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Using Data to Improve Customer Experience at the US Census Bureau



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Granicus #DCCComm17

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WHO IS THE CENSUS BUREAU & WHAT DO WE DO?

DATA COLLECTION: What Data Do We Collect & Publish?

■ 3 CENSUSES:

1. **PEOPLE:** The **Decennial Census of Population and Housing** counts every resident of the United States every 10 years, as set forth in the Constitution.
 - *The next Decennial Census Day is April 1, 2020, just 3 years away!*
2. **BUSINESSES:** **Economic Census** of all American businesses & the economy.
3. **GOVERNMENTS:** **Census of Governments (State & Local)**

■ 14 ECONOMIC INDICATORS reports- each released on a specific schedule.

■ 130+ SURVEYS done every year for Commerce and other federal agencies

- Topics range from: education, healthcare, law enforcement, and consumer spending to manufacturing, construction and foreign trade
- Includes our nation's largest surveys on:
 - Households: **American Community Survey (ACS)**
 - Businesses: **Annual Retail Trade**

All Census Bureau Surveys and Programs: <https://www.census.gov/programs-surveys/surveys-programs.html>

DATA DISSEMINATION: How Do Customers Use Our Data?

The Census Bureau distributes and teaches users how to use our data. Users include: federal/ state/ local governments, businesses, academia, non-profits, journalists, and the American people for:

■ APPORTIONMENT & REDISTRICTING

- Determine the distribution of Congressional seats to states, including apportioning seats in the U.S. House of Representatives to defining legislature districts, school district assignment areas, and more.

■ PLANNING & BUSINESS DEVELOPMENT

- Make planning decisions about community services- Ex. building roads & schools
- Decide where to locate or market your business. Power your own data products.

■ FUNDING

- Apply for grants (for non-profits).
- Distribute more than \$400B in federal funds to local, state and tribal governments each year, from public health & education to infrastructure improvements.

■ AGE SEARCH & GENEALOGY

- Qualify for Social Security and other retirement benefits; Passport applications.
- Prove relationship in settling estates; Research family history or a historical topic.

■ ACADEMIC or JOURNALISTIC RESEARCH

- Use data for a research project or journalism story.

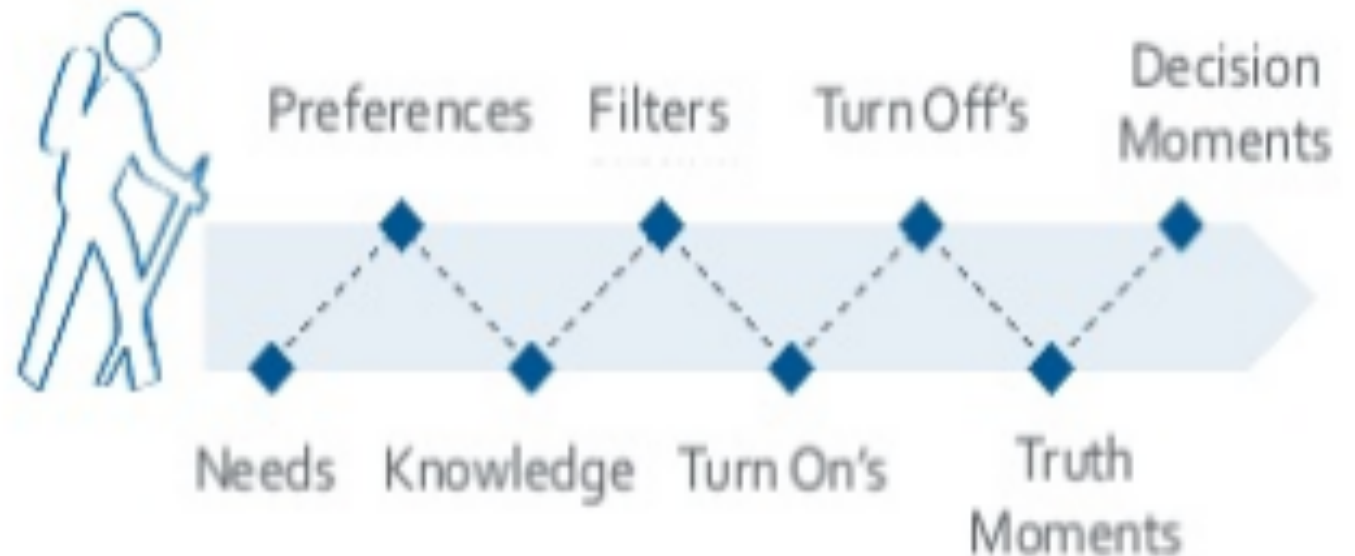
HOW DO WE ASSESS OUR CUSTOMERS' EXPERIENCE?

What is Customer Experience (CX) Data?

