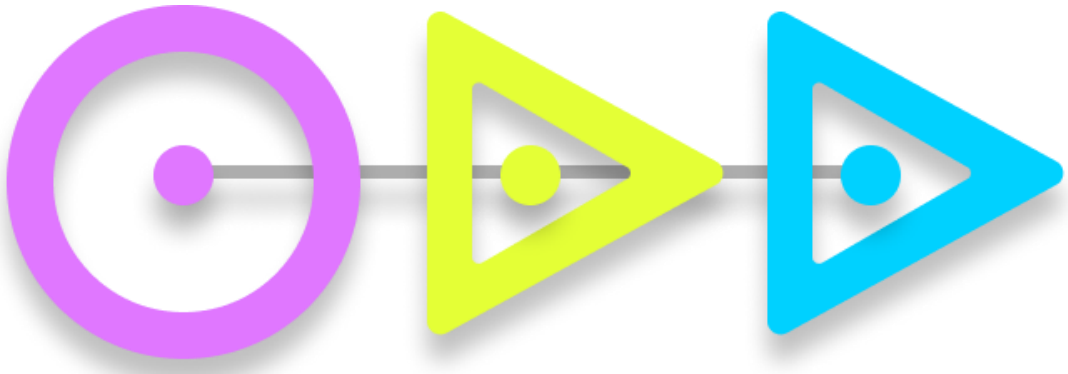


Open Data Day

Celebrating ten years of open data in Connecticut

March 7, 2024

Data & Policy Analytics
CT Office of Policy and Management

Thank you to Tyler Technologies for sponsoring the Open Data Day breakfast!

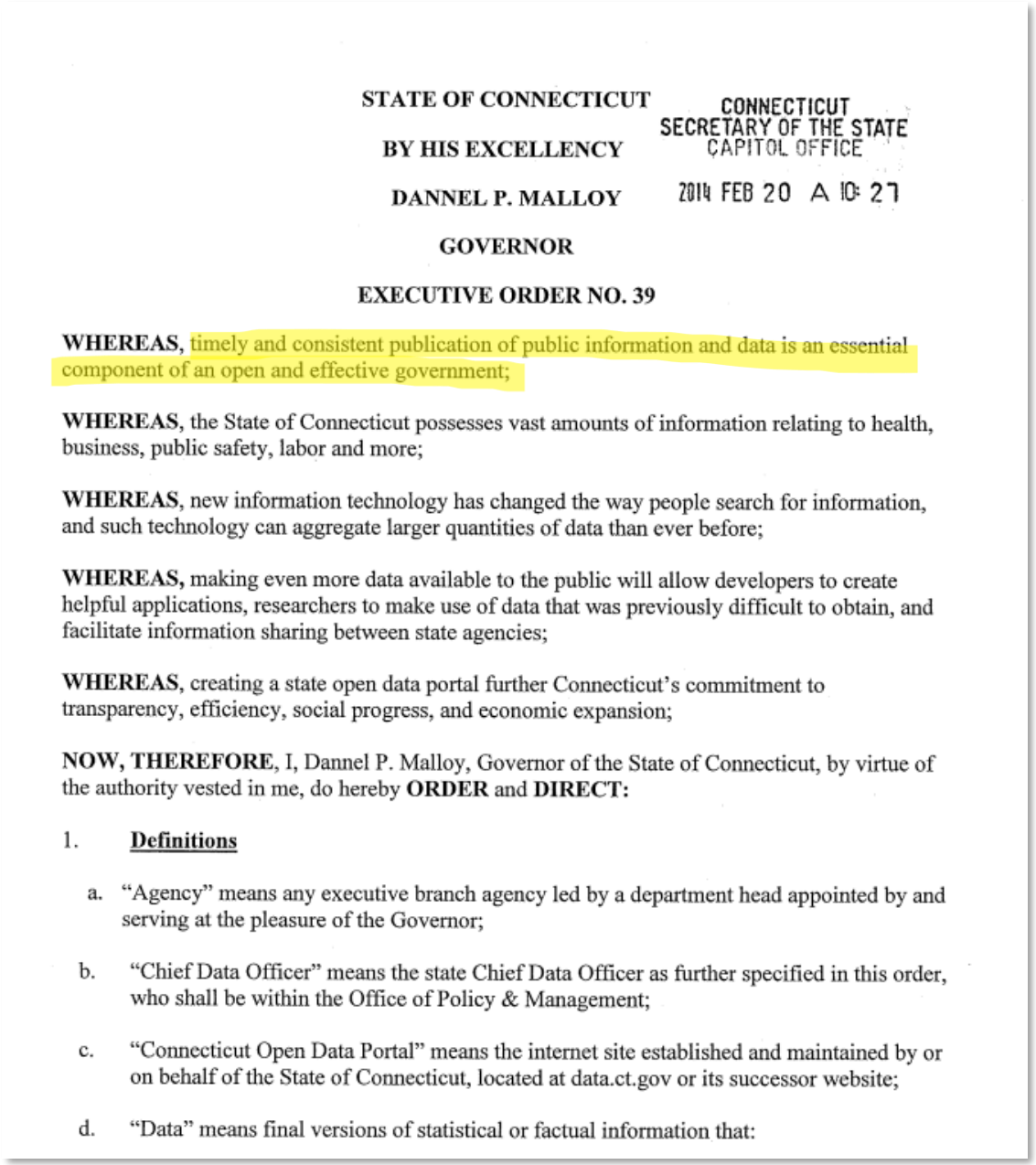
Agenda

1. **Opening remarks**
   Scott Gaul, OPM, and special guest Tyler Kleykamp
2. **Open data portal update: Highlights and focus areas**
   Pauline Zaldonis, OPM
3. **GIS Office update: Geodata Portal and upcoming data**
   Alfredo Herrera, OPM
4. **FOIA and open data**
   Russell Blair & Nick Smarra, FOIC
5. **Open Connecticut: Transparency in CT state government**
   Yamuna Menon, OSC
6. **Meet the vendor: Tyler Technologies**
   David Marcus, Tyler Tech
7. **Meet the Vendor: Esri**
   Matt Deal & Krithica Kantharaj, Esri
8. **Telling your story with open data**
   Rachel Leventhal-Weiner, OPM

Ten years of open data in Connecticut

In 2014, Governor Malloy signed Executive Order 39 to:

- Launch data.ct.gov
- Call on agencies to publish data within 90 days
- Create the Open Data Advisory Council



STATE OF CONNECTICUT

BY HIS EXCELLENCY

DANNEL P. MALLOY

GOVERNOR

CONNECTICUT
SECRETARY OF THE STATE
CAPITOL OFFICE
2014 FEB 20 A 10:27

EXECUTIVE ORDER NO. 39

WHEREAS, timely and consistent publication of public information and data is an essential component of an open and effective government;

WHEREAS, the State of Connecticut possesses vast amounts of information relating to health, business, public safety, labor and more;

WHEREAS, new information technology has changed the way people search for information, and such technology can aggregate larger quantities of data than ever before;

WHEREAS, making even more data available to the public will allow developers to create helpful applications, researchers to make use of data that was previously difficult to obtain, and facilitate information sharing between state agencies;

WHEREAS, creating a state open data portal further Connecticut's commitment to transparency, efficiency, social progress, and economic expansion;

NOW, THEREFORE, I, Dannel P. Malloy, Governor of the State of Connecticut, by virtue of the authority vested in me, do hereby **ORDER** and **DIRECT:**

1. **Definitions**

a. "Agency" means any executive branch agency led by a department head appointed by and serving at the pleasure of the Governor;

b. "Chief Data Officer" means the state Chief Data Officer as further specified in this order, who shall be within the Office of Policy & Management;

c. "Connecticut Open Data Portal" means the internet site established and maintained by or on behalf of the State of Connecticut, located at data.ct.gov or its successor website;

d. "Data" means final versions of statistical or factual information that:

STATE OF CONNECTICUT
GOVERNOR DANNEL P. MALLOY

03/31/2014

Gov. Malloy Launches Data.CT.Gov to Give Public Unprecedented Amount of Access to Government Data

(NEW HAVEN, CT) - Governor Dannel P.
launched Data.CT.gov , Connecticut's n
government data to be collected, place
increase government efficiency and tra
residents can use for any number of pu
New Haven firm that has created a com
issues, and governments to track, mana

"We launched this website to as part of
open and easily accessible to its owner

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Malloy orders data dump

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STAFF REPOR

Governor D
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Gov. Malloy to create Connecticut information database

Feb 20, 2014

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GOVERNMENT

Connecticut moves openly toward more data transparency

by CT Mirror Staff
March 3, 2014 @ 12:21 pm

Governor Dannel P. Malloy speaks at an open data conference at the Hartford Public Library. CT MIRROR

Why open data?

Promote open and effective government

Facilitate data sharing between agencies

Make it easier for developers to make helpful applications

Promote transparency, efficiency, social progress, and economic expansion

Open data in 2024 and beyond

Curating the data published on the Portal

Integrating with other state data efforts

Improving the user experience on the Portal

Making data on the Portal more accessible through data visualization and storytelling

State Data Plan goals

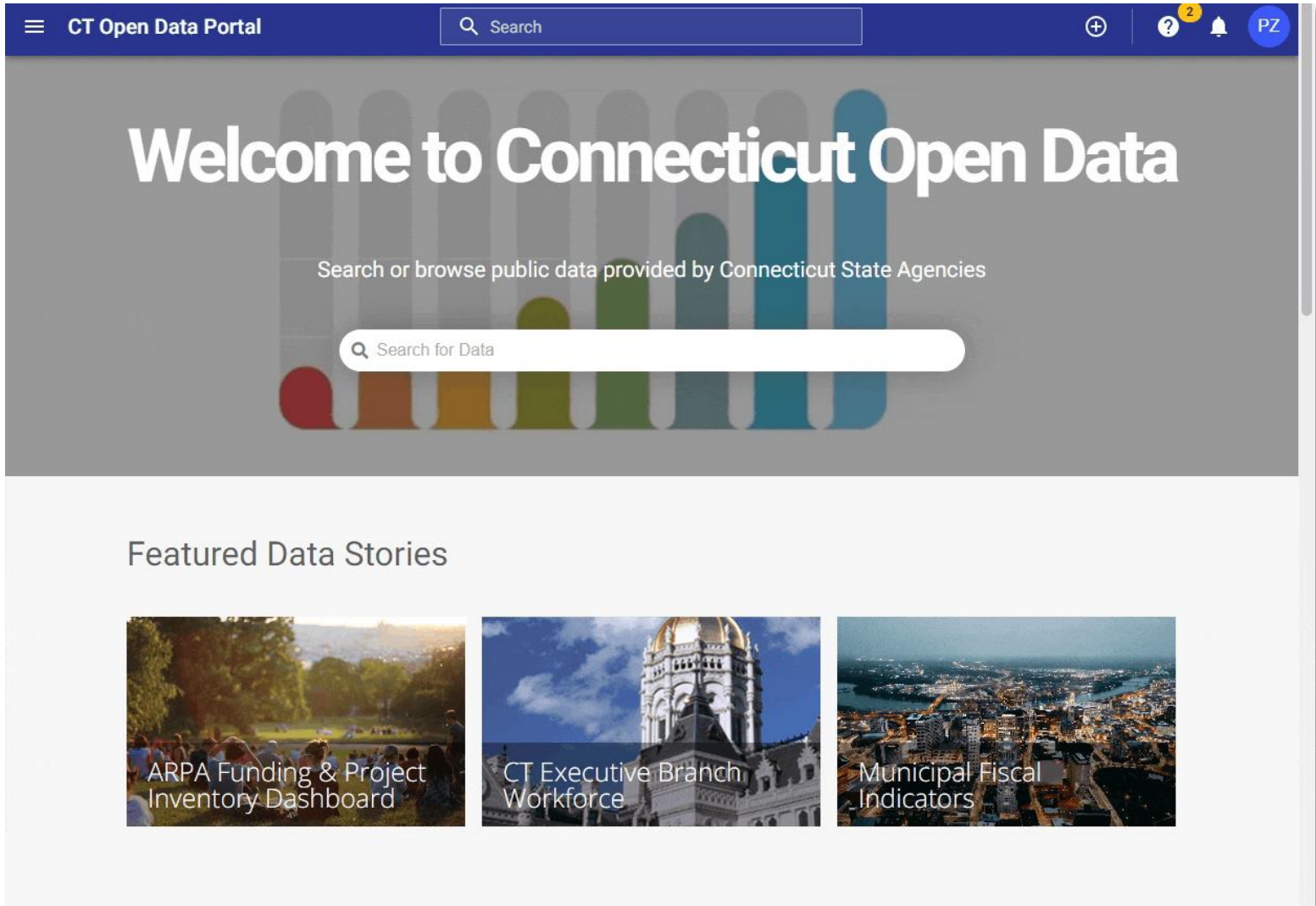
1. Improve access to data
2. Support agency data and analytics capacity
3. Using data to inform decision-making

Due for an update soon!

