Federal GIS Conference

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Esri Global Demographic and Lifestyle Data

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Agenda

- Introduction to Living Atlas
- Four Types of Data Classification
- U.S. Demographic Data
 - Next Generation of Tapestry Segmentation
- Global Demographic Data
- How is Demographic data served?
- Department of HHS
- Summary



Living Atlas

ArcGIS includes a Living Atlas of the World

Maps and Layers from Esri and Thousands of Contributors



Collection is Growing and Changing on a Daily Basis

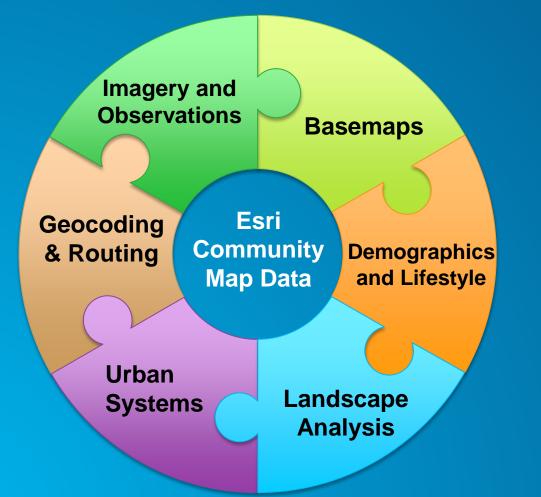
Curated Content for Many Topics



. . . Providing a Foundation for Your Work

Esri Content Portfolio within Living Atlas

Content is organized into set of themes, using Esri & Community Data





Classifications of Demographic Data

Four Classifications of Esri Demographics



Demographics









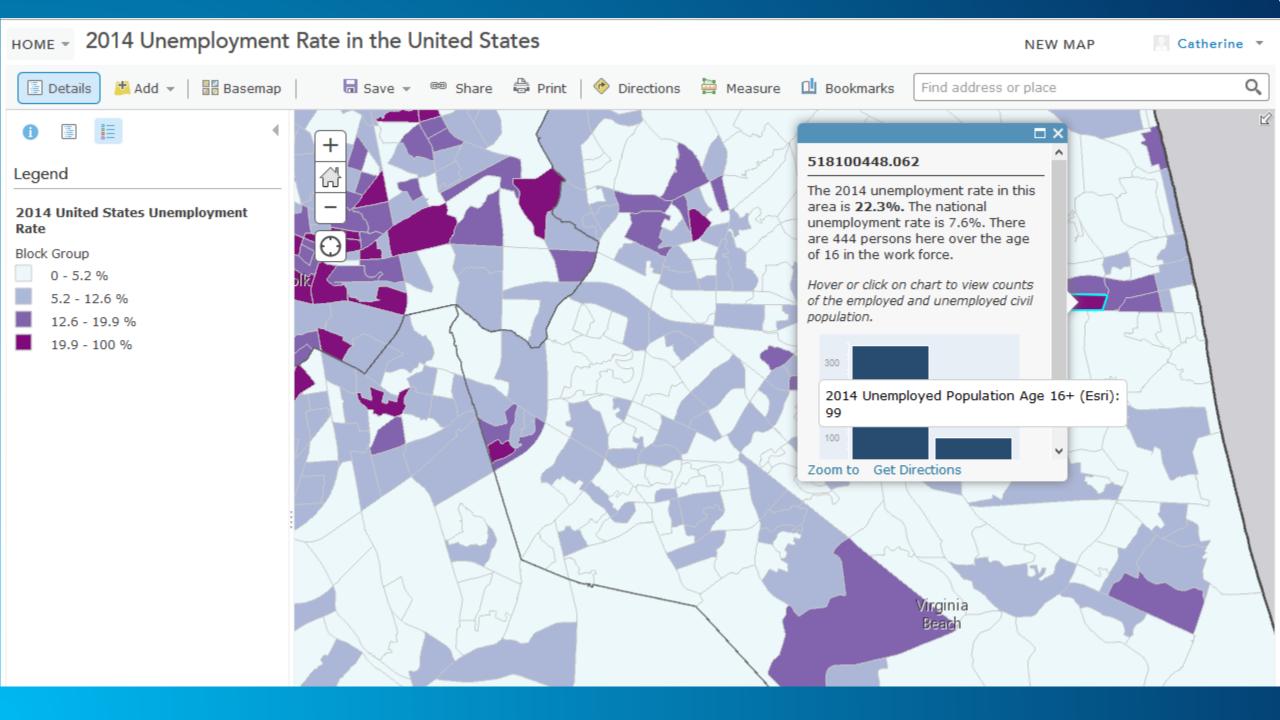
Population Educational Attainment School Enrollment Marital Status Veteran Status Age and Sex Labor Force Language Household Size Home Value **Owner/Renter** Housing Costs



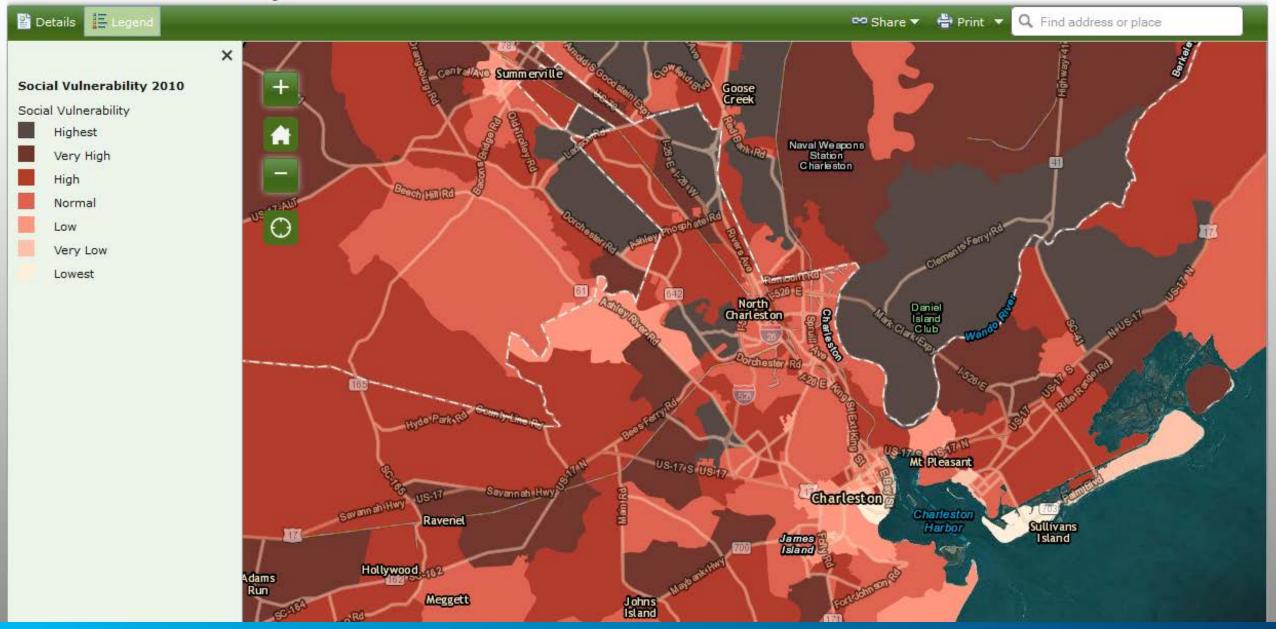
Households Race and Ethnicity Industry and Occupation Living Arrangements Income Poverty Net Worth Housing Ancestry Religion Journey to Work Daytime Population







