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DG Program/Organization Resource Model Guide

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About us

Radu Arslanian
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- 40+ years of experience in providing Management Consulting and Data Strategy, Advisory and full lifecycle data ecosystem and Data Management, Quality and Governance implementation services to fortune 100 and 500 companies
- Has designed, architected and implemented more that two dozen Data Strategy, Data Management, Governance, Data Quality and Integrity large/complex programs and more than 20 very large/complex Data Warehouse and BI engagements
- Has built, deployed and matured more than one dozen Analytics, Data Management, Data Integration and Data Quality Centers of Excellence
- Verticals: Finance, Insurance, Retail, Telco/Media, State/Municipality

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Mary Wilson
Sr. Principal Consultant
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- Responsible for helping organizations design their data strategy and data governance organizations focused on archiving business value
- 25+ years experience in Data Strategy, Data Governance, Data Quality, Organization Design and Process Improvement
- Have functioned as a practitioner and a consultant with experience in Automotive, Life Sciences, Retail/CPG, Apparel and Financial Services

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Agenda

1. Purpose – provide our customers with guidance in preparing for the inception of an Enterprise Data Governance (EDG) Program and Organization
2. The EDG Program/Organization and its enabling components
3. An entry point DG Program/Organization and a high-level scaling guide
4. The basic EDG Program/Organization
5. How do EDG roles map to Informatica's tools – recommended usage guide

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Background

Customer Questions addressed in this presentation

This presentation should be used as a guide and reference when working with customers interested in how they should prepare and budget for the inception of a Data Governance Program and Organization. Here are the questions that drove the initial inception of this deck:

- What should my DG Program and organization look like?
- What is the minimum staff I can start with?
- Do I need to hire all these resources, or can I leverage any of my internal staff?
- What support should I expect from the LOBs?
- What are examples of how other enterprises have implemented their DG Program?
- How can I figure our or plan for expansion of my DG Organization as we start supporting multiple LOBs and a lot more use cases?
- Is my DG Program staffing dependent or impacted by the DG solution enabling tools I own or plan to purchase?

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A few Definitions

The Center of Excellence (CoE)

- *"A CoE is a physical or virtual center of knowledge concentrating existing expertise and resources in a discipline or capability to attain and sustain world-class performance and value." (Gartner)*

- A CoE is usually represented by a cross-LOB (or cross-Business Units or cross-product lines within a BU), premier and highly specialized organization made up of a team of very skilled knowledge workers whose mission is to provide their enterprise with best practices, innovation and shared processes, services and tools focused around a particular area of interest. The CoE has a leading-edge (sometimes even bleeding-edge) set of knowledge, competency, best practices and tools to support a specific industry vertical and a specific field of [or combination of] technology and business stakeholders, processes and applications. A CoE brings together people from different disciplines and provides shared facilities and resources to the enterprise. It is sometimes called a Center of Competency or Capability. From a Data Ecosystem perspective, examples of CoEs include Analytics, Data Management and Data Integration.

The Community or Center of Practice (CoP)

- A CoP is generally represented by a group of skilled people who share a common vision, understanding, concern, a set of problems, and an interest in a specific enterprise topic, and who come together and work to address and fulfill both individual and enterprise goals. CoPs go by different names depending on the organization, including learning and collaboration networks, or tech and business clubs. To be considered successful, CoPs require key critical elements such as leadership roles, funding, personalized learning and/or training, guiding principles, organizational support, social learning, purpose, innovation and vision. It is believed that successful CoEs started as CoPs, and the initial CoP continues to thrive within each successful CoE. CoPs are not considered official enterprise organizations and will not be able to make business or technical impactful decisions but are rather internal best-practices advisors.

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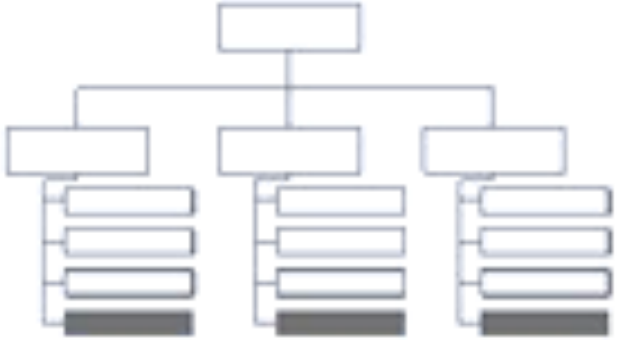
Defining Your Data Governance Organization

DG Operating Model: Degree of Centralization

Data Governance Office

	Centralized	Federated	Decentralized
		Suggested State	
Activities	• Centralized approach – fully corporate control over Data • Data Stewards are full-time, permanent roles, managed by Corporate • All data maintenance is performed within the centralized team	• Functional domain-based approach –supports enterprise standards, policies and such, but is managed at functional or Lines of Business • Data Maintenance function is performed and managed by Business Data Stewards at functional areas and supported with IT resources	• Execution is held in the functional domains with policy and standards set by a central steering group • No central management of the data maintenance function - limited corporate influence.
Benefits	• Fully leverages expertise of professional data stewards – not dependent on various functional domains • Maintenance and Governance are performed centrally, facilitating communication	• The centralized data governance team has enterprise responsibility for both policy and standards • Leverages experts while placing the business users in charge of their data. • Supports LOB needs and restrictions	• Direct accountability and ownership by business areas; • Limited dependence on “outside” resources • Stewards may have other roles in addition to data maintenance

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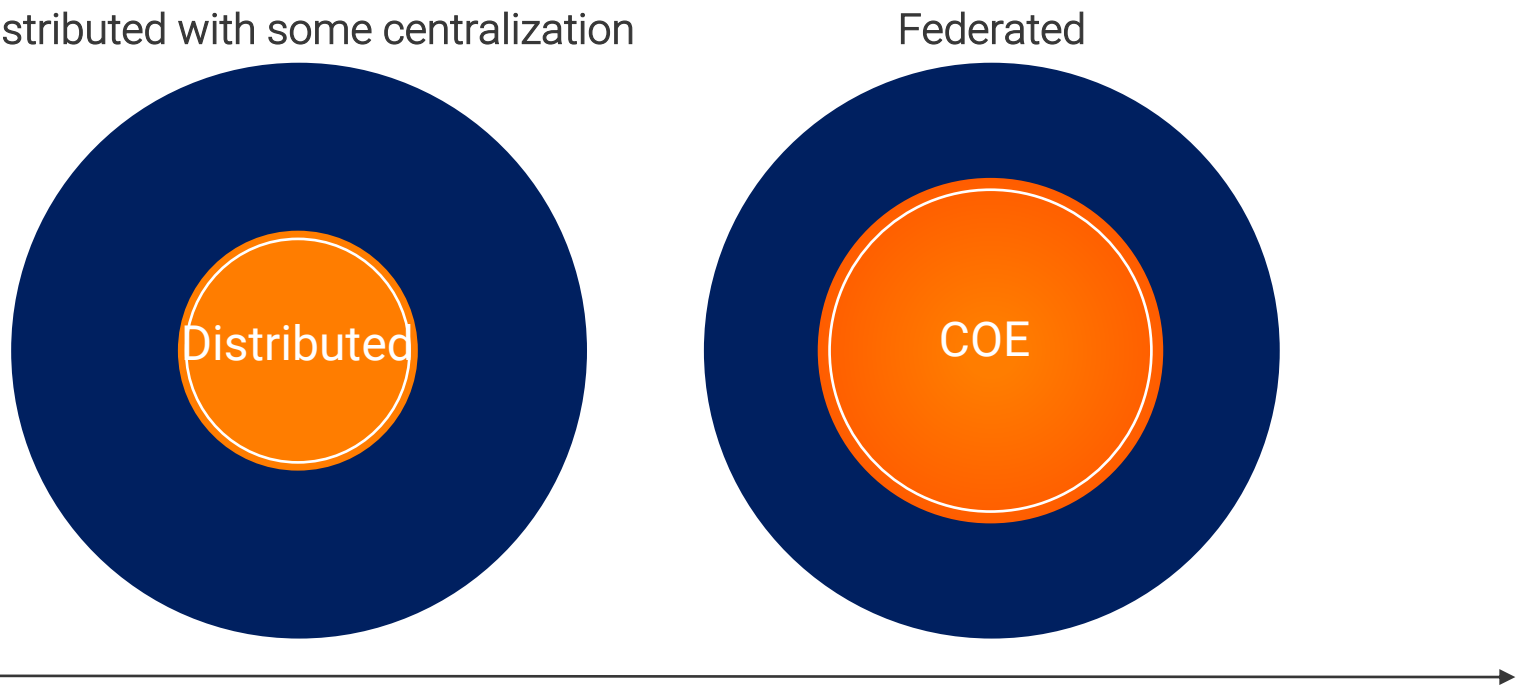
Degrees of Centralization

