

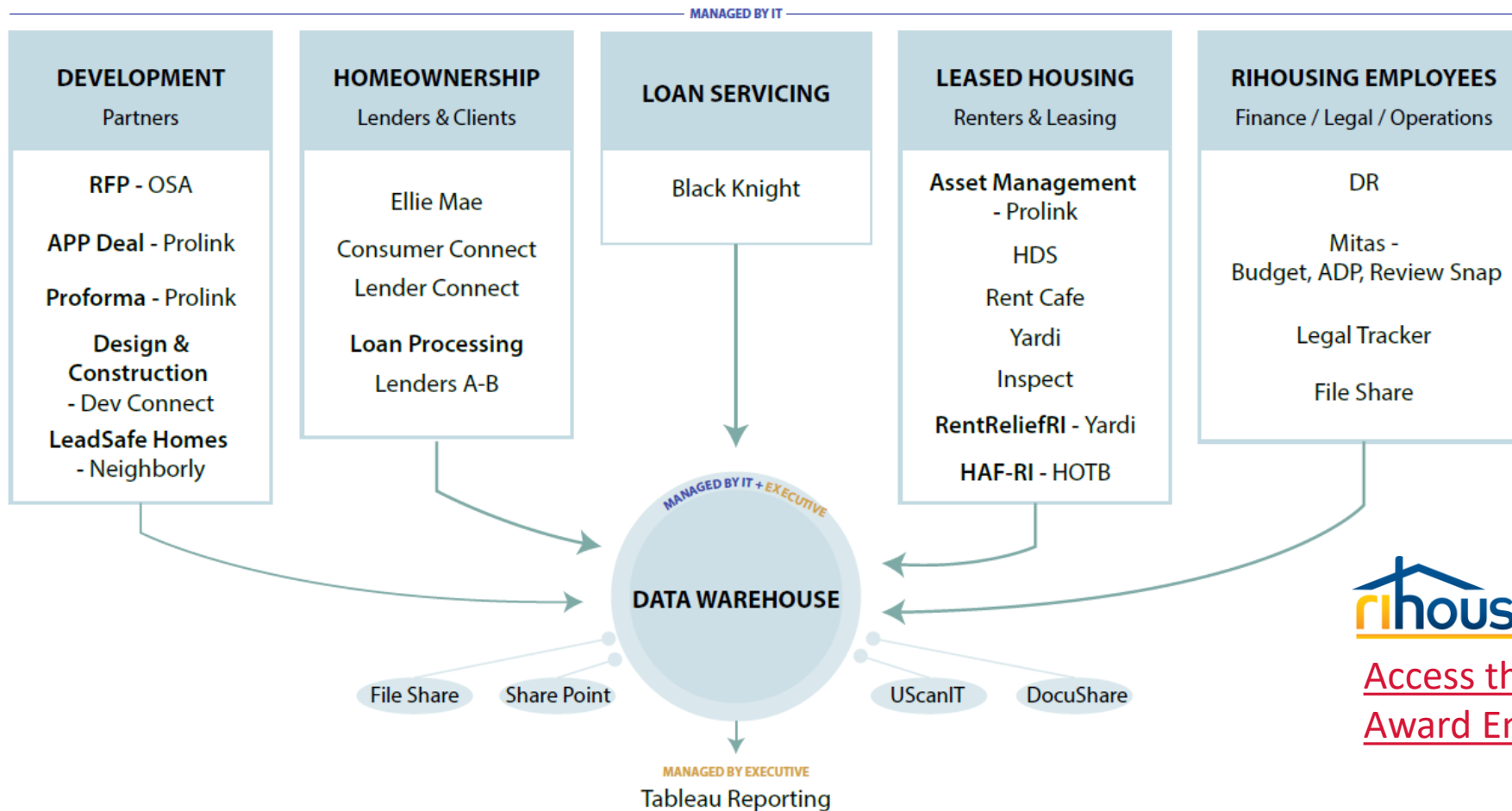
**2023**  
**BOSTON**

**Considerations in Data  
Warehouse Architecture**

# Speakers

- **Discussion Leader: Liana Webb**, Chief Information Officer | Oregon Housing and Community Services
- **Brian DeChambeau**, Manager of Research and Evaluation | Rhode Island Housing
- **Tyler McLaughlin**, Data and AI Specialist | Microsoft