Open data portal update: Highlights and focus areas

CT Open Data Portal

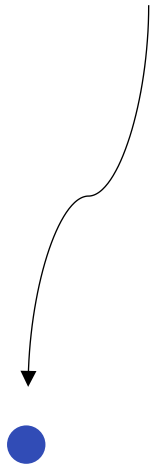
Connecticut's repository for open data published by state agencies



Provides open access to machine-readable data about state government

Open data by the numbers

The OPM Data and Policy Analytics Division...



...work with about 170 data publishers and editors across state agencies

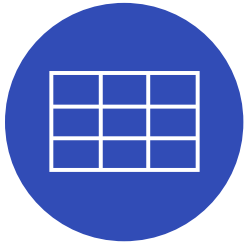
~170
editors and publishers

...to provide access to data to over 185k users every year!

185,000+
users in the last year*

*User data from Google Analytics, April 2023-February 2024
Slide inspiration: https://moda-nyc.github.io/2023-OpenDataReport/open-data-by-the-numbers.html

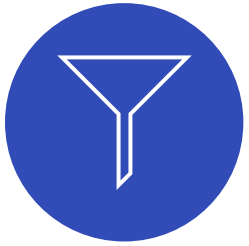
What's on the Portal?



557
Datasets

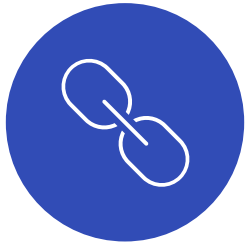
37
Data stories

44
Maps



137
Filtered views

102
Charts



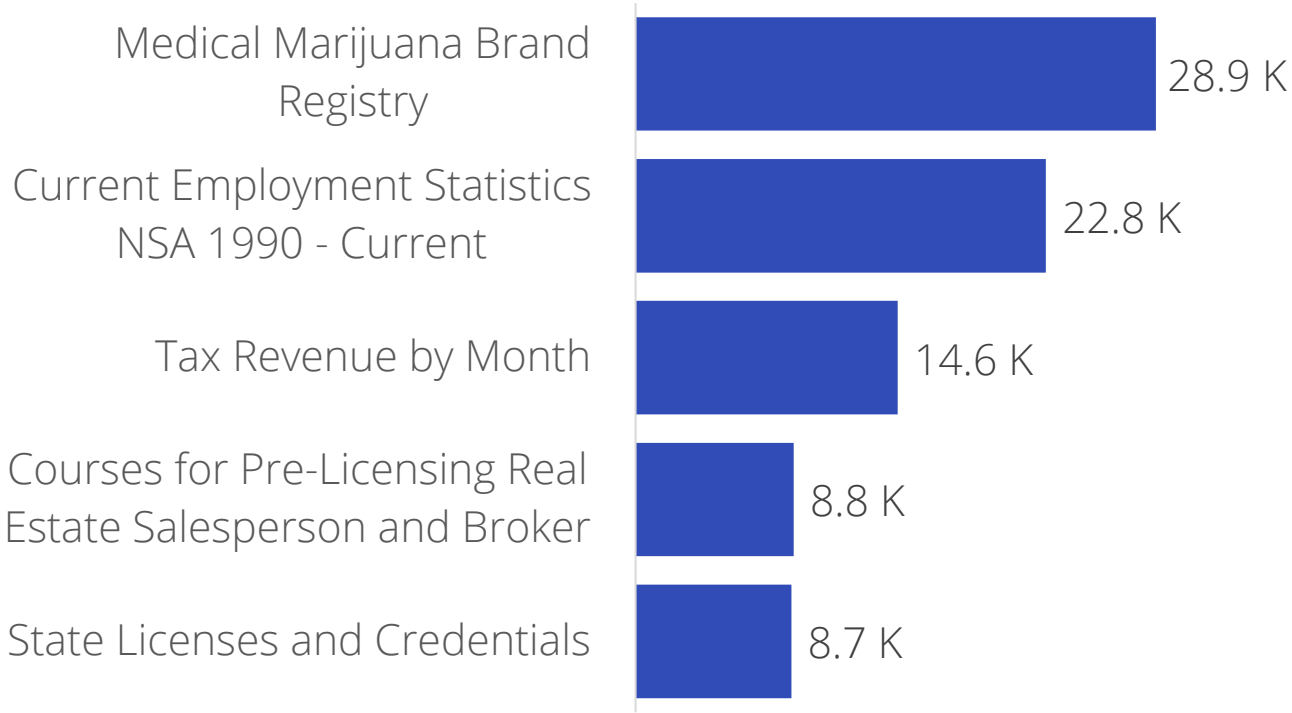
587
Federated assets

Dataset views on the Portal decreased slightly over the last two years, from a high of 71k in January 2022

The most viewed datasets included data on medical marijuana, employment statistics, and tax revenue.

Dataset views, 2022 - present

Most viewed datasets, 2023

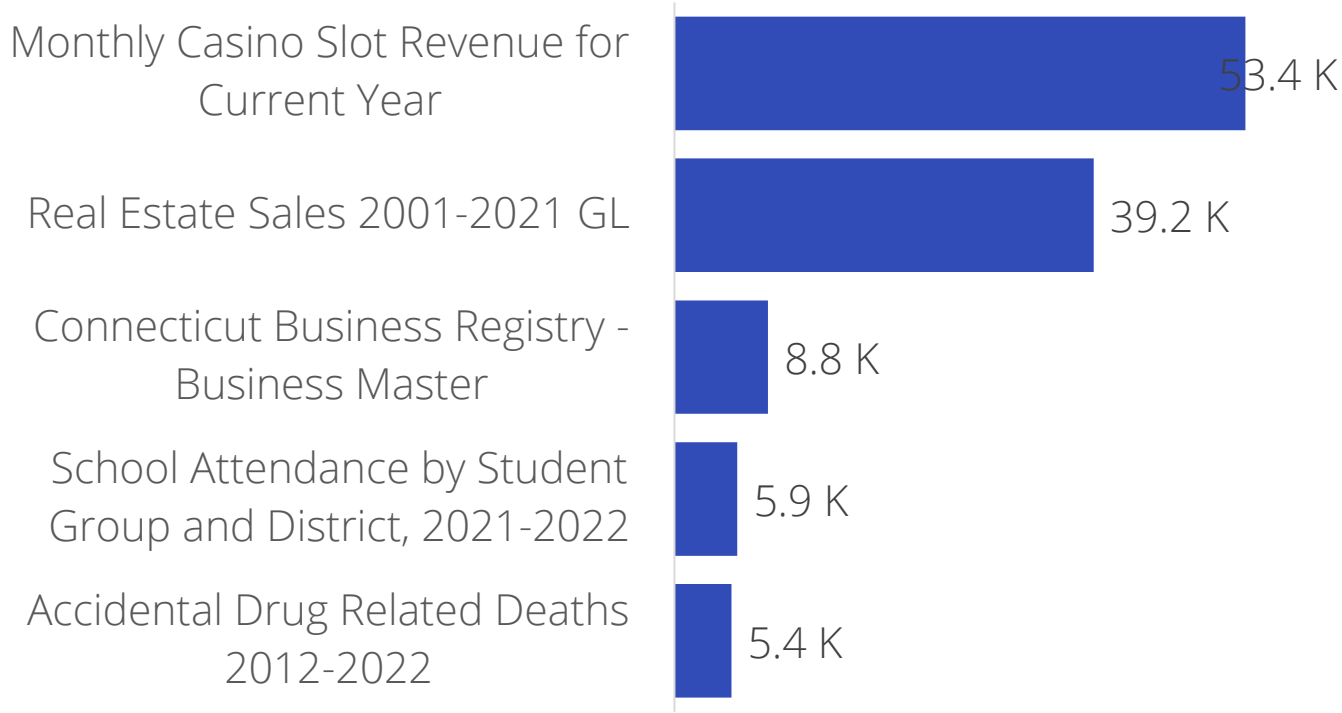


Dataset downloads have increased over the last two years, with a high of 35.5K downloads in October 2023

The most downloaded datasets included data on casino slot revenue, real estate sales, and Connecticut businesses

Downloads, 2022 - present

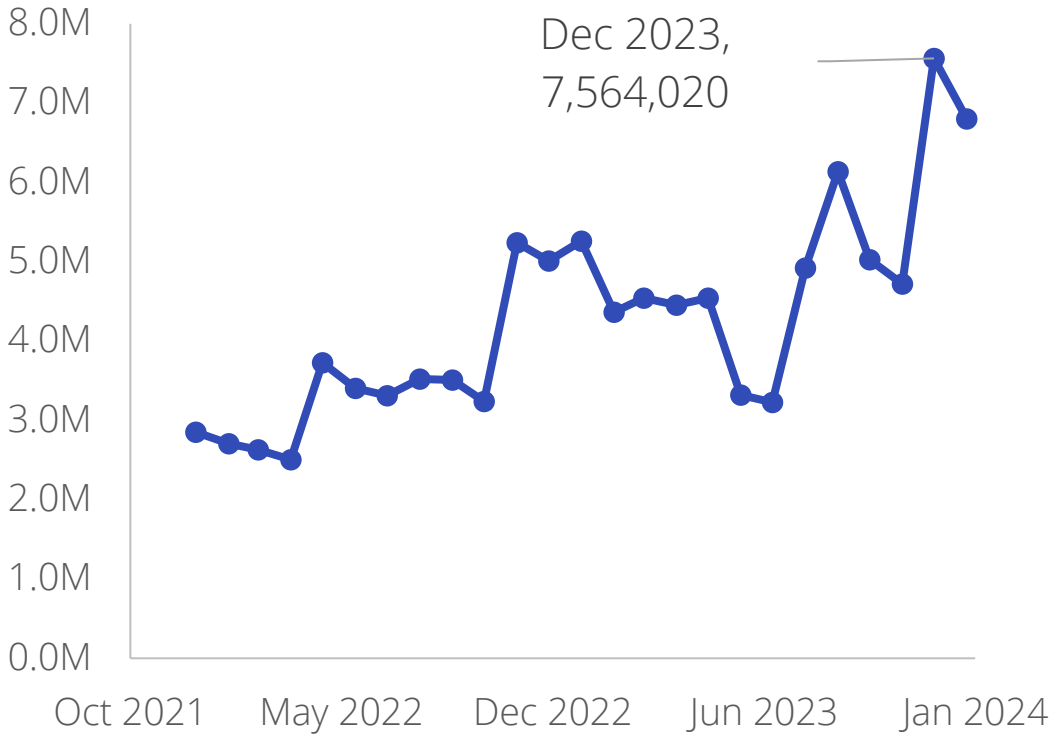
Most downloaded datasets, 2023



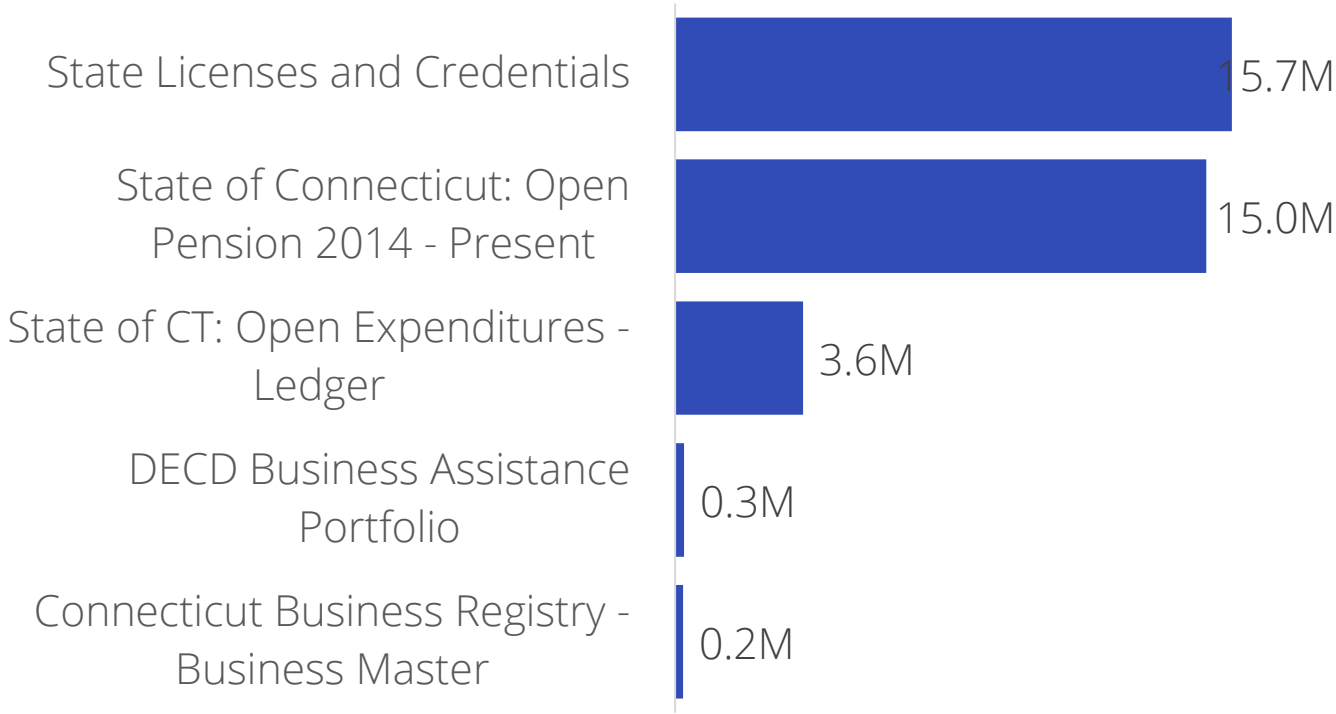
API calls have increased over the last two years, with a high of 7.5M calls in December 2023