- Recommending a hybrid approach
- Affords some autonomy for business specific requirements



- Majority of roles still are spread in local functions, business units
- Domain expertise is localized
- Mix of central and localized project delivery and support

- SMEs generally in the business units
- Best practices and architecture centralized > Center of Excellence (COE)
- EDO Office Roles: Enterprise Data Governance Lead; Enterprise Data Steward; Enterprise Data Coordinator

- Higher degree of difficulty in insuring governance and process control than with a fully centralized model

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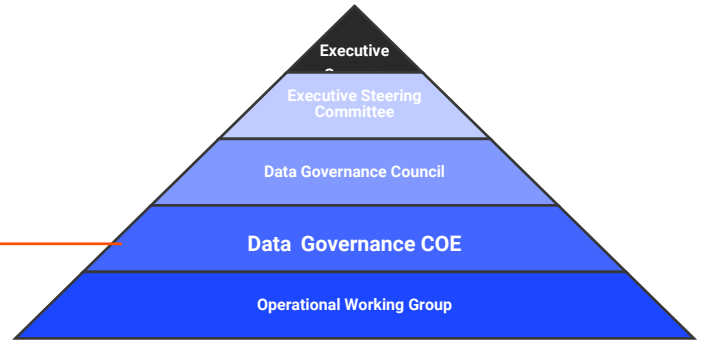
Data Governance Organization

Integration and Collaboration



Data Governance Center of Excellence (COE)

Data Governance Office

- Enable improved efficiency and stability in delivering and maintaining business critical data
- Facilitate improved decision making through increased access and trust in data – enable data democratization; data literacy
- Establish a centralized process and way of doing business – data policies, business process management, risk management
- More efficient, effective compliance with regulatory requirements

Business Units

- Demonstrate proactive Data Management
- Execute Data Quality Monitoring
- Provide quality data for reporting and analytics
- Collaborate with IT and the Data Governance Office
- Embrace an Enterprise perspective of data quality

Information Technology

- Install and integrate the technology as an enabler of data governance
- Ensure software meets the evolving needs of the organization
- Execute role-based access
- Collaborate with the Data Governance office and the Business Units

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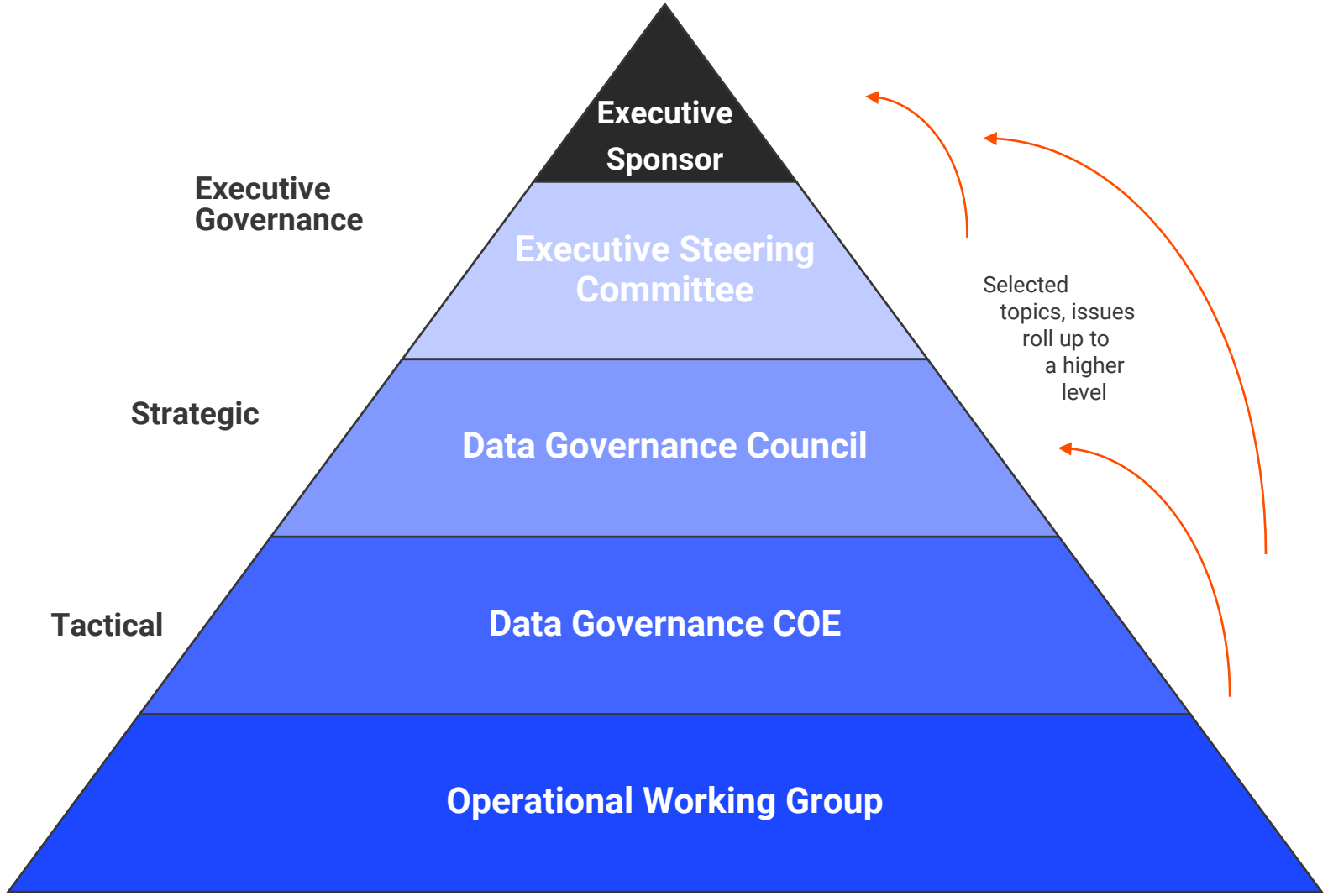
Data Governance Model



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Data Governance Operating Model

Executive Steering Committee

- Validate/approves the EDS and COE vision and mission
- Resolve escalated issues
- Approve people, process, technology projects and business budgets
- Holds accountable the COE leader, program manager and team for return on investment

Enterprise Data Council

- Approves enterprise-wide data and solution changes
- Approves enterprise-wide definitions and DQ metrics
- Resolve escalated issues
- Reviews DQ KPI and aligns on enterprise-wide actions
- Ratifies Enterprise CDE's

Data Domain Council

- Execute domain relevant initial priority "lighthouse" use cases
- Monitor delivery of use-case projects and selection process
- Approve or amend new domain-wide policies

Operational Work Group

- Cross-department teams that assess impact of data change requests
- Develops options for implementing data changes and presents to Data Owner and DGC
- Align on enterprise-wide definitions and DQ metrics before proposing to DGC
- Recommend common data definitions, DQ Rules, Critical Data Elements (CDE's)

Executive Steering Committee **Existing Structure: Existing ELT meetings** **Frequency: Quarterly**	
Chair:	**ELT / Data Governance Strategy Lead**
Members	ELT

Enterprise Data Council **Existing Structure: DG Council** **Frequency: Monthly**	
Chair:	**DG Leader**
Members	Data Owners, Enterprise/Data Architect

Data Domain Council **Existing Structure: [discuss]** **Frequency: Monthly and as needed**	
Chair:	**Domain Owner Leader**
Members	Data Domain Leaders

Operational Work Group **Existing Structure: [discuss]** **Frequency: Monthly and as needed**	
Chair:	**Enterprise Data Steward Lead**
Members	Data Stewards, Data Architect

