

Supply Chain Initiatives at the U.S. Census Bureau

FESAC Meeting
June 14, 2024

Christian Moscardi – U.S. Census Bureau

Nidaal Jubran – U.S. Census Bureau



Cars, sugar and cruises: How the Port of Baltimore closure could hurt the economy

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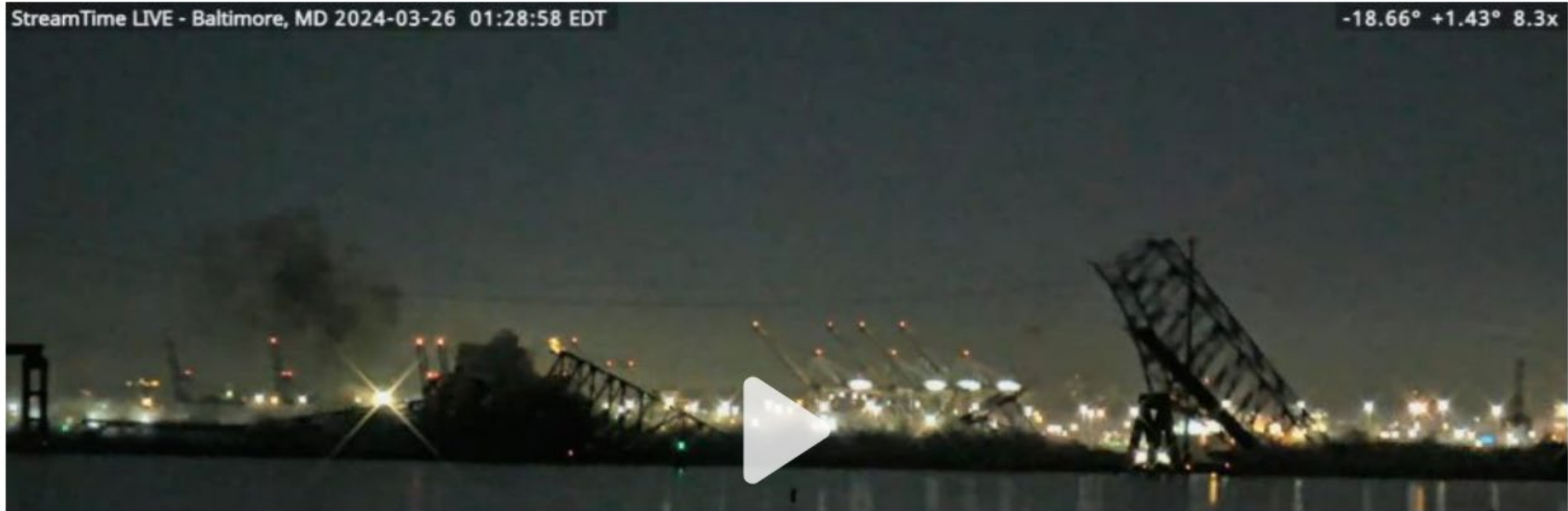
By [Mark Thompson](#) and [Chris Isidore](#), CNN

🕒 6 minute read · Updated 12:29 PM EDT, Wed March 27, 2024



StreamTime LIVE - Baltimore, MD 2024-03-26 01:28:58 EDT

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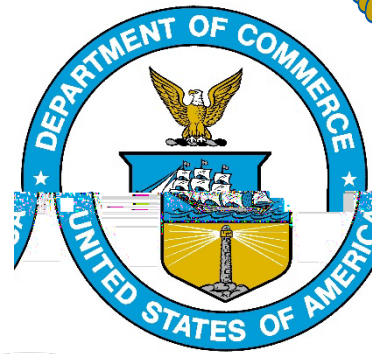
NPR SHOP



The Census Bureau has a lot of supply chain data...