CX data is cross-channel data that is instantly accessible and can be used to shape customer experiences – in the moment of a given experience

CX data reveals:

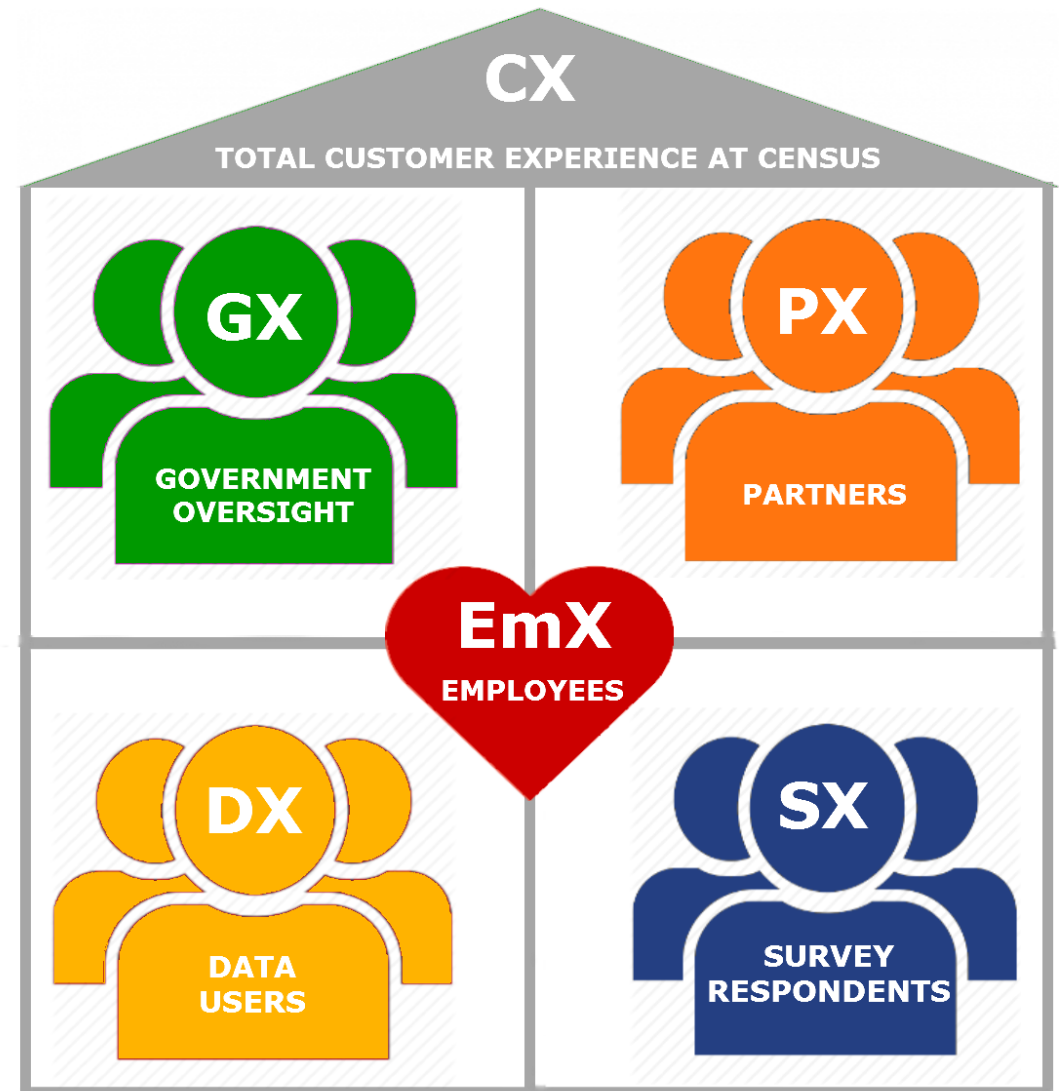
- a customer's **INTENT** and
- what is **MEANINGFUL** and **RELEVANT** to the customer as s/he progresses along their journey with your brand



Source: Danone Nutricia Case Study: The Data-driven Mother's Journey –by Christopher Nash at Sitecore

The Total Census Customer eXperience (CX) is Comprised of the eXperience of these 5 Segments

1. **SX= Survey respondents' eXperience**
2. **DX= Data users' eXperience**
(businesses, journalists, academia, K-12 teachers, government agencies- federal, state, local, tribal, and the general public)
3. **PX= Partners' eXperience**
(national, local, survey-specific)
4. **GX= Government oversight entities' eXperience**
(Congress/GAO; White House/OMB/Department)
5. **EmX= Employees' eXperience**
is at the ♥ since they deliver CX to internal and external stakeholders