Social Vulnerability



Spending







- Dining Out
- Automobiles
- Media Habits
- Home Improvement
- Psychographics
- Advertising
- Electronics
- Internet
- Pets





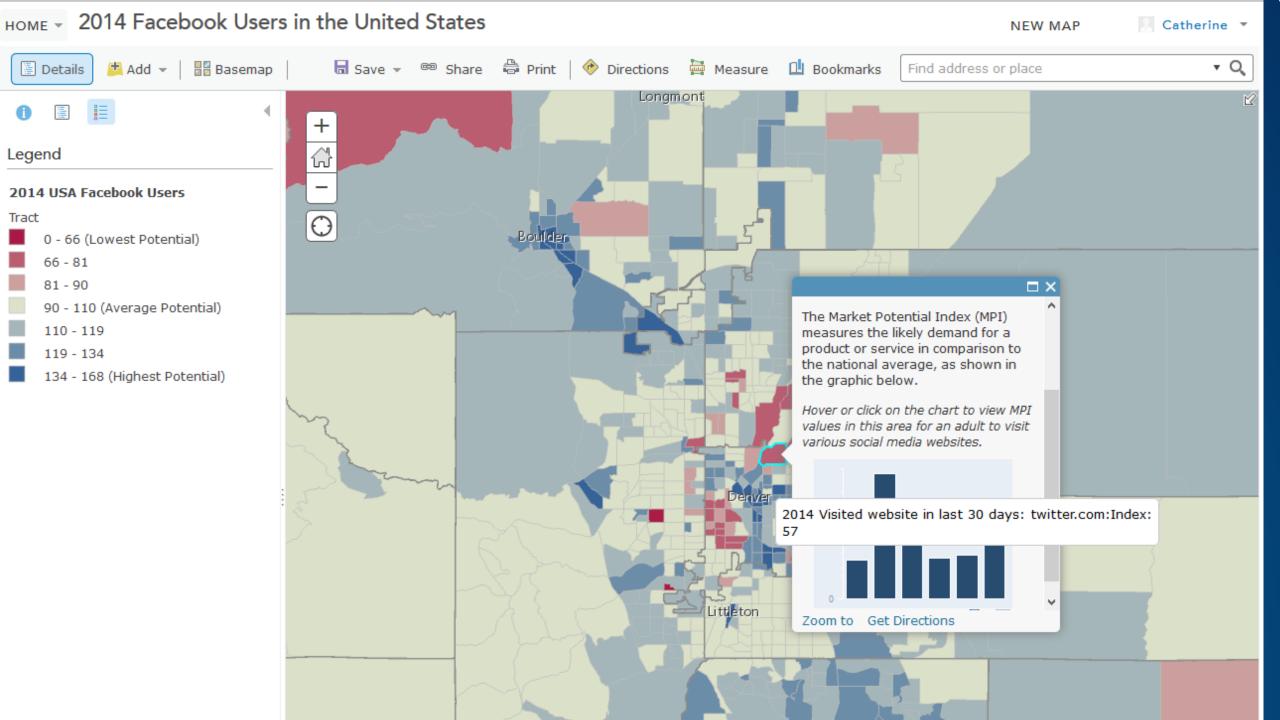


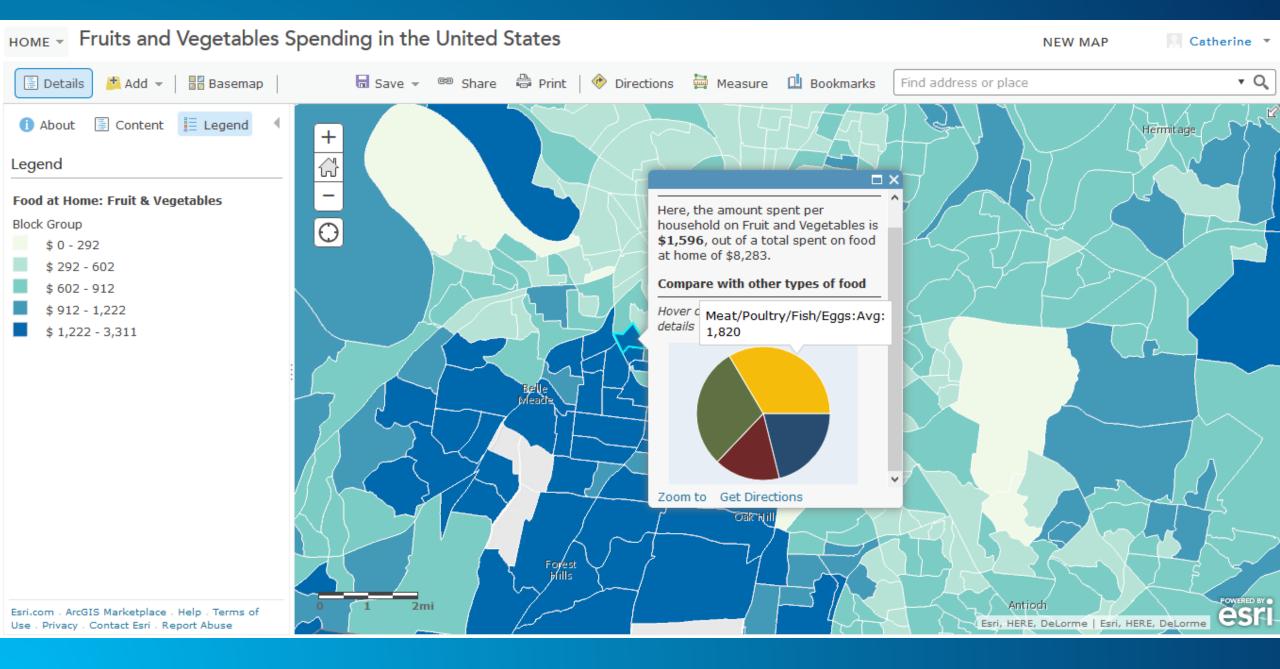
- Food
- Clothing
- Housing
- Transportation
- Health
- Insurance
- Education
- Travel
- Recreation