The datasets with the most API calls included data on state licenses and credentials, pensions, and the state budget

API calls, 2022 - present



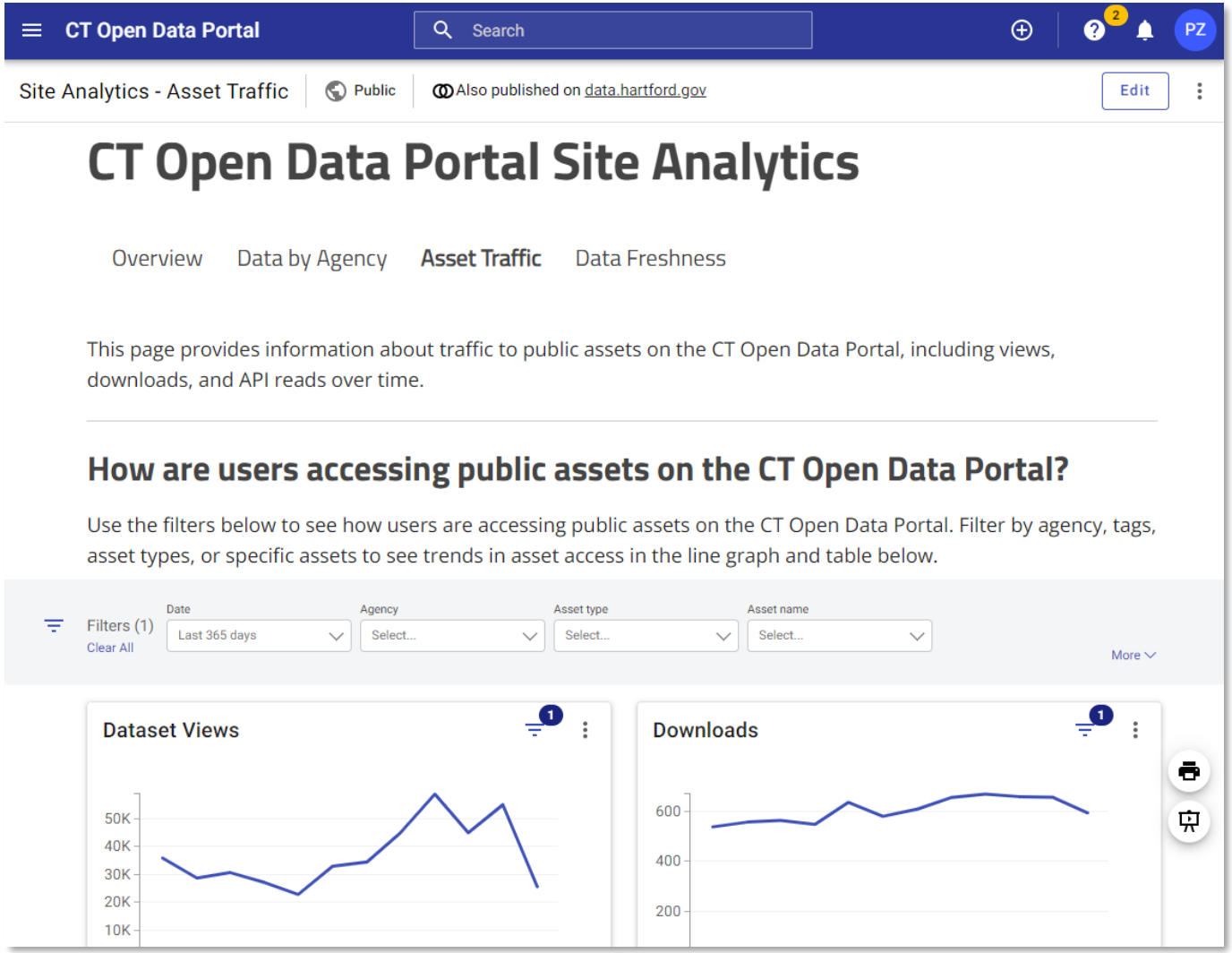
Datasets with most API calls, 2023



Data & Policy Analytics

See more analytics in the site analytics data story

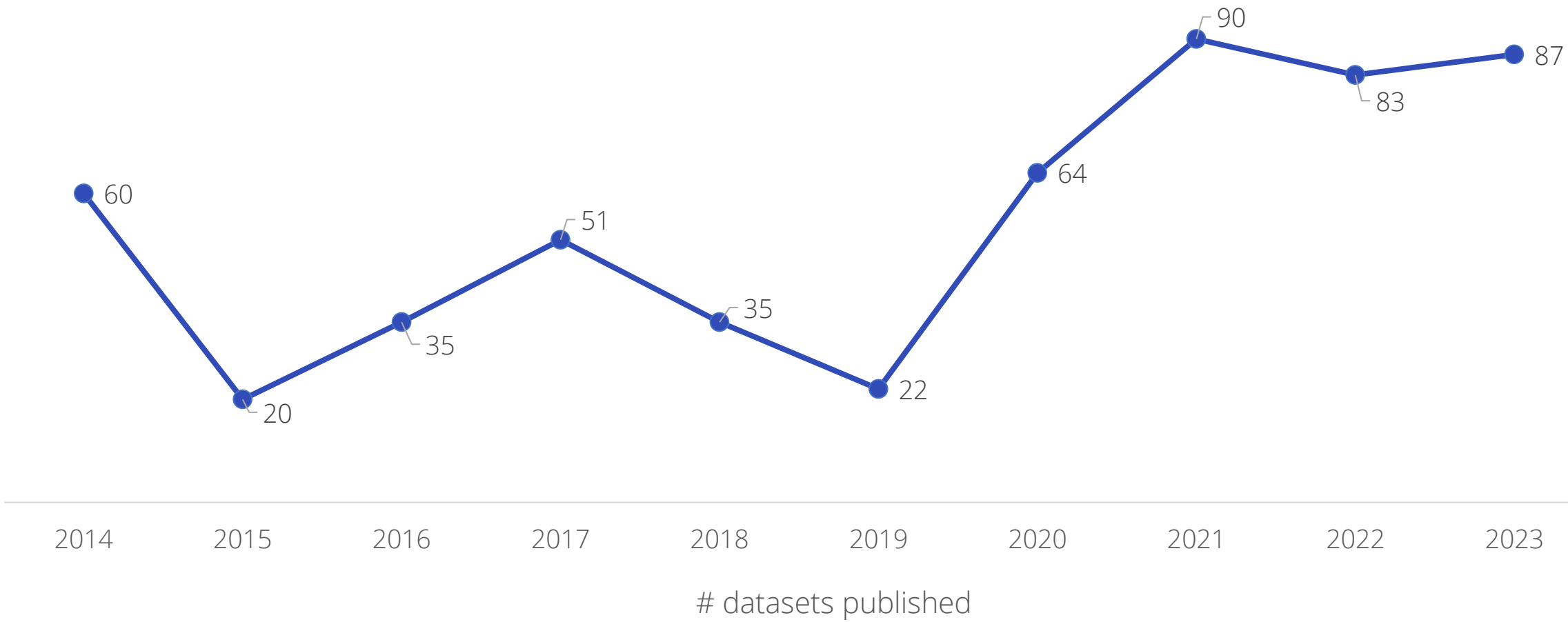
- Assets by agency
- Popular assets
- Views, downloads, API reads over time
- Data freshness



https://data.ct.gov/stories/s/cczq-bx74

Dataset highlights

Agencies have published more than 80 new datasets annually for the last three years



