



# Data Warehouse Modernization Initiative





Our data journey begins  
and ends with students

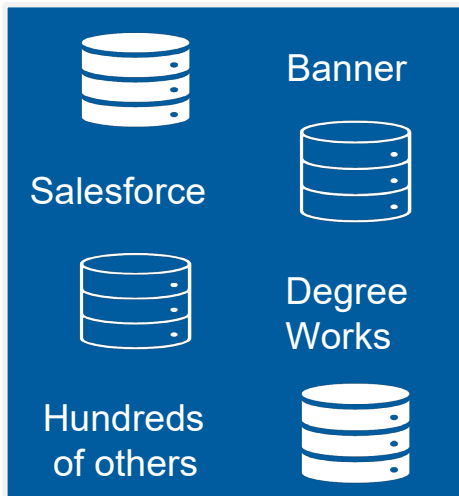


# Two Dimensions of Data

## DATA IN

Operational &  
Transactional Data

Databases &  
Core Systems



## IT

Extractions  
Integrations  
Loading

Oracle DBA  
Admin Tools  
Many Others

## IR

Transforms  
Quality  
Reports & BI

Toad  
Tableau  
SQL Plus  
SAS  
Power BI

## DATA OUT

Analytical &  
Presentation Data

Visualizations &  
Publications



# What is the UA Data Warehouse?

## DATA IN

Operational & Transactional Data

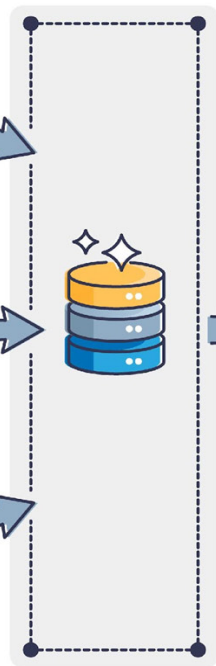
Databases & Core Systems

Also known as live data, or PROD data. This data fluctuates constantly to accurately reflect real time happenings.  
– Like a mirror.

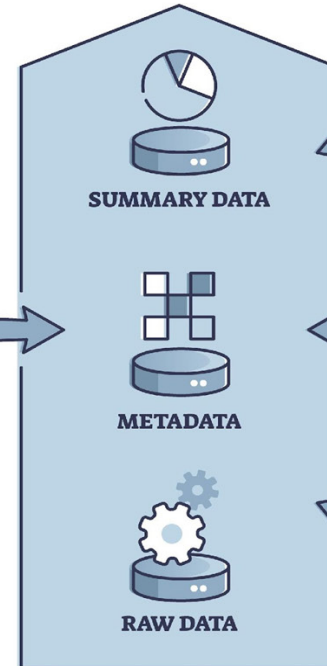
### DATA SOURCES



### STAGING AREA



### WAREHOUSE



### USERS



## DATA OUT

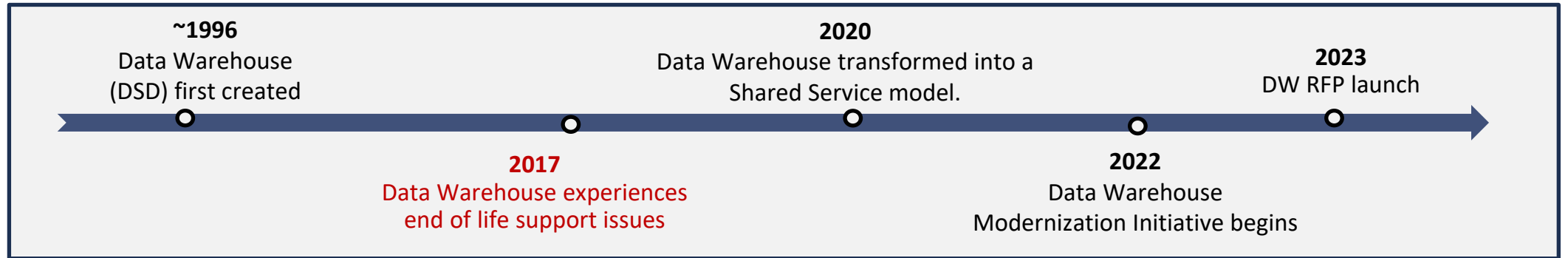
Analytical & Presentation Data

Visualizations & Publications

Also known as freeze data, snapshots, or RPTP data. This data is copied at key intervals and retained as reference points.  
– Like a picture.