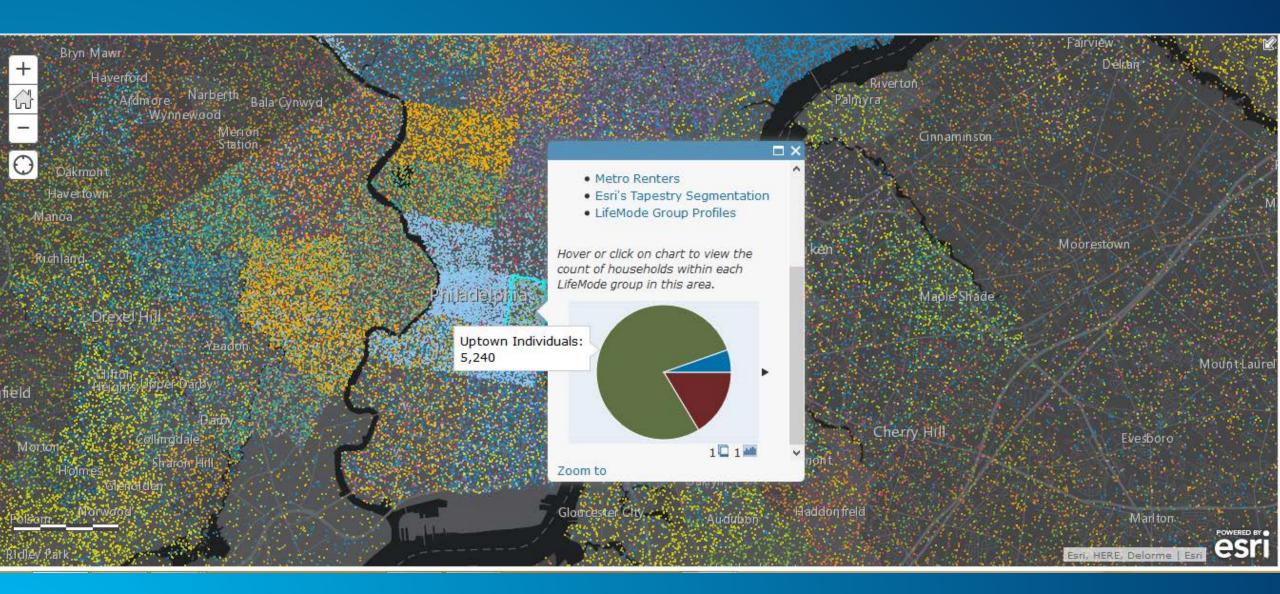






Lifestyle Data

WHO are my targets?
WHAT are they buying?
WHERE do I find more like them?
HOW do I reach them?



Business Data

- Business Locations
- Sales Volumes
- Employee Count
- Square Footage
- Industry Classifications

	7	
		/

- Banking
- Traffic Counts
- Shopping Centers
- Crime
- Supply and Demand









Celebrating a World of Cheese

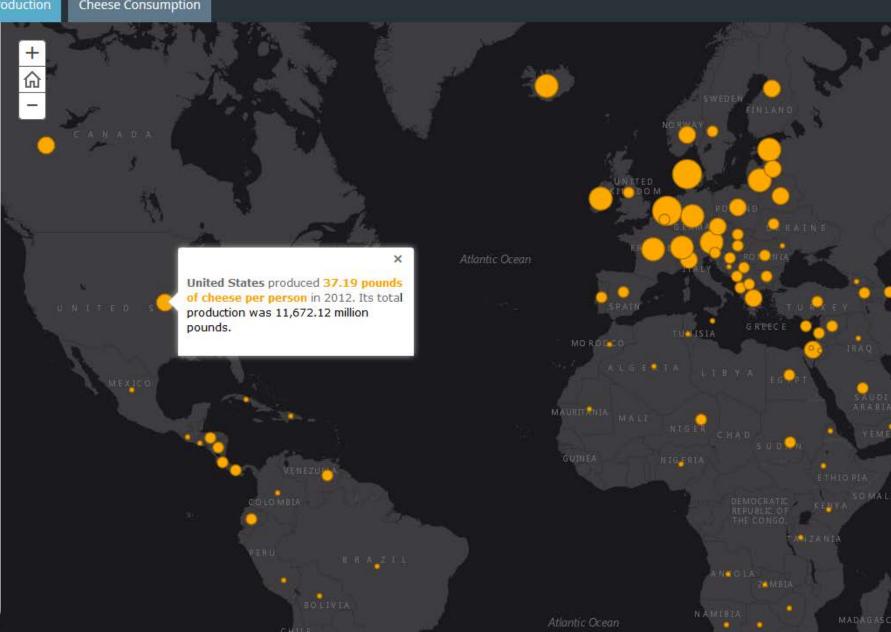


10 Interd States

The United States leads the world in cheese production, cranking out 11.7 billion pounds per year. Germany is the runner up with 4.6 billion tons. On a per capita basis, New Zealand tops the list, producing 137 pounds per person.

