



# EOTSS: Data Sharing and Services

July 18, 2019





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## Agenda

- Data Sharing Framework
- Overview of EOTSS's Data Services
- Key Products:
  - Data Prep / Secure Storage
  - Data Analytics
  - Data Visualization

# Data Sharing



## Data Sharing Problem Statement

### Challenge 1:

Data is not shared across state agencies in a cost-effective, replicable manner.

287+

Unique data-sharing agreements

133

Days to create a data-sharing agreement  
(on average)

### Challenge 2:

Confusion over rules and regulations limits data sharing. Not sharing is the default.

- Lack of clarity around what can be shared with whom
- No common process or support system for data-sharing

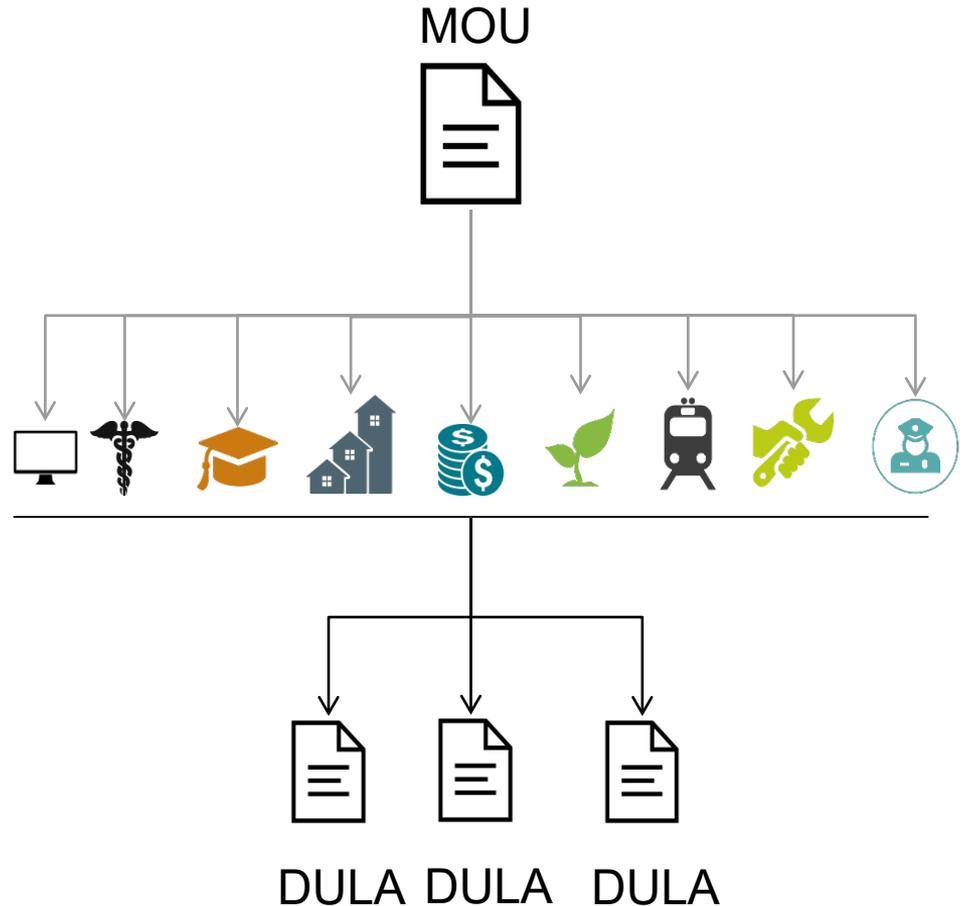
## New Legal Framework

### MOU:

A statewide agreement broadly governing the sharing of protected data between Secretariats

### Data Use Licensing Agreement (DULA):

An agreement between a data owner and a data recipient(s) specifying the details of how data will be shared for a specified purpose/project

