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U.S. Census Bureau

GEOSPATIAL WORLD FORUM

Rotterdam

May 13, 2024

**Strategic Partnerships for
Geospatial:
The Crucial Role of National
Statistical Offices**

Key Roles of NSOs in the Geospatial Information Ecosystem

Providers of Authoritative Data

- Mashups with public and restricted use data
- Rich Contextual Information

Honest Brokers

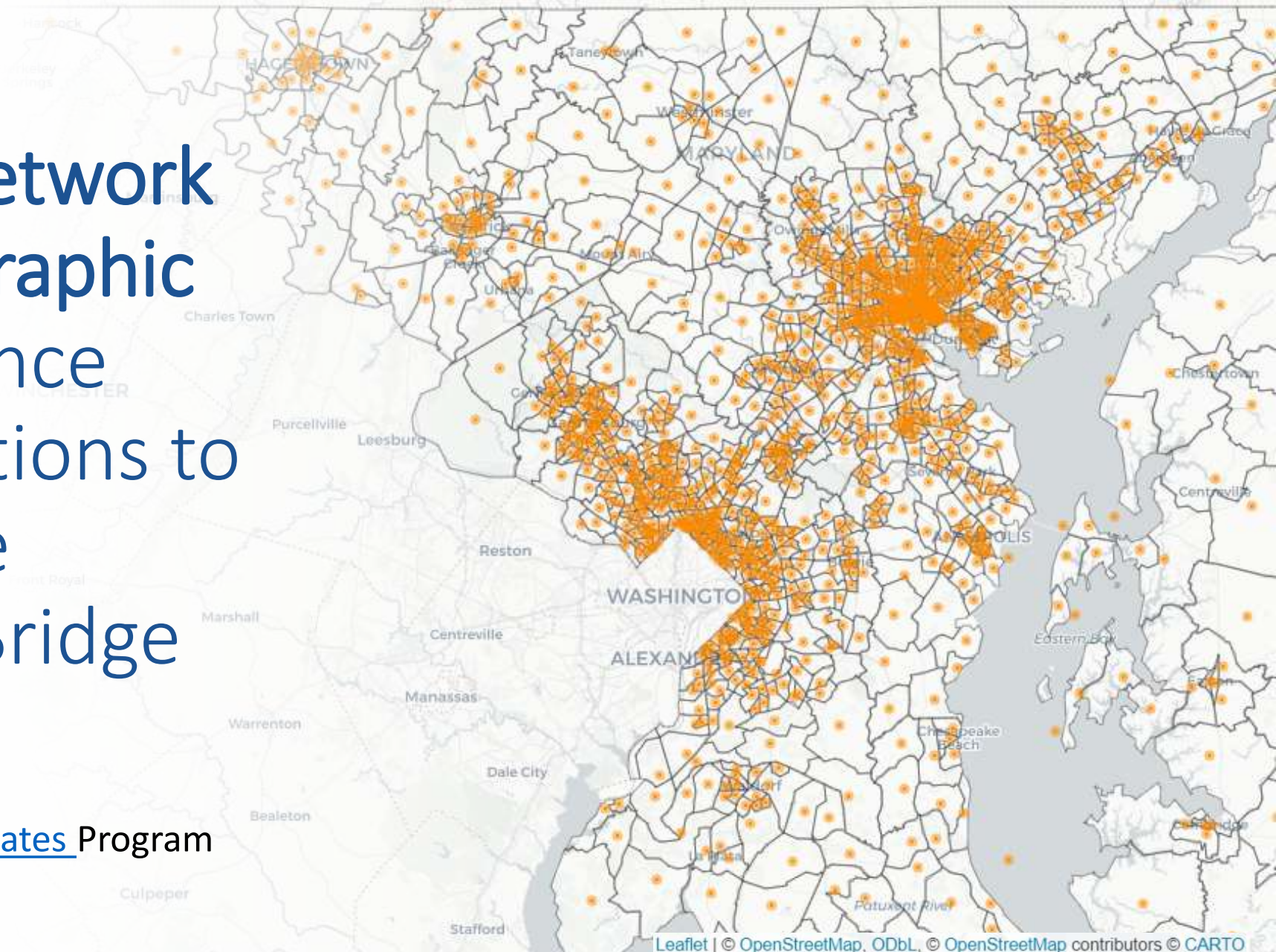
- No commercial motives
- Public oversight and input
- Strong privacy and confidentiality protections

Linking Road Network Data to Demographic Data on Residence and Work Locations to Understand the Impact of Key Bridge Collapse.

