How process orchestration improved data governance at Sam's Club
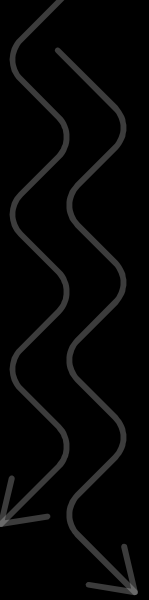
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Director Data Governance, Sam's Club

Sam's Club Company Facts

Sam's Club is a membership club that is pioneering the retail experience, focused on providing its members exclusive access to a combination of value, convenience and modern omnichannel shopping experiences along with exceptional service delivered with a human touch. Unlike traditional retail, the club model is a unique business model, focused on limited SKUs/curated items, driving membership and member value.

Sam's Club builds experiences that define the future of shopping, outpacing its competitors with market-leading technologies and offers its members access to the fullest range of omnichannel retail experiences with the convenience of online combined with the delight of shopping in its clubs.

With more than 40 years of innovating the category, Sam's Club is on an accelerated growth trajectory with the bold ambition to become the club channel lead.
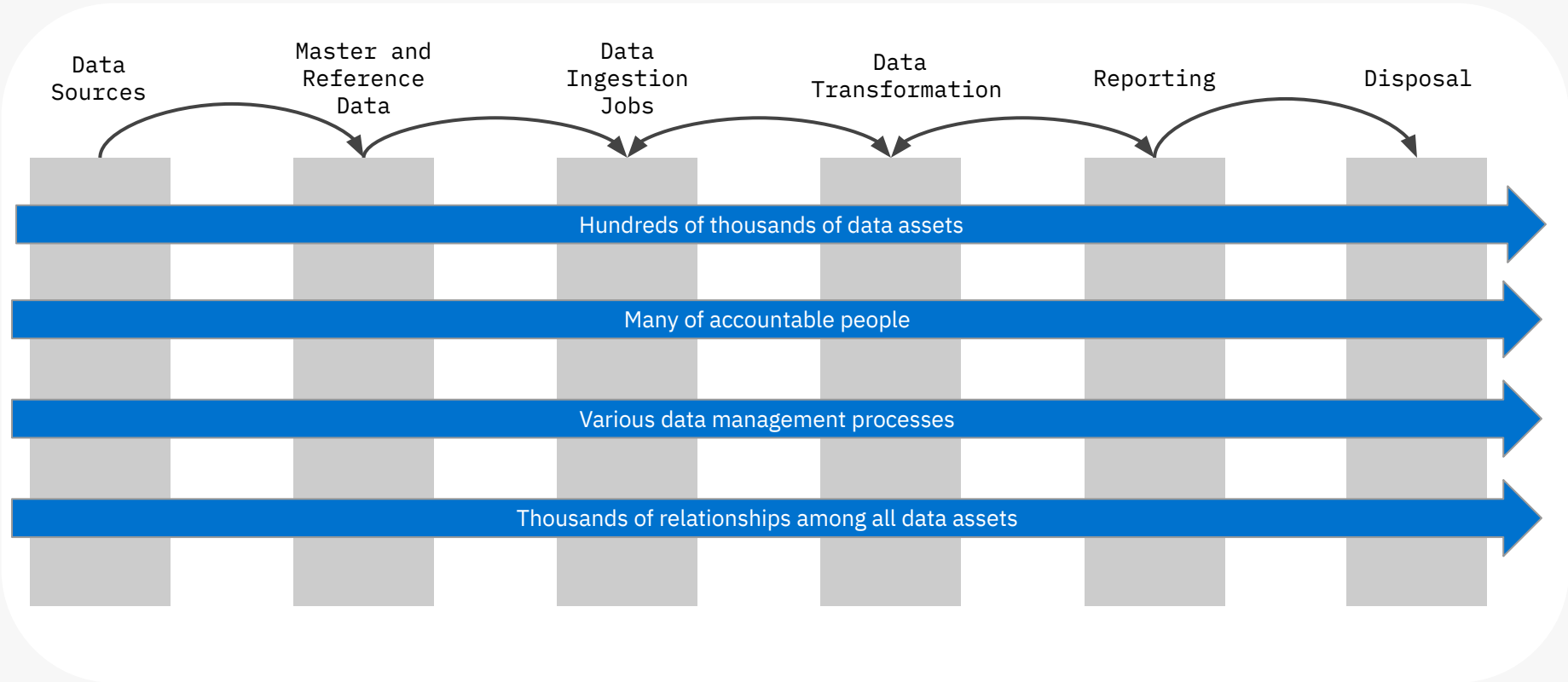
~600 Clubs
In U.S. & Puerto Rico