... and many supply chain stakeholders



FEMA

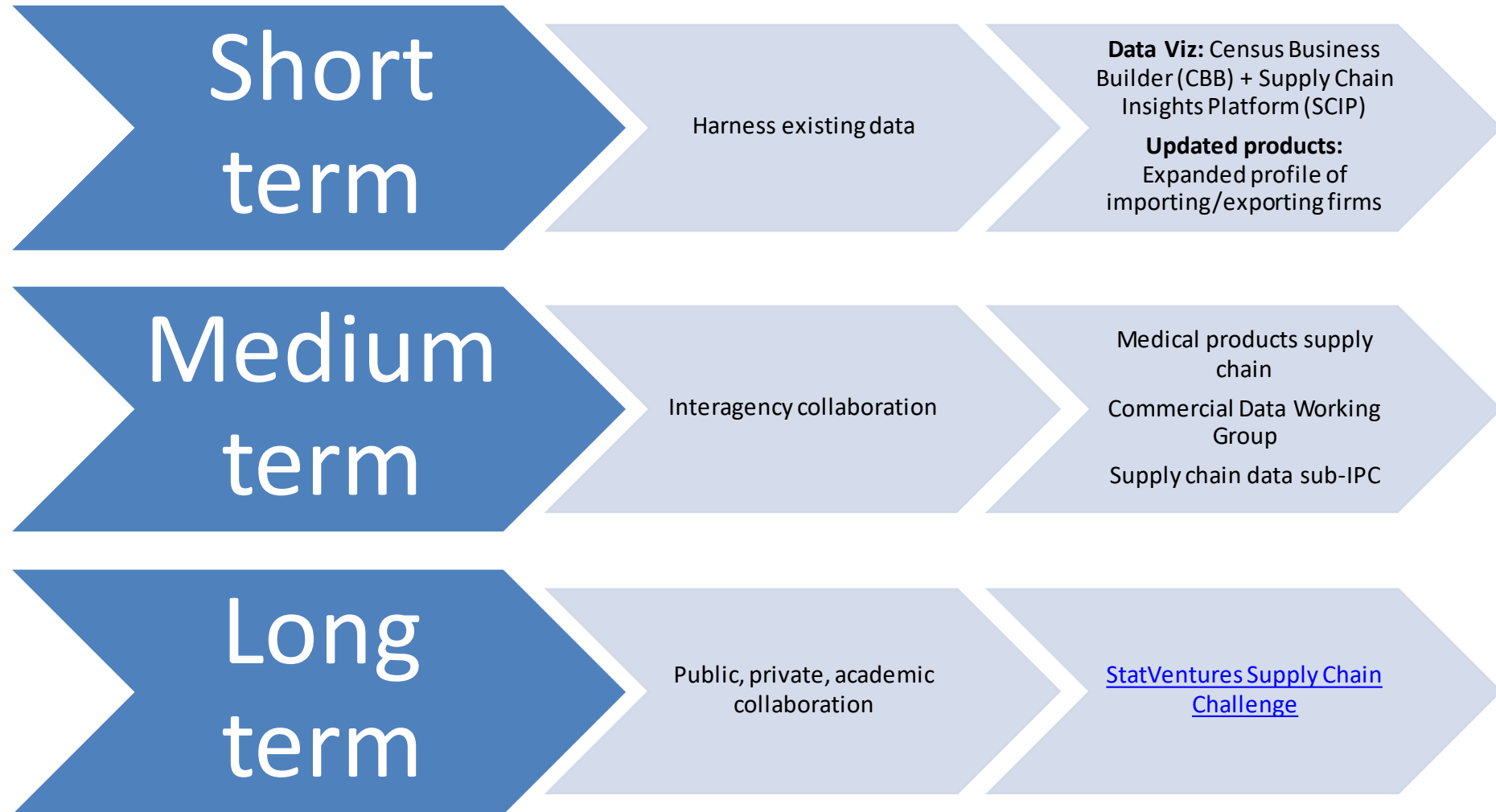


Vision: develop a comprehensive supply chain data infrastructure

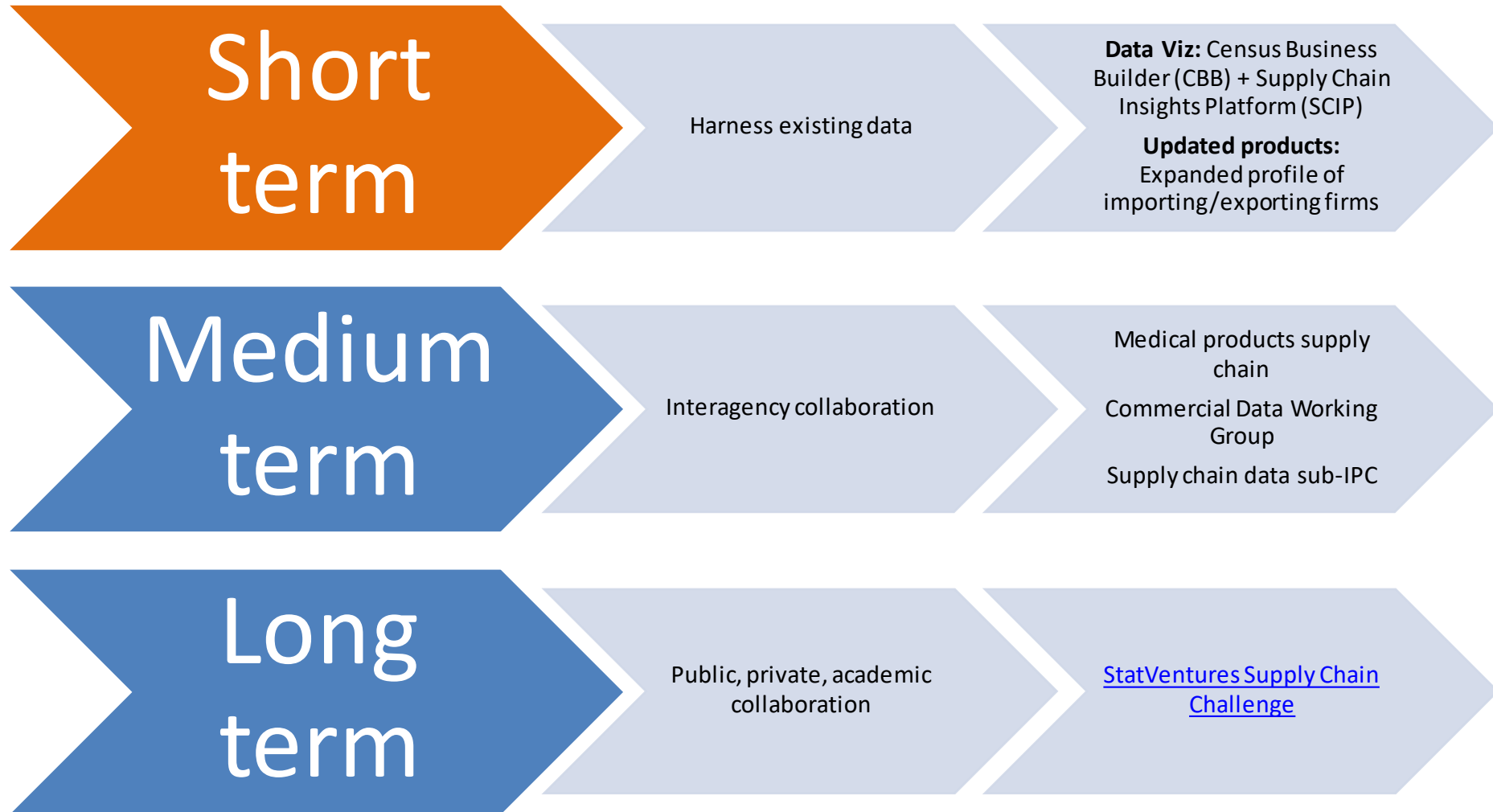
Reactive → Proactive

Indirect → Direct

Roadmap



Roadmap



Data viz: use cases

- "Tell us everything the Census Bureau knows about pharmaceuticals"
- "What are the supply chain impacts of severe weather in Southern California?"

Data viz: use cases

- **"Tell us everything the Census Bureau knows about pharmaceuticals"**
- "What are the supply chain impacts of severe weather in Southern California?"

Prototype tool: SCIP (Supply Chain Insights Platform)

- **What:** Internal prototype interactive data visualization platform that brings together siloed supply chain data and presents holistic views of supply chain that answer real-world questions
- **How:** harmonize data on each aspect of supply chain
 - Foreign trade, manufacturing, domestic movement of goods, sale of goods, and labor supply
- **Where and when:** goal is to have publicly available late CY 2024

Supply Chain Insights Platform

This dashboard presents Census information relevant to product supply chains. It includes information from economic surveys about the manufacture, supply, and use of products. [More](#) ▾

Pharmaceuticals

By Industry

By Product

Industry codes

The North American Industry Classification System ([NAICS](#)) is a system for classifying business establishments.

Below are the top 3 industries which manufacture pharmaceuticals by revenue.

