

STARDOG

How to Build a **Data Fabric**



INTRODUCTIONS:



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What will you learn today?

1

Describe and define a data fabric

2

Review the steps to build a data fabric

3

Look at how to shorten delivery time using an MVP approach

4

Demonstrate how to use Stardog Explorer to visualize your Stardog data fabric

• **Conventional data integration is broken**

- Consolidating data in one place (i.e. data warehouses and data lakes) has not resulted in faster, better data analysis
- Traditional data integration methods are too rigid and slow
- Most reports work on stale data and don't provide explainable results

What is a data fabric?



Why is a data fabric worth it?

1. Data of any structure can be connected and made machine-understandable
2. Data from existing data management systems can be incorporated, in place
3. Easy to adapt to changes and accommodate multiple viewpoints using a flexible data model
4. Machine-understandable definitions allow you discover previously unknown connections and explain how they were derived

76% of executives demand strategic insights from IT

McKinsey, "Partnering to shape the future--IT's new imperative"

65% reduction in data quality and data mastering ongoing operations costs

Gartner, "Top Trends in Data and Analytics for 2021: Data Fabric Is the Foundation," Mark Beyer et al, 16 February 2021

Graph leads to up to a 96% reduction in code.

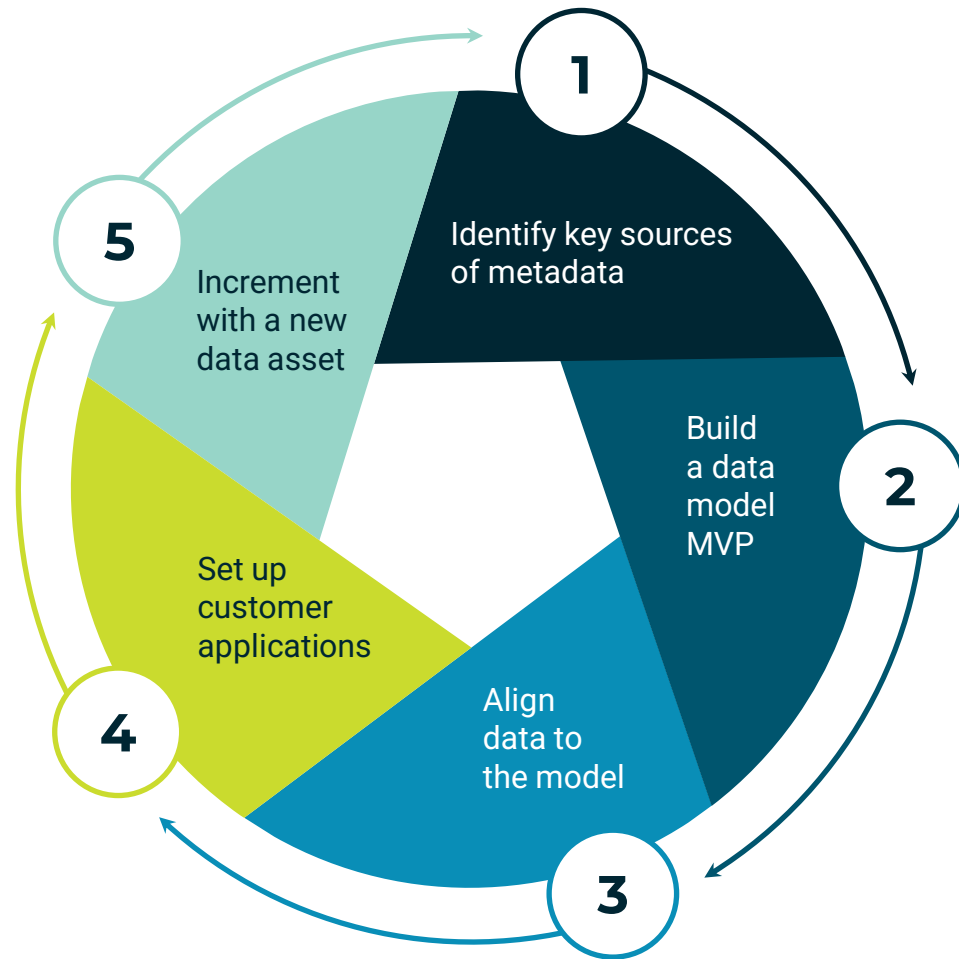
Gartner, "What is 'Graph?' - An Elementary Version for the Uninitiated," Mark Beyer et al, 7 December 2020

Some common misconceptions

- Data fabric is synonymous with digital transformation – “This is going to take forever”
- I need to replace all of my current applications
- I need personnel with special skills

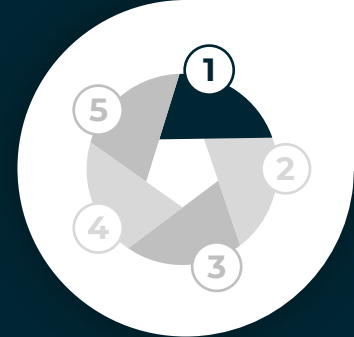


A data fabric implementation framework



STEP 1:

Identify key sources of metadata



How?

- Capture data requirements from business questions
- Discovery and review of existing assets

How long?

- 2 weeks

What can accelerate this step?

- Subject Matter Experts (SMEs) for business domain
 - Prior work done by data governance programs
 - Data catalog
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STEP 2:

Build a data model MVP



How?

- Identify and define key concepts needed for your first use case

How long?

- 2 weeks

What can accelerate this step?

- Use of an industry data model
- Data catalog

How does Stardog help?