# RIHousing Applications to Data Warehouse Flow



[Access the RIHousing Award Entry](#)

# Oregon's Story



OREGON HOUSING *and*  
COMMUNITY SERVICES

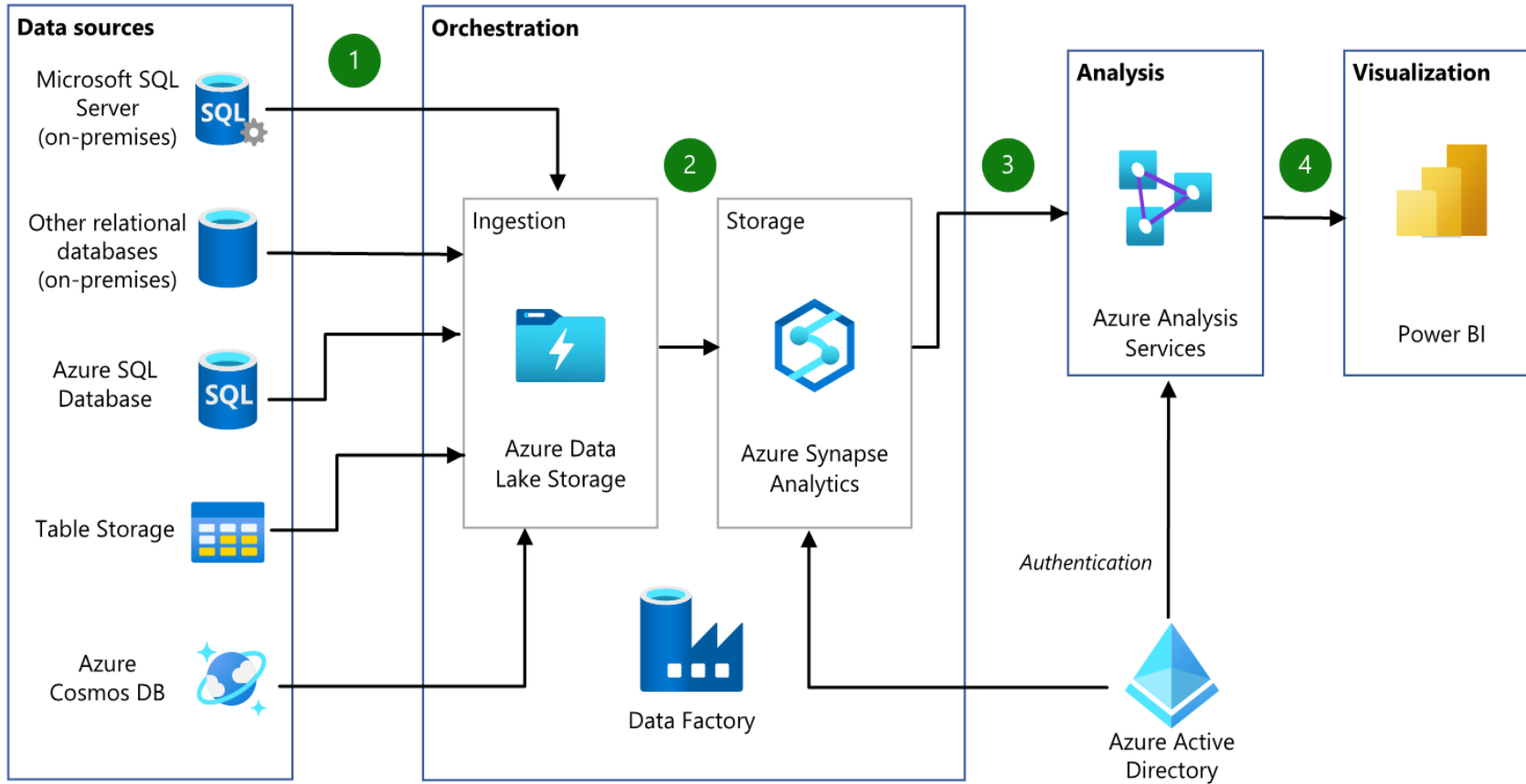


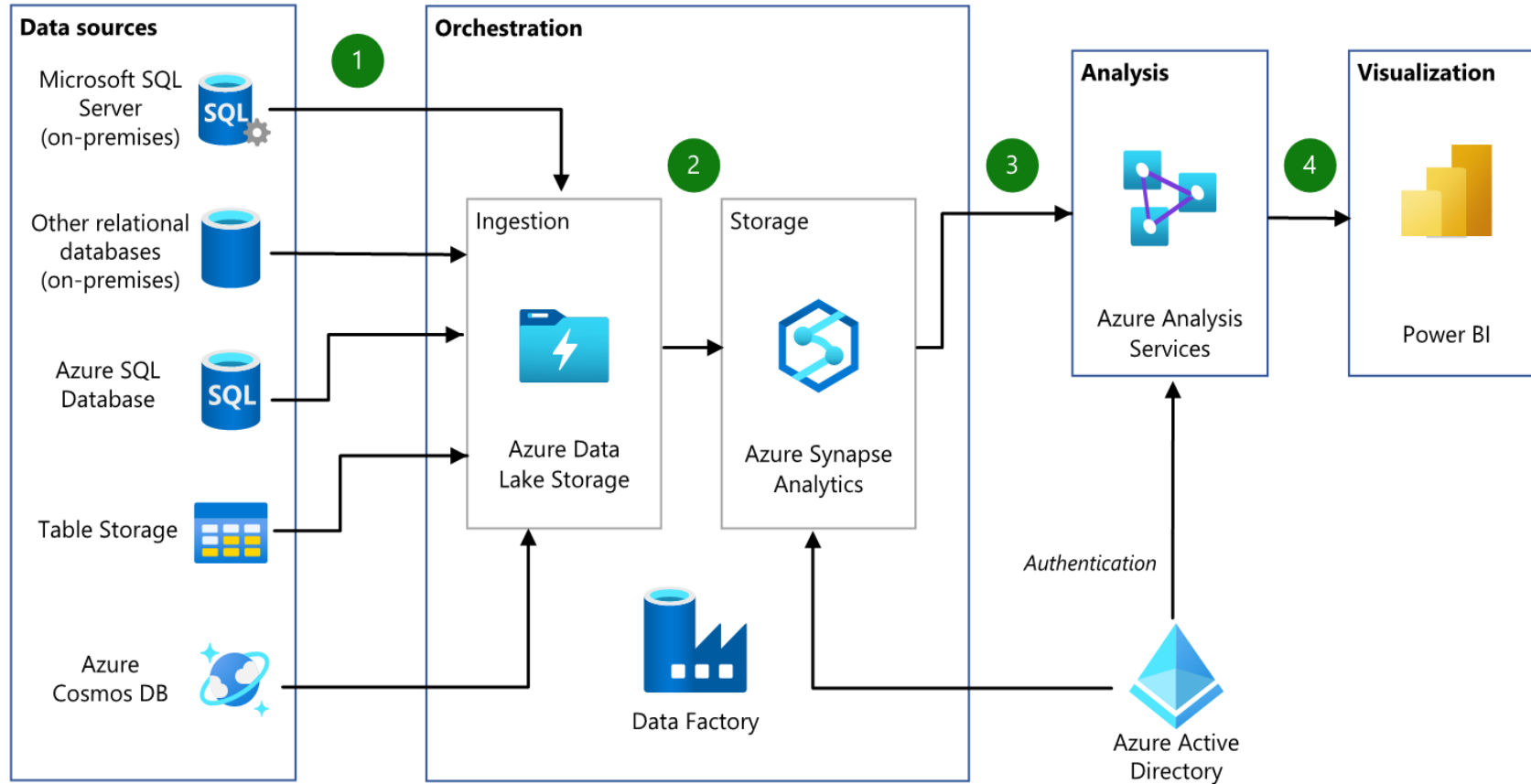
Colonia Paz

# 2023 BOSTON

## Considerations in Data Warehouse Architecture

Tyler McLaughlin, Data and AI  
Specialist | Microsoft



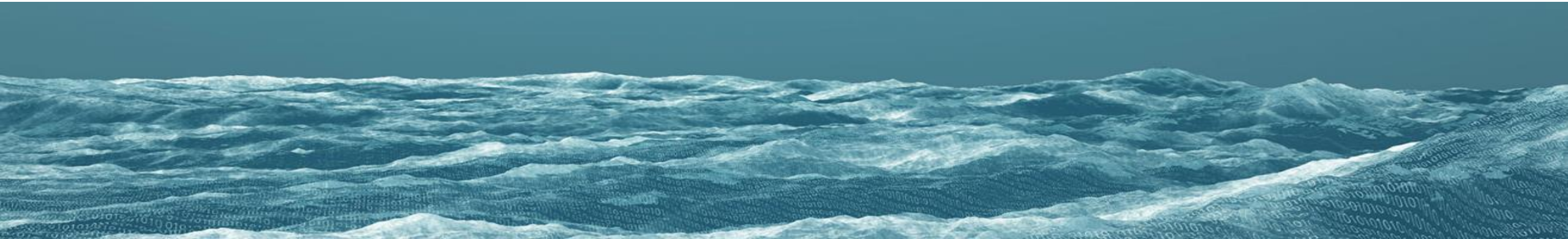