Pharmaceutical Preparation Manufacturing (NAICS 325412) ^

Firms ⊖

Rank in subsector ⊖

1033

#2 of 29 industries

Source: [2017 Economic Census \(Full data\)](#)

Concentration score ⊖

Rank in subsector

662: (Low)

#10 of 29

Source: [2017 Economic Census \(Full data\)](#)

Establishments ⊖

Rank in subsector

1297

#1 of 29

Manufacturing capacity ⊖

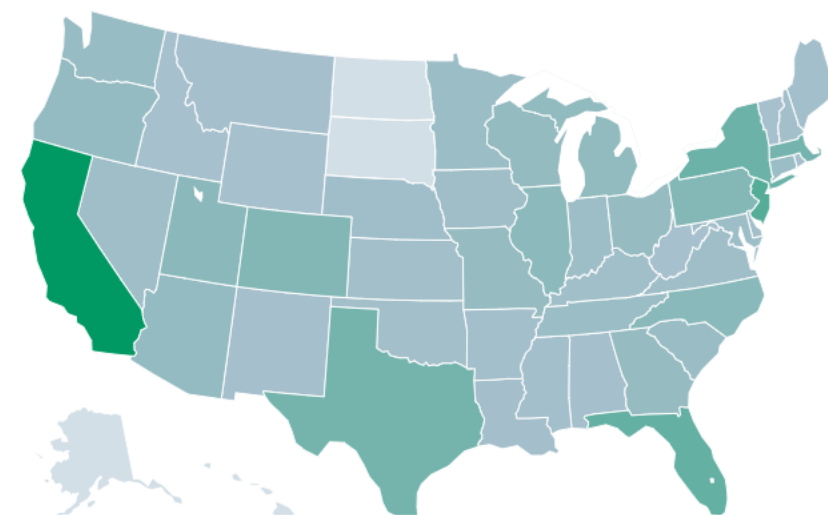
72.6%

Source: [2023 Quarterly Survey of Plant Capacity Utilization \(Full data\)](#)

Biological Product (except Diagnostic) Manufacturing (NAICS 325414) ▾

Medicinal and Botanical Manufacturing (NAICS 325411) ▾

Pharmaceutical Preparation Manufacturing (NAICS 325412) establishments by state



Source: [2021 County Business Patterns \(Full data\)](#)

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Enter a product

Search

Pharmaceuticals

By Industry By Product

Data gap: discoverability

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Pharmaceuticals by revenue.

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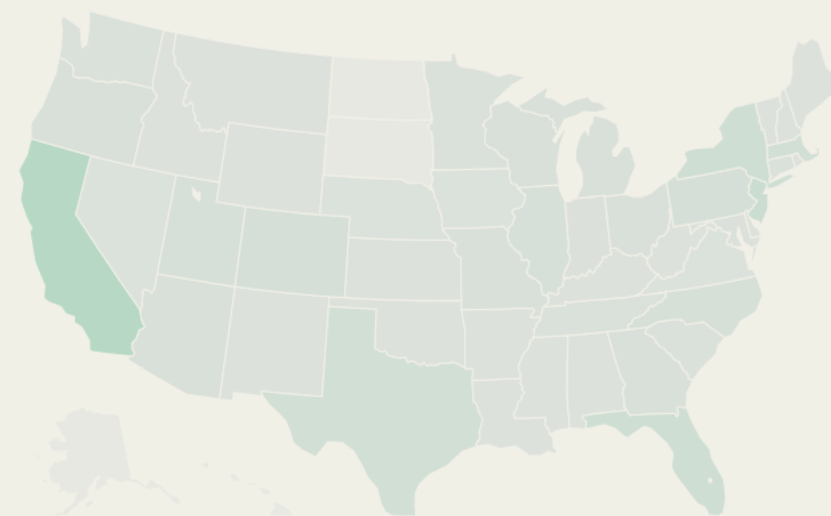
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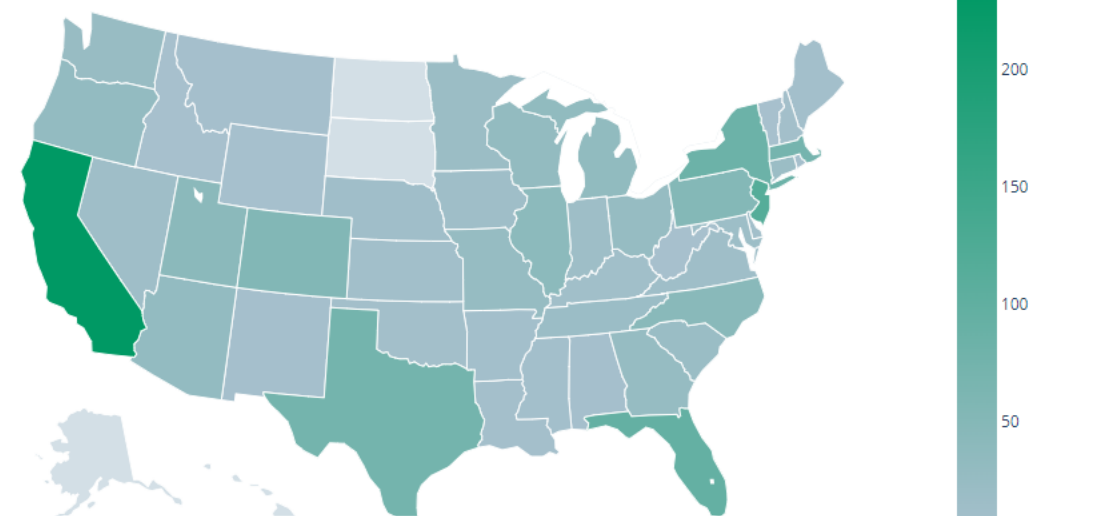
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By Industry

By Product

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Data gap: timeliness

Data gap: granularity

Concentration score ⓘ

Rank in subsector

662: (Low)

#10 of 29

Source: [2017 Economic Census \(Full data\)](#)

Manufacturing capacity ⓘ

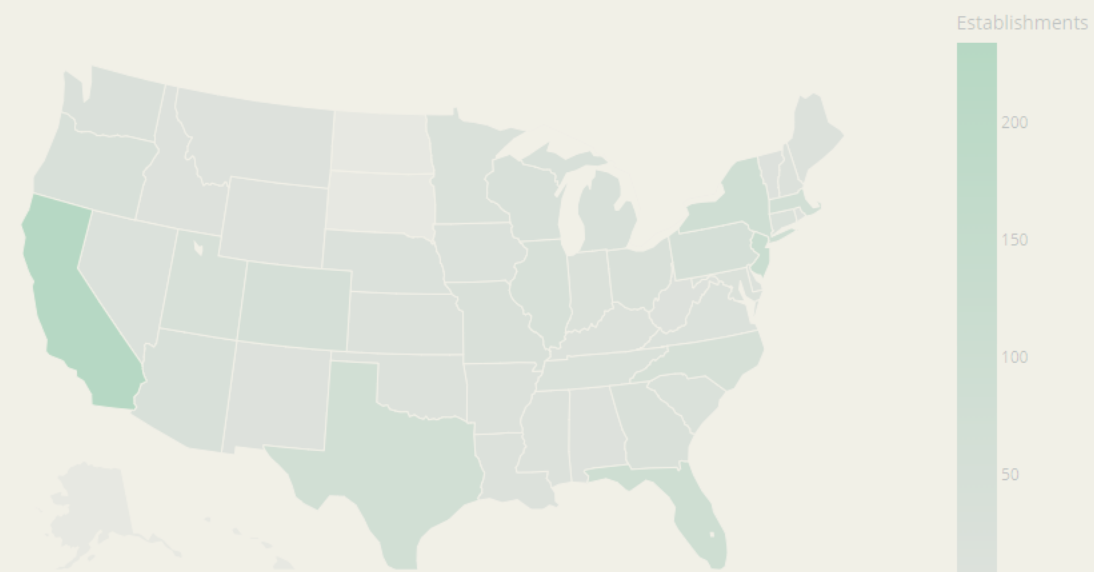
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Pharmaceuticals

