

Applied A.I. Solutions

Foundations of Data Management

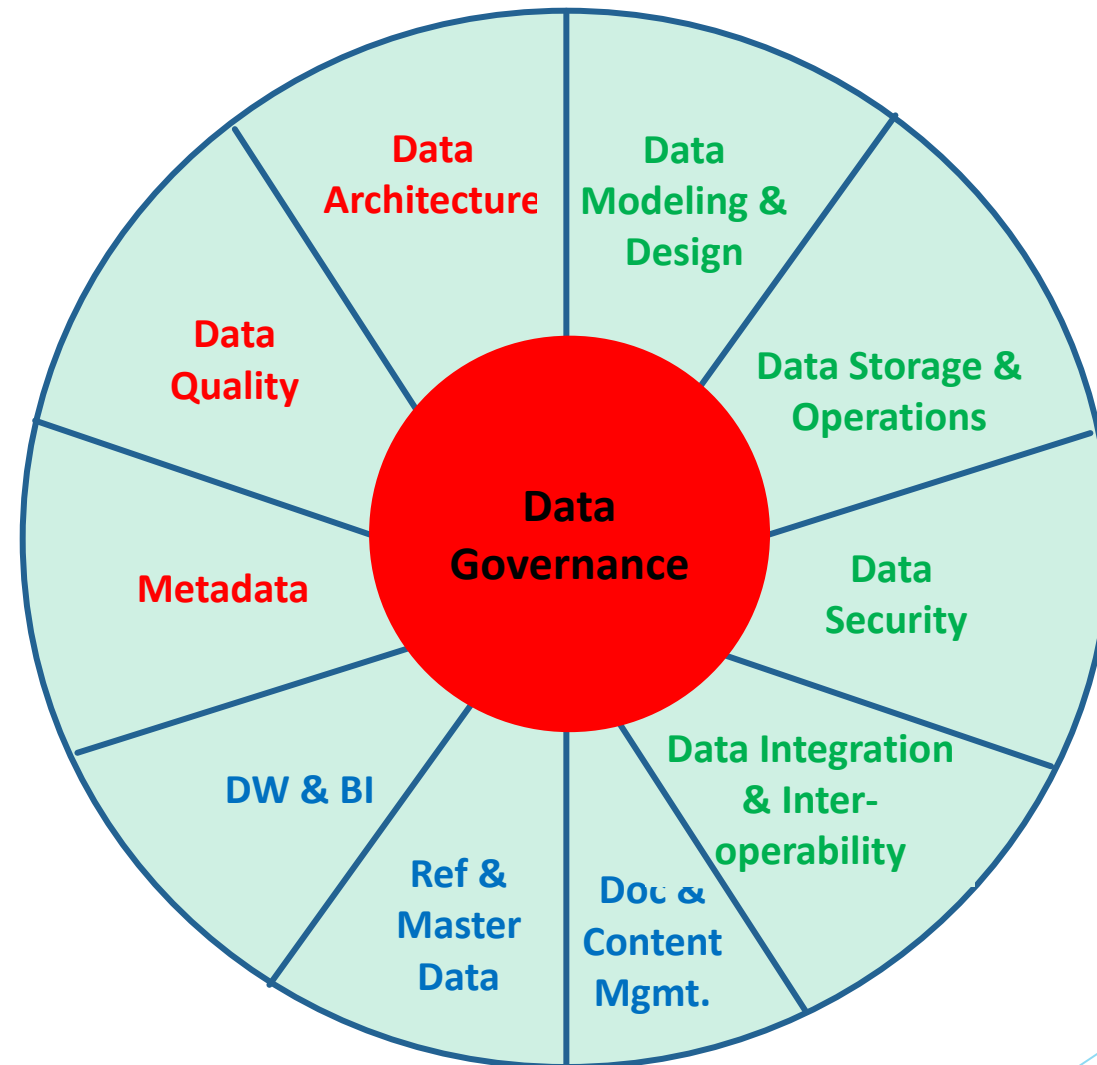
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