- Connectors to data catalogs
 - Visual modeling for rapid data modeling
-

The role of a data catalog in a data fabric

- A data catalog provides a starting point for current business definitions and technical layout
- Stardog's data catalog connectors import key items to build out data model and virtual connections
- Stardog rationalizes competing definitions from different catalogs and overlays the correct answer

STEP 3:

Align data to the model



How?

- Create data source mapping or ETL pipeline

How long?

- 2 weeks / data source

What can accelerate this process?

- Pre-negotiated data access

How does Stardog help?

- Virtualization leverages existing data in place
 - Inference allows identification of new connections
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Virtualization speeds up iterations

- Virtualization let you test the representation of your data within the platform without having to move it
- Virtualization and the semantic data model create an abstraction layer where you can change out contributing systems without forcing end users to change inbound queries

STEP 4:

Set up consumer applications



How?

- Connect to end-user apps to answer business questions

How long?

- 0-4 weeks

How does Stardog help?

- Stardog Explorer creates immediate visualization of data
 - SQL API allows you to connect to common apps
-

STEP 5:

Repeat for new data assets



- Easily go back and improve your existing data model
- Iterate and expand out to new use cases
- Reusable nature of the semantic data model speeds up the process of realizing value from your next use case

Graph leads up to a 96% reduction in code.

Gartner, "What is 'Graph?' - An Elementary Version for the Uninitiated," Mark Beyer et al, 7 December 2020



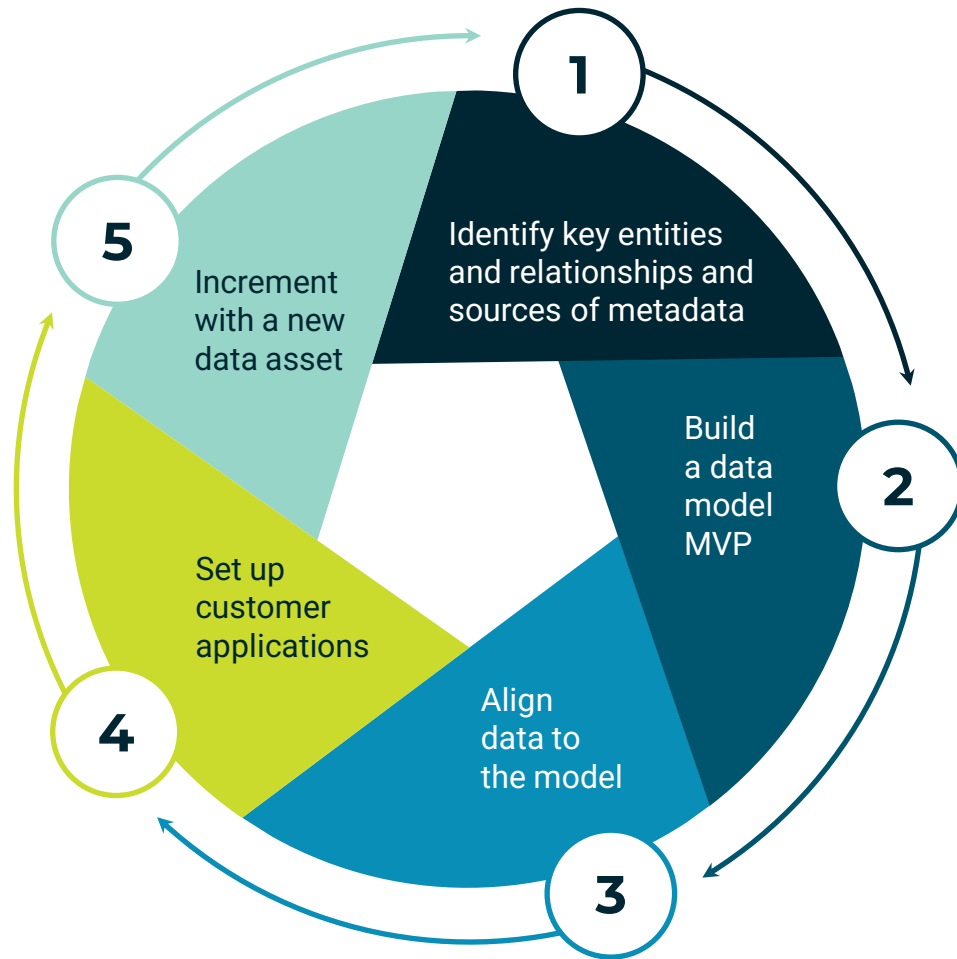
DEMO:

Stardog Explorer

A data fabric implementation framework

“Stardog enables you to browse through the data and all these relationships. **It's a 10 to 1 savings.** It's not only less overhead, it's much better job satisfaction and getting the knowledge in hand that you lacked before.”

- Program Data Integration Manager,
Exploration Systems Division, NASA



• What does the ideal team look like?

- **Business domain SME:** someone responsible for business data interpretation and accuracy
- **Information modeler:** someone who shapes the data for meaning, connectivity, and reuse
- **Data engineer:** someone who is responsible for data reliability and automated pipelines (if needed)
- **A business or project owner:** someone with concrete business goals aligned to the data

The background is a dark teal color with abstract geometric shapes. There are several large, semi-transparent triangles in various shades of blue and green. On the right side, there are two wireframe cubes made of dashed lines, with some of their faces filled with solid colors like light blue and green. Small white asterisks and plus signs are scattered along the lines of these cubes. On the left side, there is a smaller wireframe cube, also made of dashed lines, with a few small white asterisks and plus signs around it.

WEBINAR: **LIVE Q&A**



STARDOG

Thank you!

Additional information:

View E-book: info.stardog.com/data-fabric-whitepaper

Try Stardog Free: www.stardog.com/get-started