[By Industry](#)[By Product](#)

Product codes

⊖ HS 300490: MEDICAMENTS NESOI, MEASURED DOSES, RETAIL PK NESOI

⊖ NAPCS Collection Code 2010325000: Manufacturing of pharmaceutical preparations, affecting parasitic and infective diseases, for human use (excluding diagnostics)

Annual value of domestic manufacturing ⊖

Percent of supply produced domestically ⊖

\$29.5M

0.073%

Source: [2021 Annual Survey of Manufactures \(Full data\)](#)

Annual imports

Annual exports

\$65169M

\$25057M

Source: [2021 International Trade](#)

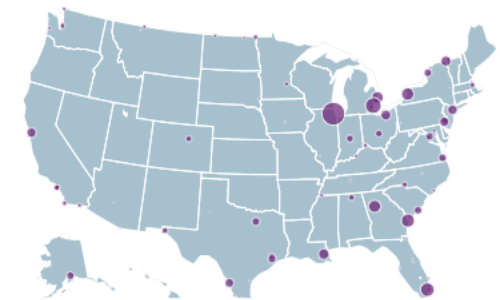
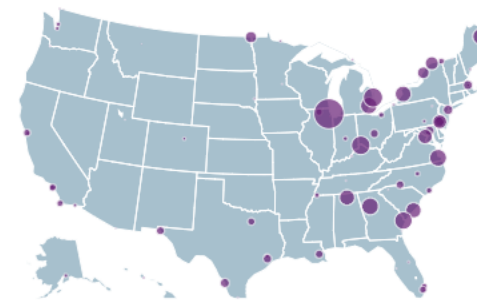
Domestic supply ⊖

\$40142M

Total value imported (2021)

Total value exported (2021)

- Import/Export value: \$0.0M-\$1308M
- Import/Export value: \$1308M-\$5233M
- Import/Export value: \$5233M-\$11774M
- Import/Export value: \$11774M-\$20932M



Values are displayed at the port of entry where the product is imported or exported, not necessarily where it is sold or produced.

Source: [2021 International Trade](#)

