

Metro Atlanta Demographic Destiny and the future of Mobility

Mike Alexander, AICP Director

ARC Center for Livable Communities

Community
Development

Community
Partnerships

Mobility Services

Natural Resources

Research and
Analytics

Transportation
Access and Mobility



Competitive Economy



World Class Infrastructure



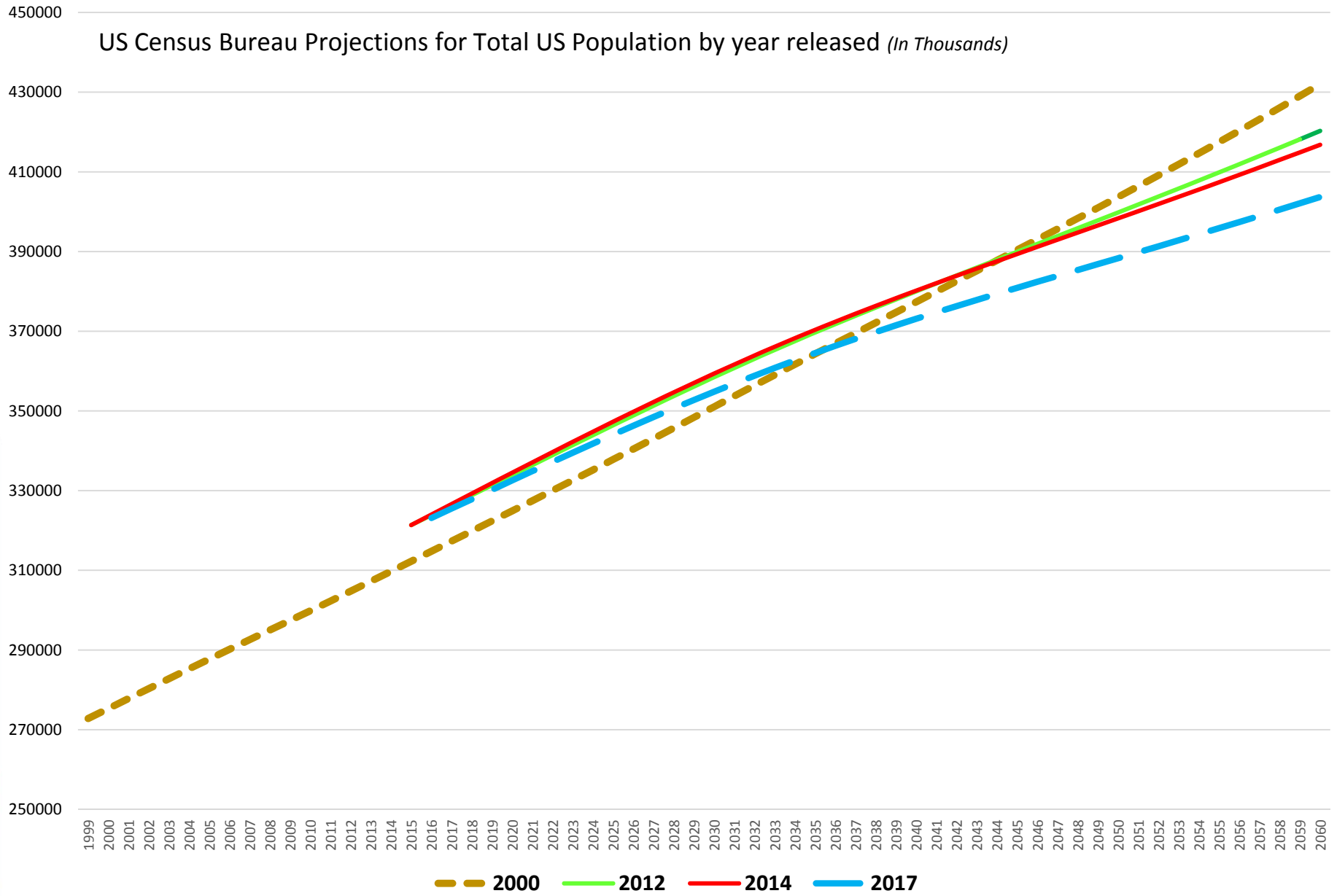
Healthy, Livable Communities

malexander@atlantaregional.org



ATLANTA REGIONAL COMMISSION
regional impact • local relevance