# What is the DW Modernization Initiative?



A vision to support data **consistency, definitions, change management, access, reliability** and **sustainability**.

Its goal is to bring this critical system-wide service up to date with enterprise and industry standards.

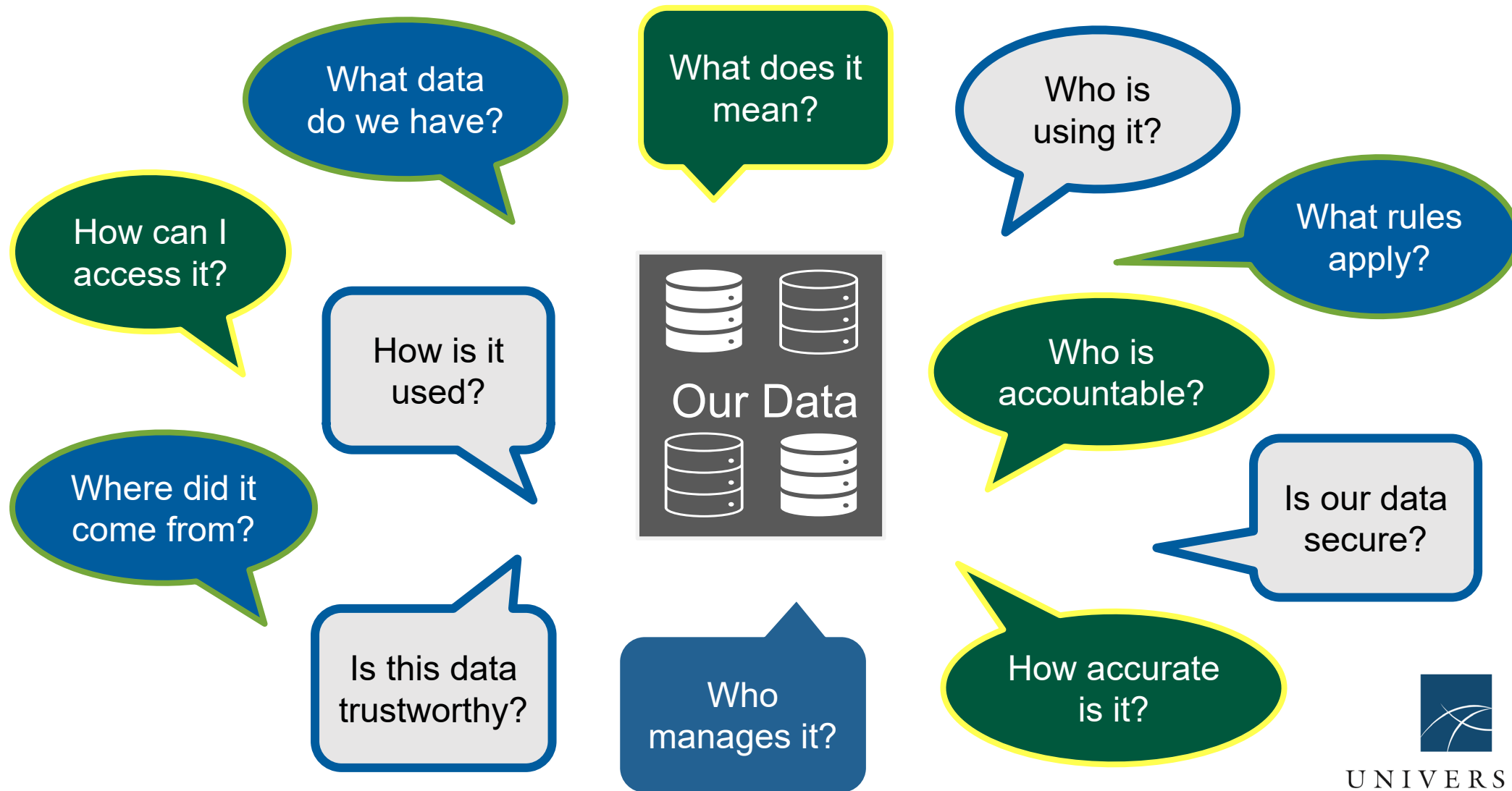
An approach to sharing, documenting, and honoring each institutions unique data needs.

