



Automated Industry Data Model Manufacturing



Infrastructure (Azure)
Data & AI (Azure)
Digital & App Innovation (Azure)
Security
Biz Applications



Celebal Specialization and Strength







Advanced Specialization

- AI & Machine Learning
- Analytics
- Infra and Database Migration
- Kubernetes
- Cloud Security
- Low Code No Code
- Intelligent Automation



INDIA | USA | CANADA | APJ | MIDDLE EAST | AUS

2800+

Industries We Serve

Employees

+008

Al experienced professionals

500+ Al Certifications

















Financial Services



Energy & Sustainability



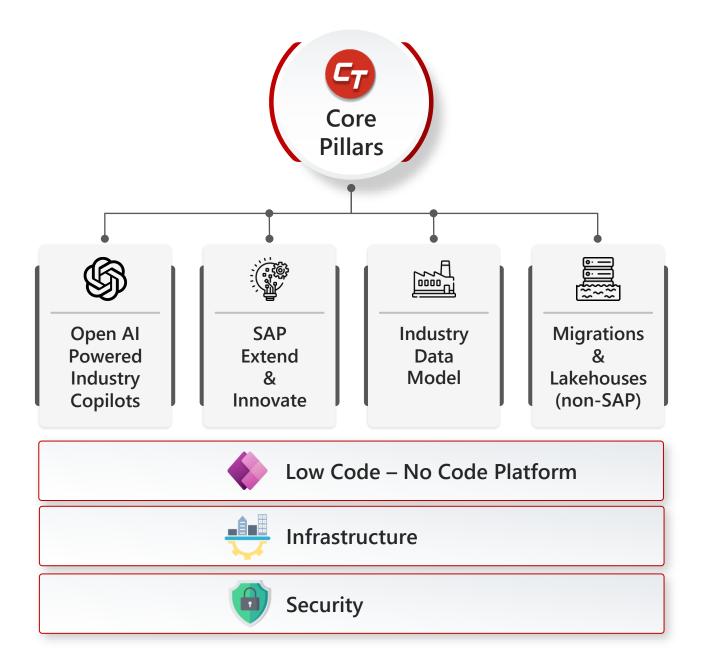
Healthcare & Life Sciences