CEM: Customer Experience Management system

Census Bureau's custom integrated analytics platform



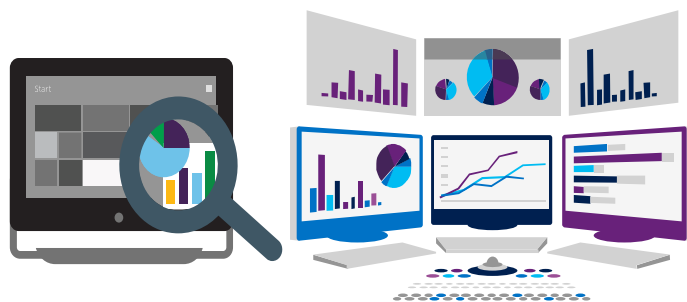
Data Integration

- Any Data Format (API/Flat file/database)
- Internal or External: Web, Contact Center (Phone/Chat/FAQs/Email), E-newsletters, Social Media, CRM



Business Rules

Visual Analytics in Real Time



Advanced Mapping



Personalized Dashboards



Security/ Access Controls



Anywhere Access



Event Driven Alerts*



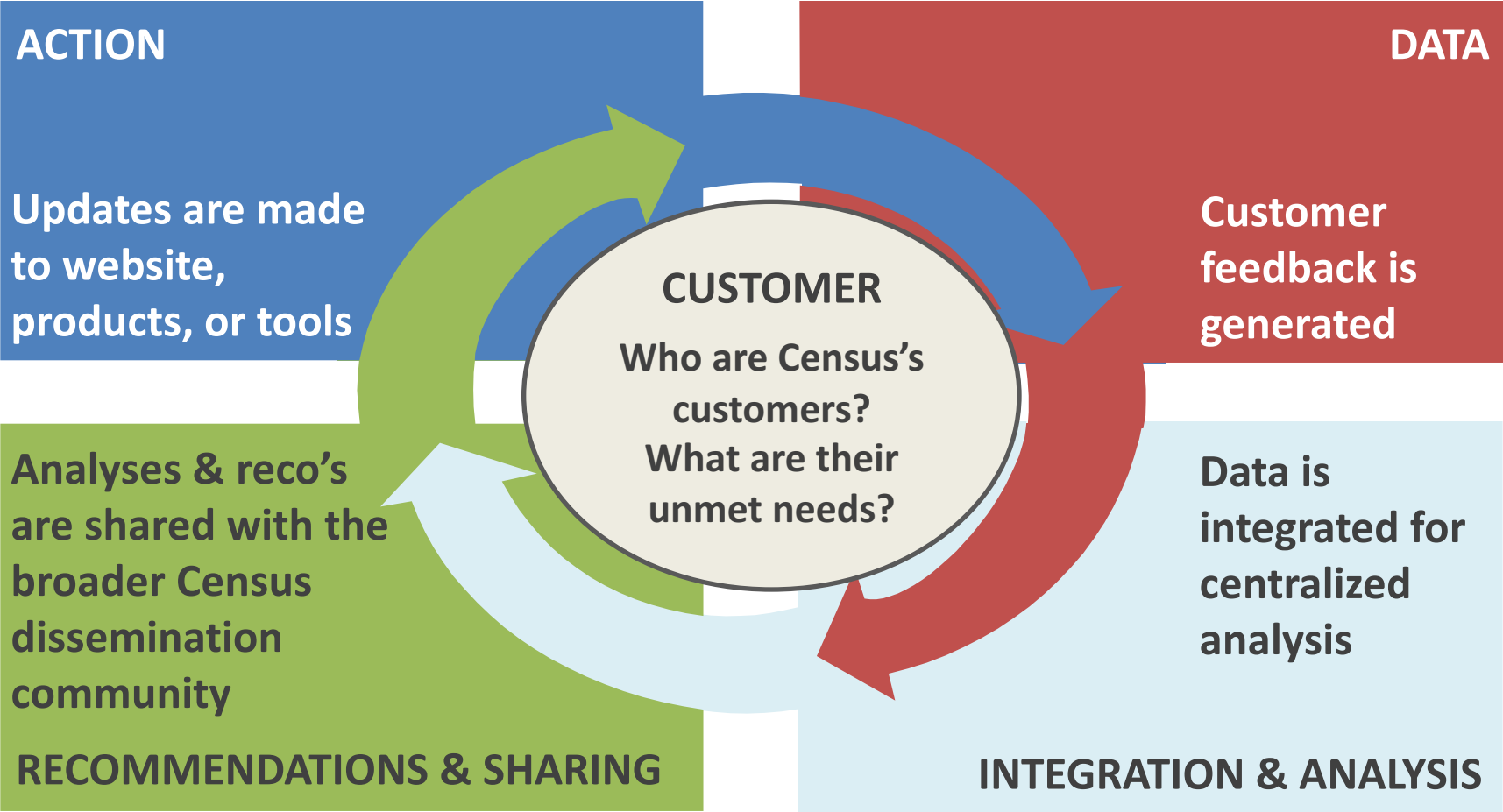
Advanced Analytics*

PLUS, stakeholder feedback from:

- ✓ Mail tests
- ✓ Focus groups
- ✓ In-person field interactions
- ✓ Public events
- ✓ Surveys
- ✓ Advisory Committees

* Future

Customer Insights are at the Center of Our Data Dissemination Transformation



WHAT CX INSIGHTS HAVE WE ACTED UPON?