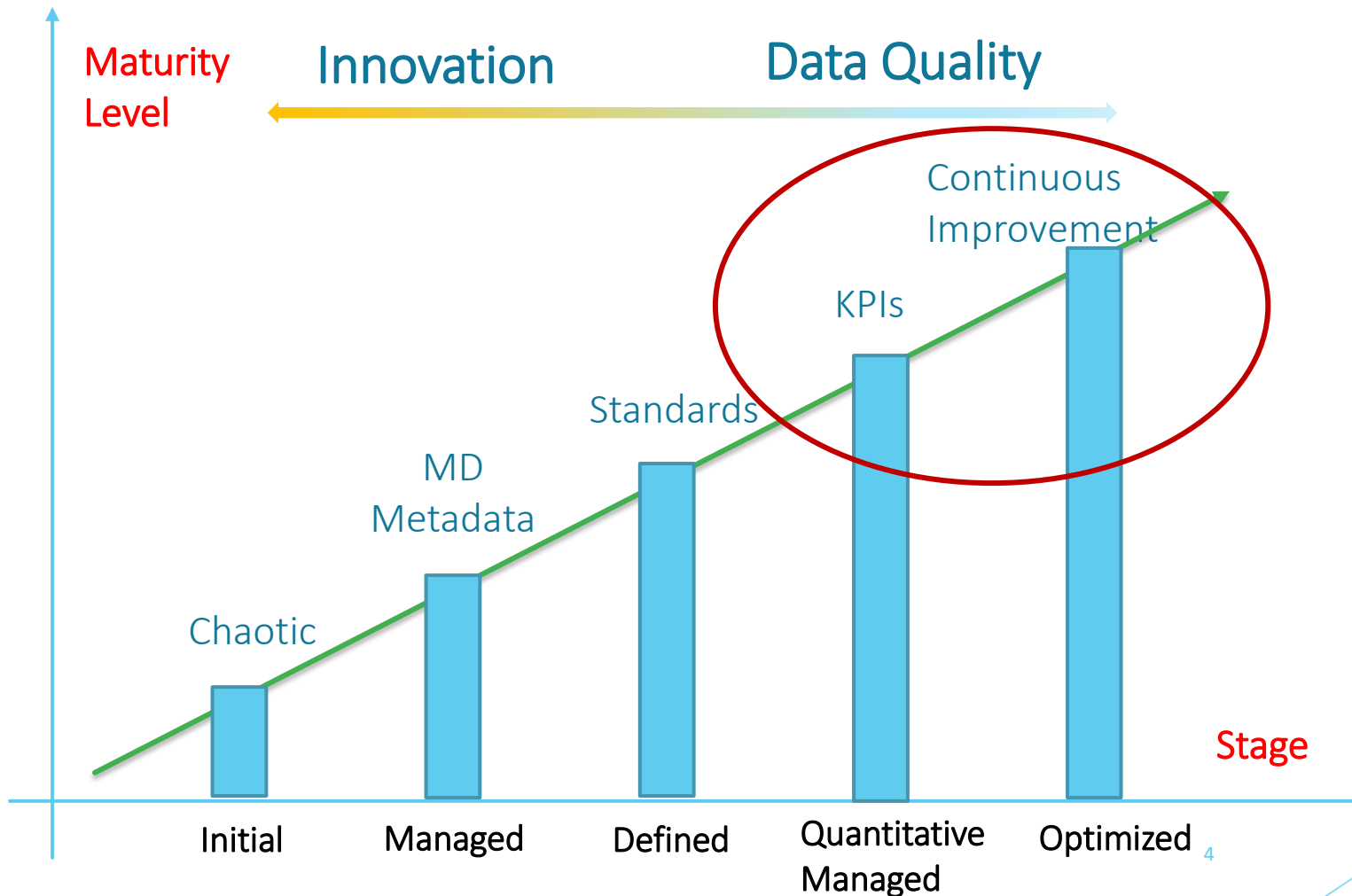
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DATA GOVERNANCE

