Enterprise data warehouse implementation

Manufacturing Firm

- Designed and deployed an enterprise data warehouse in Azure Synapse.
- Created corporate data models and developed reporting suite in Power BI.

Manufacturing firm needs implementation of enterprise data warehouse

Picture this…

You're looking for implementation of a comprehensive data management solution to integrate data from multiple ERP systems and set up a robust data and reporting infrastructure.

You turn to Accordion.

- We partner with your team to design and deploy an enterprise data warehouse in Azure Synapse and to create corporate data models and developed reporting suite in Power BI, including:

1) Developing an enterprise data warehouse using Azure Synapse Analytics leveraging Azure Data Factory, Azure Data Lake and dedicated pool.
2) Implementing dynamic pipelines with control table approach and created corporate data models (CDM) to house the data from multiple ERPs.
3) Analyzing ERPs' order capturing mechanisms and created a standard reporting process for bookings and orders across the company.
4) Collaborating with finance team to map GL accounts across the firm and create standard recognition and reporting process for revenue, AR and AP.
5) Developing executive level Power BI dashboards related to commercial, procurement and finance functions.

Your value is enhanced.

You have data across the companies that is harmonized, cleaned and prepared to derive actionable insights for decision making. The previous manual efforts to create weekly and monthly booking/order reports were eliminated and are now updated on a daily basis. You can track orders/bookings data for running daily operations and reliable AR/AP data closely. The business operations gaps discovered during the development process helped the team initiate internal projects to address such gaps.

ENTERPRISE DATA WAREHOUSE IMPLEMENTATION

KEY RESULT

- Eliminated manual efforts and business operations gaps

VALUE LEVERS PULLED

- Azure Synapse Data Warehouse implementation
- Corporate Data Models (CDMs) creation
- Data models creation using fact and dim tables
- Executive level Power BI dashboards creation

Enterprise data warehouse implementation for a manufacturing firm

Enterprise Data Warehouse Implementation

Situation

- The client had multiple ERP systems in place driven by inorganic growth. In addition, there was a lack of transparency for commercial, procurement and finance functions for the legacy entity and overall enterprise.
- Partnered with the client to develop and implement a comprehensive data management solution to integrate data from multiple ERP systems and set up a robust data and reporting infrastructure.