Annual per capita cheese production in 2012 by country

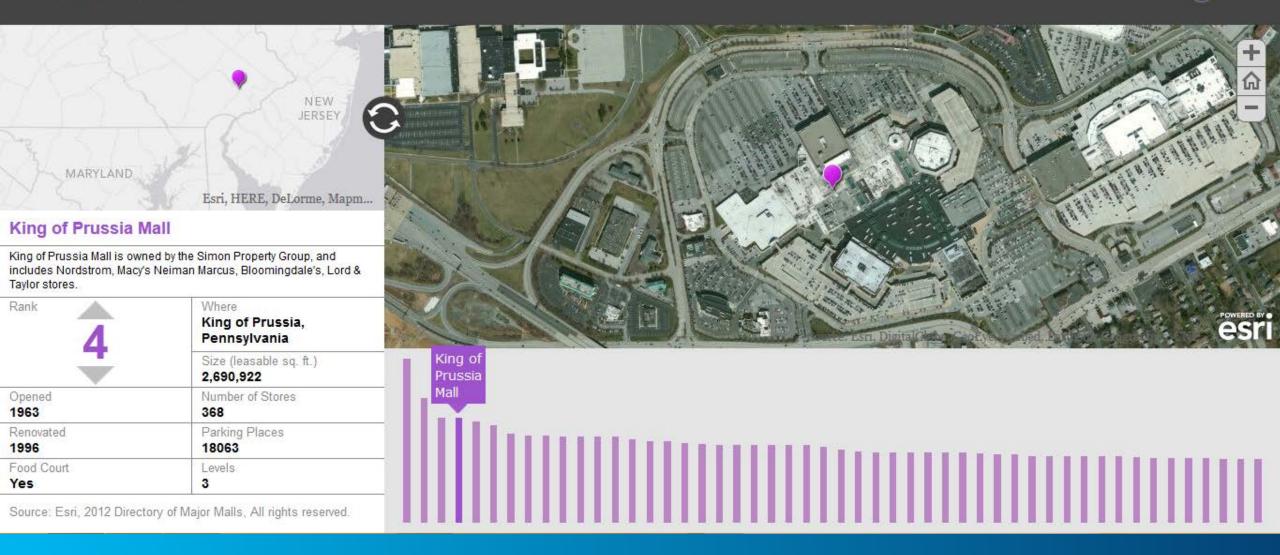




A story map 🖪 🎔 🖉 🍈 esri

Fifty Largest Shopping Malls in the United States

Although layouts vary, big shopping malls typically feature a central pedestrian spine connecting three or more "anchor" stores. The combined retail area of these fifty malls totals more than three and a half square miles.



A story map 🧃 🗾

esri

Esri U.S. Demographic and Lifestyle Data

Esri U.S. Demographics

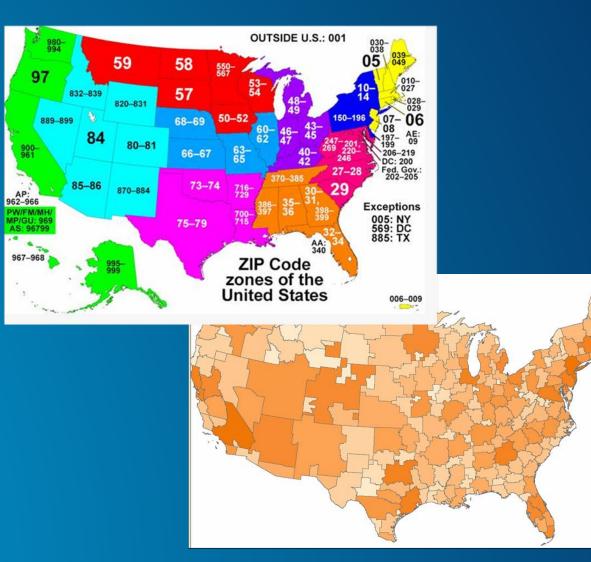
- Updated Demographics
- Tapestry Segmentation
- Census
- ACS Data
- Retail MarketPlace
- Business Locations
- Business Summary

- Consumer Spending
- Market Potential Data
- Traffic Counts
- Major Shopping Centers
- Bank Branches
- Banking Potential
- Crime Indexes



Esri U.S. Data Geographic Levels

- Census Geography
 - Block Group
 - Tract
 - County
 - State
 - US
- Census Correspondence
 - CBSA
 - DMA
 - Place
 - County Subdivisions
- Postal Geography
 - ZIP Code
- Congressional Districts



Esri U.S. Demographic Data



2014/2019 Updated Demographics

Population and Housing Age by Sex **Race and Hispanic Origin** Education Marital Status Age by Sex by Race Labor Force Income Home Value **Disposable Income** Net Worth

Population Age by Sex Race and Hispanic Origin Household Size Households by Type Tenure

Census 2010

Language Spoken at Home Veteran Status Journey to Work Poverty **Military Service** Mortgage Status Rent Vehicles Available Units in Structure Year Structure Built

ACS

New with 2008-2012 ACS

Food Stamps/SNAP Disability Health Insurance Coverage by Age

Esri U.S. Spending Data



		Spending Potential	Average Amount	
Consumer Spending		Index	Spent	Total
	Apparel and Services	138	\$3,203.41	\$11,399,276
	Men's	132	\$585.27	\$2,082,677
	Women's	126	\$1,015.94	\$3,615,192

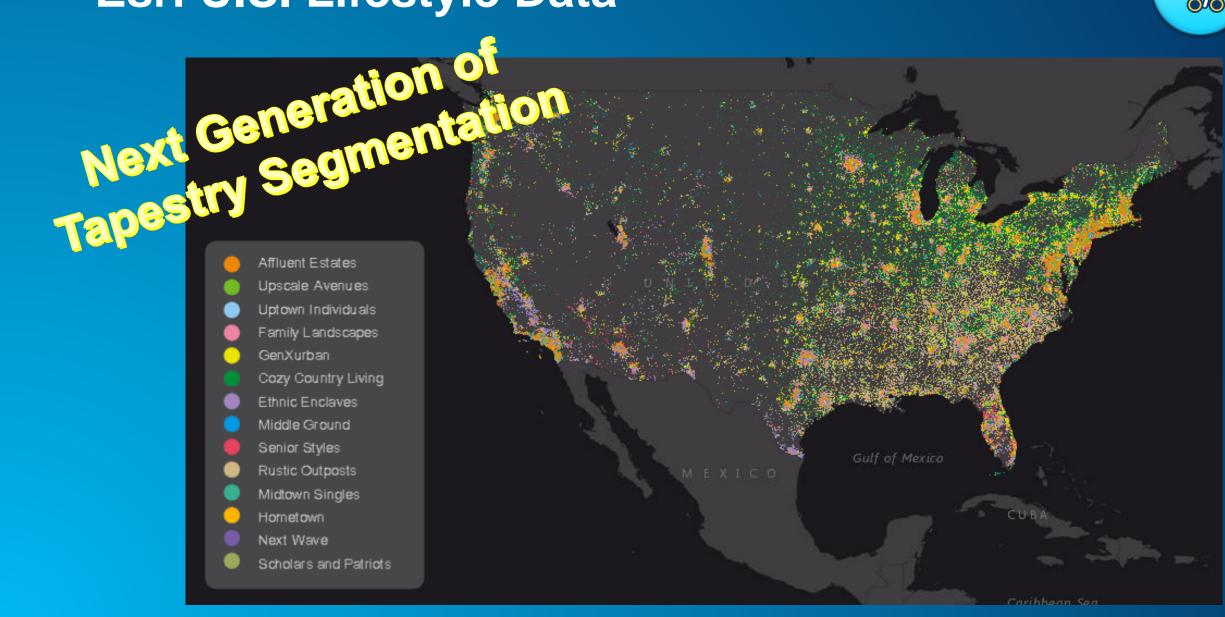
Market Potential	Product/Consumer Behavior	Expected Number Adults/HHs	Percent of Adults/HHs	MPI
	Apparel (Adults)			
	Bought any men's apparel in last 12 months	3,749	50.6%	102
	Bought any women's apparel in last 12 months	3,700	50.0%	110