The Numbers keeps Getting Smaller

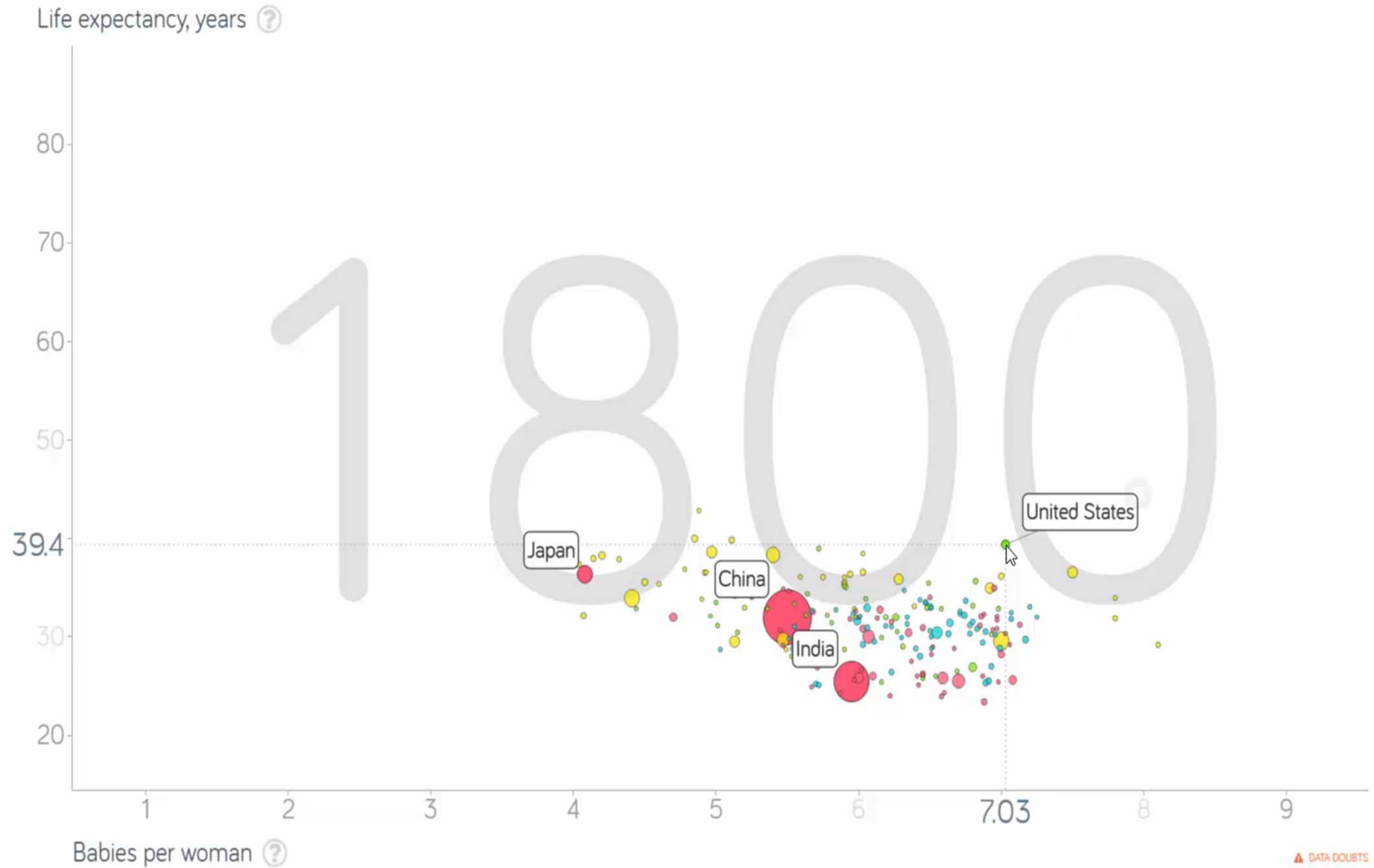


215 Years of World History in 50 Seconds

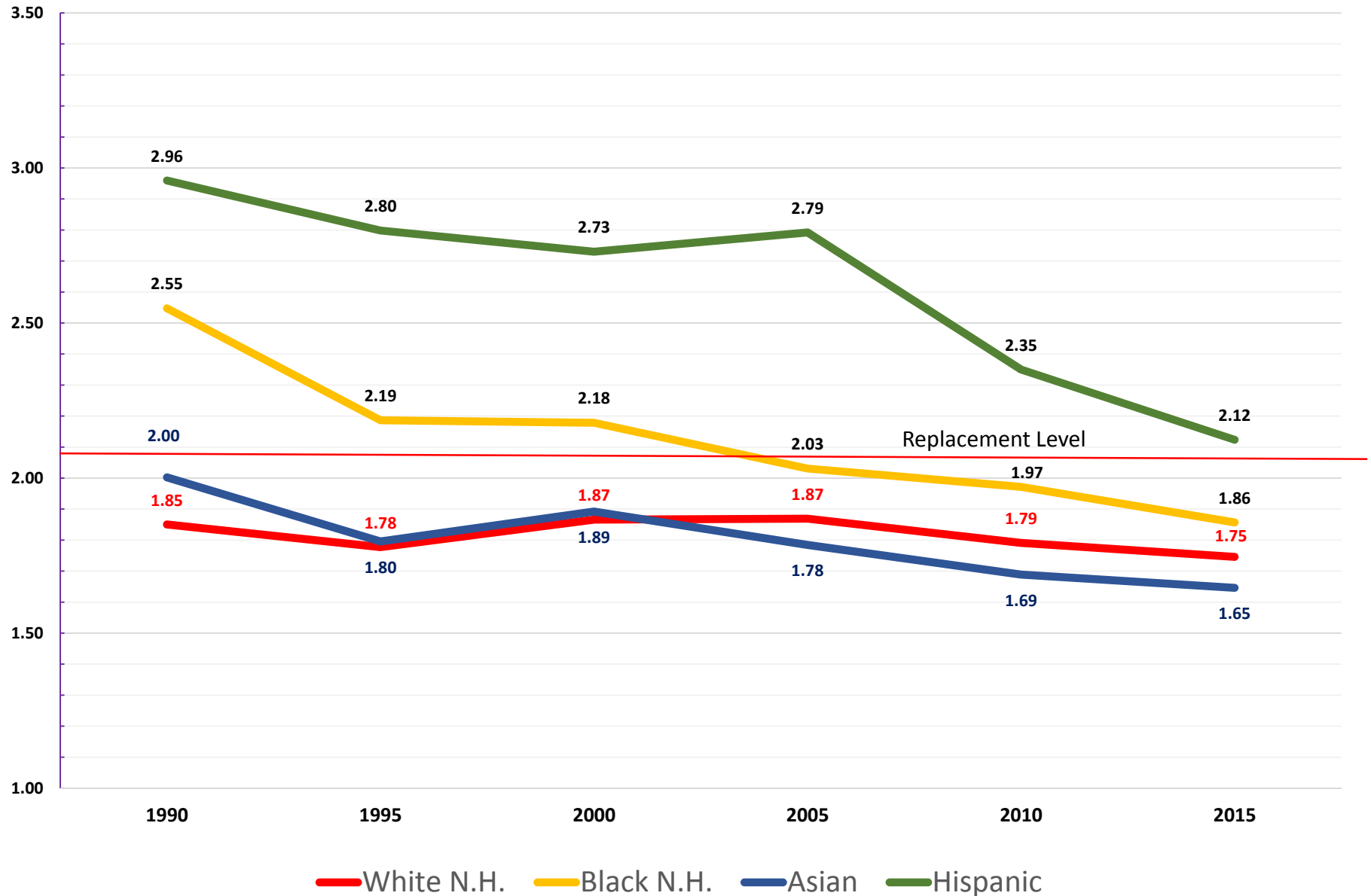
Video

www.gapminder.org

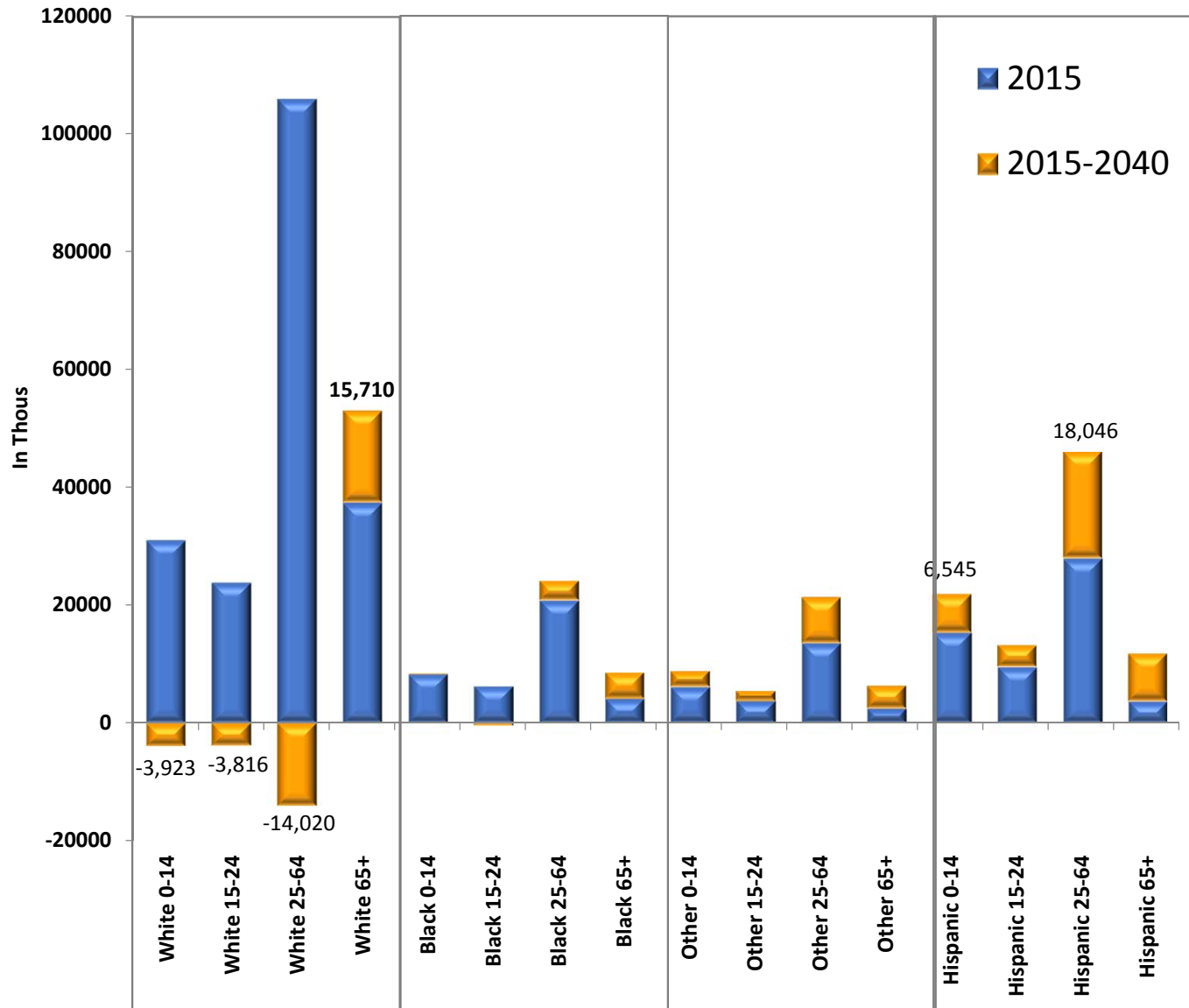
regional impact + local relevance



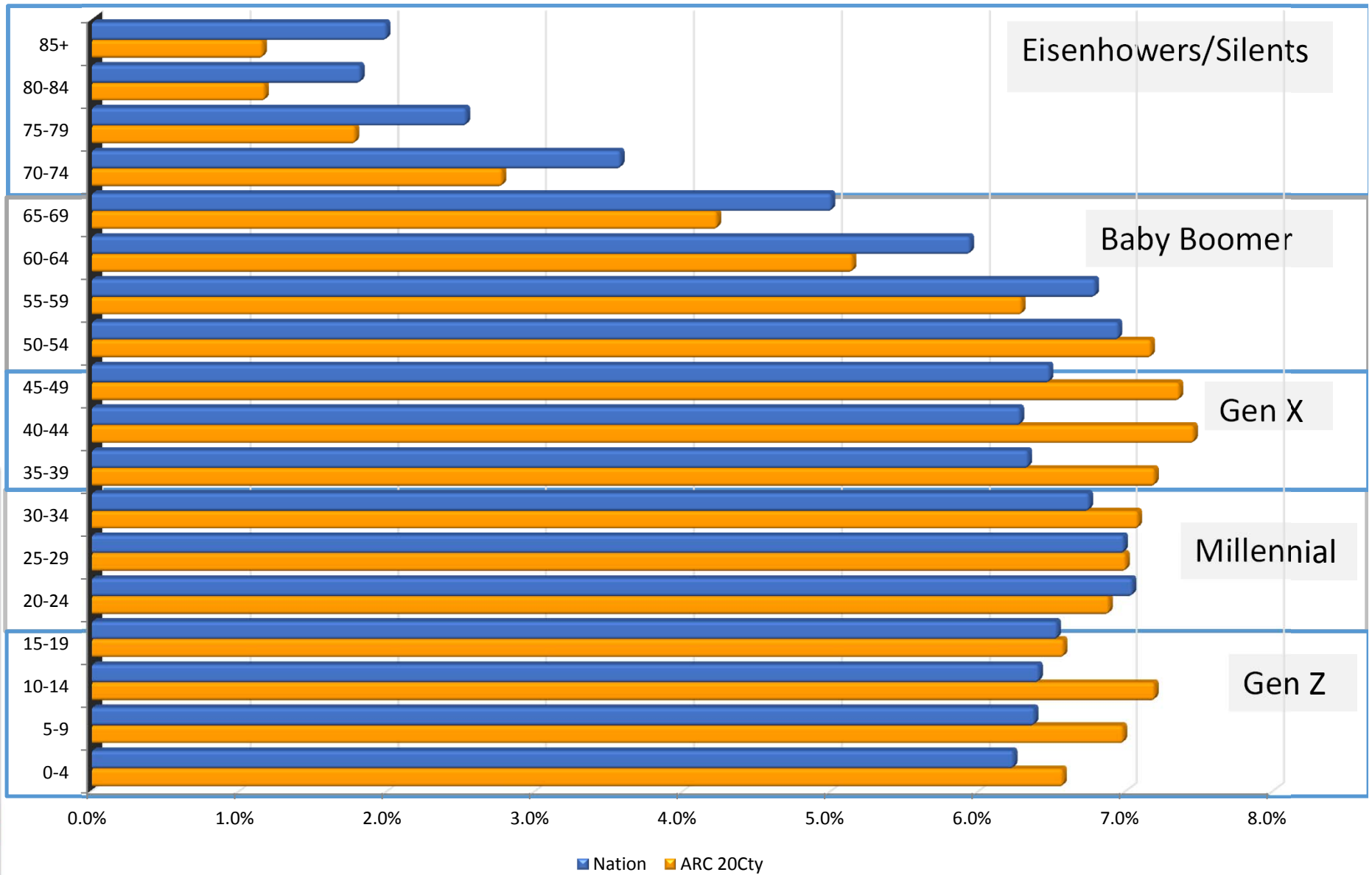
The Future: Fertility Trends



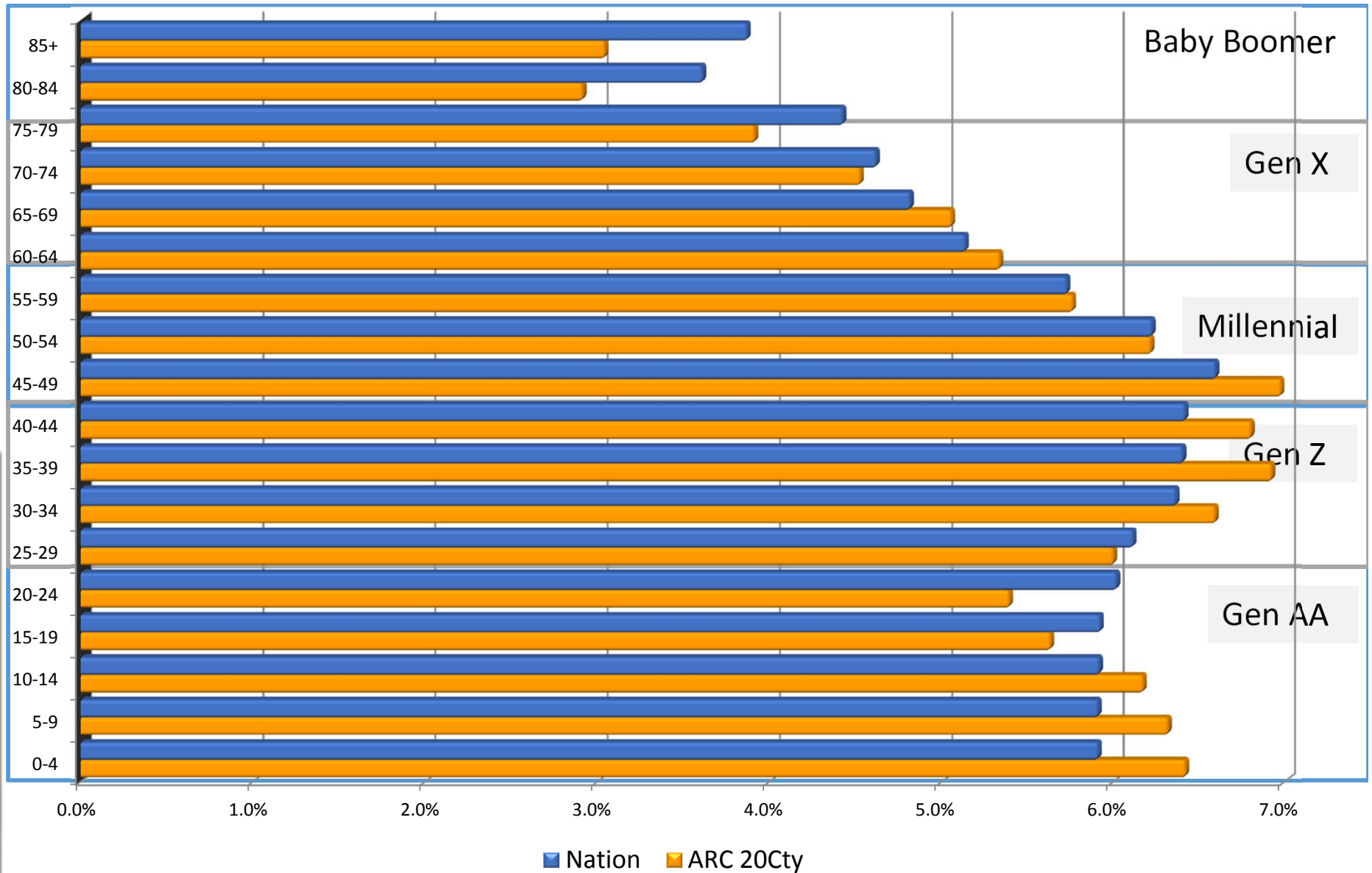
National Population Change 2015 to 2040



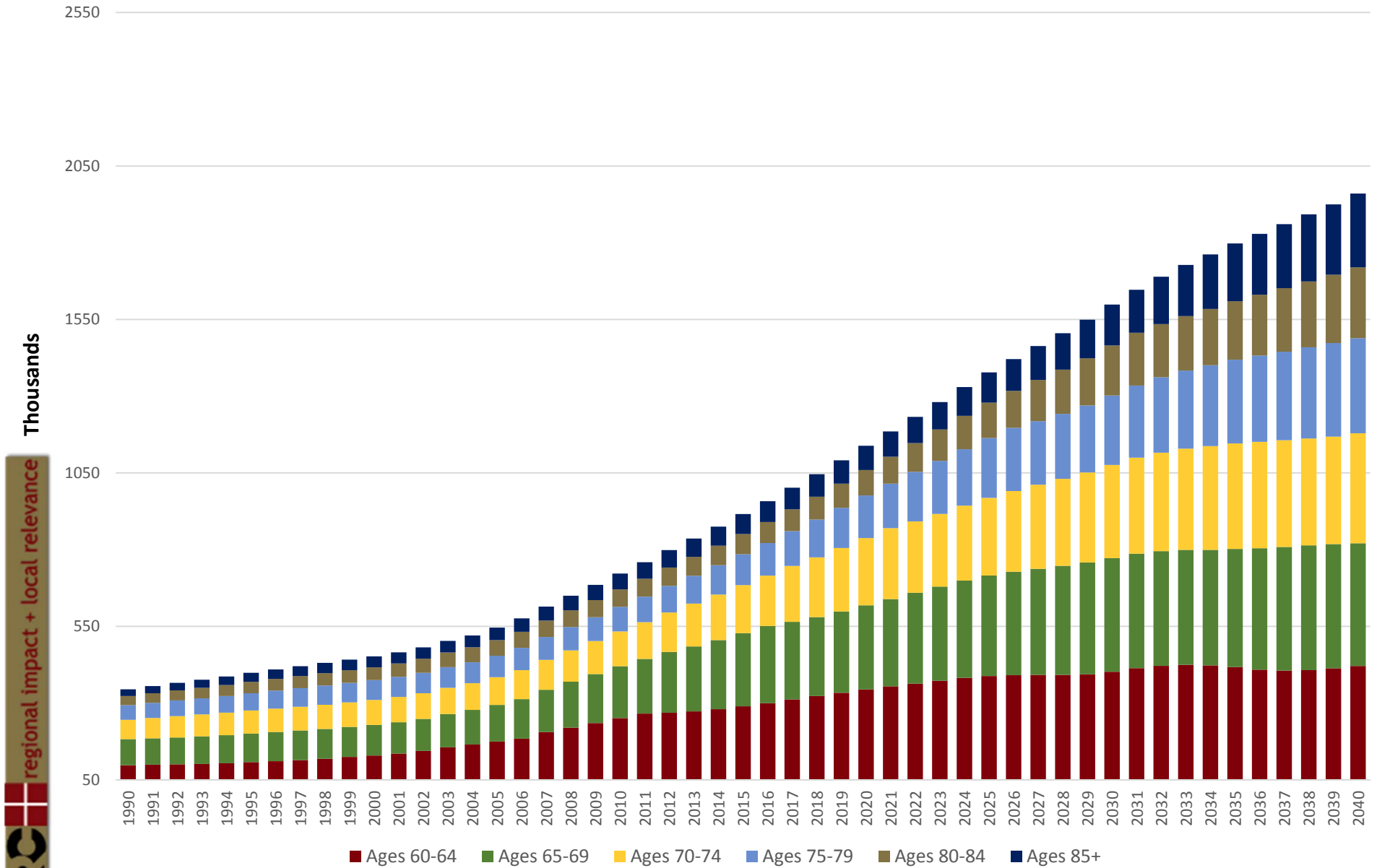
2015 Age Comparison (%of tot pop)



