



U.S. Department
of Transportation

**Federal Highway
Administration**

Data Governance

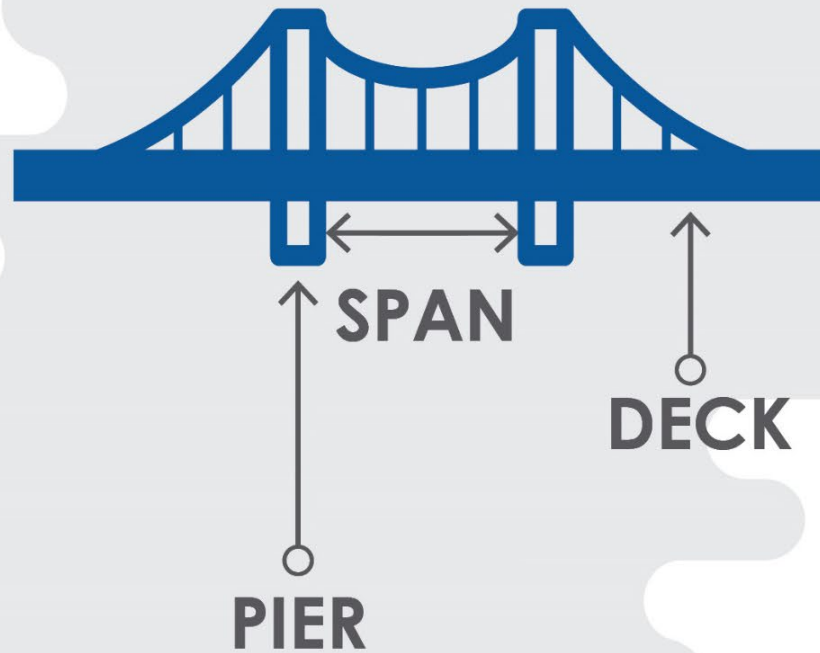
A FDOT Case Study

Outline

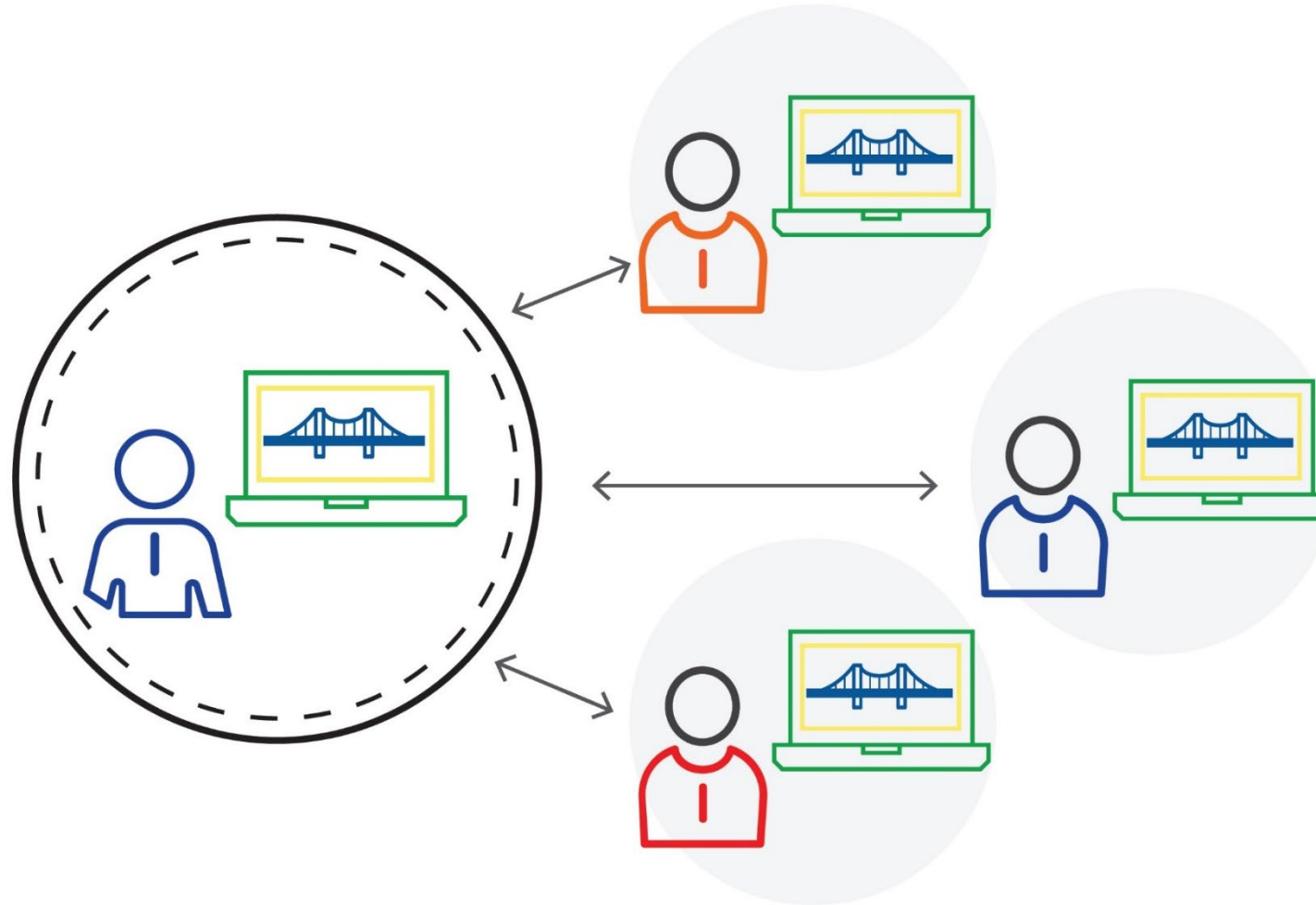
- BIM for Infrastructure and data governance
- An orientation to ROADS (Reliable, Organized, Accurate, Data Sharing)
- Assessing needs, gaps and approach
- Data governance structure
- What's next?



