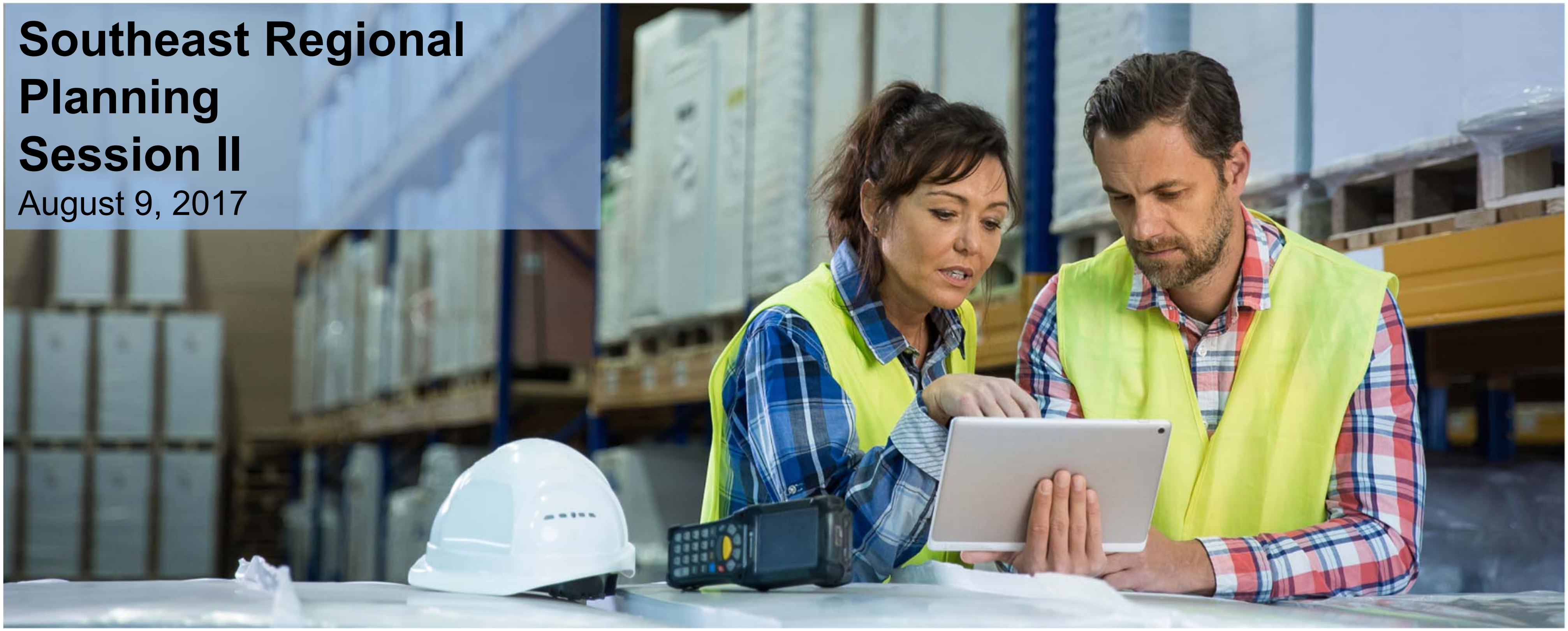
Southeast Regional Planning Session II

August 9, 2017



SIGILLUM REIPUBLICÆ MASSACHUSETTENSIS

Objectives

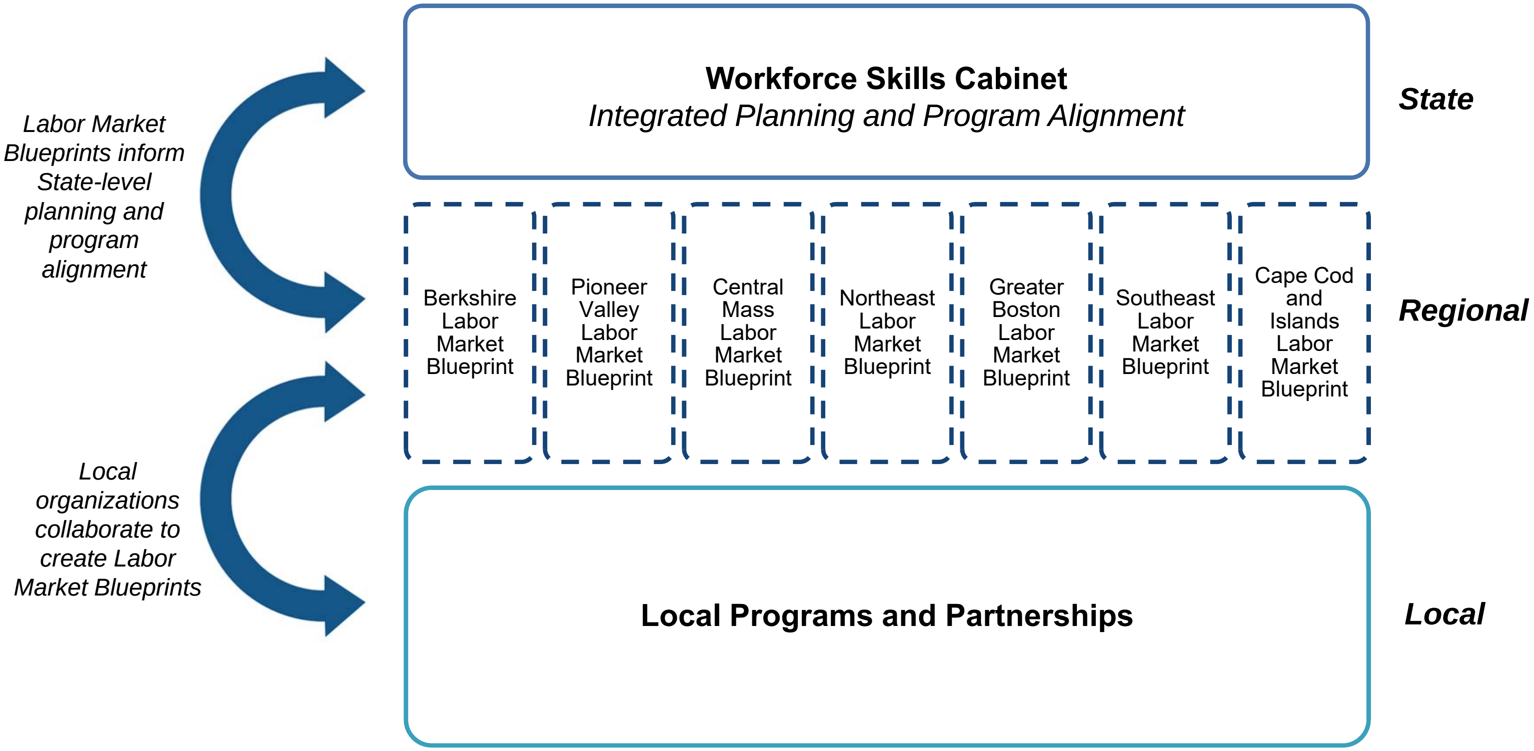
- Confirm **regional criteria** to select high priority industries and occupations
- Confirm regional **high priority industries and occupations**
- Confirm top demographic, labor pool, and talent pipeline considerations impacting workforce skills gaps

Agenda

- Regional Planning Context
  - Regional planning timeline
  - Blueprint structure
- Regional Demographic Context
  - State and Regional Demographics on the Workforce
- Framing the Data Process to Identify Priority Industries/Occupations
  - Region's Preliminary Criteria
  - Confirming Industry Priorities
  - Review Occupational Gap Priorities
  - Data Tool

I. Regional Planning Context

Why is this important?



Labor Market Blueprints inform State-level planning and program alignment

Local organizations collaborate to create Labor Market Blueprints

Workforce Skills Cabinet
Integrated Planning and Program Alignment

State

Berkshire Labor Market Blueprint

Pioneer Valley Labor Market Blueprint

Central Mass Labor Market Blueprint

Northeast Labor Market Blueprint

Greater Boston Labor Market Blueprint

Southeast Labor Market Blueprint

Cape Cod and Islands Labor Market Blueprint

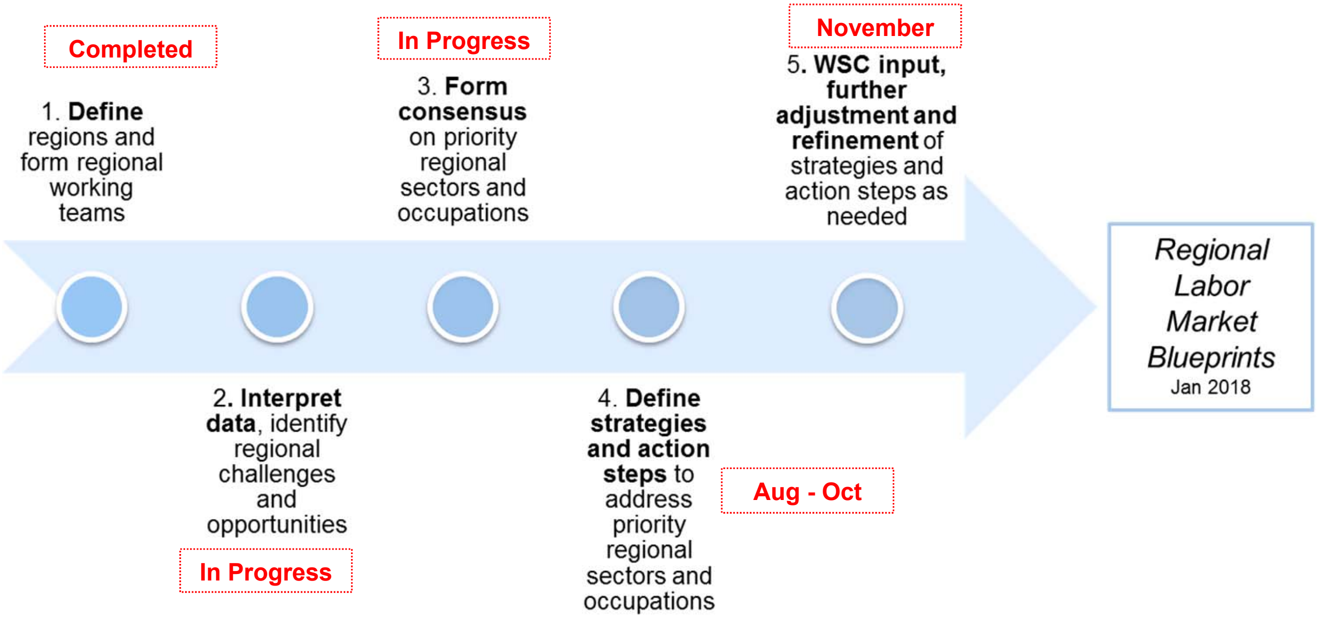
Regional

Local Programs and Partnerships

Local

Regional Planning Timeline

The Path to Regional Labor Market Blueprints: Core Regional Working Groups



Completed

1. **Define** regions and form regional working teams

In Progress

2. **Interpret data**, identify regional challenges and opportunities

In Progress

3. **Form consensus** on priority regional sectors and occupations

Aug - Oct

4. **Define strategies and action steps** to address priority regional sectors and occupations

November

5. **WSC input, further adjustment and refinement** of strategies and action steps as needed