Founded in 1983

Over 100,000 associates

~$85B in FY24 Annual Sales

sam's club ◇

Explaining the challenge in simple terms

I am a new finance analyst, and I need to write a report to provide data insights on Sales per member requested by a consulting company:

- I need to look for member data; who owns that data; who is the SME?

- Is this data highly sensitive for my company?

- Am I authorized to share the data?

- This is a complex build, so I need to engage engineers, a modeler etc.

- Are there already existing reports for this?

- Are there multiple definitions of Sales?

- I found multiple data sources. What is the authoritative source for the right outcome?

- Where do I find that data; where do I start?

- What about the quality of this data?

Applying consistency - minimizing tribal knowledge

Understanding Complexity in the Data World

Data Sources

Master and Reference Data

Data Ingestion Jobs

Data Transformation

Reporting

Disposal

Hundreds of thousands of data assets

Many of accountable people

Various data management processes

Thousands of relationships among all data assets

Data flows adding complexity to the process

Data Concepts

Data Strategy → Data Governance ← Data Management

Data Policies

Data Governance

- Business Process Management
- Regulatory Compliance
- Data Quality
- Risk Management
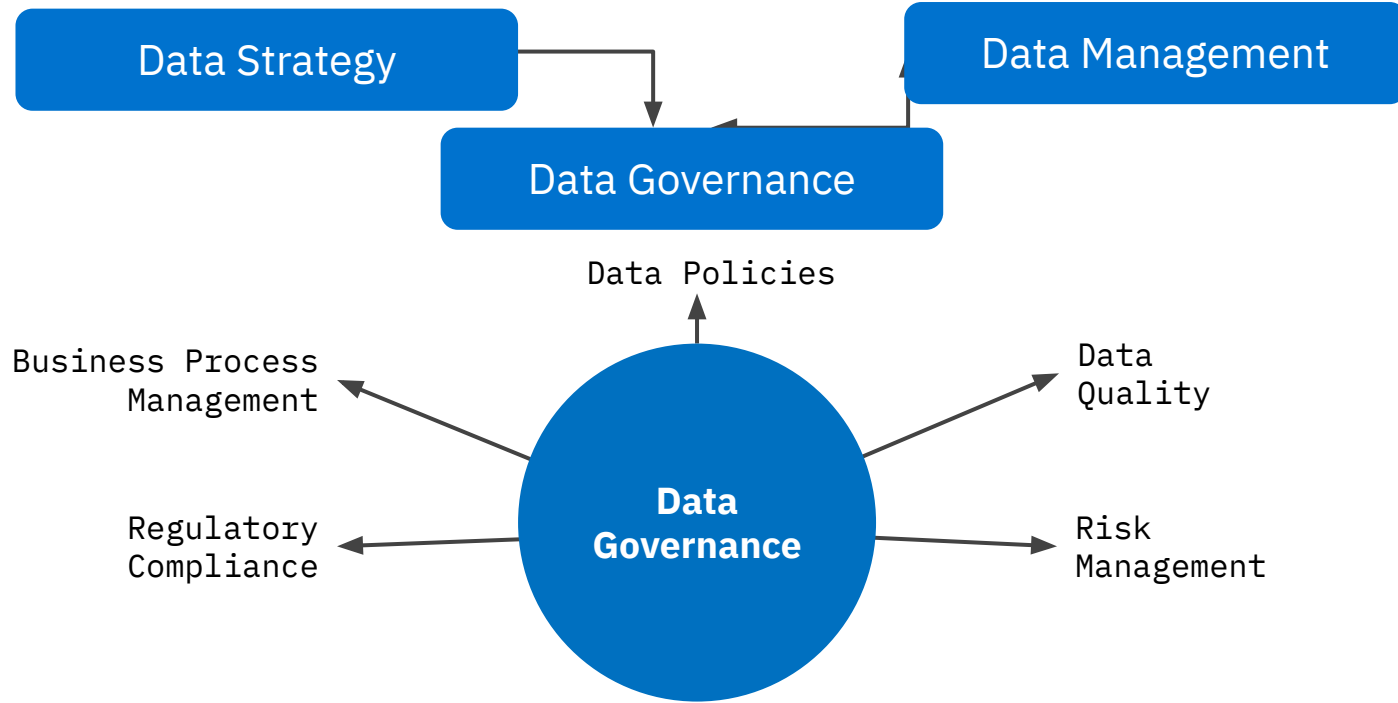
Must support processes based on global footprint