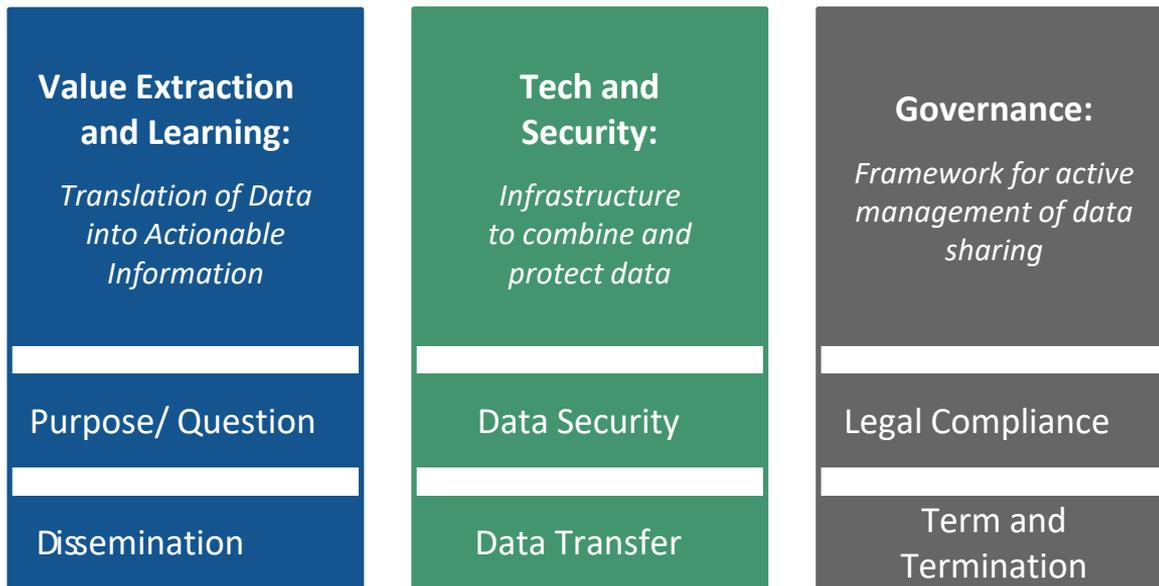


## What's in the MOU and DULA?

### The MOU covers the following areas:

- Justification for Data Sharing
- Data Access/Confidentiality
- Data Transfer/Storage
- Security Requirements/Breaches
- Requirements under a DULA

### Parts of a DULA:





## Data-Sharing Support: The Data Steward Council

The Data Steward Council is a peer forum to support data-sharing.

Assist with the timely execution of the DULA process, before and after signatures

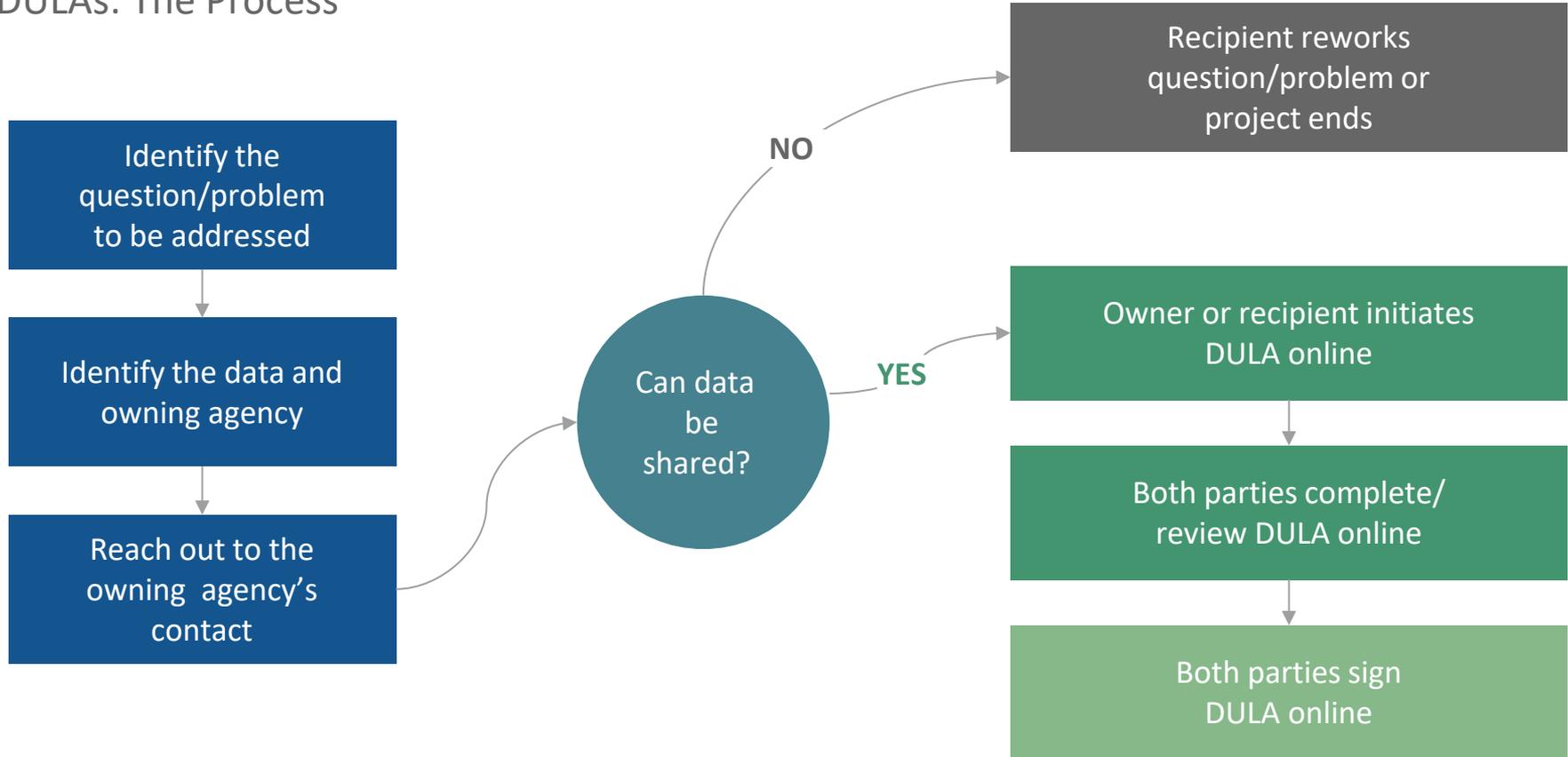
Manage the MOU, including the addition of new signatories