Regional Labor Market Blueprints
Jan 2018

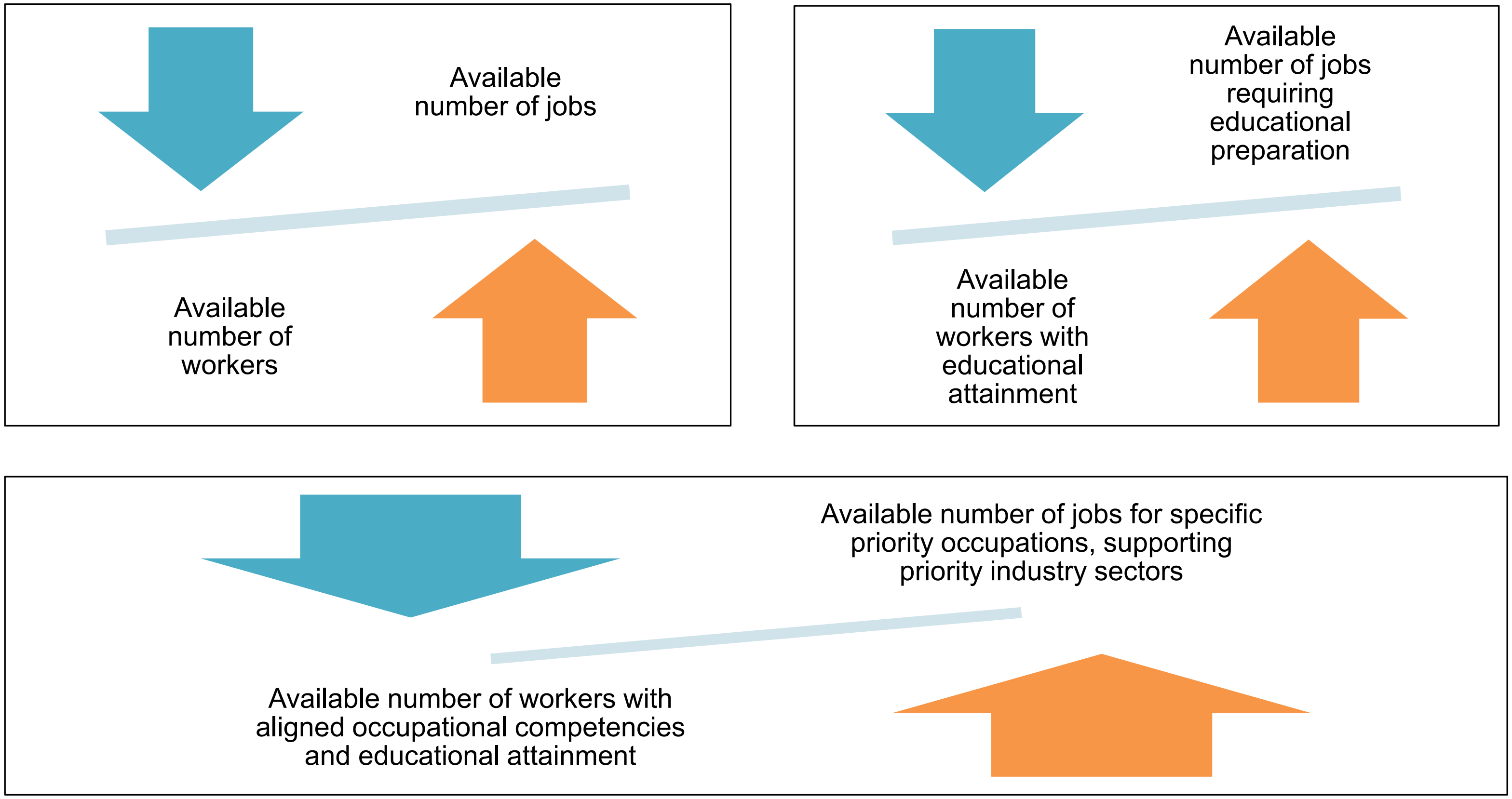
← Stakeholder Engagement →

Blueprint Review – Identify Strategies for Skill Gaps

Introduction	Describe the process of creating a regional plan.
Where are we now?	Describe the current state of your region, including an analysis of industries, occupations, demographic shifts, and gaps between employer demand and employee supply. I. Industry Demand Analysis II. Occupational Demand Analysis ← Session I III. Regional Context: Demographic and Industry Trends IV. Workforce Supply ← Session II
Where do we want to go?	Describe the collectively developed criteria, industry and occupational priorities, vision, mission, and goals for your region. I. Criteria for Priority Industries and Occupations ← Sessions I-II II. High Priority Industries III. High Priority Occupations IV. Assets V. Vision, Mission, Goals ← Sessions III-IV
How do we get there?	Describe the strategies you will jointly employ to align the work of multiple systems around your shared vision, mission, and goals. I. Shared Strategies ← Sessions III-IV II. Mutually Reinforcing Activities

Framing the conversation: What is a skills gap?

Changes in *demand* (jobs) or *supply* (people) can impact the skills gap.



Available number of jobs

Available number of workers

Available number of jobs requiring educational preparation

Available number of workers with educational attainment

Available number of jobs for specific priority occupations, supporting priority industry sectors

Available number of workers with aligned occupational competencies and educational attainment

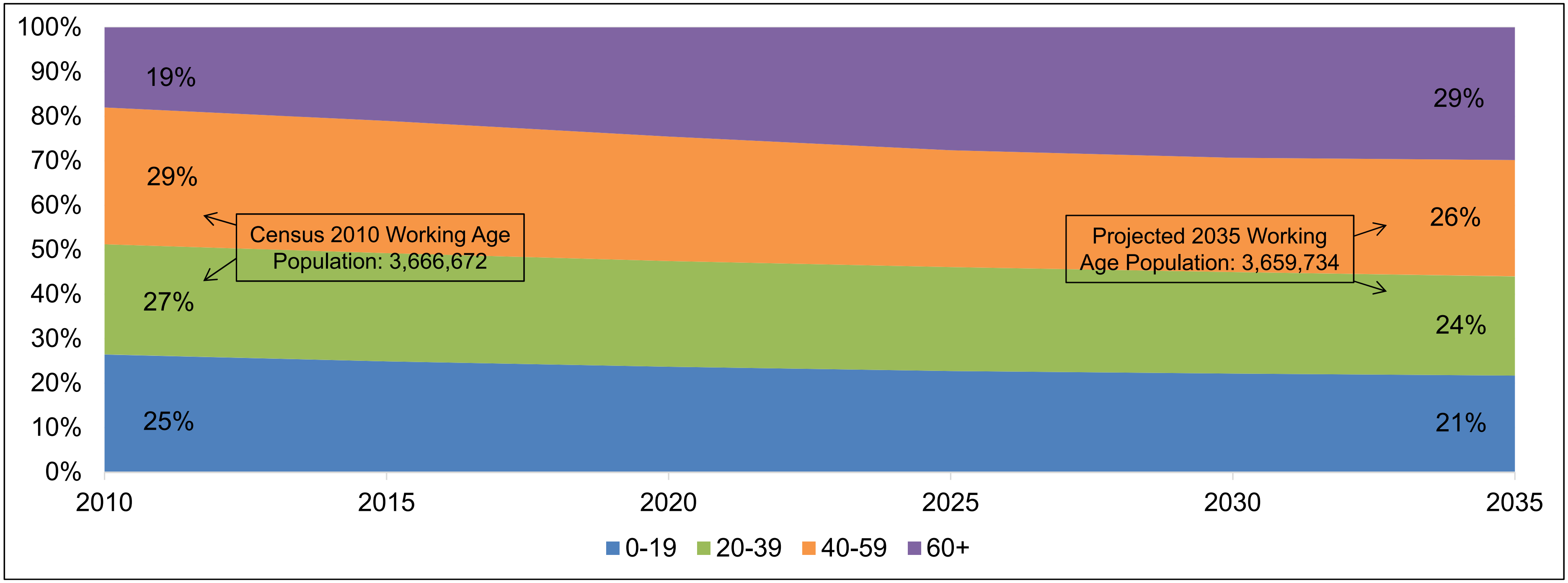
I. Regional Demographic Context

Projected State Population Growth by Age, 2010-2035

The share of older residents is increasing, while the share and number of the working age population is declining.

Census 2010
Population: 6,547,629

Projected 2035
Population: 7,319,469



Census 2010 Working Age Population: 3,666,672

Projected 2035 Working Age Population: 3,659,734

UMass Donahue Institute, Long-term Population Projections for Massachusetts Regions and Municipalities, March 2015

State Trends, Race/Ethnicity and Place of Origin

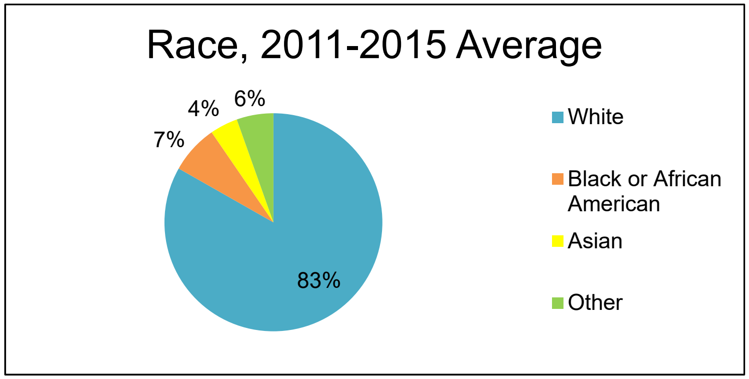
Massachusetts population growth is driven by immigration and growth in diverse populations.

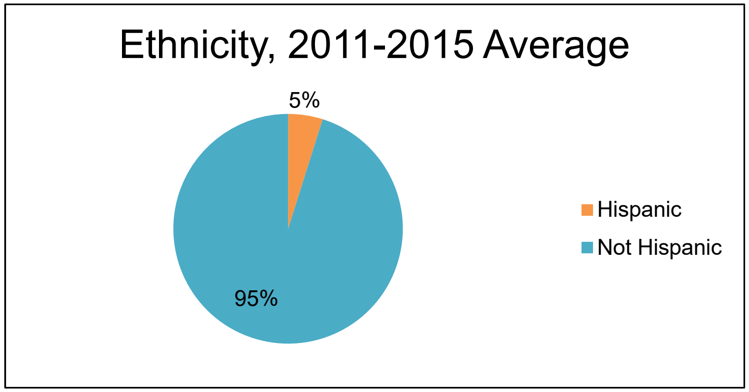
Massachusetts	2000	2012-2014	Share of Total Population 2012-2014	***Absolute Change***	Percent Change	Average Annual Growth Rate
Total Population*	6,131,752	6,447,295	100%	***315,543***	5.1%	0.4%
Nativity						
Native Born	5,279,860	5,326,213	83%	***46,353***	0.9%	0.1%
Foreign Born**	851,892	1,121,082	17%	***269,190***	31.6%	2.1%
Race/Ethnicity						
White, non-Hispanic	5,026,398	4,817,401	75%	***-208,997***	-4.2%	-0.3%
Black, non-Hispanic	300,758	407,723	6%	***106,965***	35.6%	2.4%
Asian, non-Hispanic	224,242	375,130	6%	***150,888***	67.3%	4.0%
Hispanic	412,496	678,193	11%	***265,697***	64.4%	3.9%
Other race, non-Hispanic	167,858	168,848	3%	***990***	0.6%	0.0%
*Civilian non-institutional population						
**Foreign born is defined here as those born outside of the 50 states and the District of Columbia, who was not born to American parents abroad, and people born in Puerto Rico and other U.S. territories.						

Source: Commonwealth Corporation via 2000 Census, 2012-2014 American Community Survey, PUMS.

