Data Lakehouse for Higher Education Advancement

CTI DATA

Business Challenge

Higher education client needed to migrate off older Alumni & Development CRM to a modern data & analytics platform that broadly encompasses their Alumni Lifecycle to increase engagement and willingness to give.

Solution

Modernized cloud data lakehouse: A secure platform to enable ingestion and integration of data across the university.

Cloud-based data integration platform: A variety of new capabilities including business data integration, application integration, and API management between cloud and local applications.

MULTI-TIER DATA ARCHITECTURE

Sources	Data Pull or Push	Landing Zone	Transform & Load	Refined Zone	Transform & Load	Certified Zone
Cloud — Salesforce, Ascend, Anthology, Symplicity, Snowflake Marketplace	API Calls	All data as-is (snowflake)	Cleanse, process, and make it more accessible to users	Filtered and more sanitized data produce refined views here	Normalize data to make it easier to query.	Business-level aggregated data
On-Prem — Banner, PowerFAIDS	Integration Runtime					
SFTP	App SFTP File Watcher	Unstructured Data + Metadata (amazon S3)	Informatica	snowflake	Informatica	snowflake

Orchestrations + Self-Service Data Exploration
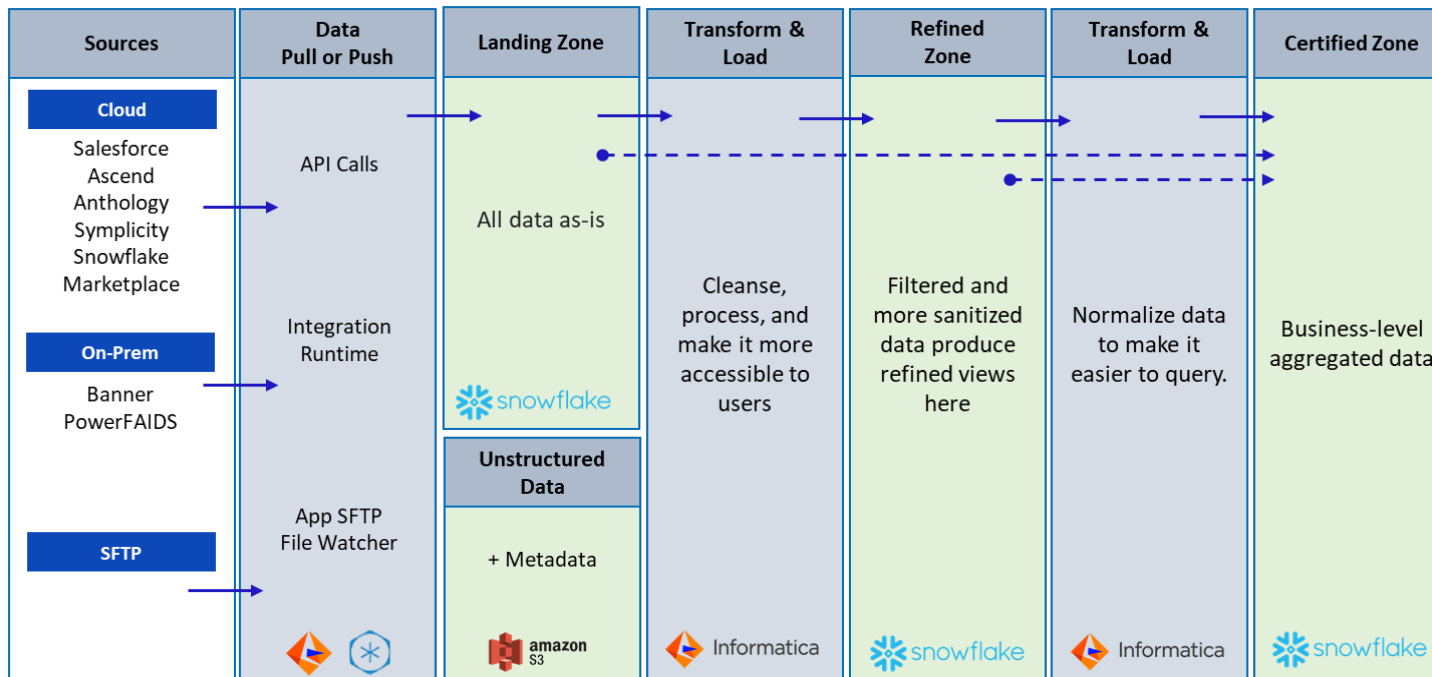
→ Next Zone process

- - → Skip Zone(s) process

Approach

- **Delivered thorough Assessment:** Discovery and alignment of business goals with technical processes and assets.
- **Optimized Ingestion Process:** Created an automated ingestion into the Snowflake zone-based architecture.
- **Re-engineered Data Integration Process**: Re-engineered custom built CRM views to eliminate tech debt and improved efficiencies in the integration process.

Business Value

- **Eliminated Tech Debt** by modernizing cloud data lakehouse platform and eliminating on-prem enterprise data warehouse
- **Unified Data** across data sets (Finance, Enrollment, Student Activities, Co-Op, Financial Aid, Registrar)
- **Integrated Data Delivered Analytical Insights** in the business areas of Annual Giving, Alumni Stewardship Major gift, Campaigns, Prospect Research, etc.