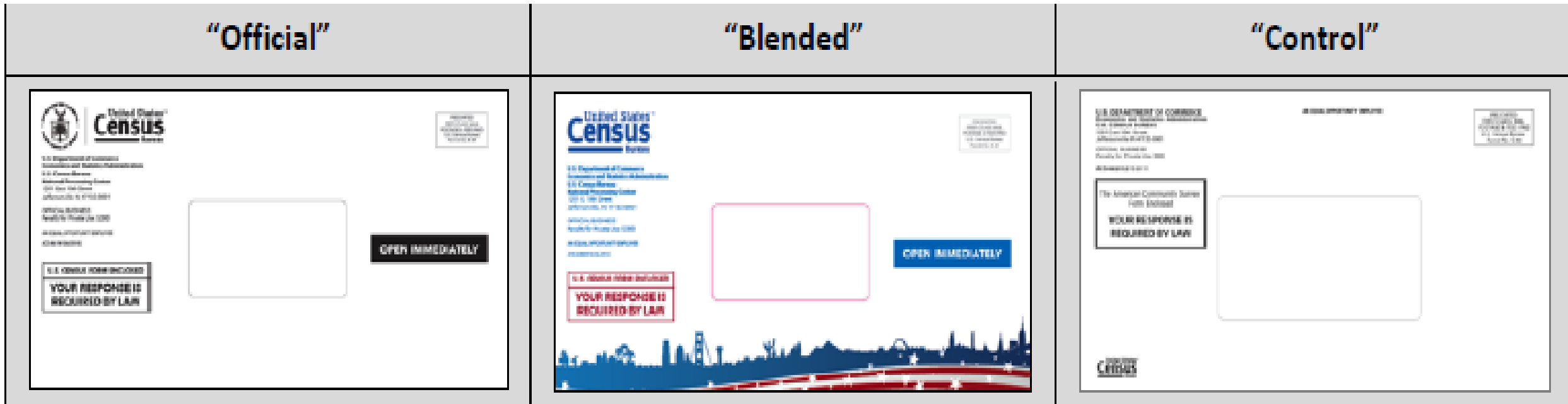
SURVEY RESPONDENTS

Direct Mail for American Community Survey



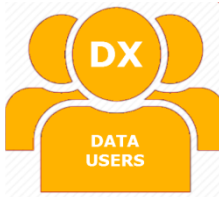
#1: Answer ACS respondent's question "What's in it for me?" while addressing concerns of Privacy, Trust & Legitimacy

- Evaluated messaging, design and sequencing of American Community Survey communications on a control vs. alternative options, including envelopes, pre-notice letters, postcards, multilingual brochures, and the ACS questionnaire form.



▪ **RESULTS → Using new "Official" design, improved ACS response while saving \$19M.**