New datasets include…

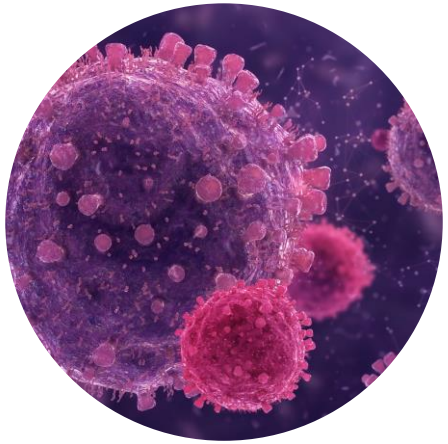
Prescription drug monitoring

School immunizations

DECD construction report

Cannabis applications, sales, tax revenue

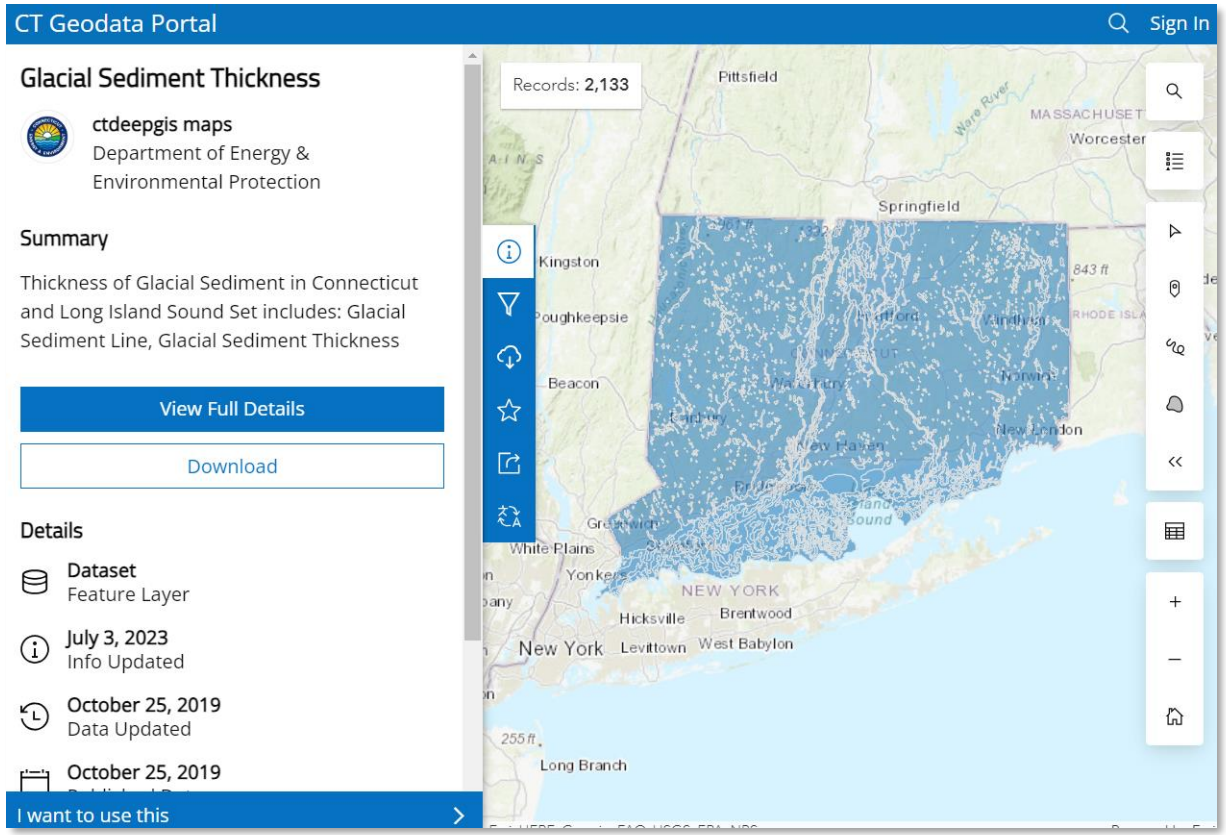
Sports wagering

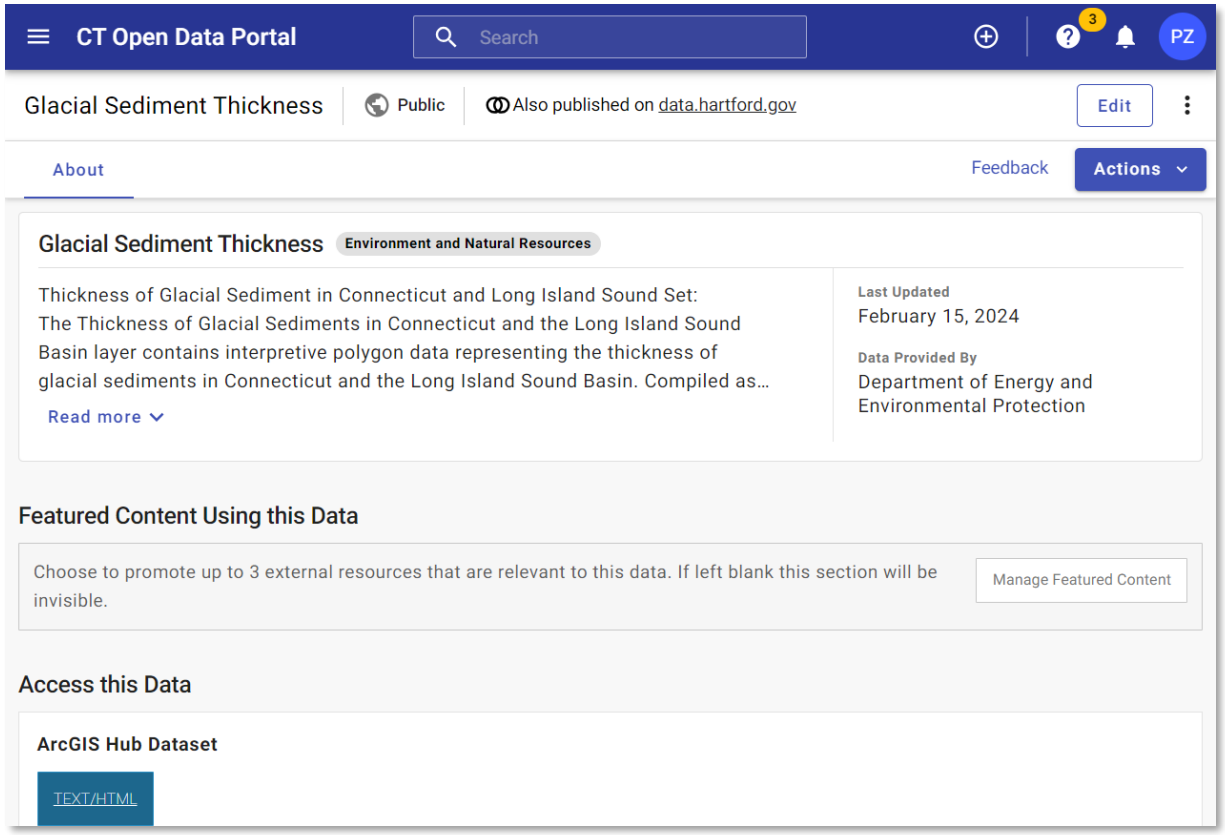


Reportable diseases

Birth to Three

GIS data from geodata.ct.gov is now included in the CT Open Data Portal catalog





GIS data now on the Portal includes...

Highways, state routes, and local roads

Statewide parcel data

DEEP trails

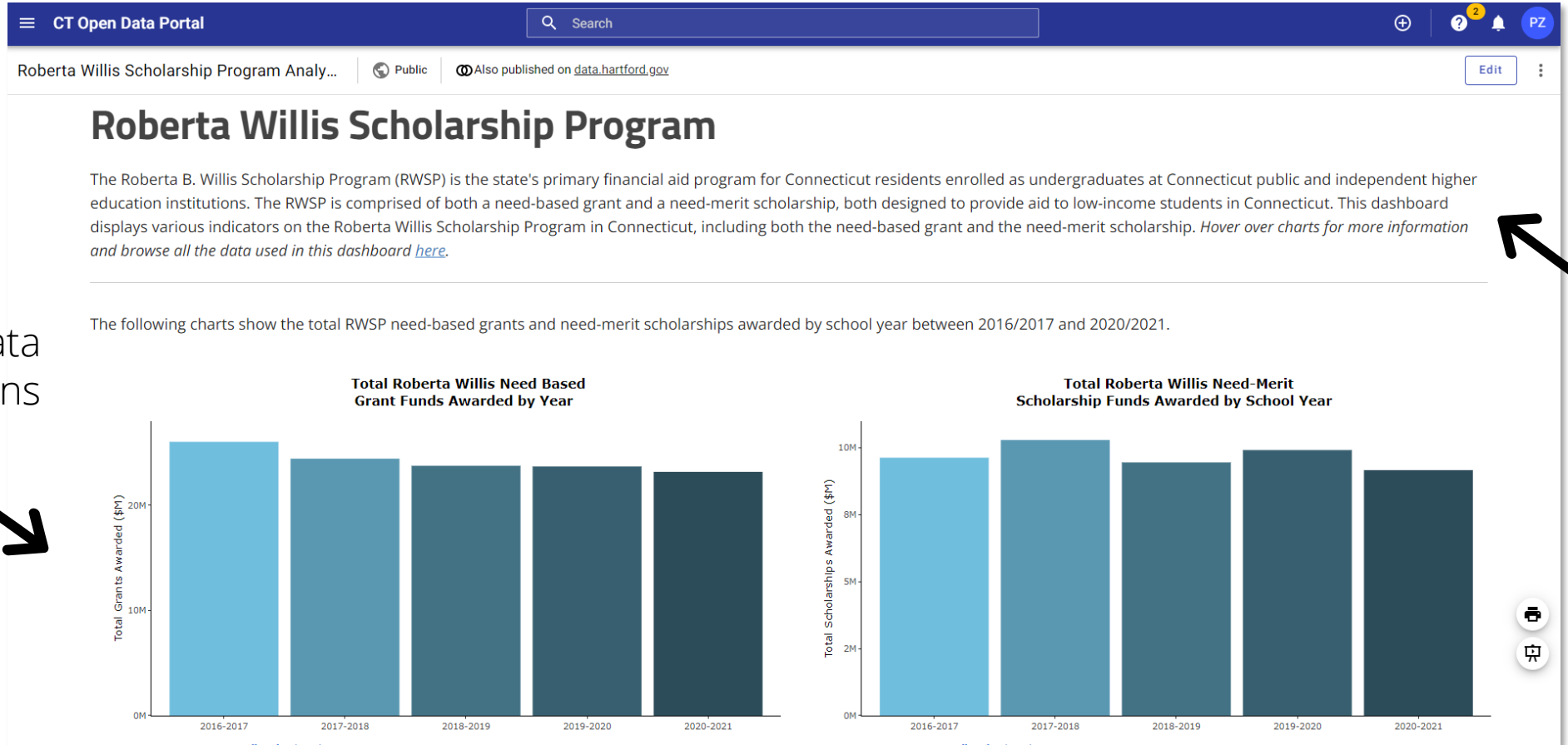
Hurricane surge inundation

Aerial imagery

Made with open data

Data stories provide context about data on the Portal

37 data stories are now published on the CT Open Data Portal



Context about the data

Data visualizations

Open data screencasts

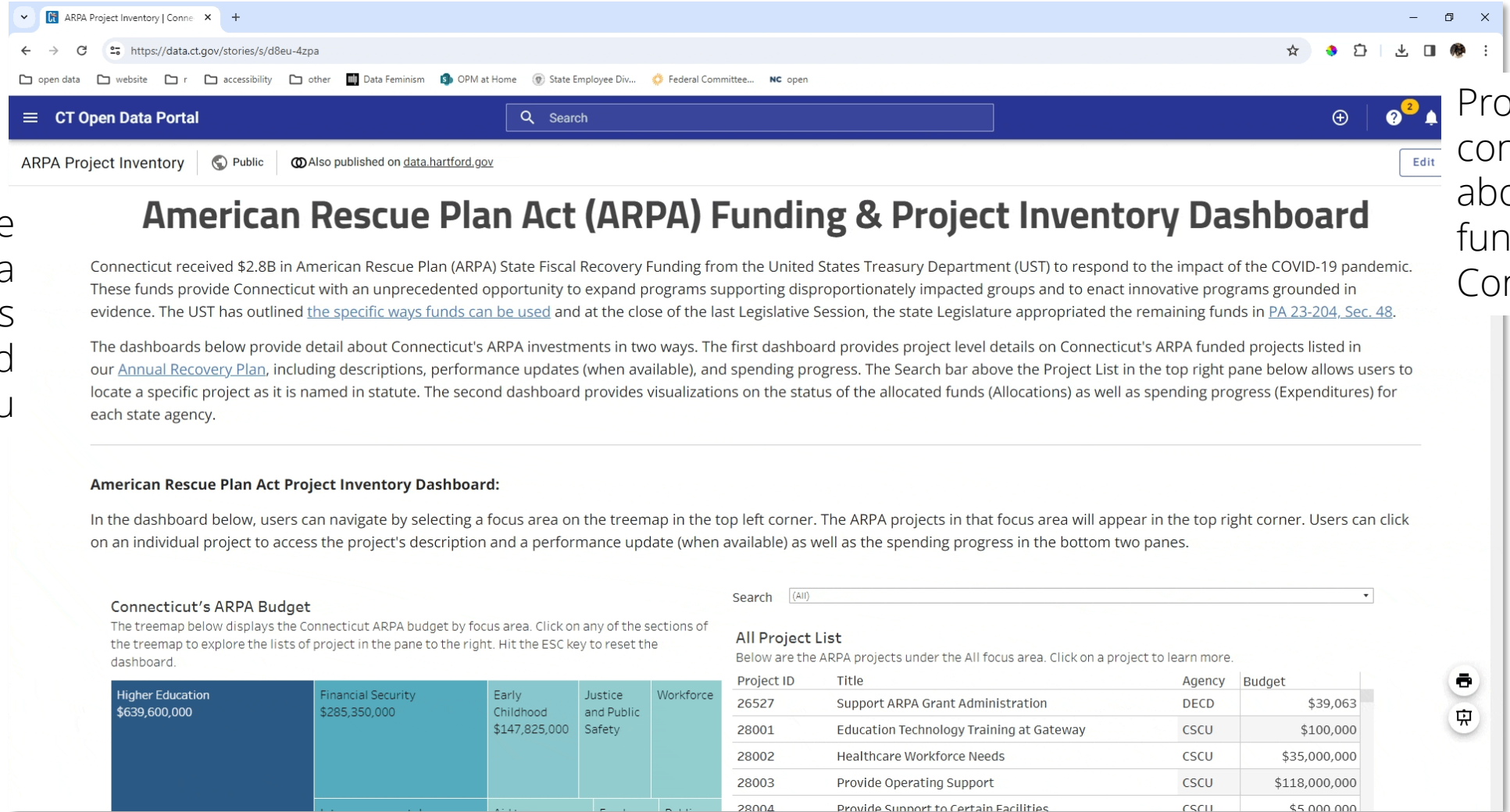
- Finding data on the CT Data Portal
- Introduction to the Geodata Portal
- Making a chart on the CT Data Portal
- Juvenile Justice Equity Dashboard
- ARPA Funding & Project Inventory Dashboard
- Exploring the CT high value data inventory
- Using R with open data

Check out the screencasts highlighting work around open data!

https://portal.ct.gov/datapolicy/Knowledge-Base/Articles/Connecticut-Open-Data-Recordings

ARPA Project Inventory Dashboard

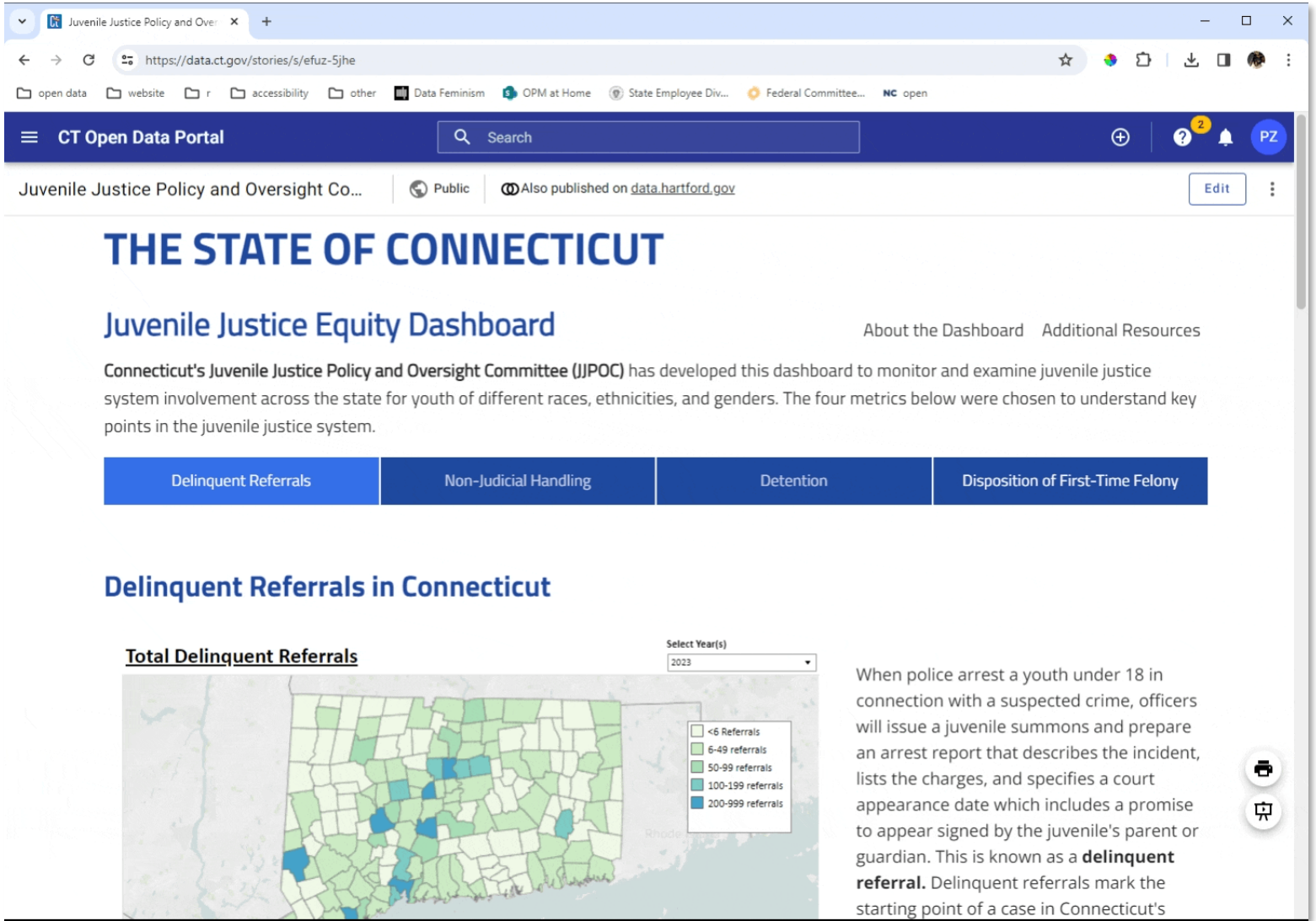
Interactive data visualizations developed with Tableau