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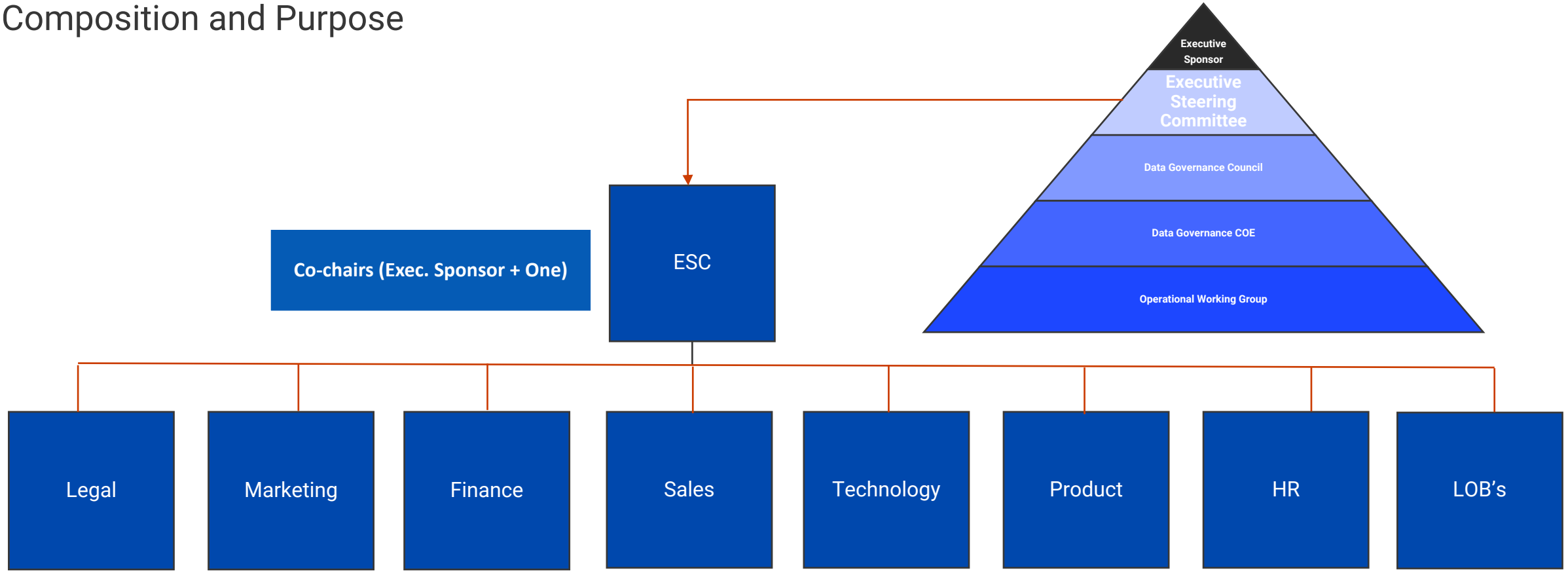
Executive Steering Committee (ESC)

Composition and Purpose



- Validate/approves the Data Governance vision, strategy and plan
- Resolve escalated issues
- Approve people, process, technology projects and business function budgets
- Holds accountable the Data Governance leader, program manager and team for return on investment
- Meet 1x / quarter to receive updates on Data Governance Roadmap progress

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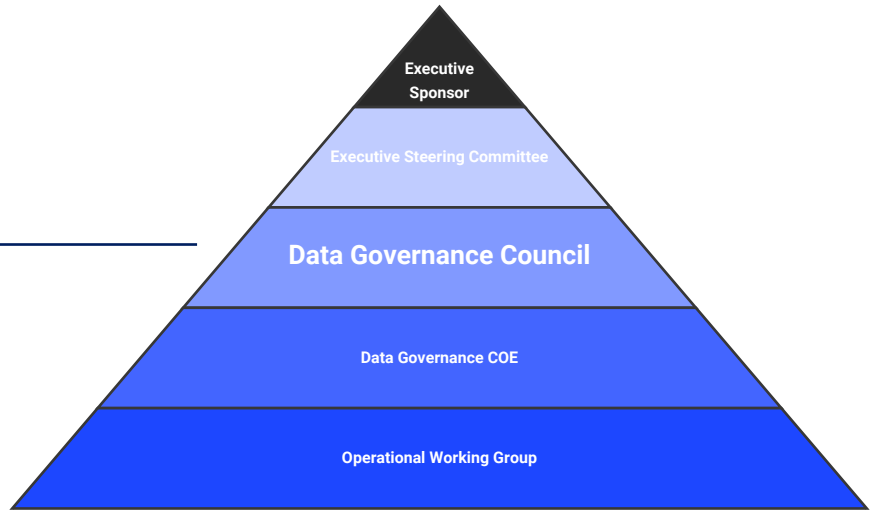
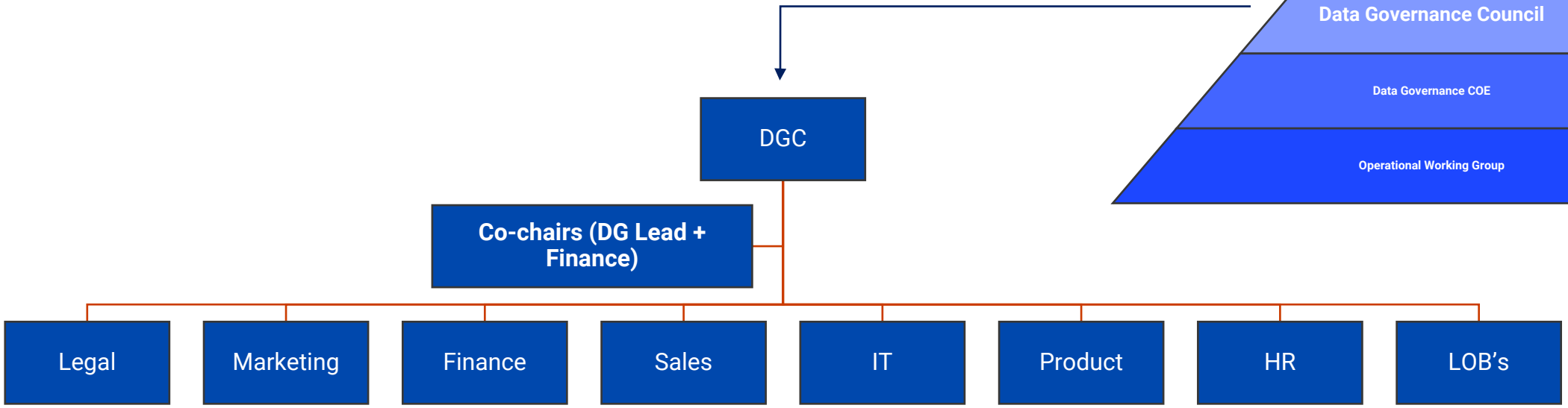
Data Governance Council (DGC)

Composition and Purpose





- Approves enterprise-wide data and solution changes
- Approves enterprise-wide DQ metrics
- Resolve escalated issues
- Reviews KPI's and aligns on enterprise-wide actions
- Holds accountable peer domain leaders and their own domain team
- Meet 1x / month to review and manage the Data Governance Roadmap

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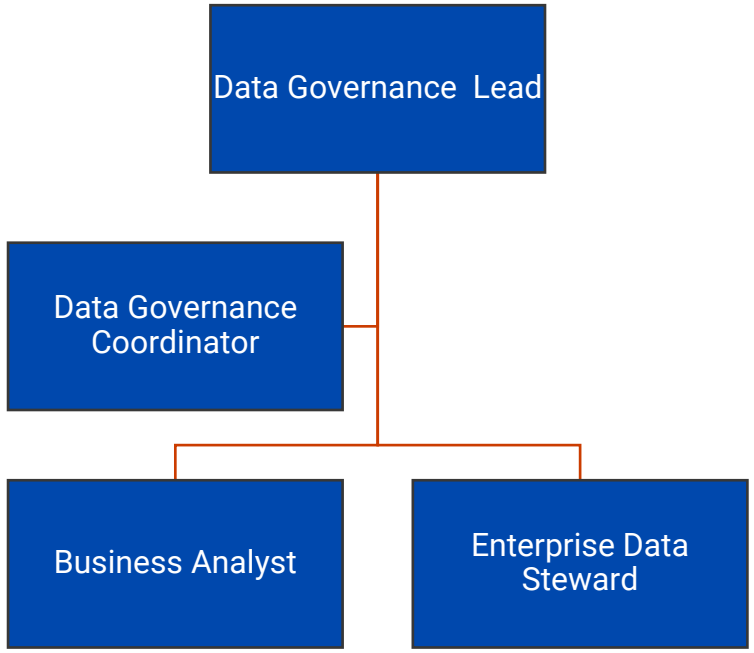
Data Governance Office Center of Excellence

Composition and Purpose



- Establish a centralized process and way of doing business – data policies, business process management, risk management
- Monitors compliance and performance
- Promotes cross-domain data governance
- Drives continuous improvement with policies and processes
- Ensures sustain activities occur within domains