2040 Age Comparison (% of tot pop)

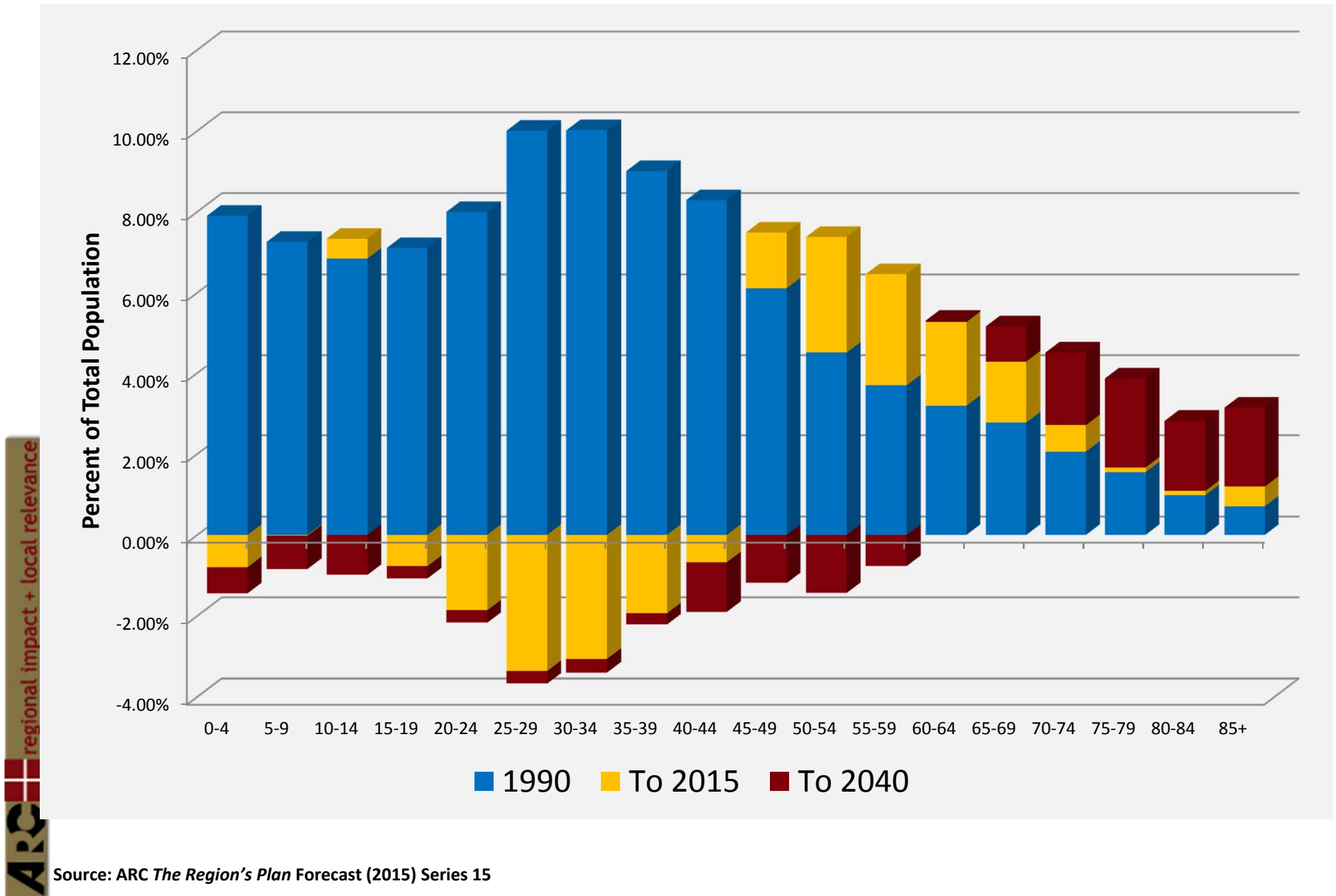


Aging Forecasts

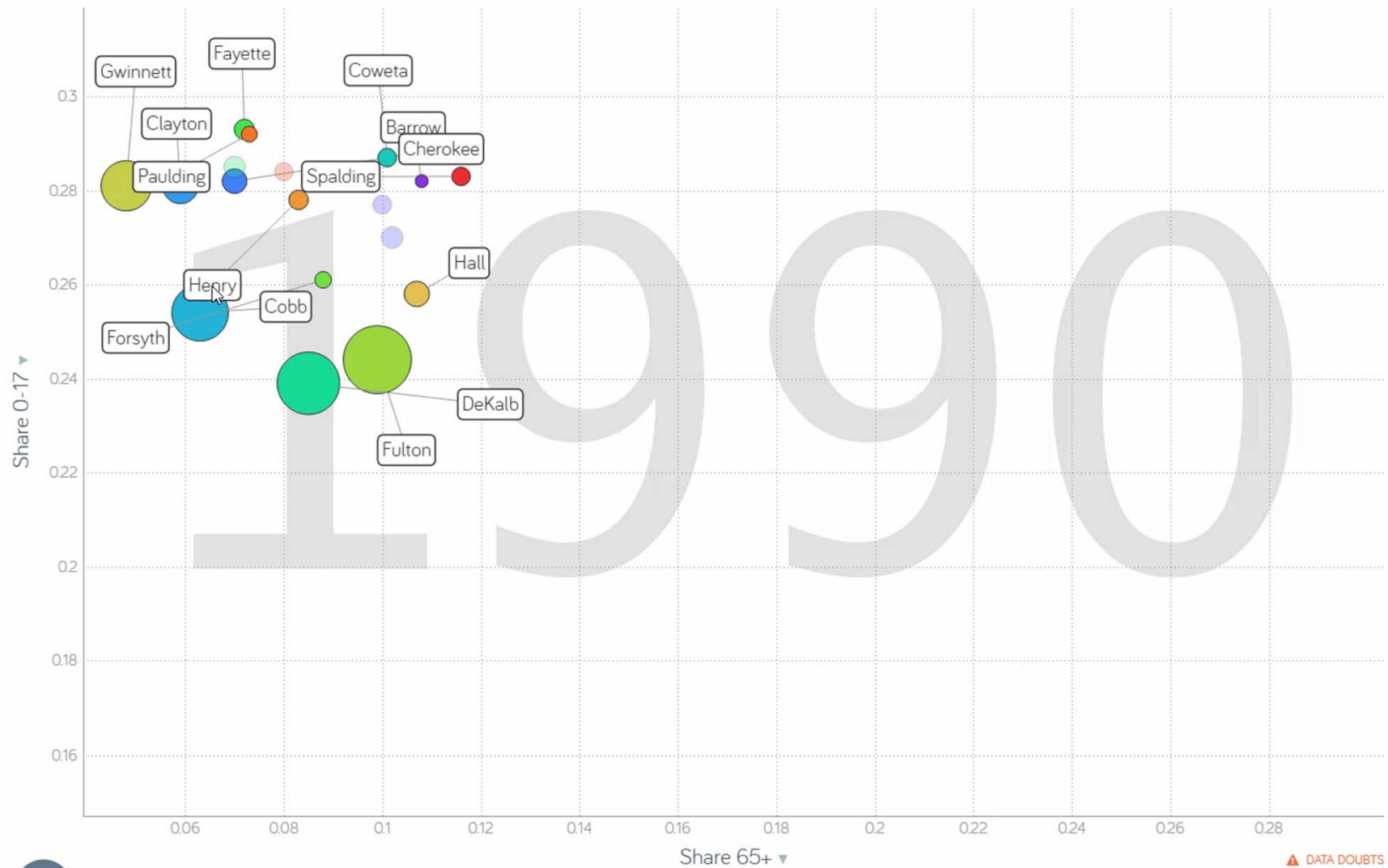


Source: ARC *The Region's Plan Forecast (2015) Series 15*

Age Composition Change

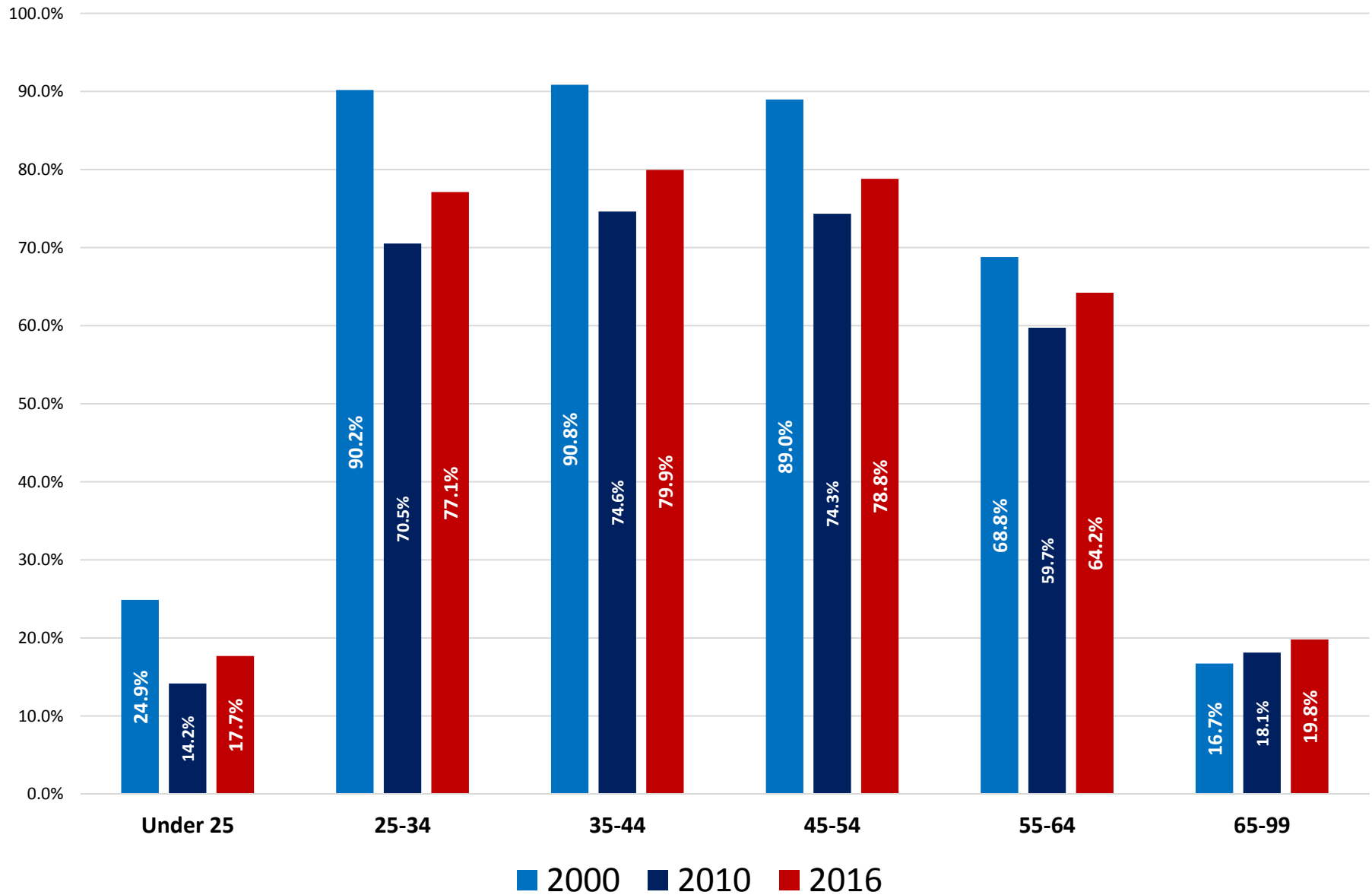


County Aging Trends



Worker Ratios

Ratio of workers (QWI) to Population (Census)