Provides context about ARPA funding in Connecticut

Juvenile Justice Equity Dashboard

Developed by OPM with the Juvenile Justice Policy and Oversight Committee (JJPOC) with data from CSSD



Interactive data visualizations made with Tableau

Data stories on the Portal include...

- Annual Nursing Facility Census
- ARPA Project Inventory
- Childhood Lead Poisoning Surveillance
- Connecticut State Workforce
- CT Business Registrations
- CT Income Tax Dashboard
- CT Open Data Portal Site Analytics
- Disproportionately Impacted Areas
- GreenerGov CT Dashboard
- Juvenile Justice Equity Dashboard
- Municipal Fiscal Indicators
- Prescription Monitoring Program Dashboard
- Roberta Willis Scholarship Program Analysis
- School Immunization Survey

Focus areas

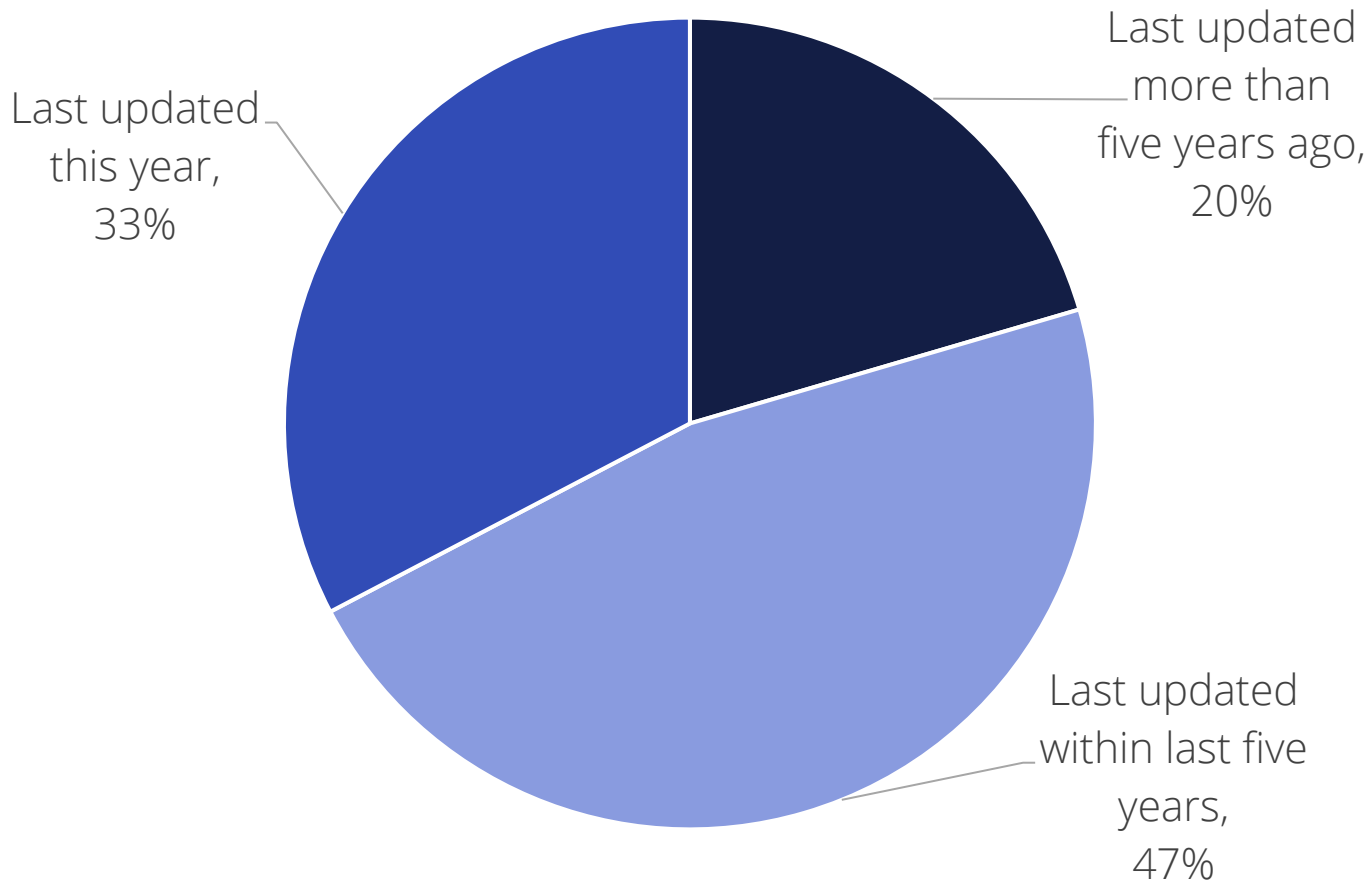
Data & Policy Analytics

Ensuring data is up-to-date

Progress has been made in making sure data on the Portal is current, but some old assets still need updating

Eighty percent of datasets on the Portal have been updated in the last five years

Twenty percent of datasets haven't been updated since 2019 or earlier

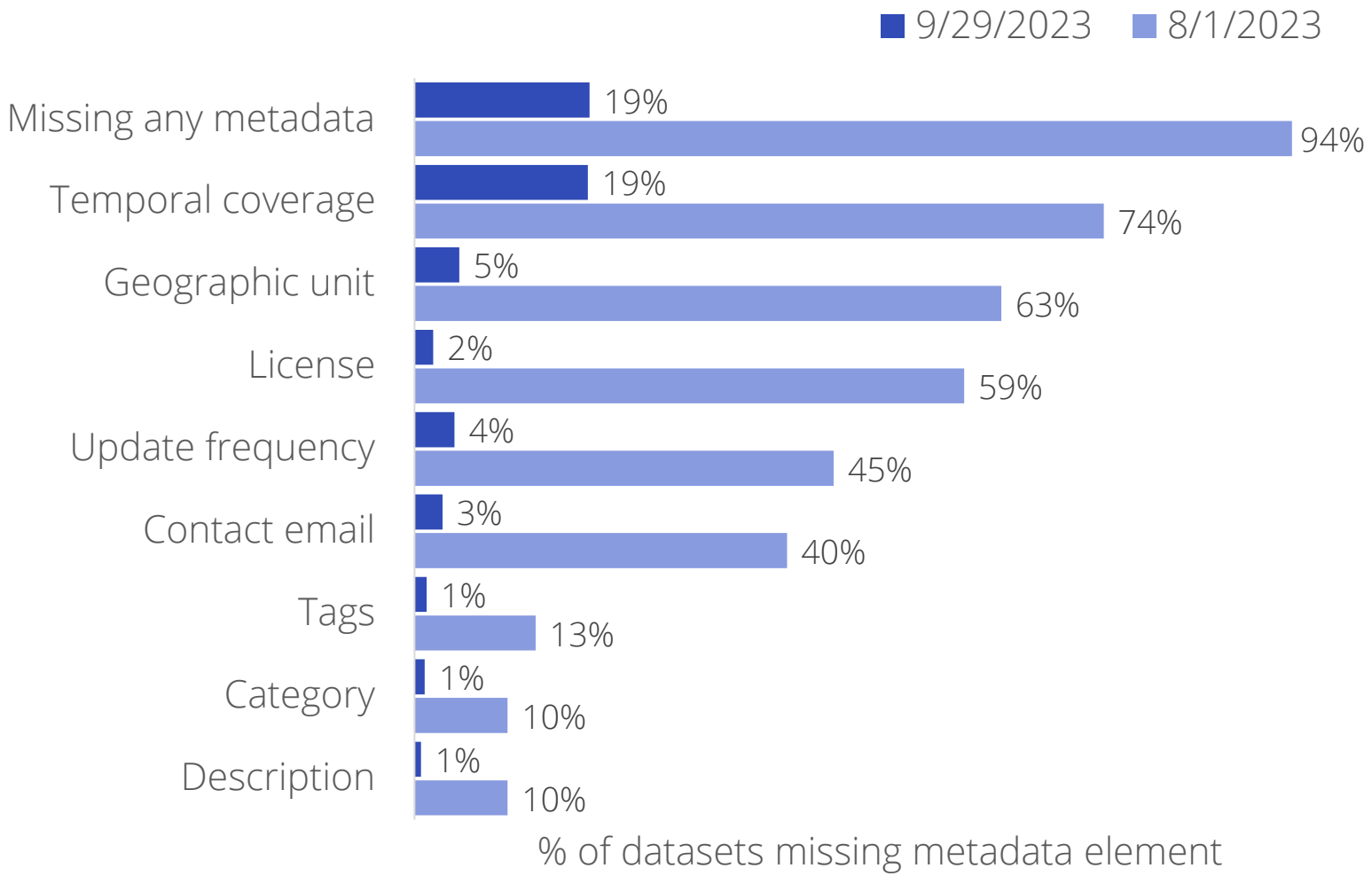


Improving metadata on the Portal

Metadata update in August-September 2023 focused on metadata quality and completeness to improve the usability of data on the Portal

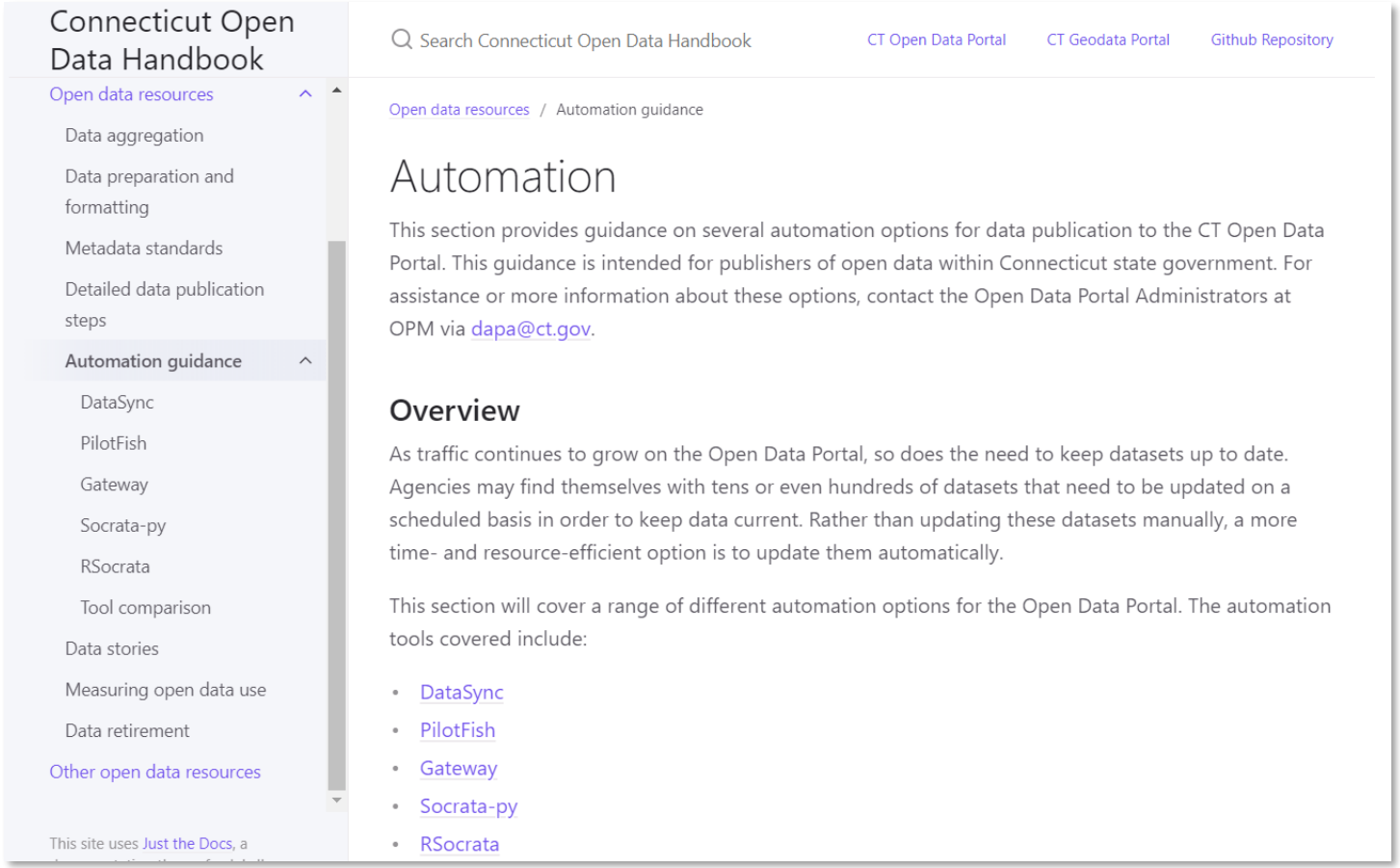
Metadata completeness on the Portal improved greatly in 2023

Only 19% of datasets are missing any piece of metadata, down from 94% in August 2023.