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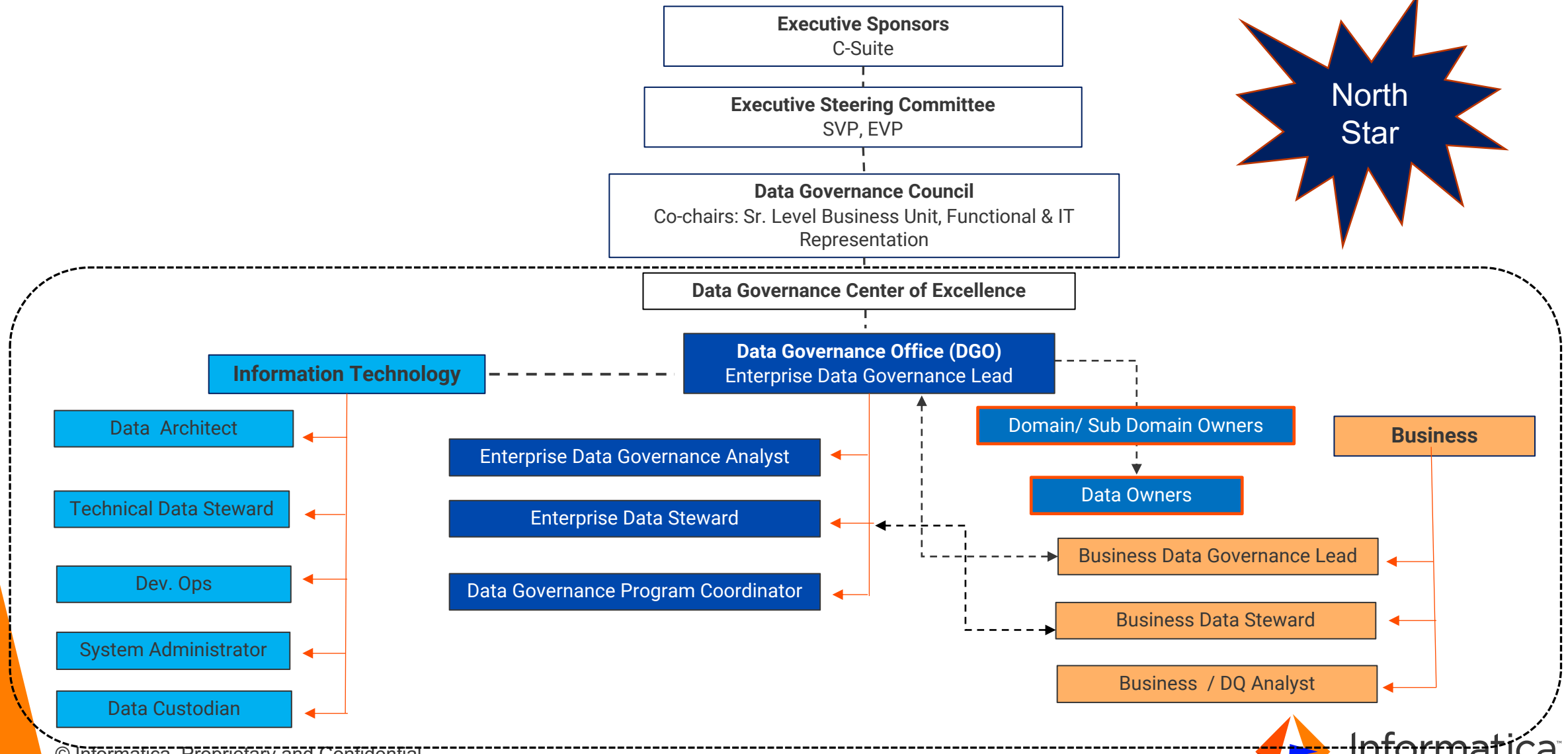
Phase 1: Data Governance Organization: initial structure



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Staffing Model – Getting Started

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Entry Point: DG Program Core Team

Minimum / entry level DG Program organizational staffing – with or without a COE

Here are some of the key roles you need to have as part of your DG program initially. These numbers will be impacted by some of the key factors that determine staffing (see next slide):

Role	# of Core Team FTEs
DG Program Lead	1
Business Stewards/SMEs	1 per LOBs supported (can sometimes handle 2 LOBs initially)
Enterprise Data Stewards (tech or business)	1 per LOBs supported (can sometimes handle 2 LOBs initially)
Business and/or Data Analysts	1 per LOBs supported (can sometimes handle 2 LOBs initially)
DG Solution Enabling Tool Admin/Manager	1 per DG solution tool purchased (can sometimes handle 2 DG tools initially)
ETL Developer	1
Data Management process/capability	1 per process (DQ, Metadata, Privacy, etc.)
Data Architect/Data Modeler	1 per LOB supported (can usually handle 2-3 subject areas/domains)
DG Program Entry Point	7-8 FTEs

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Proposed EDG Operating model

Executive Oversight and Sponsorship

The DG organization will require ongoing sponsorship and oversight

Executive Steering

A DG Program Office will be established, led by the EDG Team leader.

DG Operating Committee

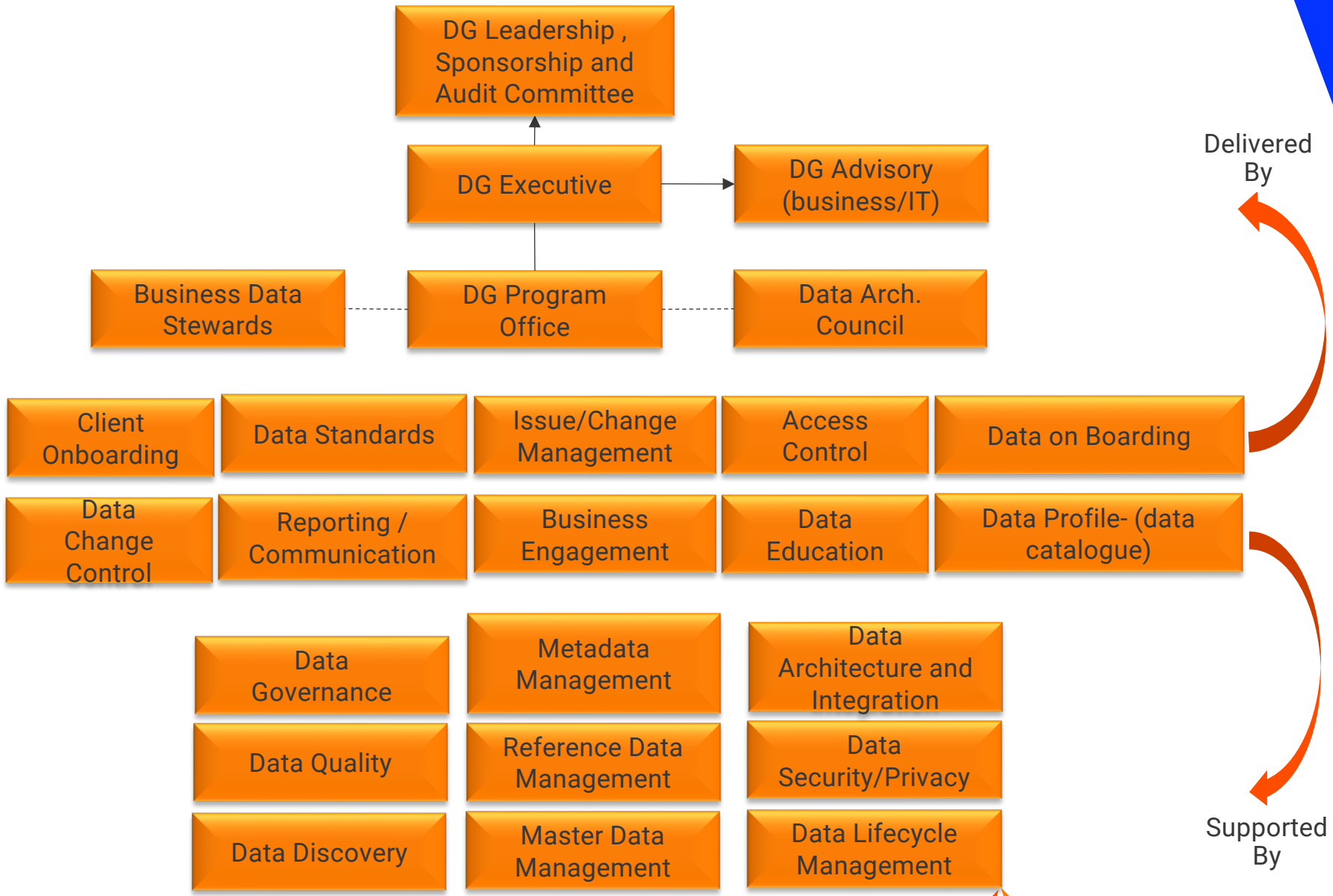
Executive sponsorship from a newly formed DG Council, jointly with the LOB areas, will balance commercial and risk objectives

DG Working Group Processes

Critical DG Processes will be implemented, focusing on assessing data quality and risk, and engaging business teams in data stewardship and in addressing applicable use cases

Required DG Platform Capabilities

Enabling technologies will be implemented to provide critical capabilities for modeling the Customer's business, understanding change management impacts, and assessing risk



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Sample High-Level RASIC MATRIX