Mediate disagreements around data-sharing

Provide general support for data-sharing projects

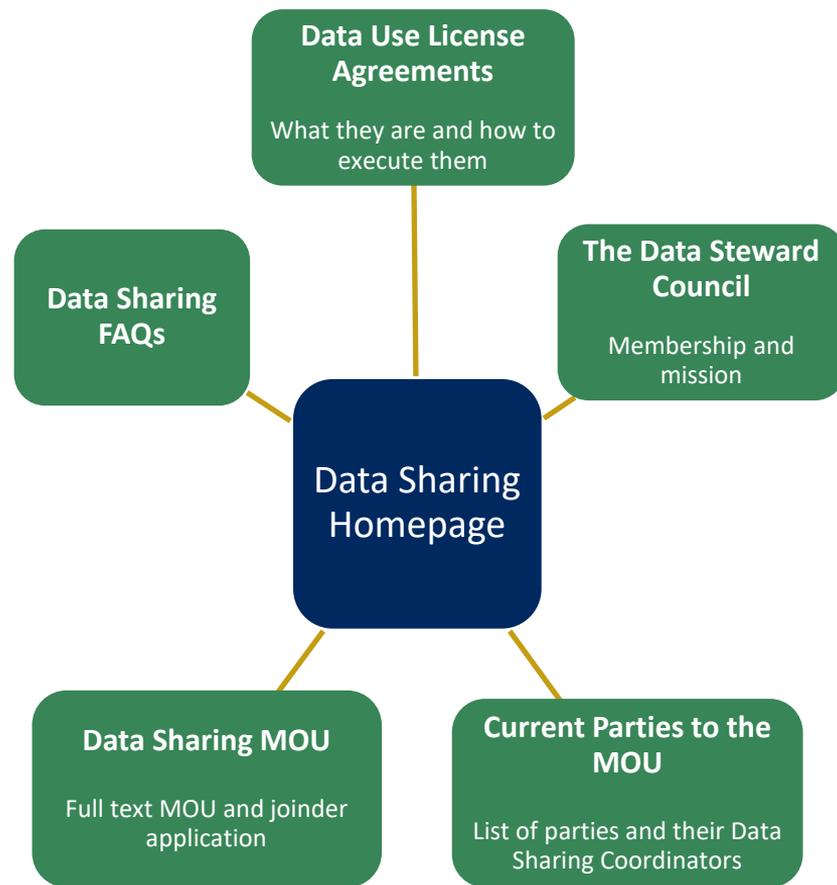
Reach out to your Secretariat's representative at any point in the data-sharing process.

