

Data Security Governance

-Access policy Governance Framework with Collibra

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1. Introduction to DSG

Data Security Governance (DSG) is an information governance framework that defines the process for data access and control throughout the data lifecycle of non-relational data sources (e.g. Hive, HDFS, etc), which effectively interacts with all the stages involved and supporting technologies that store and control data.

Information Governance Reference Model (IGRM)

Linking duty + value to information asset = efficient, effective management

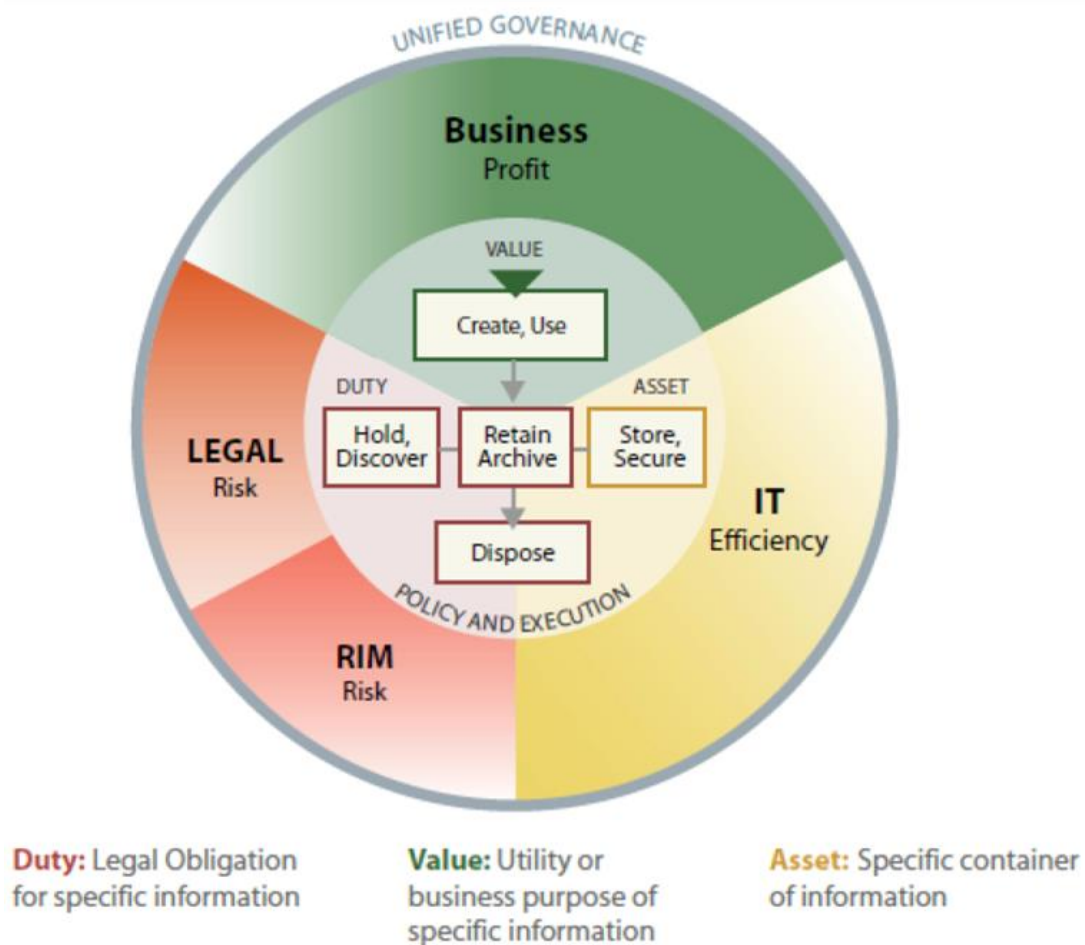


Fig.1 : IGRM Model

DSG implements the IGRM reference model for governing the data-access policy life-cycle