Area	Task	Data Governance Program	Business Data Owner	Data Stewards	Source System Owner	IT Custodian	Data Architect
Discover	Profiling Source and Target Data	I	I	R	I	I	I
	Manage Data Models	I	I	S	S	S	AR
	Manage Application Inventory	I	I	S	S	S	AR
Define	Defining and Maintaining Business Definitions	A	A	R	C	C	C
	Define Business Rules	A	A	R	C	C	S
	Define Key Performance Indicators	A	A	R	C	C	S
Apply	Apply Business Rules to Source Systems	I	I	S	R	S	C
	Apply Business Rules to Target Systems	I	I	S	S	R	C
	Remediating Issues - in Data/Process	I	A	R	S	S	C
Measure and Monitor	Data Quality Scorecard Creation and Maintain	A	A	R	I	I	I
	Monitoring Scorecards	A	A	R	I	I	I
	Data Lineage Technical Analysis	I	I	S	S	R	C
	Program Performance	R	S	S	S	S	S

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Data Governance Program Scaling factors and guides

Here are the key scaling factors that drive the sizing of a DG Program with guidance for adding staff

DG Program Sizing Factor	Consider Adding
Number of LOBs	1 Tech Data Steward + 1 Data Analyst
Number of Use Cases per LOB (including data challenges and pain points) – 1-2 per LOB can be handled by the core team	1 Business/Data Analyst per 2-3 use cases
Number of Data Sources (assume 1-2 per LOB)	1 ETL developer/tester for 1-2 additional data sources
Number of CDEs per Data Source (assume 30-40 per use case)	1 ETL and one analyst for CDE's that account for 30-50 beyond the initial 30-40)
Number of Governance Business Processes, Apps and Systems	If more than 1-2 needs to be analyzed and documented, add 1 additional analyst for every 1-2 additional
Overall Data Elements per source (assume 20-30 per source)	1 ETL and one analyst for additional data elements that account for 30-40 beyond the initial 20-30)
Number of Subject Areas/Domains per LOB (with 30-40 CDEs per Domain)	1 Data Architect/Modeler per additional LOB
Number of DG Program Tools Supported (1 FTE can support 1-2 DG solution tools initially. Tools include MDM, Lineage, Catalog, Metadata, Data Quality, Data Analysis/Profiling and Data Privacy)	1 for every additional 1-2 tools initially

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Q&A

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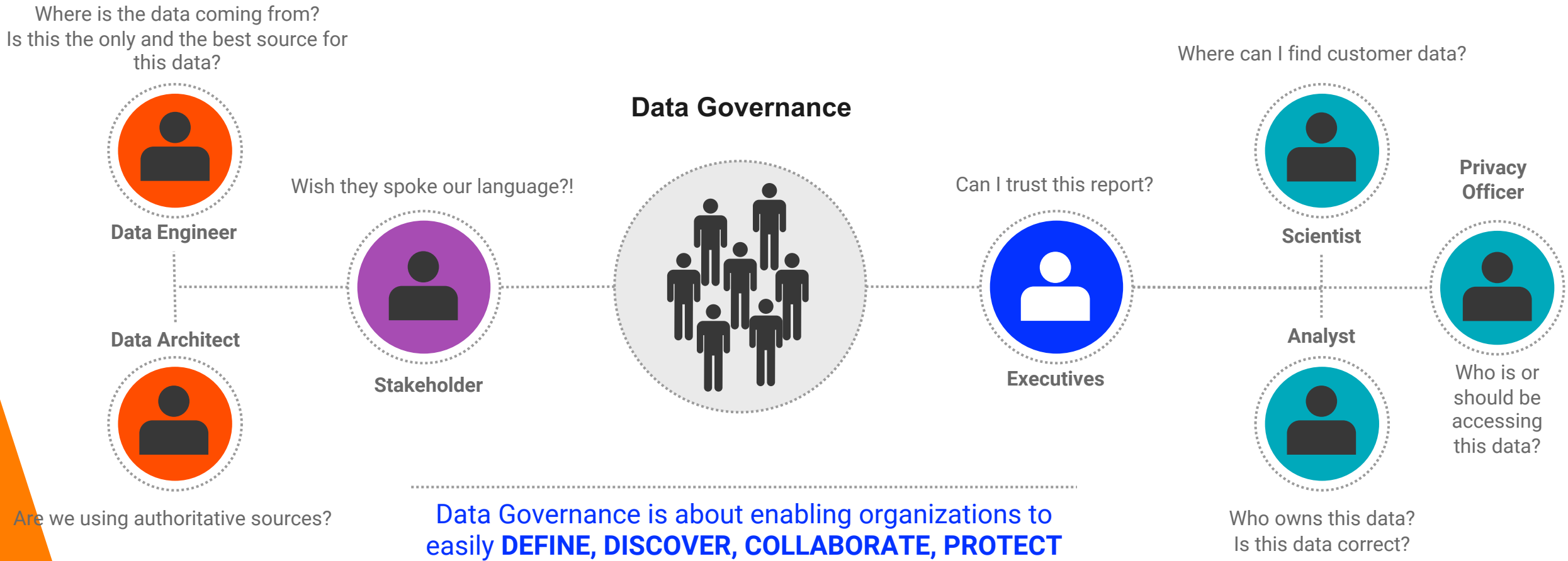
Appendix A

Understanding the Informatica Data Governance solution

Common Challenges in Governance



Data Governance is about enabling organizations to easily **DEFINE, DISCOVER, COLLABORATE, PROTECT** and **TRUST** their data.

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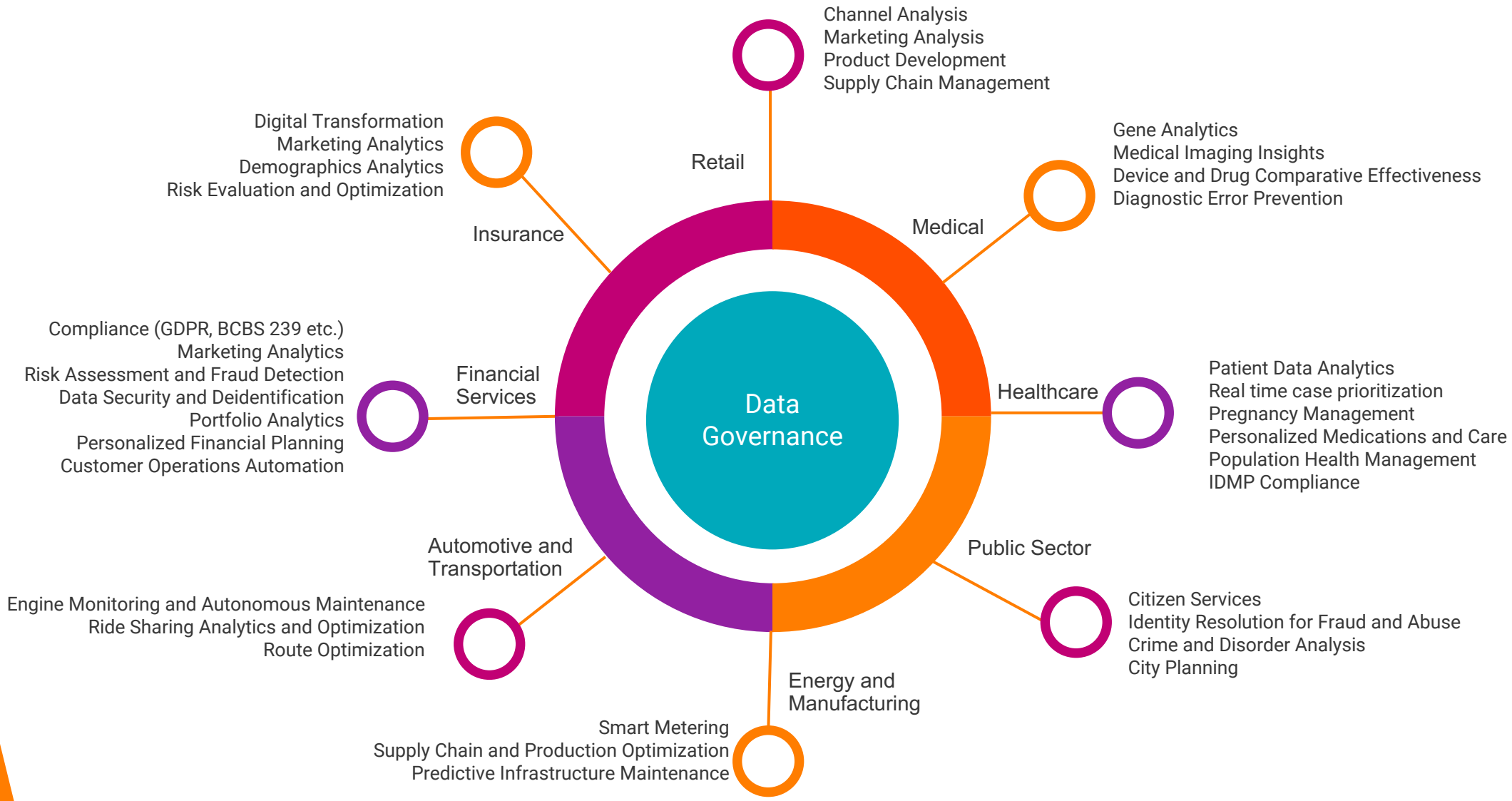
Portfolio of use cases