BIM is About Data

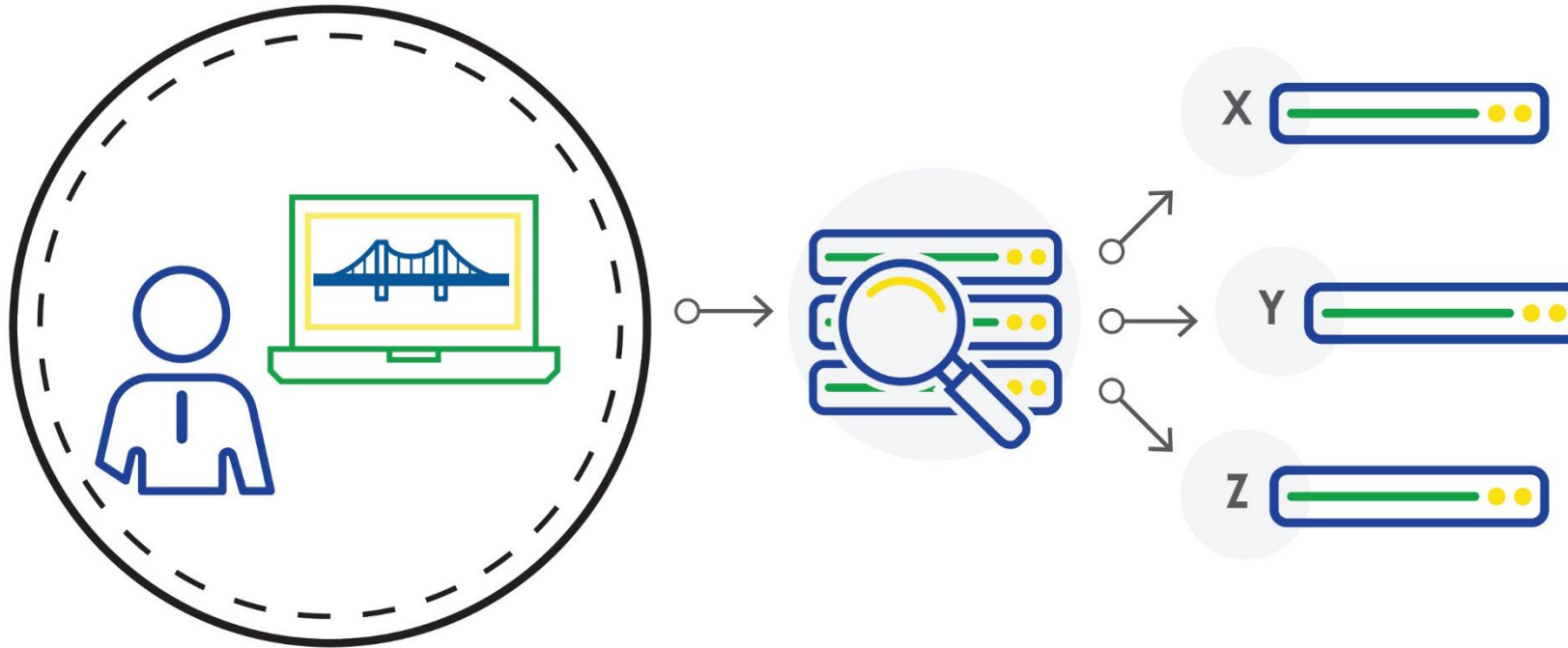


BIM Gains Value When Shared



Sharing BIM

- Using data to populate databases
- Only works with known data structures





Overview and Mission



The goal of the ROADS initiative is to improve data reliability, simplify data sharing across the FDOT, and have readily available and accurate data to make informed decisions.

Reliable, Organized, Accurate Data Sharing across all of the FDOT



Why ROADS?

It's hard to know what data is available

Information is organized around applications instead of around perspectives end users can relate to (e.g., business subject areas).

Data is hard to access

Security controls are scattered across many different tools and processes (e.g., RACF, AARF, applications, SharePoint, etc.) throughout 170+ centralized and local systems.

Lack of standardized approach

Many districts are moving toward the adoption of the GIS as the entry point for information searches, but the approach has not been standardized across the districts.

No enterprise-level view of data

A majority of the district data efforts appear to focus on singular business issues without the added benefit of looking at the data from an overall business view to improve performance or reduce risk.

Teams want a "one stop shop"

Teams consistently stated they would like a "one stop shop" to access all information they need in one place, with a "Google type" search. Over 40 "search criteria" elements have been identified.