2. Business Challenges

Typical challenges in governing the data access policies of big-data assets

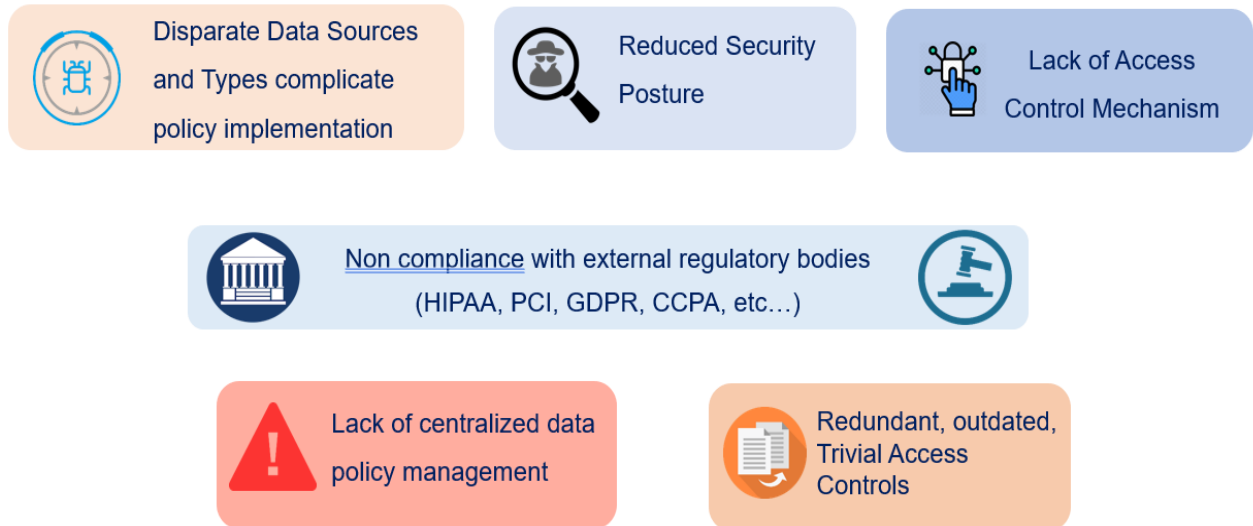


Fig.2 : Business Challenges in implementing DSG

3. Functional Challenges

- Lack of dedicated data access policy Governance frameworks.
- Non-availability of solutions that integrate Governance products like Collibra and access control frameworks like Apache Ranger.
- Disparate data-structures and resources add to the complexity of data security and data access policies.
- Customized policy assets/structures needed for different policy sources/repositories.
- Centralized governance and policy structure to manage access controls and related meta-data is challenging compared to relational data.
- Orchestration of data requests, access grants, data protection and data provisions is a challenging task.

4. Introduction to DSG Framework

DSG Framework integrates Collibra Data Governance system with Apache Ranger - which is a Data Access policy management framework for Hadoop data sources (e.g. Hive, HDFS, etc), and provides the following features