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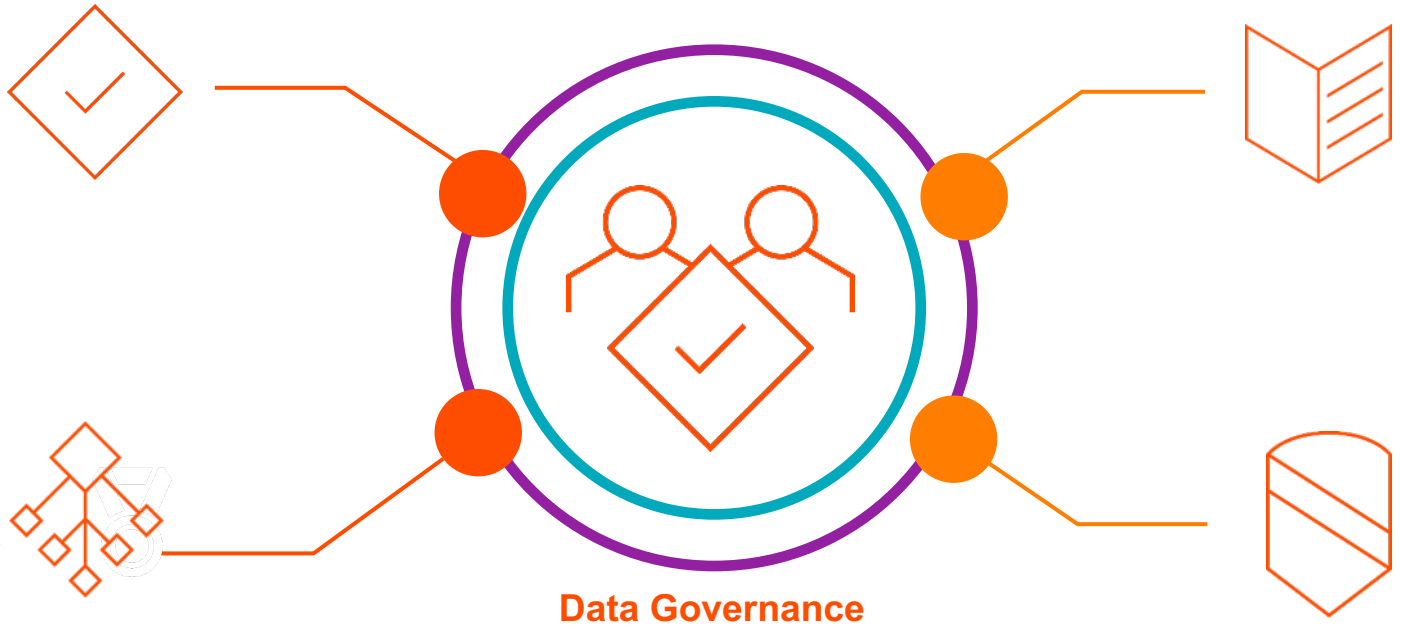
Informatica Enterprise Data Governance Solution

The Core, Modular, Unified Platform for All Data Governance Use Cases



Quality
Informatica Data Quality
Measure data quality metrics and scorecards

Master
Master Data Management
Repository of trusted master and reference data

Data Governance
Axon Data Governance
Business content of data, define processes, policies, ownership/stewardship and enable your non-technical consumer the ability to understand and access data.

Catalog
Enterprise Data Catalog
Discover what's being defined. E.g. Schemas, Tables, Columns, etc.

Privacy
Data Privacy Management
Enforce policies, report on risk, search subject registry, breach analysis, etc.

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Key Questions to Answer (using the 'Person' entity as an example)

We need to build a foundation to support business stakeholders' needs

We need a platform that will:

1. Capture definitions and business rules about our citizens
2. Discover and document/catalog locations of citizen data across multiple data sources/agencies' repositories
3. Clean, de-duplicate and standardize citizen data such as addresses
4. Pull together and integrate citizen data from multiple source systems
5. Observe Privacy and Security Rules and Regulations

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What are some of your Data Ecosystem Challenges/Pain Points?

Find Data and Metadata

- Where is all my PHI/PII Data for a Specific Customer/Citizen?
- Where is the data for all my other Regulatory Compliance Reporting?
- Are compliance requirements observed or included in my analytics and reports?
- Are business and data rules observed and included in my analytics and reports?
- What has happened to my data from the time it was created to when it was consumed?
- How do I build a data dictionary and capture my data taxonomy?

Document Business Definitions and Rules

- How do I define Customer and Product the same way across my enterprise?
- What are my business and data standards and rules/definitions?
- How do I manage all these definitions, and not in EXCEL?
- How do I give business users access to this glossary of terms and definitions?
- How can I see all data sources for one data element?
- How many data domains and dimensions is a data element in?
- Who are our data owners and business and data stewards?
- How do I document tribal knowledge?
- How do I manage all my Data Quality and Business Rules in one place?
- How do I document compliance rules?

Addressing Real Business Pain Points

- Every time I run this report, I get a different result. Why is that?
- How can I trust this financial report? Where did the data come from? Were there any changes or transformations applied on its way to my report?
- Has this data been validated and certified?
- Who owns the data and what domain(s) does it come from?
- Which source do I trust has the right data for my analytics?
- Is the data set complete as per my requirements?
- How can I know everything about my customers/clients/citizens?
- How do I know all the citizens on a household or at one address?

What Data Management Processes will help me with these Pain Points?

- Data Lineage
- Metadata Management
- Data Stewardship
- Data Profiling
- Data Security/Privacy
- Data Governance

- Data Stewardship
- Data Governance
- Data Lineage

- Data Quality
- Data Lineage
- Data Governance
- Master Data Management

What Informatica Tools do I need to enable these Data Management Processes?

- EDC
- AXON
- Data Privacy

- EDC
- AXON

- EDC
- IDQ
- AXON
- MDM – C360

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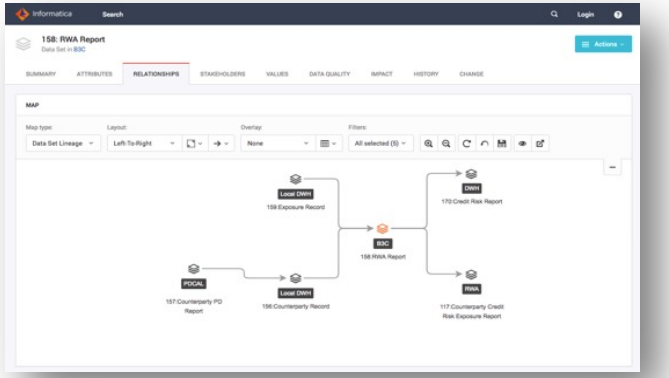
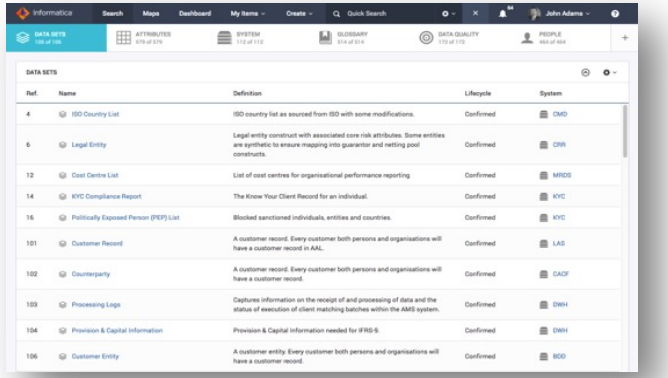
AXON for Business Users