Entertainment

Celebal Core Pillars

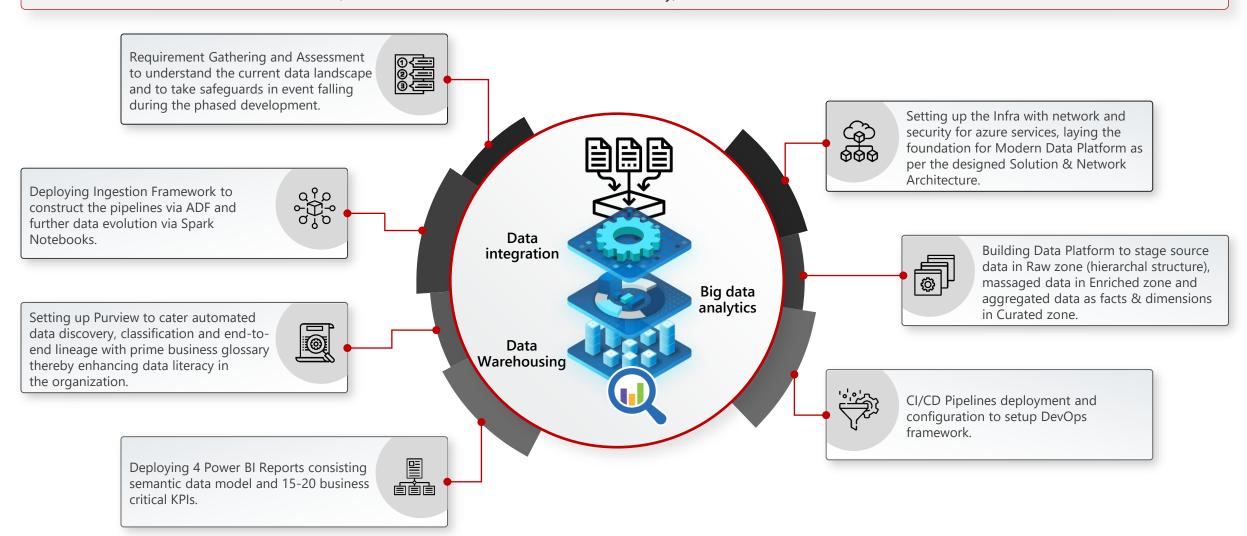




Scope and Objectives



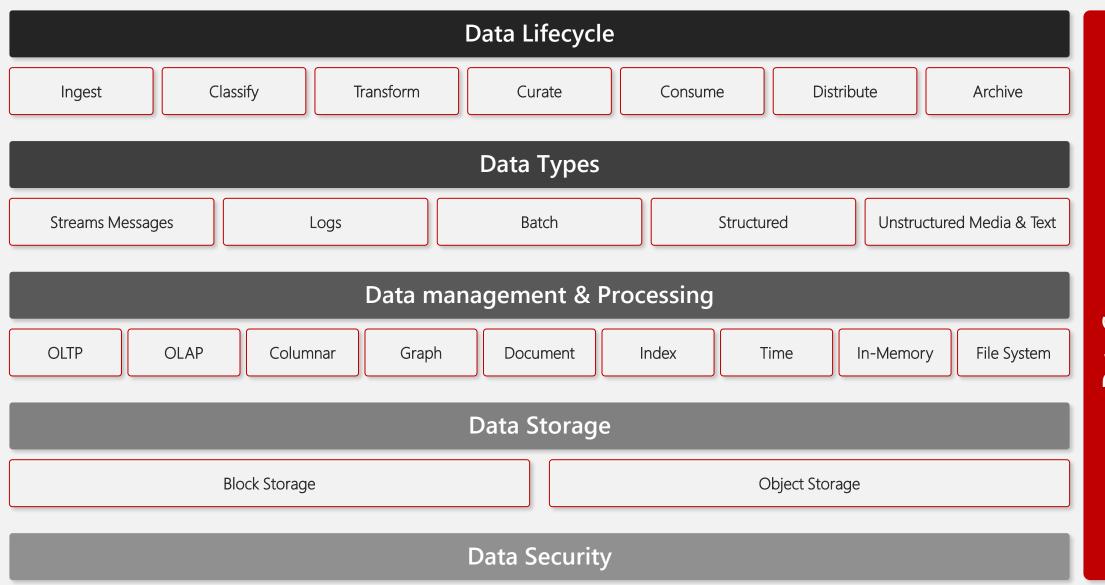
Theme: To construct and automate the different Data Lake solution that can be **versatile** with hybrid necessities, **apparent** with regards to data governance and lineage, **adaptable** concerning the immense size and variety of data and able to carry out the state-of-the-art advance analytics. In preference to give a logical approach to business choices, modern data fabric (enable controlled, secure and self-service economy) to deliver data model with business critical KPIs for subdomains.