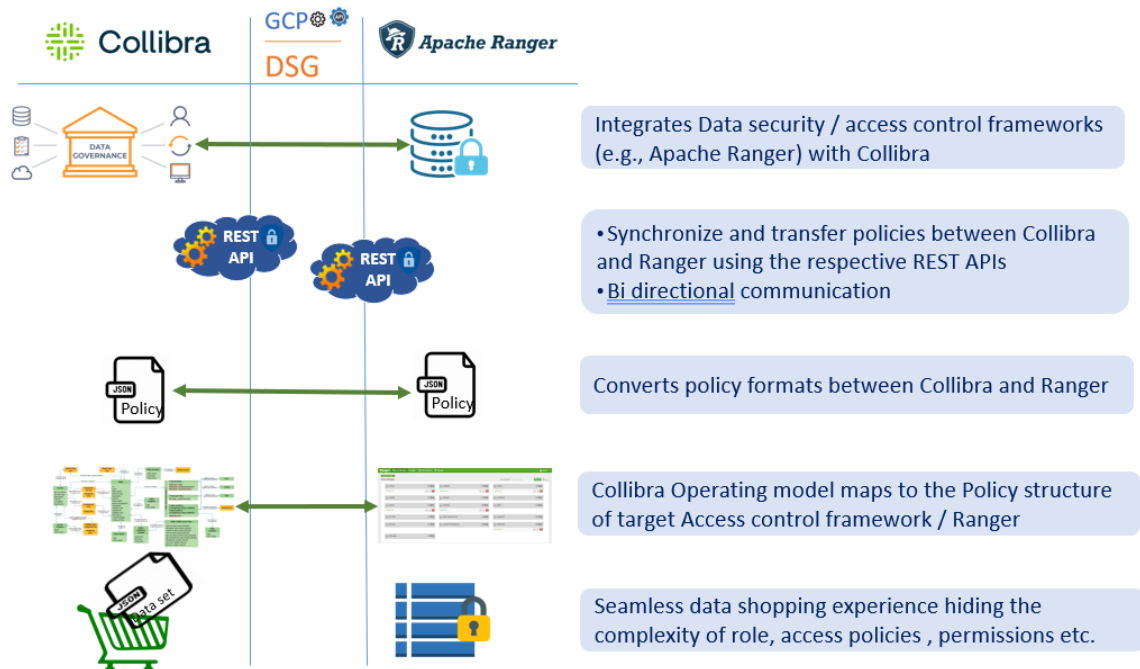


Fig.3 : Synopsis of DSG Framework

5. Why DSG Framework

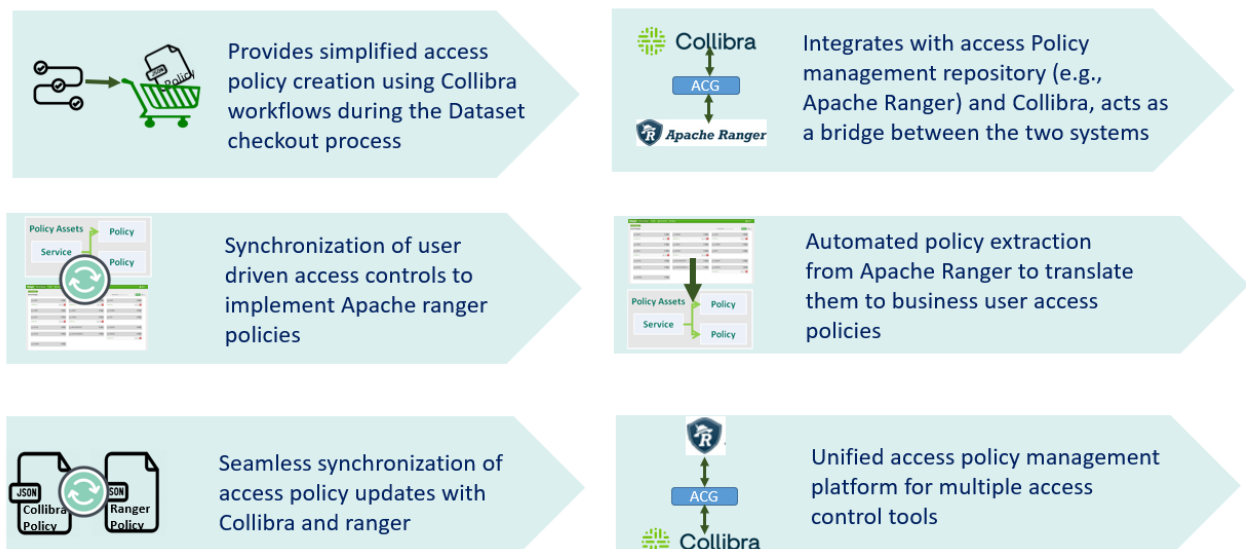


Fig.4 : Benefits of DSG Framework

6. DSG Objectives