Data is a valuable Asset

Data Governance Goals

Cultural mindset shift to raise awareness of treating Sam's data effectively, ethically and responsibly

01 Adopting a Data Culture

Identification of sources, definitions, ownership, and reporting uses of data across the data value chain

02 Understanding Data

Data Governance Strategy

Collaborative processes to detect, assess and cleanse data issues

04 Trusting Data & Optimizing Value

03 Managing Data

Effective and compliant processes throughout data lifecycle:

Origination ● Ingestion ● Transformation ● Consumption ● Disposal
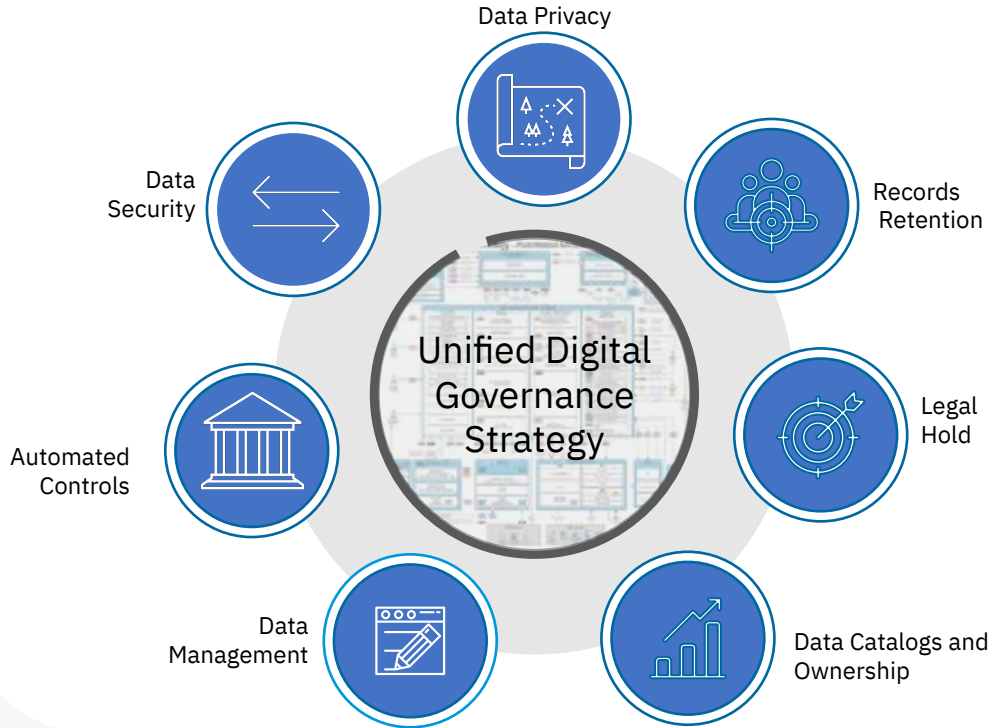
Embracing the process driven culture, supports the adoption of data culture

Unified Digital Governance Strategy

Integrated Digital Governance ecosystem and multiple processes

How can we make Data Governance seamless and uneventful?