## DULAs: The Process



## Data Sharing Resource Site

- Resources for Data Sharing Coordinators:
  - DocuSign resources for initiating/using DULAs
  - Quick access to the Data Sharing MOU
  - Listing of Data Sharing Coordinators
- Resources for other data users:
  - Introduction to the Data Steward Council
  - Application to join the MOU
  - Instructional resources for signing DULAs
  - Data Sharing FAQs



# EOTSS's Data Services



## EOTSS's Data Services

### Data Sharing

- Support the work of the Data Steward Council
- Manage the statewide MOU
- Facilitate the electronic DULA system
- Develop resources for Data Sharing Coordinators

### Data Analytics

- Data Matching
- Integrated Data Systems
- Data Science/Analytics
- Machine Learning

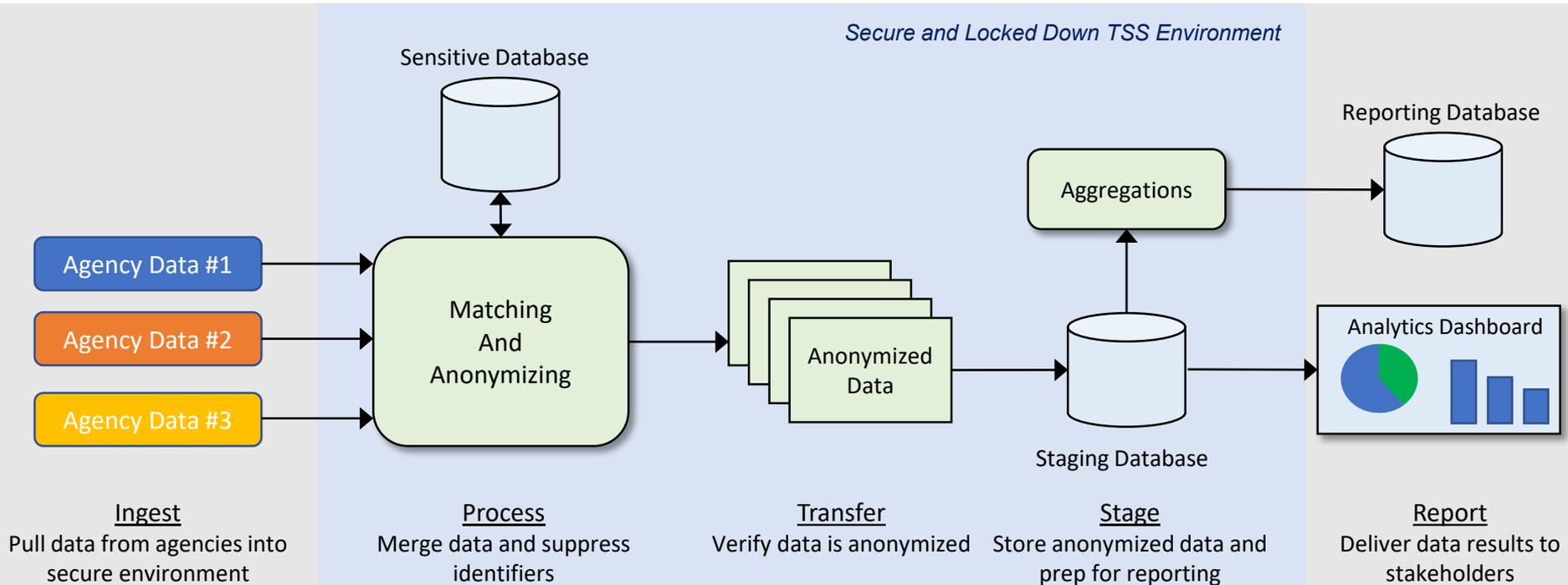
### Open Data

- Data Sites
- Mass.gov open data platform (FY20)

Data Prep / Storage

# Data Prep and Storage: Integrated Data System (IDS)

## Data Processing Flow

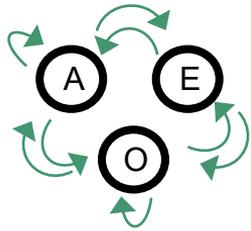


# Data Analytics

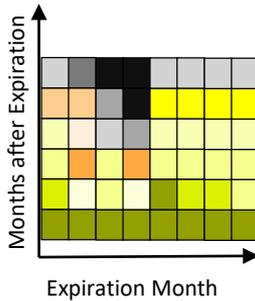
# Analytic Processes: SNAP "Churn"

## Describe

How much unintended churn takes place in SNAP?