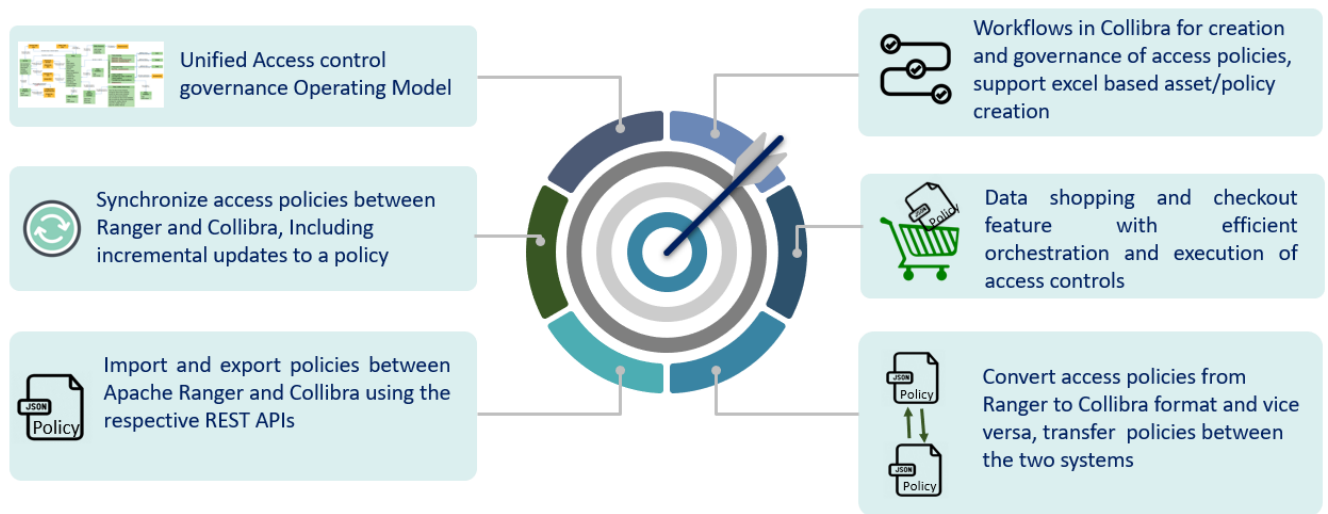


Fig.5 : DSG Objectives

7. DSG: User Journey at-a-glance

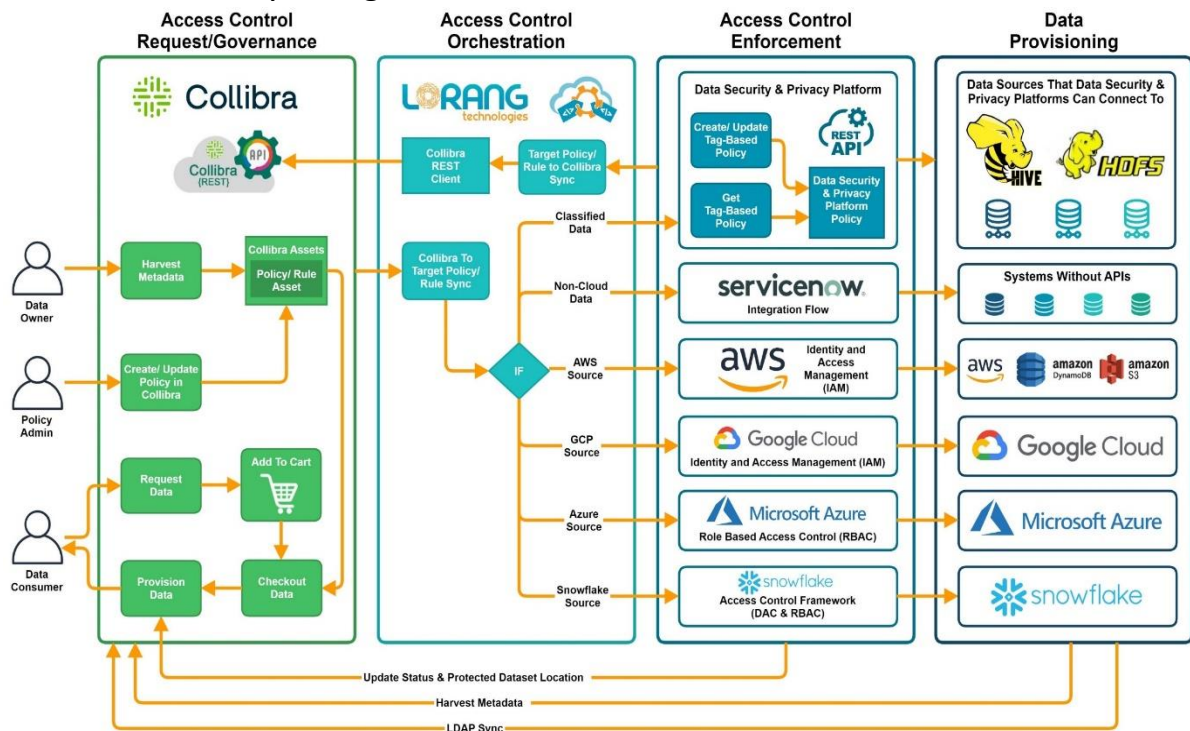


Fig.6: User Journey at a glance

8. DSG: User Journey by Persona