keys about the manufacture, supply, and use of products. [More](#) ▾

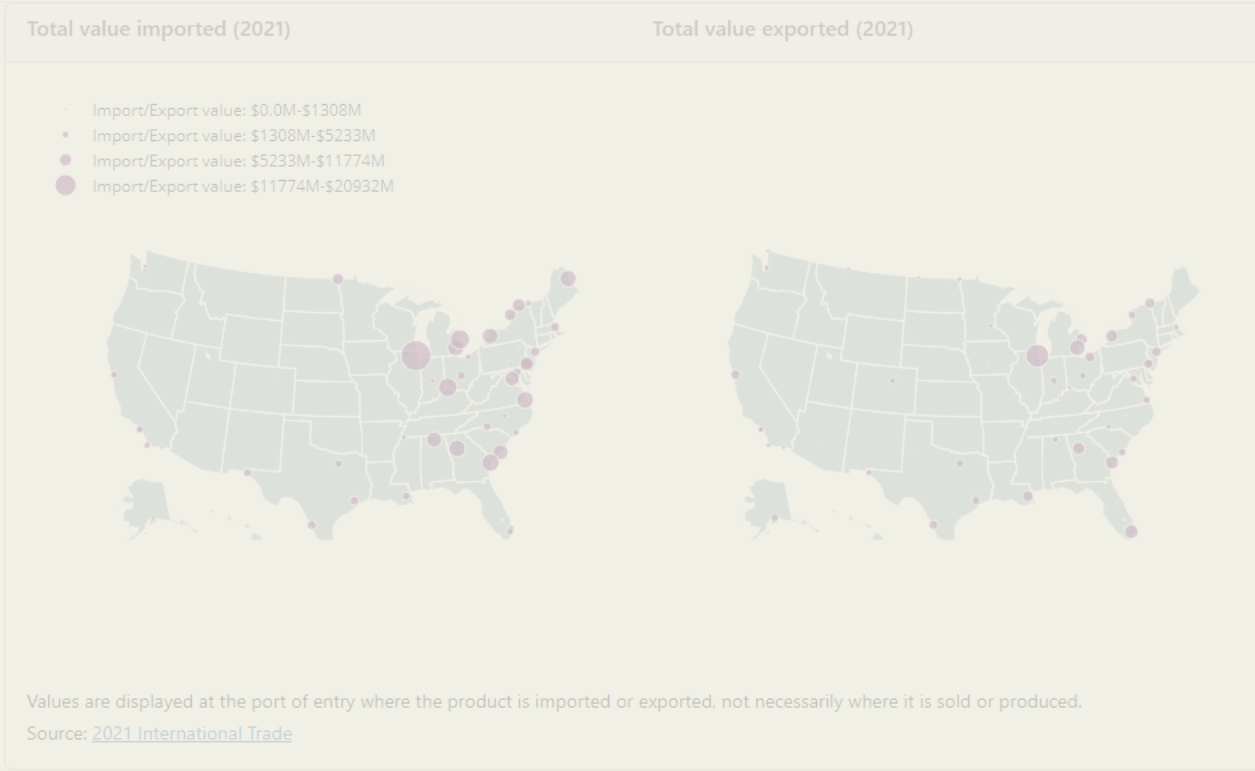
Data gap: interoperability

By Industry | By Product

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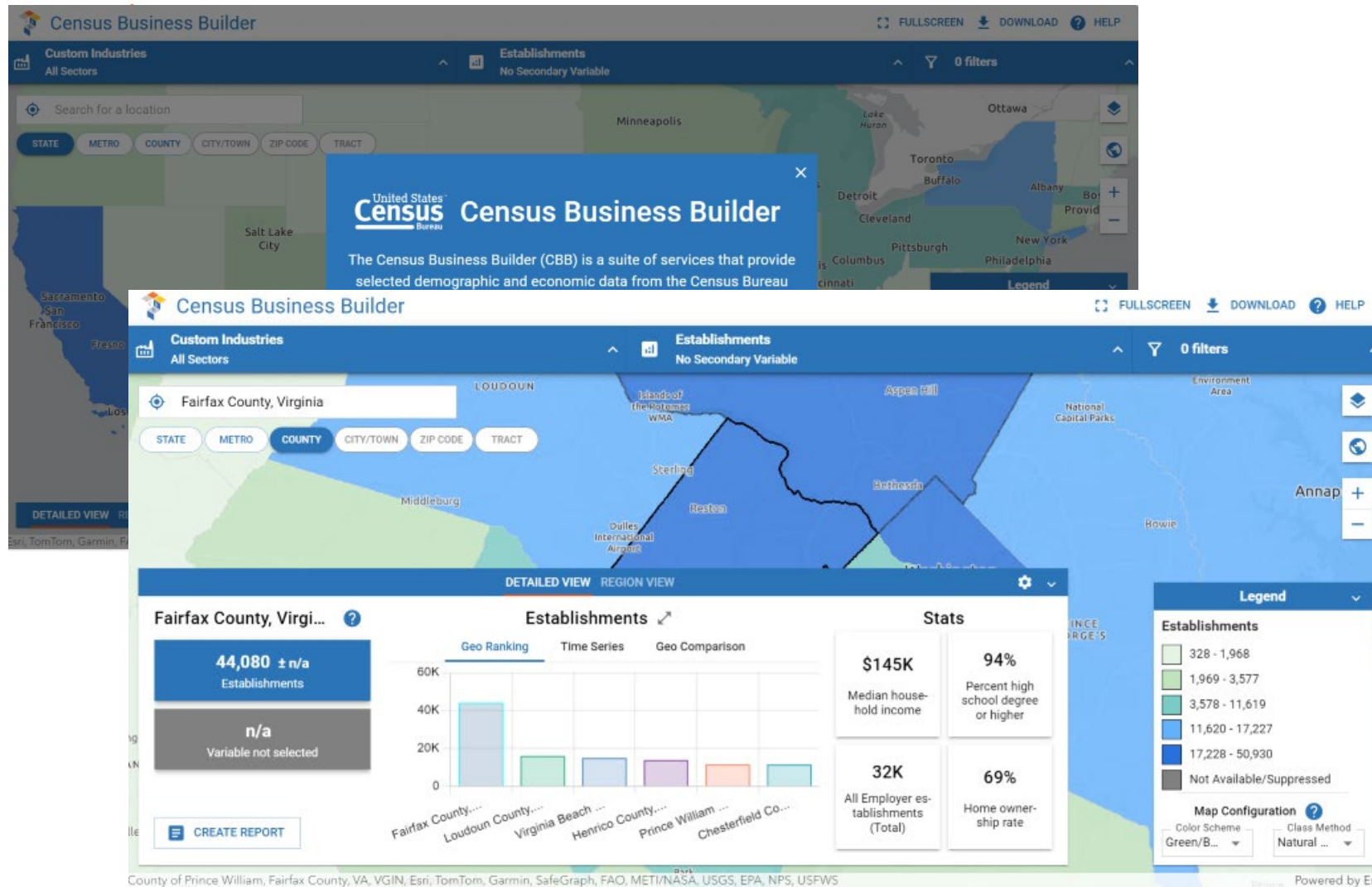
Data viz: use cases

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Census Business Builder 5.5

Guiding Principles

- Easy to use
- Customer focused
- Provide access to Census data and more
 - BLS, USDA, & third party
- Leverage existing Census investments
 - Esri, API
- Use latest technology
 - Cloud

