Regional Snapshot

The Digital Economy in Metro Atlanta:

What is it & Why it is Important

Atlanta Regional Commission
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What is the Digital Economy and Why is it important?

Simply put, the digital economy consists of the business conducted through computers and computer networks. This type of economic activity will play a large role in the future economy, as it is a key to enhanced productivity across most industries. Metro Atlanta is well-positioned for this future. Here are some numbers:

- **14th** overall among *global* metros for international headquarter locations
- **10th** *globally* in software development categories
- **3rd** *nationally* in 2011 in engineering degree graduates
- **3rd** *nationally* in the number of degrees awarded in the technology sector

Source: IBM Business Solutions, Site Selection, IPEDS

Job Postings Related to the Digital Economy

Software developer was the most demanded occupation for the area, across all industries and groupings.

Based on job postings in software development and applications, metro Atlanta has already seen the importance of the Digital Economy in the area.

Source: Burning Glass Technologies

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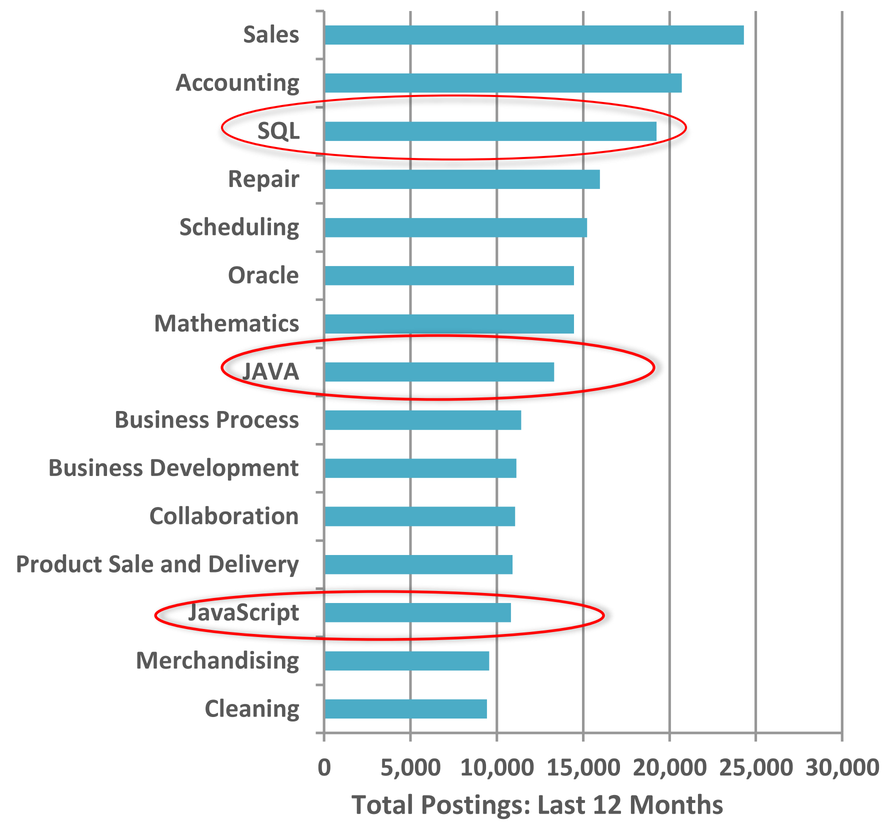
Technical Skills Increasingly In Demand

TOP SKILLS- U.S.

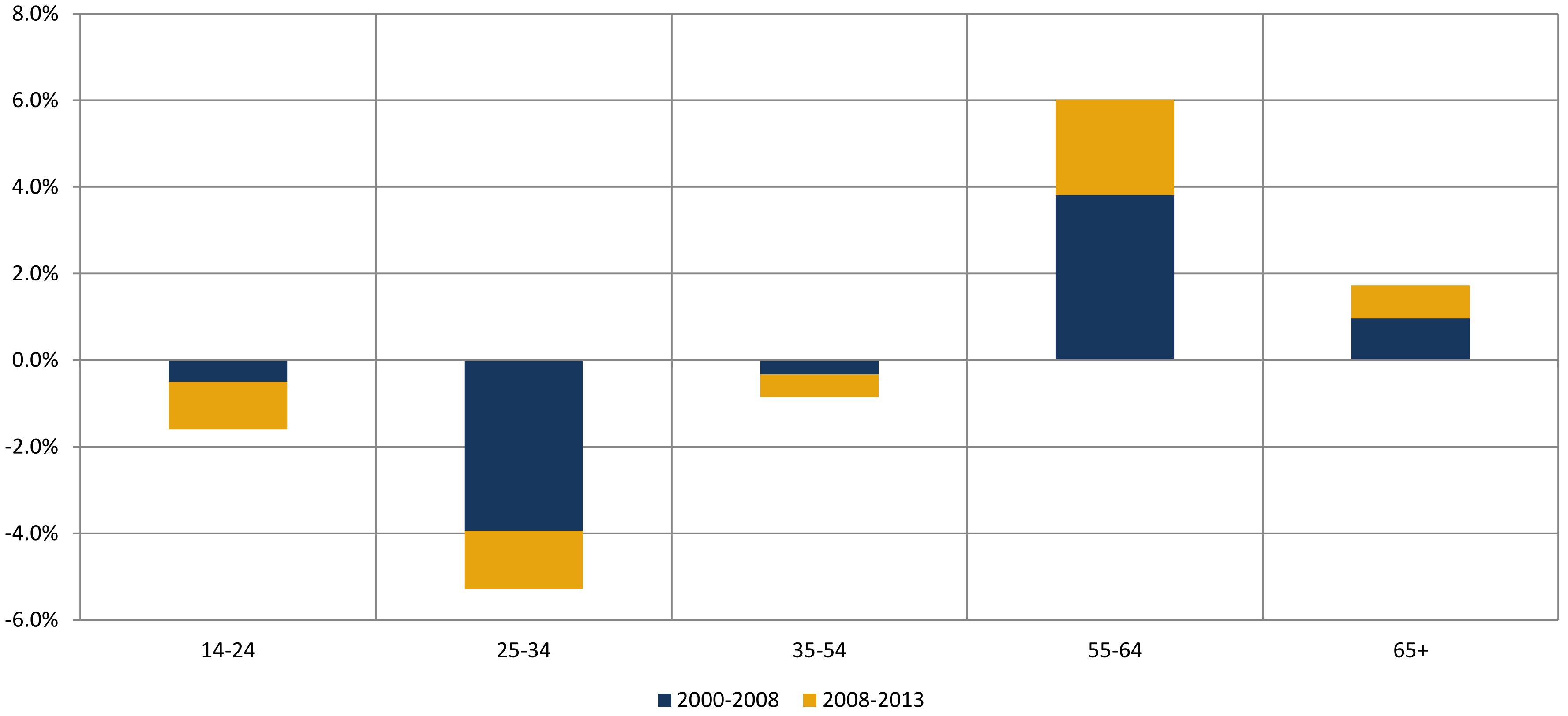
TOP SKILLS- ATLANTA



Technical skills are increasingly in demand in metro Atlanta. The programming and database languages of SQL, JAVA and Javascript – the stuff that makes our devices do the cool things we have come to rely on – are particularly prevalent in metro Atlanta

Source: Burning Glass Technologies

Falling Labor Force Participation Rates for Younger Cohorts



An educated workforce is obviously critical to the digital economy. In addition to general demographic trends that shows declining shares of younger workers, labor force participation rates are falling for the younger age cohorts and rising for older cohorts. This trend actually began prior to the Great Recession of 2007.