The [Community Resilience Estimates](#) Program



The Census Bureau has reviewed this data product to ensure appropriate access, use, and disclosure avoidance protection of the confidential source data used to produce this product (Data Management System (DMS) number: **P-7517412**, Disclosure Review Board (DRB) approval number: **CBDRB-FY24-SEHSD003-052**).



Overview

- **The Need:**

- What is the logistical impact for commuters **directly** impacted by the Key Bridge collapse?

- **The Method:**

- Calculate driving route to work for American Community Survey respondents.
 - Subset ACS microdata (5yr 2018-2022) to car-commuting workers.
 - Geocode residence tract and place of work tract to population-weighted tract centroid (or use place of work if tract is unavailable).
 - Use road network data and routing algorithms to calculate the optimal driving route from origin centroid to work centroid.
- Compute results:
 - Compare bridge and non-bridge commuters.
 - Average driving distance before and after Key Bridge collapse.

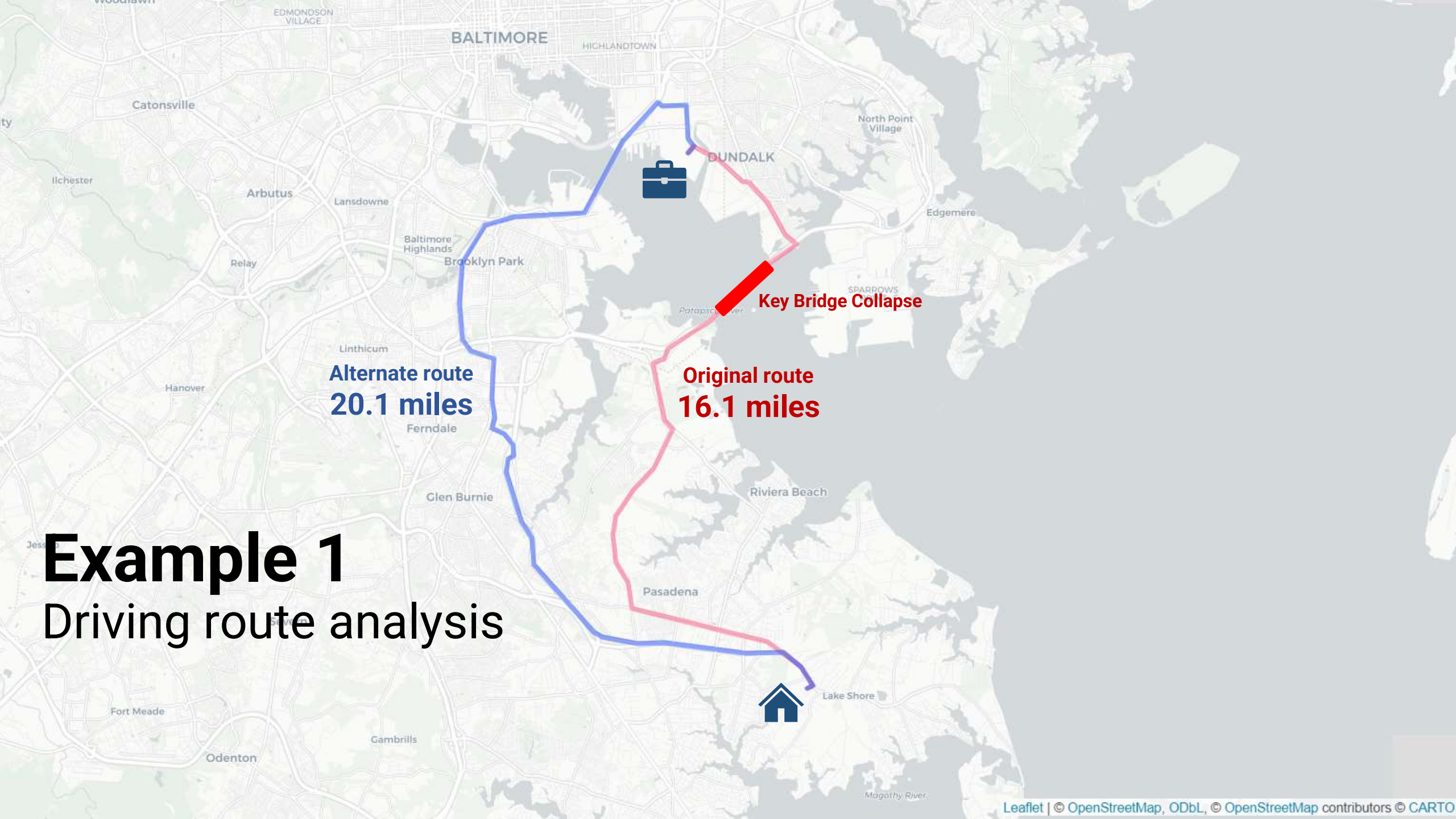
Example 1

Driving route analysis

Alternate route
20.1 miles

Original route
16.1 miles

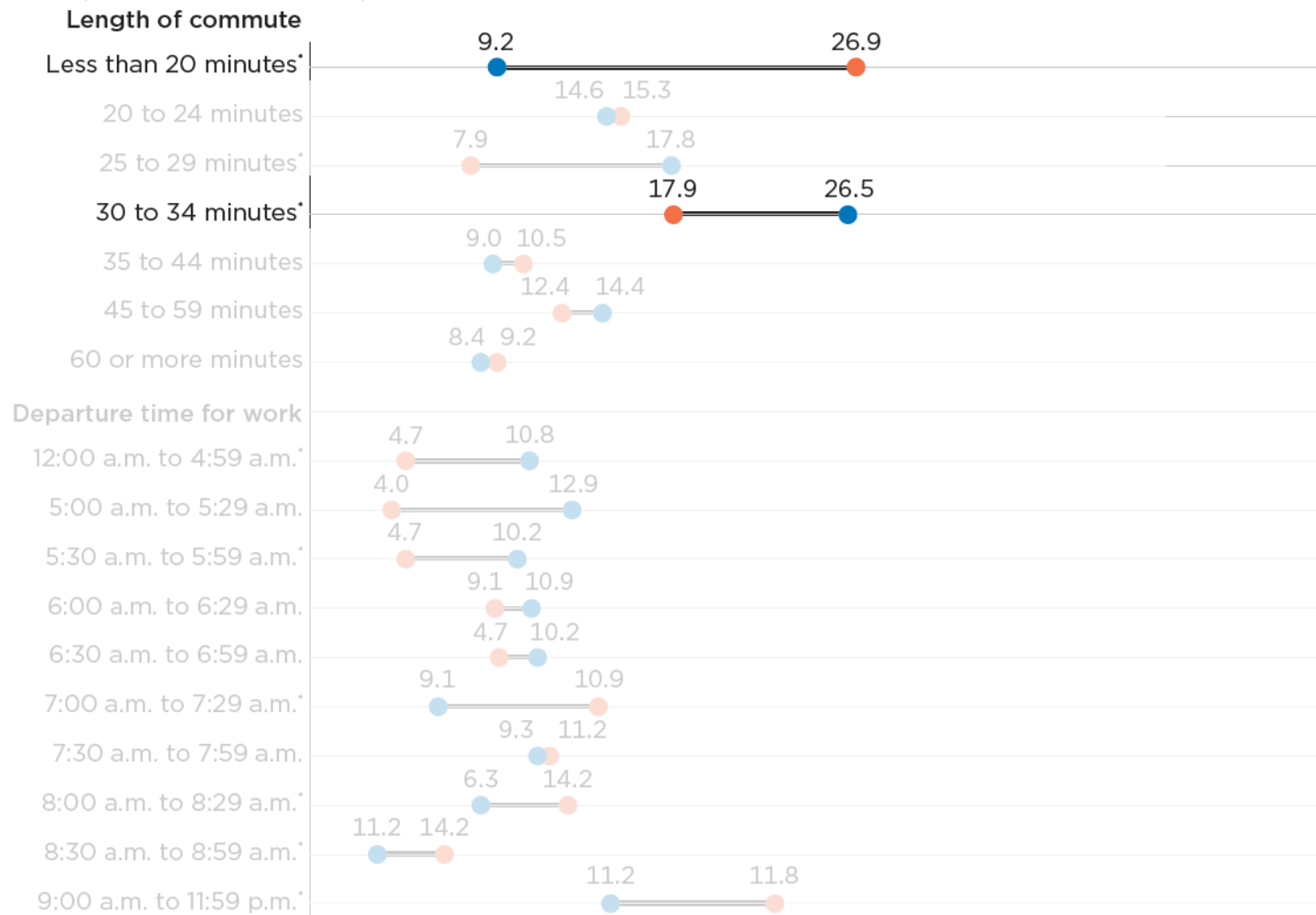
Key Bridge Collapse



Characteristics of Baltimore Car Commuters

(Percentages)