By embedding Data Governance tasks into our day-to-day data processes

- Data Governance is a <u>complex and rigorous process</u> that requires seamless integration of policy requirements throughout the entire life cycle of data assets.

- The key to <u>success lies</u> in having a <u>strong process orchestration</u> capability. Process orchestration plays a crucial role in coordinating and managing the numerous workflows and tasks involved in Data Governance.

- By leveraging this capability, organizations can <u>effectively govern their data</u> assets, ensuring compliance, quality, and transparency throughout the entire data life cycle.

Proactive, Sustainable and Evergreen

Data Governance Core Components

Data Governance is focused on executing three main workstreams

Processes

Policies & Standards

Create policies, standards, and procedures to govern how we manage and use data

Documents
Enterprise Data Governance
Roles & Responsibilities
Data Classification
Data Sharing
Data Product
Data Access
Data De-Identification
Data Quality
Data Retention

People

Roles & Responsibilities

Clearly define roles across business, technology, Global Data, Legal, Privacy, and more

Roles
Business Data Owner
Business Data Steward
Data Modeler
Data Architect
Data Engineer
Business SMEs

Technology

Provide tools to build a global data catalog, manage access, data quality, and more

Capabilities
Data Definitions
Metadata Management
Data Quality Management
Data Discovery & Access
Reconciliation and Issue Remediation
Security & Privacy
Reference Data Management
Reporting, Dashboards, and Alerting

Managing People, Process and Technology components

Data Governance Process Orchestration

Data Governance is focused on executing three main workstreams

[One Stop Shop & Process Orchestrator]