Source: QWI Census

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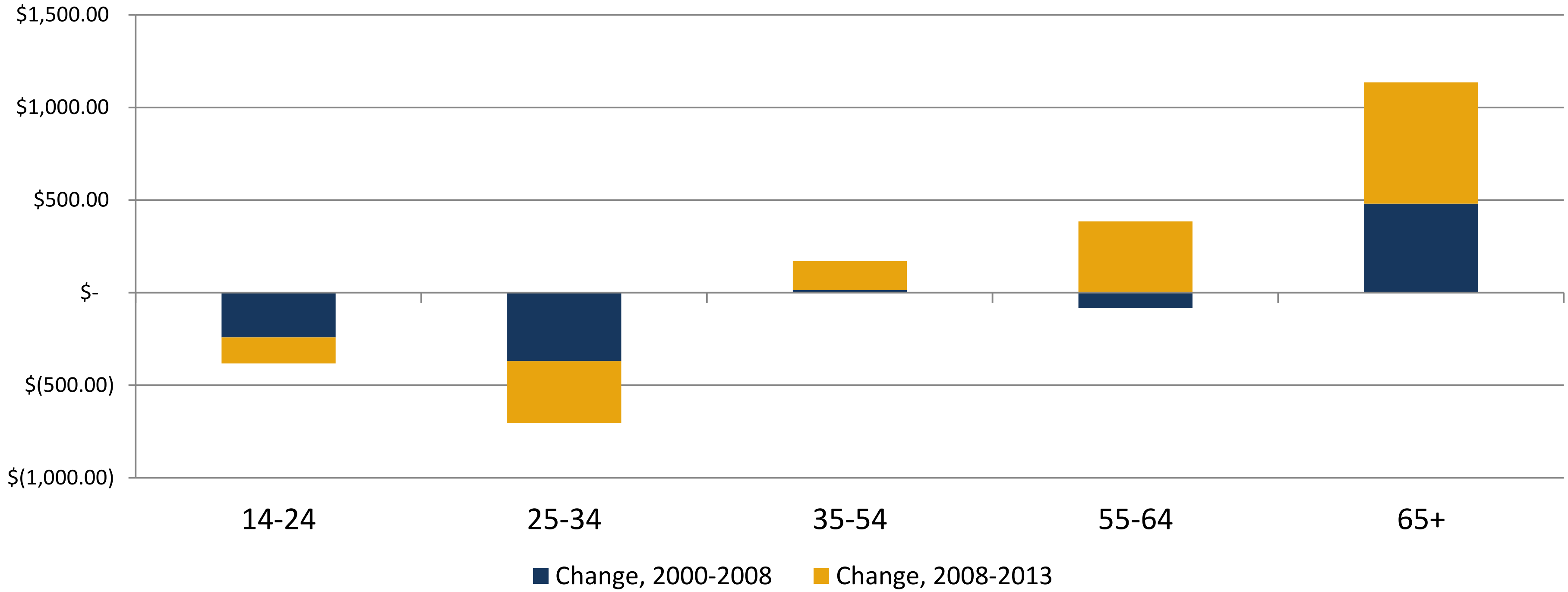
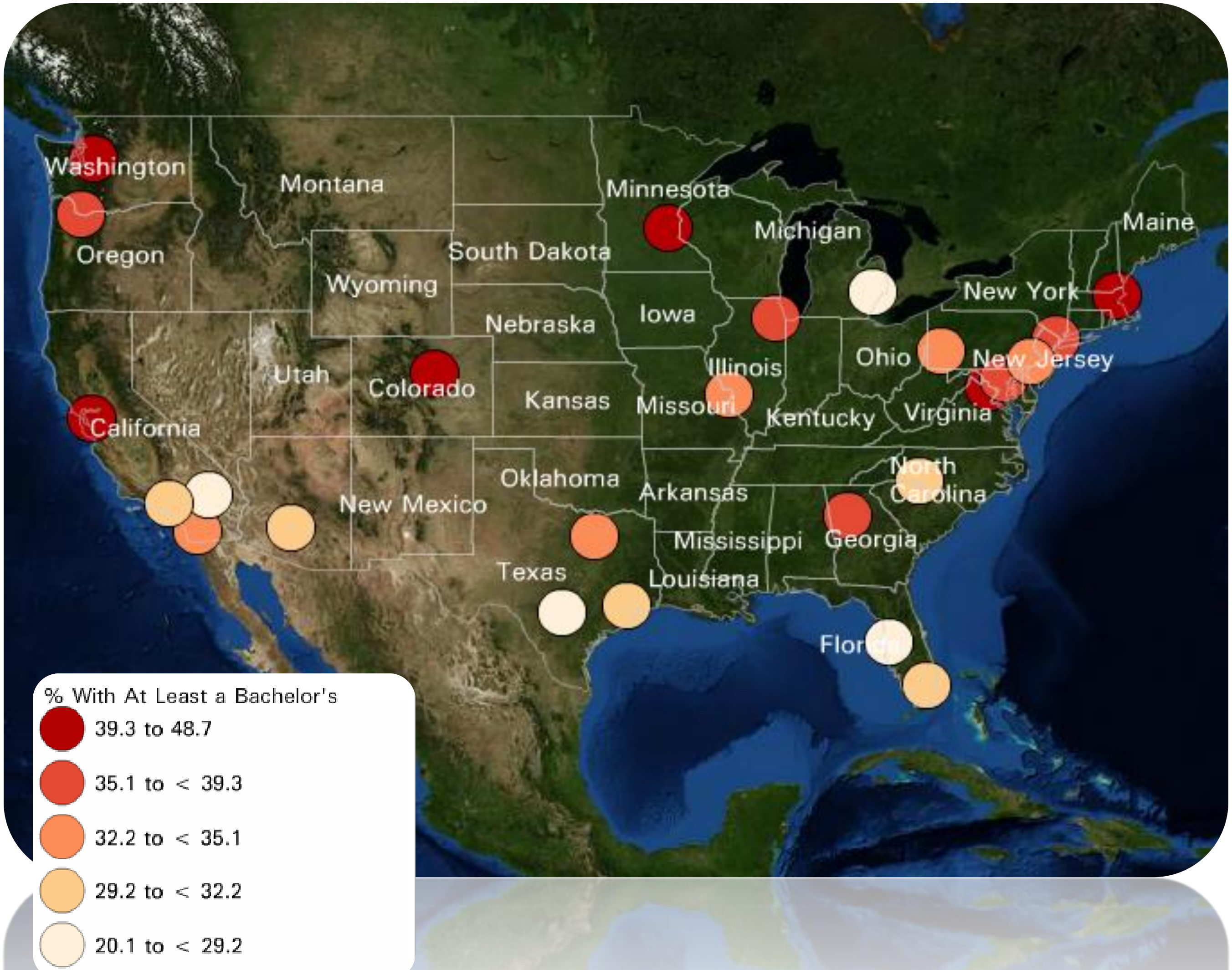
Wages Are Falling for Younger Cohorts Too



Like labor force participation rates, wages are falling for younger age cohorts as well. This presents challenges for the digital economy writ large as these younger age cohorts are critical to innovation. Today, they are more likely to work in lower paying sectors. Preparing the younger workforce for higher paying, digital economy jobs would combat this trend.