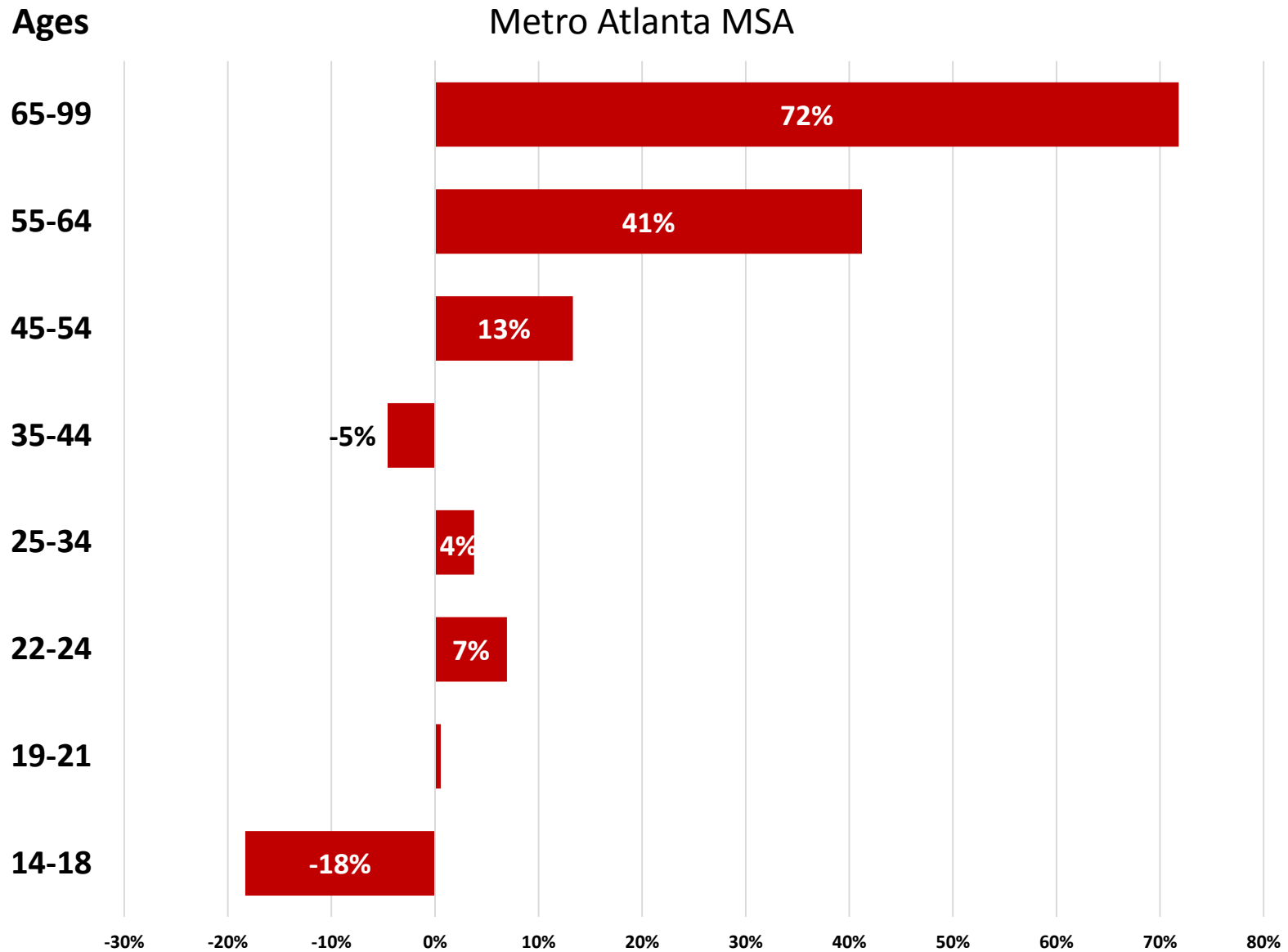


Source: Quarterly Workforce Indicators, U.S. Census Bureau



Change in Employment by Age 2007-2017

Source: Quarterly Workforce Indicators, U.S. Census Bureau



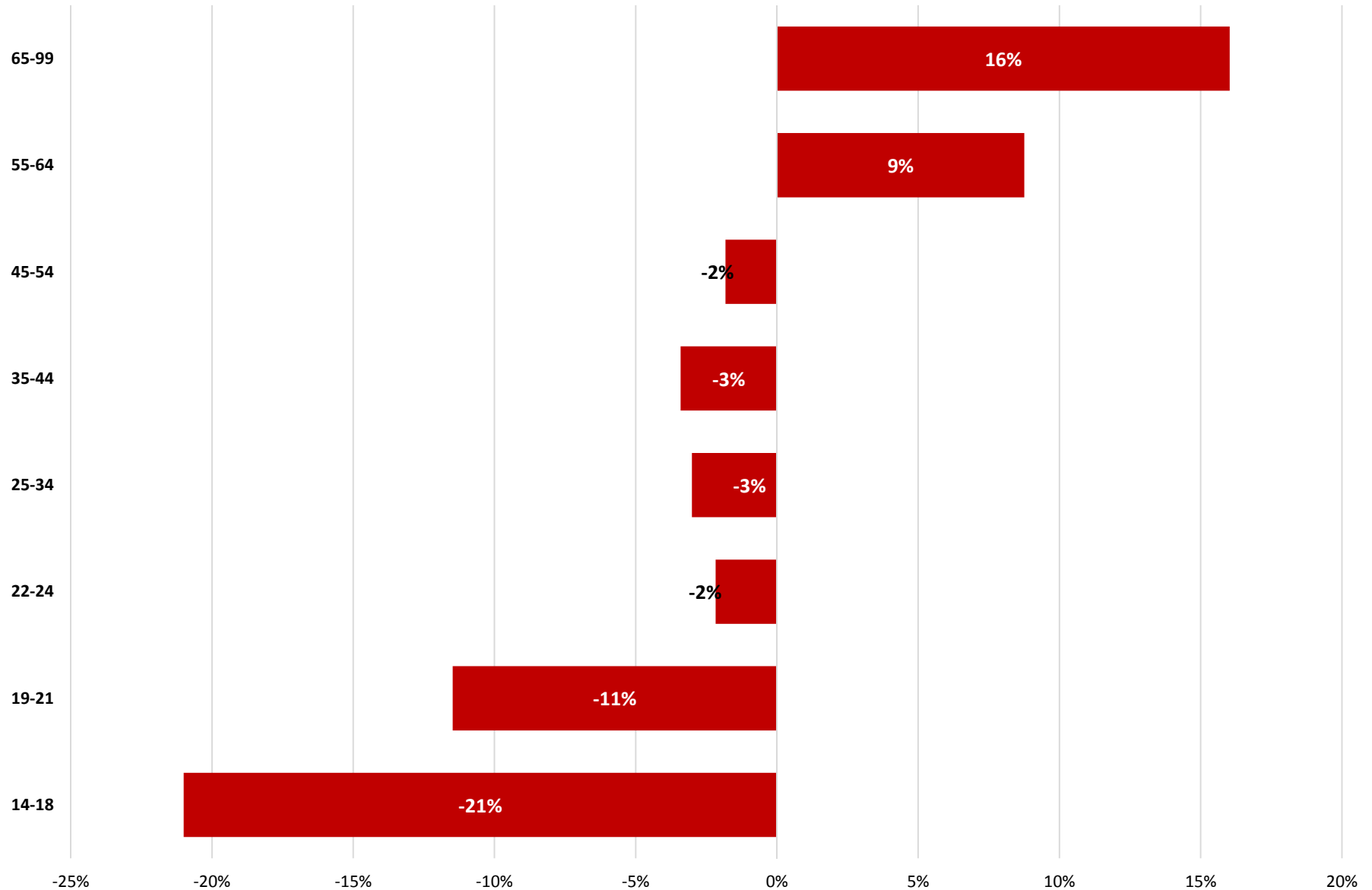
Change in Earnings 2007-2017

(2017 Dollars)