The DAMA Wheel



Data Management Maturity Model



Introduction

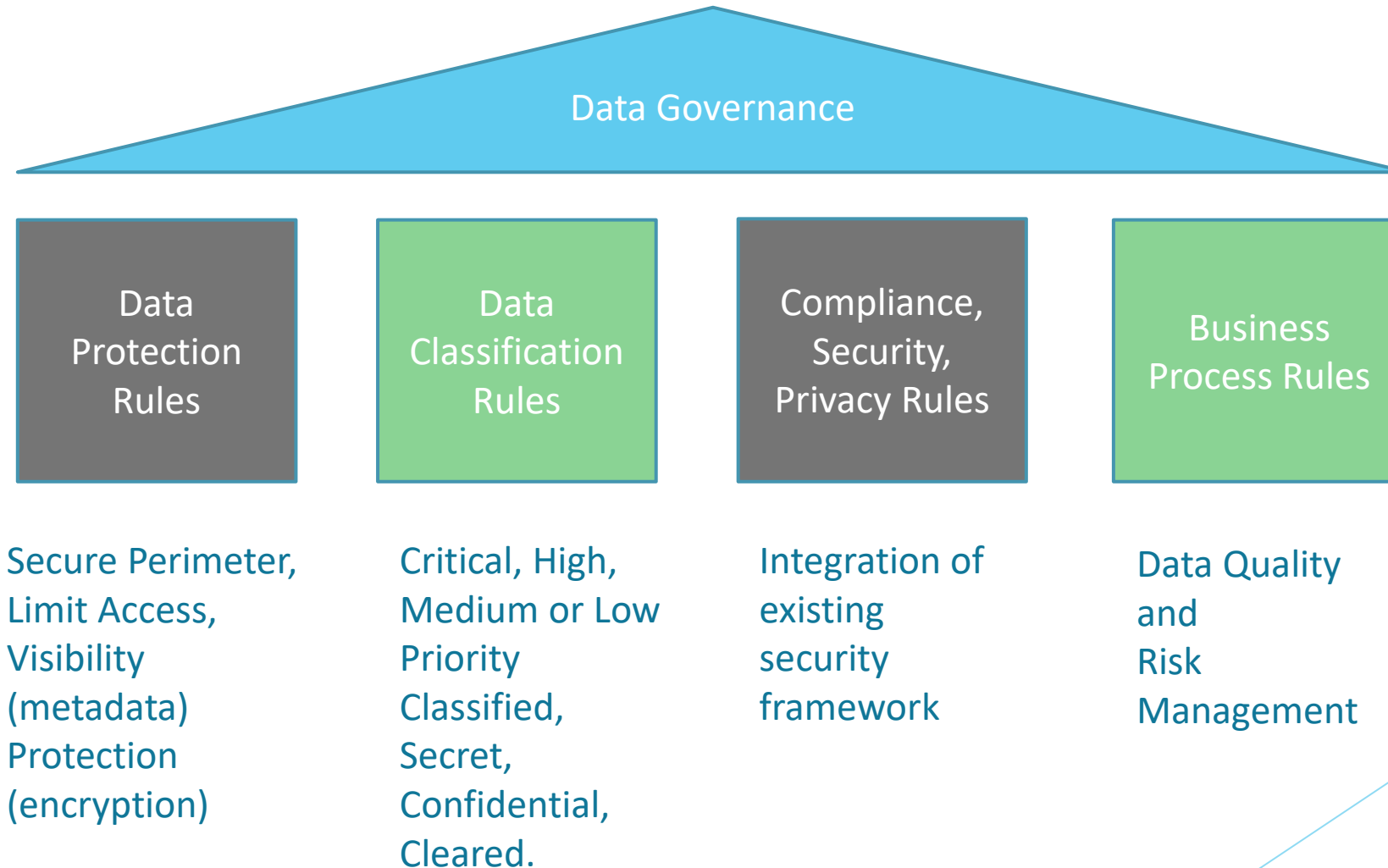
- Data Governance is defined as the exercise of authority and control (planning, monitoring, and enforcement) over the management of data assets.
- Data Governance guides and oversight all other data management functions.

