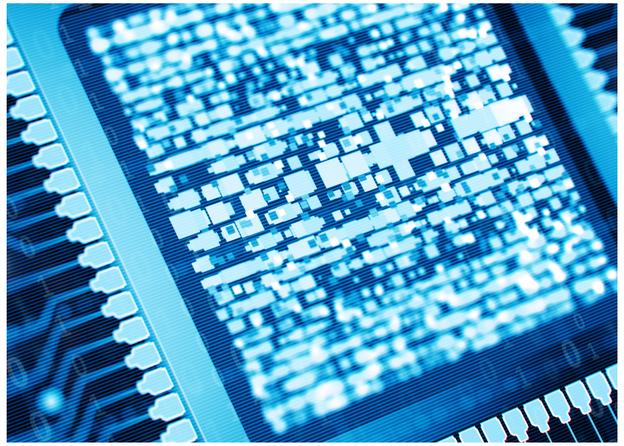
Data Management Strategy 2019-2022

City of Dallas



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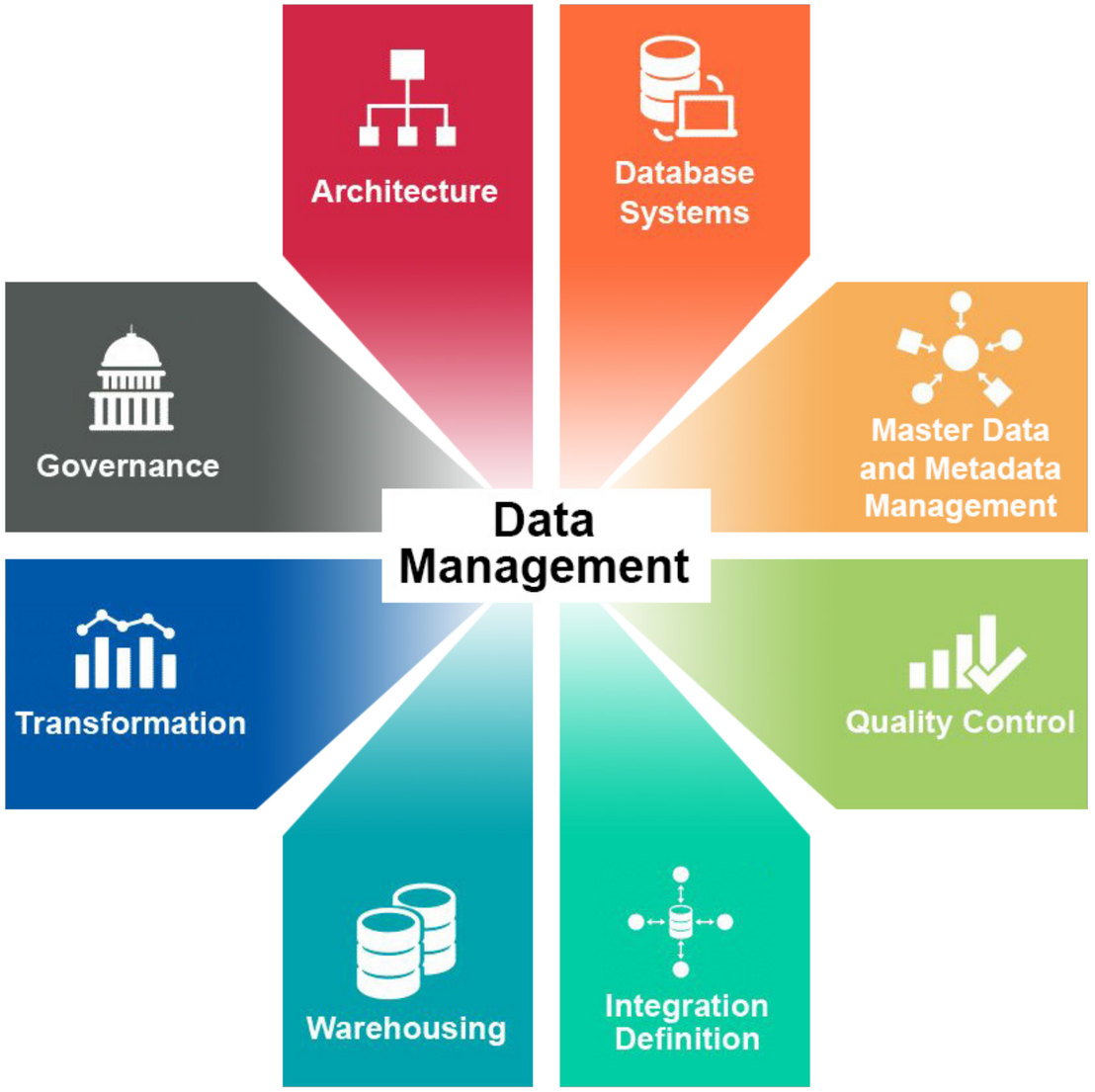
Executive Summary