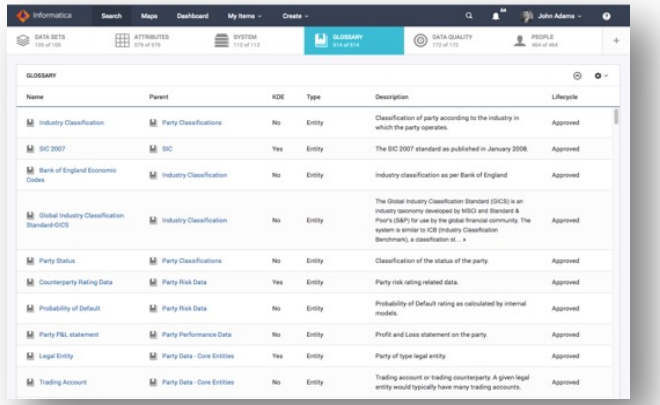
Data Lineage and Impact Analysis



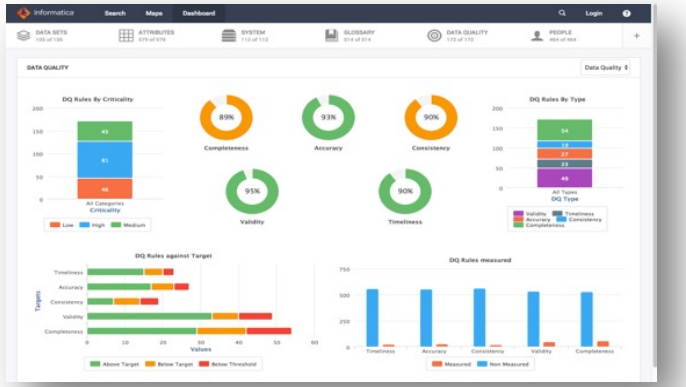
Business Glossaries



Search for People/Systems



Data Quality Scorecards



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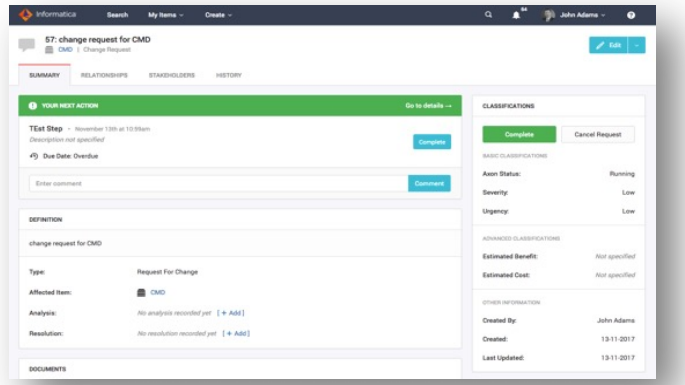
Business Users

Make Change Request



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What can a Business User do with Informatica AXON?

Business User

- Identify what data is used to comply with certain regulations
- Understand the business definitions of existing data
- Identify the people responsible/involved in data governance
- Understand the quality of the data available today
- Identify and report data lineage
- Understand what data is required to enable existing business processes
- Identify and understand the relationship between existing systems and the data used by the business

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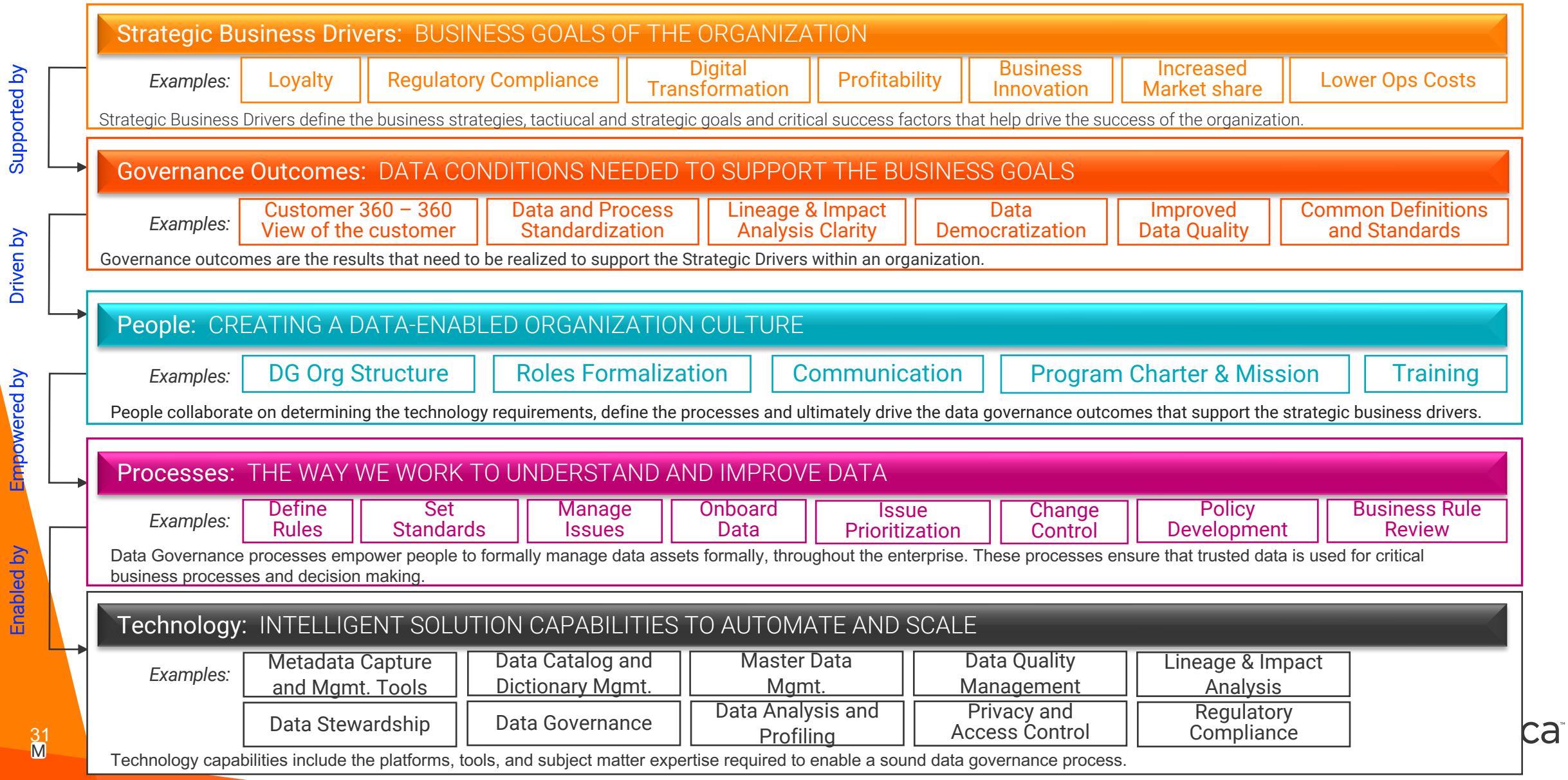
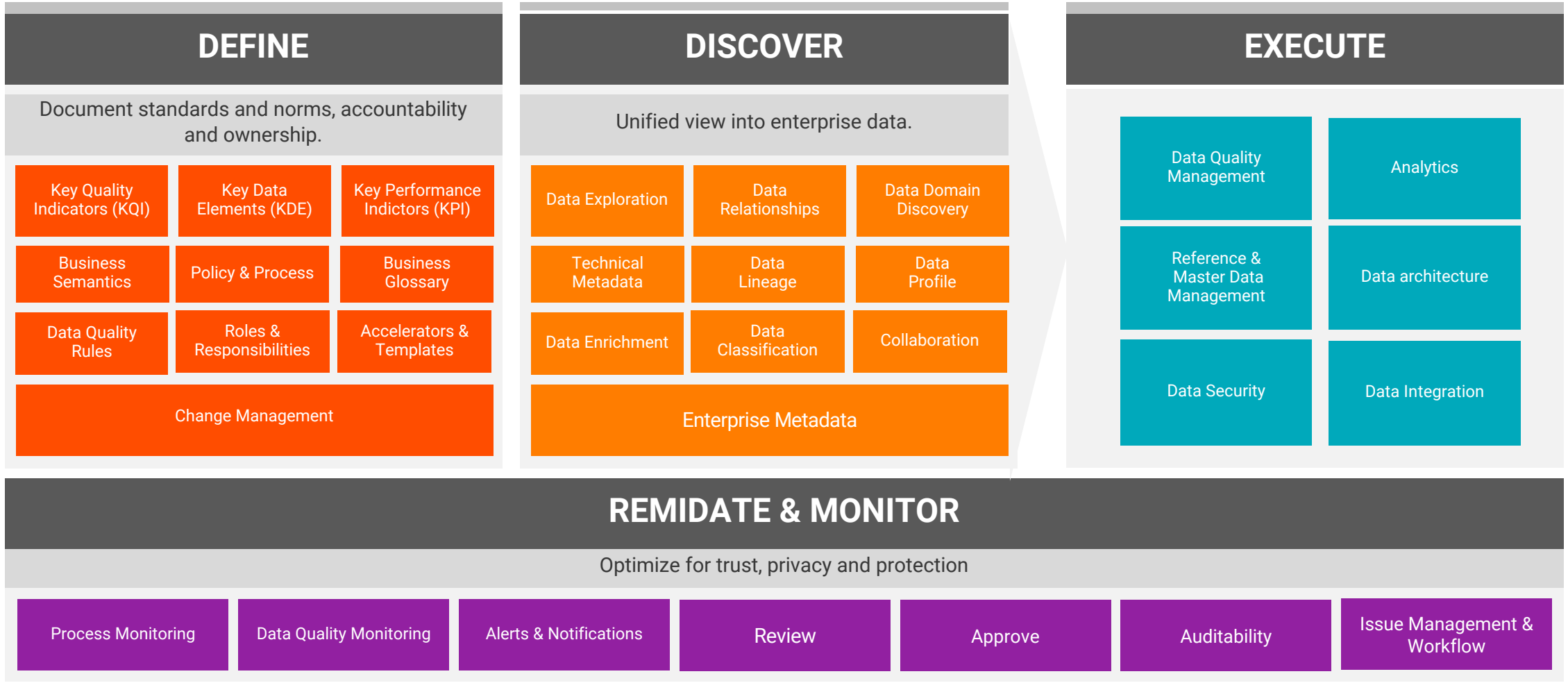
Data Governance Framework