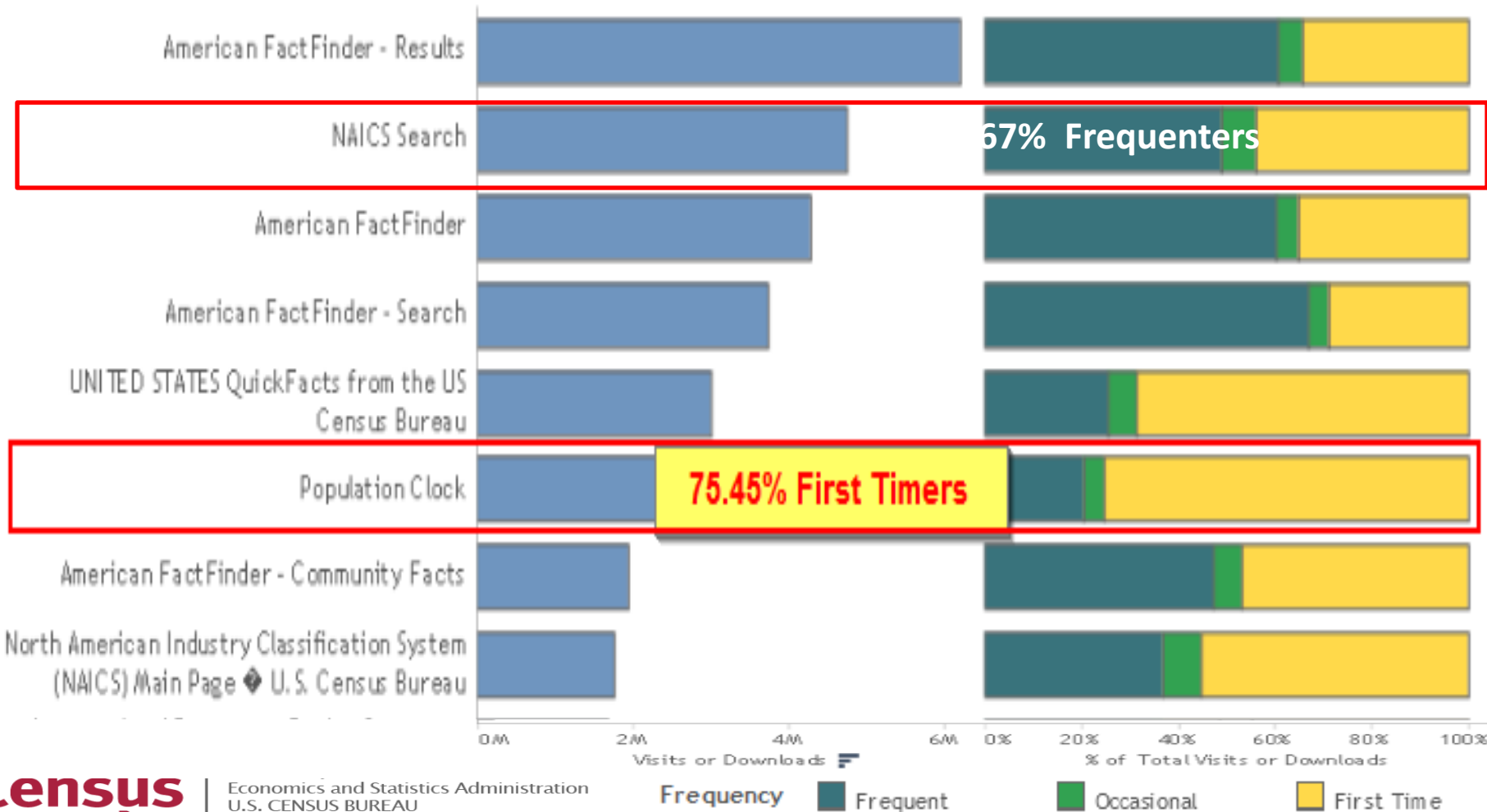
DATA USERS- Website Users by Frequency



Pages Popular with Frequent vs. Occasional vs. First Time Visitors

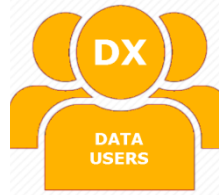
Page Visits by Visitor Frequency

"What is the number of visits or downloads from Products and Tools pages and how often do users visit them?"



- First Timers:** use popular topics like Income & Poverty and simple tools like Population Clock, and QuickFacts
- Frequent Repeaters:** use more sophisticated tools like American Fact Finder, and USATrade "Perspective"