Increasing automated updates

Increase the number of datasets that are updated automatically instead of manually



Guidance on automation is in the **Open Data Handbook** at https://ctopendata.github.io/open-data-handbook/

Publishing new data

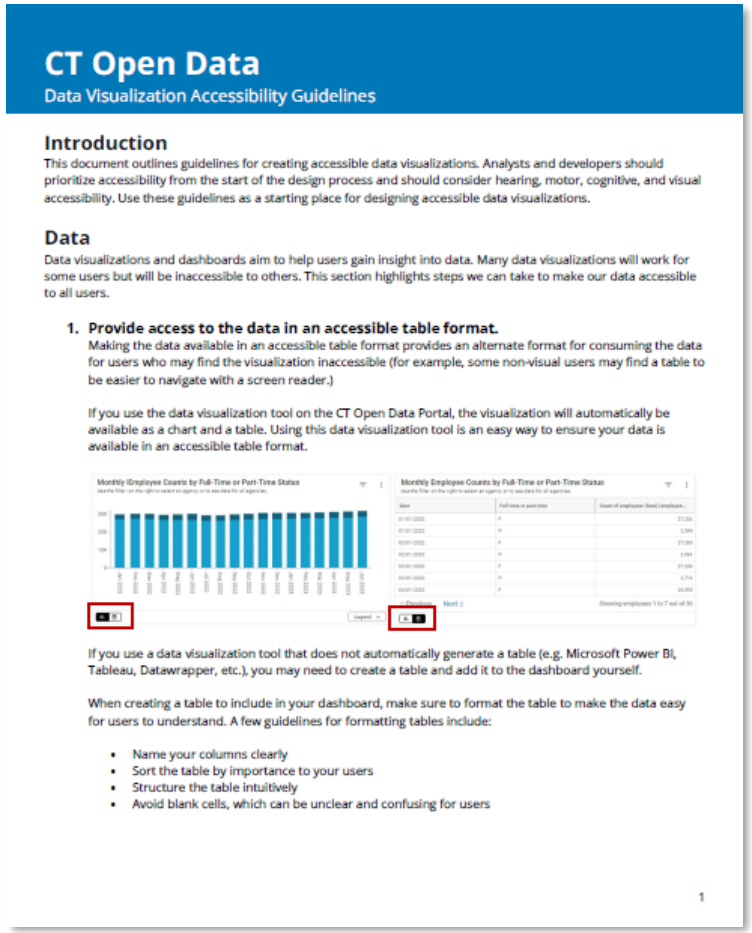
Work with agencies to publish new data on the Portal

New data could include:

- Data that is frequently requested by the public or other agencies
- Data that is already being published on a regular basis elsewhere (e.g. in an Excel spreadsheet, PDF, or other report)
- Data that is considered high value by your agency

Increasing the accessibility of content on the Portal

Develop processes and resources to improve the accessibility of data visualizations, data stories, and other content



CT Open Data

Data Visualization Accessibility Guidelines

Introduction

This document outlines guidelines for creating accessible data visualizations. Analysts and developers should prioritize accessibility from the start of the design process and should consider hearing, motor, cognitive, and visual accessibility. Use these guidelines as a starting place for designing accessible data visualizations.

Data

Data visualizations and dashboards aim to help users gain insight into data. Many data visualizations will work for some users but will be inaccessible to others. This section highlights steps we can take to make our data accessible to all users.

1. **Provide access to the data in an accessible table format.**
   Making the data available in an accessible table format provides an alternate format for consuming the data for users who may find the visualization inaccessible (for example, some non-visual users may find a table to be easier to navigate with a screen reader.)

   If you use the data visualization tool on the CT Open Data Portal, the visualization will automatically be available as a chart and a table. Using this data visualization tool is an easy way to ensure your data is available in an accessible table format.

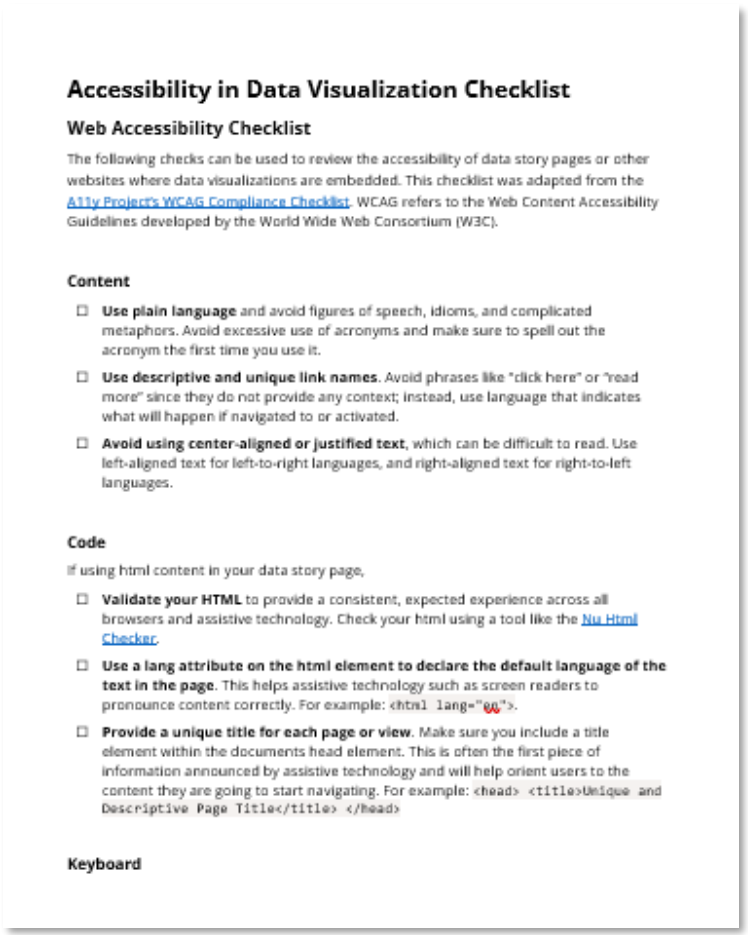
   If you use a data visualization tool that does not automatically generate a table (e.g. Microsoft Power BI, Tableau, Datawrapper, etc.), you may need to create a table and add it to the dashboard yourself.

   When creating a table to include in your dashboard, make sure to format the table to make the data easy for users to understand. A few guidelines for formatting tables include:

   - Name your columns clearly
   - Sort the table by importance to your users
   - Structure the table intuitively
   - Avoid blank cells, which can be unclear and confusing for users

1

Guidance document



Accessibility in Data Visualization Checklist

Web Accessibility Checklist

The following checks can be used to review the accessibility of data story pages or other websites where data visualizations are embedded. This checklist was adapted from the A11y Project's WCAG Compliance Checklist. WCAG refers to the Web Content Accessibility Guidelines developed by the World Wide Web Consortium (W3C).

Content

- ☐ **Use plain language** and avoid figures of speech, idioms, and complicated metaphors. Avoid excessive use of acronyms and make sure to spell out the acronym the first time you use it.
- ☐ **Use descriptive and unique link names.** Avoid phrases like "click here" or "read more" since they do not provide any context; instead, use language that indicates what will happen if navigated to or activated.
- ☐ **Avoid using center-aligned or justified text**, which can be difficult to read. Use left-aligned text for left-to-right languages, and right-aligned text for right-to-left languages.

Code

If using html content in your data story page,

- ☐ **Validate your HTML** to provide a consistent, expected experience across all browsers and assistive technology. Check your html using a tool like the Nu Html Checker.
- ☐ **Use a lang attribute on the html element to declare the default language of the text in the page.** This helps assistive technology such as screen readers to pronounce content correctly. For example: `<html lang="en">`.
- ☐ **Provide a unique title for each page or view.** Make sure you include a title element within the documents head element. This is often the first piece of information announced by assistive technology and will help orient users to the content they are going to start navigating. For example: `<head> <title>Unique and Descriptive Page Title</title> </head>`

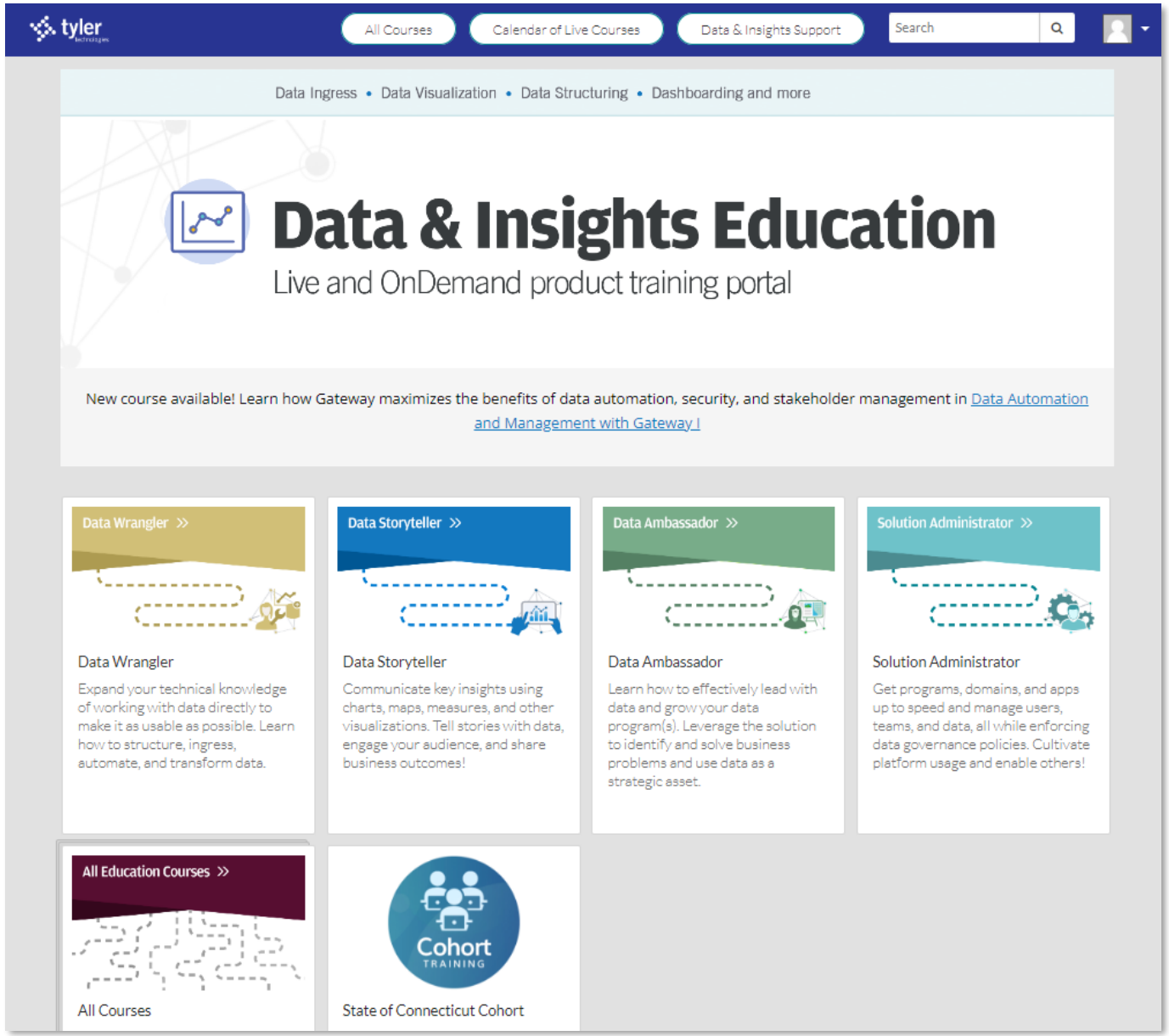
Keyboard

Checklist

Providing training opportunities

Live and on-demand training from Tyler Tech is available for users of the Portal.