It's a team effort to improve the management of our data assets!



# VISIBILITY – CONTEXT – COLLABORATION

Improve visibility into our complex data environment so that we can better manage our data and answer our own questions with greater confidence.



# The 80/20 Rule of Data Analysis

Time to insights: A measure of how quickly raw data can be turned into actionable business insights.

Data analysts can spend up to 80% of their time as hunter-gatherers, stumbling around the forest foraging for data, trying to divine its context, and preparing the data for use.

Only 20% of their time is required to perform the analysis or generate insights.

Time to insights can be used as a performance indicator to help evolve a more sophisticated data management plan and measure Return on Investment (ROI).







# Project Scope

**Scope** →

**Data Lake  
(mesh/fabric)**

**Warehouse  
& ETL Tool**

**Data Catalog**

**Governance  
Platform**

**People** →

**OIT + DW**

**DW + IR**

**IR +  
Power Users**

**Entire  
University**

**Process** →

**Integrations**

**Movement &  
Transformation**

**Data Quality  
Improvement**

**Policy**

**DW RFP** →

**Nice to Have**

**Must Have**

**Must Have**

**Nice to Have**

**Lifts** →

- Unify Systems
- Unify Data Mgmt.
- Security Control
- Access Efficiency

- Pipeline Mgmt.
- Data Lineage
- Golden Data Set
- Process Efficiency

- Visibility
- Observability
- Data Definitions
- Reduce Shadows

- Proactive Mgmt.
- Time Savings
- Build Trust
- Gain Insights

**Intelligence,  
Visualizations,  
Publications** →



# What is the Data Warehouse & Data Catalog RFP Seeking?

## Key Benefits

- Improved data pipeline management
- Traceability & impact analysis
- Measure & manage data quality
- Process efficiencies, do more with less
- Increase visibility into our data assets
- Reduce “time to insights” ratio
- Reduce redundancies and shadows
- Increase the trustworthiness of our data

## Updated tools to replace the current system

- A data **Extraction, Transformation, and Loading (ETL)** tool to help bring data from various sources into one location.
- A Data Warehouse management tool to ensure robust security, access, process automations, and enhance data quality.
- A Data Catalog to capture both shared and unique data definitions and the various critical reporting metrics across UA.