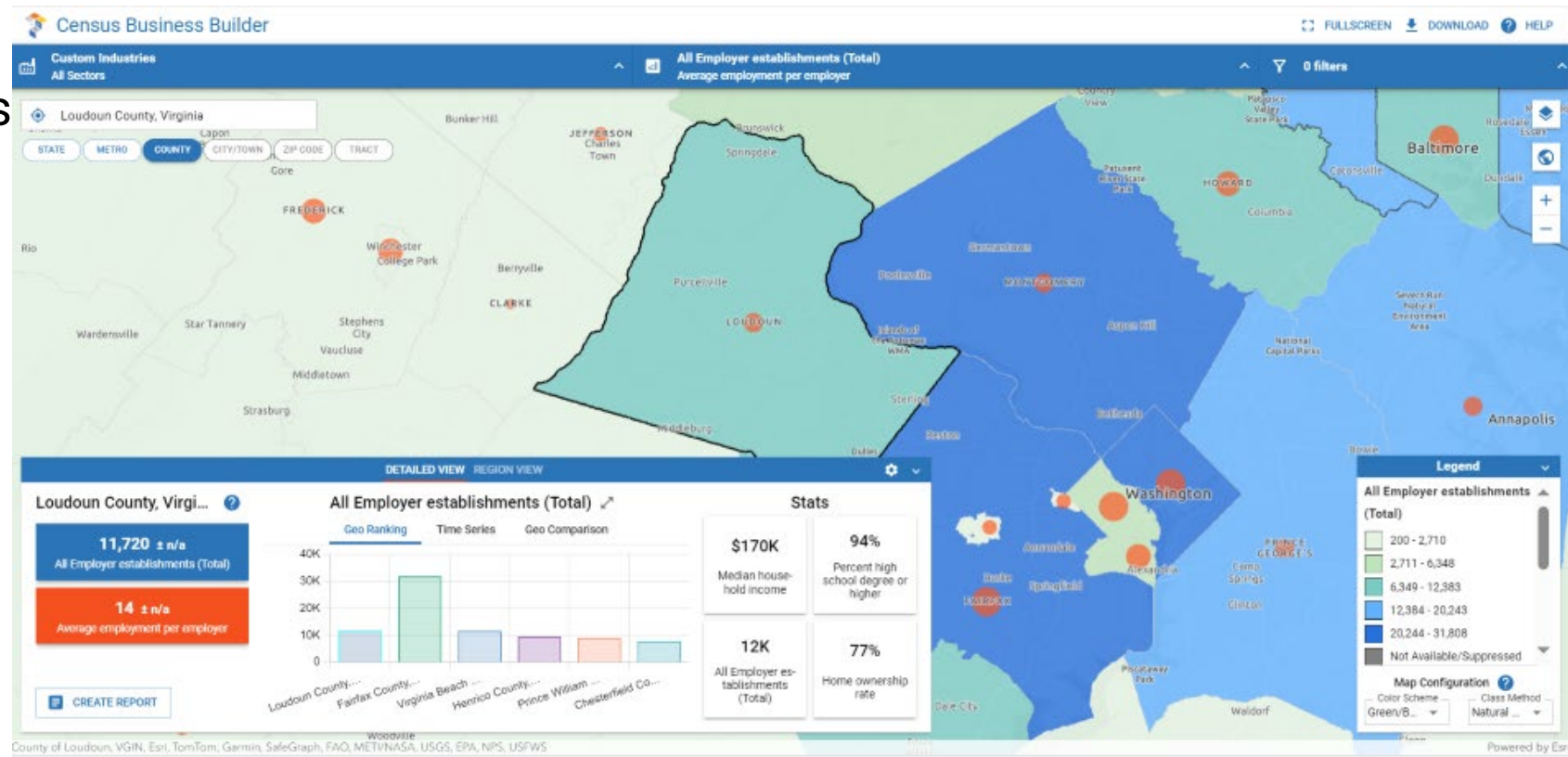


CBB Home Page

<https://www.census.gov/data/data-tools/cbb.html>

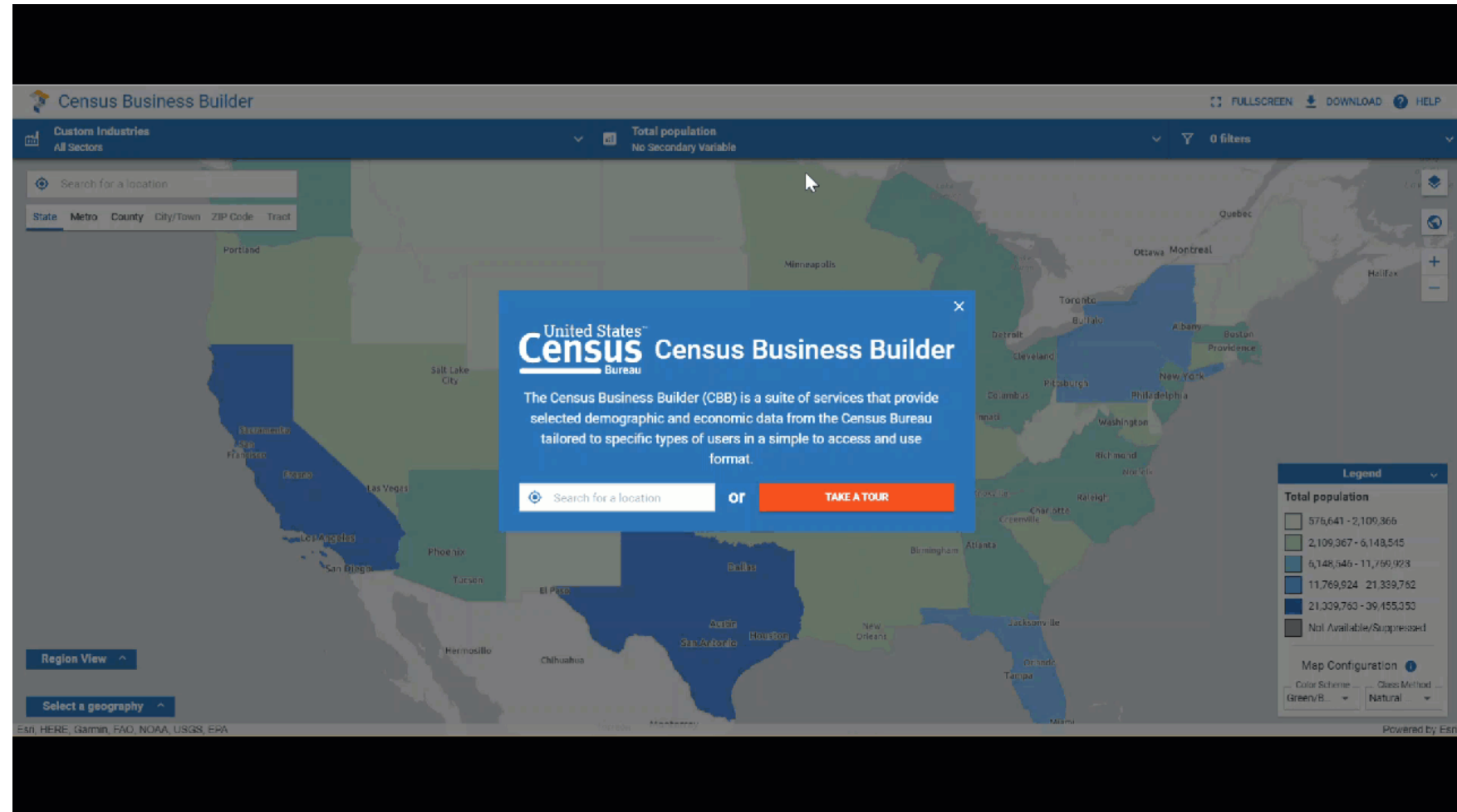
CBB User Experience

- Useful
 - Business plans
 - Grant applications
 - Economic Development Planning
 - Emergency Preparedness
- Easy to Locate
 - Census.gov
 - Search engines
- Accessible
 - Mobile optimized
 - 508 compliant
- Credible
 - Census data
- Valuable
 - Mission Critical



CBB - Tour

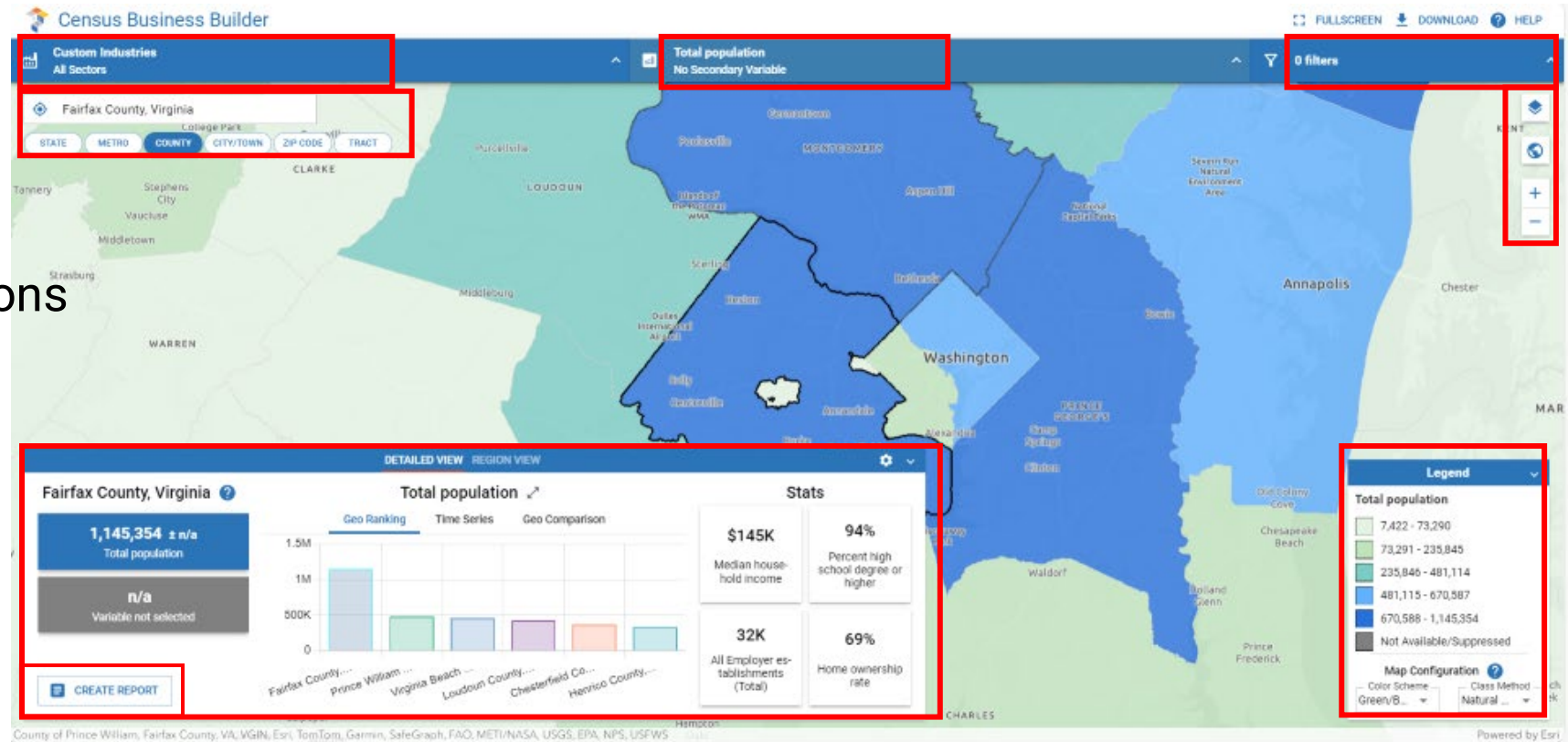
- Tour will walk you through the core functionality of the application