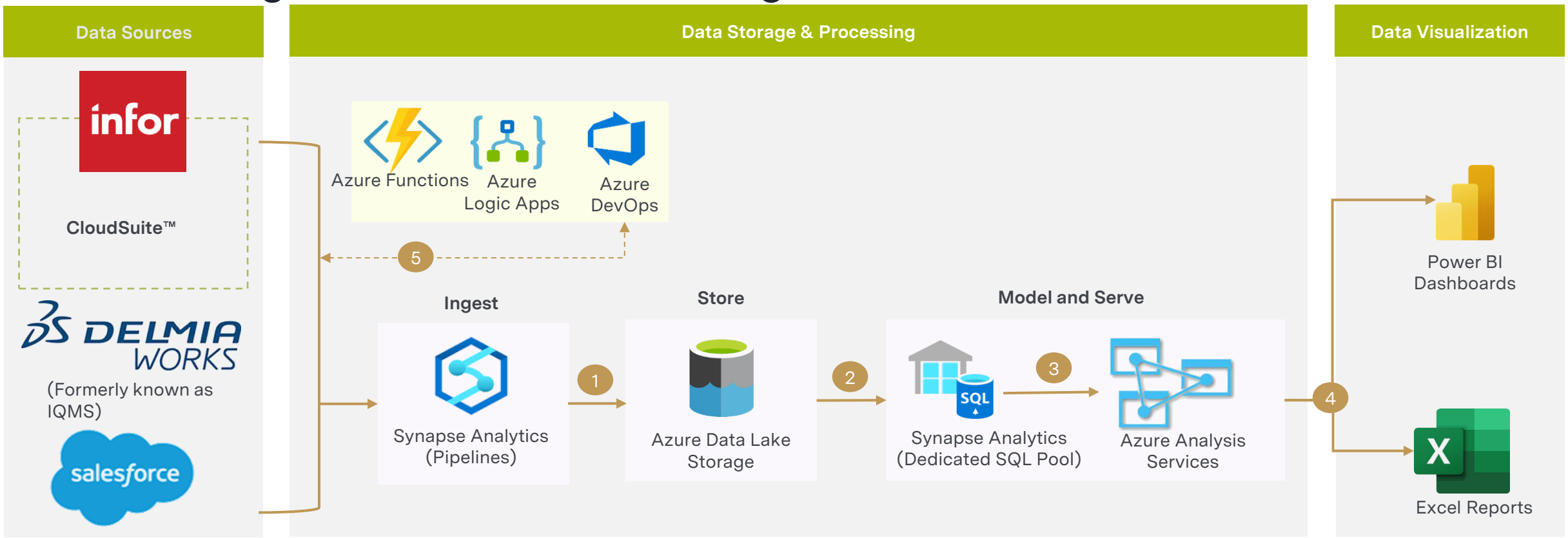
Accordion Value Add

- Developed an enterprise data warehouse using Azure Synapse Analytics leveraging Azure Data Factory, Azure Data Lake and dedicated pool.
- Implemented dynamic pipelines with control table approach and created corporate data models (CDM) to house the data from multiple ERPs.
- Analyzed ERPs' order capturing mechanisms and created a standard reporting process for bookings and orders across the company.
- Collaborated with finance team to map GL accounts across the firm and create standard recognition and reporting process for revenue, AR and AP.
- Developed executive level Power BI dashboards related to commercial, procurement and finance functions.