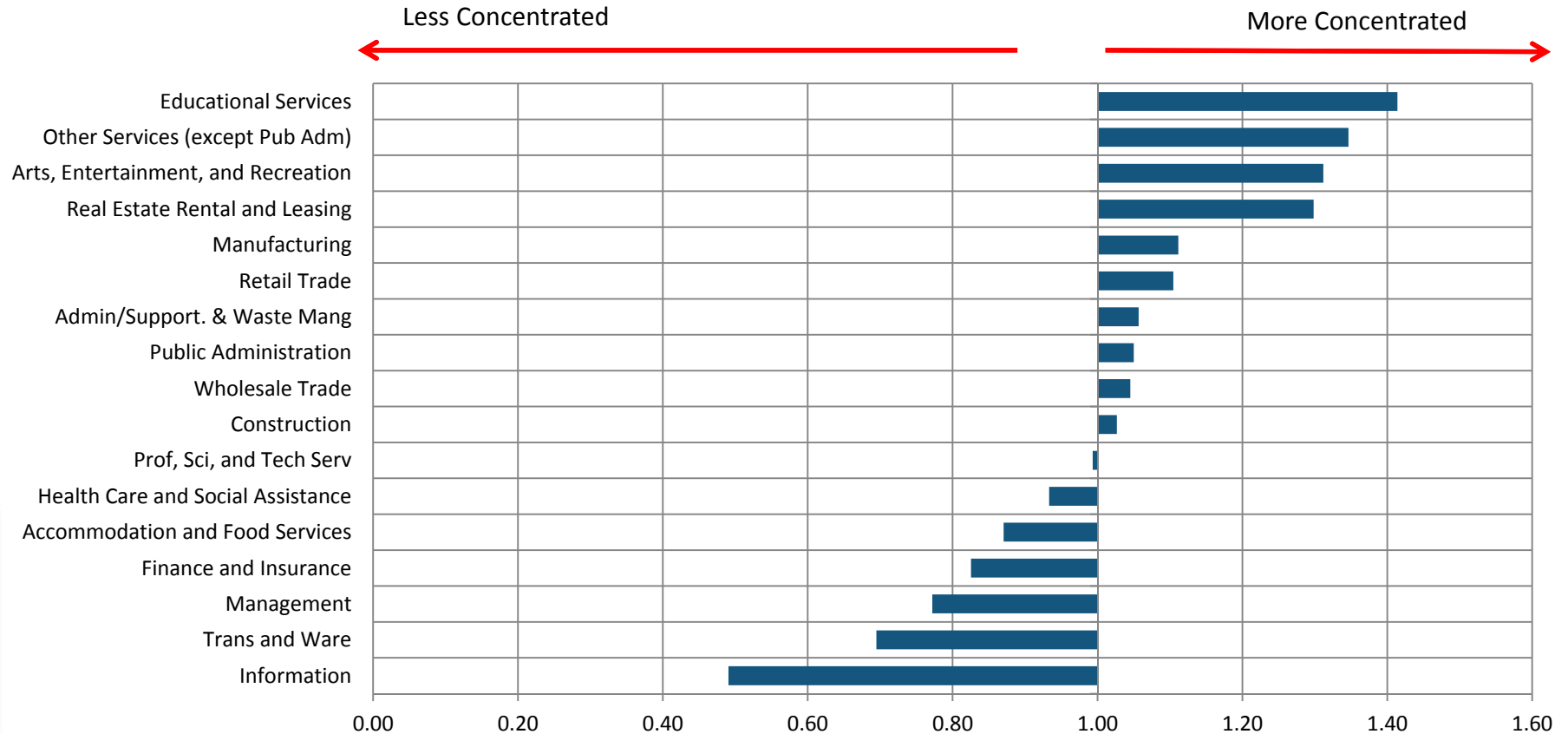
Metro Atlanta MSA

Ages

Source: Quarterly Workforce Indicators, U.S. Census Bureau

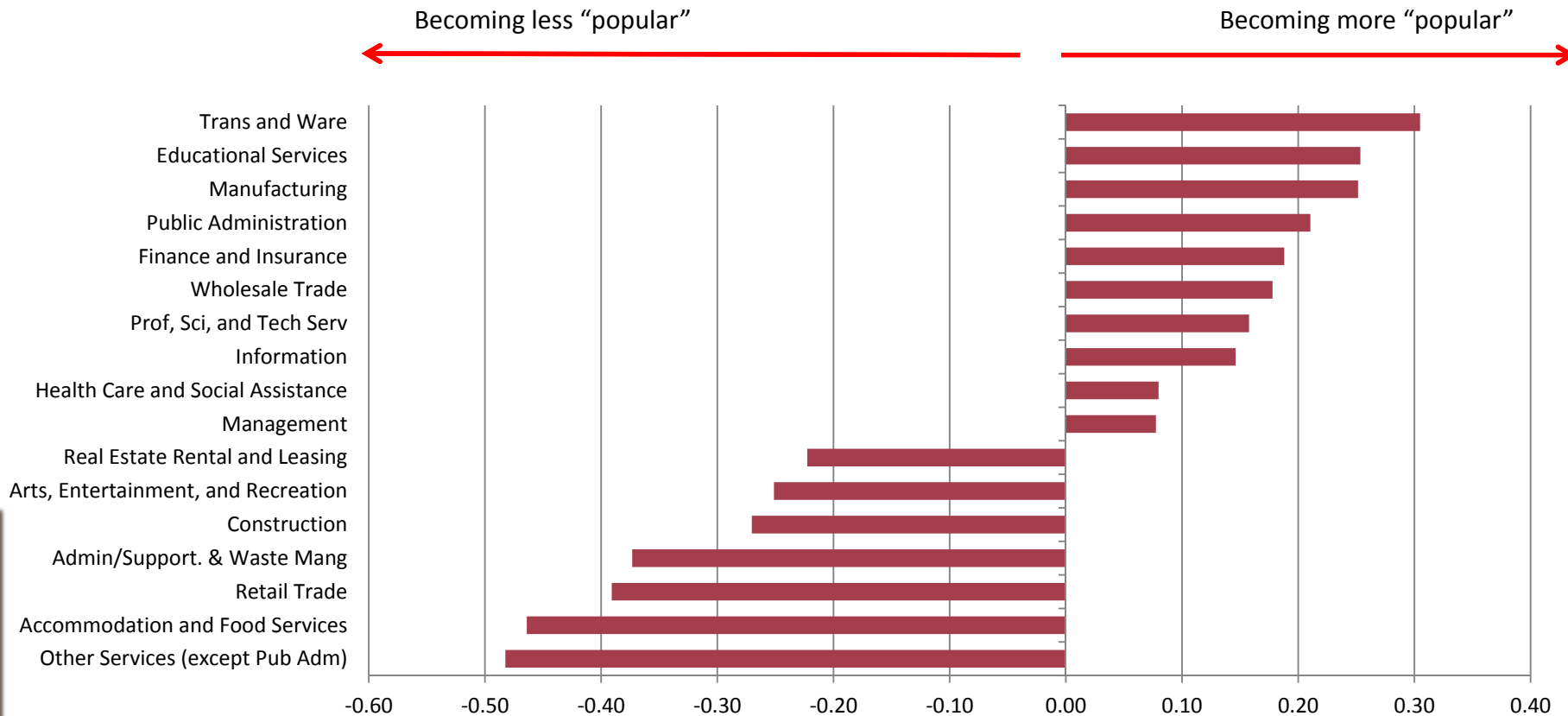


Workers Age 65+ (Most Popular Sectors)



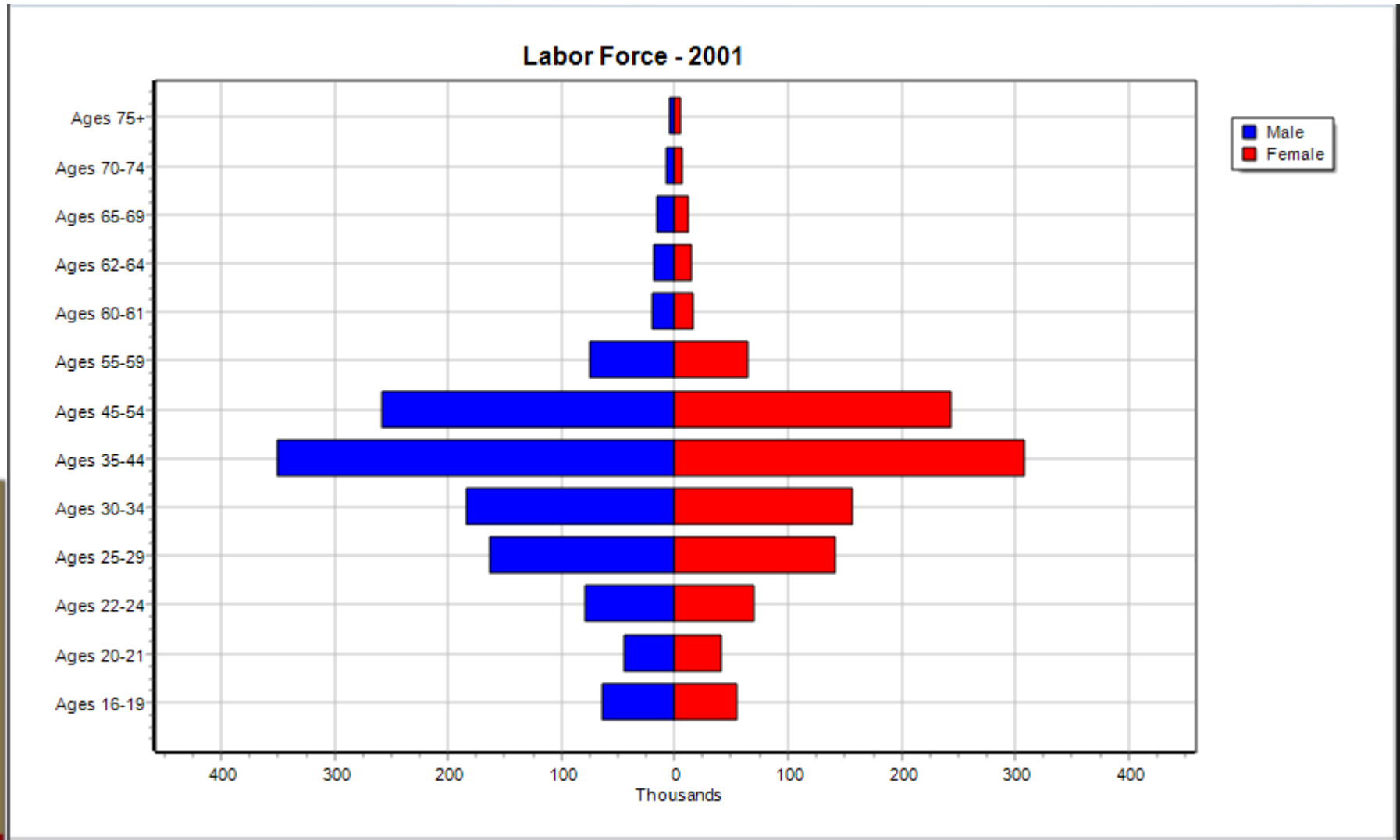
This chart shows which are the most “popular” sectors for workers age 65+, or which sectors that this age cohort is more heavily concentrated in. Any value above 1 (or blue bars that are pointing to the right) means that workers age 65+ are more likely than the average worker, regardless of age, to work in these sectors. **Thus, Education, Other Services and Arts/Entertainment are the most popular sectors for this age cohort.**

Profile: Workers Age 65+ (Expanding Sectors)

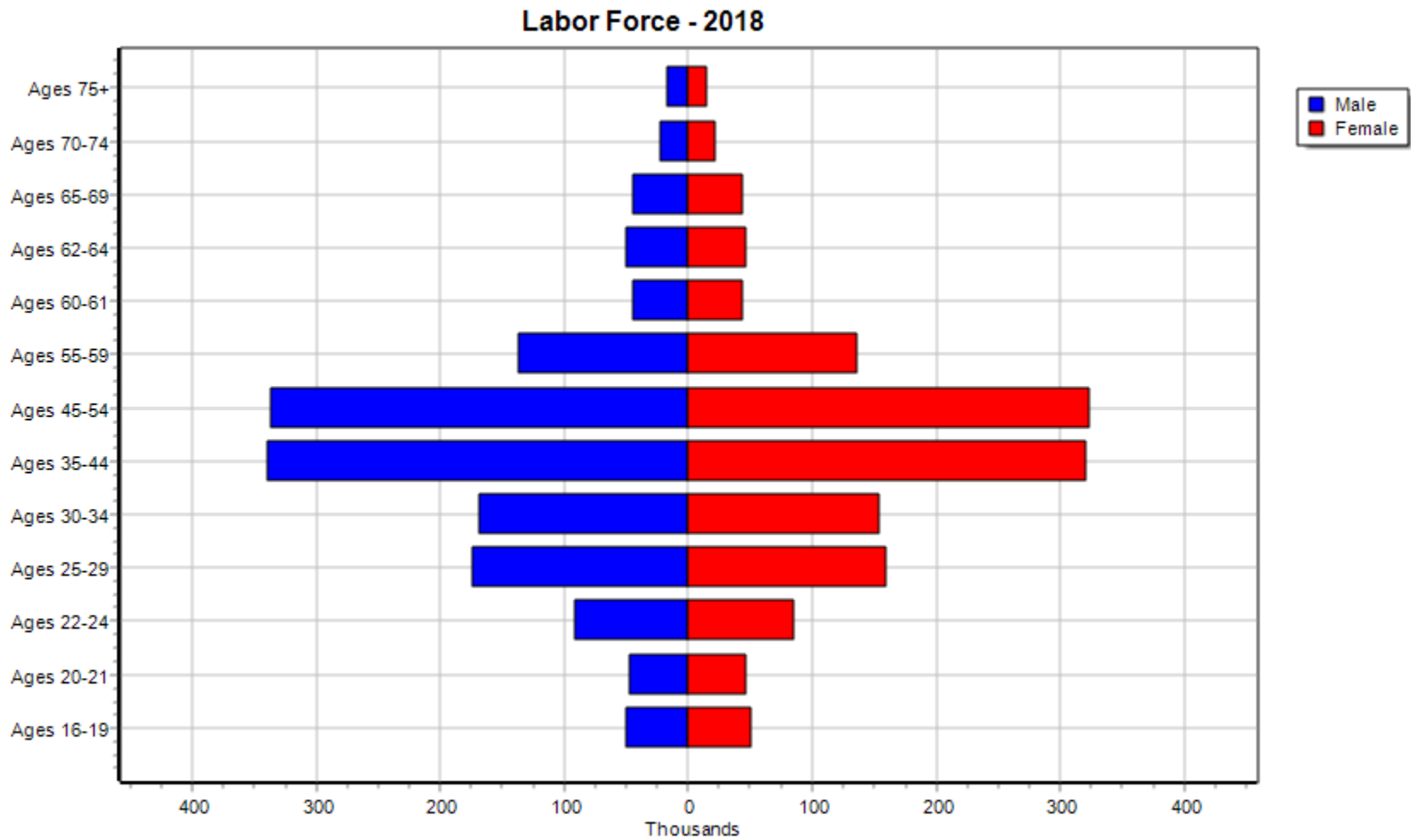


This chart shows which sectors are expanding for workers age 65+, or which sectors are capturing a greater share of 65+ workers relative to the workforce as a whole. Any value above zero (or red bars that are pointing to the right) means that workers age 65+ have increased their concentrations in these sectors since 2000. **So, while Education, Other Services and Arts/Entertainment are the most popular sectors today for this age cohort, Transportation/Warehousing, and Manufacturing are becoming more popular for this age cohort.**