● Bridge commuters ● Nonbridge commuters

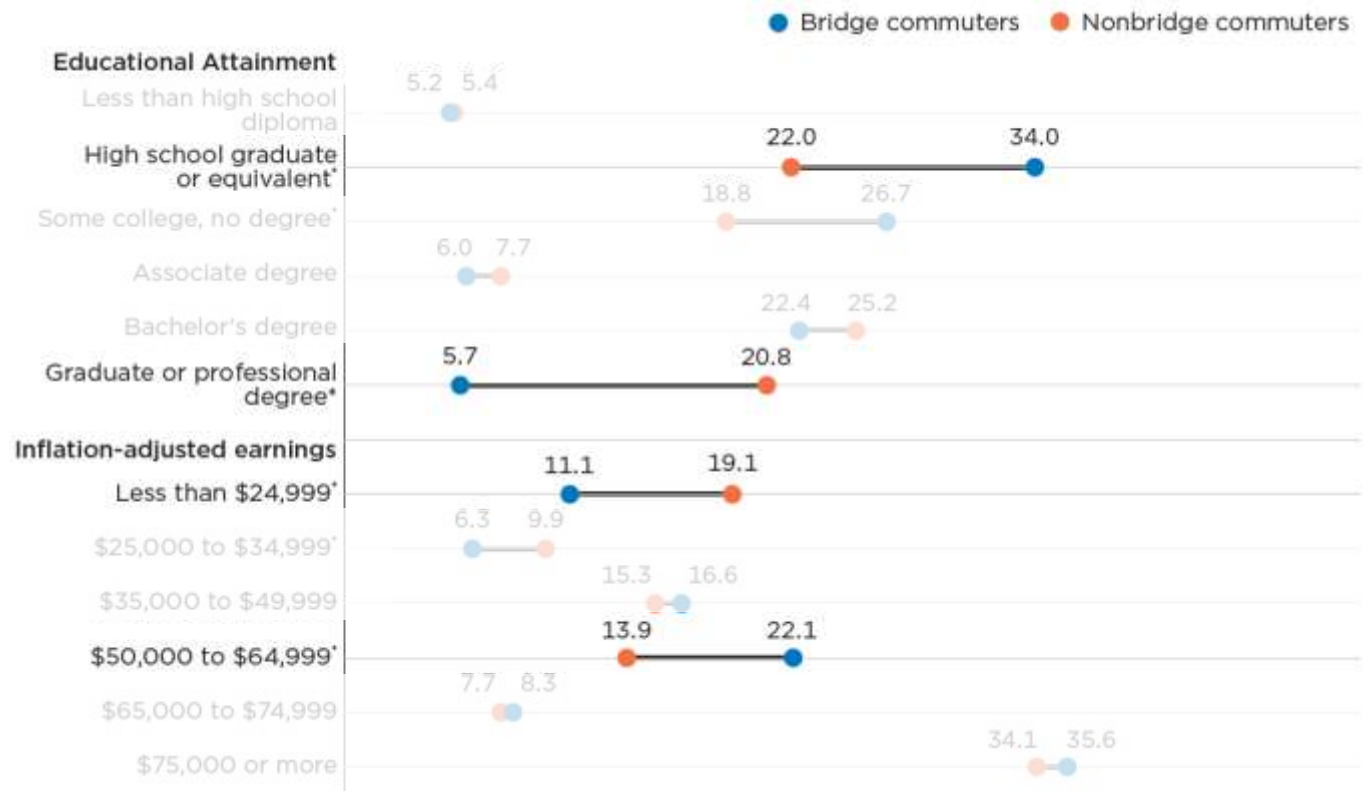


* Difference is statistically significant
 Note: Analysis of survey respondents who live or work in Baltimore city or County and who drive alone or carpoled to work in a car, truck or van. Bridge commuters are those whose driving route to work likely included the Francis Scott Key Bridge prior to Collapse.
 Source: U.S. Census Bureau, American Community Survey 2018-2022, OpenStreetMap, Open Source Routing Machine