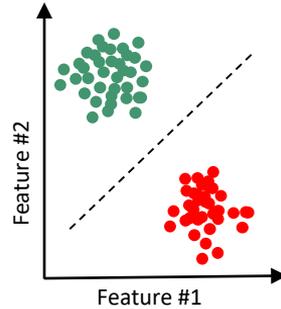
Stochastic Models



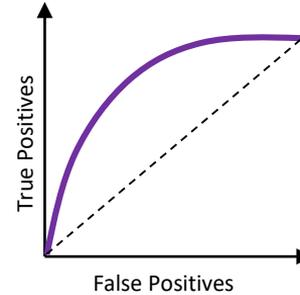
Cohort Analysis

## Predict

Which individuals are high-risk for unintended churn?



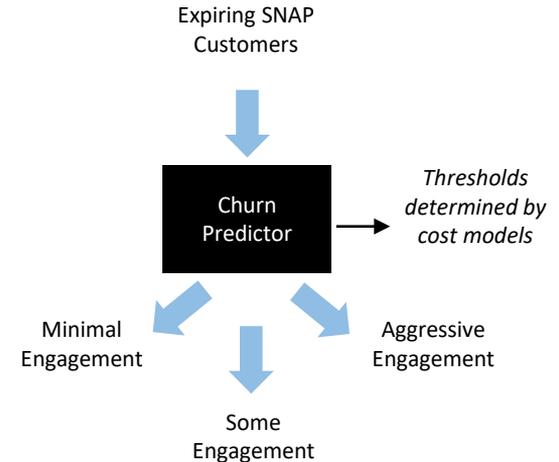
Feature-Driven Prediction



ROC Curves

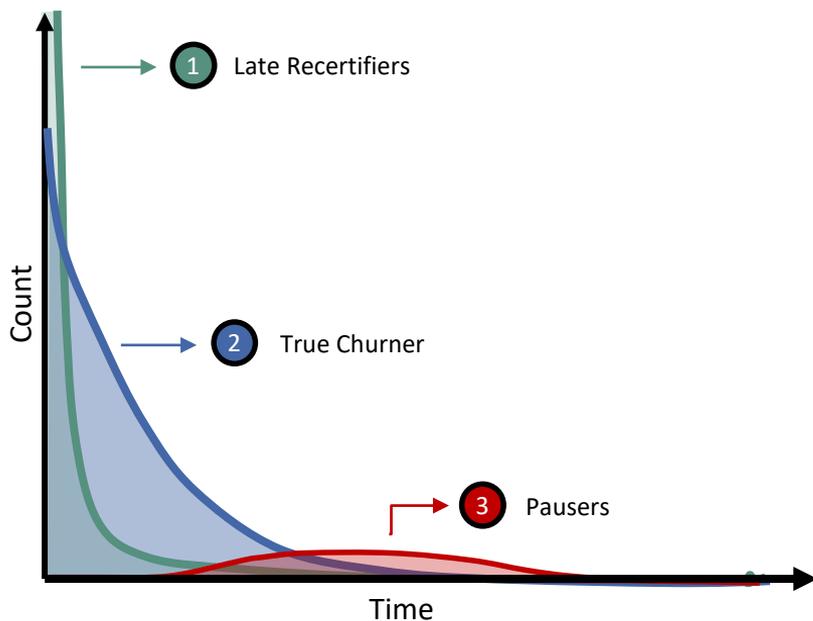
## Prescribe

What approaches are effective at reducing unintended churn?