All Data Users' Satisfaction with Products, Tools & Interactions



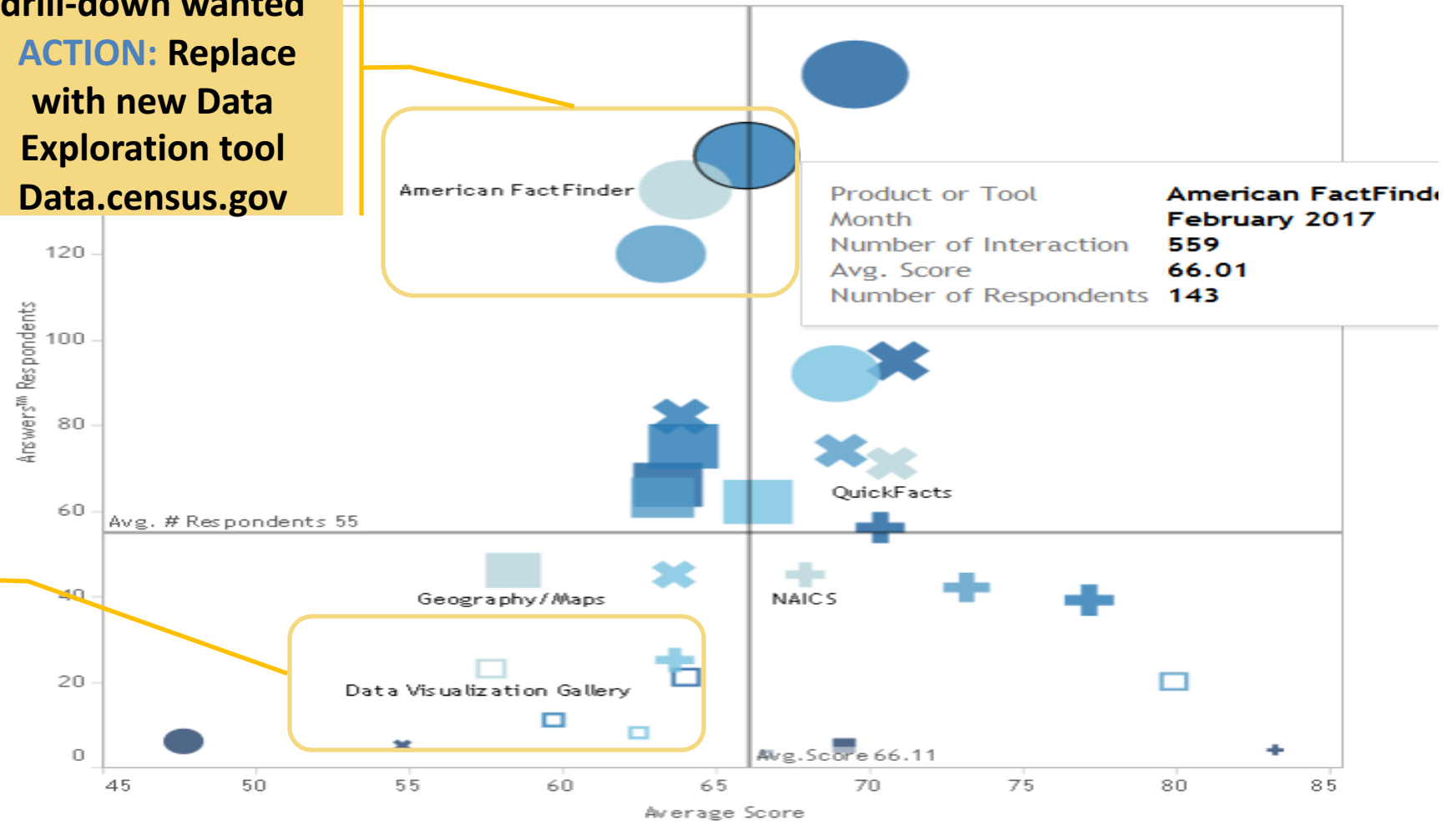
Last 6 months

- American FactFinder ●
- QuickFacts ✕
- Geography/Maps ■
- NAICS +
- Data Visualization Ga.. □

- Shape represents survey
- Size represents number of related interactions (Excluding Visits)
- Color Represents proximity to current month (Darkest=Current month)

INSIGHT: Easier data drill-down wanted
ACTION: Replace with new Data Exploration tool
 Data.census.gov

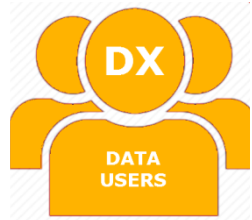
Time Frame: November 2016 to April 2017



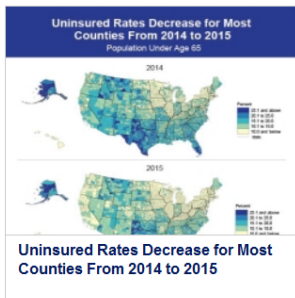
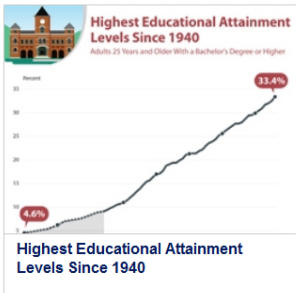
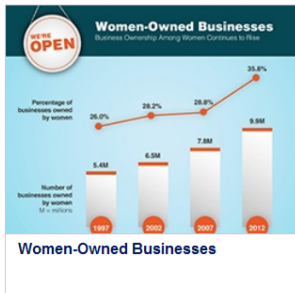
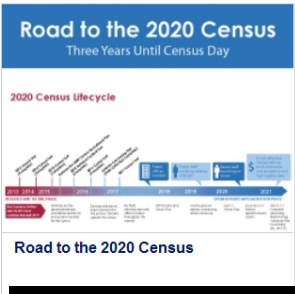
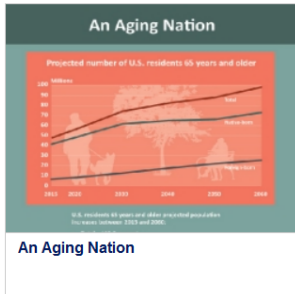
INSIGHT: Dissatisfaction with and low utilization of Data Visualizations
ACTION: Improve quality & quantity of imagery

DATA USERS- Casual to Frequent

All Digital Channels and Multimedia



Visualizations, Infographics & Video



Stats In Action: New Orleans Smoke Alarm Outreach Program

Those smoke detectors and batteries in there are good for 10 years, y'hear?

Data.census.gov Data Exploration Platform

virginia manufacturing

ALL TABLES WEBPAGES MAPS

2 Selected Filters: Virginia x 31-33 - Manufacturing x Clear All

FILTER

- Topics
- Geographies
- Years
- Survey/Programs
- Industries (NAICS)

SEARCH RESULTS (27,219)

Virginia Statistics

8,411,808 2016 Population Estimates vintage 2016 population estimate: population estimates	\$ 65,015 Median Household Income 2011-2015 american community survey 5-year estimates	11.2 % Persons in poverty, percent 2015 american community survey 1-year profiles
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TABLES

County Business Patterns

2013 : CBP Business Patterns

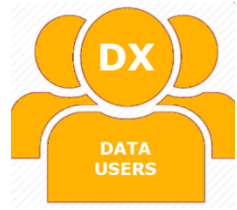
County Business Patterns By Legal Form Of Organization