Impact

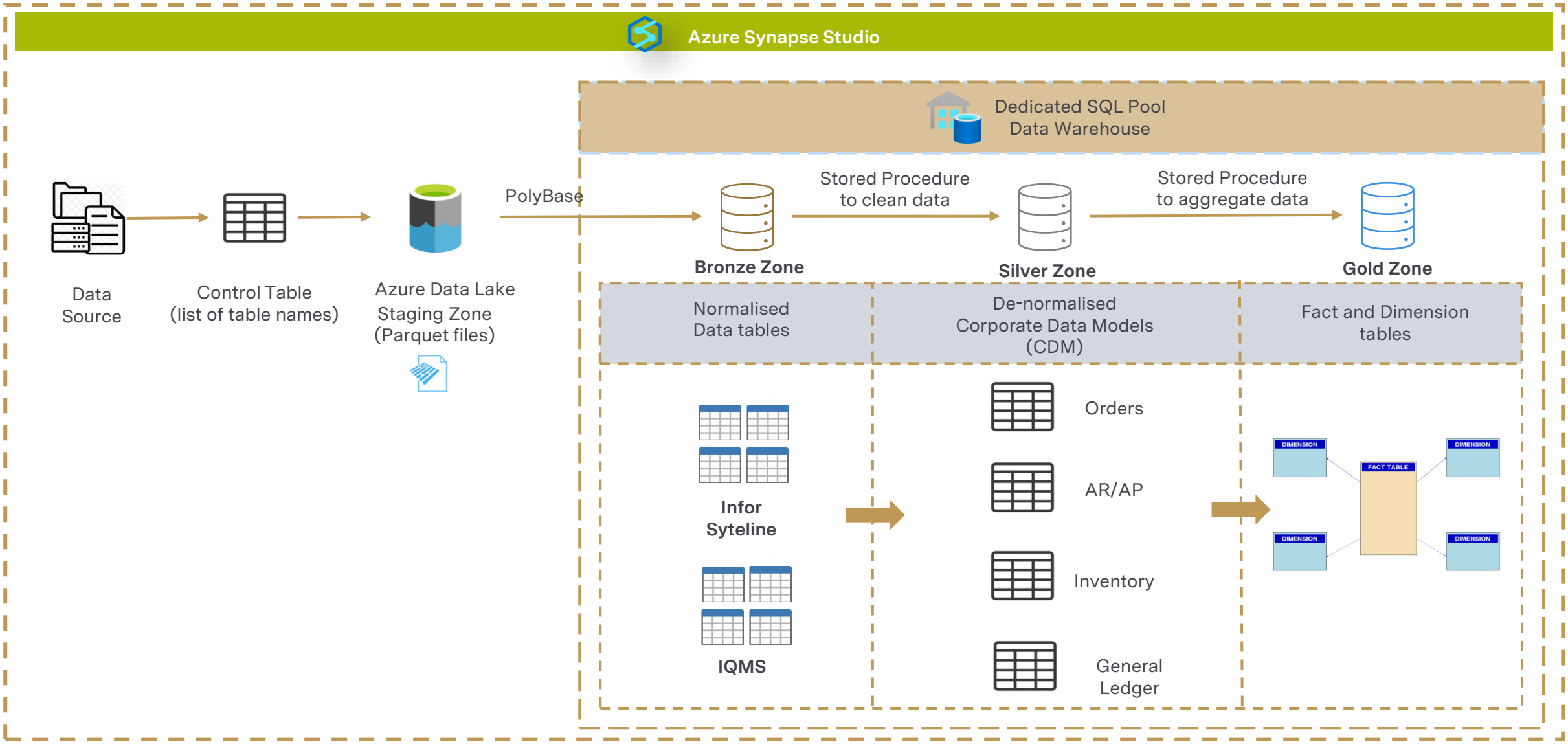
- Data across the companies was harmonized, cleaned and prepared to derive actionable insights for decision making.
- Previous manual efforts to create weekly and monthly booking/order reports were eliminated and are now updated on a daily basis.
- Orders/bookings data for running daily operations and reliable AR/AP data for closely tracking working capital were more easily tracked.
- Business operations gaps discovered during the development process helped the team initiate internal projects to address such gaps.

Data Management Architecture Design



1. Collate and ingest data from data sources using Azure Synapse Analytics (Pipelines) and Azure Functions to Azure Data Lake Storage
2. Cleansed and transformed data can be combined with existing structured data, creating one hub for all the data with Azure Synapse Analytics
3. Using the cleaned data, star or snowflake schema is designed and dim and fact tables are developed leading to data models with KPIs and Metrics
4. Build operational reports and analytical dashboards above dedicated SQL pool to derive insights, and use Azure Analysis Services to serve multiple users
5. Azure Functions - in absence of off-the-shelf connectors, Logic Apps – automated & scheduled workflows, DevOps – Code Repos, JIRA – Agile Project Mgt