## Isolating Churn

### Hypothesis: Different Types of Behaviors Drive Return to SNAP



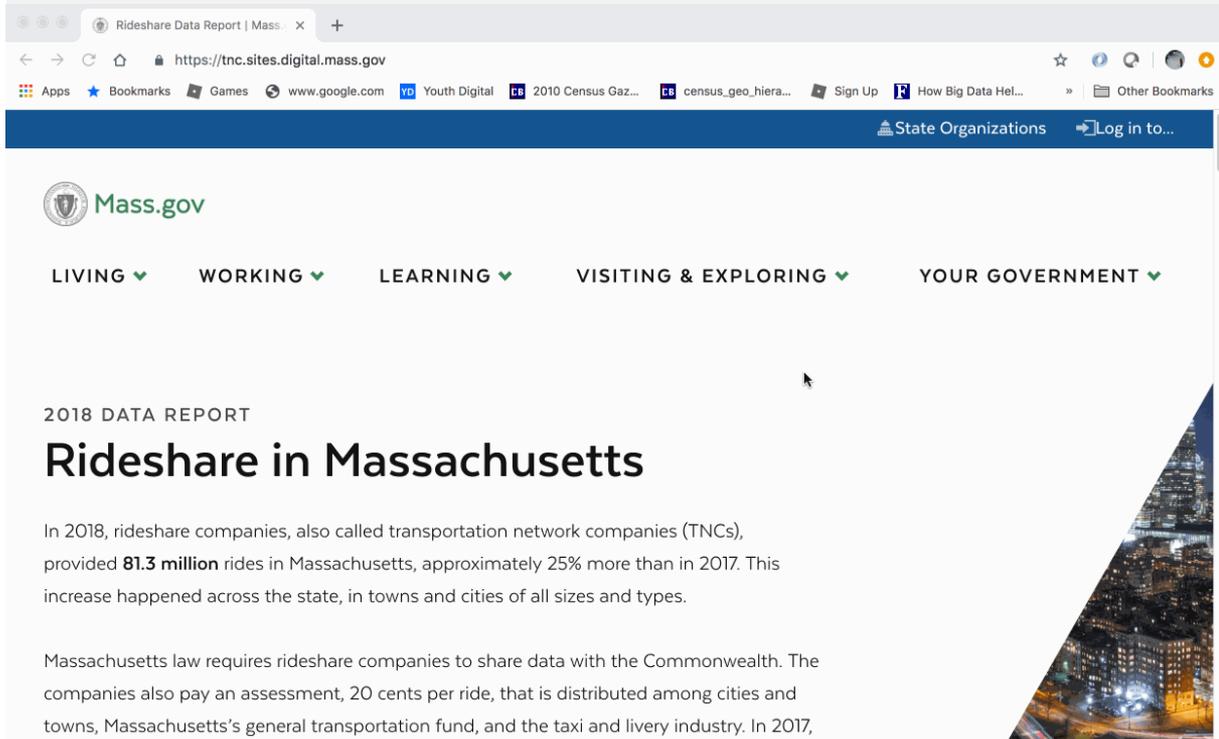
- 1 Clients who knew to renew but engaged with DTA too close to the application deadline
- 2 Clients who did not know they expired until they prompted by no access to benefit
- 3 Clients who let their benefit expire but returned due to life changes