A structured approach to designing your data governance program



Architecture to Support Data Governance Framework



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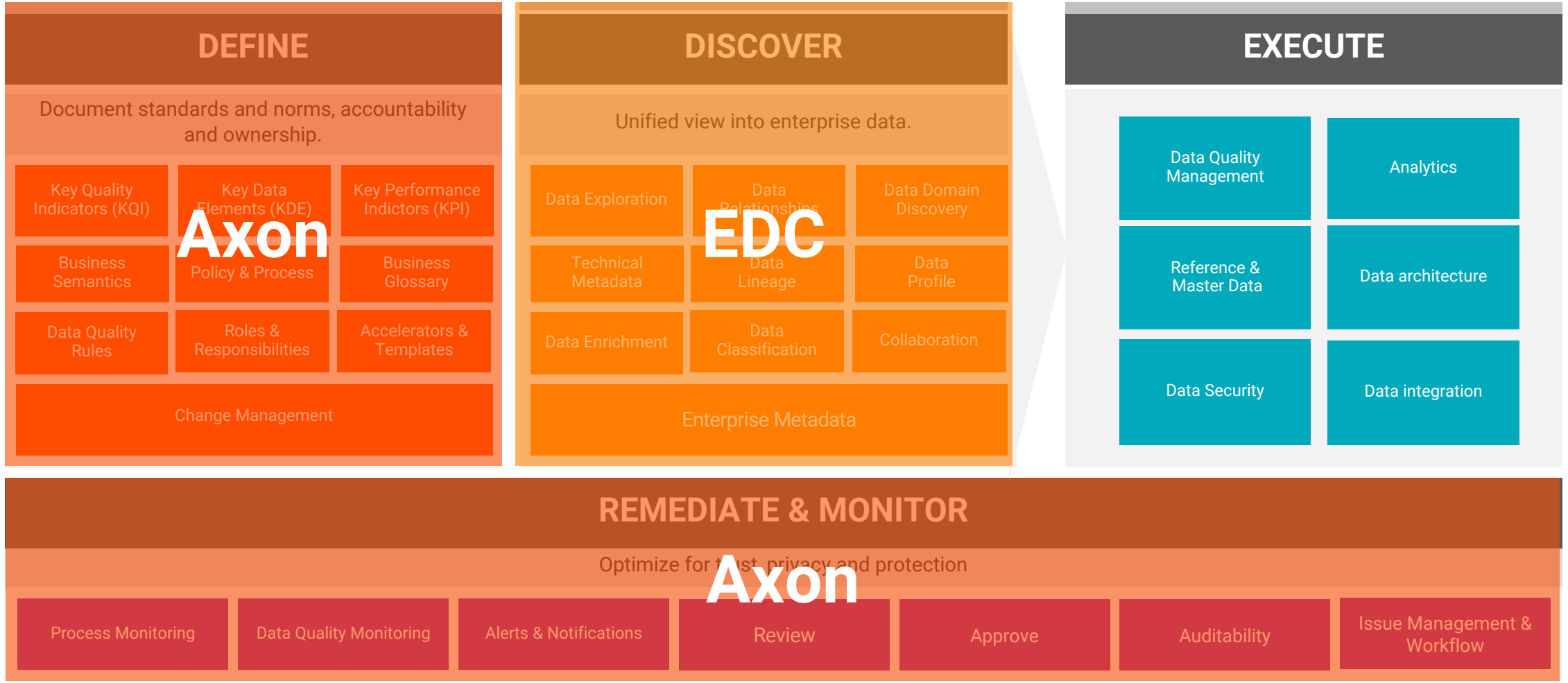
Architecture to support Data Governance framework



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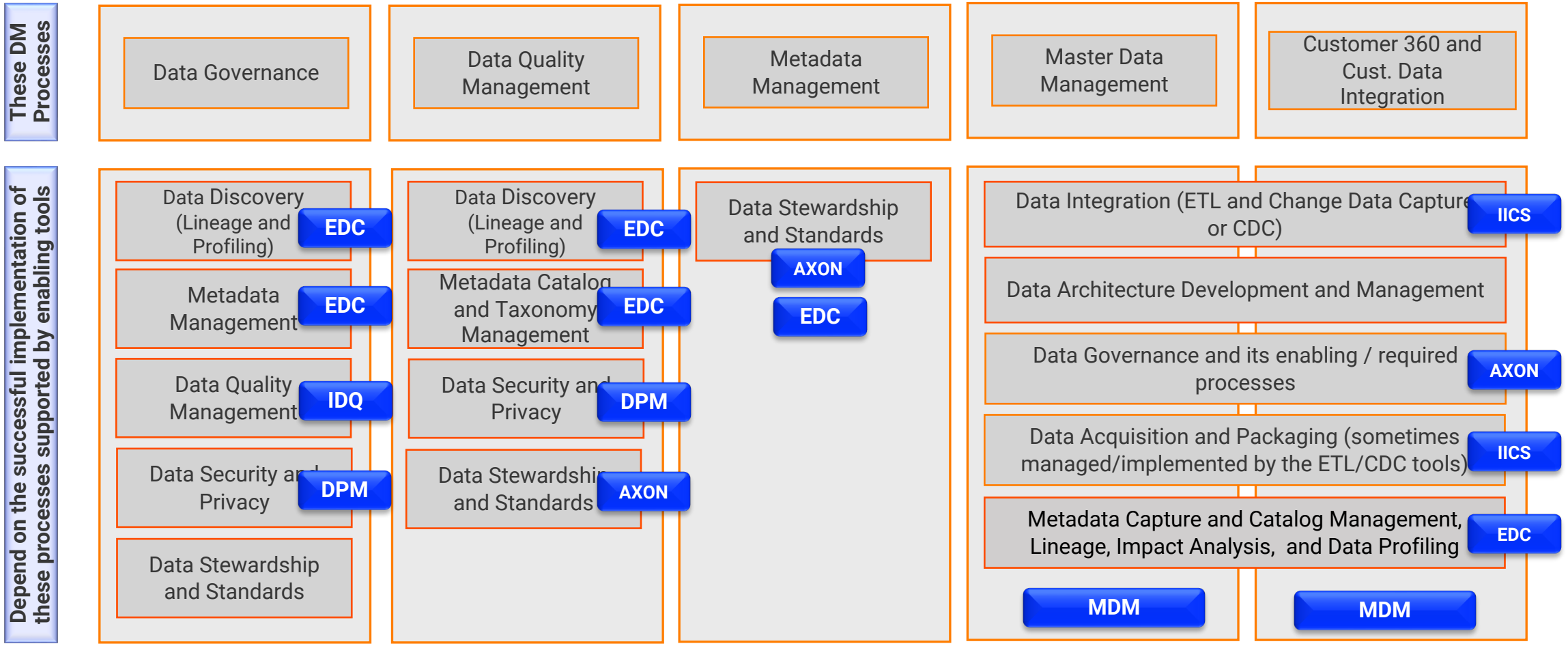
Data Management Processes interdependencies

You need to implement and enable key foundational data capabilities before others can be started
Informatica can provide a number of key enabling tools (represented by the blue boxes)



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How do key DG Program/Org Roles map to our DG Solution Tools?

This is an initial list of roles and the tools they usually leverage

Role or Function / Enabling DG Solution Tool	AXON	EDC	IDQ	DPM	PWC	MDM	Other
Business Steward	★						
Data and Business Stewards (Part of the DG working group)	★	★	★	★		★	
Business Analyst	★					★	
Data Engineer – Data Quality Architect and Developers/Testers			★		★		
Data Engineer – MDM Architect and Developers/Testers						★	
Data Engineer – Data Security and Access - Data Privacy Architect and Developers				★			
Domain / Subject Area / Data Owners	★						
Solution Architect							★
Data Strategy Advisory Architect							★
DG Domain & Tool Specialist (part of DG working group)	★	★	★	★	★	★	
System Admin (HW and SW sizing and config SMEs for Dev R&D sandboxes)							★
Infrastructure architect							★
DBA							★
Data Modeler							★
DG Tool Manager/Config SME/Admin (one per tool)	★	★	★	★	★	★	
Data and ETL Architects					★		★

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