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Table ID: CB1200A12

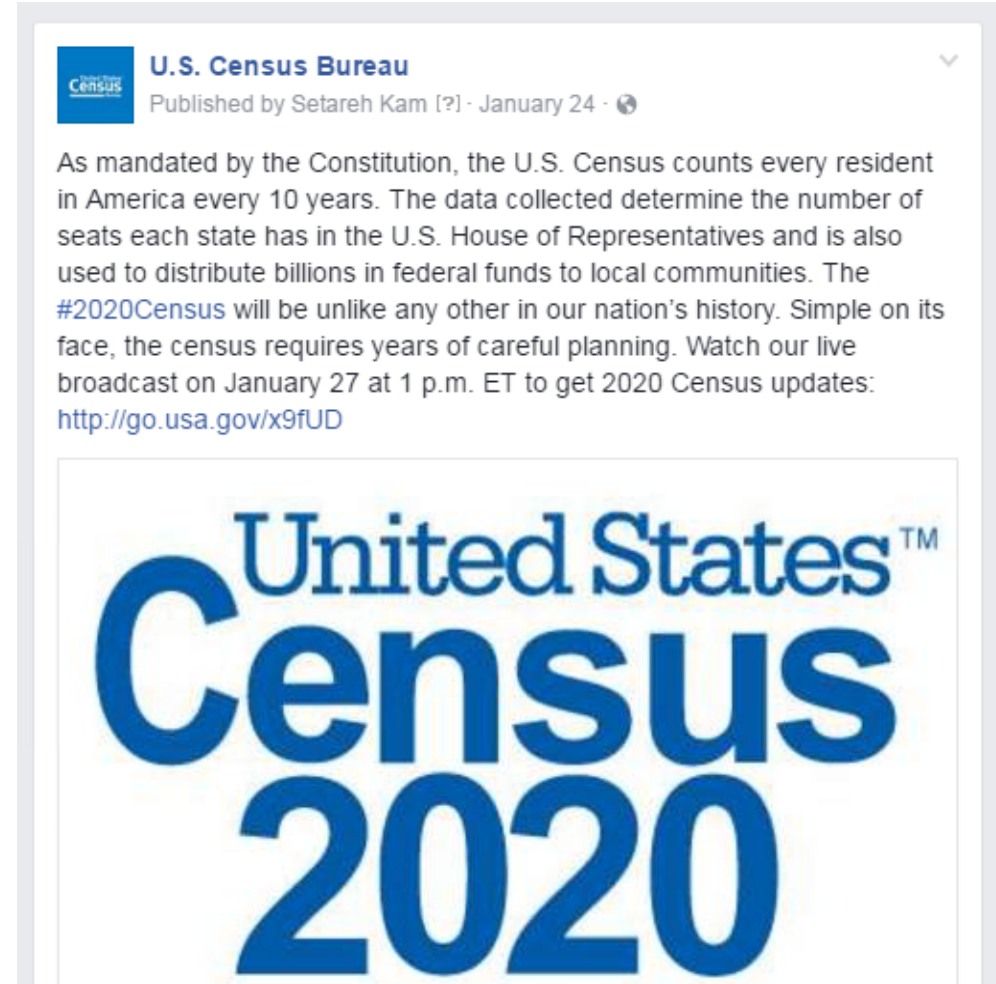
DATA USER- General Public, Business, Media

Social Media



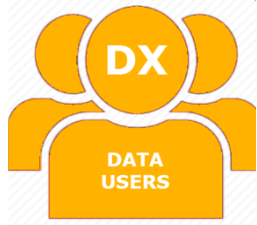
■ AUDIT INSIGHTS:

- **Oversaturating some channels** → Cut back most Pinterest, some Facebook
 - **Lack of evergreen content that conveys our value** → Evergreen works best on Facebook for us
 - **Underutilizing LinkedIn** → Added 3-4 posts/ week; Webinars are doing best here!
- **RESULTS:** After 6 months, followers & engagement are way up!



DATA USERS: Developers

Software Developer Tools “City SDK”

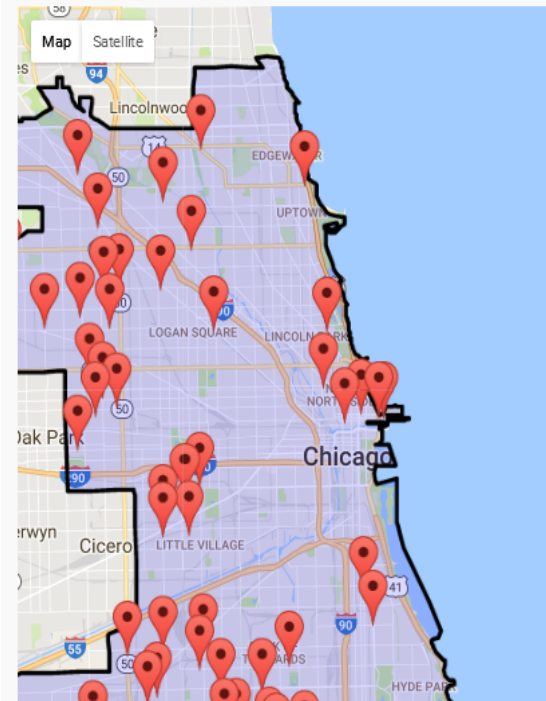


- **INSIGHT:** State/local Javascript developers told us in hackathons and focus groups that it was hard to learn how to program with our data.
- **ACTION:** Combined 3 Census APIs into one simple “Smart City” Service Development Toolkit called “City SDK.”
 - Easier to learn and to mash up any other open data from other APIs, saving hours of coding time.
- **RESULT:** Developer on-boarding time **DROPPED** from over 12 hours to under 4