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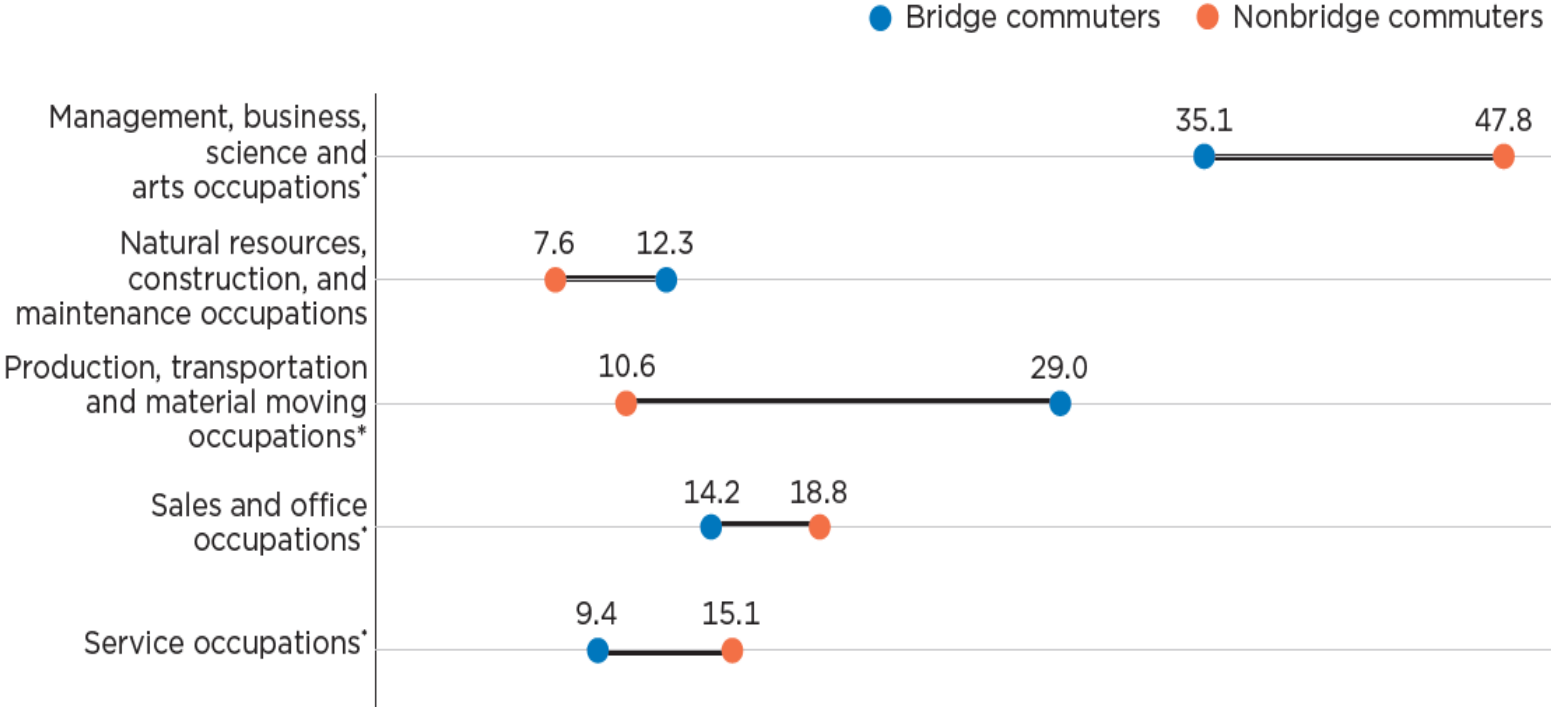
Characteristics of Baltimore Car Commuters (Percentages)



* Difference is statistically significant
 Note: Analysis of survey respondents who live or work in Baltimore city or County and who drive alone or carpooled to work in a car, truck or van. Bridge commuters are those whose driving route to work likely included the Francis Scott Key Bridge prior to Collapse.
 Source: U.S. Census Bureau, American Community Survey 2018-2022, OpenStreetMap, Open Source Routing Machine

Characteristics of Baltimore Car Commuters

(Percentages)



