

DATA SCIENCE, GOVERNANCE & STRATEGY – SELECTED EXPERIENCE

Managed and lead data governance as it pertains to processes, roles, policies, standards, and metrics to ensure the effective and efficient use of information as it relates to:

- Enterprise Data Service (strategy)
- Data Warehousing / Strategy (Azure data lake)
- Standardization management
- Metadata management
- Data Quality management
- Life cycle management

SaaS Telecom Product startup (2021-2022)

Lead the data governance mandate to evaluate the possibility of migrating from an on-prem to the cloud, the soon to be, unsupported Atlassian platform. **The potential issue was related to data security of PII (Personal Identifiable Information) from sensitive client information captured during the initial stages of the sales cycle and throughout the project planning phase and stored into specific datasets. More specifically, establish the processes and responsibilities that ensure the quality and security of the data used across the business or organization (as it pertains to rules set up by both our internal Infosec team and Data Privacy client agreements).**

The work consisted of:

- 1) **Data Strategy** Established the data strategy.
 - a. Develop consistent data pipelines (scalable ingest, store, transform and use data)
 - b. Validation of evolving data models (monitoring, measurement, resolving data drifts)
- 2) **Identifying, capturing and understanding:** Identifying both the dataset (what data to include and what to exclude) and the relevant functions (data mapping)
- 3) **Improving the quality of the data:** In this phase we looked at profiles, data formats, data quality. Figuring and listing out all the use cases of when and how the data could be used (now and in the future). Identifying the various roles and responsibilities for the various data users by developing an internal compliance program (meaning which departments and groups to include – aka data literacy – who, when, what and how). Here, both Salesforce and Jira/Confluence systems were included in the analysis as these two systems were tightly integrated together. We had to do some cleansing and merging and data enrichment (adding additional information missing). Asking the various teams involved in gathering the data – the Customer facing teams, such as Sales / Sales Engineering / Technical Account Managers / Delivery teams / Customer support – to collaborate to save time so that the right person would be analyzing the data and determining: (a) ownership, (b) the amount of interaction with this set of data, and (c) it's historical relevance (data heritage and lineage – the DNA of data)
- 4) **Managing the data:** Looked at the model (mostly object related – schema) of how this data was constructed. Decided to build a small staging data warehouse to aggregate, manipulate and re-segregate the data (raw data versus metadata versus summary data).

- 5) **Controlling the data / Documenting:** Creating and documenting the data definitions of the PII entities and attributes; Identifying the business and architectural Relationship between data points; Catalog the data points / assets to make the data easily accessible – or discoverable – by business users.
- 6) **Migration:** Once data sets were secure and understood, we built a runbook for both data clean-up & migration. Data left on premise would be kept on a separate db. at a low-cost access (negotiated by the IT Operations team).

East coast Utilities (super regional) – T&D groups 2015-2018

Lead a data warehousing / strategy project to ensure formal data management within the T&D organization, as well as guide the data stewardship and quality to help organizations gain control of data assets management – principally the Compatible Unit (CU) library. Goal was to bring the organization from being “Data Aware” (which means just using standardized reporting) to being “Data Savvy” (not only tracking organizational KPIs and using BI platform but making data-based decisions for key initiatives). The work consisted in:

- 1) **Data Strategy** Established the data strategy.
 - a. Democratize data (data accessible to everyone)
 - b. Develop consistent data pipelines (scalable ingest, store, transform and use data)
 - c. Validation of evolving data models (monitoring, measurement, resolving data drifts)
- 2) **Identifying, capturing and understanding:** Discovery workshops looking at both the data (high-level assessment of the status of the CU - compatible unit - library) and assessing the processes regarding the asset management Governance itself. Determined that CU library was incomplete and that there was no strategy or governance from an Asset management standpoint.

Lead the leadership workshops to build the Asset Management Policy, to include: a high-level intent and outcome, the depreciation rules – with financial team, the overall scope, and the overall responsibilities of the various team involved).

Built the Asset Management Strategy, to include: the scope and applicability, the business context, the performance target KPIs, the roles and responsibilities, risk assessment and management). Through the various workshops we discussed and established the following:

- a. Sustainability & resilience procedures (operational, financial, environmental)
 - b. Functional relationships
 - c. Policies
 - d. Data scope, hierarchy
- 3) **Improving the quality of the data:** Lead the 4-month workshops from a data Governance and Configuration and limited it to the area of CU library. This consisted in:
 - a. Understanding and mapping of Account and Asset codes as well as GL account (with both finance team and various business and operations team – when and how mapping of the data would take place between CU's and Account and child Asset codes as well as the relationship with finance). These fields were brought in through custom APIs.
 - b. Craft configuration.
 - c. Unit and Unit cost.
 - d. Services (order pricing).
 - e. Configured the work groups (maintenance crews, engineering).
 - f. Estimation rules and guidelines (overhead loading as a % as well as work types – labor / non labor).

- 4) **Build Data Warehouse and Enterprise Data as a Service.** Built Ingest system (pipelines) as well as Data Lake, Processing through Spark, Data and serverless pools, Enriching the data through Azure cognitive services / machine learning and creating Data Marts (Azure Cosmos DB / Data Search)
- 5) **Managing the data:** Implemented the use of Maximo application as the layered tool to have an effective solution for folks to be able to access and review the data. Custom API integrations to / from SAP and other internal systems were built to retrieve the coding structure.
- 6) **Controlling the data / Documenting:** Initiated the Data Validation review and discussed data quality to ensure it was consistent across the various data sources we were pulling information from various systems. Establish Operational procedure and Maintenance in terms of the data governance (both ownership and accountability – who would perform the data quality checks on a monthly/quarterly basis) as well as determined the KPIs governing the data quality on an ongoing basis (report on number of errors / mismatches, estimate and WO mismatches)