Chicago Crime and Demographics

Visualize Chicago Crime data versus various demographics. Change the date range, crime types, and arrest options for Crime. Crime data provided by the [City of Chicago](#)

Select your boundary types and variables to compare. Click a crime marker to view more data about that crime, or click inside a boundary to view the requested variables for that boundary.



Crime Controls

Start date:

End date:

Crime type:

Arrest type:

Demographic and Data Controls

Show boundaries for:

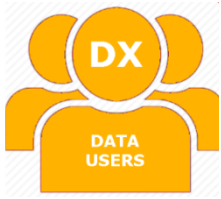
Include American Community Survey (2013, 5-year) variables:

Median	Income Per	Population ?
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<https://uscensusbureau.github.io/citysdk/>

DATA USERS: All Segments

Outbound Email Newsletters with Granicus



Granicus Email Audit Insights

TRADE & COMMERCE

	OPEN RATE	CLICK RATE	SUBSCRIPTIONS PER SUBSCRIBER	OVERLAY IMPACT	ENGAGEMENT RATE
MEDIAN	19.29%	2.22%	3.90	251%	45.24%
TOP 20%	23.98%	5.68%	7.83	783%	53.48%
Federal	14.2%	2.06%	2.29	295%	46.01%
Census	12.8%	1.4%	4.0	0%	38.8%

INSIGHTS:

- **Uses must subscribe to get emails:** Less than 400 of 32M Census.gov visitors sign up for emails since signup is hidden in the footer.
- **Users must receive emails to engage:** 66% of subscribers and 152 topics with >1,000 subscribers HAVE NOT received content in 90 Days.
- **Users must like the frequency, format and content** of your emails to increase their engagement. Low open and click rates.

Email Actions Under Way

Email Reboot Campaign

- **To Improve**
 - Quality of templates and content & admin training
 - Revised topic list
- **To Implement**
 - A/B testing and analysis
 - Increased frequency for high subscriber topics
 - Add email sign-ups via overlay pop-up and topic pages

Customers Need Content Adapted to their Level of Familiarity with the Topic



1- “Convince me”
I’m a **NOVICE**.

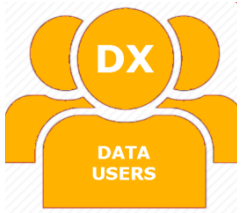
2- “Teach/Remind me”
I’m vaguely **FAMILIAR**.

3- “Advance me”
I’m an **EXPERT**.

- **Identify** which types of customers should be aware of and using your content and what level of familiarity they might have with it.
- **Research** the wording and visual clues that group needs for that topic.
- **Develop** search-optimized verbal and visual content (text, images, interactive tools) using the phrases and images to appeal to that audience.

DATA USERS- Population Data Seekers

Search Engine Optimization (SEO) of Web Content



Google Search Queries	Clicks to Census.gov	Total Google Search Impressions	CTR	SERP Position	User Familiarity Level
us population	6,357	156,483	4.06%	2.7	
population of usa	2,399	128,445	1.87%	3.2	
us population 2016	4,540	65,901	6.89%	2.8	Familiar
usa population	867	31,720	2.73%	3	
how many people live in the us	220	27,156	0.81%	4	Novice
population of america	516	20,952	2.46%	2.8	Novice
population of the united states	824	20,006	4.12%	2.6	
united states of america population	325	19,610	1.66%	3.8	
united states population	685	17,049	4.02%	3.2	
population of us	497	16,038	3.10%	2.8	
american population	604	15,824	3.82%	2.7	Novice
how many people are in the us	164	14,629	1.12%	3.5	Novice
population of united states	292	11,880	2.46%	2.9	
united states population 2016	108	11,770	0.92%	5.2	Familiar
population of the us	415	9,521	4.36%	2.5	
population clock	2,981	8,771	33.99%	2.7	Expert

INSIGHTS:

- Population Experts:** Know that Census has a tool called “Population Clock” or “PopClock” and search for that on Google
- Population Novices:** Don’t know the lingo so they use search phrases like “how many people live in the US” or “population of usa”

Future ACTIONS:

- Add, then analyze, some of these “novice” search phrases to the Population Clock webpage and easier population tools
- Add familiar and expert phrases to the population landing pages and tables



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