Retail MarketPlace	Industry Group	NAICS	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage/Surplus Factor	Number of Businesses
WarkerPlace	Clothing & Clothing Accessories Stores	448	\$8,798,820	\$1,407,558	\$7,391,262	72.4	5

Esri U.S. Lifestyle Data







Tapestry Segmentation



	Beth Wright	Amy Smith
Median Age	36.7	37.0
Median Household Income	\$86,900	\$100,100
Tapestry Segment	Soccer Moms	Laptops and Lattes



Beth Wright



Amy Smith

Two working parents with children living in the suburbs	Single and partial to city living
Well connected for convenience	Use iPads to stay connected
Spend money on family-oriented purchases like children's apparel and toys, visits to theme parks or zoos.	Spend money on expensive clothes, dining out, travel, spa treatments and lattes.
Like their gardens and own the tools for minor upkeep like riding mowers.	Renters who are more interested in the stock market than the housing market.
Most households own at least 2 vehicles	Walk, bike or use public transportation

Now I Can Find Them...



Why did we update Tapestry Segmentation?

- New housing patterns less dense suburban developments
- Effects of the Recession
 - Reduced income and asset levels
 - Lower home values
 - More subdued growth
- Increasing diversity of the population
- Steady shift in household type away from traditional families
- Aging of the population
 - Small households
 - Millennials moving out

The U.S. Census is collected and released every 10 years. Just as this database is reset, Tapestry must be reset to reflect the same changes in demography and geography.



LifeMode Group: GenXurban **Rustbelt Traditions**

Household: 2,685,000

Average Household Size: 2.46 Median Age: 31.6

Median Household Income: \$49.109

WHO ARE WE?

entertainment a

Rustbelt Traditions are aptly named. Most residents are still living in the same cities in which they grew up, although there are some expatriates that have retired to warmer climates. They do not follow fads or pursue the latest and greatest in product innovations. Although they tend to stick with what they know, they have adapted to

AGE BY SEX

I Indicates US

85+1 80-147 70-74 85-49 80-44 85-59 80-44 85-59 80-54 80-44 85-59 80-54 80-55

10%

Male

Median Age: 31.6 US: 37.6

OUR NEIGHBORHOOD

• Dominant household type: married couples (Index 95), with a slightly higher proportion of single person households (Index 105) that reflects the aging of the population Household size lower at 2.46 (Index 95) Housing units are primarily single family

LABOR FORCE

- Education: 68.3% with high school diploma or some college
 - Unemployment rate lower at 7.8% (Index 90)
 - Labor force participation rate, 67% (Index 103), with more dual earner



RACE & ETHNICITY

The Diversity Index summarizes racial and ethnic diversity. The index shows the likelihood that two persons, chosen at random from the same area, belong to different race or ethnic groups. The index ranges from 0 (no diversity) to 100 (complete diversity) Diversity Index: 44.2 US: 62.1

* Nispanic can be of any race.

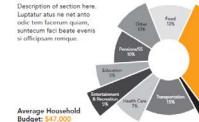
Housing 33%

60% 80%

IS Average



AVERAGE HOUSEHOLD BUDGET



INCOME AND NET WORTH

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TAPESTRY SEGMENTATION

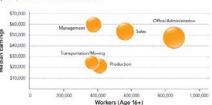
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Median Household Income \$49100



OCCUPATION BY EARNINGS

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LifeMode Group: GenXurban Rustbelt Traditions

WHAT ARE MARKET CHARACTERISTICS?

- · Purchased a used or new domestic vehicle in past year
- Own 4+ TVs, including Internet connectivity
- · Use Internet for chat rooms, gaming, Facebook and some online banking
- · Investments more conservative, savings accounts or bonds
- · Home remodeling and gardening are priorities
- · Partial to traditional media, magazines, newspapers and radio
- · Family oriented consumers that value time spent at home
- · Budget aware shoppers that opt for comfort, brand loyalty—and buying American
- · Digitally aware, but not wholly comfortable with the latest in tech-nology

POPULATION CHARACTERISTICS

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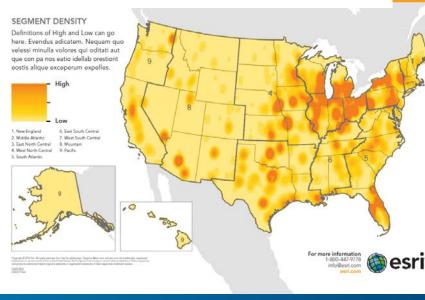


TAPESTRY SEGMENTATION

ESRI INDEXES

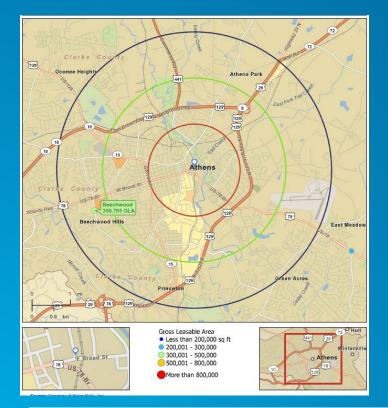
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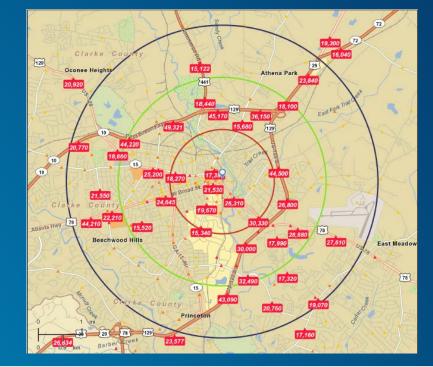




HOUSING

Esri U.S. Business Data





	Busine	Businesses		yees
by SIC Codes	Number	Number Percent		Percent
Agriculture & Mining	8	1.0%	34	0.4%
Construction	32	3.8%	192	2.1%
Manufacturing	19	2.3%	225	2.4%
Transportation	14	1.7%	71	0.8%
Communication	7	0.8%	38	0.4%
Utility	2	0.2%	32	0.3%
Wholesale Trade	18	2.1%	108	1.2%

NAICS		Franchise	Distance From	Employees		Sales (\$000)	
Code	Business Name	Code	Site in Miles	Number	Percent	Number	Percent
511110	FLAGPOLE INC	n/a	0.02 SE	10	0.0%	520	0.0%
	112 Foundry St Ste A						
	ATHENS, GA 30601						
111998	FARMERS EXCHANGE	n/a	0.03 SW	1	0.0%	63	0.0%
	580 E Broad St APT 305						
	ATHENS, GA 30601						