Source: QWI Census

Metro Atlanta is An Educated Place



Atlanta ranks 9th in population with at least a bachelor's degree among the top 25 US metros. In the southeast, metro Atlanta is the most educated large metro.

Source: American Community Survey, 2013

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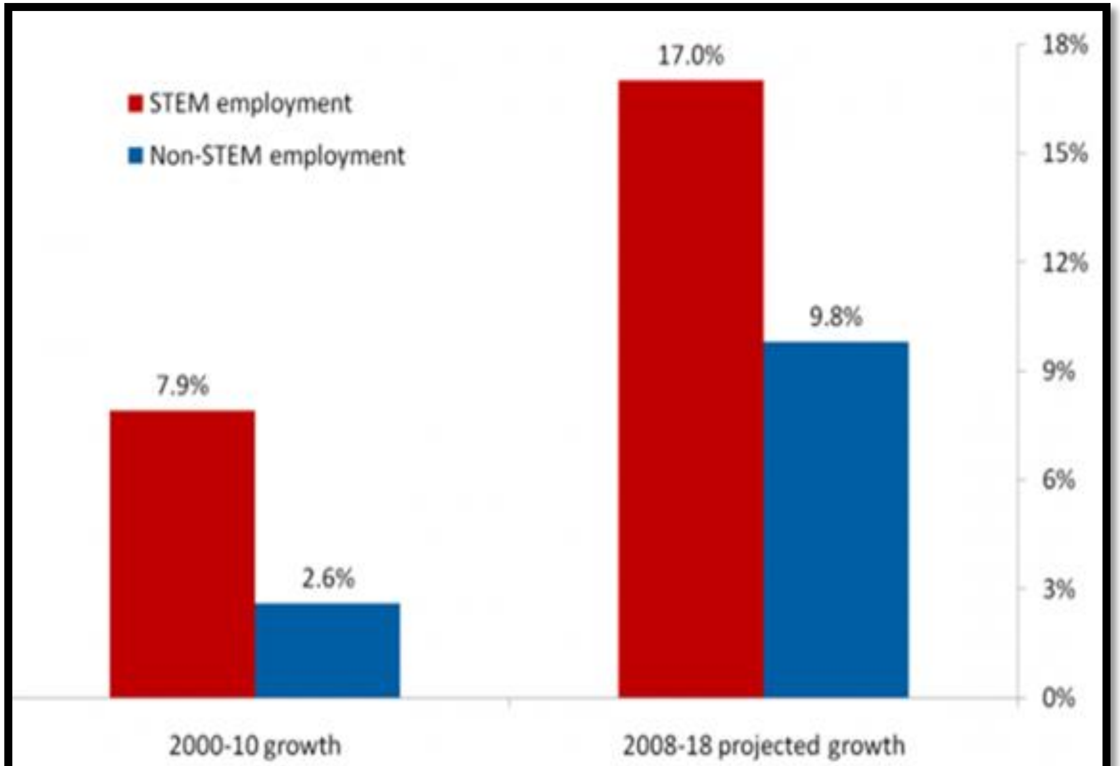
STEM is The Engine Driving The Digital Economy

STEM (Science, Technology, Engineering, and Mathematics) Initiatives:

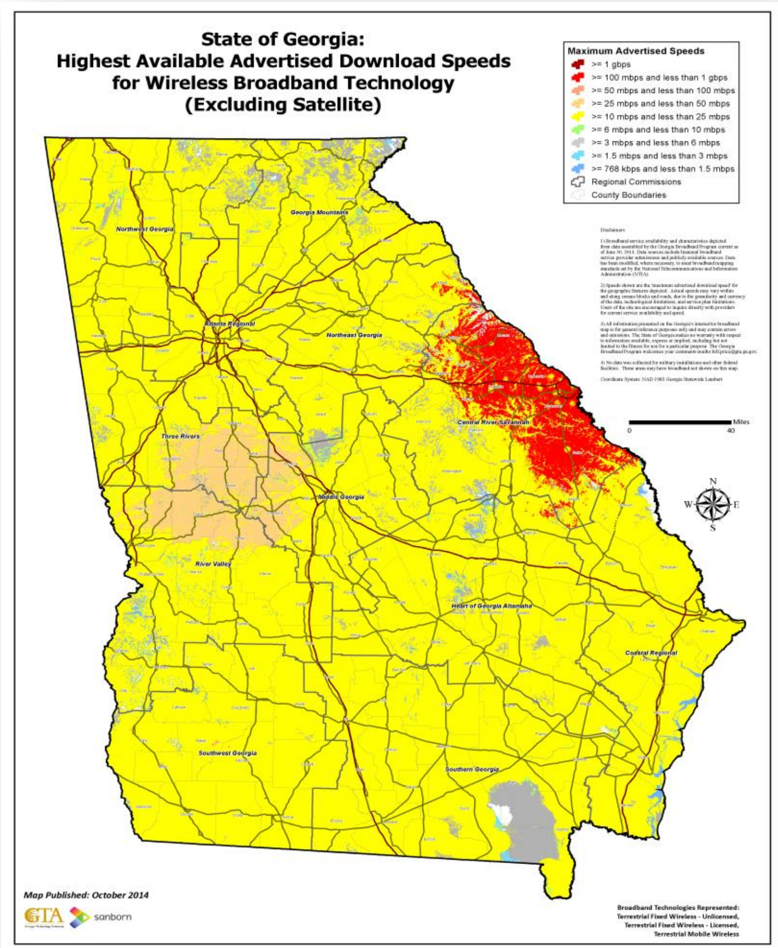


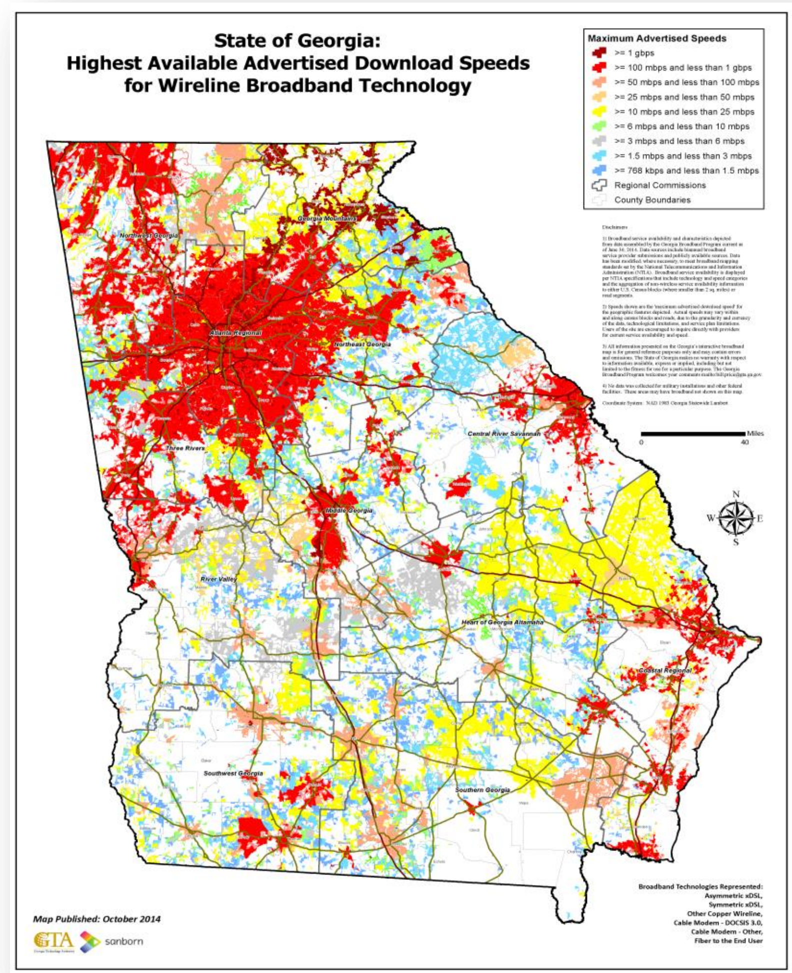
Source: ESA calculations using Current Population Survey public-use microdata and estimates from the Employment Projections Program of the Bureau of Labor Statistics.

- STEM workers earn about **25 percent more than their non-STEM counterparts**
- STEM workers are **less likely to experience joblessness** than non-STEM counterparts.
- In 2010, there were **7.6 million stem workers in the U.S.** (about 1 in 18)
- Over **two-thirds of STEM workers have at least a college degree**
- STEM degree holders **command higher earnings in STEM or non-STEM occupations**.
- STEM fields jobs have grown **three times as fast as jobs in non-STEM fields**

Source: Current Population Survey- Bureau of Labor Statistics, The Economic and Statistics Administration at the U.S. Commerce Department

Infrastructure Important In Digital Economy





As with the “traditional” economy, having good infrastructure is critical to the digital economy as well. Atlanta has competitive advantages, as Georgia Trend recently noted: Atlanta’s “infrastructure is among the top five in the country, and it is clearly the telecom hotspot in the state.”

Source: Georgia Trend, GTA, Sanborn

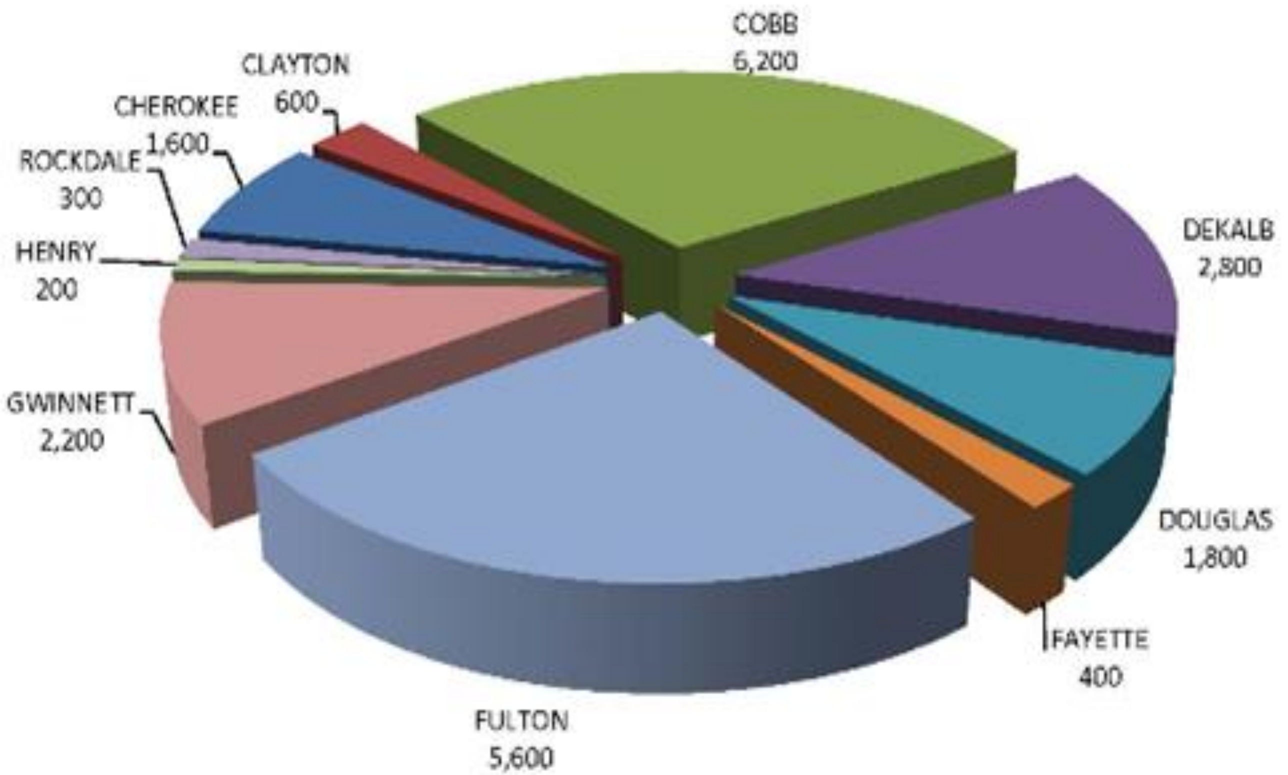
"Community Anchor Institutions" Critical To The Region's Digital Economy

	Number by ARC County										10-County
CAI Type	Cherokee	Clayton	Cobb	DeKalb	Douglas	Fayette	Fulton	Gwinnett	Henry	Rockdale	10-co Region	Share State
K-12 Schools	48	82	189	242	46	45	314	171	71	30	1,238	37.4%
Libraries	6	6	20	29	3	4	38	18	6	1	131	25.8%
Medical/ Healthcare	28	82	140	313	28	17	185	235	24	26	1,078	38.5%
Public Safety	36	39	58	61	13	20	135	47	20	14	443	16.3%
Higher Ed (Post-Sec)	1	1	12	21	3	0	26	3	0	1	68	28.0%
Govt-Community Support	19	35	32	71	14	11	186	35	18	15	436	19.7%
Total CAI	138	245	451	737	107	97	884	509	139	87	3,394	27.6%
Source: ARC analysis of GTA CAI Inventory, Fall 2014												

Community Anchor Institutions (CAIs), like schools, healthcare providers, libraries, public safety entities, and community support organizations, help "facilitate greater use of broadband by vulnerable populations, including low-income, the unemployed, and the aged" (FCC). In the Atlanta region, there are more than 3,400 CAIs according to analysis of the Georgia Technology Authority's inventory. This represents 28 percent of the statewide inventory. Increasing the number and enhancing the capacity of existing CAIs should be a key goal moving forward.