Data Governance

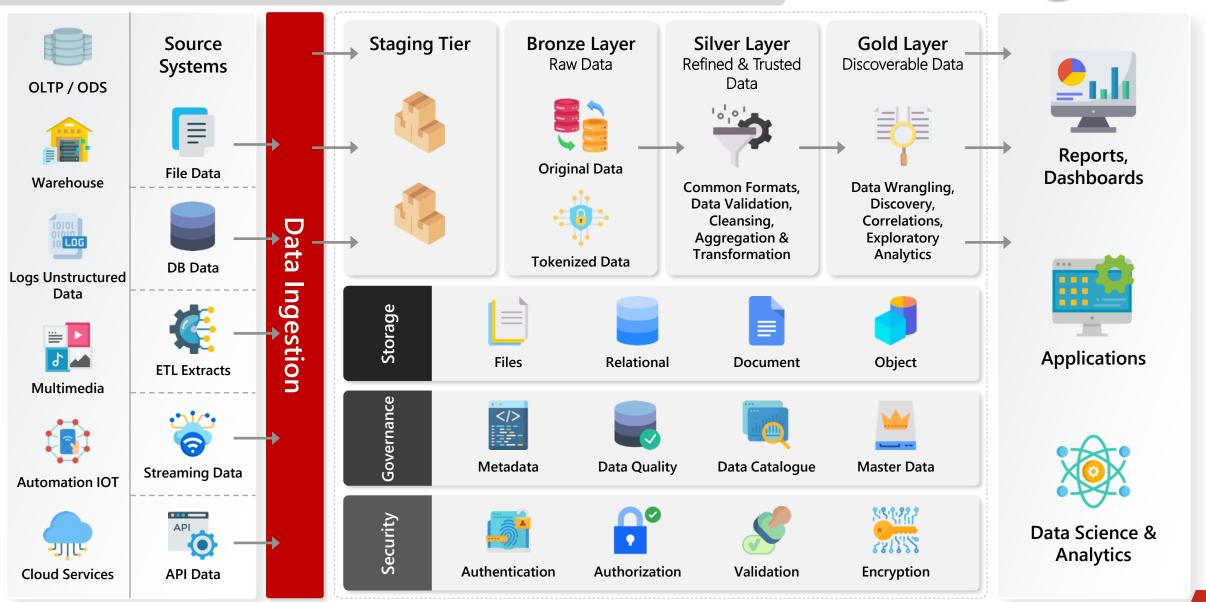
Data Management Lifecycle





Reference Data Architecture





Source Mapping for Data Models



Source Mappings to be provided by Client

Source_Table_Name	Source_Column_Name	Source_Column_Type	Sink_Table_Name	Source_Column_Name	Source_Column_Type
Employee	Employeeld	string	Employee	Employeeld	integer
Employee	EmployeeName	string	Employee	EmployeeName	string
Employee_Name	DateOfBirth	string	Employee	DateOfBirth	date
Employee_Name	DateOfDeath	string	Employee	DateOfDeath	date
Employee_Name	Employee Standard Cost Amount	string	Employee	EmployeeStandardCostAmount	decimal
Employee_Name	EmployeeOvertimeCostArnount	string	Employee	EmployeeOvertimeCostAmount	decimal
Employee_Name	EmployeeHireDate	string	Employee	EmployeeHireDate	date
Employee_Name	Highly Compensated Employee Indicator	string	Employee	HighlyCompensatedEmployeeIndicator	boolean
Employee_Name	KeyEmployeeIndicator	string	Employee	KeyEmployeeIndicator	boolean
Employee_Name	ExemptEmployeeIndicator	string	Employee	ExemptEmployeeIndicator	boolean
Employee_Name	NonexemptEmployeeIndicator	string	Employee	NonexemptEmployeeIndicator	boolean
Employee_Name	AlienStatusId	string	Employee	AlienStatusId	integer
Employee	SexId	string	Employee	SexId	integer
Employee	Genderld	string	Employee	Genderld	integer
Employee_Name	Racial Categoryld	string	Employee	RacialCategoryld	integer
Employee_Name	EthnicCategoryld	string	Employee	EthnicCategoryld	integer
Employee_Name	EmploymentLeadSourceld	string	Employee	EmploymentLeadSourceld	integer
Employee_Name	SecurityClearanceld	string	Employee	SecurityClearanceld	integer
Employee_Name	SecurityLevelld	string	Employee	SecurityLevelld	integer
Employee_Name	Partyld	string	Employee	Partyld	long