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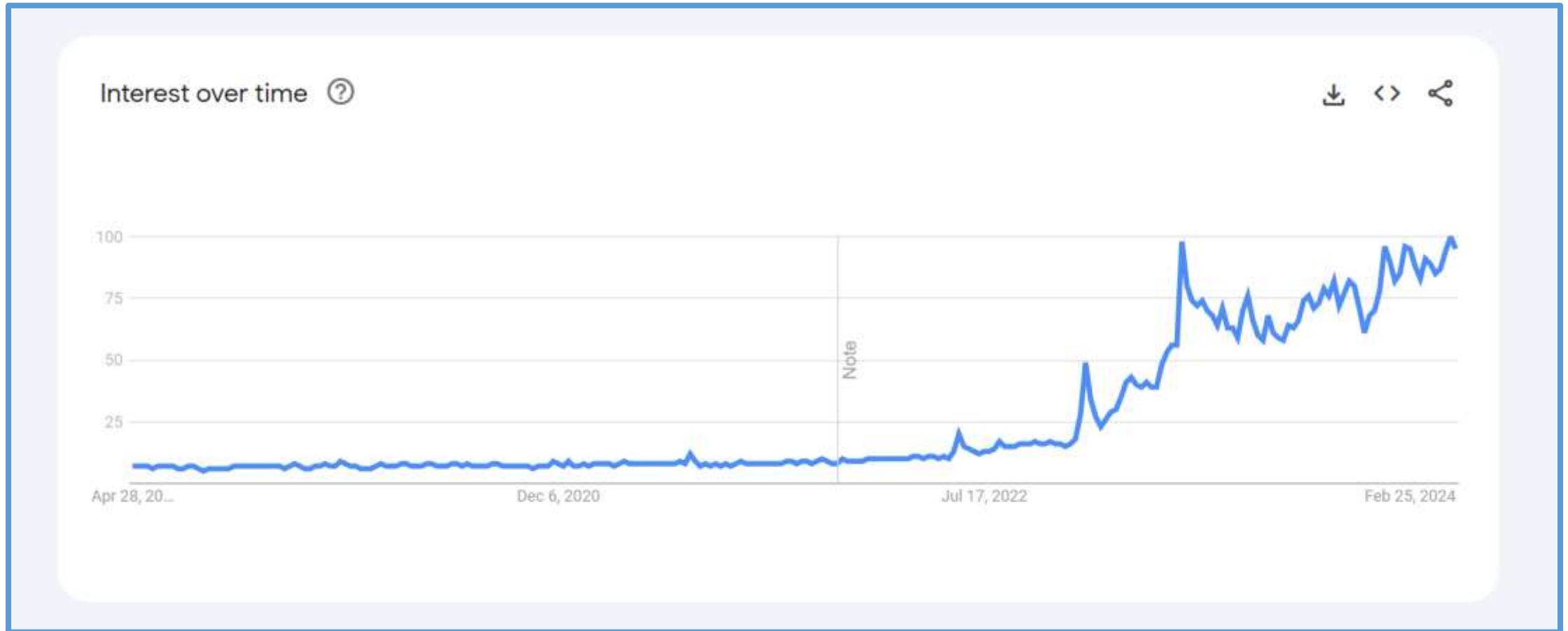
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Summary

- Road network data can be combined with microdata to parse certain categories of commuters.
- Compared to non-bridge commuters who live or work in Baltimore City or County, bridge commuters:
 - Tended to have longer commutes.
 - Arrived at work earlier.
 - Tended to work in production, transportation and material moving.
 - Had higher earnings.
 - Were more likely to have a high school degree only; less likely to have a graduate degree.

Hype vs Reality: AI

(not really a Geospatial example)



SMALL BUSINESS PULSE SURVEY (SBPS)

BUSINESS TRENDS AND OUTLOOK SURVEY (BTOS)

Recap:

- SBPS initially created as response to the COVID-19 pandemic
- Concept to publication in 39 days

Goals:

- Continue producing near real time data products
- Produce economic pulse



America Counts Story

New Small Business Pulse Survey Shows COVID-19 Impact on Businesses

The U.S. Census Bureau's Small Business Pulse Survey yields near real-time economic data on businesses...



America Counts Story

New Surveys Give Timely Info on Families, Businesses During Pandemic

The Household Pulse and Small Business Pulse surveys will provide current household and economic statistics on the impact of the pandemic.



Business and Economy

Tracking Supply Disruptions, Impact of Inflation on Small Business

Bi-weekly Business Trends and Outlook Survey shows a drop in supply chain delays after the peak of the pandemic emergency but higher prices due to inflation.