The Data Management Strategy (DMS) is the process of creating strategies/plans for handling the data created, stored, managed and processed by an organization. The City's DMS is tightly coupled with the IT Governance & Project Management process that aims to create and implement a well-planned approach in managing the City's data assets.

The primary objective in establishing the data management strategy is to develop a business strategy that ensures that data is:

- Collected, stored, consumed and processed in a standard manner required by the City.
- Controlled, monitored, assured and protected using data governance and security.
- Stored, categorized and standardized using defined and known data classification and quality frameworks

The goal for Data Management Strategy is to help the City gain the best benefits from its data and data assets.



Data Management Strategy Overview

Organizations make decisions about how they engage with, operate on and leverage their data - at an enterprise or project level. Organizations that form a holistic point of view in adopting an enterprise-grade data strategy are well positioned to optimize their technology investments and lower their costs. Such a strategy treats data as an asset from which valuable insights can be derived. These insights can be used to gain a competitive advantage by being integrated into business operations.

The City of Dallas aims for a smooth transition to becoming data driven — aligning operational decisions to the systematic (and automatic as much as possible) interpretation of data needs a plan for advancing its digital transformation journey and treating data as an asset. The COD data management strategy (DMS) is the first step toward enabling such a plan and increasing the City's Analytics IQ.

A DMS ensures that all data initiatives follow a common method and structure that is repeatable. This uniformity enables efficient communication throughout the enterprise for rationalizing and defining all solution designs that leverage data in some manner. Creating a data strategy is both achievable and valuable. It's also an essential component of the City's digital transformation journey.

Common drivers for an effective DMS:

• Unification of Department and IT perspectives. A common data strategy ensures that the department and IT organizations are positioned as joint leaders of the company's direction by understanding each other's needs, capabilities and priorities.

• Enterprise-wide alignment of vision and guidance on leveraging data as an asset. Such alignment, captured in a data strategy, ensures that different groups in the enterprise view data-related capabilities with consistency, which reduces redundancy and confusion.

• Definition of key metrics and success criteria across the enterprise. The data strategy defines "success" and "quality," thus reinforcing consistency for how initiatives are measured, evaluated `and tracked across all levels of interacting organizations.