Lakehouse for Manufacturing Customers





Digitally Empower Your Workforce



Operate Safe and **Agile Factories**



Create More **Resilient Supply** Chains



Unlock Innovation



Increase Customer Engagement

Bring your ERP/ CRM on MS Teams





Material Handling

Intelligent Field Service





Inventory Counting

Automated Invoice Processing

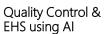




Intuitive Dashboards











Smart Manufacturing for Real-time Decision & Execution

Asset Tracking & Predictive Maintenance





Automated **Production Booking**

Shop Floor to Top Floor Insights







S&OP on Power BI

Inventory Forecasting, Optimization and Replenishment





Vendor & Supply Management

Route & Logistics Optimization





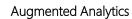


Track & Trace

Equipment Inspection with Azure IOT



Quality Management & Inspection with Azure IOT







Intelligent Field Service

Sales & Service Insights





Hyper Personalization

Trade Promotion Offer **Analytics**





Conversational IVR



















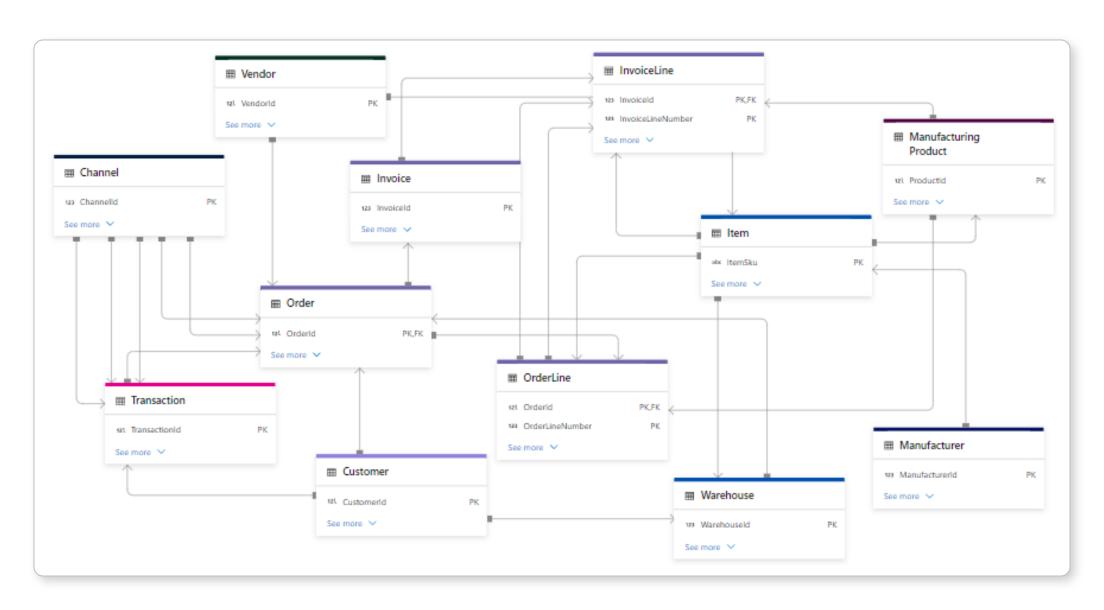






Standard Data Model - Manufacturing





Use Cases - Manufacturing



Customer Key Facts



Industry: Manufacturing



Time to Market: 6 Weeks



ACR: \$3500/Monthly

Dashboards



Sales, Supply Chain & Manufacturing Dashboard



Account Receivable & Payable Analysis



Inventory Stock Analysis

Challenges & Solution



- ✓ Build more Resilient supply chains, Reduce Overdue Issues & Increase Cash Flow.
- ✓ Automated Data Model built with consolidating Sales, Supply Chain & Inventory data from SAP ERP, and non-SAP / legacy applications for unified Insights.

Impacts



✓ Utilizing delivered Reports & Dashboards. Inventory optimization up to 20% and decision time reduced up to 25%

KPIs



- 1. Revenue
- 2. Cash Flow
- 3. Customer Fill Rate
- 4. Overdue AR, AP
- 5. Account Receivable vs Payable

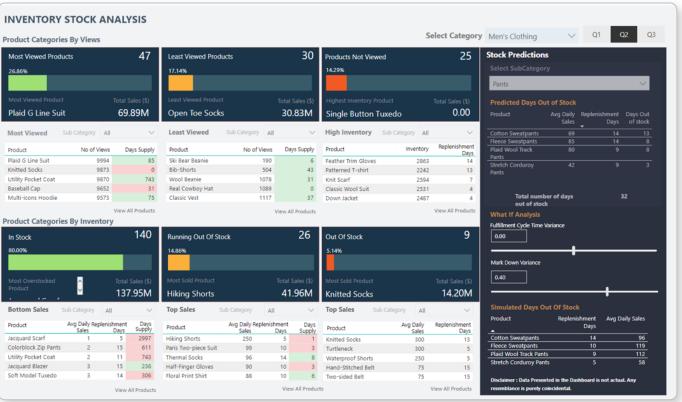
- 6. AR & AP by Aging Bucket
- 7. Lead Time Over Time
- 8. Production Cost Over Time
- 9. Avg Lead Time
- 10. FSN Stock Classification

- 11. ABC Analysis
- 12. Replenishment Days
- 13. Fulfillment Cycle
- 14. Avg daily Sales
- 15. AR & AP Analysis
- 16. And few more...