CBB – Key Features

Map page

- Dashboard
- Region View
- Geographic Levels
- Industry Cluster
- Map Variables options
- Filter Menu
- Map Buttons
- Map Legend
- Reports



CBB – Reports

Reports

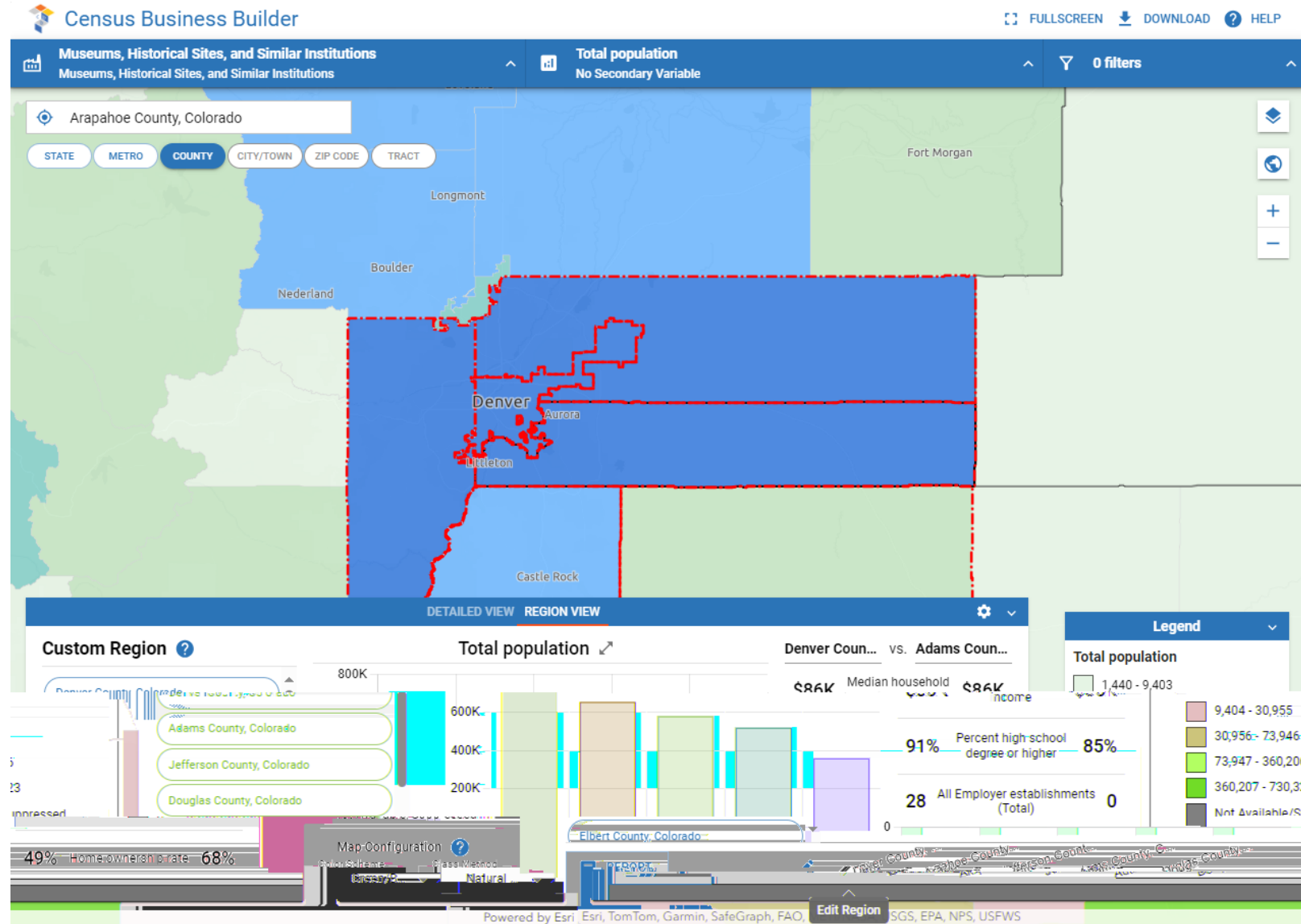
- Report sections, interactive charts, customizing, and bookmarking
- Single or multi-geography reports

The screenshot displays a web application interface for a Business Profile report. At the top left, the logo for 'Business Profile' is shown, followed by the title 'Business Profile' and the subtitle 'Museums, Historical Sites, and Similar Institutions - Arapahoe County, Colorado'. On the top right, there are navigation links for 'HELP', 'EXPORT', and 'SETTINGS'. A dark sidebar on the left contains a 'Table of Contents' menu with the following items: Contents (highlighted), Map, Consumers/Residents (with sub-items: Demographic Characteristics, Socioeconomic Characteristics, Housing Characteristics), Business Summary (with sub-items: Employer Businesses, Business Revenue, Nonemployer Businesses), Workforce, Quarterly Businesses, Building Permits, Business Comparison, Businesses Totals, Key Ratios, Consumer Spending (with sub-item: Consumer Spending), and About Data. The main content area is titled 'Contents' and lists several report sections with brief descriptions: 'What will I find in this report?', 'My Customers' (describing demographic information for Arapahoe County, Colorado), 'Business Summary' (describing statistics about Museums, Historical Sites, and Similar Institutions businesses), 'Business Comparison' (describing tables of juxtaposed information for businesses across all sectors), and 'Consumer Spending' (describing a high-level overview of spending patterns). A callout box on the right states: 'Museums, Historical Sites, and Similar Institutions is comprised of: Museums, Historical Sites, and Similar Institutions'. Below the 'Contents' section is a 'Map' section titled 'All Employer establishments (Total) in Arapahoe County, Colorado'. The map shows the county with labels for 'Longmont' and 'Boulder'. A legend indicates that green squares represent 3 establishments and grey squares represent 'Not Available/Suppressed'.