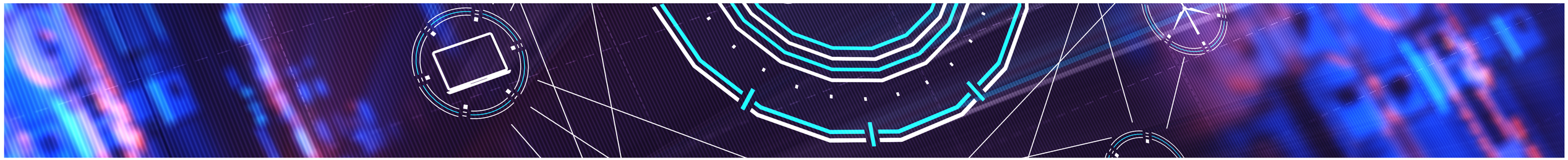
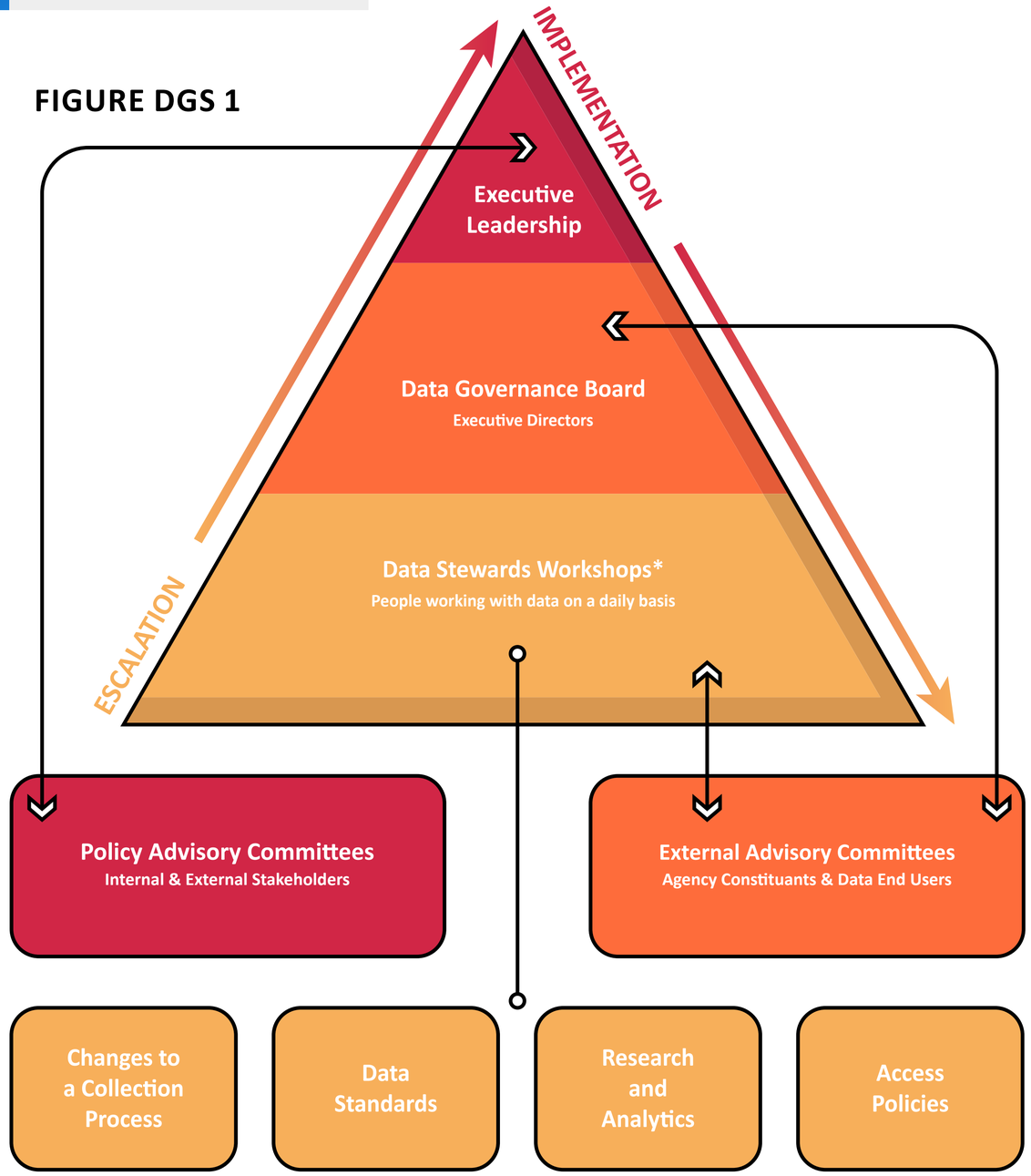


FIGURE DGS 1



Data Governance Structure

From the execution side, an established Data governance touches every part of the data management process down to the individual technologies, databases and data models. The governance process also affects the processes people use to create and retain data and how these rules are replicated within applications to help make smarter decisions faster.

The effective part about a data governance is that the City never has to start from scratch and there are typically pockets of data governance underway, and new efforts can tap into those to find leaders, supporters and advocates.