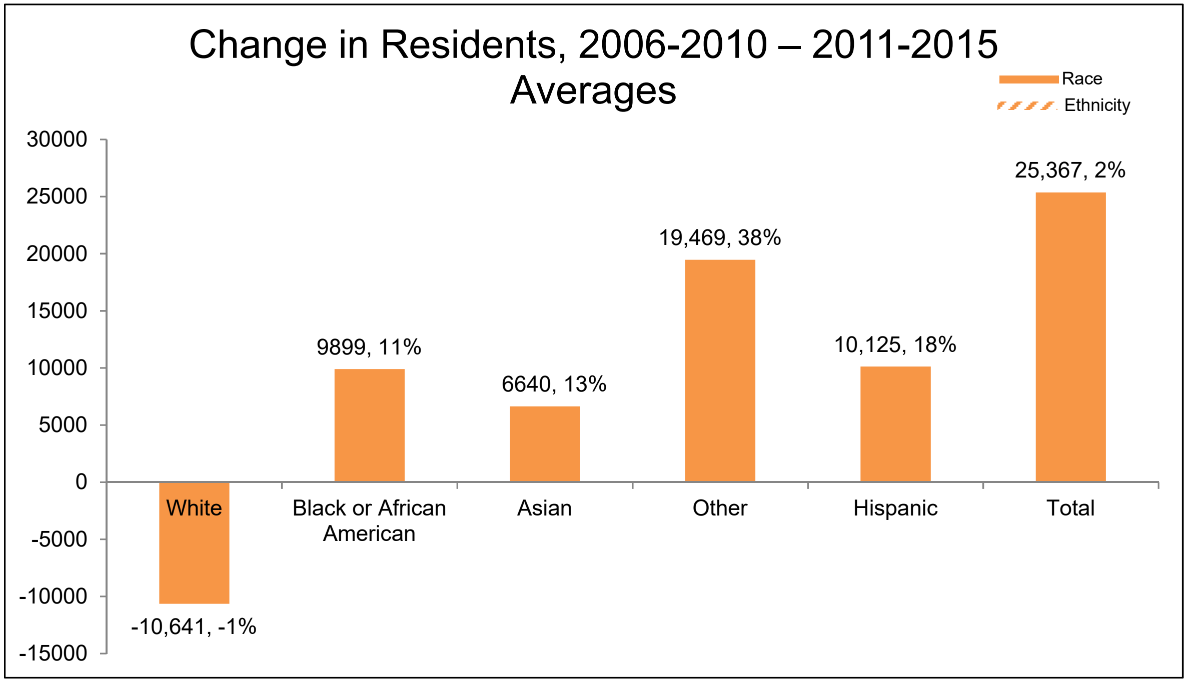
Regional Trends, Race/Ethnicity

The total population in Southeast MA has increased slightly over the past ten years, driven by growth in minority populations that counteracts a decline in the white population.





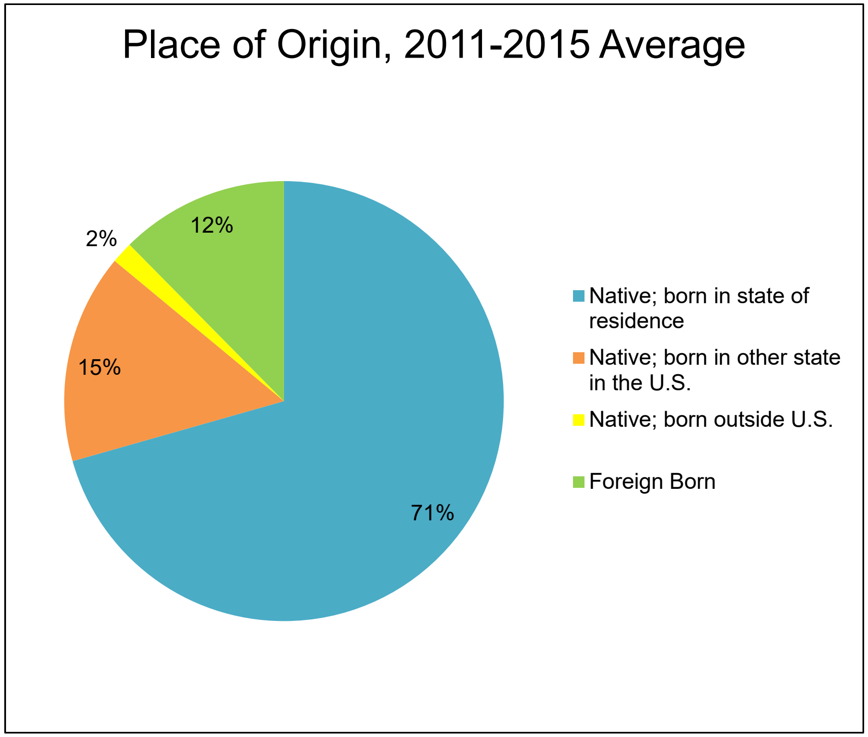
Total Population Estimate: 1,359,366
2011-2015 Average

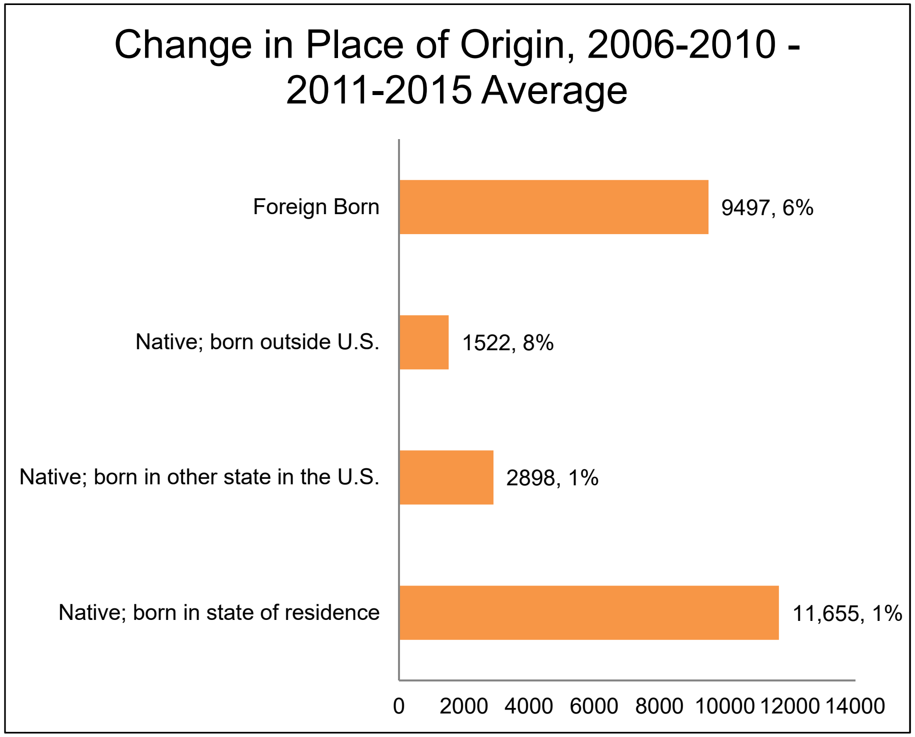


Source: American Community Survey, Selected Characteristics of the Total and Native Populations of the United States, 5 Year Averages 2011-2015

Regional Trends, Place of Origin

Almost ¾ of Southeast MA was born locally. The share of foreign-born residents has increased by 6% over the past ten years.

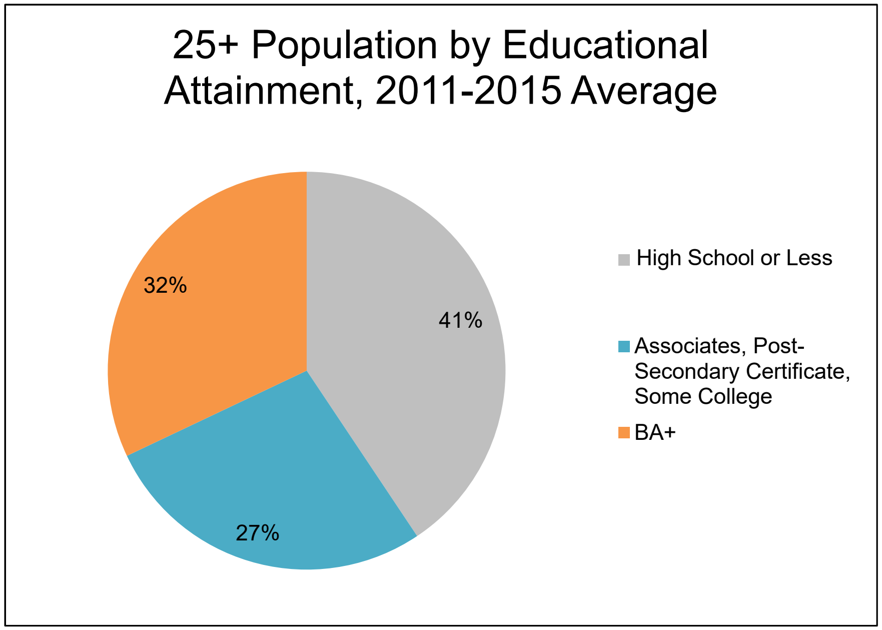


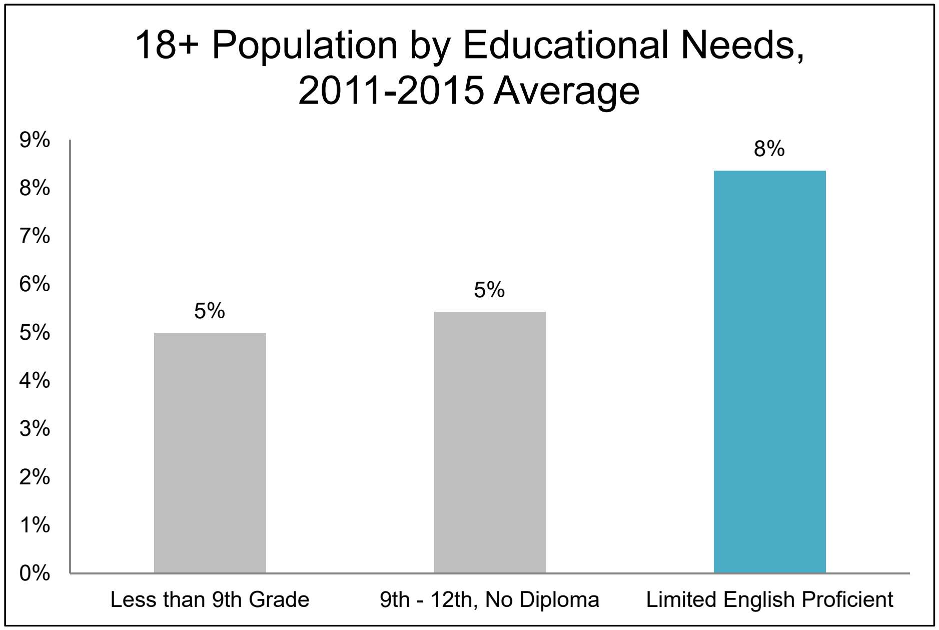


Source: American Community Survey, Selected Characteristics of the Total and Native Populations of the United States, 5 Year Averages 2011-2015

Regional Trends, Education

Although much of Southeast MA is highly educated, a significant portion of residents require language or basic skill remediation.





Total Population Estimate, 25+: 940,475

Total Population Estimate, 18+: 1,062,656

Source: American Community Survey 5 Year Averages 2011-2015

Regional Commuter Patterns

Southeast MA employers face a net loss of approximately 135,000 employees who leave the region for work.

152,536
Employed in Region but Living Outside

332,134
Living and Employed in Southeast

288,940
Living in Region but Employed Outside

U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2014).

Takeaways

- As our State’s population ages, the share of working-age and young people is declining.
- The total population in Southeast MA has increased slightly over the past ten years, but decline in the white population has been accompanied by growth in minority and foreign-born populations.
- The Southeast region loses more workers to outside of the region than the amount of employees that it gains.