CBB - Region Builder

Multiple options to build a region

- Option #1: build region of 2+ geographies of the SAME TYPE
- Option #2: build a Region of 2 or more geographies of 2 OR MORE types
- Option #3: build a Region using Prebuilt Regions



CBB – Disaster Impact

CBB can be used to assess the potential impact of disasters on surrounding communities.

Evaluate the supply chain impact on the area.

Assist in deciding where to allocate emergency funds.

The screenshot shows a document page from the Federal Register. The main content is titled "PUBLISHED DOCUMENT" and includes sections for Agency, Action, Summary, and Dates. A sidebar on the right provides "DOCUMENT DETAILS" such as the printed version (PDF), publication date (04/19/2024), agency (Small Business Administration), document type (Notice), document citation (89 FR 28837), page count (1 page), and document number (2024-08400). The main text describes a Presidential declaration of a major disaster for California (FEMA-4769-DR) dated 04/13/2024, covering severe winter storms, tornadoes, flooding, landslides, and mudslides. It also specifies incident periods and application deadline dates for physical and economic injury loans.

PUBLISHED DOCUMENT

AGENCY:
U.S. Small Business Administration.

ACTION:
Notice.

SUMMARY:
This is a Notice of the Presidential declaration of a major disaster for Public Assistance Only for the State of California (FEMA-4769-DR), dated 04/13/2024.
Incident: Severe Winter Storms, Tornadoes, Flooding, Landslides, and Mudslides.
Incident Period: 01/31/2024 through 02/09/2024.

DATES:
Issued on 04/13/2024.
Physical Loan Application Deadline Date: 06/12/2024.
Economic Injury (EIDL) Loan Application Deadline Date: 01/13/2025.

DOCUMENT DETAILS

Printed version:
[PDF](#)

Publication Date:
04/19/2024

Agency:
Small Business Administration

Dates:
Issued on 04/13/2024.

Document Type:
Notice

Document Citation:
89 FR 28837

Page:
28837 (1 page)

Agency/Docket Numbers:
Disaster Declaration #20272 and #20273
CALIFORNIA Disaster Number CA-20012

Document Number:
2024-08400

DOCUMENT DETAILS

<https://www.federalregister.gov/documents/2024/04/19/2024-08400/presidential-declaration-of-a-major-disaster-for-public-assistance-only-for-the-state-of-california>

CBB – Disaster Impact

California Severe Winter Storms, Tornadoes, Flooding, Landslides, and Mudslides, 1/31–2/9/24

- FEMA issued a Disaster Declaration for some counties in California due to the potential for economic injury caused by the severe winter storms.
- This disaster might have far-ranging effects for businesses throughout the state and surrounding areas.
- We can use Census Business Builder (CBB) to evaluate the potential impacts to these areas and identify vulnerabilities.

The screenshot shows a document page with a left sidebar containing navigation icons (hamburger menu, speech bubble, two people, share, printer, document, folder, document with arrow, document with checkmark). The main content area is titled 'PUBLISHED DOCUMENT' and contains the following sections:

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On the right side, there is a 'DOCUMENT DETAILS' sidebar with the following information:

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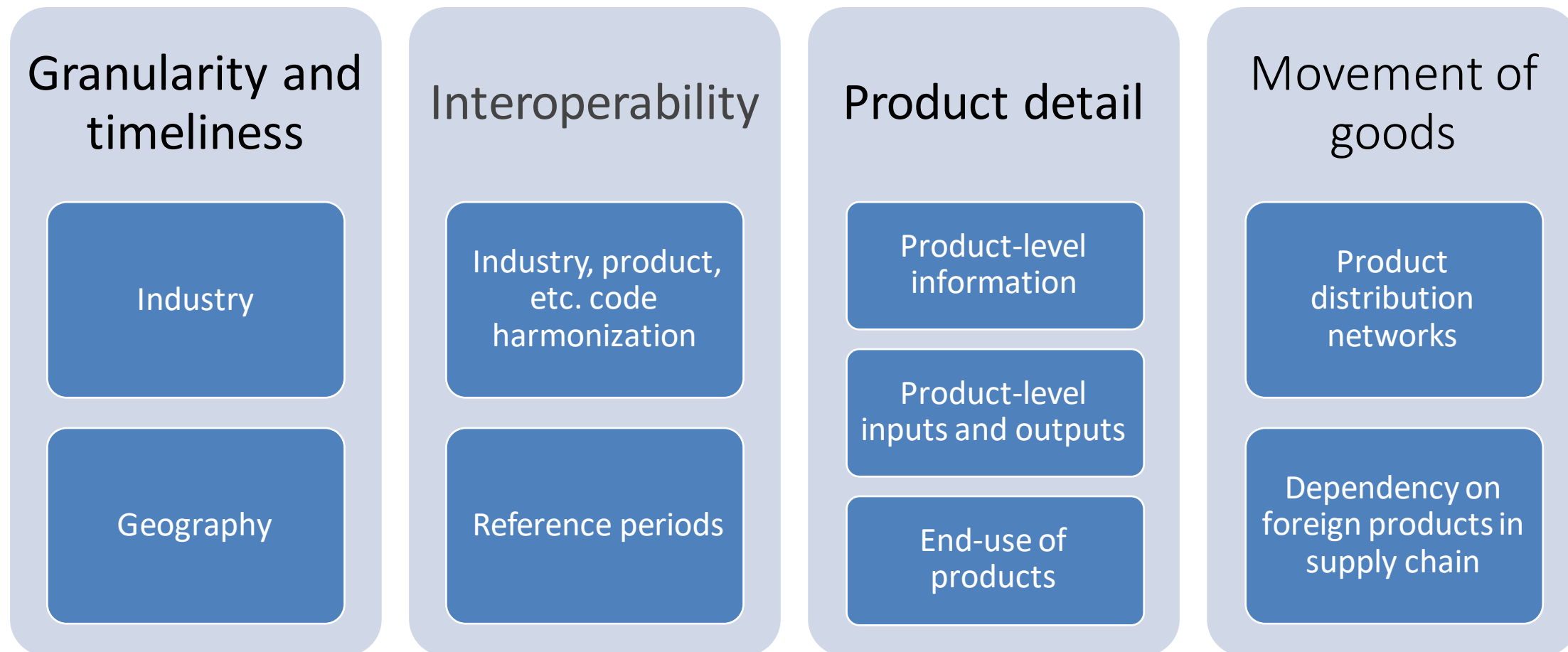
A 'DOCUMENT DETAILS' tab is visible at the bottom right of the sidebar.

<https://www.federalregister.gov/documents/2024/04/19/2024-08400/presidential-declaration-of-a-major-disaster-for-public-assistance-only-for-the-state-of-california>

Live Demo

Cbb.census.gov

There are still a lot of data gaps



Discussion questions

- What are the biggest challenges for supply chain analysis using Census data currently?
- How might Census produce data that enable more comprehensive supply chain analyses?
- How might Census enable better discoverability of its existing data assets?
- How might Census standardize/harmonize data with different vintages and geographic constraints?