## Synapse Analytics

- 1. Azure Data Lake Storage** – staging area.
- 2. Azure Data Factory** – data is cleansed and transformed.
- 3. Azure Analysis Services** – simplifies analysis of business data.
- 4. Microsoft Power BI** – analysts use PBI to analyze warehoused data.

## What makes a robust data warehouse?

- Tiered Architecture: Bottom, Middle, Top
- Investing in the right tools and technologies
- Diversification of dataflows
- End-to-end solution





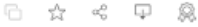
## Data-driven Decision-making

**65%**  
of people are visual learners

**80%**  
of information is retained  
through visualization

**60,000x**  
speed of visuals processed vs text

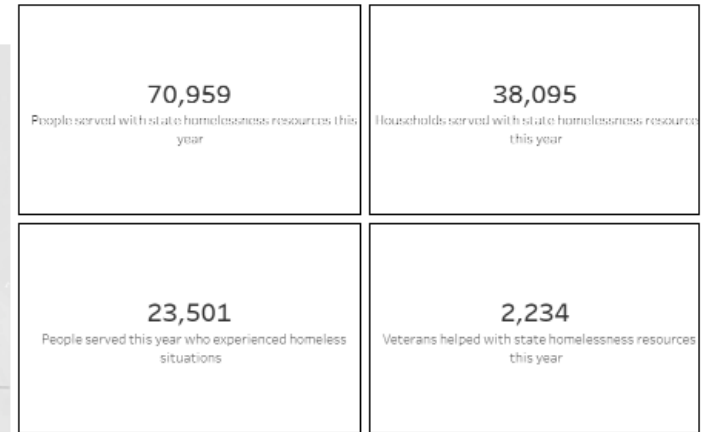
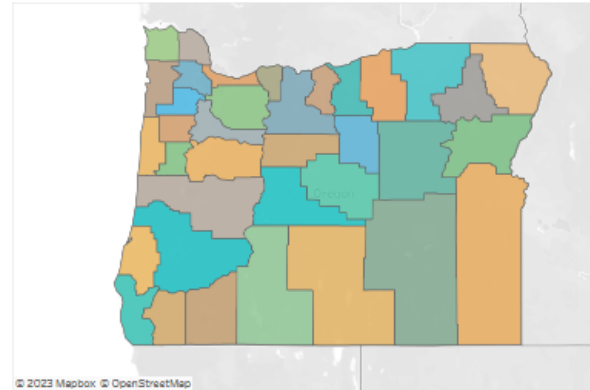
OHCS Homelessness and Housing Programs Dashboard by [Oregon Housing and Community Services](#)