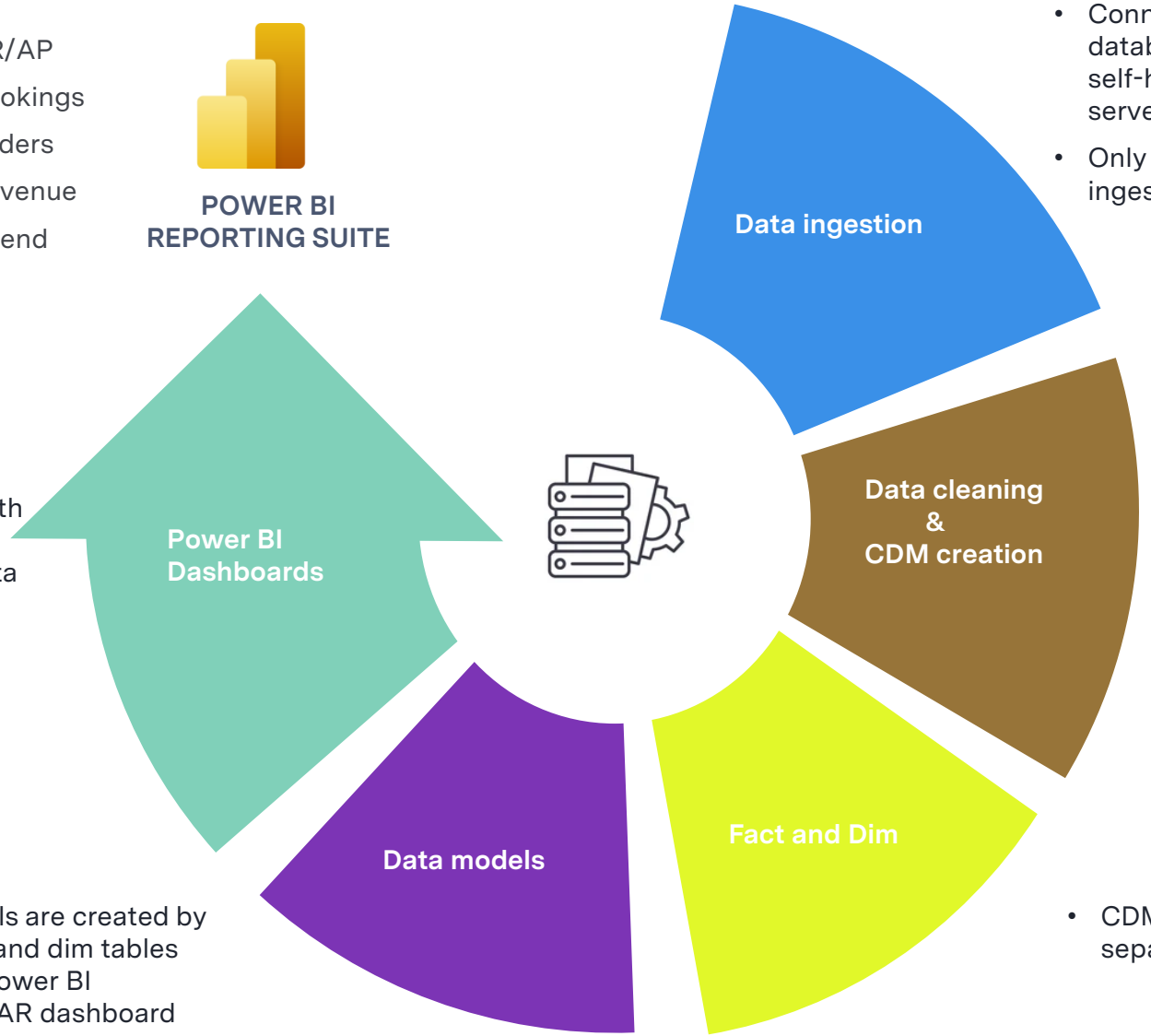
Data Warehouse Design – Using CDM and Fact/Dim Tables



Data Modeling & BI Reporting Suite

- AR/AP
- Bookings
- Orders
- Revenue
- Spend

POWER BI REPORTING SUITE



- Connected Azure Synapse to production servers' databases for both Infor Syteline and IQMS using self-hosted integration runtime on respective servers
- Only data tables required for business reporting are ingested into the enterprise data warehouse

- Data is then cleaned, harmonized and prepared for reporting
- Key data fields are identified covering all the dimensions and data cuts required, to be combined into a single table by functional requirement called as Corporate Data Models (CDMs)

- CDMs are further broken down to logical separation of data into fact and dim tables

- Analysis Services tabular data models are created by creating relationships between fact and dim tables
- Data models are created based on Power BI dashboards, e.g., AR data model for AR dashboard

- Power BI dashboards are created with detailed raw data, trend pages and summary pages to showcase the data for deriving actionable insights
- Power BI dashboards have live connection to data models and are loaded within seconds