Esri International Demographic and Lifestyle Data

Coverage



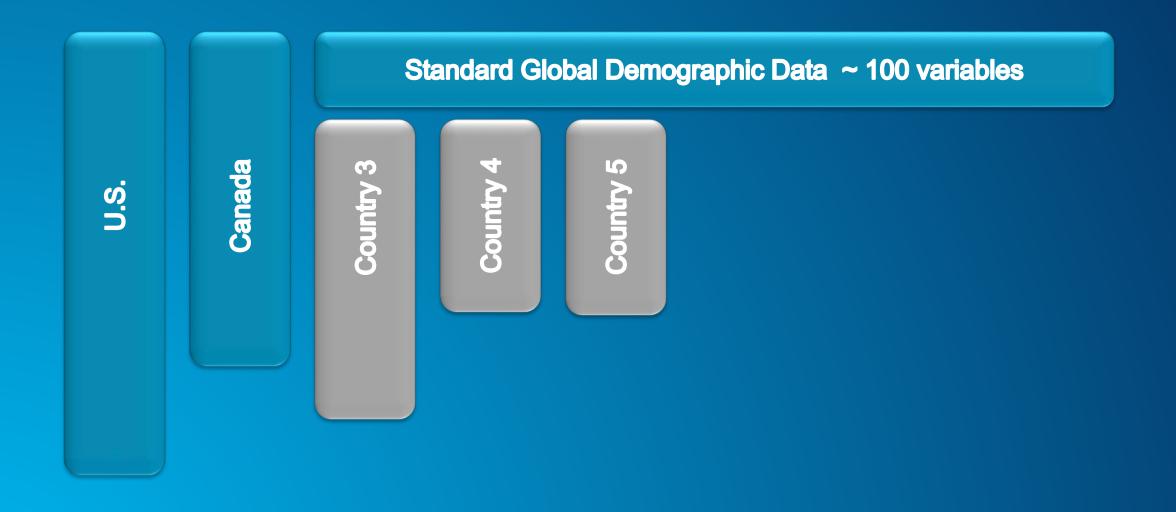
http://links.esri.com/demographics-global-coverage



Esri Standard International Demographic Data

- Around 100 variables per country
 - Population
 - Average Household Size
 - Total Households
 - Purchasing Power
 - Age (15-Year Age Groups)
 - Gender
 - Income
 - Household Type
 - Marital Status
 - Education

- Spending on food, household, clothing, medical, recreation, more



Strategy

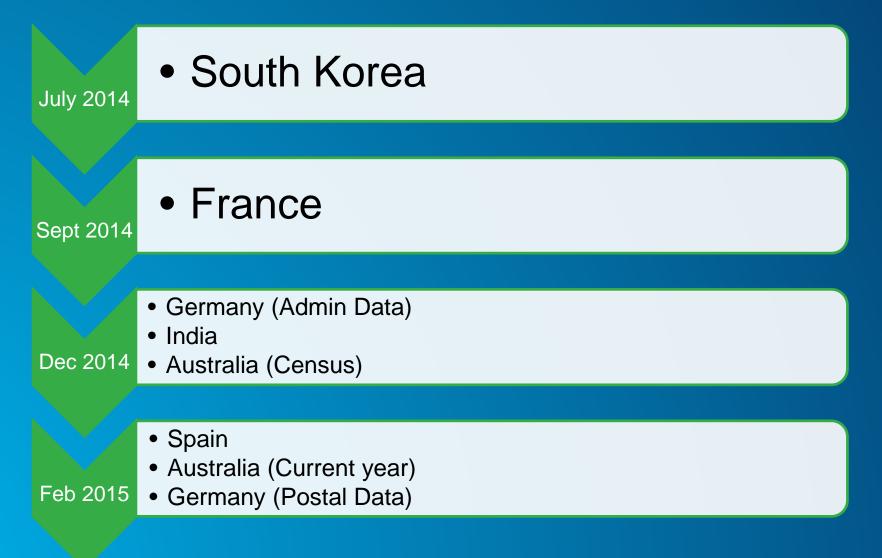
Increase Coverage & Depth

One Global Content team

Working with our distributors for content

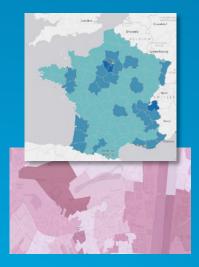
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Detailed International Data

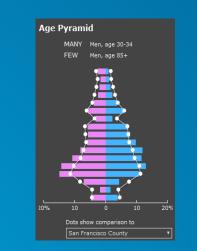


How to Access Esri Demographic and Lifestyle Data

Esri Demographic and Lifestyle Data Accessible in Four Ways



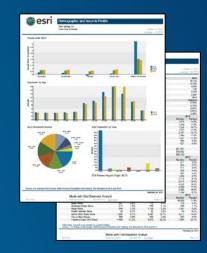
Maps







Geographic Data Enrichment

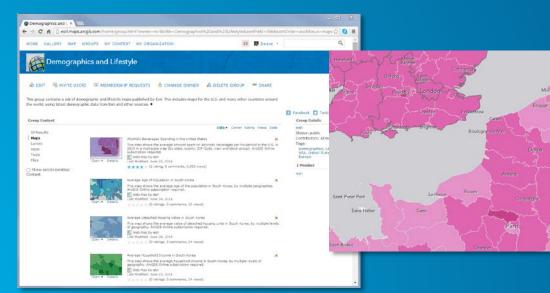


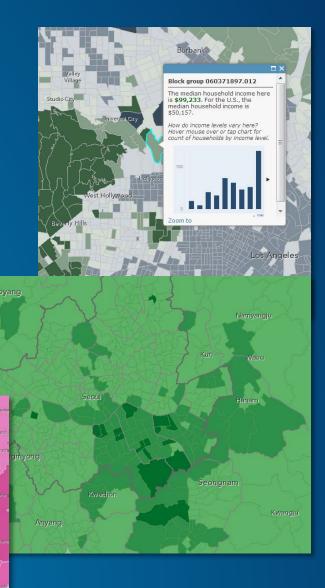
Reports

Demographic Maps

Collection of Ready-to-use Maps and Layers

- Data for Multiple Themes
 - Demographics, Lifestyle, Spending, Business
- Include Popups
- Configurable: customize symbols or popups
- Access via "Demographics and Lifestyle" Group





Infographics



New style of reporting

Ready to use

- Age
- Average Household Size
- Household Income
- Housing Units by Occupancy
- Dominant Tapestry