- **Data Governance** is a system of rights and accountabilities, and the enforcement of authority over the management of all data and data-related assets of the organization.
 - ✓ who can take what actions
 - ✓ with what information and when
 - ✓ under what circumstances
 - ✓ using what methods

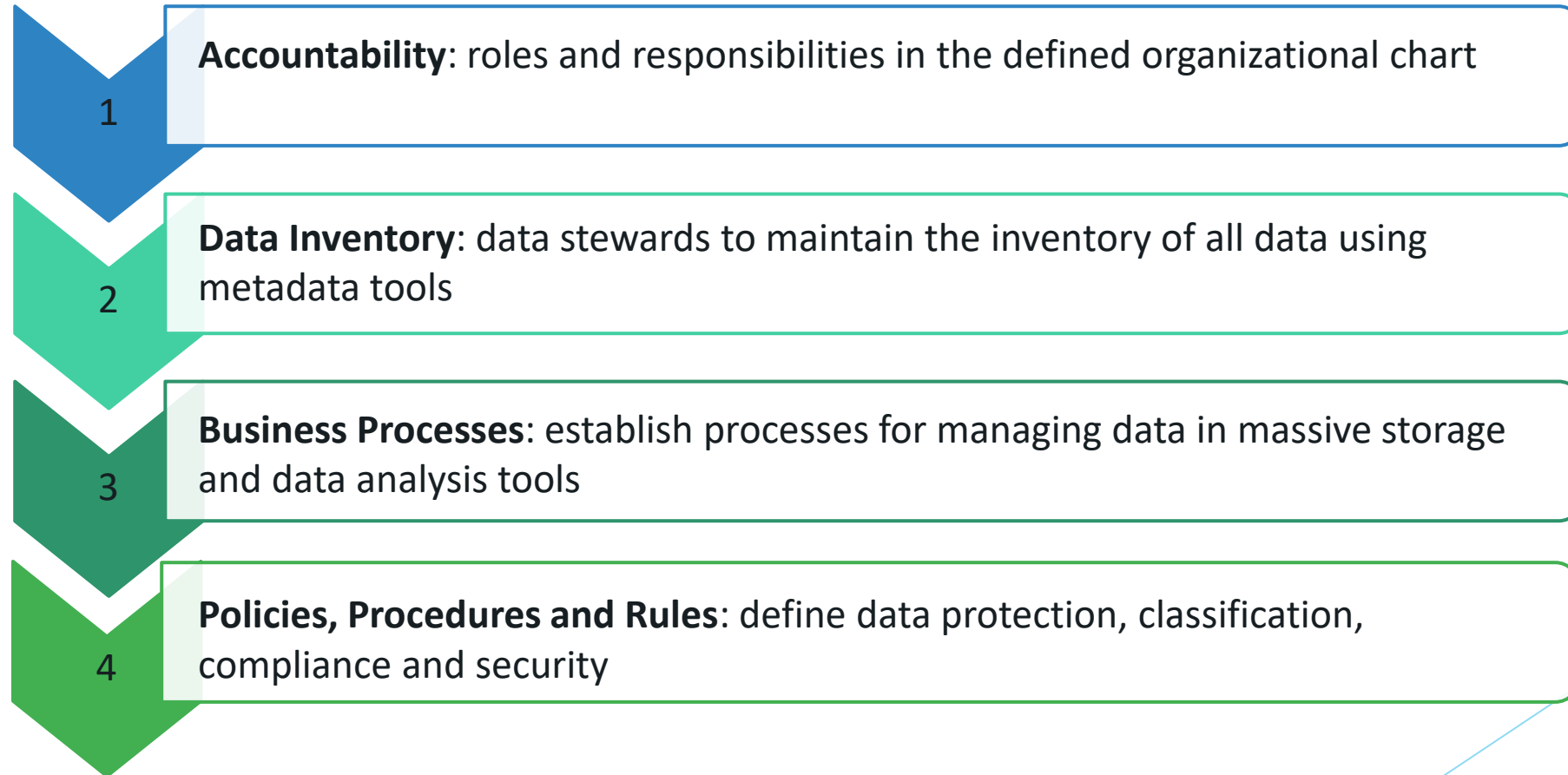
Data Governance Program

1. Strategy
2. Policy
3. Standards and Quality
4. Stewardship
5. Compliance
6. Issue Management
7. Data Management Projects
8. Data Asset Valuation

4-pillar Framework



Strategic Alignment



Data Governance Framework

Definition

The exercise of authority, control, and shared decision-making (planning, monitoring, and enforcement) over the management of data assets.