Figure DGS 1 is the high-level layout of the data governance committee structure. Escalation flows up the pyramid with the executive leadership having decision-making authority, and implementation flows down the pyramid with the data stewards being the subject matter experts and best suited to implement processes and changes to data.

This structure allows the City to clearly identify decision-making authority at all levels.

Why do Data Management?

Data Management helps with a tighter information control that builds opportunities and reduces risks of data breaches, privacy violation, distributing bad data.

• Information quality - Having enterprise wide data standards, definitions and coordinated effort will improve data quality.

• Ability to integrate - Well-defined data management processes allow an organization to be proactive and integrate with organizational changes or developments at a reduced cost and with limited burden.

• Performance management and business intelligence - Defining clear ownership of data, controlling data quality and implementing data management will reduce the costs and complexity of performance management and business intelligence.

• Establish new rules and processes - Creating and implementing standard, formalized rules and processes is key to ensuring data are trusted, secure and ultimately fit for business usage.

• Align or modify the existing rules and processes - Assessing existing rules and processes to ensure they are accomplishing the purpose intended and modifying them if needed.

• Richer data environment and regulatory compliance - Overall, data governance leads to a richer data environment and ensures regulatory compliance

1.
DATA

INFORM
“What happened?”

2.
INFORMATION

EXPLORE
“Why did it happen?”

3.
KNOWLEDGE

PREDICTIVE
“What will happen next?”

4.
WISDOM
(Scenario Planning)

PRESCRIPTIVE
“What’s the best we can do?”

Data Management and IT Governance

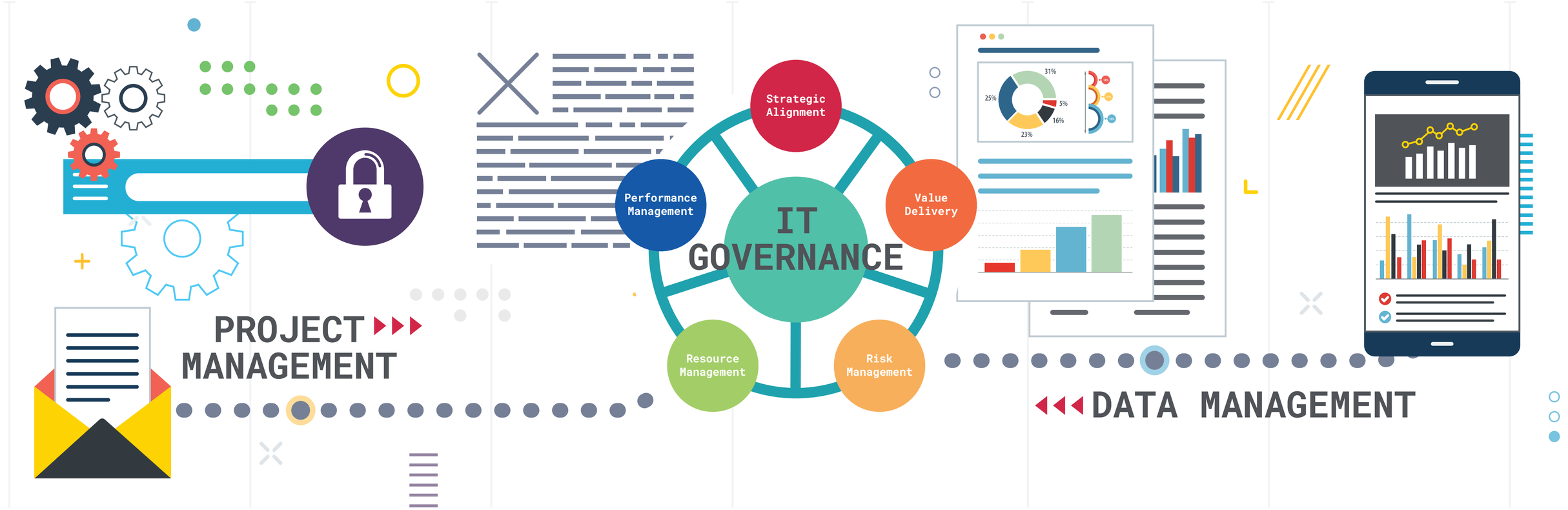
Data Management complements Project Management. Both exist under the overarching structure of IT governance.