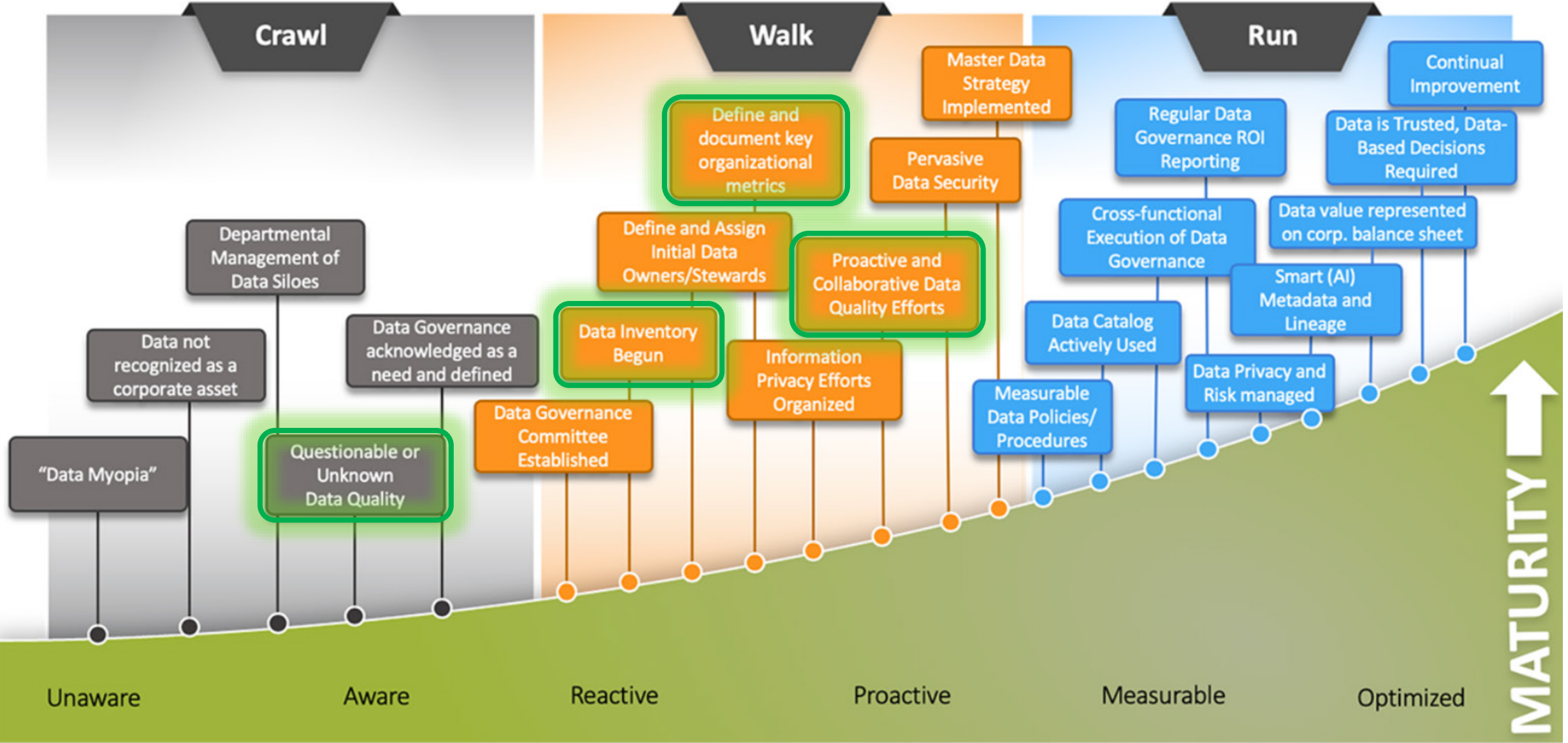
**Increase the trustworthiness of our data!**

**Empower quicker, smarter, data-driven decisions!**

**Cultivate our single source of truth!**



# Data Governance Maturity Curve



Goals:

1. Implement modernized tools for ETL & data warehouse management.
2. Develop a data catalog of Data Warehouse contents (and grow).

## Agility

### Discover Data

Everyone should be able to discover the data they need with ease.

## Knowledge

### Understand Data

Everyone should be able to understand our data with all its context.

## Confidence

### Trust Our Data

Everyone should be able to trust that the data is right for their use-case.

## Collaboration

### Drive Value from Data

Everyone should be able to access the data they need with the tools most comfortable to them.

To better manage our data as we would any other high value asset.



# We are inviting data professionals across the University to preview these tools.

## How you can help

- Review vendor proposals and/or attend data catalog demos.
- Share your feedback as a group or an individual, just a short summary of impressions.
- After implementation, use the new data catalog with an eye for potential expanded uses in your area.

## How these tools could help you

- Access to self-service reporting tools, customizable to distinctive data needs.
- Tools to better find the data you need and understand its context.
- A data catalog that could provide cohesive integration of the disparate data sources in your area.

Be a data hero for your UA campus!