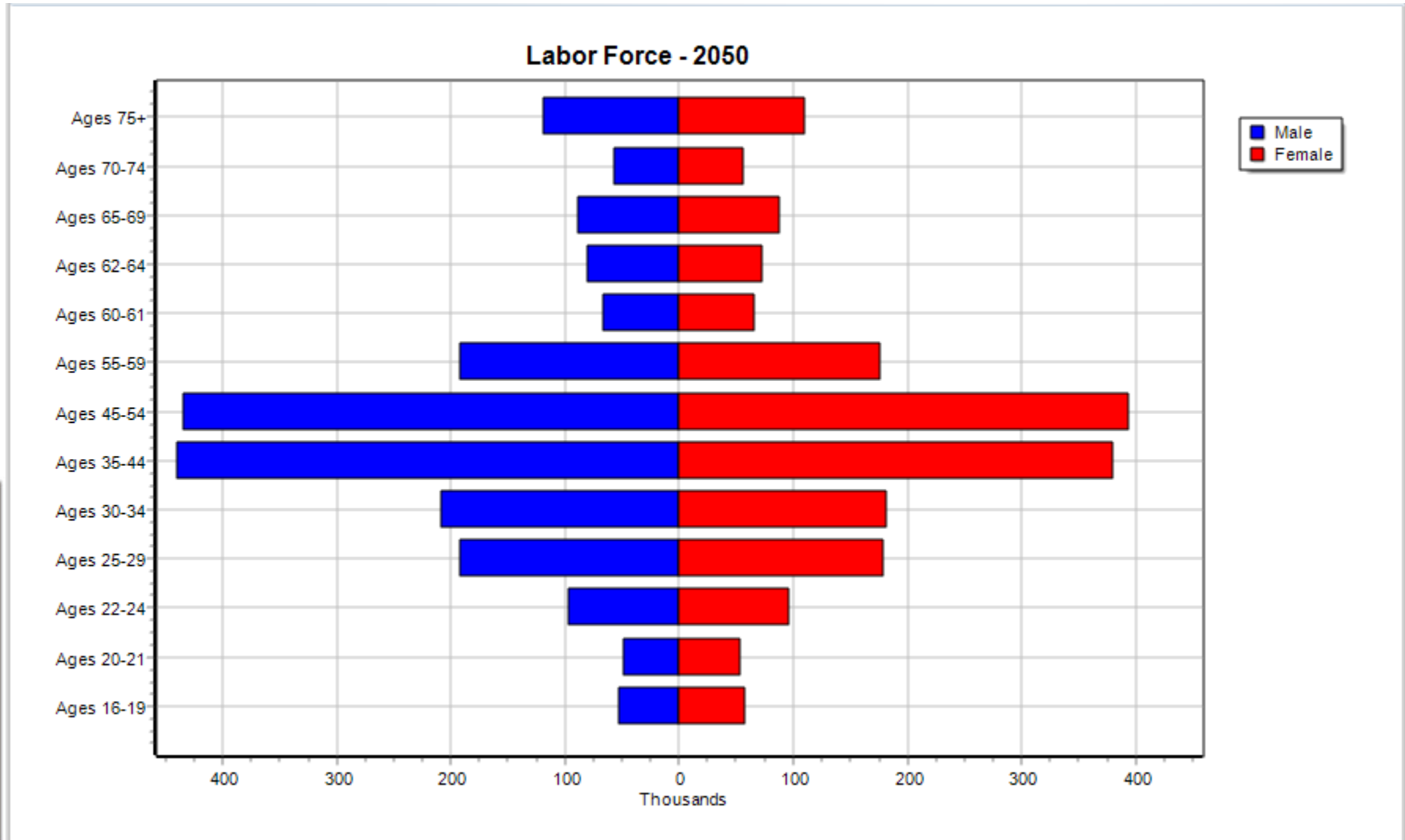
2001 Labor Force



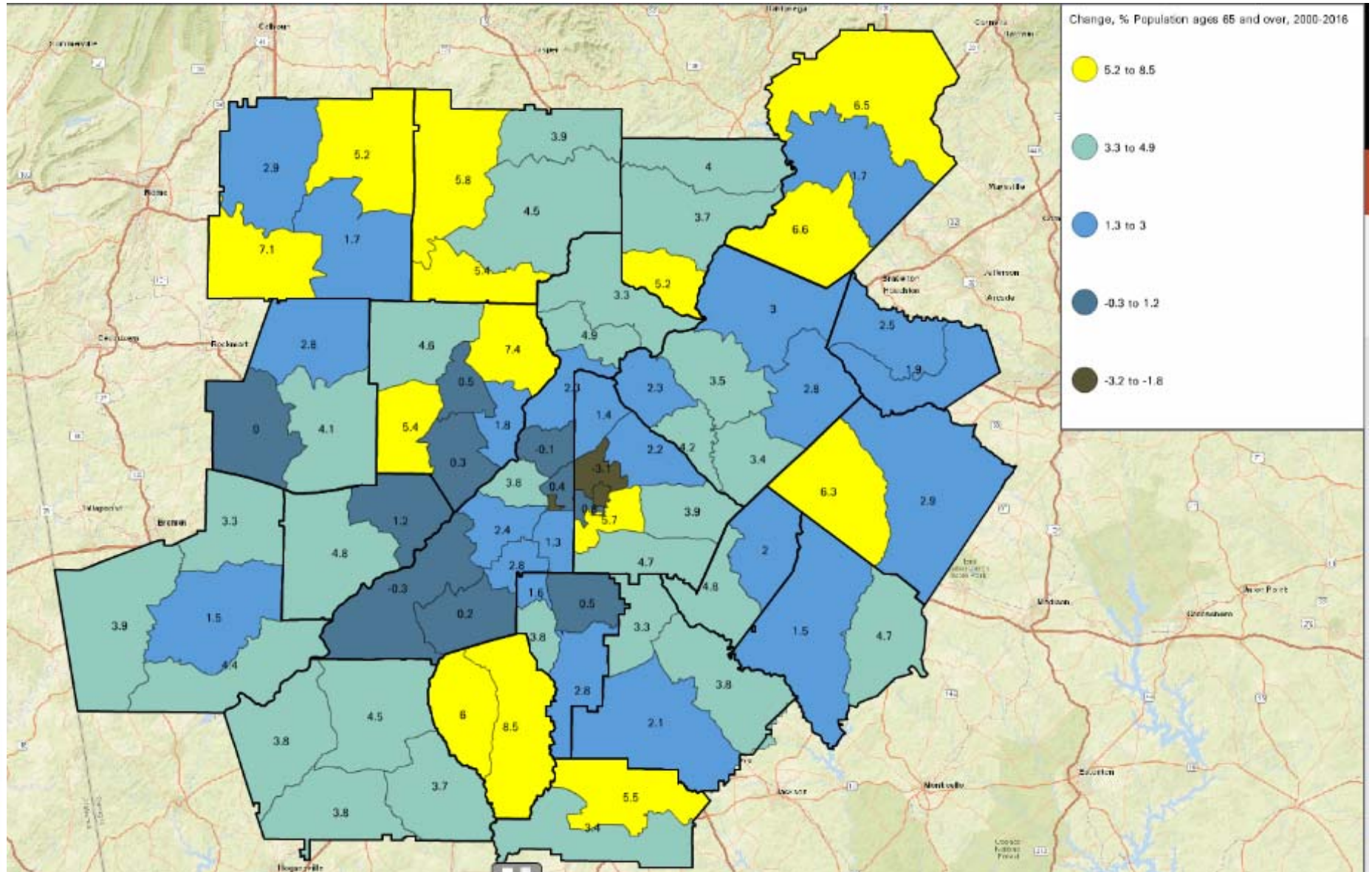
Labor Force 2018



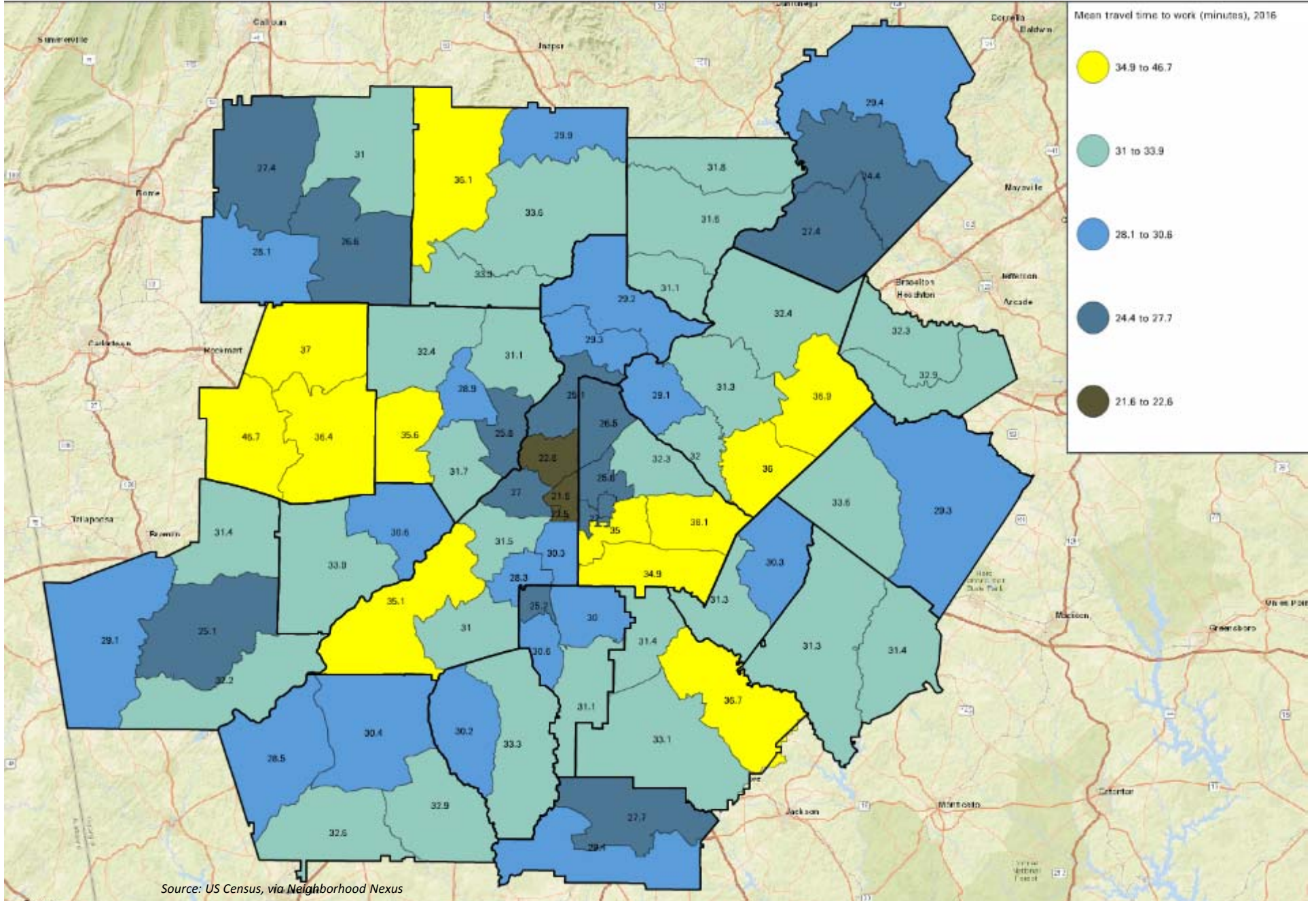
Labor Force 2040



Aging



Commute Times to Work





“If you don’t like change...

you’re going to like irrelevancy even less.”

— General Eric Shinseki, former U.S. Army Chief of Staff

The Speed of Change

5th Ave New York City, April 15, 1900

1900:
Where
is THE
CAR?

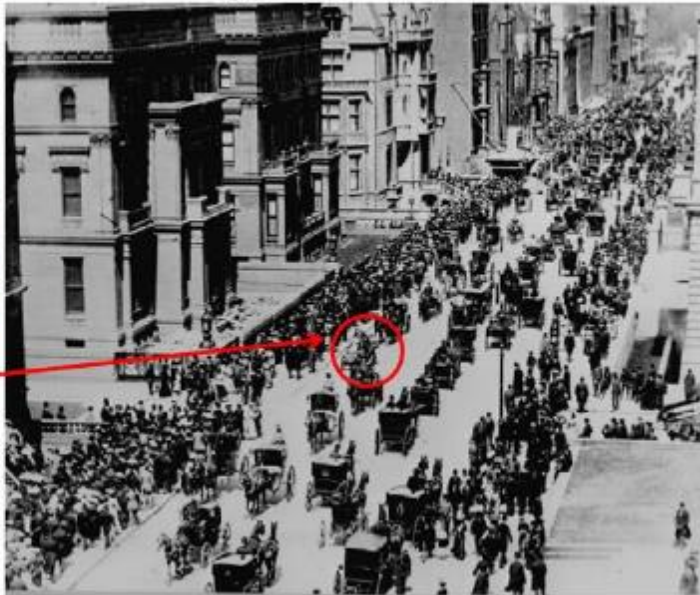


Photo: Fifth Ave NYC on Easter Morning 1900

Source: US National Archives

5th Ave New York City, March 23, 1913

1913:
Where is
THE
HORSE?



Photo: Easter 1913, New York. Fifth Avenue looking north.

Source: George Grantham Bain Collection

The Internal combustion engine shares with the commercialization of electricity the gold medal for the tow most important inventions of all time, by one of history's remarkable coincidences invented within ten weeks of each other in the fall of 1879- Gordon

**People Born Today
Will Never Drive A Car**

Although Americans are healthier and living longer than ever before, seniors are outliving their ability to drive safely by an average of 7 to 10 years.

Autonomy



AUTOMATION LEVELS OF AUTONOMOUS CARS

LEVEL 0



There are no autonomous features.

LEVEL 1



These cars can handle one task at a time, like automatic braking.

LEVEL 2



These cars would have at least two automated functions.

LEVEL 3



These cars handle "dynamic driving tasks" but might still need intervention.

LEVEL 4



These cars are officially driverless in certain environments.

LEVEL 5



These cars can operate entirely on their own without any driver presence.

