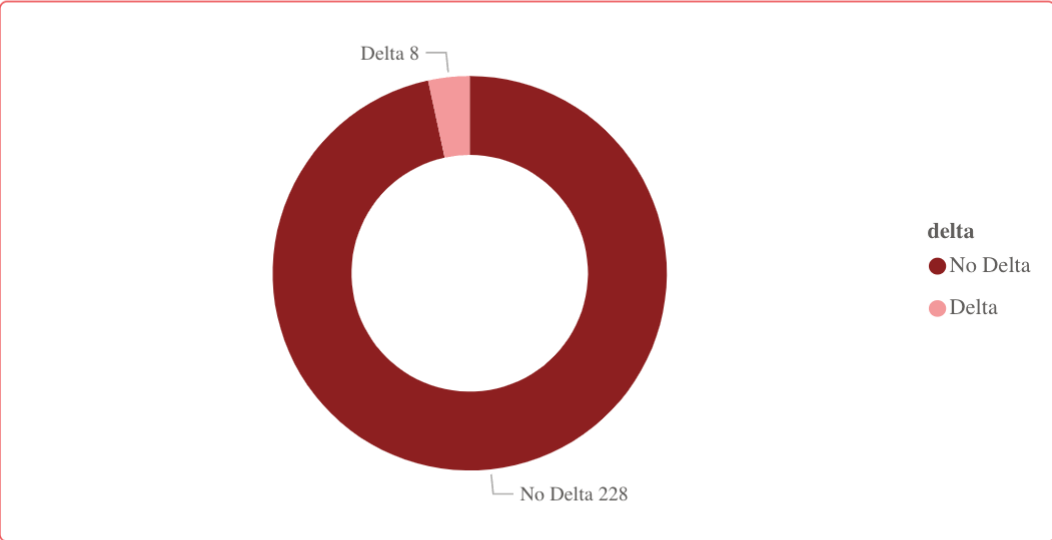
Purpose: This dashboard shows the differences between Base costs and Total Balances by Costbase, due to source data issues. The data is reported on a per-project basis.

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Connected Services Level 2 – Purchase Order / Project Monitoring Example