• Project Management focuses on defining a portfolio of investments, setting performance objectives, and evaluating and managing risk for IT projects.

• Data Management focuses on creating a structure enabling an organization to align data efforts to business objectives, to support regulatory compliance and to manage risks associated with data.

• IT governance is the overarching structure that focuses on IT infrastructure, including managing resources and risks, to ensure IT efforts and solutions align with the City's mission and business goals.

To borrow an analogy commonly used by the data management community: IT governance focuses on the pipelines in the organization's IT infrastructure, data and project management focus on the water that flows through those pipelines.



Data Governance Framework

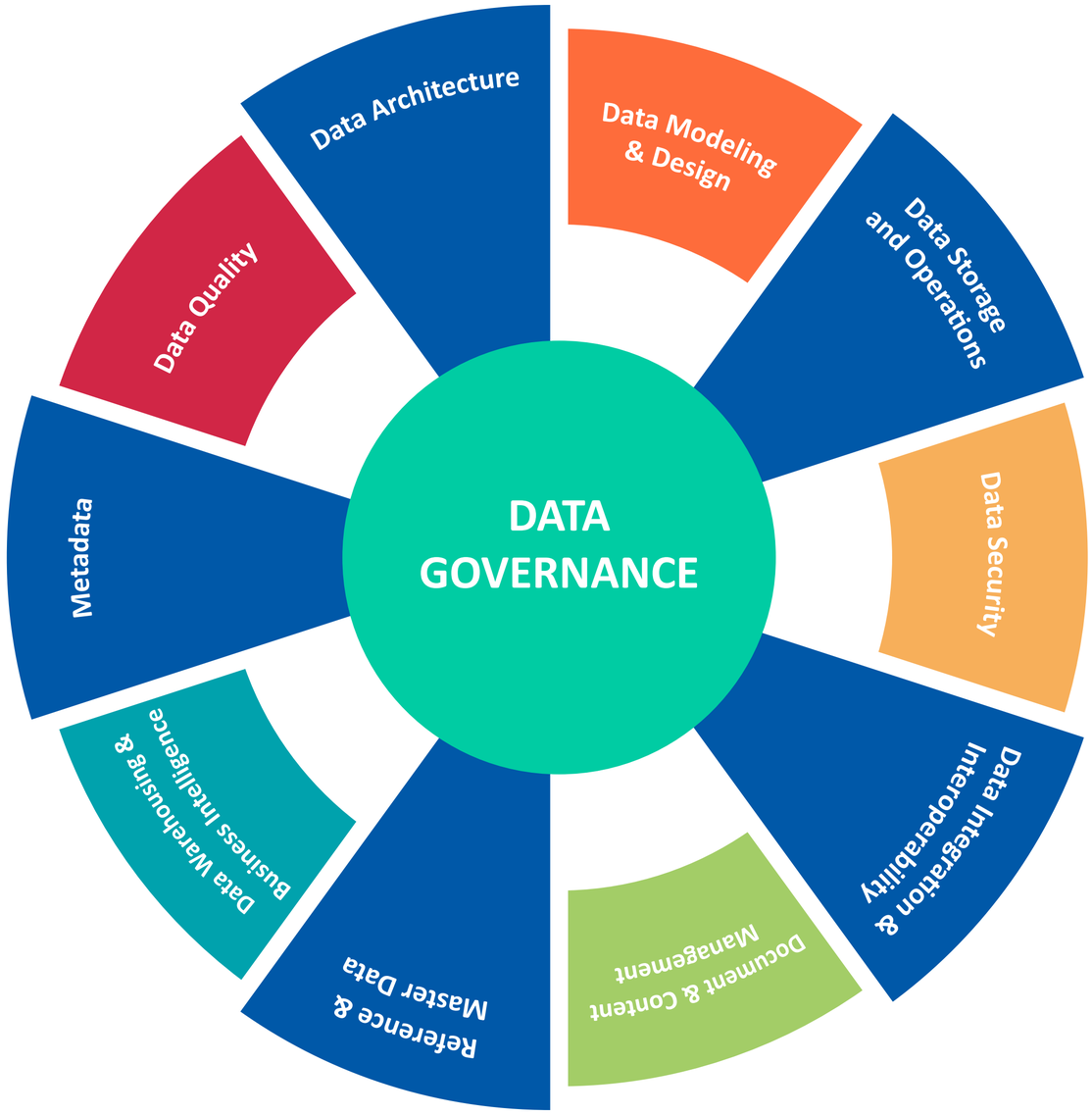
Managing the dynamic, ever-growing landscape of data technology and fluctuating City operations requires clear and consistent communication and guidance. A data Management strategy has to account for how an organization plans to mature its datacentric capabilities and enable new data- and analytics-based products and services to mature.