**Hypothesis: Three different behaviors drive return cycles to SNAP**

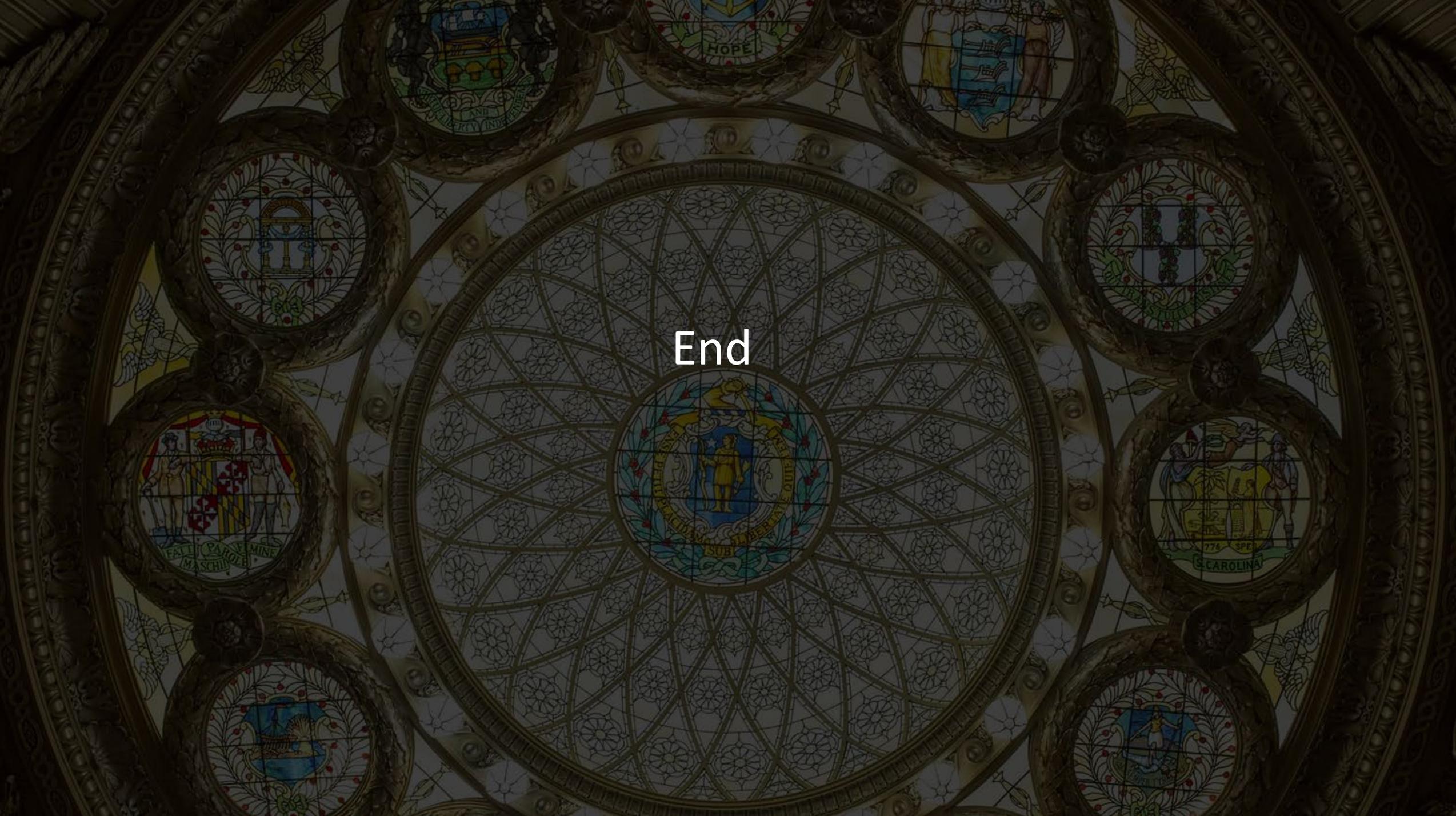
# Data Visualization

## Data Story: TNC Rideshare

- EOTSS partnered with Department of Public Utilities (DPU) to develop a [data site](#) for TNC rideshare (Lyft/Uber).
- The site helps the state and the public better understand ride flows between municipalities and over time.



The screenshot shows a web browser displaying the "Rideshare Data Report | Mass.gov" page. The browser's address bar shows the URL "https://tnc.sites.digital.mass.gov". The page features the Mass.gov logo and a navigation menu with categories: LIVING, WORKING, LEARNING, VISITING & EXPLORING, and YOUR GOVERNMENT. The main content area is titled "2018 DATA REPORT" and "Rideshare in Massachusetts". The text below the title states: "In 2018, rideshare companies, also called transportation network companies (TNCs), provided **81.3 million** rides in Massachusetts, approximately 25% more than in 2017. This increase happened across the state, in towns and cities of all sizes and types." A second paragraph explains that Massachusetts law requires rideshare companies to share data with the Commonwealth, and that companies also pay an assessment of 20 cents per ride, which is distributed among cities and towns, the state's general transportation fund, and the taxi and livery industry. The page includes a night cityscape image in the bottom right corner.

The image shows a complex stained glass dome ceiling. At the center is a large circular medallion with a grid pattern, containing a figure holding a scale and a banner with the Latin motto "LIBERTATE QUIA SUB". Surrounding this central medallion are several smaller circular panels, each containing a different heraldic crest or coat of arms. Some of these panels include the word "HOPE" at the top and "S. CAROLINA" at the bottom. The entire dome is supported by a network of ribs, and the background is filled with intricate floral and geometric patterns. The word "End" is written in white text in the center of the image.

End



## Data Steward Council Members

<b>Secretariat</b>	<b>Member</b>
Administration and Finance	Patrick Lynch
Education	Ann Reale
Energy and Environmental Affairs	Faye Boardman
Housing and Economic Development	TBD
Health and Human Services	Sarah Ricardi
Labor and Workforce Development	Michael Doheny
Public Safety and Security	Cliff Goodband
Technology Services and Security	Holly St. Clair (Chair)
Transportation	Rachel Bain
Governor's Office	Michael Kaneb