II. Framing the Data Process to Identify Priority Industries/Occupations

Preliminary Criteria

- Supply gap
  - Gap between demand and output
- High demand, high wage Occupations (4 and 5 Stars)
  - Jobs that will not put you in debt
  - Meeting current demand of employers
- *Supportive employers*
- Career pathways
  - Accessible training
- Support industry resilience
  - Jobs that will not be outsourced or obsolete
  - Jobs that encourage residents to stay local rather than move to Boston
- Aligned with regional priorities
  - Jobs that can lead to increased transit in the area (construction, manufacturing)

Preliminary Priorities

Industries

- Finance and Insurance
- Healthcare and Social Services
- Professional and Technical Services (IT)

Occupations

- *None identified yet*

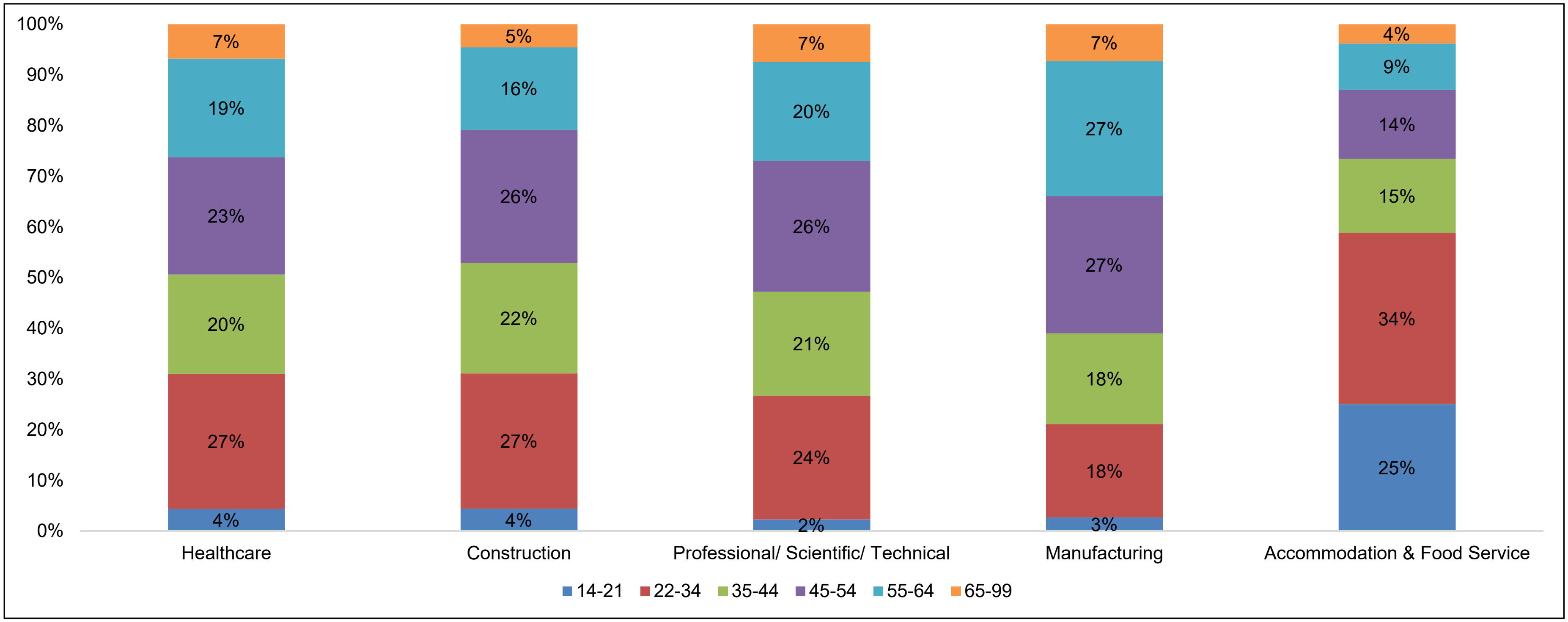
Regional Industry Priorities– Establishments, Employment, Wages

	Establishments			Employment				Wages	
	Count	Share	Change	Count	Share	Change	Total Wages	Avg Weekly Wages	Change
Finance and Insurance	1,596	3.7%	▲ 2.8%	24,687	4.5%	▲ 4.5%	$462,071,147	$1,440	▲ 12.45%
Professional and Technical Services	3,748	8.7%	▲ 5.2%	20,442	3.7%	▲ 7.9%	$400,004,191	$1,505	▲ 8.67%
Health Care and Social Assistance	11,127	25.9%	▲ 10.3%	104,528	19.0%	▲ 6.6%	$1,223,033,602	$900	▲ 7.05%
Construction	4,391	10.2%	▲ 7.8%	36,227	6.6%	▲ 22.9%	$619,237,345	$1,315	▲ 8.24%
Manufacturing	1,420	3.3%	▼ -4.4%	40,647	7.4%	▼ -1.3%	$634,839,878	$1,201	▲ 2.44%
Total, all industries	43,036	100.0%	▲ 5.3%	551,218	100.0%	▲ 5.6%	$6,885,126,429	$961	▲ 9.76%

Source: Department of Unemployment Assistance/Bureau of Labor Statistics Quarterly Census of Employment and Wages, Q3 2013 - 2016

Priority Regional Industries by Age

Of the selected industries, Manufacturing has the oldest workforce in the region, with 34% of the workforce over the age of 55. In comparison, PST, Construction, and Healthcare 21-27% of the workforce is over the age of 55. Accommodation & Food Services is the youngest industry.

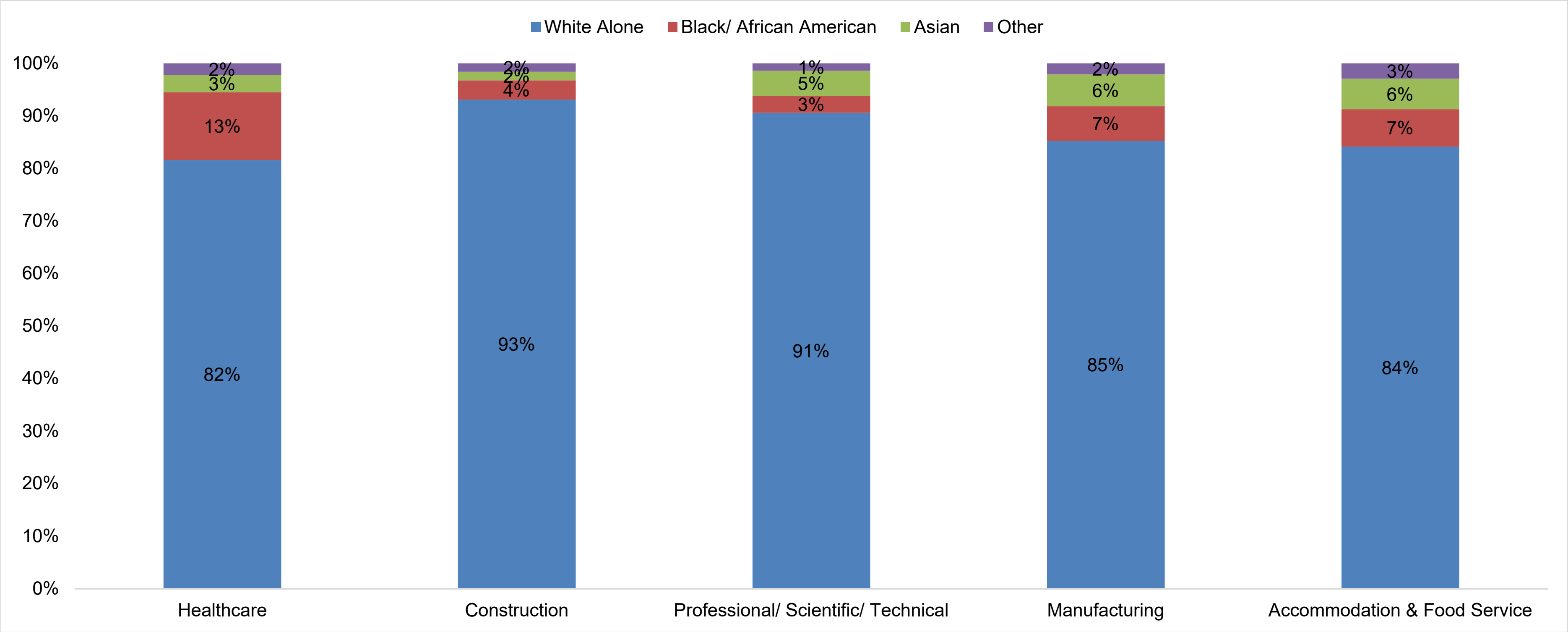


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators Q2 2016

Confirming Industry Priorities
Industry Overview: Race and Ethnicity

Priority Regional Industries by Race

Healthcare is the most racially diverse industry, with 15% non-white employees. Construction is the least racially diverse industry.