Processes

P2P
Person to Person
Processes

P2S
Person to System
Process Orchestration

S2S
System to System
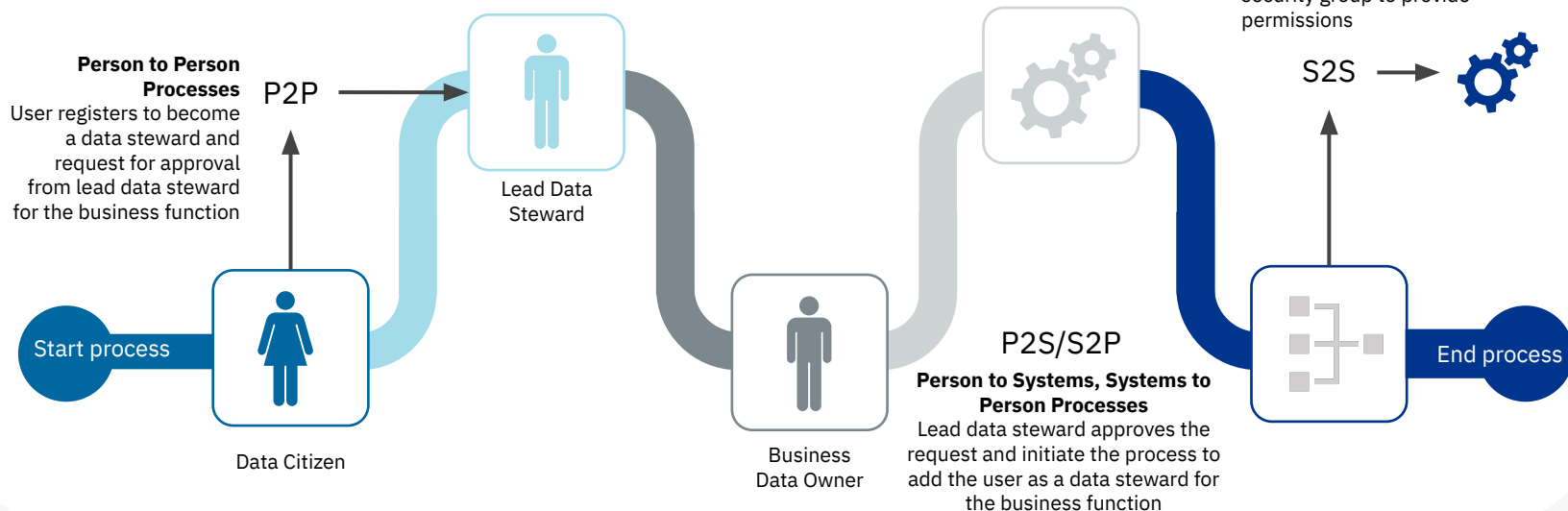**Processes**

People

Technology

Given the number and variability of processes, flexibility and evolution are required.

Data Governance Process Orchestration

Data Governance is focused on executing three main workstreams

Data Steward Registration Example Process

Systems to Systems Processes
Adds the user as a data steward for the business function and communicate with external systems to add the user to the appropriate security group to provide permissions

Person to Person Processes
User registers to become a data steward and request for approval from lead data steward for the business function

P2P

S2S

Start process

Data Citizen

Lead Data Steward

Business Data Owner

P2S/S2P

Person to Systems, Systems to Person Processes
Lead data steward approves the request and initiate the process to add the user as a data steward for the business function

End process

Connecting all processes using common patterns and decision trees

People and Data Asset Types

| **People** Roles & Responsibilities **("Who")** | | Data Assets **("What")** |

Business Data Stewards

BDO — **Business Data Owner:** The Business Data Owner oversees and owns the business vision and strategy for the data in their domain

BDS — **Business Data Stewards:** execute the business vision and strategy for the data in their domains

SME — **SMEs:** Provides business process and business operations support in coordination with the BDO and BDS needs

Technical Data Stewards

DA — **Data Architect:** provide technical leadership and strategic direction for the technologies, standards, processes and architectures of data across the enterprise.

DE — **Data Engineer Lead:** develops and deploys innovative data solutions for advanced analytics and data processing. They define and build the data pipelines that will enable faster, better, data-informed decision-making within the business.

DM — **Data Modeler:** understand and translate business needs into data models supporting long-term solutions. They work with the development teams to implement data strategies, build data flows, and develop conceptual data models.