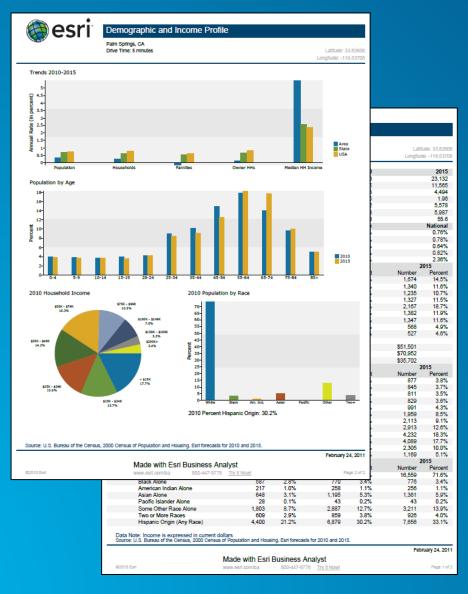
Dynamic and Interactive

Geographic Data Enrichment

- Add new columns of information to your data
- Configurable



Reports



 Pre-formatted PDF and XLS Demographic and **Income Profile** Market Profile ACS Reports Census 2010 Reports

Demo



United States Department of

Health & Human Services Office of the Assistant Secretary for Preparedness and Response



Situational Awareness in Event Response

How HHS uses situational awareness to make informed decisions about planning, response and recovery needs prior to deploying staff and resources



United States Department of

Health & Human Services Office of the Assistant Secretary for Preparedness and Response



Community Analyst in Action





Demographic Report



- Reports key demographic characteristics for affected communities
- Data sources
 - Community Analyst



- American Community Survey (ACS)
- Census
- Behavioral Risk Factor Surveillance System (BRFSS)



Demographic Report



- Reports key demographic characteristics for affected communities
- Data sources
 - Community Analyst
 - American Community Survey (ACS)
 - Census
 - Behavioral Risk Factor Surveillance System (BRFSS)

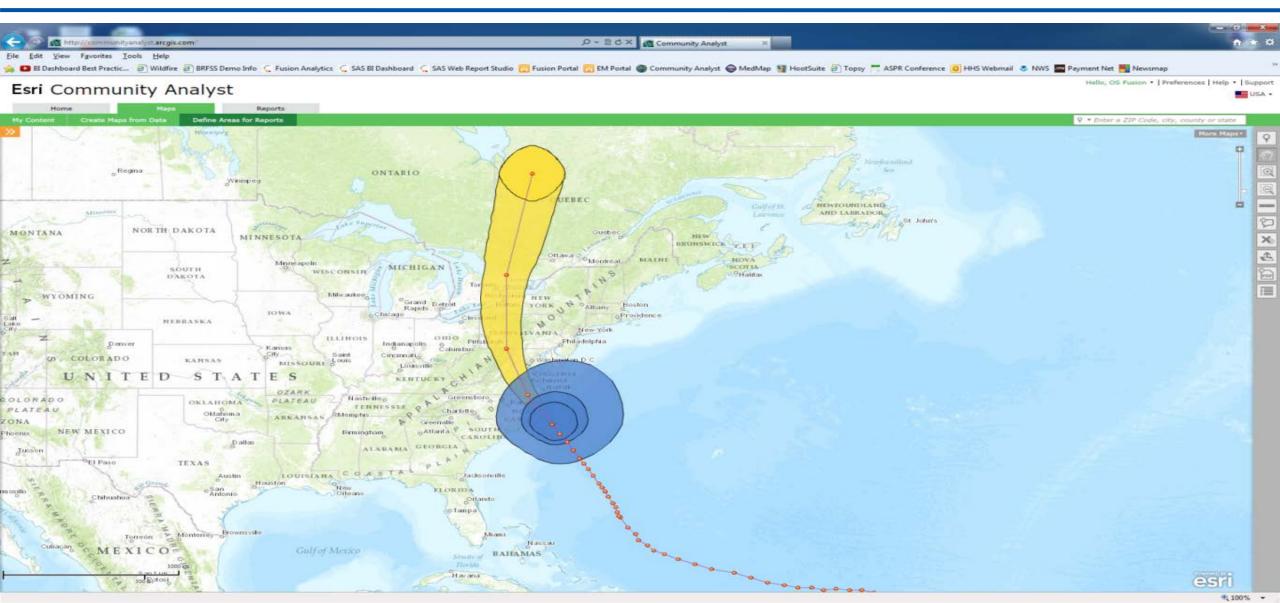






The storm approaches...







Select Area of Interest



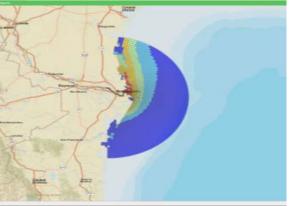
Utilization of Web Maps



HAZUS outputs



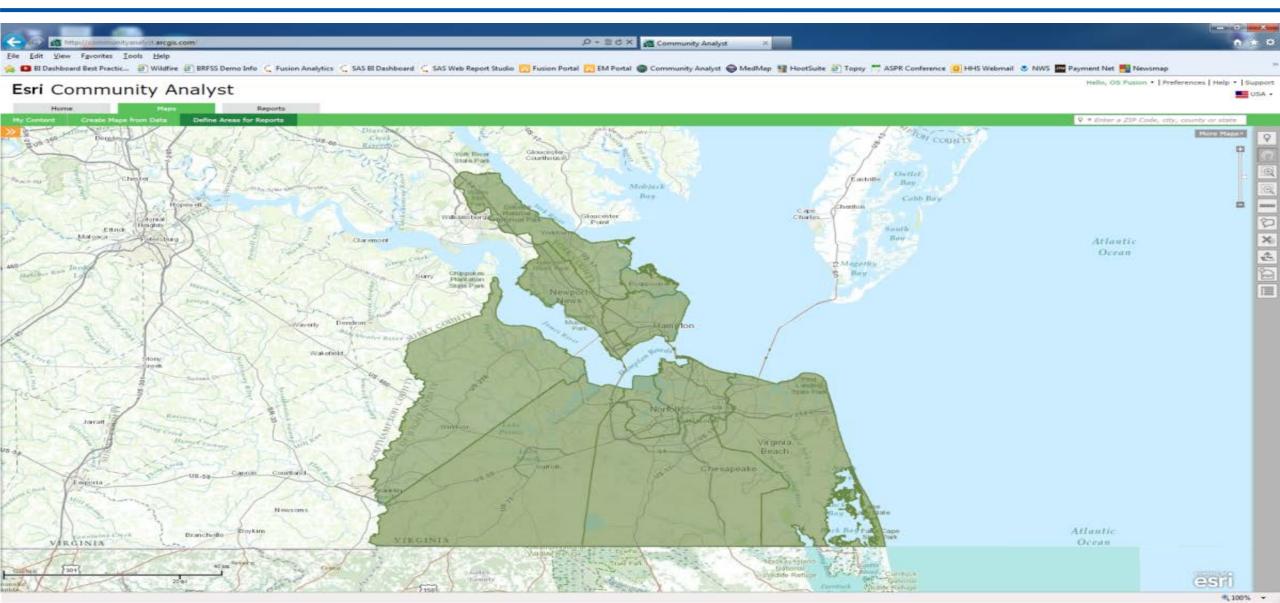
SLOSH outputs





Select Area of Interest







Select Area of Interest



My Site Library



Past Responses





Identify Variables of Interest



- Standard Demographic Report
 - Age
 - <18
 - >=65
 - Gender
 - Race/Ethnicity
 - Households with income below poverty level
 - Households with no vehicles available
 - Insurance status
 - Pet Ownership
 - Home heating fuel type
 - Total Population