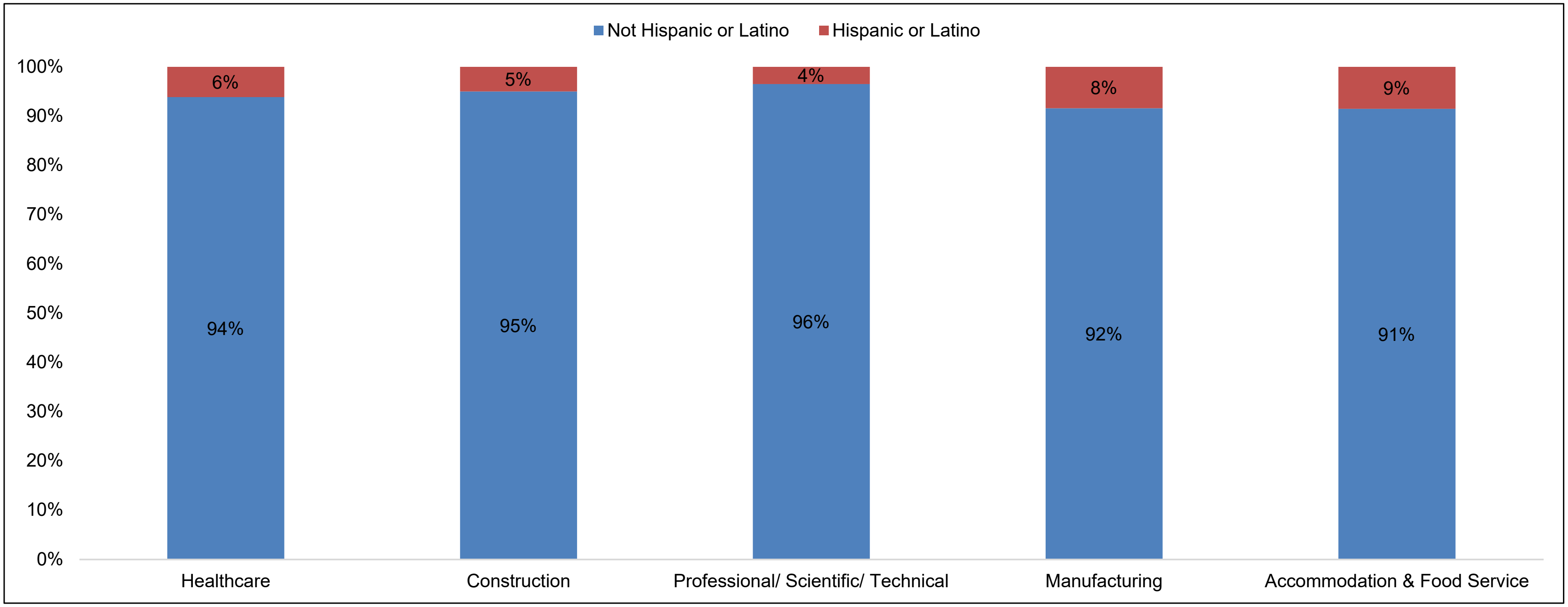


Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators Q2 2016

Confirming Industry Priorities
Industry Overview: Race and Ethnicity

Priority Regional Industries by Ethnicity

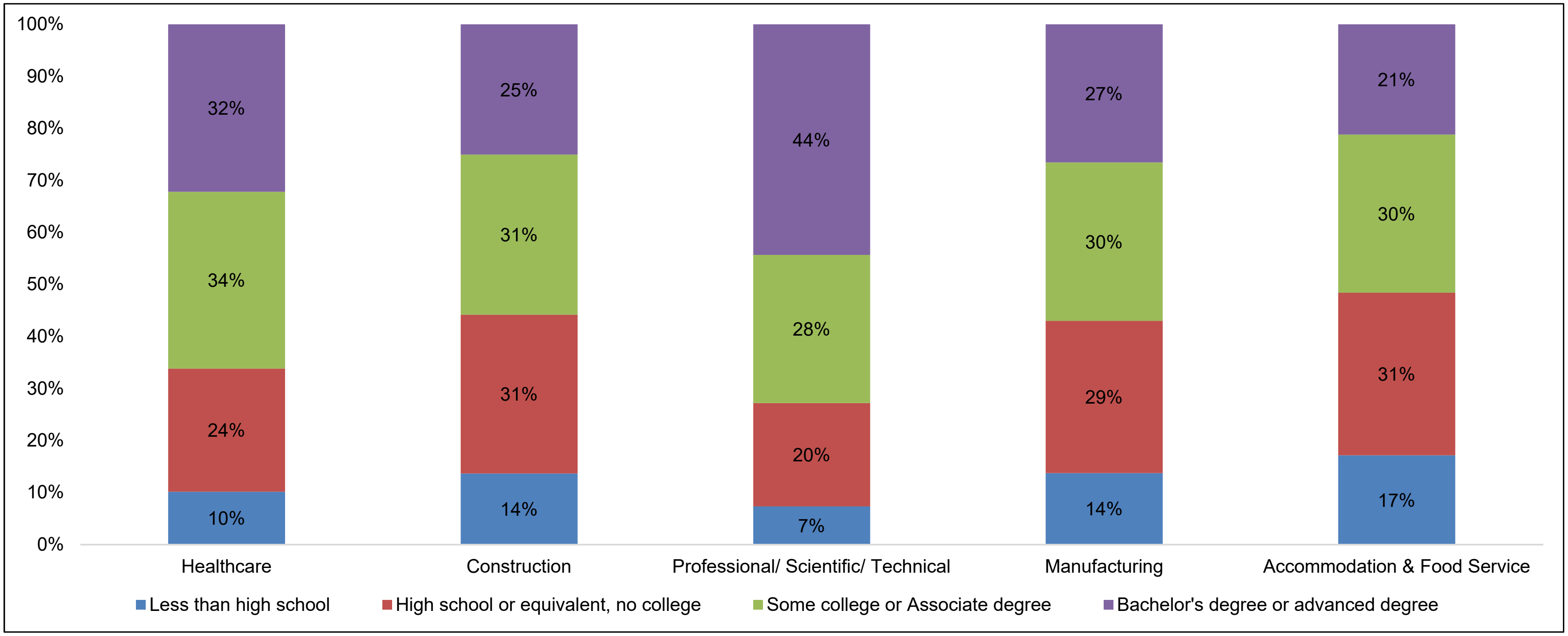
PST and Construction have the lowest percentages of Hispanic employees.



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators Q2 2016

Priority Regional Industries by Educational Attainment

Construction, Accommodation & Food Service, & Manufacturing offer the most opportunities for individuals with a high school diploma or less. Conversely, 2/3 of Healthcare and almost ¾ of Professional, Scientific, and Technical Services have at least some postsecondary education.



Source: US Census Longitudinal Employer-Household Dynamics: Quarterly Workforce Indicators Q2 2016

Takeaways

- Of the selected industries, Manufacturing has the oldest workforce in the region, with 34% of the workforce over the age of 55. In comparison, PST, Construction, and Healthcare 21-27% of the workforce is over the age of 55. Accommodation & Food Services is the youngest industry.
- Healthcare is the most racially diverse industry, with 15% non-white employees. Construction is the least racially diverse industry. PST and Construction have the lowest percentages of Hispanic employees.
- Construction, Accommodation & Food Service, & Manufacturing offer the most opportunities for individuals with a high school diploma or less. Conversely, 2/3 of Healthcare and almost ¾ of Professional, Scientific, and Technical Services have at least some postsecondary education.

Confirming Industry Priorities

Discussion

- Does this information support your priority industry selections so far? What other questions do you have?

III. Confirming Supply Gaps and Occupational Priorities

Supply Gap Analysis

How do we calculate a supply gap ratio?

Supply Gap Ratio = Projected Qualified Individuals Per Opening

- Supply Gap Ratio is a ***proxy measure*** for understanding what occupations are likely to not have enough talent to meet employer demand.
- Supply / Demand = Supply Gap Ratio
  - 100 qualified individuals / 50 potential openings = supply gap ratio of 2
    - 2 qualified individuals per opening (More supply than demand)
  - 6 qualified individuals / 12 potential openings = supply gap ratio of 0.5
    - 0.5 qualified individuals per opening (Less supply than demand)

How do we calculate demand and supply?

Demand

How many potential job openings do we expect for a given occupation?

Average of total number of jobs for each occupation across three data sets…

- 2017 projections from openings and replacement (OES)
- 2024 projections from openings and replacement (OES)
- Help Wanted Online annualized 2016 job postings

Supply

How many qualified individuals do we potentially have available to fill a relevant job opening?

Sum of available workers or graduates related to an occupation from multiple data sets…

- Unique UI claims, 2016 (DUA)
- Relevant completer data
  - Voc-Tech completers, 2013-2015 average (DESE), 50% available*
  - Community College completers, 2013-2015 average (DHE), 90% available
  - State University completers, 2013-2015 average (DHE), 71% available
  - Private University completers, 2013-2015 average (iPEDS), 55% available

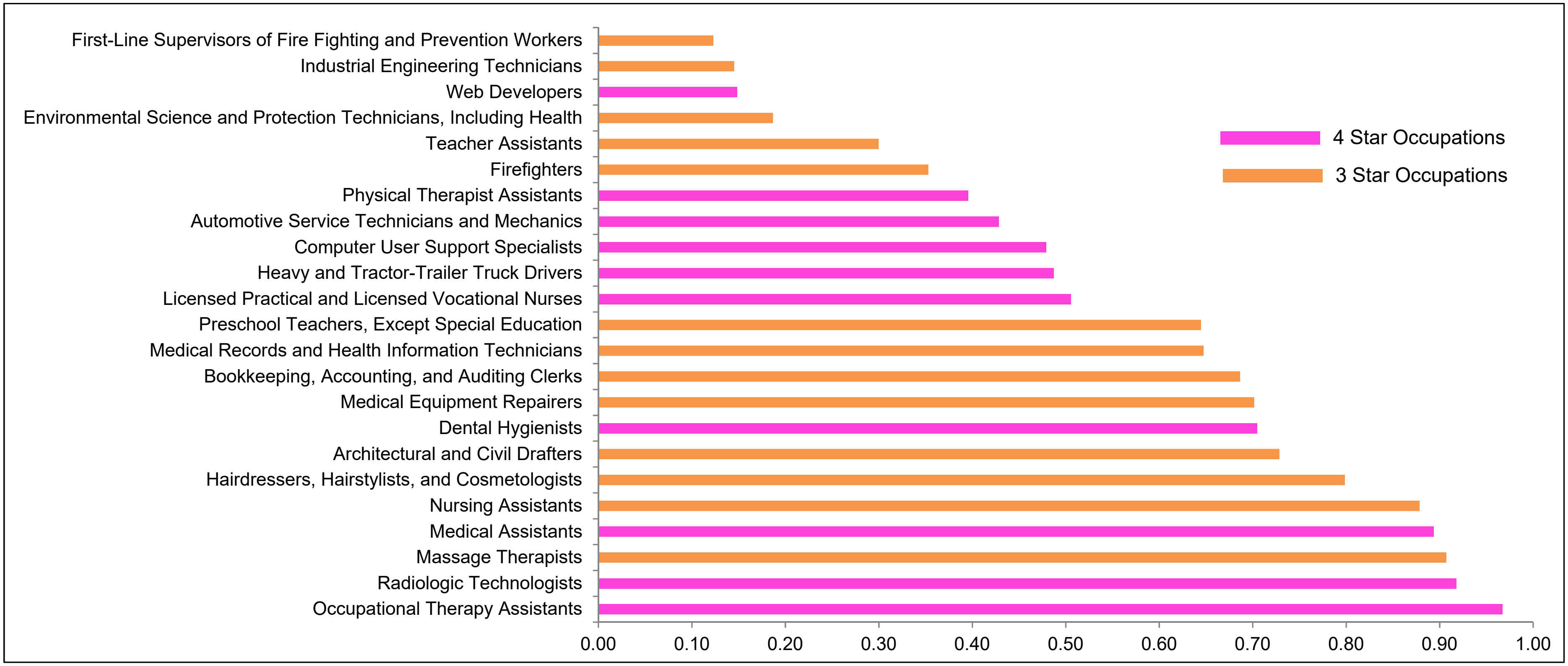
*All retention figures are statewide, studies cited in Data Tool

**Occupations requiring post-secondary education only

Supply Gap Analysis

More Openings than Qualified: Regional Sub-BA Occupations

Among all occupations requiring an Associates or Certificate, computer/IT, healthcare support occupations, transportation, and a number of installation professions face supply gaps.

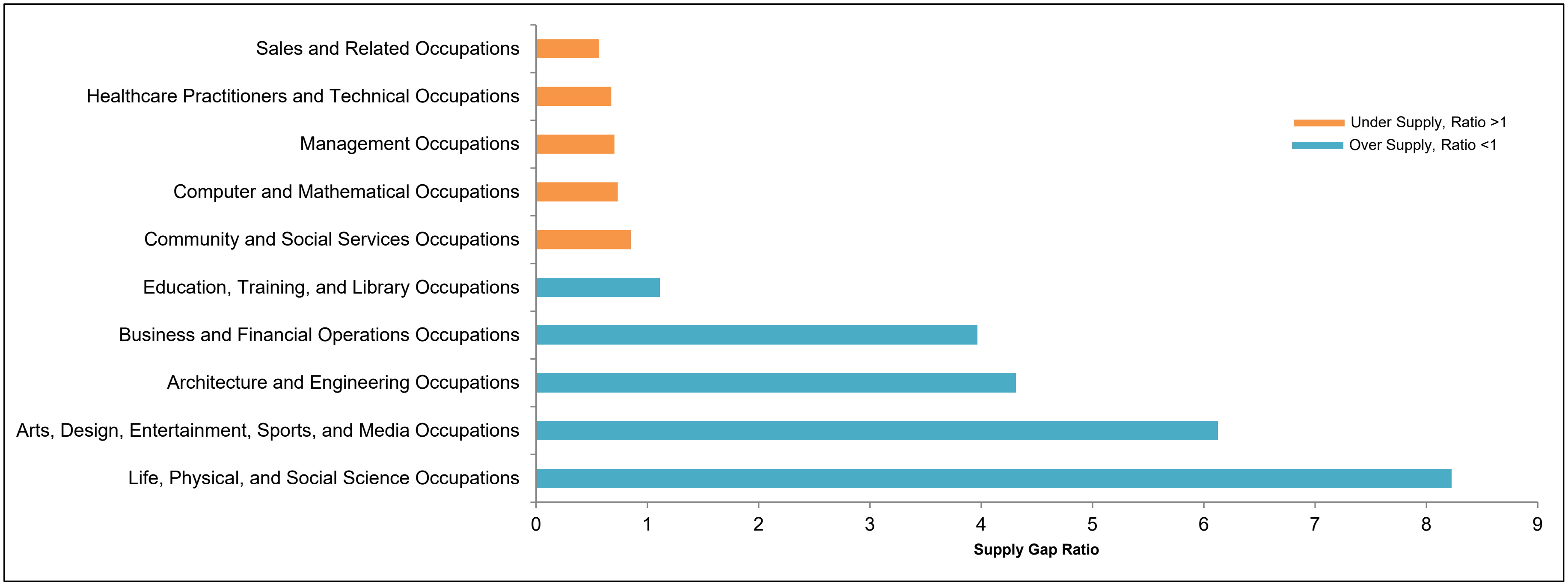


Occupations requiring a postsecondary non-degree award, some college, or an Associate’s Degree, 20+ Demand Index only

Source: OES Projections 2014-2024, OES Projections 2015-2017, HWOL 2016 average, iPEDS, Massachusetts Department of Higher Education, Department of Unemployment Assistance

State Supply Gap Overview: BA Clusters

Sales, Healthcare, Management, and Computer and Mathematical Occupations average the lowest ratios of qualified individuals per opening at the BA level.