KPIs
Metrics
Reports
Glossary
Process

Databases

Schemas

Tables & Columns
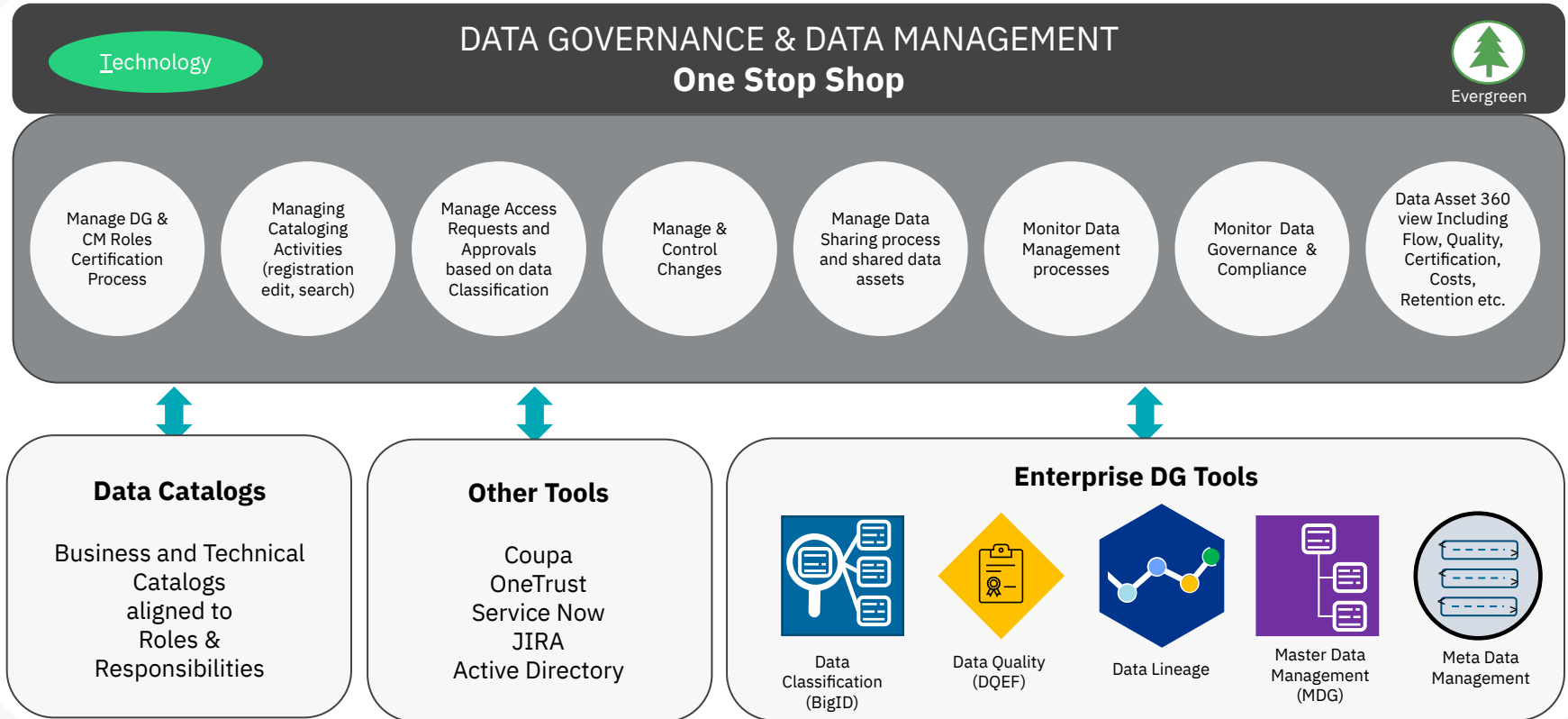
Transformation Jobs

Ingestion Jobs

Key Data Governance components supporting processes

One-Stop-Shop View

DATA GOVERNANCE & DATA MANAGEMENT
One Stop Shop

Technology

Evergreen

- Manage DG & CM Roles Certification Process
- Managing Cataloging Activities (registration edit, search)
- Manage Access Requests and Approvals based on data Classification
- Manage & Control Changes
- Manage Data Sharing process and shared data assets
- Monitor Data Management processes
- Monitor Data Governance & Compliance
- Data Asset 360 view Including Flow, Quality, Certification, Costs, Retention etc.

Data Catalogs

Business and Technical Catalogs aligned to Roles & Responsibilities

Other Tools

Coupa
OneTrust
Service Now
JIRA
Active Directory

Enterprise DG Tools

Data Classification (BigID)

Data Quality (DQEF)

Data Lineage

Master Data Management (MDG)