For the successful execution of such a roadmap adoption of industry standards is very crucial. The City of Dallas - Information Management group adopted the Data Management Association (DAMA) Framework for effective Data governance of City data. The DAMA is the global body for data management and lays out frameworks and standards that adopt to the changing landscape of technology.

A data governance centric framework allows the City to “decide how to decide” and helps to define overarching rules by coordinating, weighing and balancing the needs of all stakeholders through identifying:

- A decision-making process.
- Roles and responsibilities of department
- Rules and processes consistent across the enterprise

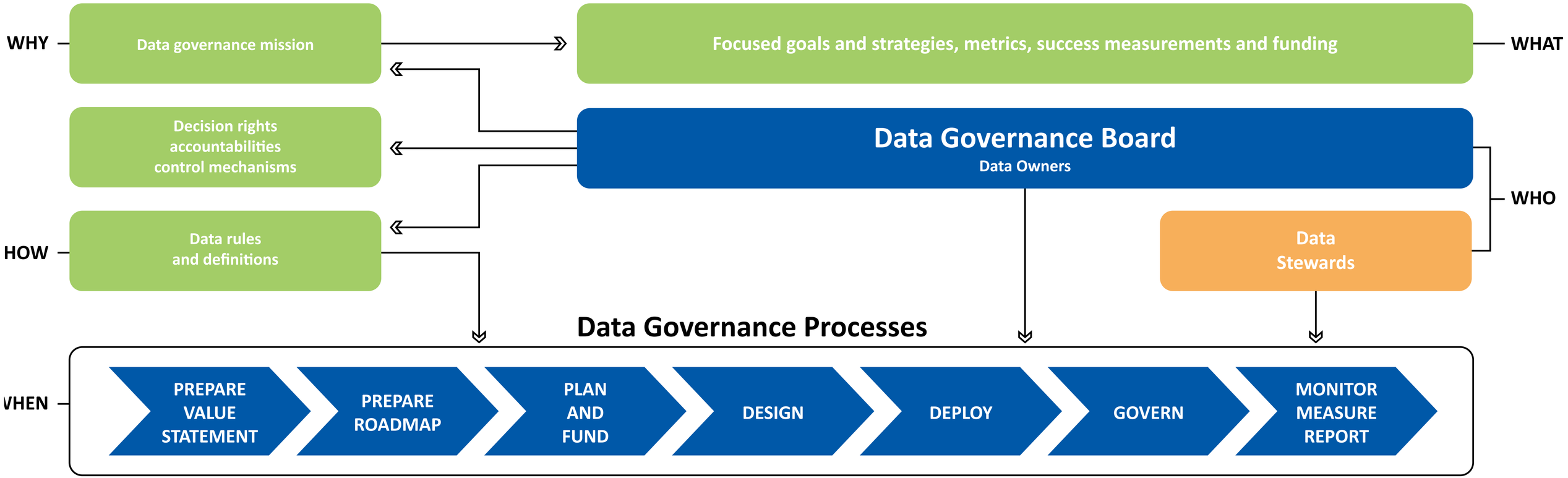
It also outlines how to make decisions about managing data, realizing value from it, minimizing cost and complexity, managing risk and ensuring compliance. In short, data governance sets the rules of engagement for data management activities, and the framework is the workflow for those rules of engagement.