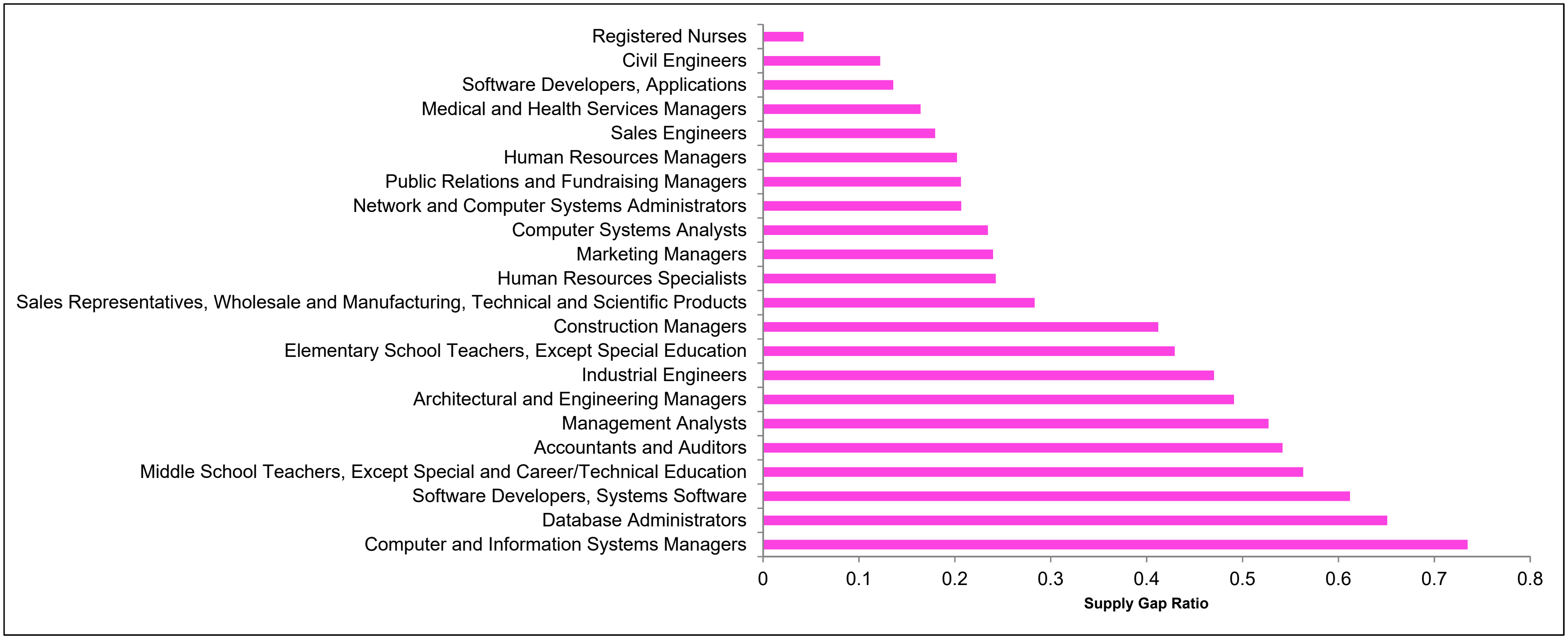
Occupations requiring a Bachelor's Degree, Demand Index 100+ Only

Source: OES Projections 2014-2024, OES Projections 2015-2017, HWOL 2016 average, iPEDS, Massachusetts Department of Higher Education, Department of Unemployment Assistance

Supply Gap Analysis

More Openings than Qualified: State BA Occupations

A number of 4 and 5 star occupations, largely in STEM fields, are in short supply.



Occupations requiring a Bachelor's Degree, 4 and 5 stars, Demand Index 100+ only

Source: OES Projections 2014-2024, OES Projections 2015-2017, HWOL 2016 average, iPEDS, Massachusetts Department of Higher Education, Department of Unemployment Assistance

Takeaways

Associate’s, Some college, Post-secondary Certificate

- In the Southeast, a specific set of 3 and 4 star occupations face supply gaps – most notably in healthcare support, computer support/IT, engineering, installation, and transportation fields.

Bachelor’s Degree

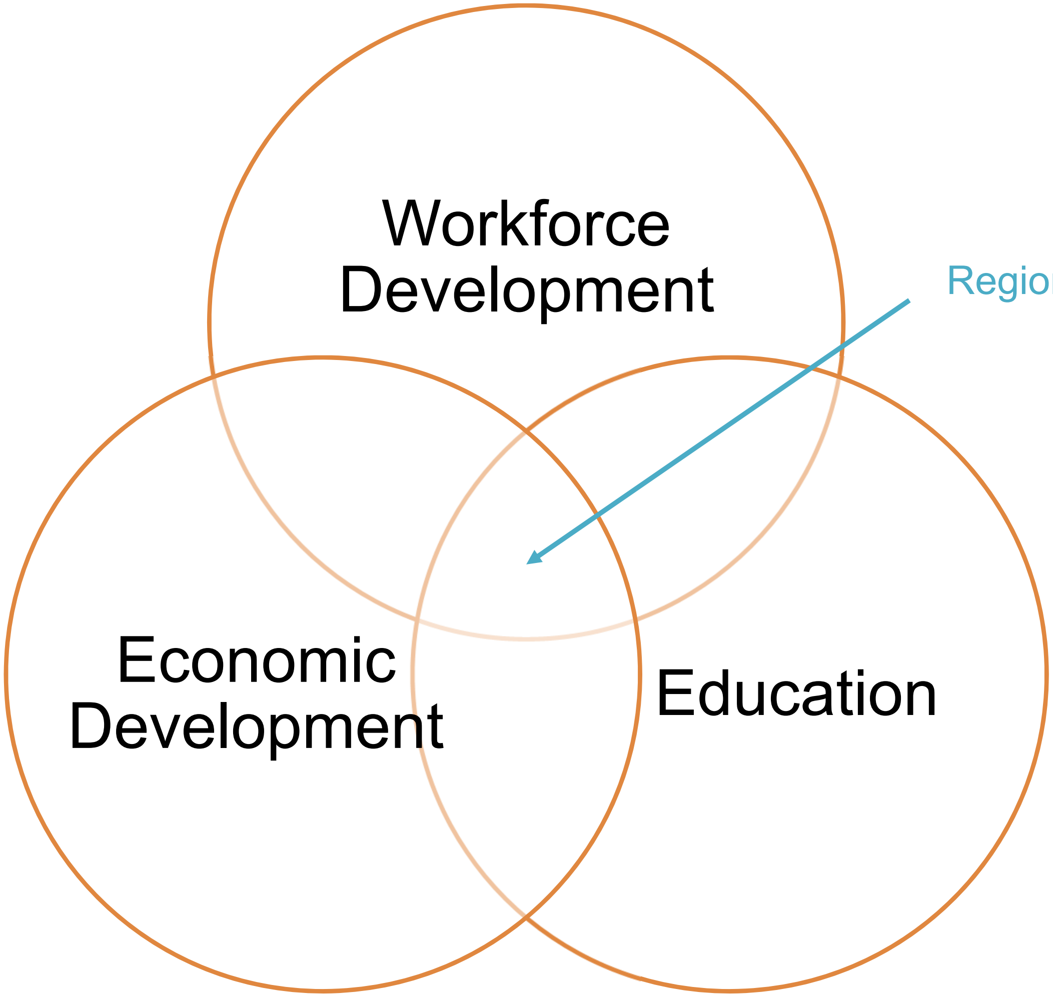
- Across the State, we expect supply gaps in 4 and 5 star occupations primarily in STEM fields, with an emphasis on Healthcare and Computer and Mathematical occupations.

Regional Industry/Occupation Priorities, Sub-BA

Industry Priorities	**Supply Gap, 4-5 Star, Associates/Cert/Some College**	**Supply Gap, 1-3 Star, Associates/Cert/Some College**	**High Indexed Demand**	**4 and 5 Star Occupations, HS or Below**	**Career Pathway Entryway**	**Supportive Employer/Aligned with Econ Dev**
1. Finance and Insurance		Bookkeeping, Accounting, and Auditing Clerks	Customer Service Representatives	Claims Adjusters, Examiners, and Investigators Insurance Sales Agents	Tellers *Customer Service Representatives*	
2. Healthcare and Social Assistance	Dental Hygienists Physical Therapist Assts LPNs OT Assistants Radiologic Technologists	Medical Equipment Repairers Nursing Assistants Medical Records and Health Info Techs			*Nursing Assistants* Personal Care Aides	
4. Professional and Technical Services	Web Developers Computer User Support Specialists		*Computer User Support Specialists*		*Computer User Support Specialists*	
Other	Automotive Service Technicians and Mechanics Heavy and Tractor Trailer Drivers		*Heavy and Tractor Trailer Drivers* Light or Delivery Services Drivers			