SOURCE: SAE International

BUSINESS INSIDER

Autonomous Vehicle Service



opportunity

adoption of emerging and money movement.

le a new age across as-a-ling industries like

US\$7 Trillion Opportunity

Autonomous driving technology will enable a new "Passenger Economy" worth US\$7 trillion – more than the projected 2017 GDPs of Japan and Brazil combined.

Not Just Cars but Autonomous Trucks

Waymo and Google launch a self-driving truck pilot in Atlanta



0 to 60 in 5 seconds



Future of Mobility

A fundamentally new business ecosystem is emerging

Imagine a world in which...

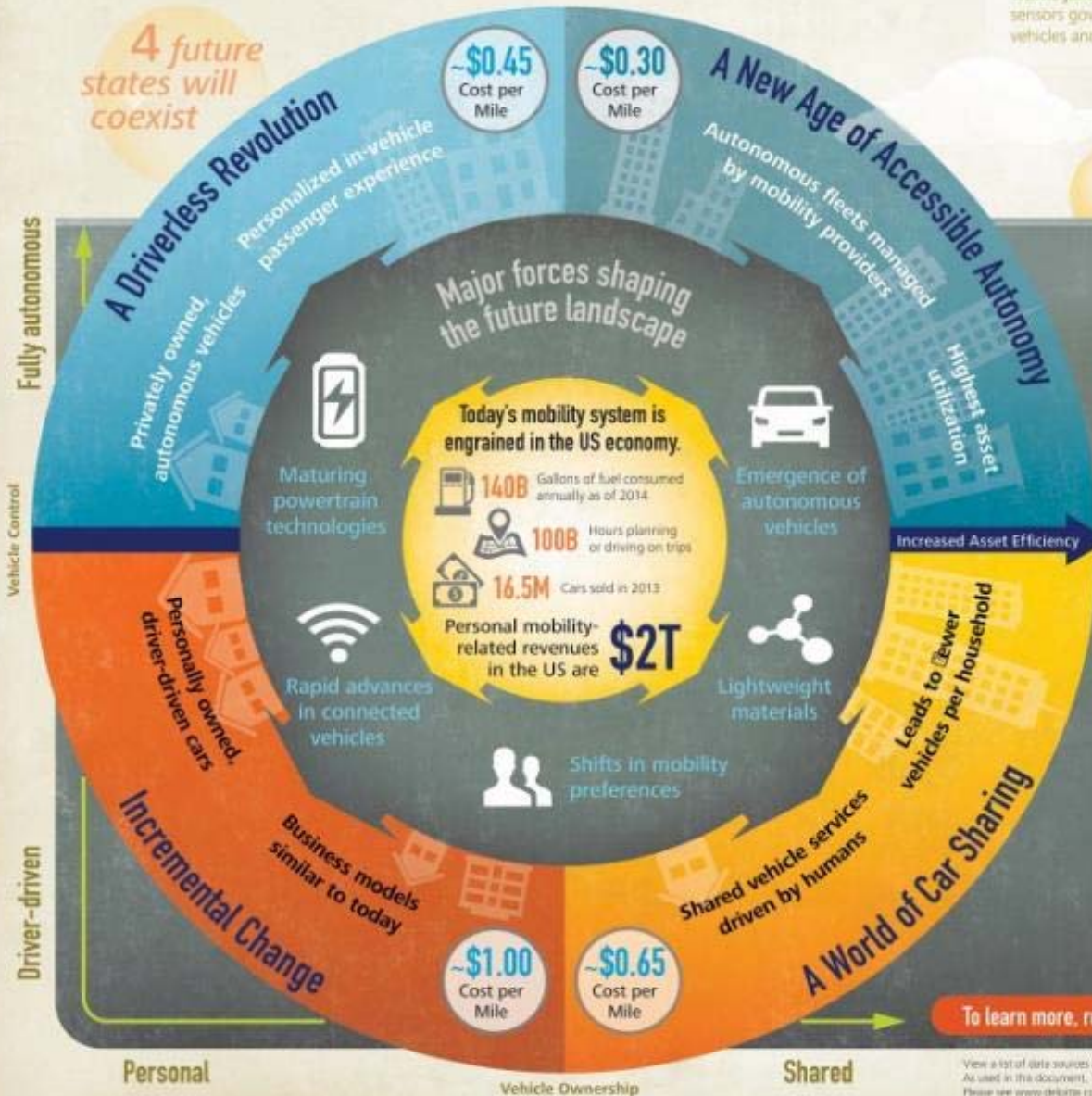
Vehicles hardly ever crash once human error is removed from the equation.

Energy demand drops as tailored vehicles enable more efficient and environmentally friendly powertrains.

Traffic jams become a rarity as sensors govern distance between vehicles and manage traffic patterns.

Trip costs plummet as the cost of commuting declines up to 70%, increasing accessible mobility.

Societal benefits



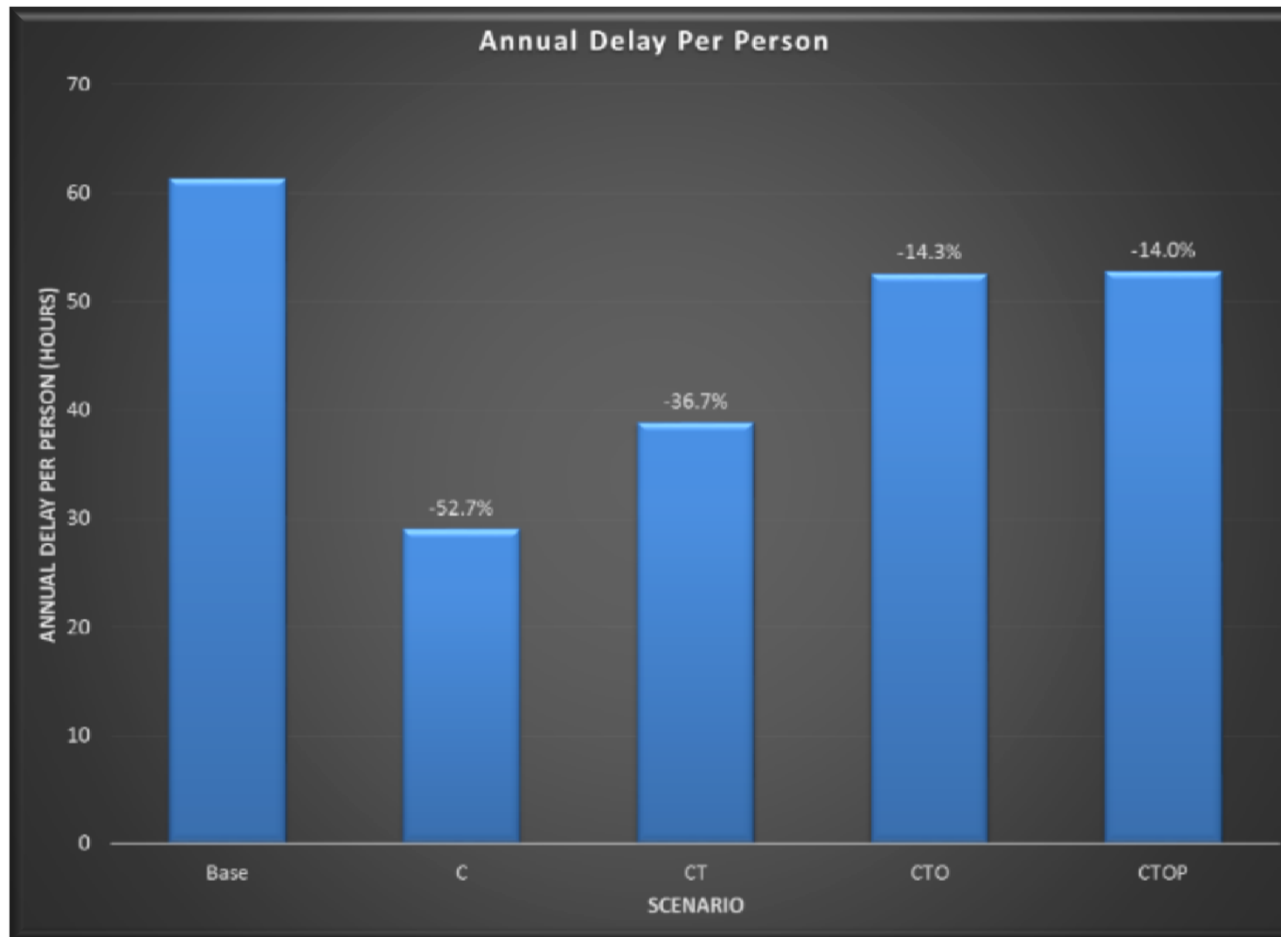
Profound disruption will extend far beyond just the automotive industry.

- Automotive:** Decrease in personally-owned vehicle sales and increase in fleet vehicle sales
- Energy:** Lower energy consumption from improved vehicle efficiency
- Finance:** Growth in fleet financing in place of auto loans and leasing
- Insurance:** Shifts from personal liability to catastrophic systems-failure insurance
- Media:** Increase in consumption of multimedia and information due to time not driving
- Medical & Legal:** Reduction of costs for emergency medical services and related legal fees because of fewer accidents
- Public Sector:** Erosion of tax revenues related to property and fuel taxes, vehicle registration and traffic citations
- Retail:** Increase in sales due to increased mobility of underserved segments (e.g., seniors)
- Telecom:** Additional bandwidth requirements to meet increased demand for connectivity and reliability
- Technology:** Emergence of autonomous drive operating system players
- Transportation:** Substitution of demand for traditional taxis, limos, and rental vehicles with shared fleet vehicles

To learn more, read our full report at www.deloitte.com/us/futureofmobility

View a list of data sources at <http://www.dupress.com/future-of-mobility-infographic>.
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Policy Discussions Led to Testing of Scenarios in 2015 Incorporating the Technology



- Potential per capita delay reductions range from 14% to 52.7%, depending on scenario
- Strong policy support to continue to explore the viability of the technology

C: 50% more Capacity

CT: Decrease Travel Time Disutility

CTO: Decrease TTU and Travel Costs

CTOP: Decrease TTU and Travel Costs & Parking

Home » Transportation News » I-66 Express Lane tolls...

I-66 Express Lane tolls were up to \$46.75 Wednesday

By Dick Uliano
January 25, 2018 4:21 am



WASHINGTON — Tolls for the I-66 Express Lanes hit another eyebrow-raising number Wednesday morning.

Single drivers who began the nine-mile trip from the Beltway to Rosslyn or D.C. at 8:30 a.m. were charged \$46.75, among the highest prices since tolling began Dec. 4.

While some commuters have blanched at the high tolls, the Virginia Department of Transportation has pointed out that the system is working as it's designed. They increase to discourage drivers from choosing the lanes in order to ease traffic flow. Under dynamic pricing, tolls change every six minutes.

Tolls trend lower on days with less traffic: At the very same time exactly one week ago, the toll was just \$13.25.

Related Stories

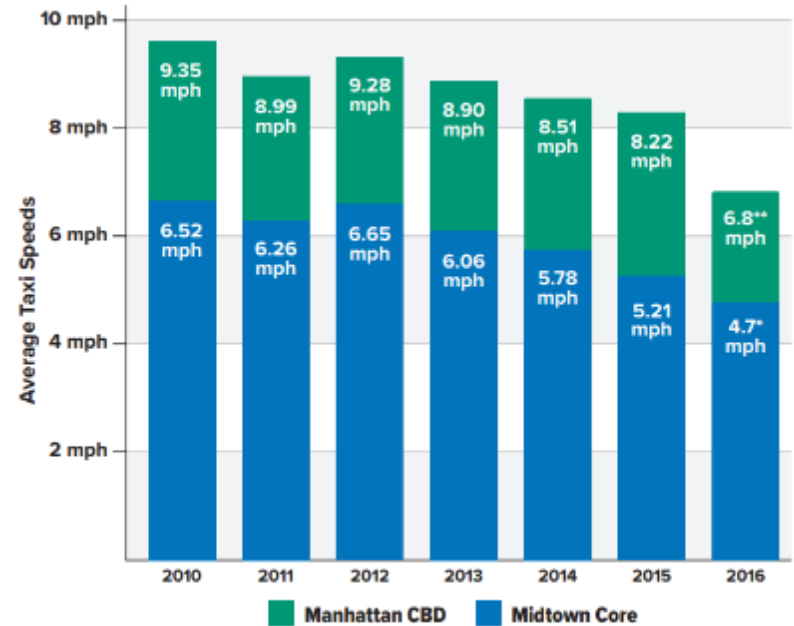
How much solo drivers paid during first 2 weeks of I-66 tolling
TRANSPORTATION NEWS

Survey: For some commuters, I-66 tolls a better option than transit
TRANSPORTATION NEWS

Survey: Carpool, slugging not preferred alternative to I-66 tolls
TRANSPORTATION NEWS

Reality

FIGURE 1. Average Taxi Speeds in Manhattan CBD and the Midtown Core 2010-2016



*Mayor de Blasio Announces Initiatives to Help Ease Congestion," October 22, 2010, Transcript at <http://www.nyc.gov/office-of-the-mayor/news/881-10/transcript-mayor-de-blasio-initiatives-help-ease-congestion>

** Empty Seats, Full Streets, Fixing Manhattan's Traffic Problem," Schaller Consulting, December 2017

Source: NYC Department of Transportation, "New York City Mobility Report," October 2016.

regional impact + local relevance

ARC

Use the postcode checker below for more accurate results when checking if your journey takes you into the zone.