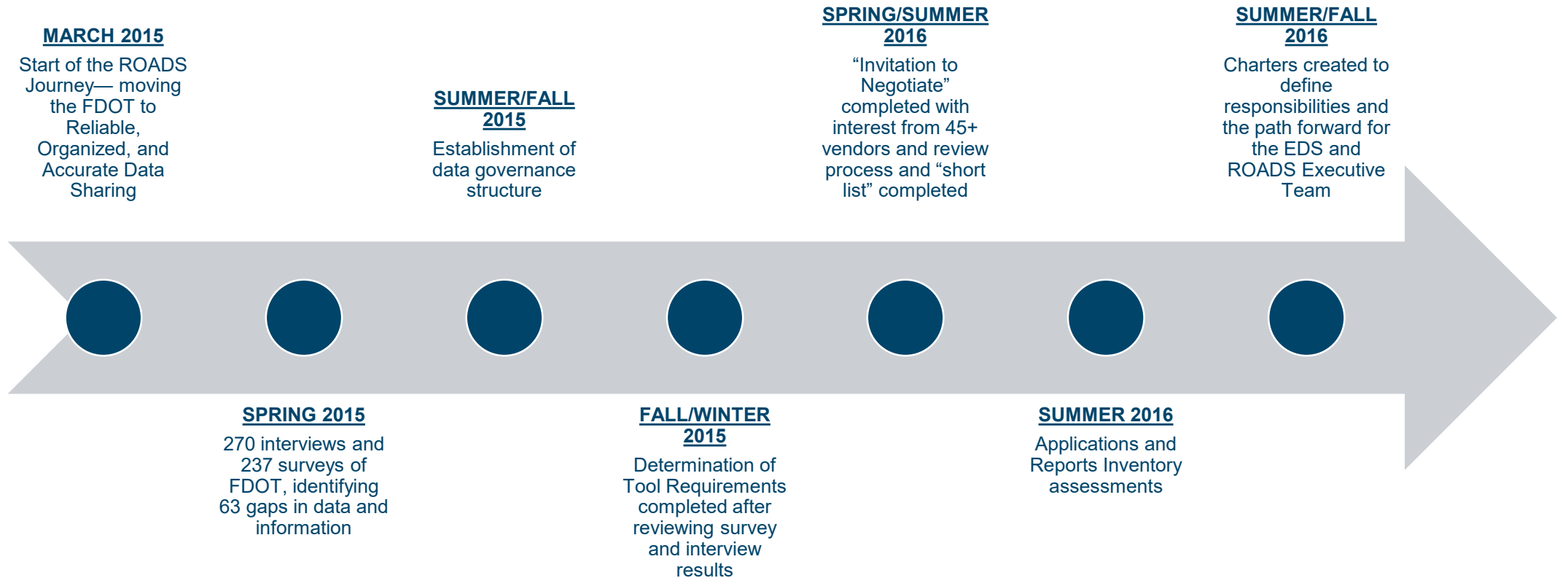


Benefits of ROADS

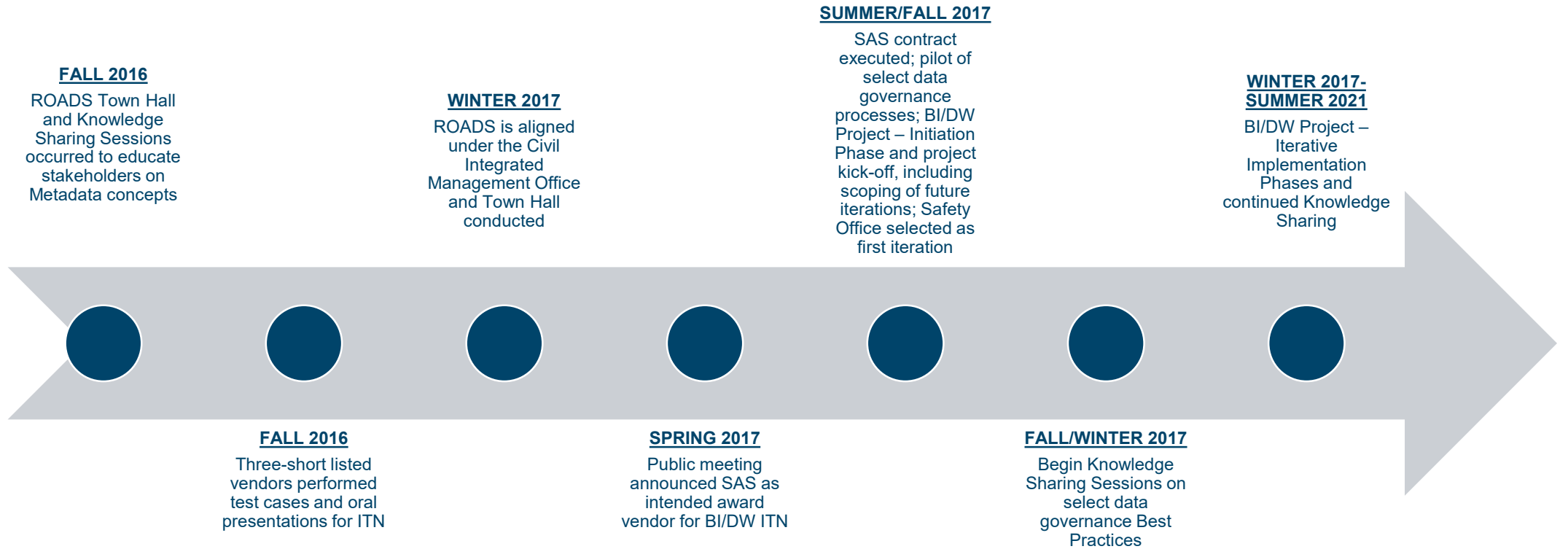
- BETTER** Ensure information is secure, accurate, reliable, and at the appropriate level to empower you to do your job better.
- EASIER** Provide the ability to access relevant business data more quickly and efficiently by knowing where to find it.
- FASTER** Reduce the amount of time to locate the data you need and provide more time to analyze the data.
- SHAREABLE** Effectively share information across our organization to enable better and faster decisions.
- INTEGRATED** Enable a greater capability to link data together from different districts, functional areas, and systems
- STREAMLINED** Remove the barriers currently in place that prevent the efficient sharing of information.