Business and Economy

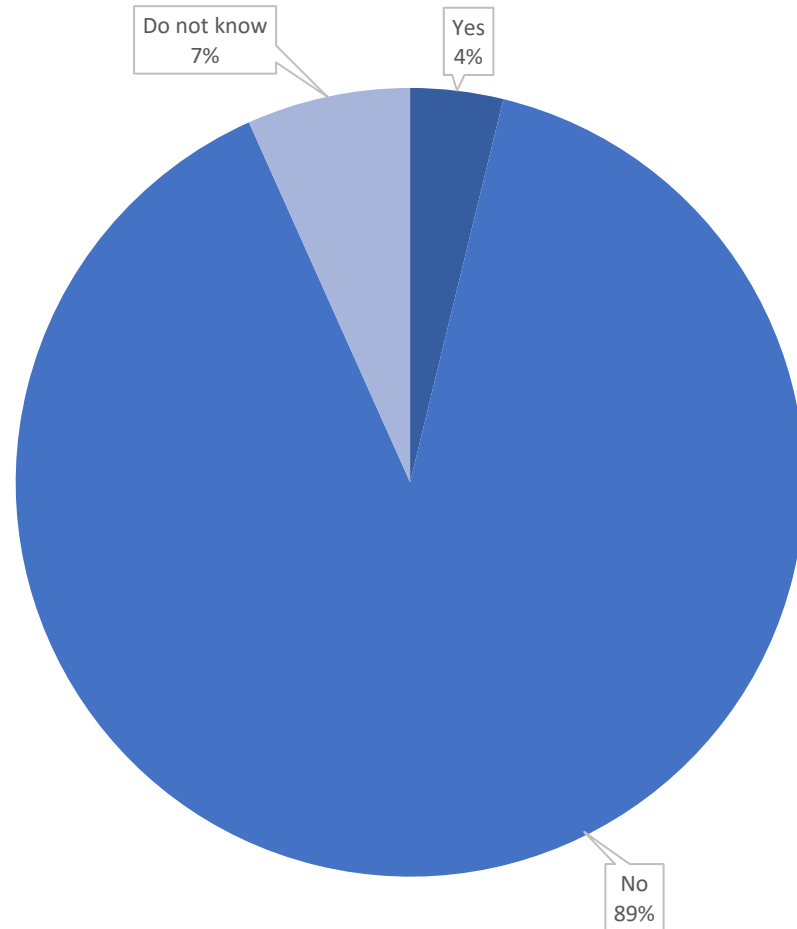
Business Trends and Outlook Survey: New Light on Business Health

The new BTOS will provide continuous data across geography, business sector, and business size.

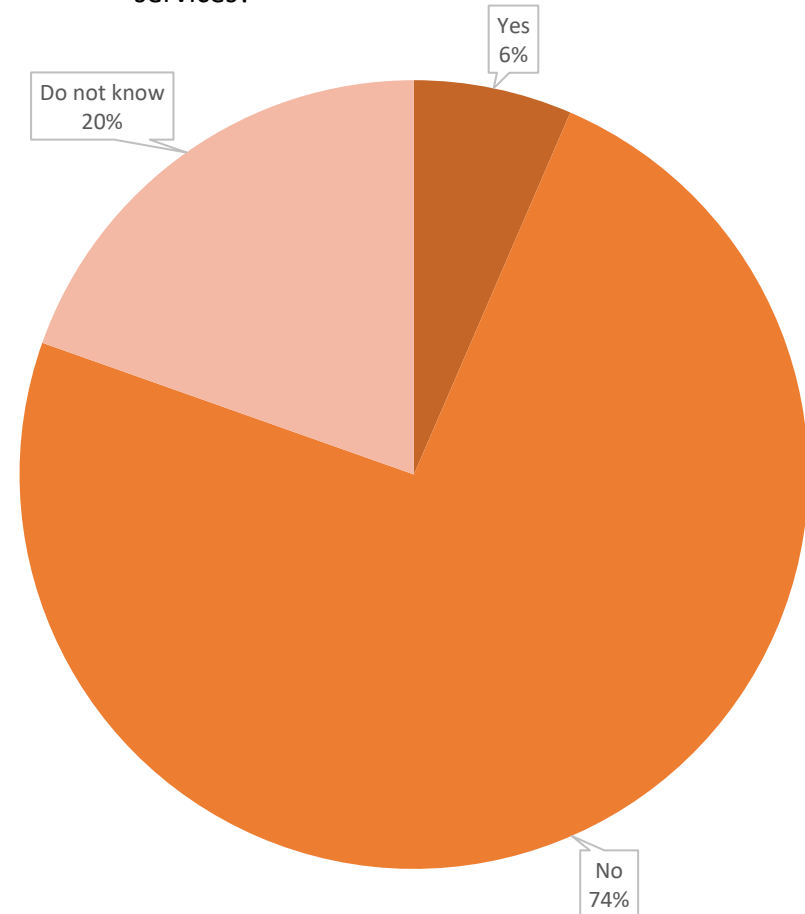


Artificial Intelligence Use (October 2023)

In the last two weeks, did this business use Artificial Intelligence (AI) in producing goods or services?