Source: GTA, 2014: FCC

Broadband Access: Metro Atlanta Well Covered



County	Households Unserved
CHEROKEE	1,600
CLAYTON	600
COBB	6,200
DEKALB	2,800
DOUGLAS	1,800
FAYETTE	400
FULTON	5,600
GWINNETT	2,200
HENRY	200
ROCKDALE	300
Total	21,700

In terms of access to high-speed internet for the average household, metro Atlanta enjoys a competitive advantage in that virtually every household has access to either wireless or wireline technology. This shows just how few households that are unserved by wireline technology. What is not shown is that practically every household has access to wireless technologies. (This does not mean that necessarily subscribe to a wireless provider, just that they have access to one)

Source: GTA, Sanborn

Regional Snapshot

Widespread Availability, Not Widespread Adoption

	ARC Region	Georgia	Rest of Georgia	South Region	USA
Share of HH with Internet Access	84.3%	77.6%	72.4%	76.2%	78.6%
With an Internet subscription:	80.0%	73.0%	67.7%	71.7%	74.4%
Dial-up alone	0.6%	1.1%	1.5%	1.4%	1.4%
DSL:	25.4%	29.9%	34.0%	22.1%	20.8%
With mobile broadband	*10.7%*	*10.8%*	*10.9%*	*7.7%*	*7.3%*
Without mobile broadband	*14.7%*	*19.1%*	*23.1%*	*14.4%*	*13.5%*
Cable modem:	44.1%	40.6%	37.4%	44.2%	48.5%
With mobile broadband	*20.4%*	*17.3%*	*14.4%*	*17.8%*	*19.7%*
Without mobile broadband	*23.6%*	*23.3%*	*23.0%*	*26.4%*	*28.9%*
Fiber-optic:	4.4%	3.7%	3.0%	7.5%	6.9%
With mobile broadband	*2.2%*	*1.7%*	*1.2%*	*3.4%*	*3.1%*
Without mobile broadband	*2.1%*	*2.0%*	*1.8%*	*4.1%*	*3.8%*
Satellite Internet service:	2.4%	3.0%	3.5%	3.6%	3.3%
With mobile broadband	*1.0%*	*1.1%*	*1.2%*	*1.2%*	*1.1%*
Without mobile broadband	*1.3%*	*1.8%*	*2.3%*	*2.3%*	*2.2%*
Two or more fixed broadband types/other:	16.6%	14.6%	12.7%	12.8%	11.8%
With mobile broadband	*8.8%*	*7.2%*	*5.7%*	*6.4%*	*6.0%*
Without mobile broadband	*7.8%*	*7.4%*	*7.1%*	*6.4%*	*5.8%*
Mobile broadband alone or with dialup	6.5%	7.2%	7.8%	8.4%	7.3%
Internet access without a subscription	4.3%	4.6%	4.8%	4.5%	4.2%
Share of HH with No Internet Access	**15.7%**	**22.4%**	**27.6%**	**23.8%**	**21.4%**

Despite good *availability*, households do not always *access* services due to cost or other reasons. As the table shows, the ARC region is well-positioned when compared to the rest of Georgia as only 15.7 percent of households in the 10-county ARC region do not have internet access, compared to almost 28 percent for the rest of Georgia, and 21.4 percent of the nation as a whole. Interestingly, within the universe of households with an Internet subscription, the “rest of Georgia” does have a higher share of DSL access as opposed to cable modem.

Source: ARC custom analysis of ACS 2013 1-year data

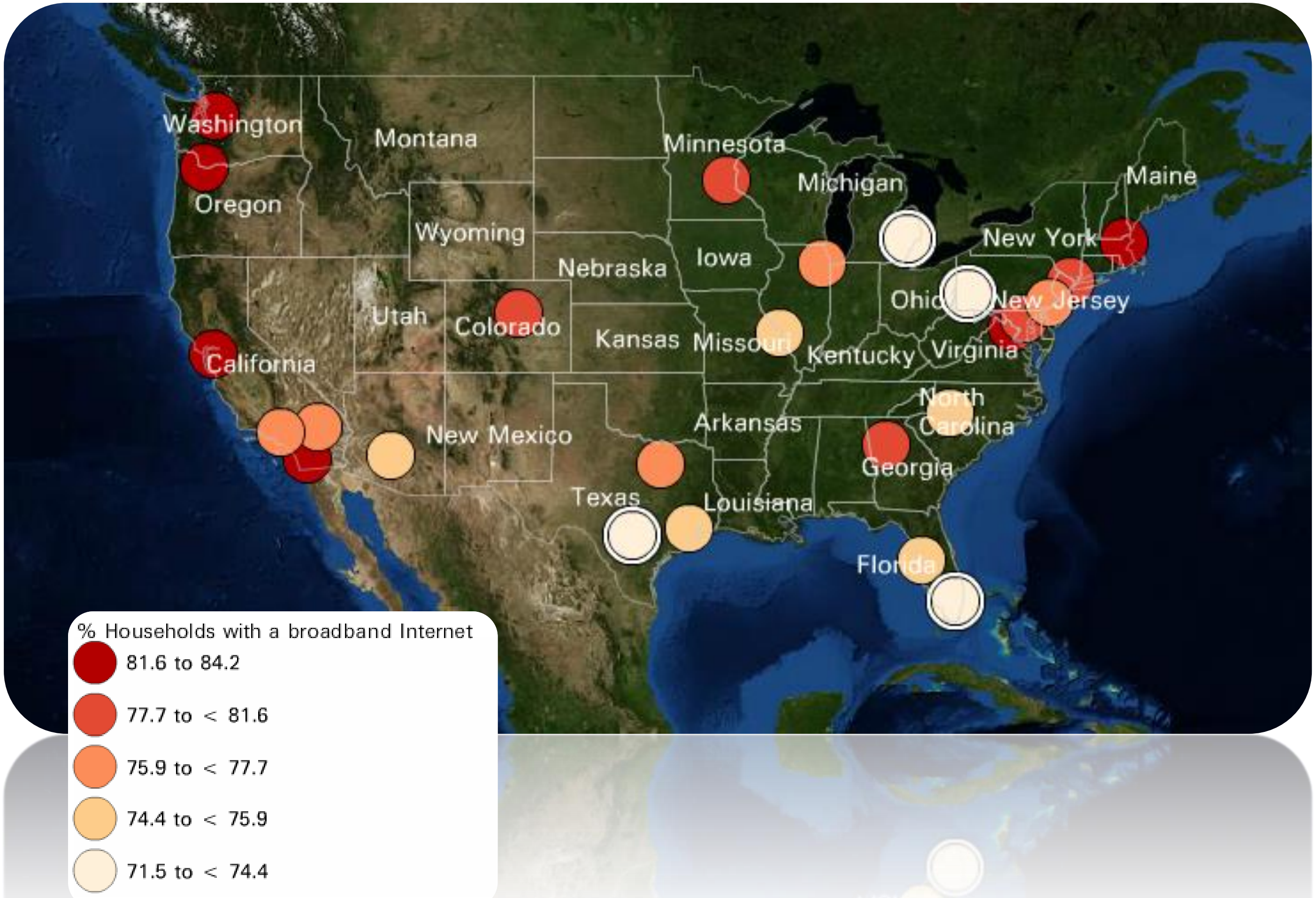
Metro Atlanta Better "Wired" Than The Average Metro