ROADS Journey to Date



ROADS Journey to Date





Assessing Our Needs

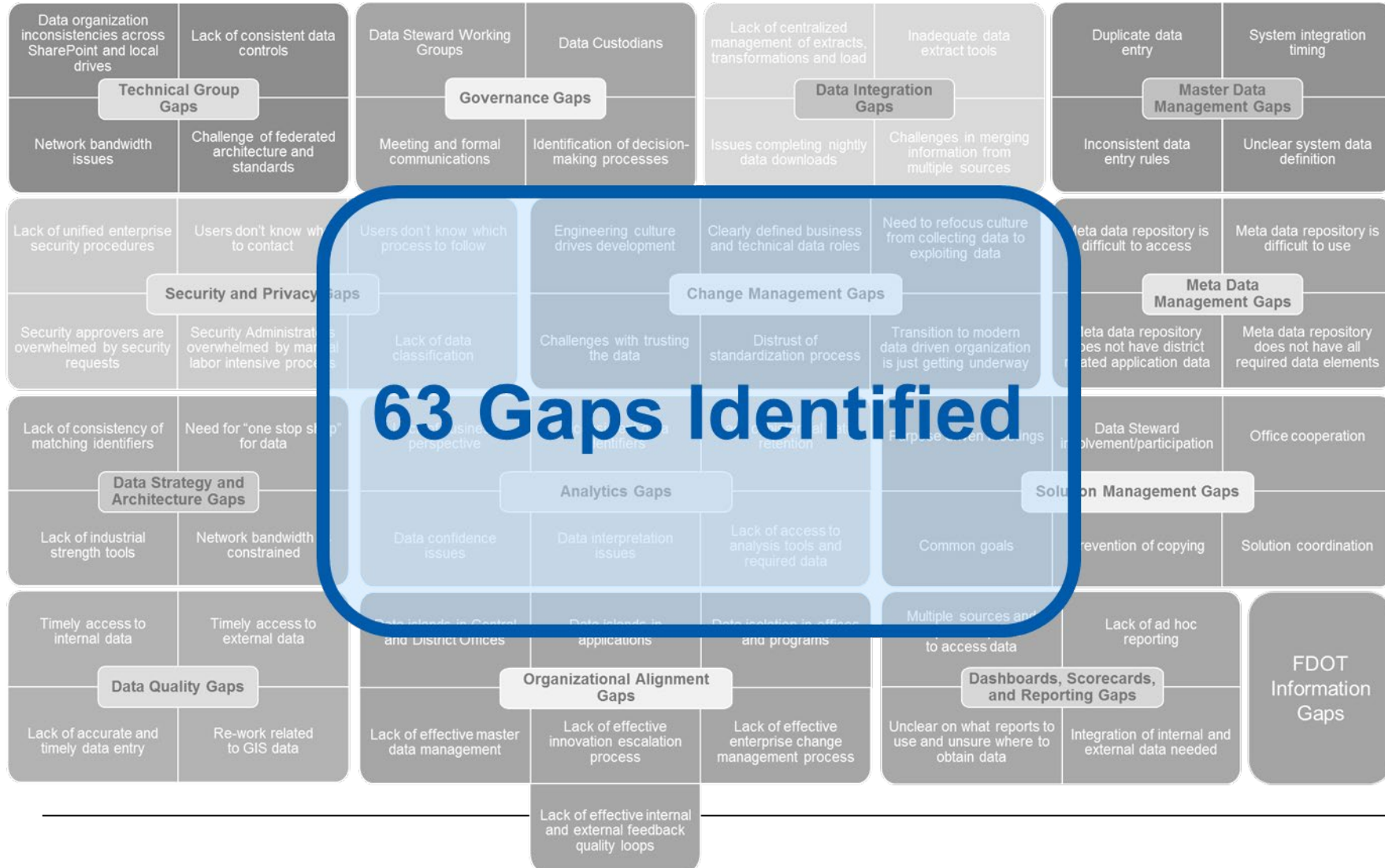
STEERING COMMITTEE
10-person team
Technical and business members
Central and district office representatives

SURVEY EMPLOYEES
75 survey invitations
60 minutes to complete
70 questions
237 responses

INTERVIEW EMPLOYEES
7 districts and central offices visited
2-hour interview durations
24 interviews completed
270 participants