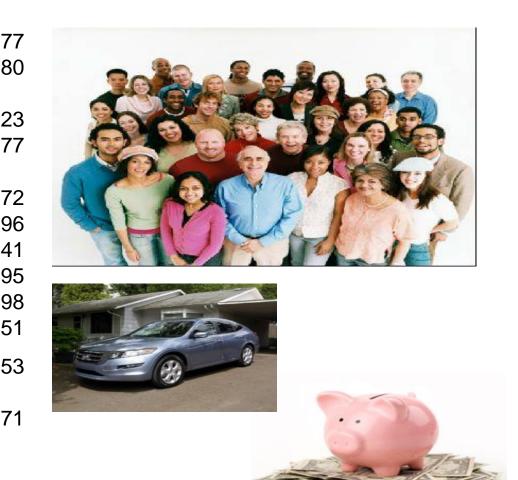
Information from other sources Language Health information



Sample Demographic Report Output



	Frequency	Proportion
Age		
<18	351,6	98 22.7
>=65	166,9	16 10.8
Total Population	1,544,9	06
Male	760,6	12 49.2
Female	784,2	94 50.7
Race/Ethnicity		
White	876,2	37 56.7
Black/African American	509,2	67 32.9
American Indian/Alaska Native	6,2	69 0.4
Asian	61,0	84 3.9
Other	30,6	42 1.9
Hispanic Population	100,5	93 6.5
Households without vehicles available	8,5	46 1.5
Households with income below poverty level	60,0	23 10.7





Sample Demographic Report Output



	Frequency	Proportion	
Pet Ownership		-	
Any pet	303,28	5 52.72	10 0
Dog	222,37	38.66	
Cat	126,13	5 21.93	
Bird	15,03	7 2.61	
Medical Insurance			
Any medical insurance covering you and other household members	459,70	5 38.96	medicare
Medicaid	50,74	8 4.30	
Medicare	110,70	3 9.38	Medicaid
Home Heating Fuel Type			Medicald
Utility Gas	230,98	7 41.22	
Bottled/Tank/LP Gas	9,18	7 1.64	
Electricity	290,25	3 51.80	
Fuel Oil/Kerosene/etc.	23,93	1 4.27	
Coal/Coke	3	9 0.01	
Wood	2,76	0.49	
Solar Energy	1	9 0.00	Sector Sector
Other	1,47	3 0.26	



Sample Demographic Report



- Compare information to other US geographies
 - Zip
 - County
 - State
 - Country



• Do differences matter?





- Don't make assumptions on what leadership might want to know
- "Leaning Forward" is not easy to do without making assumptions
- Determine the language that is needed for public messaging and communication – this may not be what you think
- Even if an event is similar in type the frequency of product needs can be significantly different
- All data needs to be vetted before it can be incorporated into the decision process, however not all vetting is the done in the same way depending on the data source



Demographic Report Supplement: Language Spoken



Language Information	Frequency	Proportion
Only Speak English	1,291,674	91.3
Additional Languages Spoken		
Spanish	53,202	3.8
Tagalog	17,922	1.3
French	6,302	0.4
German	5,671	0.4
Korean	4,141	0.3
Chinese	3,984	0.3
Vietnamese	3,658	0.3
African languages	3,380	0.2
Italian	2,669	0.2
Russian	2,340	0.2
Arabic	2,208	0.2



Behavioral Risk Factor Surveillance System Data



2011-2012 BRFSS Data

LOCATION: Anchorage, AK Metropolitan Statistical Area

Included in this area: Anchorage Municipality, AK*; Matanuska-Susitna Borough, AK*

Conditions	Metropolitan Statistical Area		National
-	%	95% CI*	Median %
Physician mentioned medical conditions:			
Asthma (currently)	9.3	(7.3, 11.4)	8.9
Diabetes	9.0	(6.6, 11.4)	9.7
Depression	17.5	(14.7, 20.4)	18.0
Adults limited in any activities due to physical, mental, or emotional	25.6	(22.3, 29.0)	20.1
problems Adults with health problems that requires use of special equipment	6.3	(4.7, 7.9)	8.0
No health care coverage	19.1	(16.1, 22.1)	17.1
Fair or poor health status	16.2	(13.2, 19.2)	16.9
Body Mass Index - Obese	27.4	(24.0, 30.8)	27.6

*CI = Confidence interval

City and county data (2011) available at: <u>http://apps.nccd.cdc.gov/brfss-smart/SelMMSAPrevData.asp</u> State and national data (2012) available at: <u>http://apps.nccd.cdc.gov/BRFSS/index.asp</u>



Road Ahead



- Moving to a data resource portal
 - Sharing data
 - Sharing viewers
- Integrating services from different sources to allow for value added enrichment
- Creating specialized viewers not one for all needs
- Allowing many other web pages in the HHS directory to include web maps







Mapping

- Too much data on your map can lead users astray
- Simplify the viewer's experience
- Demographic Report
 - Provide a snapshot of affected community demographics during an emergency response
 - Community Analyst facilitates timely production of report
 - Not all data comes structured and easily integrated



United States Department of

Health & Human Services

Office of the Assistant Secretary for Preparedness and Response



Thank you!

Contact Information:

Robert Shankman GISP Robert.Shankman@hhs.gov

MedMap https://gis.medmap.hhs.gov MedMap@hhs.gov

Esri Demographic Data Help Documentation

- Data browser variable lists for every data collection
- The Global Coverage Story map
- Detailed information on reports, infographics, data enrichment and web maps
- All methodology statements and white papers
- The brand new Tapestry Segment Summaries
- Essential Vocabulary and FAQ
- And more!



http://doc.arcgis.com/en/esri-demographics/

esridatainfo@esri.com



Understanding our world.