Data Management Strategy

Data governance enables the City to focus on data centric architecture, and the interoperability of data will improve the City's capability to make data driven decisions.

- WHY your specific program should exist
- WHAT it will be accomplishing
- WHO will be involved in your efforts, along with their specific accountabilities
- HOW data governance processes will be achieved
- WHEN specific data governance processes will be performed

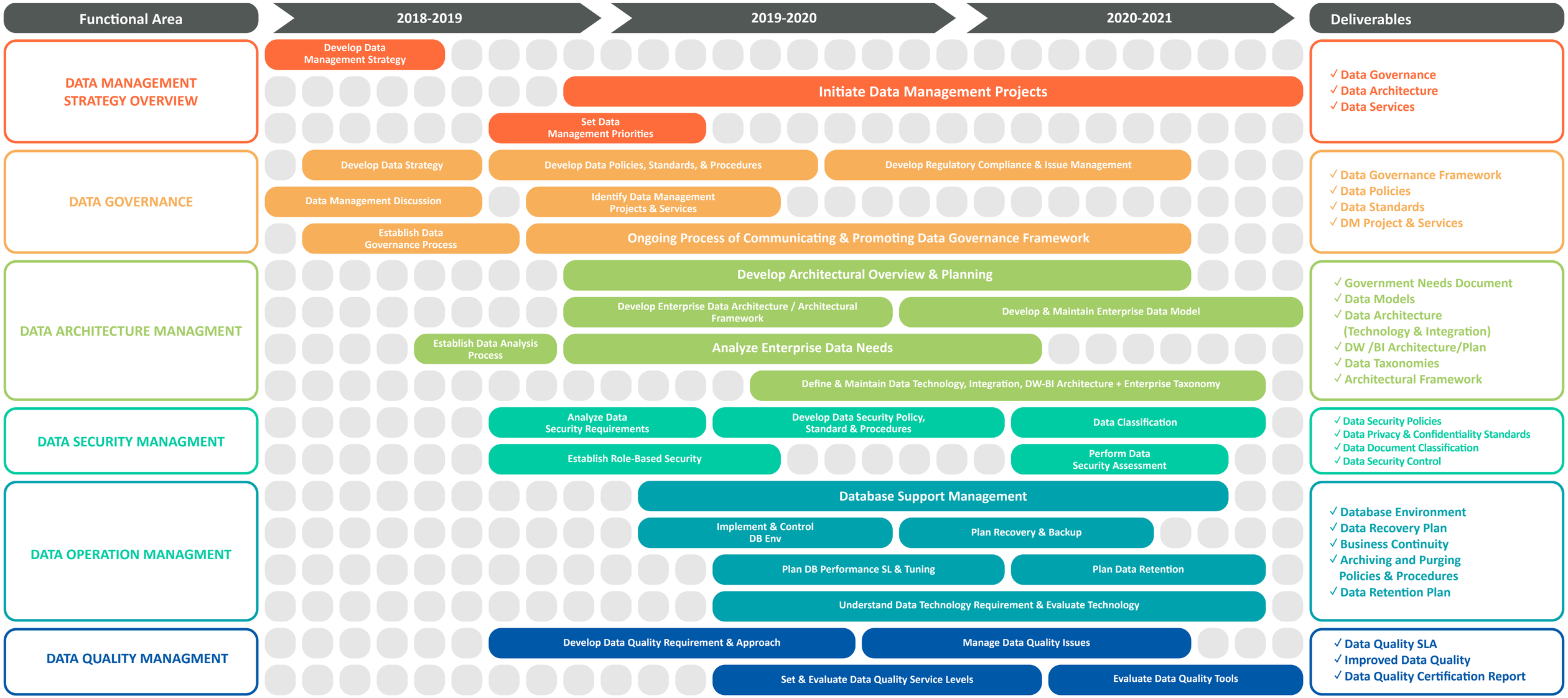


City of Dallas

Information & Technology Services

Executive Road Map

The high level Data Management plan (DMP) details the various functional areas, timeline and intended deliverable at each stage of the execution of the DMS. The deliverables in each functional area will describe the data you expect to acquire or generate during the course of the effort, how you will manage, describe, analyze, and store those data, and what mechanisms the City will use at the end to share and preserve your data.