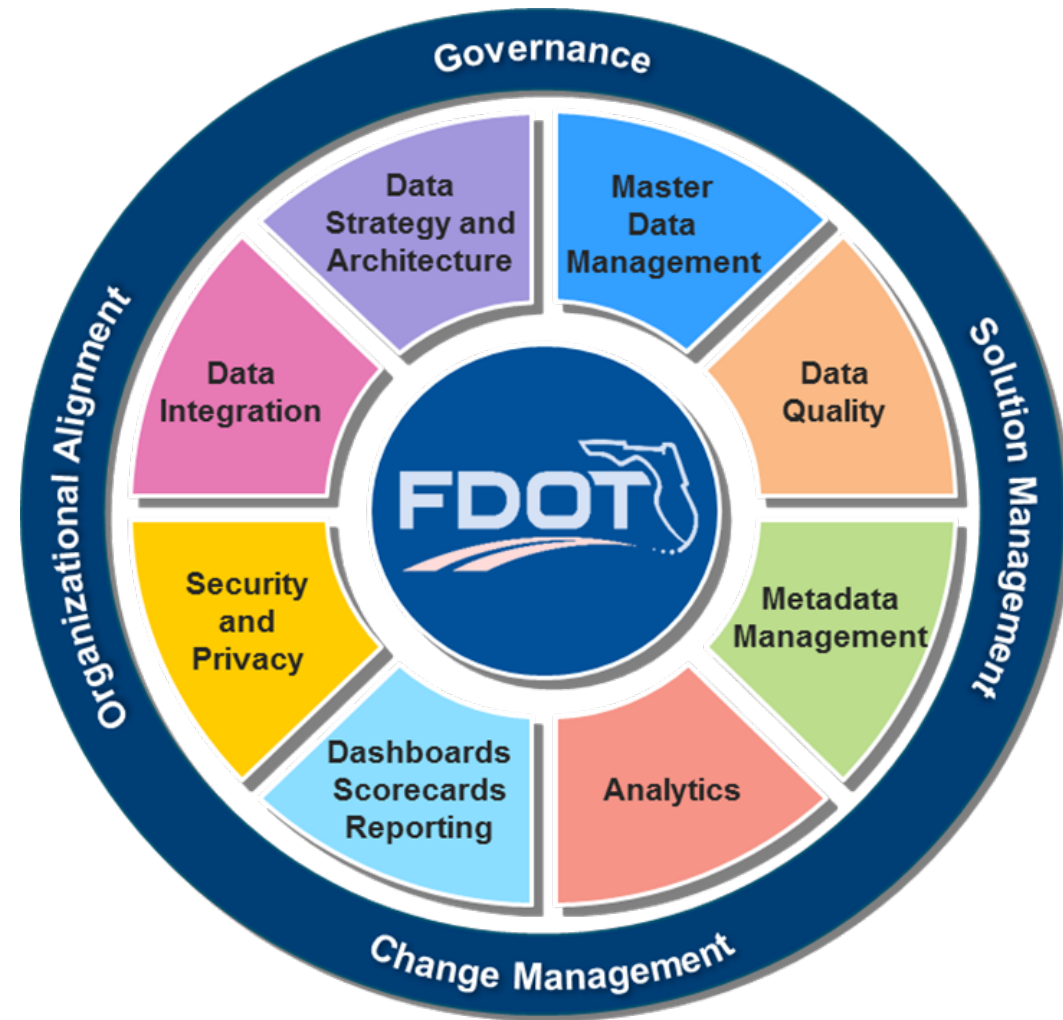


Information Gaps Identified



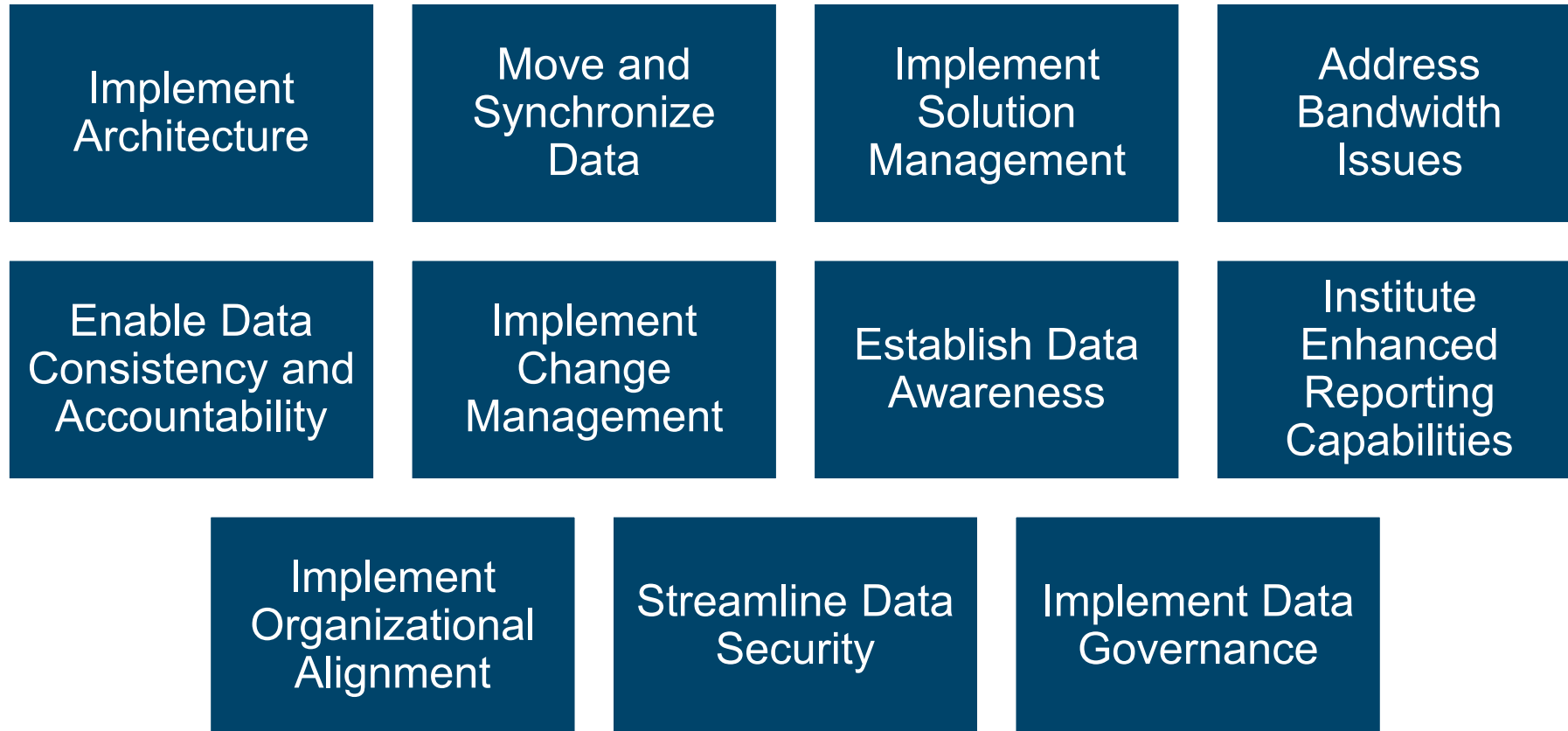
Approach

The data collected for the Inventory of Information Assets and Gap Analysis was organized into twelve key enterprise information management areas.