Report Snapshots - Manufacturing





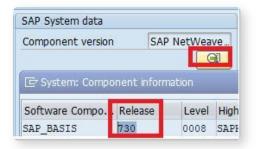


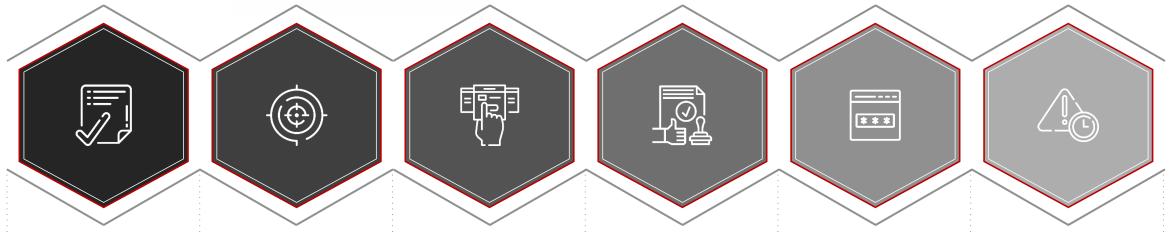
Pre-Requisites



- ✓ Use SAP GUI to connect to the SAP System.
- ✓ Go to System -> Status.
- ✓ Check the release of the SAP_BASIS, ensure it is equal to or larger than 701.







Access approvals & Data Sources Integration will be dealt with high priority requiring Client SPOC from Infra, Security, CloudOps Team & Solution Architect. Source field mapping as per the target objects to be provided by the client. Power BI License to be purchased by Client for developers to deploy BI Reports/Dashboards as per the timelines. All stakeholders (responsible for report matrices) shall give a signoff on metrics before Celebal Tech creates the reports. Access to Azure subscription & Remote database/data sources will be made available for Celebal Tech team During UAT phase, dedicated SPOC or business user from Client side would be required till Sign-Off, to avoid any delays, cater any issues or revisions which will help expedite solution deployment & delivery.

Assumptions and Deliverables





Assumptions

- ✓ 1 fiscal year data from Data Sources would be considered for loading into Data platform.
- ✓ Source mapping would be provided by client.



Deliverables

- ✓ 4 Power BI reports/dashboards with 15-20 business critical KPIs.
- Landscape for in-scope Source Systems with ingestion framework and Data Layers.
- ✓ Documentations.



Features

- ✓ Power BI model is defined reusable way for features like Q&A, communication between multiple users via comment. etc.
- Self-service features. Multiple data layers can be managed as per the use-cases and user groups.
- ✓ Integrable with other sources like Data streaming, unstructured data, AI&ML capabilities using Data platform.

Value Addition



Data Management

Lakehouse Architecture enabling multiple data layers to serve different use-cases.



Source Integration

Consolidation of multiple Data Sources.



Modern solution-built

Fully customizable to address specific business needs.



Deployment

Improving customer experience and business outcomes by 20% with Reducing cost by 20%.



Access Management

Easier access to source data for reporting and analysis.



BI Report

Readily usable KPIs and BI Reports enhancing Analysis and Productivity.



Design Customization

Simpler, customizable, and collaborative end-user interfaces.



Self-Service BI

Instant Decision making with Slide & Dice capability.





The cost for one solution implementation is \$12,500



Assumptions

- ✓ Total data volume to be copy from Source to Staging Layer is <= 1 TB(for historical data load and < 10 GB for daily incremental) covering 1 fiscal year data
- ✓ Total number of Source tables considered in scope is between 20-30 covering master and transactions
- ✓ Total 4 Power BI Reports/Dashboards with around 15-20 business critical KPIs.