Sign up at https://learn.socrata.com/?access_code=state_of_ct



Open data resources

- Open Data Teams Channel
  - Join the Teams channel to stay connected!
- Open Data Handbook
  - Resources for open data editors/publishers
- Open Data Day screencasts
  - Overviews, how to's, and examples of open data in action
- DAPA newsletter
  - Sign up for the newsletter at this link

Reach out with any open data questions!

Pauline Zaldonis

Open Data Coordinator

Data and Policy Analytics

Office of Policy and Management

Pauline.Zaldonis@ct.gov

GIS Office update: Geodata Portal and upcoming data

GIS Office Responsibilities

- **GIS data coordination.** Coordinating the collection, compilation, and dissemination of GIS data across the state, including from and to state agencies, regional councils of governments, municipalities, and other constituencies;
- **Open data.** Managing a publicly accessible geospatial data clearinghouse;
- **Supporting economic development.** Using GIS to support economic development efforts in the state;
- **Outreach & training.** Provide training and outreach on the use of GIS;
- **Orthoimagery.** Administering a statewide orthoimagery and lidar program;
- **Guidance & Standards.** Adopting geospatial data standards, guidelines, and procedures;
- **Data processing.** Performing technical data processing to aggregate and organize existing datasets and create new datasets; and
- **Broadband mapping.** Develop broadband data and mapping in accordance with Public Act 21-159.

CT Geodata Portal
About
Data Library
Partners
CT Geodata Portal
Search or browse GIS data for Connecticut
New & Noteworthy | CT at a Glance | Data Categories | Partners

Geodata Portal Highlights

https://geodata.ct.gov

ArcGIS Hub based GIS Clearinghouse built in collaboration with Esri.

The Geodata Portal shares partner agency data to make it available all in one place.

The site has been live for over a year! Updates occur periodically.

Reviewed other states' clearinghouses and synthesized results as part of preliminary preparation work.

How did we launch with so much stuff?

- Prior to the creation of the Geodata Portal, there were several other “authoritative” state sites for GIS data.
  - CT ECO
  - DEEP
  - DOT
  - CT Open Data Portal*
- One of the stated goals and needs of the CT GIS community is to have a centralized place to find geospatial data.
- A plan to aggregate state agency data was needed.
- The CT Open Data Portal was used as a model.

* The Open Data Portal was federating to some of the existing portals, but not all.

Getting Agency Data into the Portal

Challenges to aggregation:

- Inconsistent metadata implementation (some use ISO, FGDC, etc.).
- Agencies sometimes had diverging needs and uses for the data.
- ArcGIS Online orgs needed some preparation and standardization.

Despite these challenges, the key stakeholders involved ensured the success of the effort.

Special thanks to:

- *Greg Ciparelli (DOT)*
- *Stuart DeLand (DEEP)*
- *Emily Wilson (UConn CLEAR)*
- *Pauline Zaldonis (OPM DAPA)*

Contributing to the Portal

Reach out to the GIS Office to contribute data.

- opm.giso@ct.gov

Some preparation is required.

- Guidance document for contribution coming soon.

Reach out with any GIS questions!

Alfredo Herrera

Geographic Information Officer

GIS Office, Data and Policy Analytics

Office of Policy and Management

Alfredo.Herrera@ct.gov

Stretch break

FOIA and open data

Freedom of Information Commission

Russell Blair

Director of Education and Communications

Russell.Blair@ct.gov

Nick Smarra

Attorney

Nicholas.A.Smarra@ct.gov

Open Connecticut: Transparency in CT state government

Office of the State Comptroller

Yamuna Menon

General Counsel/Assistant State Comptroller

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Tyler Technologies Data & Insights

Tyler Technologies Data & Insights

David Marcus

Team Lead, Client Success

David.Marcus@tylertech.com

Esri

Esri

Matt Deal

Senior Account Manager

mdeal@esri.com

Krithica Kantharaj

Senior Solution Engineer

kkantharaj@esri.com

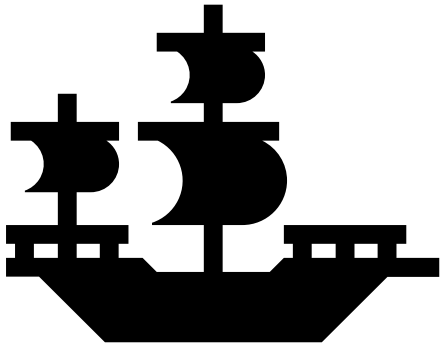
Stretch break

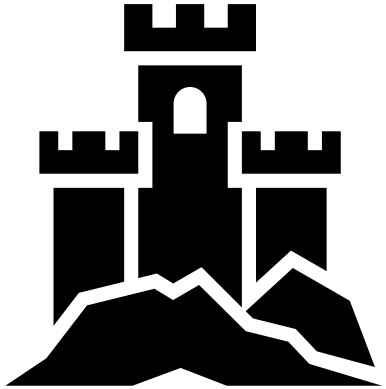
Telling your story with open data

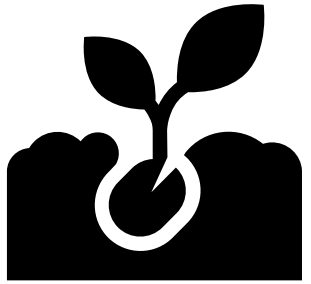
"Help us tell our story with our data."

4 things you can do to be a great data storyteller

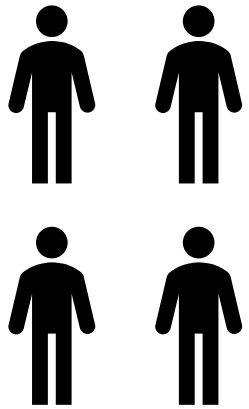
Find your narrative: Story archetypes

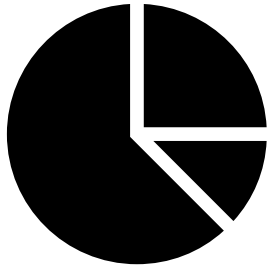


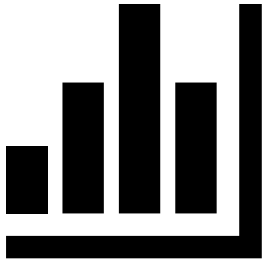


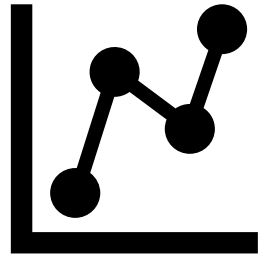


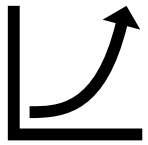
Find your narrative: DATA story archetypes











Find your story: DATA story archetypes

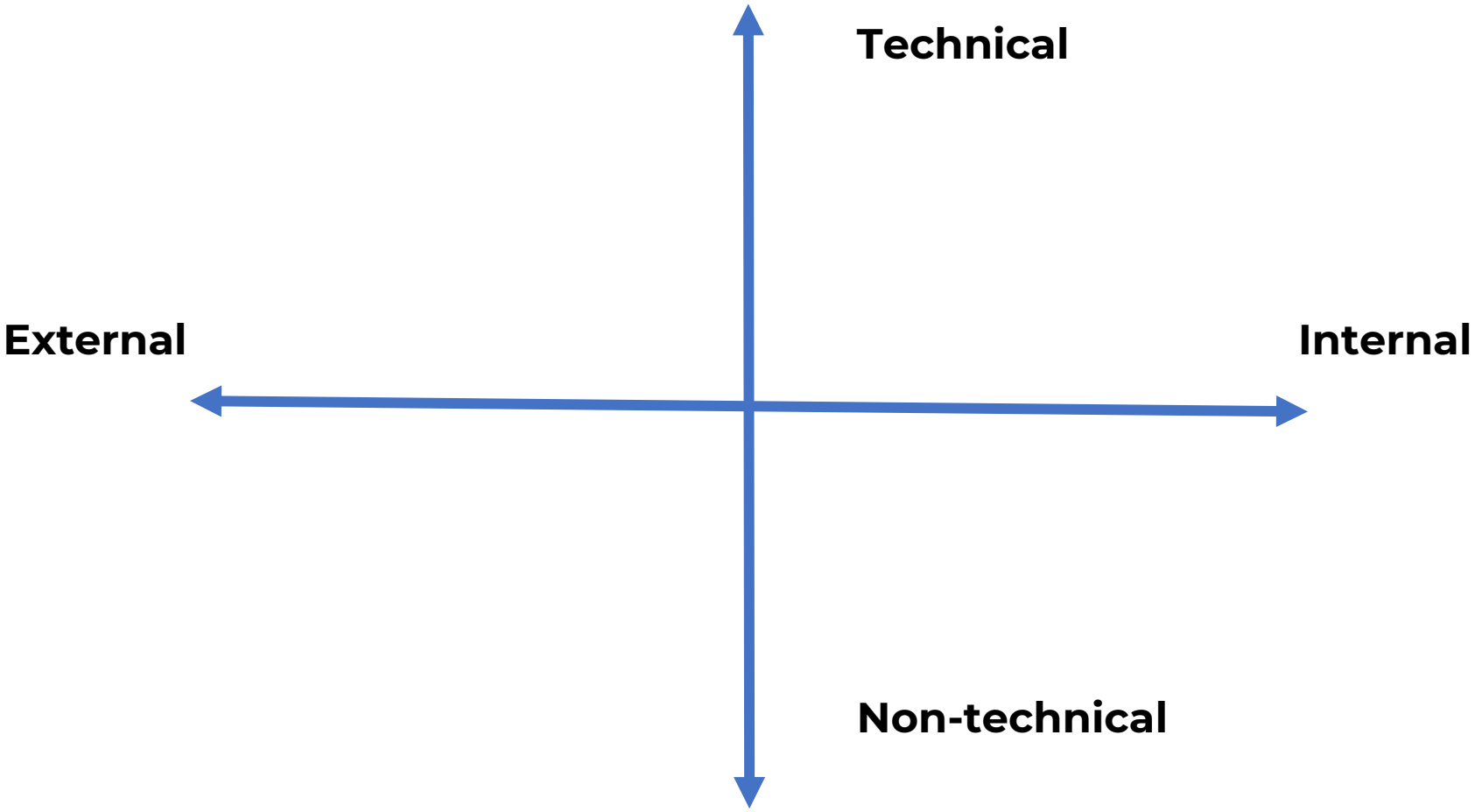
Factoid

Comparison

Trend

Spatial

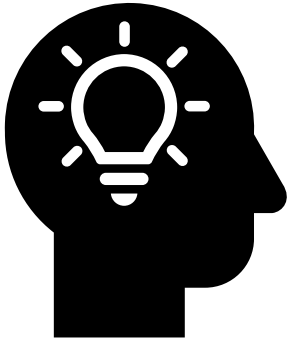
Consider your audience



Consider your audience: What should they do?