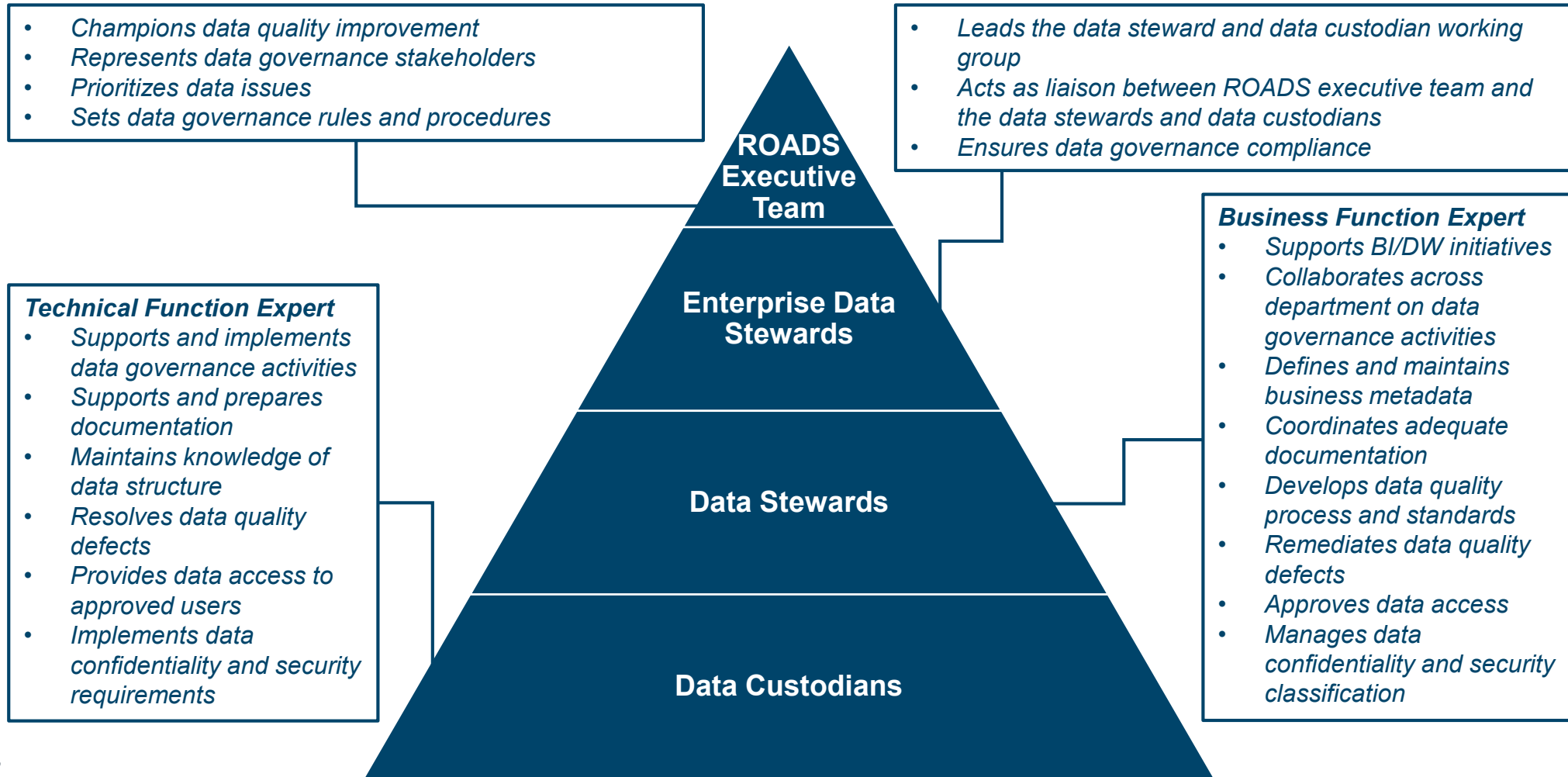




Solutions to Close Gaps



Data Governance Structure

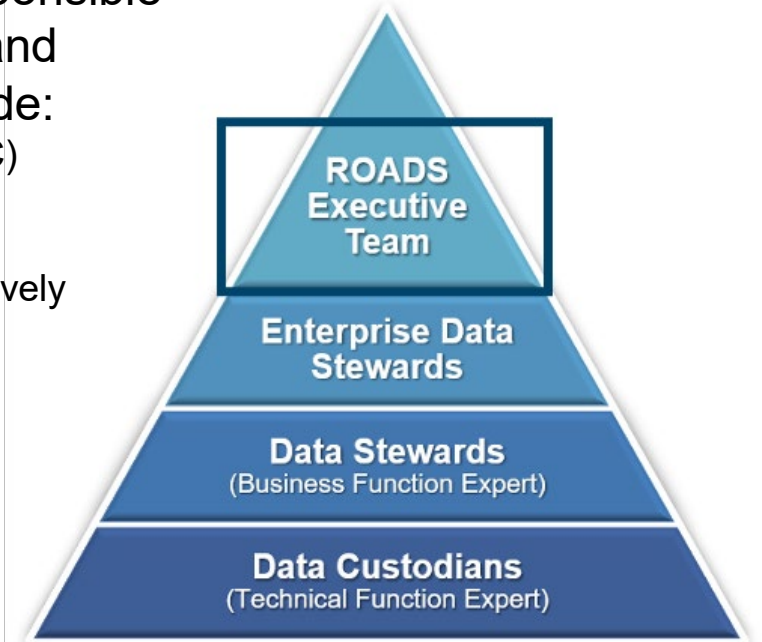


Data Governance Structure

ROADS EXECUTIVE TEAM

Leadership from across the Districts, Turnpike, and Central Office supporting the ROADS Initiative. The ROADS Executive Team members are responsible for overall data governance and provide decision-making, oversight, and strategic direction to the organization. High-level responsibilities include:

- Approve actions, resolve issues, and provide advice/feedback to the EDS (and DS/DC)
- Adopt the ROADS Component Model and ensure data governance compliance
- Establish overall data governance rules, processes, and procedures
- Drive cultural changes needed to communicate data as an asset and manage it effectively across business functional area boundaries
- Balance business priorities with operational needs across the enterprise
- Review and evaluate current data governance performance and effectiveness
- Encourage active participation from both the business and IT areas

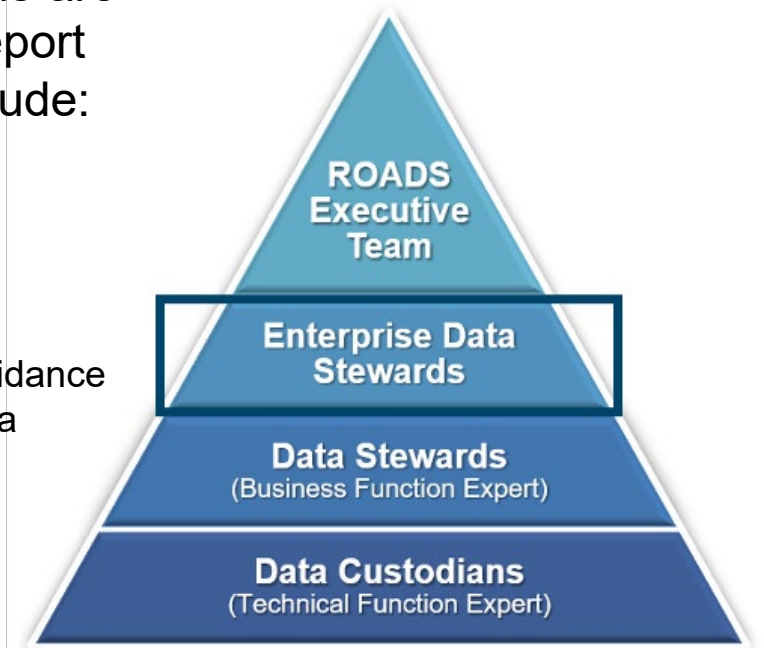


Data Governance Structure

ENTERPRISE DATA STEWARDS (EDS)

Business-focused individuals from across the Districts, Turnpike, and Central Offices supporting the ROADS Initiative. The Enterprise Data Stewards are responsible for managing their functional area working group. They report directly to the ROADS Executive Team. High level responsibilities include:

- Lead the Data Steward Working Group for their functional area/office
- Ensure data governance compliance
- Advocate for future data initiatives for the Department
- Operate in alignment with Functional Managers
- Adopt the ROADS Component Model
- Work with Data Stewards and Data Custodians regularly to provide leadership and guidance
- Act as a liaison between the ROADS Executive Team and the Data Stewards and Data Custodians

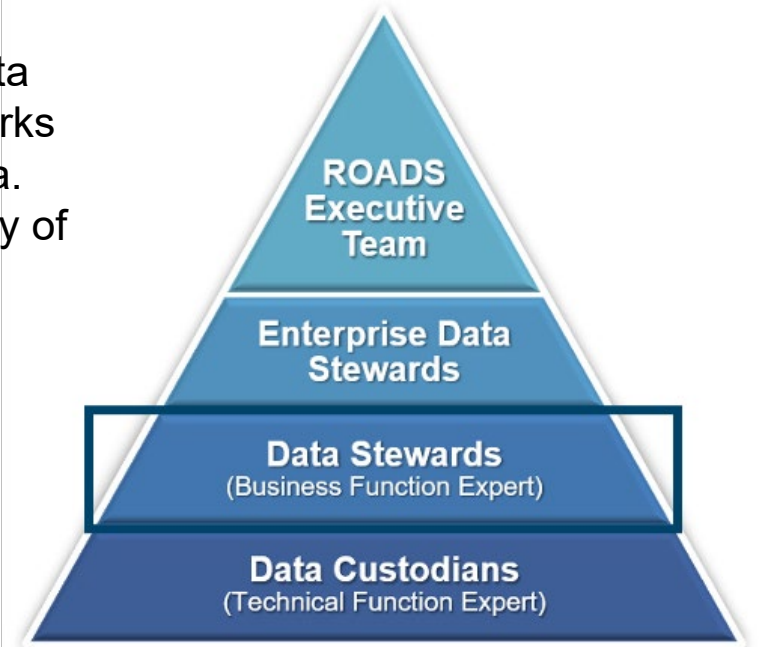


Data Governance Structure

DATA STEWARDS

Business functional expert supporting the ROADS Initiative, ideally the Functional Application Coordinators or other delegates within the business functional area, responsible for business aspects of data management and governance, which includes definition, control, and accountability for data elements within their data sources, such as applications or purchased/collected data. A Data Steward works with business personnel to define data needs for their particular functional area. Individuals that are selected as Data Stewards are typically already doing many of the activities of a Data Steward, but just in an informal manner. High-level responsibilities include:

- Understand strategic priorities of the business related to functional area along with the processes and data that support the business
- Participate in defining rules, processes, and quality metrics
- Act as a strong communicator and champion of data quality within the functional area
- Involved in gathering requirements for tools used in the transformation of data into meaningful and useful information for business analysis purposes

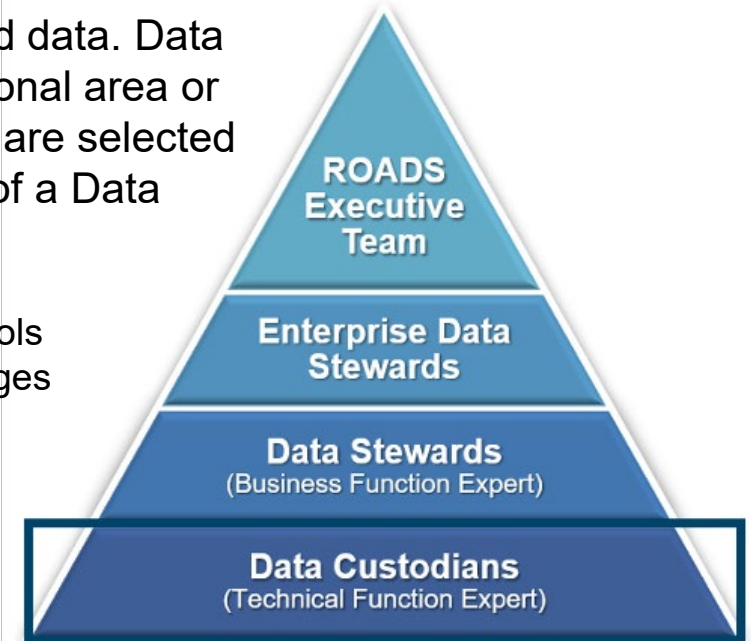


Data Governance Structure

DATA CUSTODIANS

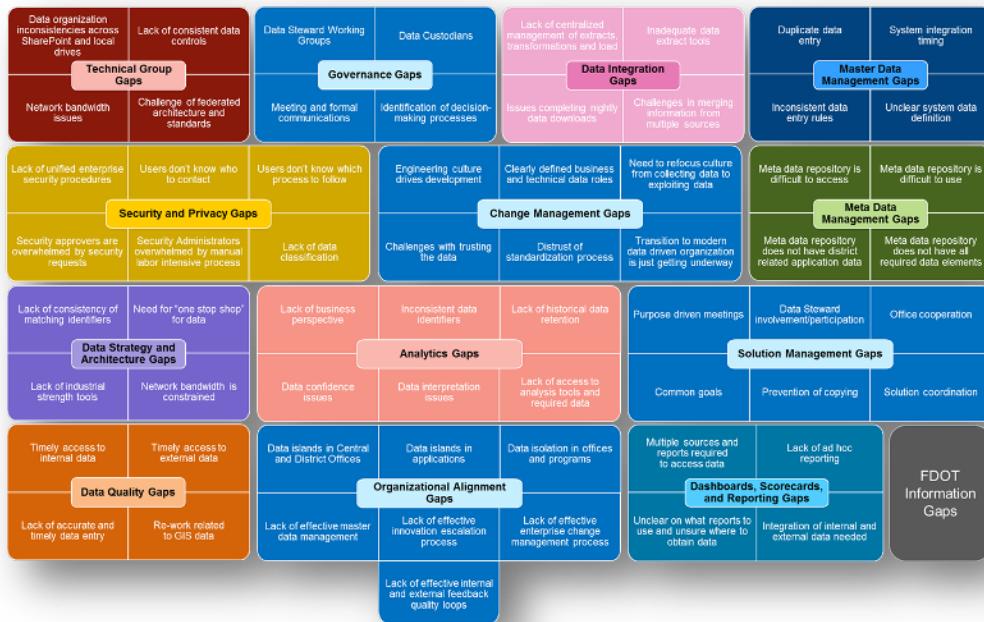
Technical functional expert supporting the ROADS Initiative, ideally from a business office; responsible for supporting and implementing data governance and best practices for data elements within their data sources, such as applications or purchased/collected data. Data Custodians may work with other technical resources within the business functional area or OIT resources may be relied on to support the responsibilities. Individuals that are selected as Data Custodians are typically already doing some or many of the activities of a Data Custodian, but just in an informal manner. High-level responsibilities include:

- Respond to research and information requests of the Data Stewards
- Escalate any items which have an impact on data quality requirements for reporting tools
- Implement data transformations, resolve data issues, and collaborate on system changes
- Maintain quality of the data that they manage

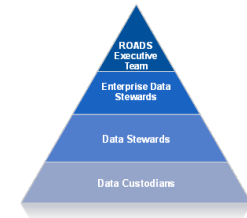


Ongoing Approach

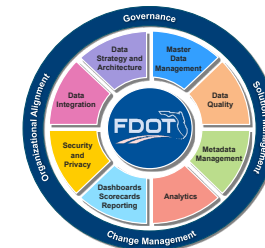
The ROADS Initiative will continue to help close the data/information gaps identified early in the project through:



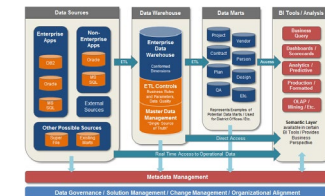
People: Managing a formal data governance structure to make key decisions related to data/information.



Process: Training the FDOT on the Data Governance Component Model and implementing standard processes and routines to provide a formal approach to data governance.



Technology: Providing common standardized BI/DW tools, technologies, and frameworks that will be used across the FDOT to make data/information more accessible.



FHWA BIM for Infrastructure Point of Contact:

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