Goals

1. Enable an organization to manage its data as an asset
2. Define, approve, communicate, and implement principles, policies, procedures, metrics, tools, responsibilities for DM
3. Monitor and guide policy compliance, data usage and management activities



Business Drivers

- DG program must be:
 - Sustainable
 - Embedded in software development, analytics, MDM, risk management
 - Measured

Principles

- Leadership and Strategy
- Business-driven
- Shared responsibility
- Multi-layered
- Framework-based
- Principle-based

Inputs

- Business, IT and Data Strategies & Goals
- Policies & Standards
- Culture Assessment
- Data Maturity Assessment
- IT Practices
- Regulatory Requirements

Activities

1. Define DG for the Organization
2. Perform Readiness Assessment
3. Perform Discovery and Business Alignment
4. Develop DG Strategy
5. Develop Organizational Touch Points

Deliverables

- Data and Data Governance Strategy
- DG Principles, Policies, Processes
- Implementation Strategy, Operations, Communications Plans
- Recognized Data Value
- Scorecard and Maturing DM Practices

Suppliers

- Business Executives
- Data Stewards
- Data Owners
- SME
- Maturity Assessors
- Regulators
- Enterprise Architects

Participants

- Steering Committee
- CIO, CDO, CD Stewards
- Data Stewards, Data Architects, DM Professionals
- Data Governance Bodies
- Compliance, Audit Teams
- PMO

Consumers

- Data Governance Bodies
- Project Managers
- Compliance Team
- DM Stakeholders
- Business Management
- Architecture Groups
- Partner Organizations

Technical Drivers

Techniques:
methods, procedures

- Messaging
- Contact list
- Logo

Tools: software

- Website
- Glossary
- Workflow
- Document Management
- Scorecards

Performance Metrics

- Compliance to regulatory and data policies
- Value
- Effectiveness
- Sustainability