Meta Data Management

Connecting all processes using common patterns and decision trees

What Camunda BPMN looks like? Master data process PoC
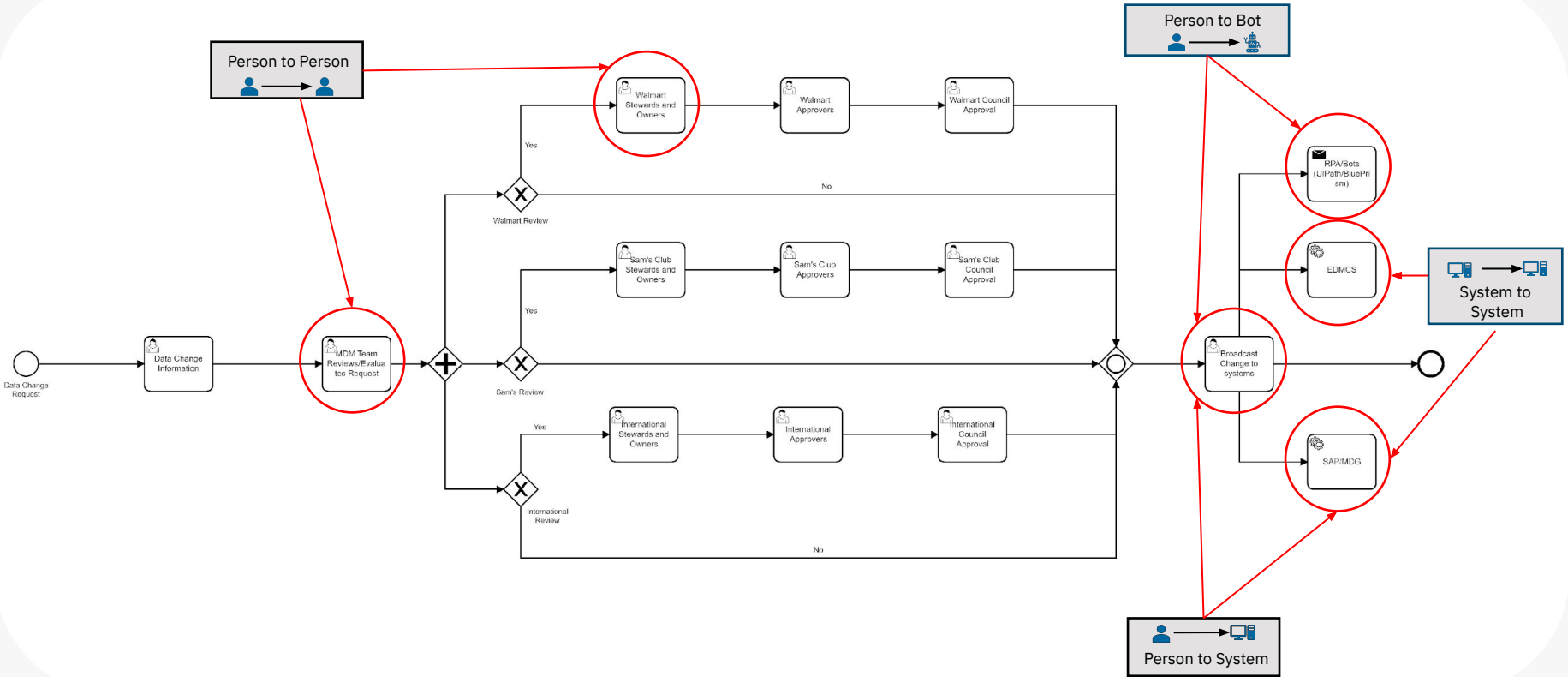
Modular build, easy to use, fast time to market

How Camunda is helping with our Data Governance approach

- Ensuring that People ("Who") and our Data ("What") remain <u>evergreen</u> and up to date through ("How") <u>sustainable</u> processes (minimum effort and part of <u>day-to-day</u> business and technology operations)

- Enforcing <u>good data hygiene</u> as it embeds DG into data management and change management processes – providing full transparency and traceability and adherence to Data Governance policies and Data Management practices

- <u>Leveraging and integrating</u> with other eco-system tools that support DG and data management processes – no need to replicate functionality and provides plug and play optionality when changes are made to the Enterprise suite of tools

- Facilitating a <u>360-degree view</u> of all data assets – a "one-stop-shop" unifying all data needs with end-to-end process handling including functionality for finding, understanding data assets relationships and stewardship, thereby eliminating tribal knowledge.

- Providing <u>process trending</u> data for SLA refinement and process reengineering

- <u>Flexibility</u> for changes as processes evolved

Thank You