	ARC Region	Atlanta MSA	All MSAs	Non-MSA	USA
Share of HH with Internet Access	84.3%	83.5%	80.2%	69.6%	78.6%
With an Internet subscription:	80.0%	79.2%	76.1%	64.8%	74.4%
Dial-up alone	0.6%	0.8%	1.2%	2.7%	1.4%
DSL:	25.4%	27.3%	19.3%	30.9%	20.8%
With mobile broadband	*10.7%*	*11.3%*	*7.0%*	*9.1%*	*7.3%*
Without mobile broadband	*14.7%*	*16.0%*	*12.3%*	*21.8%*	*13.5%*
Cable modem:	44.1%	42.6%	50.9%	33.4%	48.5%
With mobile broadband	*20.4%*	*19.6%*	*21.0%*	*11.0%*	*19.7%*
Without mobile broadband	*23.6%*	*22.9%*	*29.9%*	*22.4%*	*28.9%*
Fiber-optic:	4.4%	4.2%	7.5%	2.9%	6.9%
With mobile broadband	*2.2%*	*2.2%*	*3.4%*	*1.0%*	*3.1%*
Without mobile broadband	*2.1%*	*2.1%*	*4.1%*	*1.9%*	*3.8%*
Satellite Internet service:	2.4%	2.5%	2.6%	7.9%	3.3%
With mobile broadband	*1.0%*	*1.1%*	*0.9%*	*2.3%*	*1.1%*
Without mobile broadband	*1.3%*	*1.4%*	*1.6%*	*5.6%*	*2.2%*
Two or more fixed broadband types/other:	16.6%	16.0%	11.9%	11.7%	11.8%
With mobile broadband	*8.8%*	*8.4%*	*6.2%*	*5.1%*	*6.0%*
Without mobile broadband	*7.8%*	*7.6%*	*5.7%*	*6.7%*	*5.8%*
Mobile broadband alone or with dialup	6.5%	6.6%	6.8%	10.6%	7.3%
Internet access without a subscription	4.3%	4.3%	4.1%	4.8%	4.2%
Share of HH with No Internet Access	**15.7%**	**16.5%**	**19.8%**	**30.4%**	**21.4%**

While the 10-county ARC region has a greater share of households with Internet access than does the larger Atlanta metro area (29 counties), metro Atlanta, in general, has better access than other metro areas.

Source: ARC custom analysis of ACS 2013 1-year data

Metro Atlanta a Leader in the Southeast for Broadband Availability



Atlanta metro has better access to broadband internet than all other of the large metro areas in the Southeast, and has among the highest percentage of households with Broadband access in the entire nation. San Jose, home to "Silicon Valley," is the "most wired" metro in the nation.

Source: American Community Survey, 2013

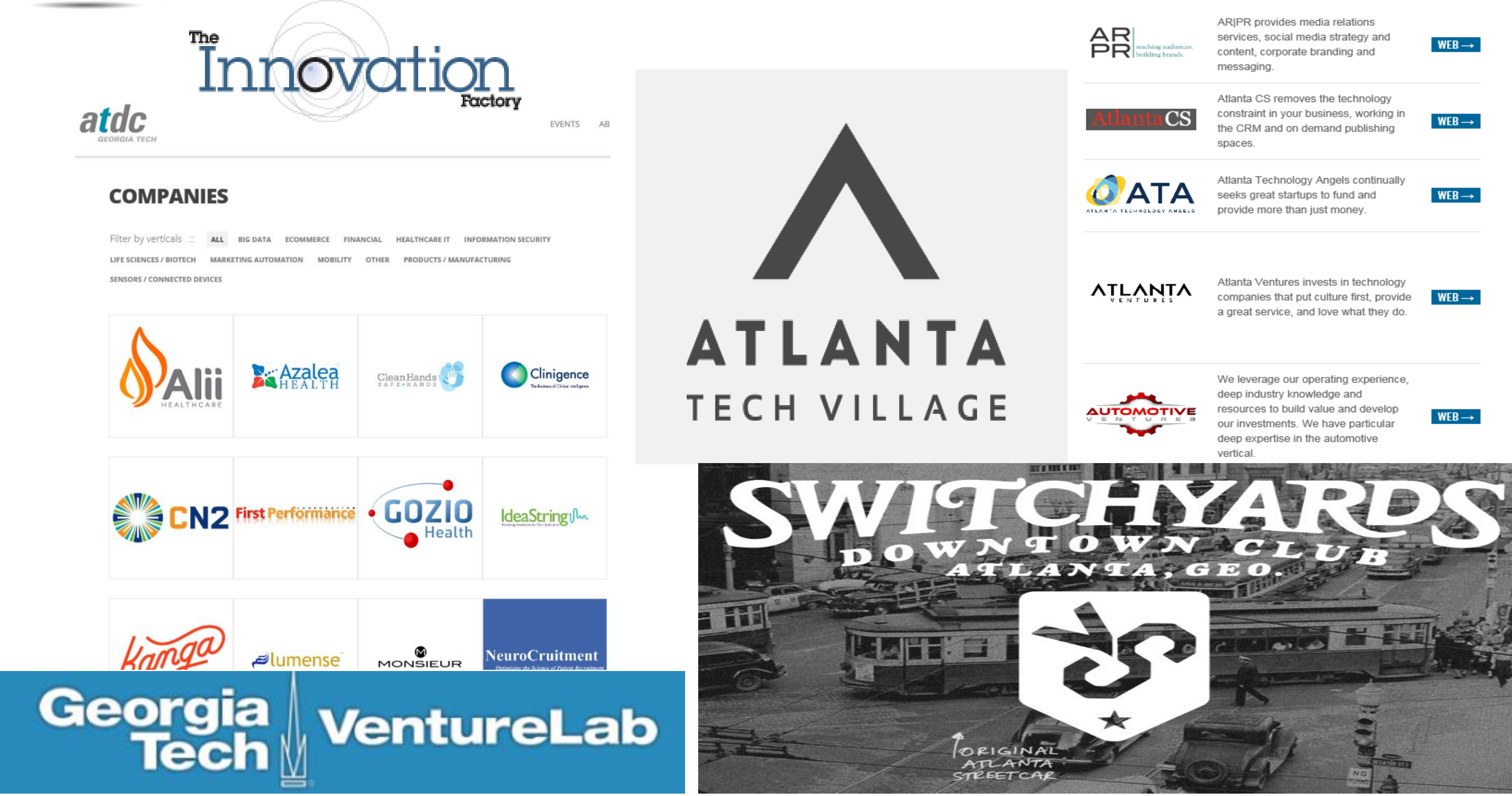
Broadband Adoption Varies Widely Among ARC Counties