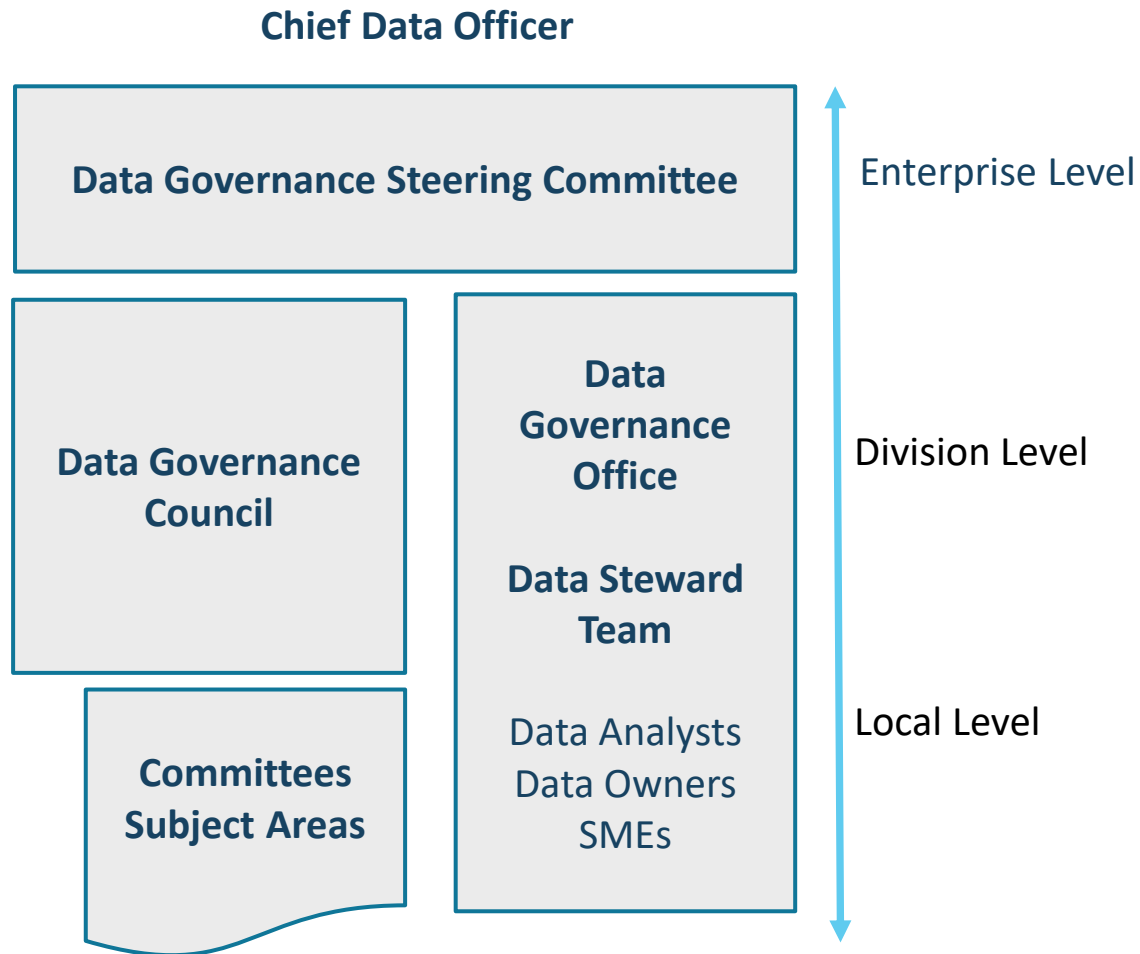
DG drivers focus on

- **Reducing risks:** Risk management, Data Security, Privacy
- **Improving processes:** Regulatory Compliance, Data Quality, Metadata Management

DG Concepts

- Data-centric Organization
- Data Governance Organization
- DG Operating Models (centralized, replicated, federated)
- Data Stewardship
- Data Policies
- Data Asset Valuation

Data Governance Model



Data Stewardship

Label to describe accountability and responsibility for data and processes that ensure effective control and use of data assets.

Main activities

- Creating and Managing Core Metadata
- Documenting rules and standards
- Managing Data Quality issues
- Executing Operational DG activities

Types of Data Stewardship

A steward manages data assets on behalf of others and in the best interest of the organization (McGilvray, 2008)

- Chief Data Steward/Officer
- Executive Data Stewards
- Enterprise Data Stewards
- Business Data Stewards
- Data Owner
- Technical Data Stewards
- Coordinating Data Stewards

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Data Policies

Data Policies are directives that codify principles and management intent into fundamental rules governing the...

- Creation
- Acquisition
- Integrity
- Security
- Quality
- Use of data and information

Data Asset Valuation

- Process of understanding and calculating the economic **value** of data to a any given organization
- Data ONLY brings value when it is used
- When it is used, data also creates **costs** related to risk management
- **Value of Data = (Benefit – Cost)** of using data **> 0**