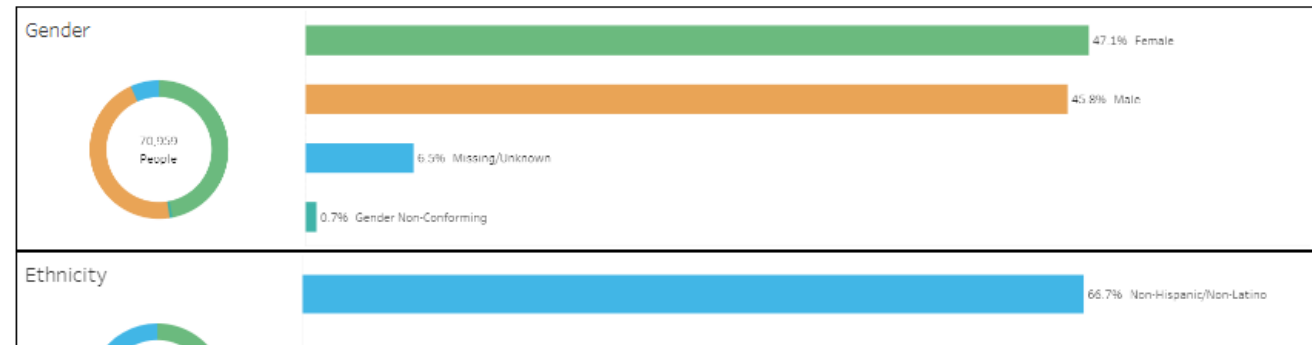
Time Period Covered: 07/01/2022 - 06/30/2023

### OHCS Housing Instability Dashboard Statewide HMIS data from OHCS Homeless and Housing Retention Programs

Select a County (or Counties) to Filter Dashboard Data



#### Demographics of People Served



## Internal Dashboarding



## Internal Dashboarding



Interactive

Integration

Local Data

Alerts

Connectors

Security

Turnkey

# Data-driven Decision-making

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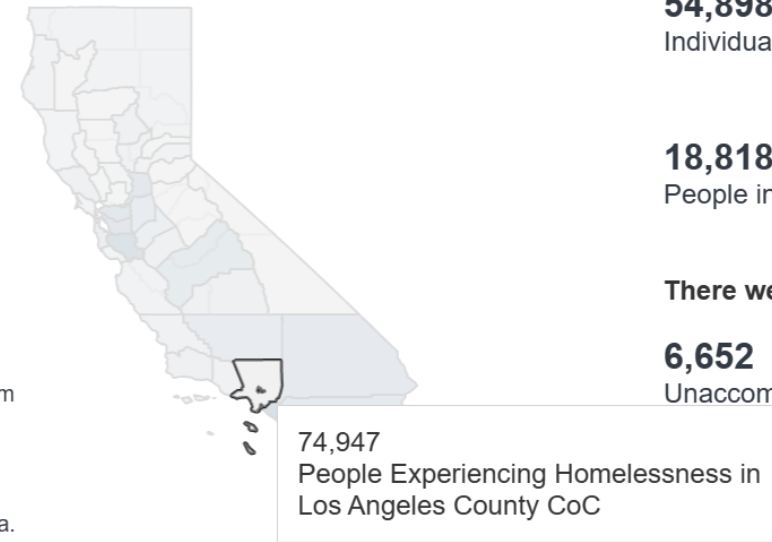
Of the 74,947 people who accessed the homelessness response system in Los Angeles County CoC in 2023 (Data through June 30th):

**54,898**  
Individuals

**18,818**  
People in families with children

**There were:**

**6,652**  
Unaccompanied youth included in  
and family groups



Click on a Continuum of Care location to filter the dashboard. Use the **filter drop-down menu** to re-select all of California.



HDIS V1.8

Source: HDIS

\* indicates that data are suppressed. To protect confidentiality, group data are suppressed when they contain fewer than 11 individuals; other groups may be complementarily suppressed when data could be used to calculate data for groups with fewer than 11 individuals. Subpopulation estimates (i.e., individuals and people in families with children) may not add up to total population estimates (i.e., people experiencing homelessness) because some people have unknown household types. Unaccompanied youth may be undercounted due to reporting practices (see Data Sources and Notes). Yuba/Sutter CoC is excluded from the CoC drop-down menu due to incomplete data.

## Questions to Consider

- Where do data and data projects live? IT, Research Department? (Both)
- How can data help HFAs make decisions? How can data expose inequity?
- How does training factor into large-scale data warehouse projects?
- How can a data warehouse help communication with policy makers?
- How do you normalize and standardize data?

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**Thank you**