	ARC Region	Cherokee County	Clayton County	Cobb County	DeKalb County	Douglas County	Fayette County	Fulton County	Gwinnett County	Henry County	Rockdale County
Share of HH with Internet Access	84.3%	89.6%	75.6%	85.6%	82.7%	84.2%	89.6%	82.4%	87.4%	89.6%	76.3%
With an Internet subscription:	80.0%	87.8%	70.9%	82.2%	77.3%	77.4%	87.9%	77.5%	83.1%	87.3%	72.2%
Dial-up alone	0.6%	0.5%	1.0%	0.7%	0.6%	0.6%	0.4%	0.5%	0.6%	0.7%	1.3%
DSL:	25.4%	30.8%	24.7%	25.2%	25.1%	24.1%	30.4%	22.7%	24.3%	35.0%	31.5%
With mobile broadband	*10.7%*	*14.4%*	*9.9%*	*10.6%*	*11.6%*	*8.4%*	*11.6%*	*10.2%*	*9.3%*	*14.9%*	*7.6%*
Without mobile broadband	*14.7%*	*16.4%*	*14.8%*	*14.7%*	*13.5%*	*15.7%*	*18.8%*	*12.5%*	*15.0%*	*20.1%*	*23.9%*
Cable modem:	44.1%	42.5%	40.9%	43.2%	40.5%	39.8%	43.3%	49.7%	43.8%	39.5%	50.1%
With mobile broadband	*20.4%*	*21.5%*	*21.9%*	*18.1%*	*20.8%*	*19.1%*	*21.6%*	*24.4%*	*18.2%*	*14.4%*	*19.0%*
Without mobile broadband	*23.6%*	*21.0%*	*19.0%*	*25.1%*	*19.7%*	*20.7%*	*21.7%*	*25.2%*	*25.6%*	*25.0%*	*31.1%*
Fiber-optic:	4.4%	3.9%	6.3%	5.2%	4.3%	4.9%	6.4%	4.5%	3.5%	2.4%	2.3%
With mobile broadband	*2.2%*	*2.4%*	*4.1%*	*2.6%*	*2.4%*	*1.9%*	*2.9%*	*2.2%*	*1.6%*	*0.9%*	*1.6%*
Without mobile broadband	*2.1%*	*1.5%*	*2.2%*	*2.7%*	*1.9%*	*3.0%*	*3.5%*	*2.3%*	*1.9%*	*1.5%*	*0.7%*
Satellite Internet service:	2.4%	2.5%	3.1%	2.9%	1.9%	2.0%	2.7%	2.4%	2.0%	2.8%	1.9%
With mobile broadband	*1.0%*	*1.3%*	*1.4%*	*1.3%*	*1.1%*	*0.5%*	*1.8%*	*0.8%*	*0.9%*	*1.0%*	*0.5%*
Without mobile broadband	*1.3%*	*1.2%*	*1.6%*	*1.6%*	*0.8%*	*1.6%*	*1.0%*	*1.6%*	*1.1%*	*1.9%*	*1.4%*
Two or more fixed broadband types/other:	16.6%	11.8%	16.4%	17.2%	18.6%	21.1%	13.1%	14.5%	21.1%	9.6%	9.1%
With mobile broadband	*8.8%*	*6.4%*	*10.7%*	*9.2%*	*8.8%*	*11.4%*	*8.4%*	*8.5%*	*10.1%*	*5.2%*	*3.6%*
Without mobile broadband	*7.8%*	*5.4%*	*5.7%*	*8.0%*	*9.8%*	*9.7%*	*4.7%*	*6.0%*	*11.0%*	*4.3%*	*5.5%*
Mobile broadband alone or with dialup	6.5%	8.0%	7.7%	5.5%	9.0%	7.4%	3.6%	5.8%	4.7%	10.0%	3.8%
Internet access without a subscription	4.3%	1.9%	4.6%	3.4%	5.4%	6.8%	1.8%	4.9%	4.3%	2.3%	4.1%
Share of HH with No Internet Access	**15.7%**	**10.4%**	**24.4%**	**14.4%**	**17.3%**	**15.8%**	**10.4%**	**17.6%**	**12.6%**	**10.4%**	**23.7%**

Broadband adoption varies widely among the counties in the 10-county ARC area. This variation is highly correlated with income, as the two counties with the lowest adoption rates, Clayton and Rockdale, also have among the lowest household incomes in the region.

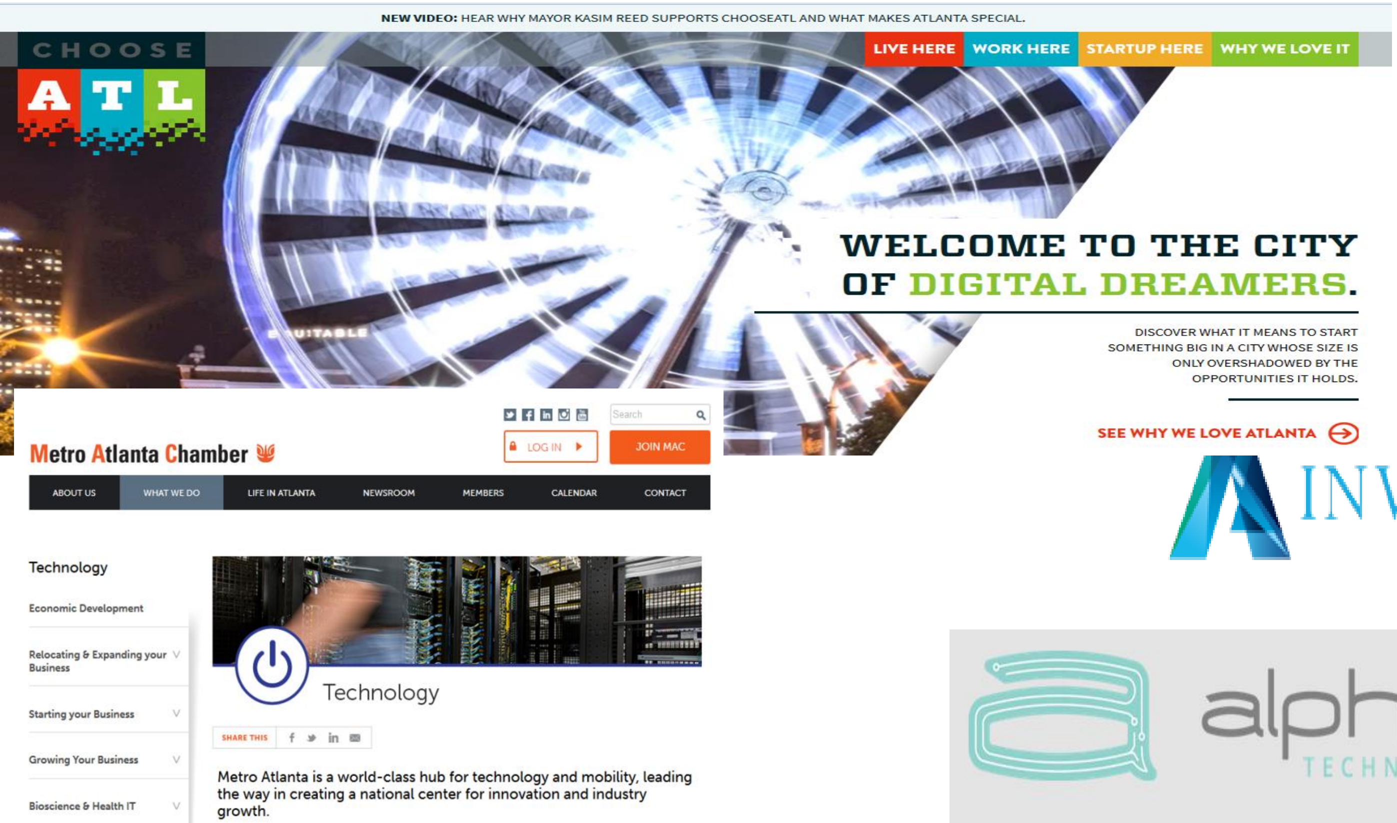
Source: ARC custom analysis of ACS 2013 1-year data

Incubators/Accelerators



The Atlanta area also has an already strong and building critical mass of incubator and accelerator space--- key infrastructure for growing the digital economy from the broadband foundation!