Forest Grove's customers require their finance team to monitor and manage the spends of Purchase Orders during each project. Through use of Connected Services to Power BI, both finance and project teams are able to monitor company PO's by project categories.
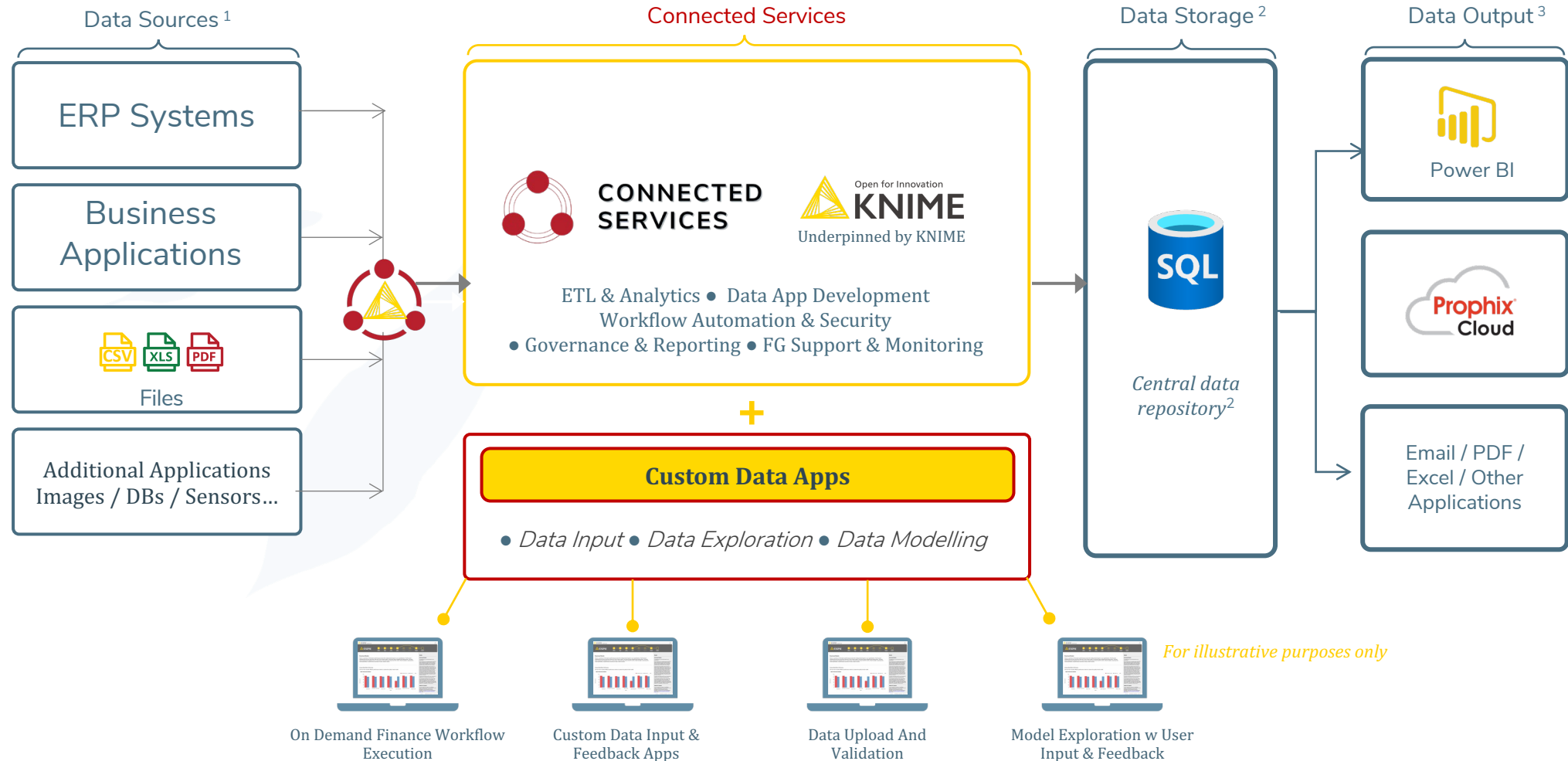
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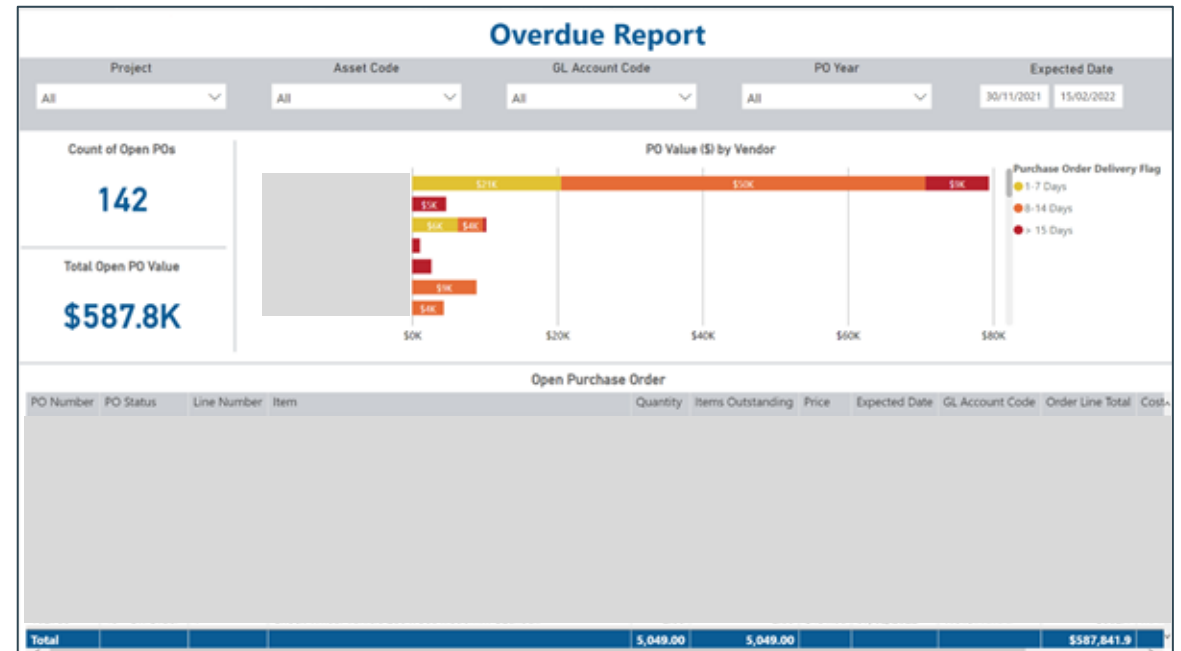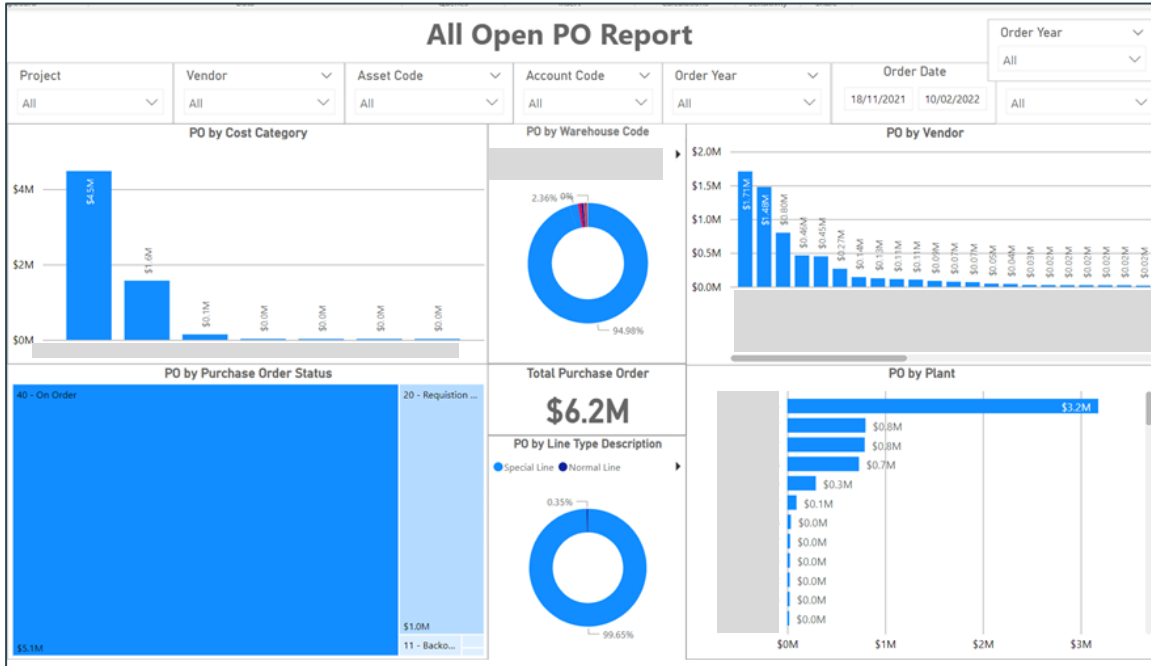
Connected Services Level 2 – Project Health Example
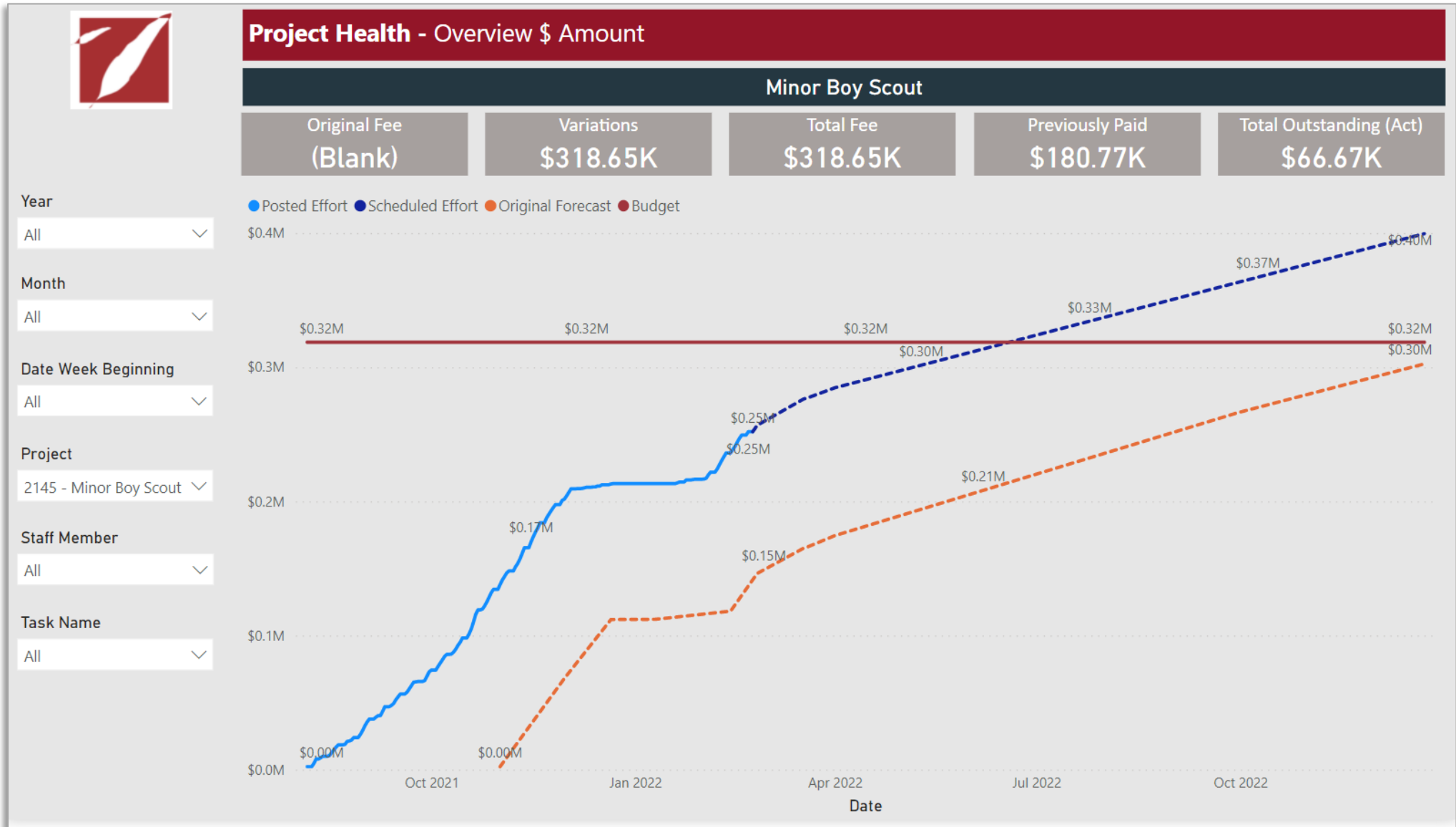
Connected Services – Level 3