Confirming Occupation Priorities

Reminder


Workforce Development
Economic Development
Education

Regional Team's Priorities

Confirming Occupation Priorities

Data Tool

- Demo

Work Time

Group Review

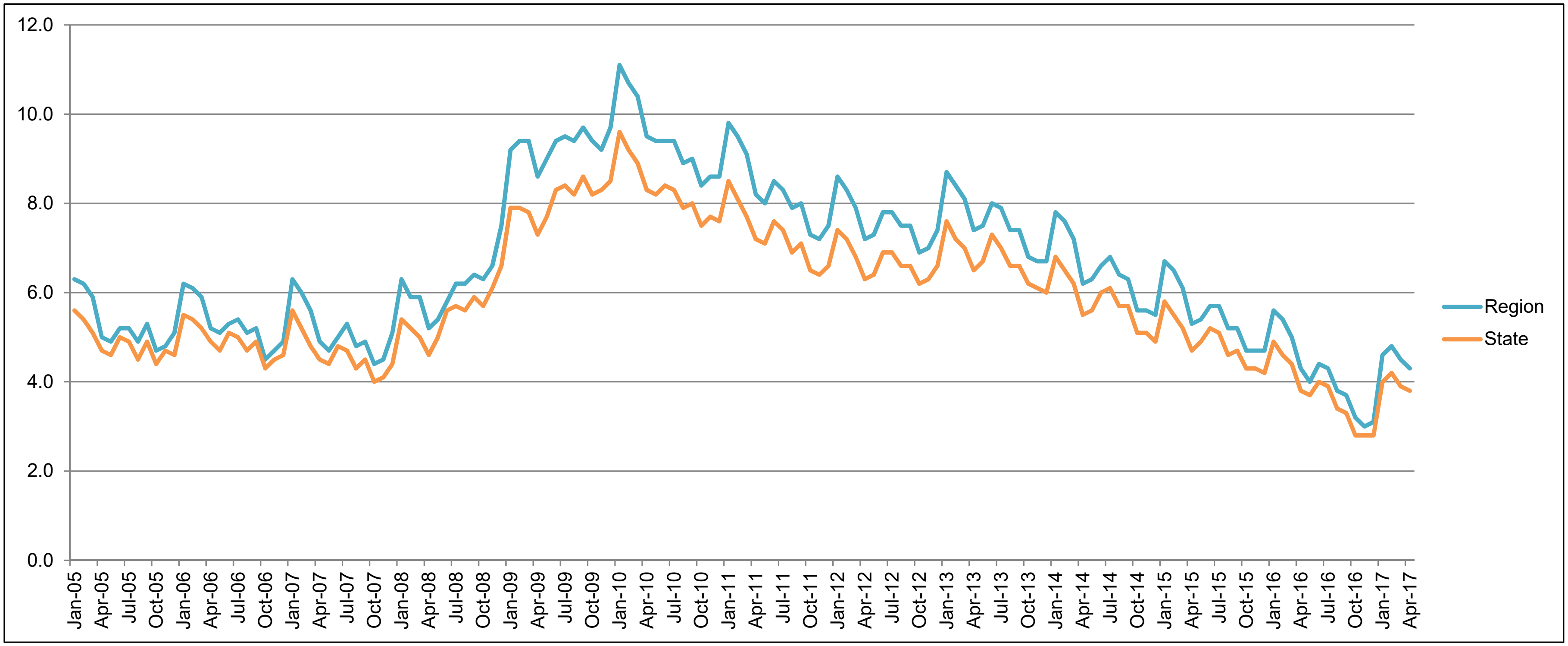
- Work in mixed groups (workforce, education, economic development groups)
- Confirm **regional criteria** to select high priority industries and occupations
- Discuss and confirm regional **high priority industries and occupations (slide 34)**
- Share out upon conclusion of work time

Appendix

I. Labor Force and Unemployment Demographics

State and Regional Unemployment Rate

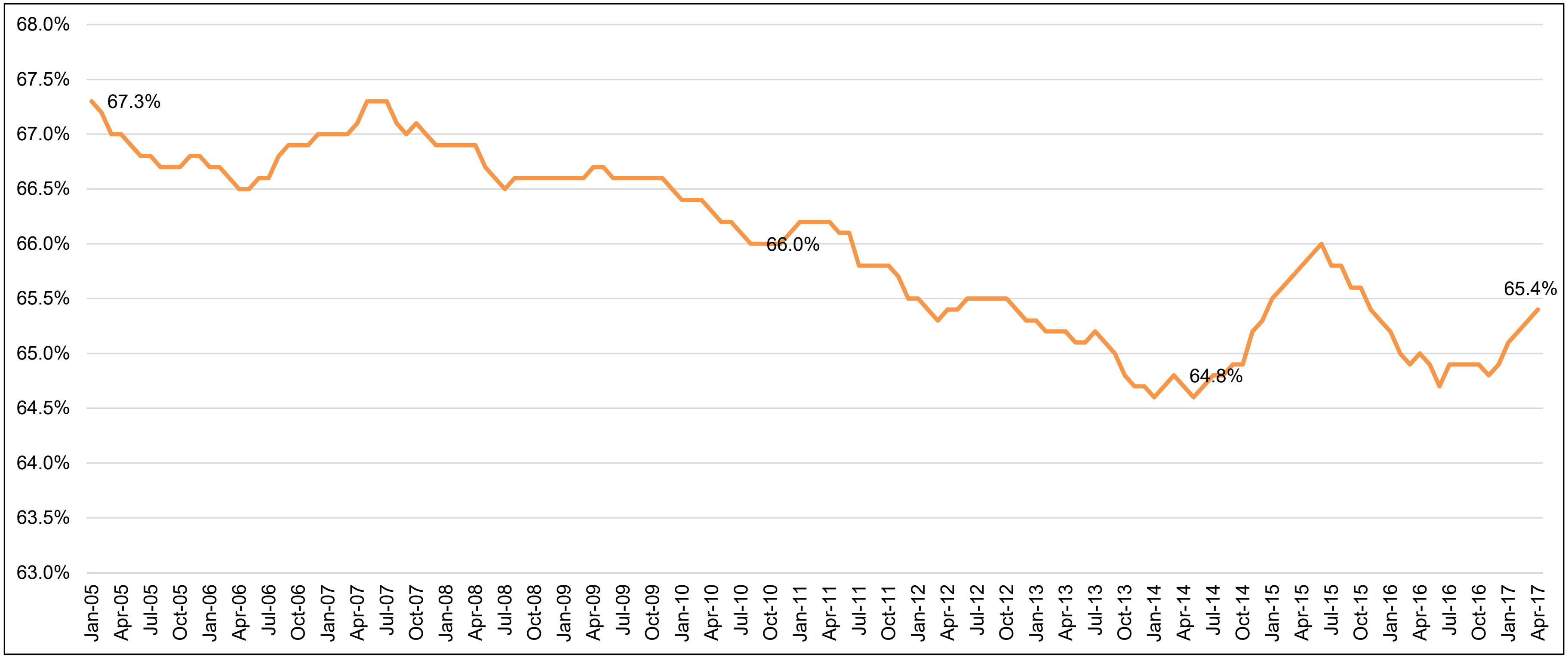
Southeast Massachusetts unemployment rates tend to exceed those of the Commonwealth by an average of approximately .4%.



Source: Bureau of Labor Statistics, 2005-2017 Seasonally Unadjusted Data

State Labor Force Participation Rate

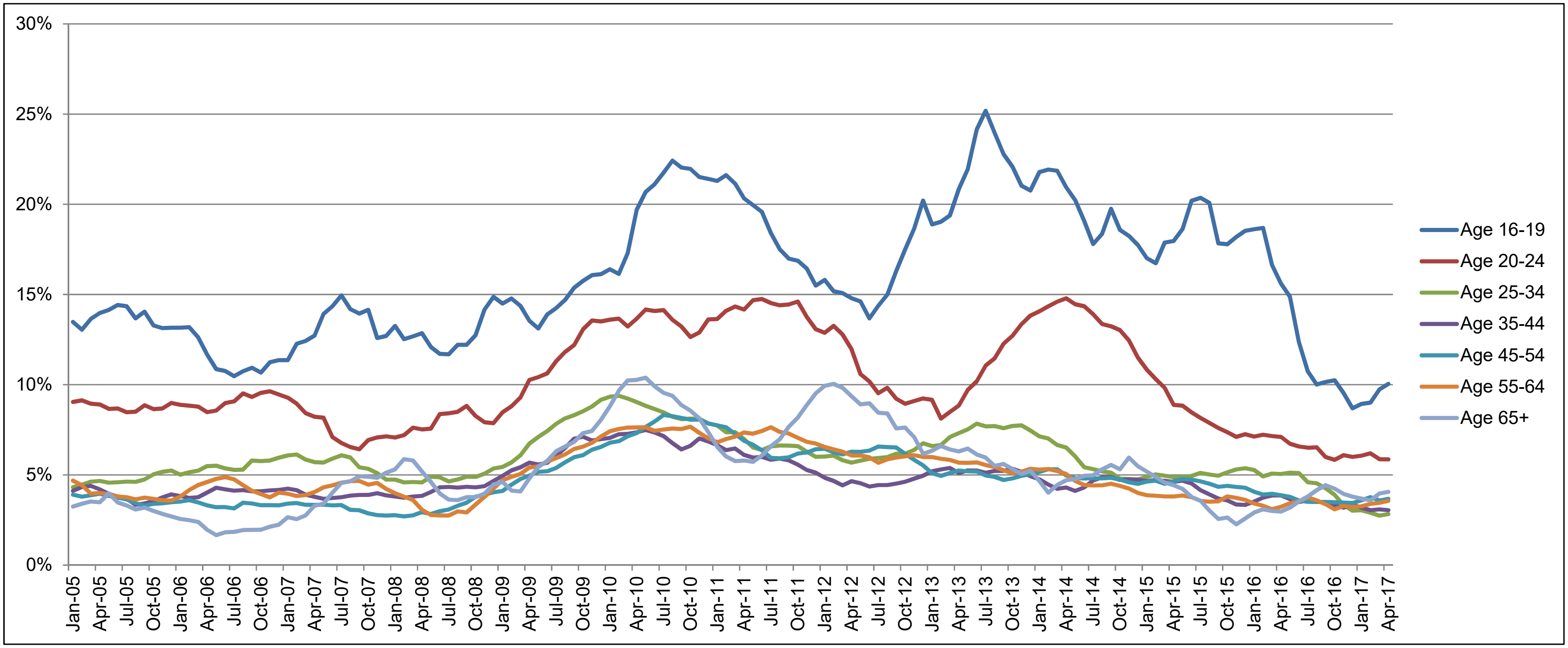
The labor force participation rate has not recovered to pre-recession levels.



Source: Bureau of Labor Statistics, 2005-2017 Seasonally Unadjusted Data

State Unemployment Rate by Age, 20-64

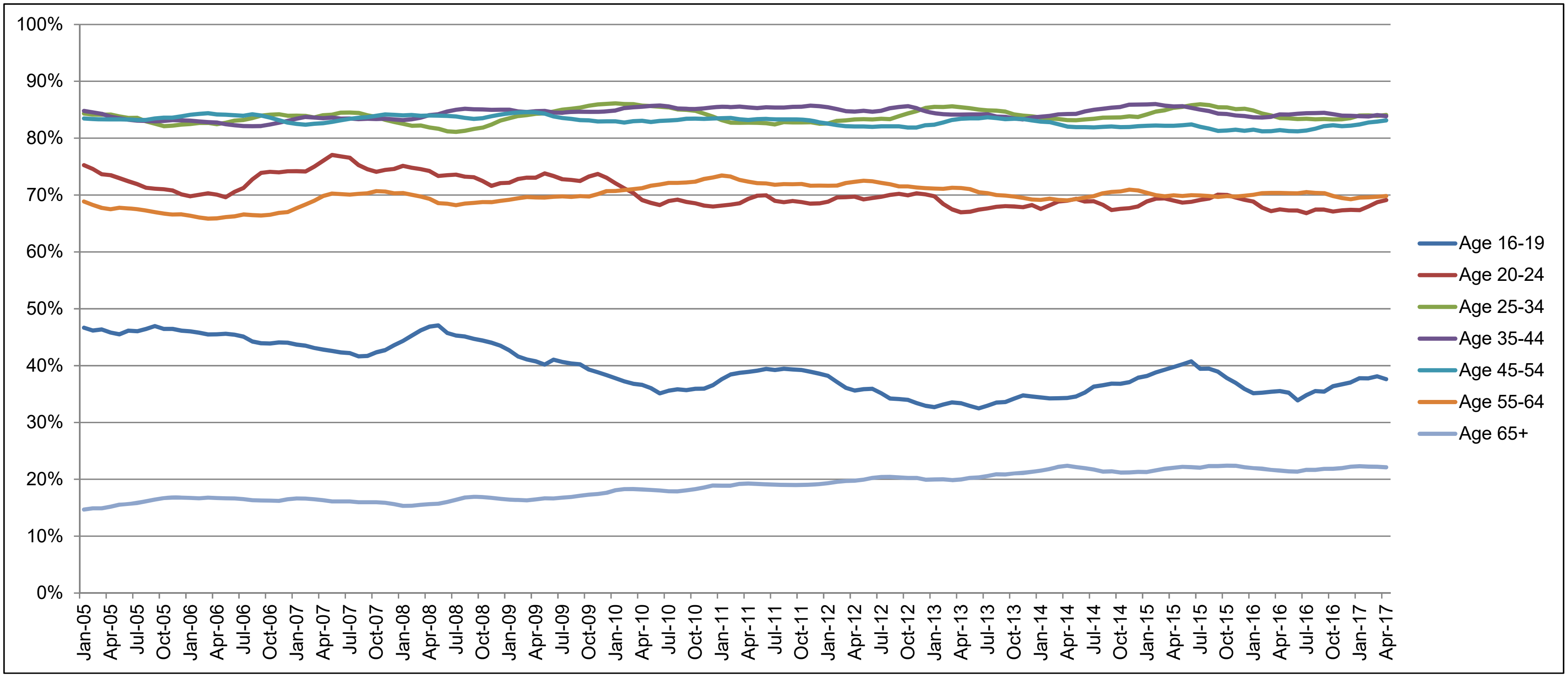
Cohorts age 16-19, 20-24, and 65+ have demonstrated the most sensitivity to changing labor market conditions. The highest unemployment rates are among young adults 16-19 and 20-24.