There is no charge on weekends, public holidays, between Christmas Day and New Year's Day inclusive, or between 18:00 and 07:00 on weekdays.

ASIA PACIFIC | BEIJING JOURNAL

Want to Drive in Beijing? Good Luck in the License Plate Lottery

北京市普通小客车指标竞价 读中文

By AP/WIDE WORLD July 29, 2016

<https://www.nytimes.com/2016/07/29/world/asia/china-beijing-traffic-pollution.html>

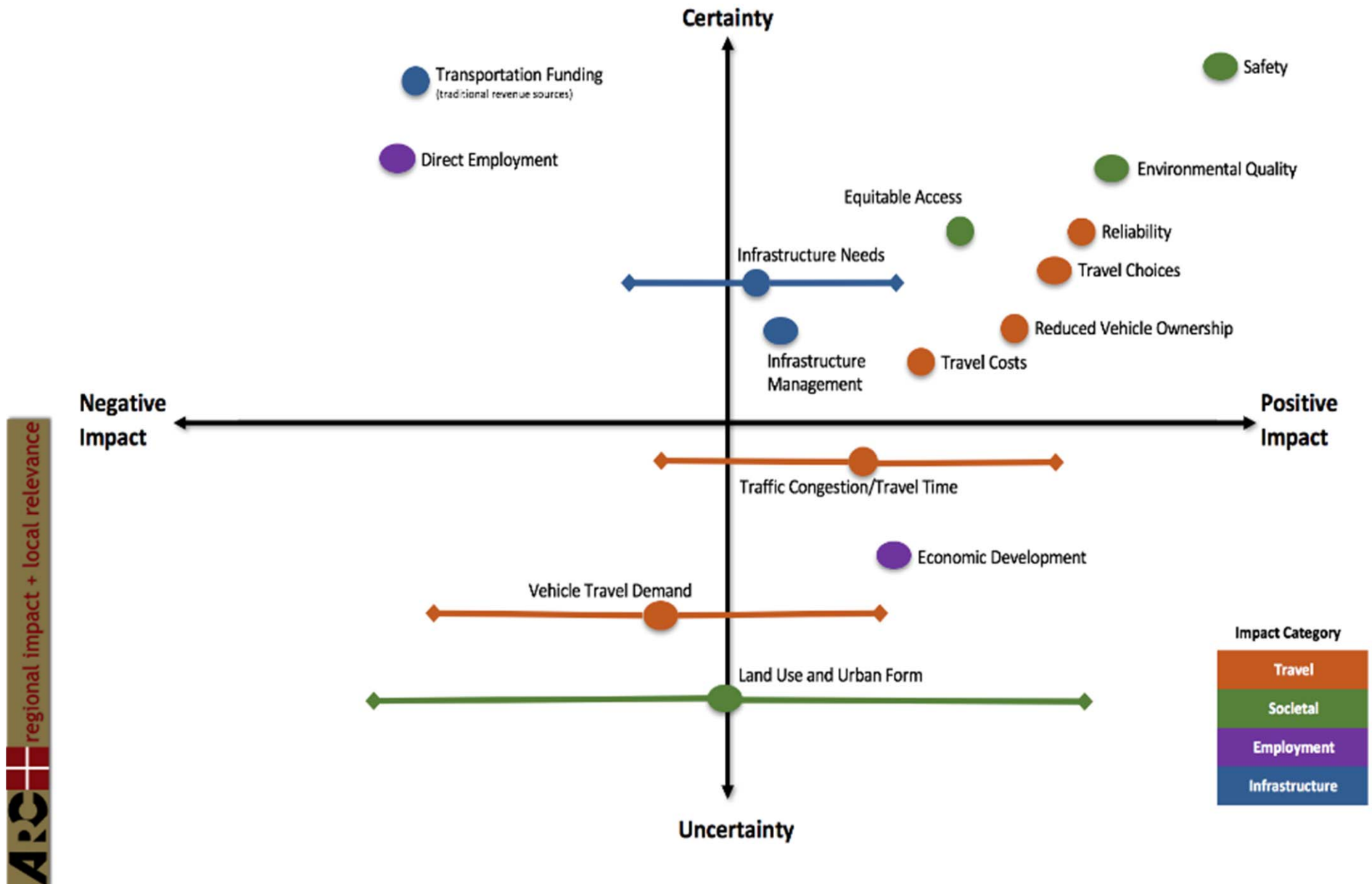


Zhou Jie, an engineer in Beijing, once needed a local license plate from a used-car salesman for about \$170 a year. (Photo taken for The New York Times)

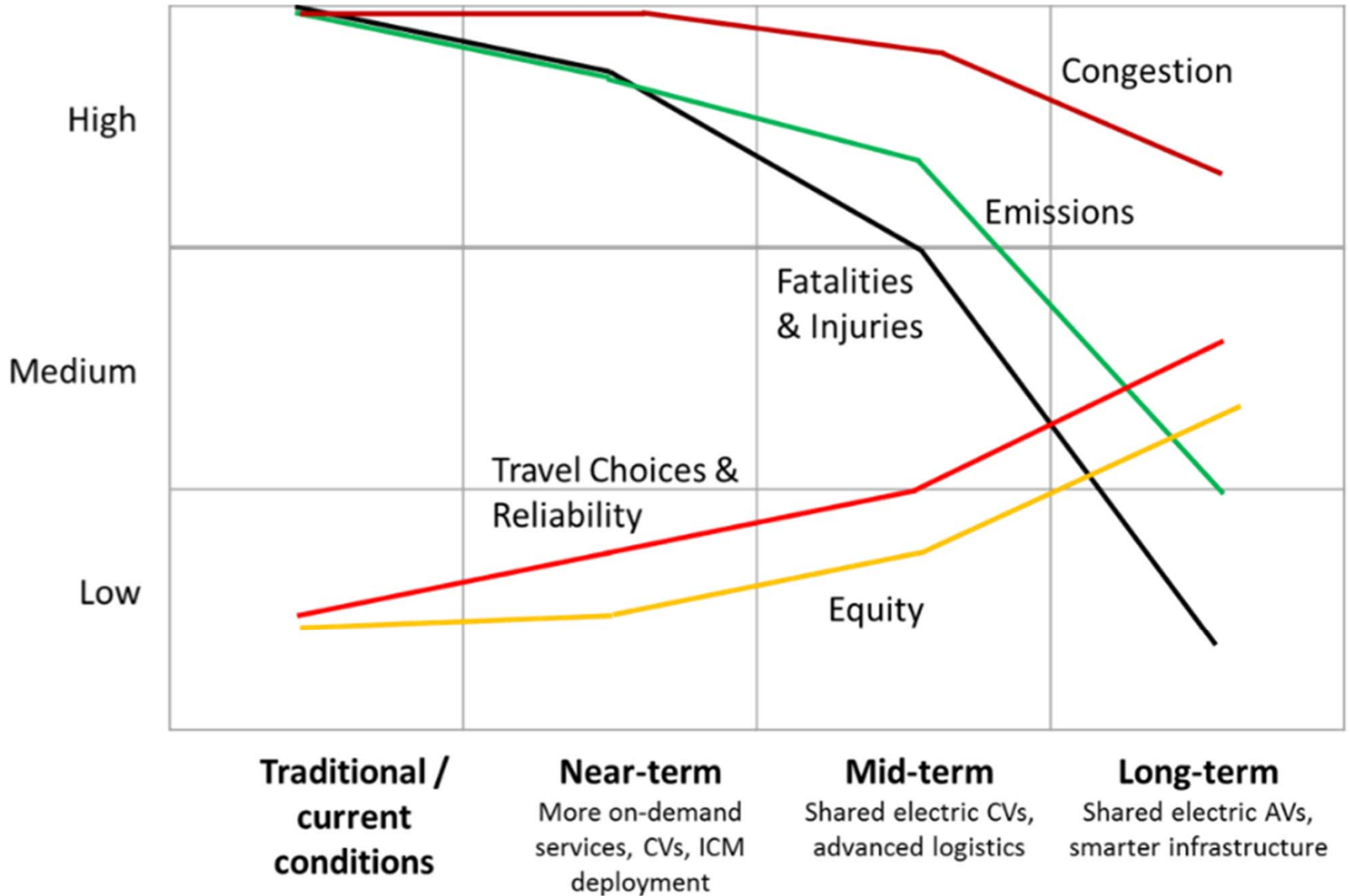
RELATED COVERAGE

- Bus Project Finds a Way Around China's Traffic Jams: Gliding Above Them
MAY 26, 2015
- Smog So Thick, Beijing Comes to a Standstill
DEC. 9, 2015
- A City Choosing on Cars Hopes Commuters Will Return to Two Wheels
MAY 11, 2015
- Beijing's Electric Bikes, the Wheels of E-Commerce, Face Traffic Backdash
MAY 28, 2016

Measuring Our Challenges



Measuring Success



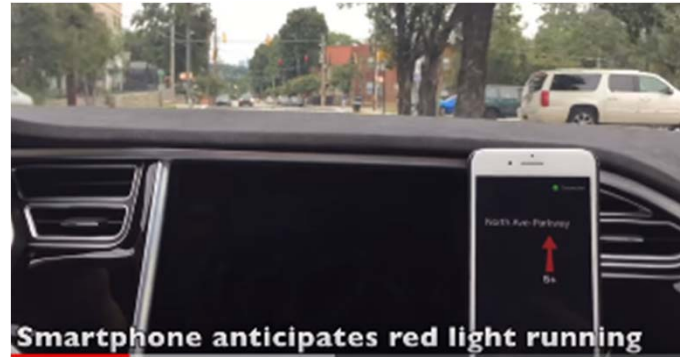
Example Projects (increases in Federal & State Funding)

- Revive I-285 North Managed Lanes & CD Lane Improvements (from I-75 to I-85): Advancing ROW phases from long range into TIP and reflect associated GARVEE Bond repayments using FHWA funding (**\$111.3 million**)
- Four new GDOT funded bridge projects (**\$36.5 million**)
- Downtown Greyhound Terminal Improvements (**\$9.3 million**)
- GRTA Managed Lanes System Park & Ride Expansion (**\$9.8 million**)
- MARTA Clean Bus Purchase (**\$4 million**)
- I-75 NB Collector/Distributor Lanes project cost updates (**\$8.8 million**)
- GDOT Connected Vehicle Pilot Program (**\$1 million**):
 - Peachtree Rd/PIB (SR 141): from Roswell Rd. (SR 9) to I-285 WB ramp
 - Ponce De Leon Ave. (SR 8): from Juniper St. to E. Lake Rd.

We are Preparing



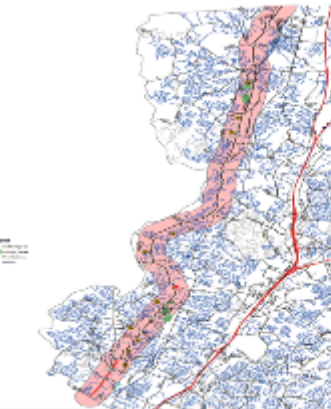
About
The Georgia Smart Commission (GSC) is a group of industry and academic leaders, including representatives from the state government, the private sector, and academia. The GSC was created by the Georgia State Board of Technical Education (GSBTE) and the Georgia State Board of Education (GSBE) to coordinate and promote the state's smart infrastructure and technology initiatives.



City of Atlanta working on first 'Smart Corridor' along North Avenue



- Project will add Connected Vehicle Technology
- Traffic signals will broadcast information
 - Signal Phase and Timing (SPaT)
 - Safety messages
- Adaptive Traffic Signal Control



- 20 miles
- Over 50 traffic signals
- Existing fiber optic cable for communications
- Daily traffic volumes range
 - 45,000 at south end
 - 30,000 in middle
 - 12,000 at north end



ARC
Atlanta Regional Commission

Atlanta Regional Commission Submission for Funding:
Advanced Transportation and Congestion Management Technologies Deployment Initiative

Metro Atlanta 2017
Metropolitan Atlanta Rapid Transit Authority
Leadership Council

2017

Chairman: [Name]

Vice-Chairman: [Name]

Members: [List of names]

Thank You



SUMMIT September 7, 2018

Mike Alexander, AICP Director

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