Introduction

In today’s business environment, companies need to react quickly to changes in demands and customer environments. Here are some challenges faced in today’s digital environment:

- **Data and compute proliferation** – Rise of cloud, big data along with existing investments – need for unified view
- **Increased regulatory and compliance** – CCAR, GDPR, solvency, HSE/reach etc.
- **Key to enable boundaryless data** – Intelligent applications need to know enterprise data and “all” about it
- **Digital journeys** – Need for trustworthy data to enable digital journeys
- **Unified data management** – Across data in traditional systems, big data systems and data on cloud
- **Collaborative and metrics driven** – Cater to all stakeholders like data stewards, domain champs, CDO, IT, business support, legal and compliance

The goal of Data Governance initiative is to ensure timely, trustworthy and relevant information delivery that enables informed decision making. Characteristics of an ideal data governance solution are:

- **Unified data management** – Across data in traditional systems, big data systems and data on cloud
- **Collaborative and metrics driven** – Cater to all stakeholders like data stewards, domain champs, CDO, IT, business support, legal and compliance
- **Smart** – Intelligent way to discovery, tag, heal data and machine learn since traditional ways are not scalable to meet future business needs
- **Active** – Data governance platform is the centerpiece for next generation enterprise, that can manage, monitor, alert, actionize policies and applications that depend on day to day runs

Data governance is not only about data, but also about enabling clear ownership, business rules, operational requirements, tools and business processes, easy decision making process, stakeholder interaction and business data access.

Infosys Data Governance framework

Across most organizations, as data is distributed across sources like data lakes, data warehouses and individual silos, it is important to create a boundaryless view to monitor the data. Infosys proposes the data governance framework to address this challenge. It helps govern Augmented Enterprise Data Warehouse making use of Infosys custom solutions and data management tools/components from vendors like Informatica, Collibra.

Highlights of Infosys Data Governance framework are:

- **Unified Metadata Hub**: Displays a unified view of organization metadata by integrating structured metadata from tool repositories like ETL/reports, unstructured metadata from custom code, metadata from data lakes and tools like Apache Atlas and Waterline data.
- **Data Quality Hub**: Provides Integrated Data Quality Management capability to define data quality rules, monitor data quality progress, self-healing capability through machine learning to predict missing values (includes Data at rest, data in motion and computed data). Infosys Smart DQ solution provides advanced machine learning capabilities.
- **Data Governance Hub**: Configurable data governance activities (define metrics policies, catalogs, standards, visualization). Plug and play model, registering applications only which are needed by the enterprise.
- **Data Governance Applications**: Capabilities for analyzing data lineage, dashboards for data protection, data quality metrics. Infosys Data Governance tool (IDG) provides these capabilities to enable organizations for next generation data governance.
- **Data Classification and Cataloging**: Catalog and organize the data scattered across the organization. Solution can utilize tools like Informatica EIC, Waterline data etc. for this purpose.
Infosys solution

Infosys tools complement data governance implementation patterns using standard tools from vendors like Informatica. Infosys Tools utilized in the solution are:

**Infosys Data Governance tool (IDG):** Supports data governance operations and helps in defining governance strategy and framework for next generation needs. IDG tool helps to achieve core principle of accuracy, lineage by providing intuitive metrics to various roles. It also provides single point access to data quality rules management, stewardship & data quality metrics reporting along with traceability visualization.

**Infosys Smart DQ:** Solution to pre-fill unknown master attributes in transactional data by mapping to history/master data using Machine Learning Models. Manual effort is reduced by more than 75%.

**Client Benefits**
- Saves efforts upto 60% in day to day governance activities
- Leverages existing investments in Data Quality (DQ), ETL and metadata management tools and fill in the gaps
- Single solution for managing Big Data application and traditional application data
- 3600 coverage of data – Covers data at rest, data in motion, computed data and unhandled exceptions from support tickets
- Advanced analytics using NLP techniques – Incorporates advanced analytics for text mining to identify reasons for data quality incidents and application correlation
- Advance visualizations – Visualizations available in cutting edge tools like Tableau and QlikView; can subscribe for only modules required by the organization

**Case Study**

*One of world’s leading financial services company* that provides asset management, portfolio management, mutual fund services, realized their enterprise data governance vision by implementing Infosys Data Governance Solution, data quality management tools and metadata management tools.

The customer was able to visualize metadata, data quality and impact of data quality in a much better way thereby improving operational efficiency and saved efforts upto 60% in data quality check.

*One of the largest CPG companies in the world* faced an issue with wrong attribute and hierarchy mapping from CPG company to retailers. Predicting unknown product attributes (historical and ongoing) and correction of miss-classification of attributes was a manual process which was tedious and error-prone.

Infosys Smart DQ solution helped in automating this manual process. Approximately 68 attributes are auto populated by the Machine Learning Algorithm. The end users receive the data with the suggested value for the unknown data within a span of 3 hours from data refresh. This released upto 75% bandwidth of the customer analyst vis-a-vis the manual activity and reduced costs by 35% over a period of 2 years.

For more information, contact askus@infosys.com