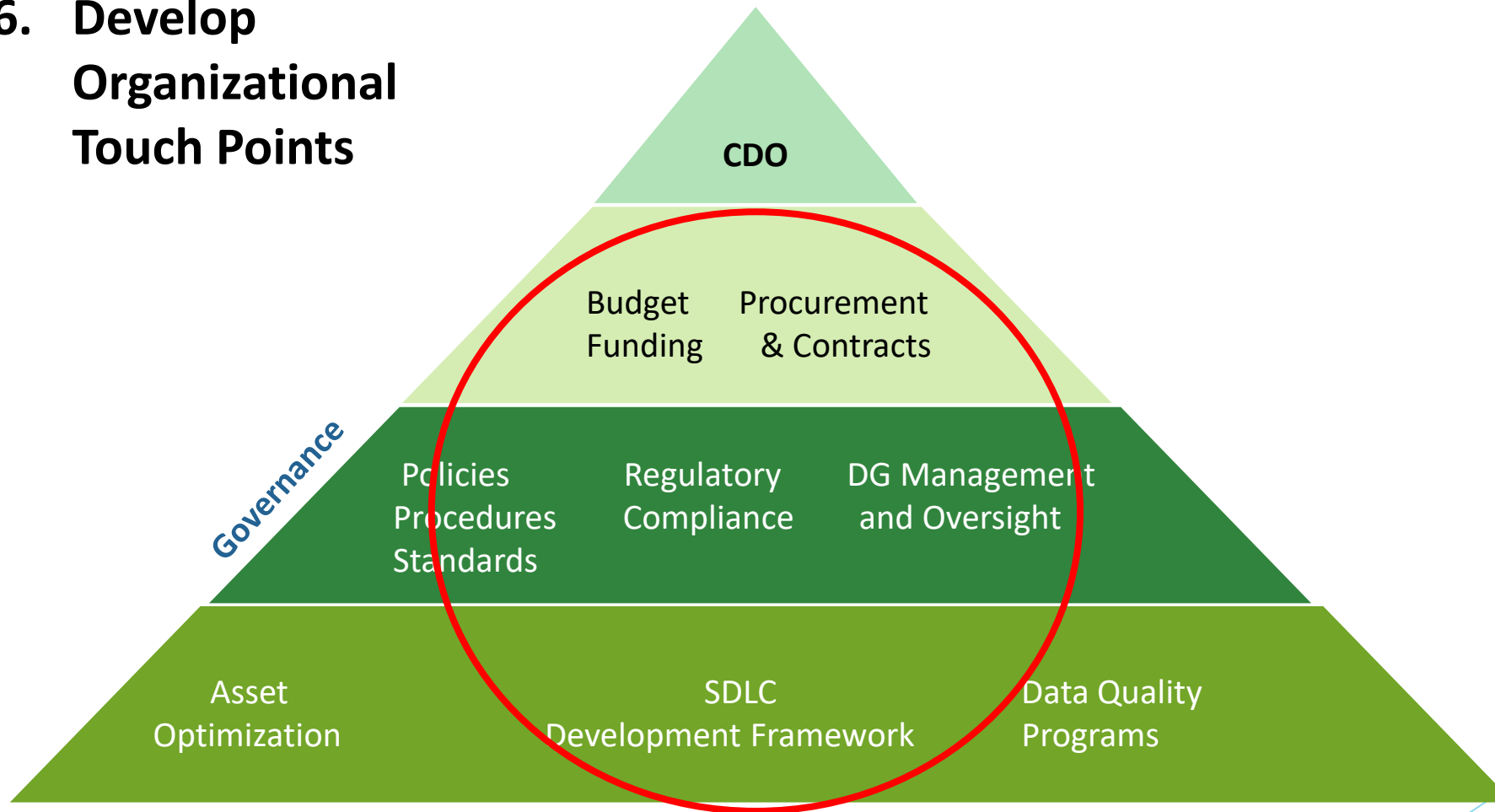
Data Asset Valuation - examples

- Market Value
- Identified Opportunities
- Selling and Buying Data
- Recovery Cost
- Risk Cost