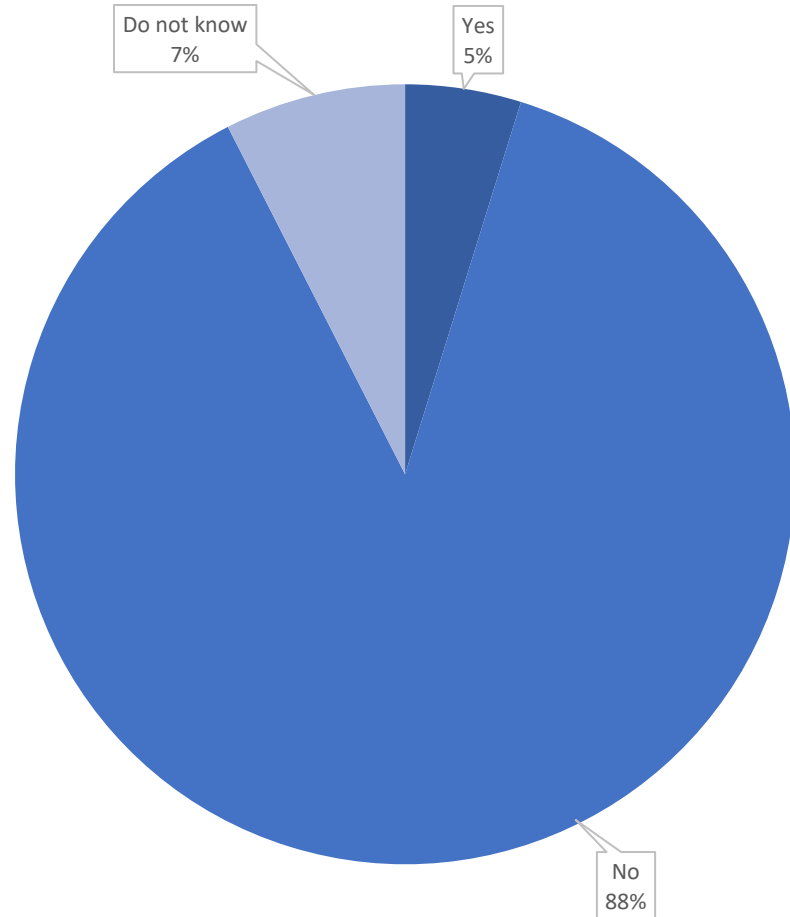
During the next six months, do you think this business will be using Artificial Intelligence (AI) in producing goods or services?



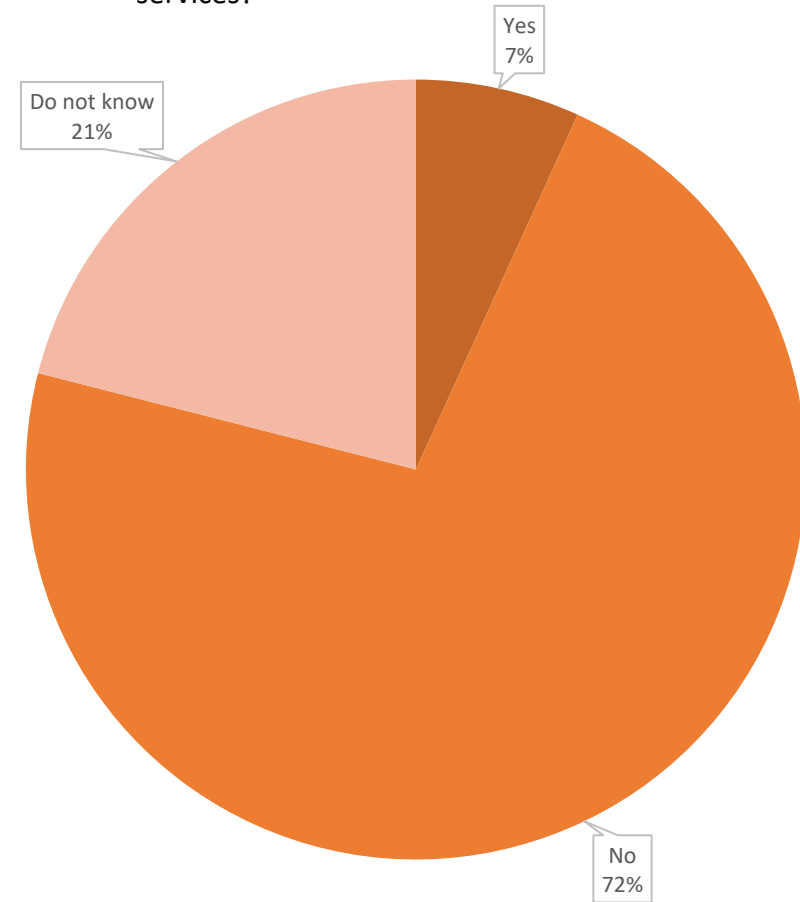
Data collected 10/9/23-10/22/2023

Artificial Intelligence Use (April 2024)

In the last two weeks, did this business use Artificial Intelligence (AI) in producing goods or services?



During the next six months, do you think this business will be using Artificial Intelligence (AI) in producing goods or services?



Thank you