Marketing "Digital": Telling the Story of the Metro Atlanta Scene



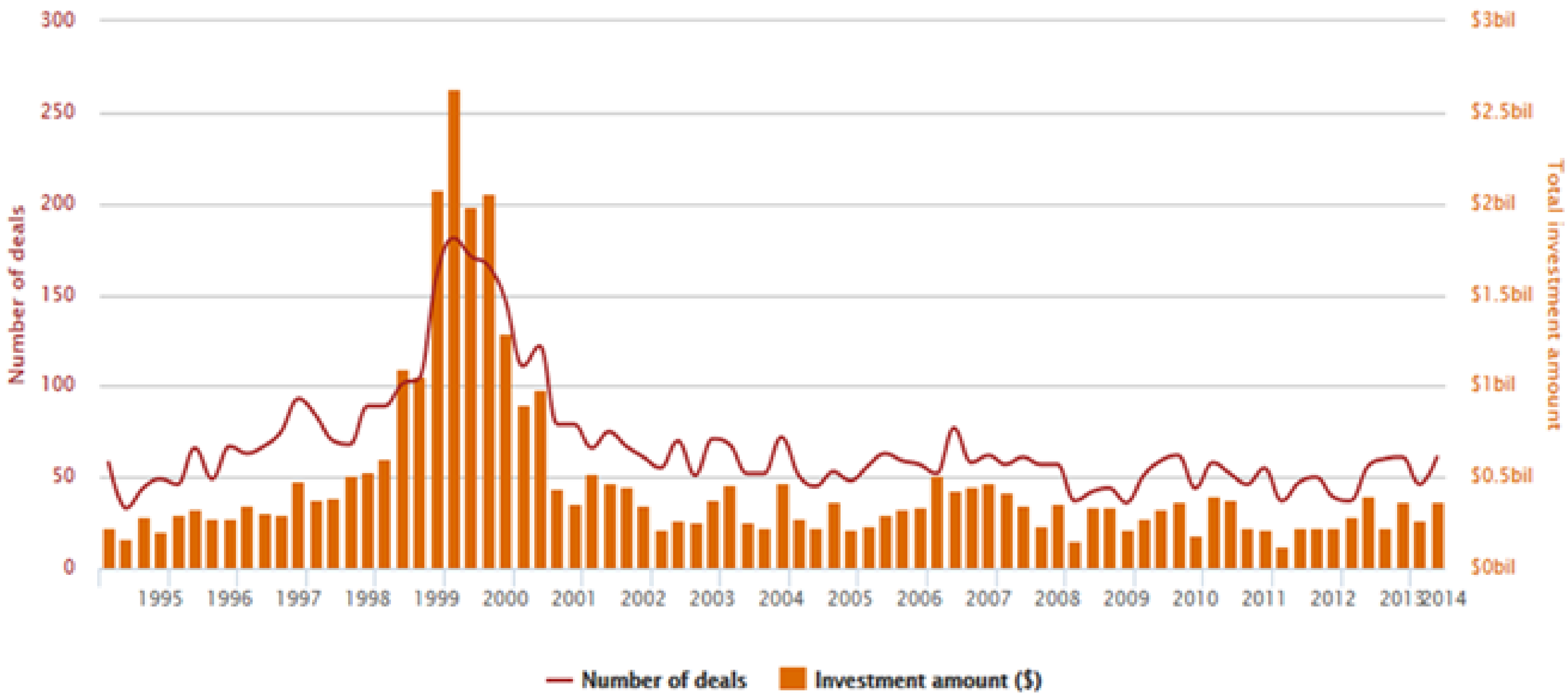
STARTUP ATLANTA

INVEST ATLANTA
Atlanta's Development Authority

alpharetta
TECHNOLOGY COMMISSION

Numerous and new organizations and industry groups also are critical assets to the Atlanta area digital economy infrastructure

Venture Capital Still Lagging in Southeast



Current venture capital availability in the Southeast has not reached the dot com boom on the late 90's and early 2000s. Conditions are stabilizing, but not comparable to the west coast and northeast high tech markets

Source: ARC custom analysis of ACS 2013 1-year data

Regional Snapshot

Venture Capital: Just the Facts

- Georgia companies scored \$403.2 million in venture capital in 2014, up from \$262.8 million the prior year. US levels hit \$51 billion, up 47% from 2013 and highest point since 2000!

- We inventoried 25 venture capital firms, most doing deals in the \$10 million to \$100 million range.

- Considering <u>broader</u> sources of funding, Atlanta is the #8 ranked metro area in the nation for 'tech acquisitions'

- Atlanta holds the "top spot for tech deals in the Southeast" (13 deals made in the last year- one coming in at \$740 million).

Source: PricewaterhouseCoopers LLP, National Venture Capital Association, PrivCo

Angel Investor Tax Credit: A New Tool in Georgia's Toolbox

- A part of HB 1069, which provides a state tax credit of up to $50,000 annually for investors of a early stage, start up companies in Georgia.

- The credit equals 35% of the amount invested and is available to investments made in years 2011, 2012,and 2013.

- Investments can be made by individuals or pass through entities without business operations that manage less than $5 million capital.

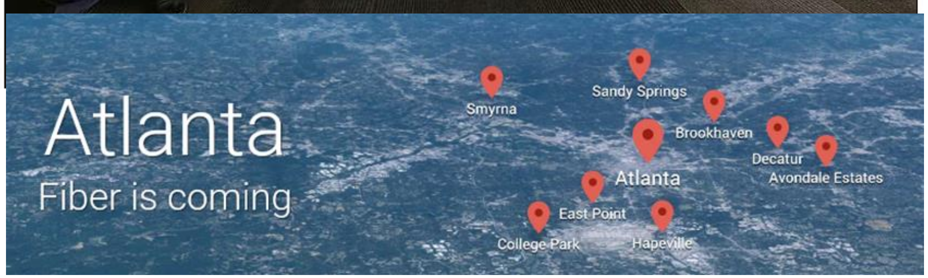
Regional Snapshot

Recent News in Digital Economy

The Atlanta Journal-Constitution

Credible. Compelling. Complete.

Google puts region in Web's fast lane



Worldpay ATDC $1 million investment In Midtown

Microsoft Incubator @ Flatiron

The New York Times

Finally, Net Neutrality

By VIKAS BAJAJ FEBRUARY 26, 2015 4:22 PM 39 Comments