Activities

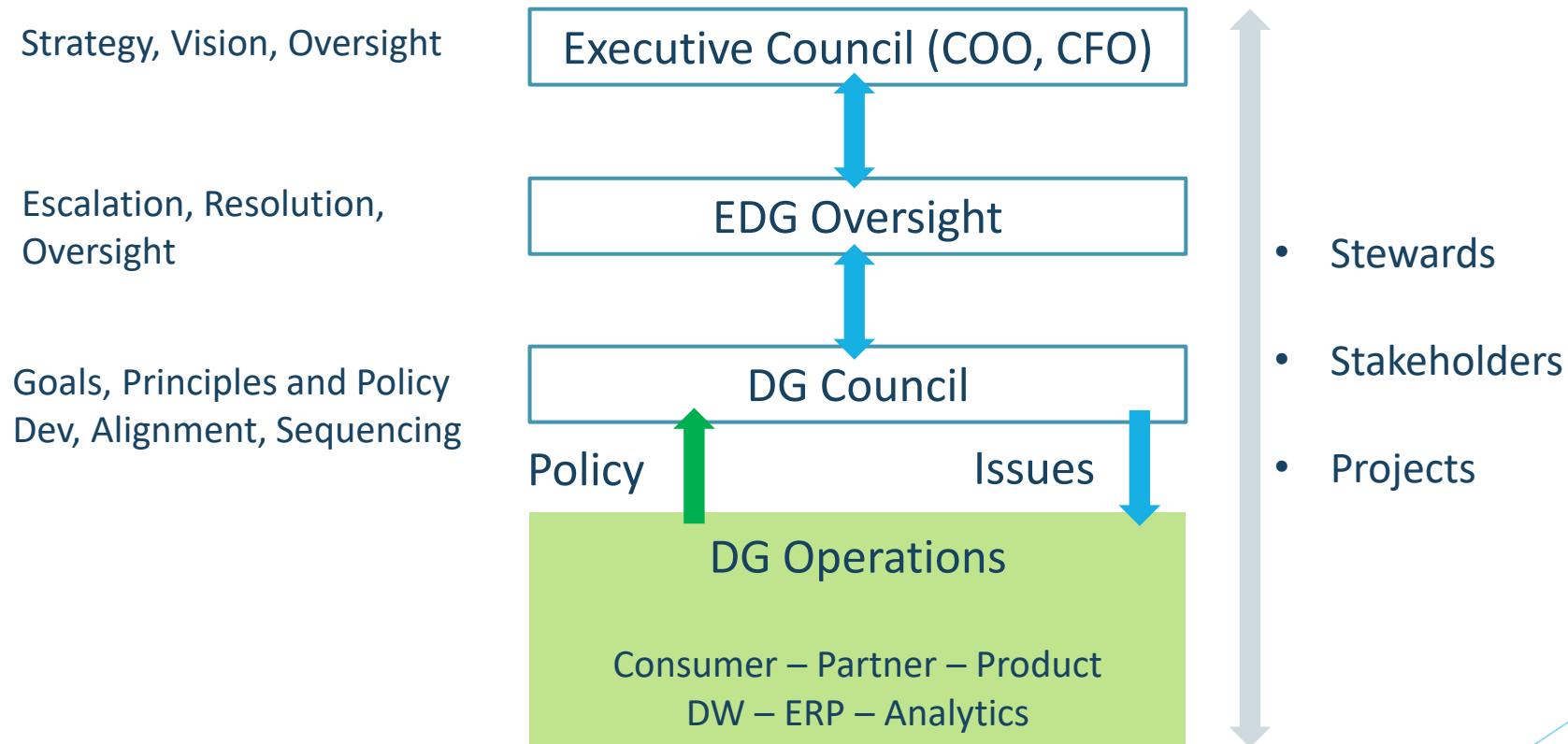
1. Define DG for the Organization
2. Perform Readiness Assessment
3. Perform Discovery and Business Alignment
4. Develop DG Strategy
5. Define Goals, Principles, and Policies

6. Develop Organizational Touch Points



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7. Define DG Operating Framework



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Other Activities

8. Underwrite DM Projects
9. Engage Change Management
10. Engage in Issue Management
11. Assess Regulatory Compliance Requirements
12. Implement DG
13. Sponsor Data Standards and Procedures

- 14. Develop a Business Glossary
- 15. Coordinate with Architecture Groups
- 16. Sponsor Data Asset Valuation
- 17. Embed DG

3. TOOLS and TECHNIQUES

- Online Presence / Websites
- Business Glossary
- Workflow Tools
- Document Management Tools
- Data Governance Scorecards

4. IMPLEMENTATION GUIDELINES

- Readiness Assessment / Risk Assessment
- Operating Plan and Enterprise-wide Implementation Roadmap
- Organizational and Cultural Change
- Adjustment and Communication

5. Metrics

- a. Value
 - Contribution to business objectives
 - Reduction of risk
 - Improved efficiency in operations
- b. Effectiveness
 - Achievement of Data Governance goals and objective
 - Extent stewards are using the relevant tools
 - Effectiveness of communication
 - Effectiveness of education / training
 - Speed of change adoption
- c. Sustainability
 - Performance of policies and process
 - Conformance to standards and procedures
 - Conformance to regulatory requirements

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