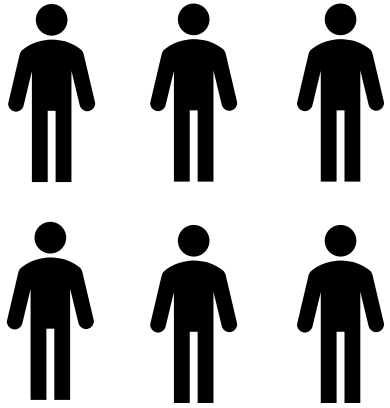
Know

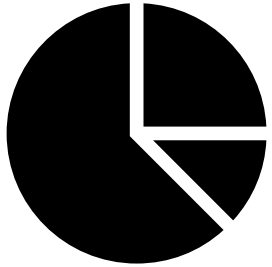
Take action

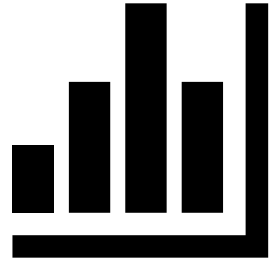


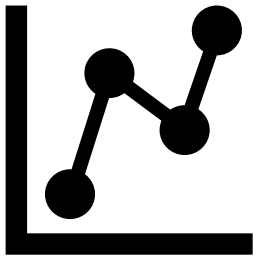
Change their mind

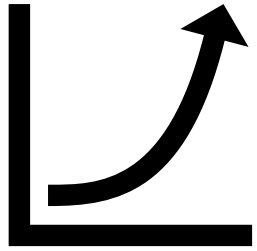
Match the story with a picture



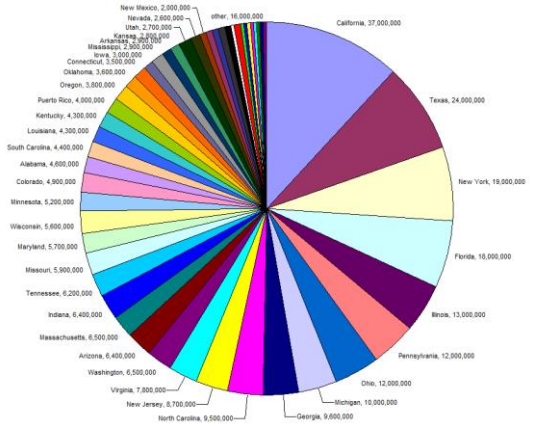


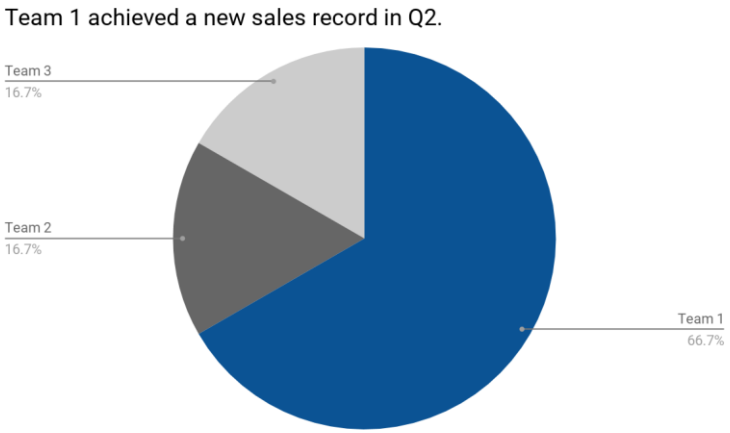


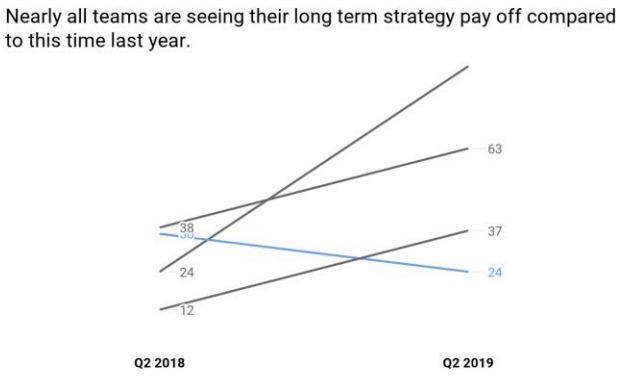




Simplify & Focus







4 things you can do right now:

1. Find your narrative
2. Consider your audience
3. Match your story with a picture
4. Simplify and focus your entire story

Reach out with any data storytelling questions!

Rachel Leventhal-Weiner, PhD

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Data and Policy Analytics

Office of Policy and Management

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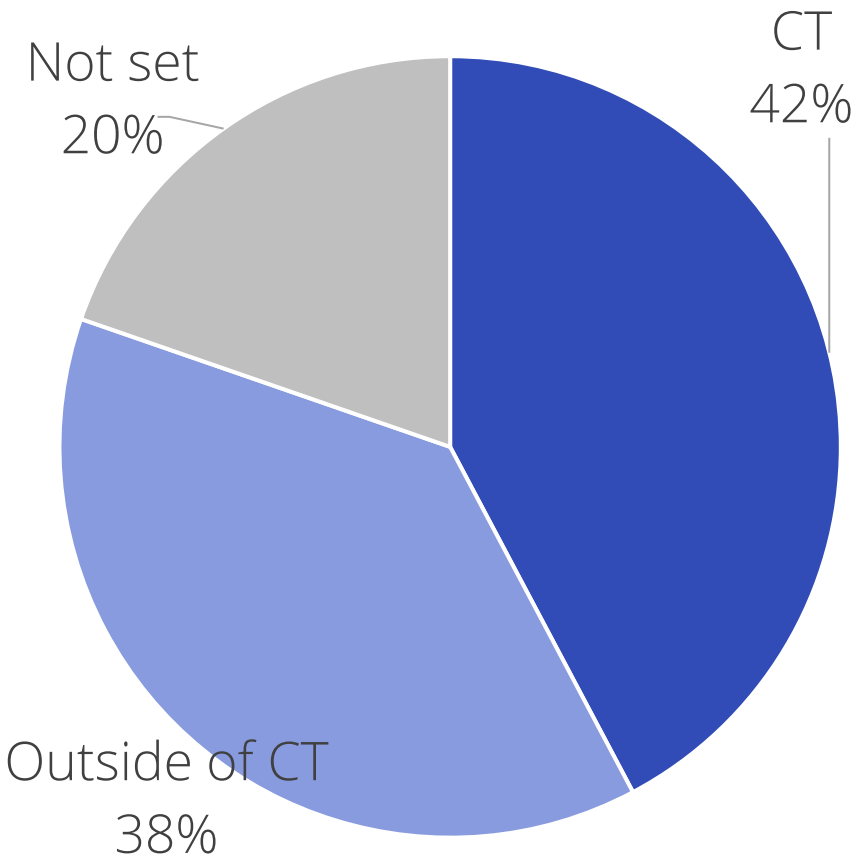
Thank you!

Appendix

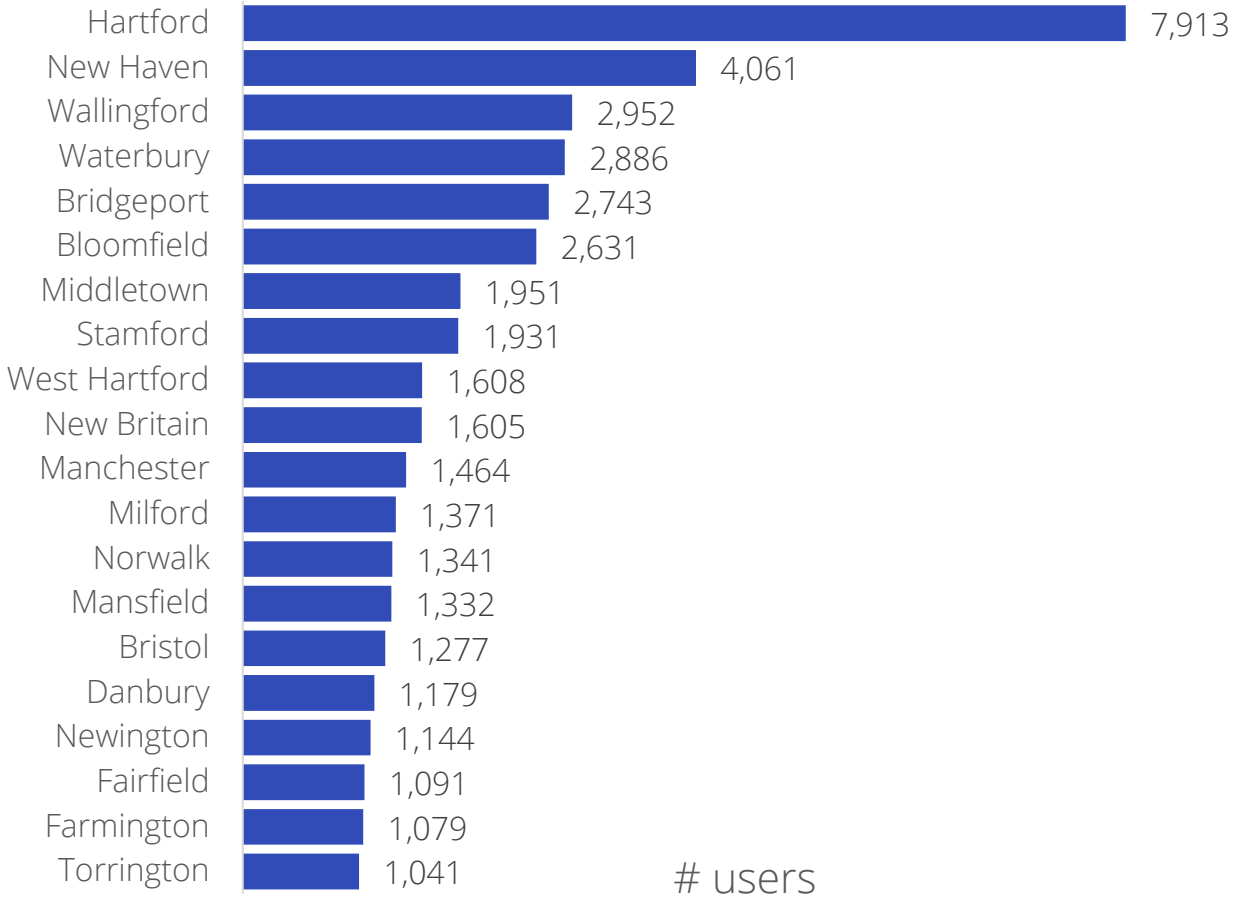
Location of users since April 2023

Over 40% of users access the CT Open Data Portal from Connecticut

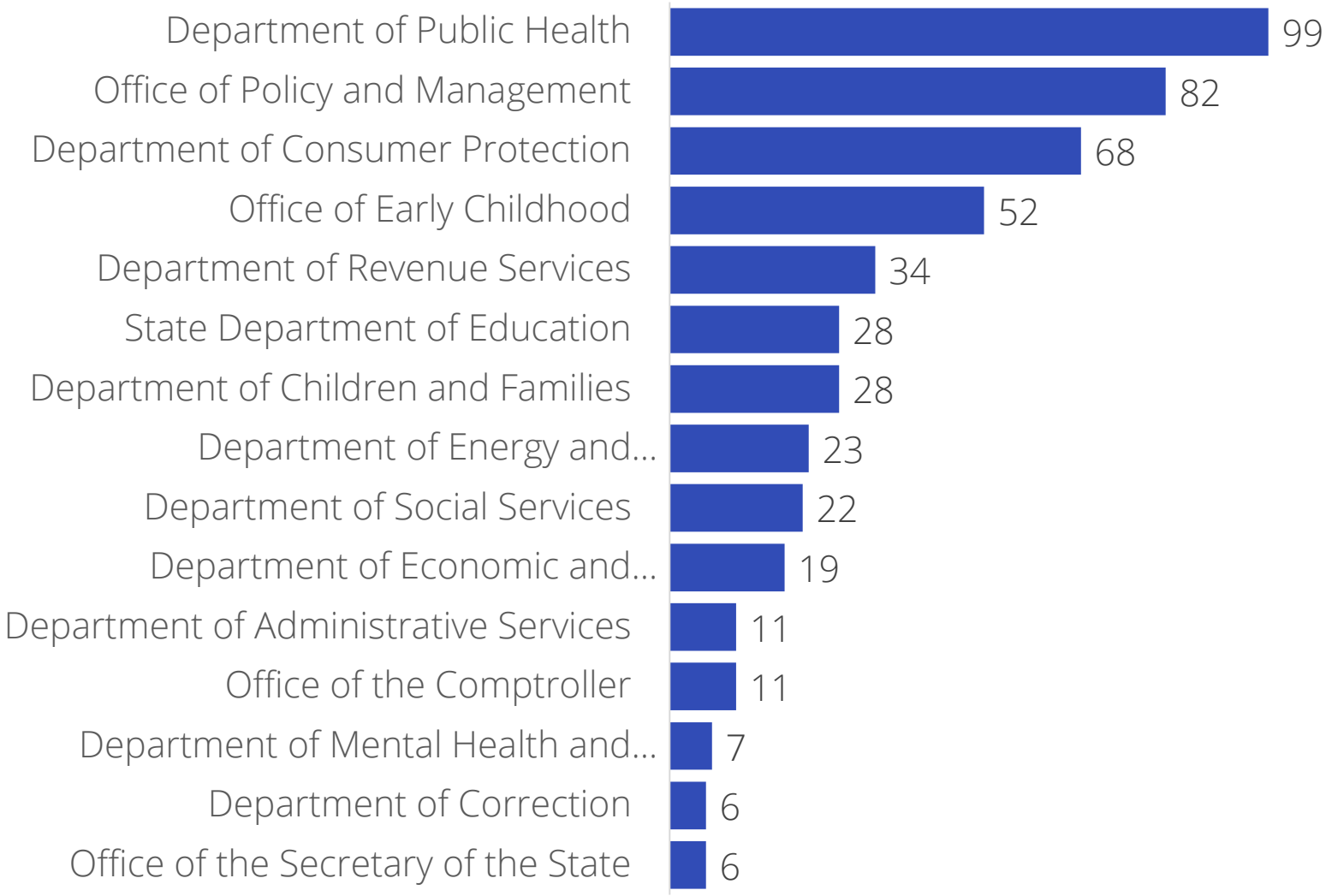


Top 20 Connecticut municipalities with users of the CT Open Data Portal

Hartford had the most users since April 2023, followed by New Haven



DPH is the agency with the most datasets published, followed by OPM and DCP

Other types of assets (ie federated links, filtered views, etc.) are not included in this chart

15 Agencies with most datasets published on the Portal