This diagram shows the personas involved in workflows for a data access request, access-policy creation and application to data sets.

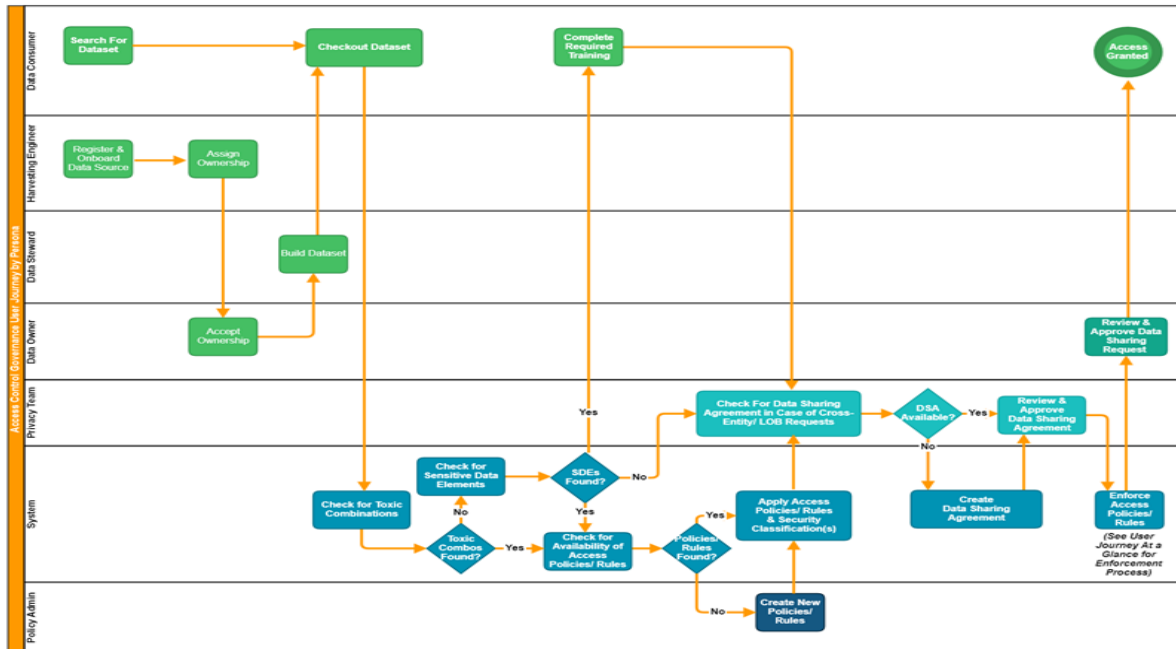


Fig.7: DSG User Journey by Persona