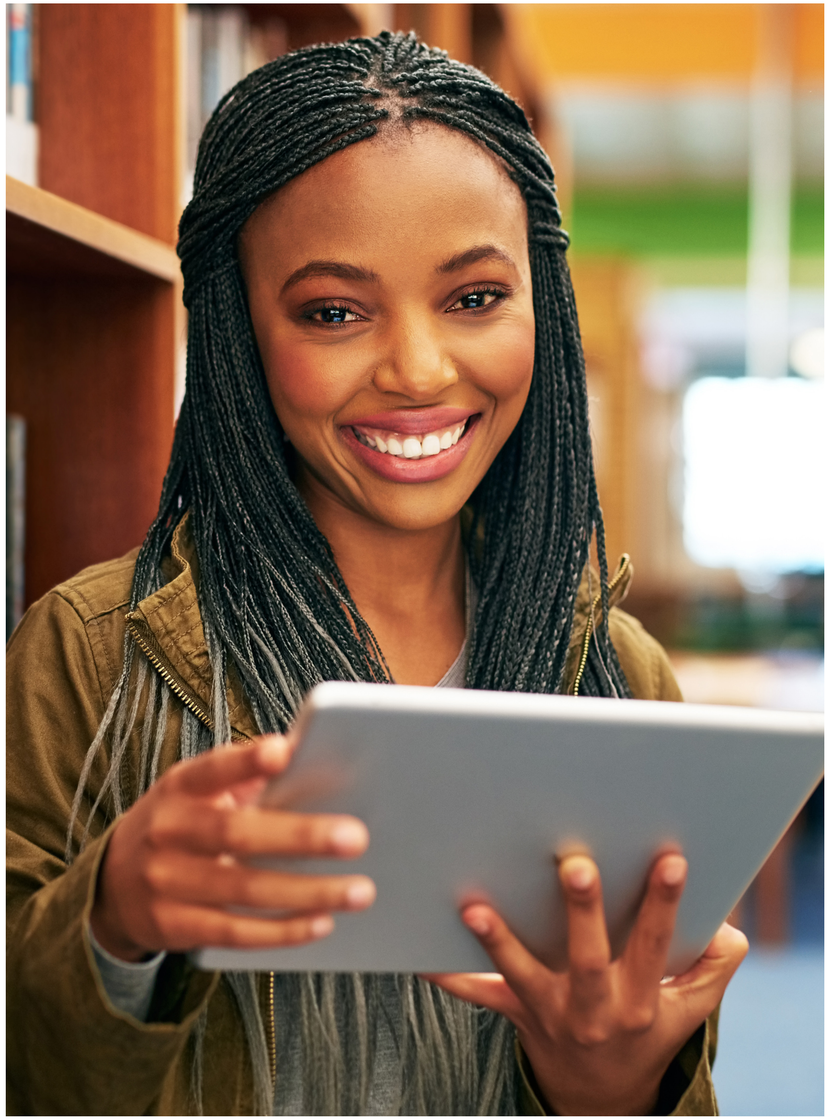
CONTACT US

If you have questions or comments regarding this document, please contact us: **ITStrategy@dallascityhall.com**

References:
The following websites were useful in drafting the details related to the development of the City of Dallas – Data Management Strategy.

DAMA Book of Knowledge:
https://dama.org/sites/default/files/download/DAMA-DMBOK2-Framework-V2-20140317-FINAL.pdf

City of Dallas - Technology+ Strategic Plan:
https://dallascityhall.com/departments/ciservices/DCH%20Documents/City-of-Dallas-Technology+StrategicPlan.pdf

City of Dallas – Enterprise Architecture:
https://dallascityhall.com/departments/ciservices/Pages/enterprise-architecture.aspx

City of Dallas Data Hub:
https://dallascityhall.com/Pages/Dallas-Datahub.aspx