Connected Service Level 3 support the creation and deployment of Custom Data Apps made available through any modern web browser. These Data Apps can be designed for all sorts of different purposes including, data input / collection, dynamic data exploration / analysis and advanced data modelling.

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Connected Services

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Custom Data Apps

● *Data Input* ● *Data Exploration* ● *Data Modelling*

Data Storage [2]

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Data Output [3]

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On Demand Finance Workflow Execution

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Designing and Deploying Data Apps

Data App Examples

Finance process automation
Automate, manual error-prone tasks INCLUDING processes for manual data input, traditionally collected in disparate spreadsheets and forms
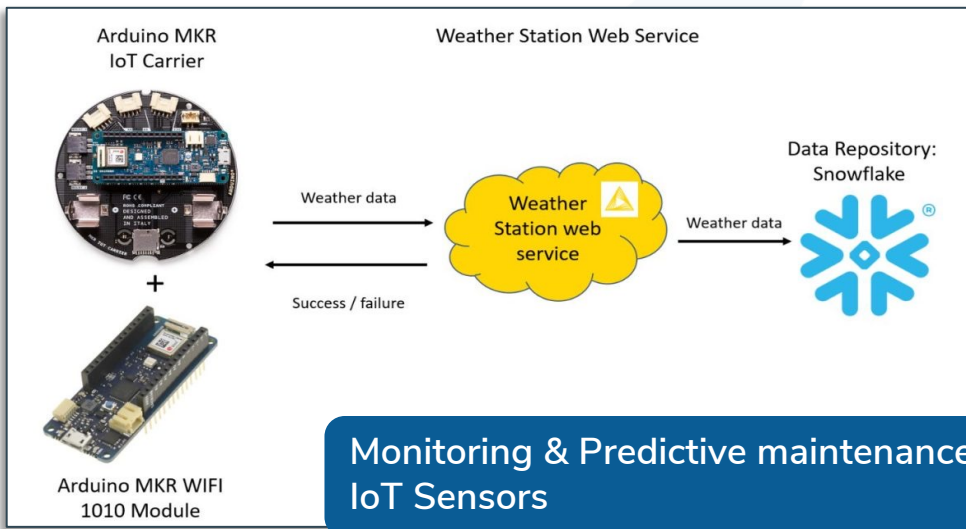

Mass data extraction (PDF, Excel formatted reports etc.)
See below screen grab from HR Resume extraction and skill matching based on job ad

Monitoring & Predictive maintenance using IoT Sensors

.....plus
- Employee data input (custom forms that update databases as required)
- Internal Audit
- Capacity Planning
- Inventory input and forecasting
- Upselling/Project Win Likelihood
- Product Propensity /NBO
- Campaign Management
- OEE ...just to name a few!

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