Source: BLS Current Population Survey, 12 Month Moving Averages

State Labor Force Participation by Age, 16+

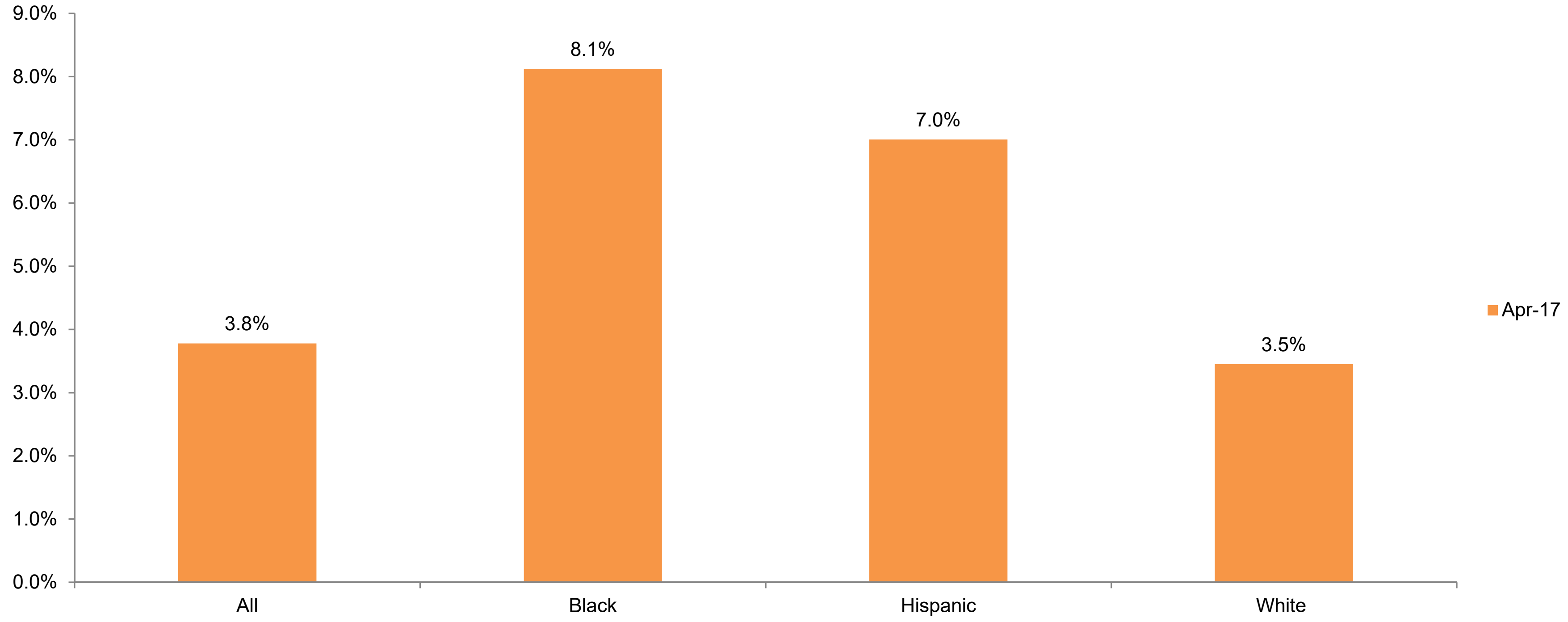
Since the year 2005, labor force participation has declined by 5% for 20-24 year olds and has declined by almost 10% for 16-19 year olds. Labor force participation for seniors has increased since 2005 by approximately 7%.



Source: BLS Current Population Survey, 12 Month Moving Averages

State Unemployment Rate by Race

The white unemployment rate aligns with the state average, whereas Black and Hispanic unemployment rates tend to significantly exceed the trend.

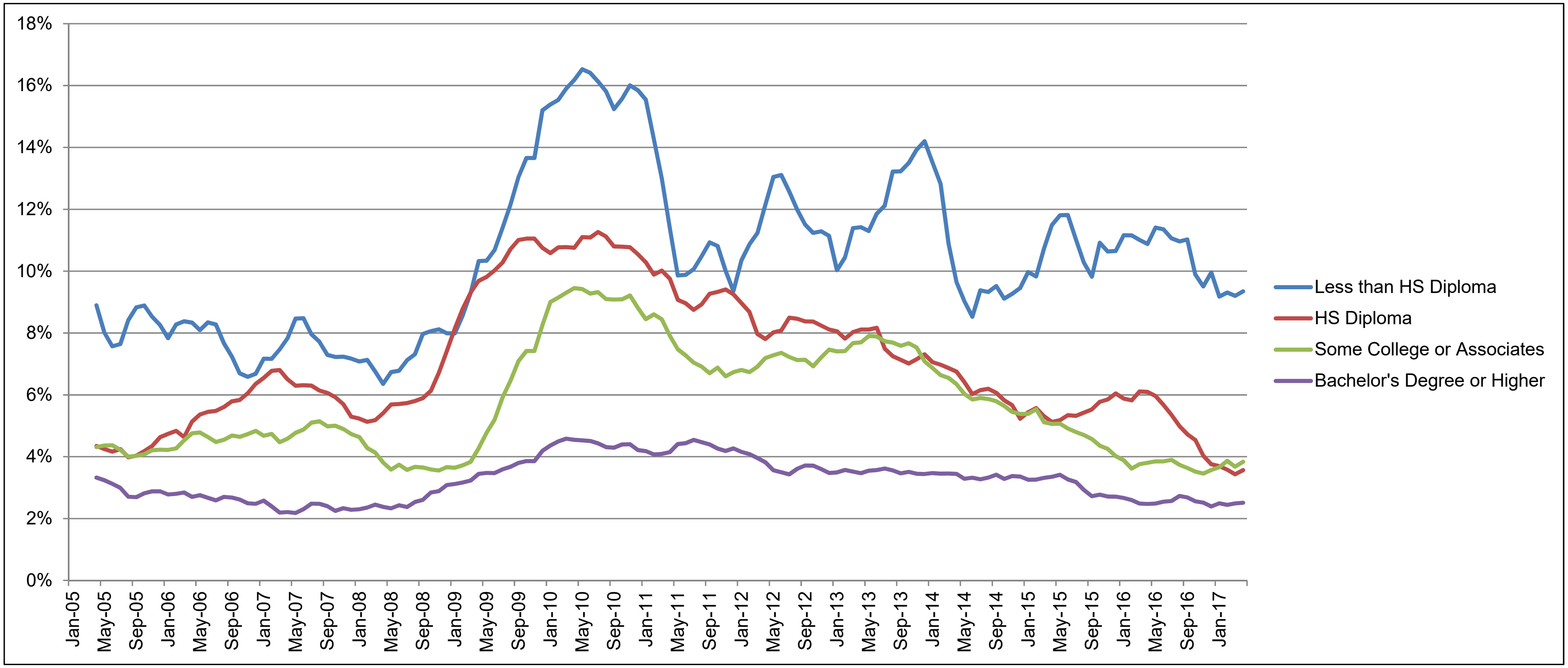


Source: BLS Current Population Survey, 12 Month Moving Averages

Unemployment Rate Deep Dive

State Unemployment Rate by Education, 25+

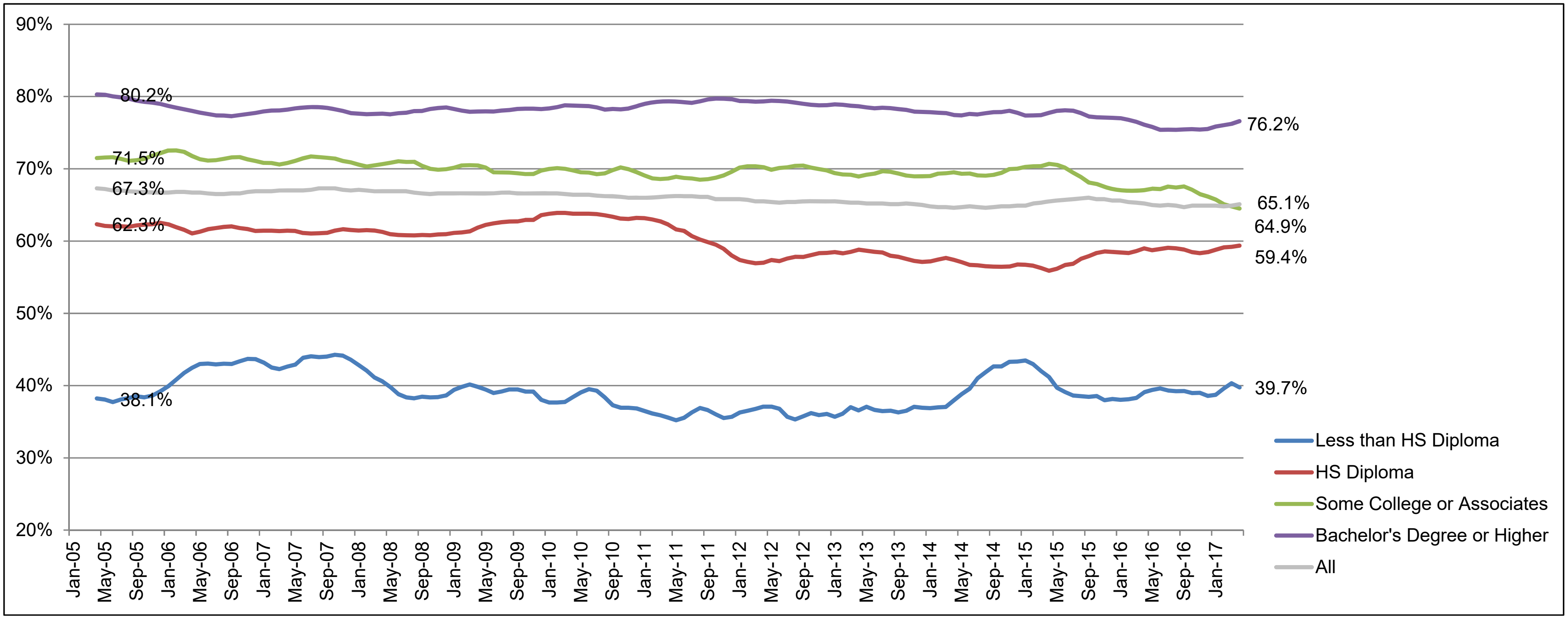
Higher levels of education tend to correlate with lower unemployment levels and more stability during uncertain economic times.



Source: BLS Current Population Survey, 12 Month Moving Averages

State Labor Force Participation by Education, 25+

Higher education levels are correlated with higher labor force participation rates. However, as the unemployment has declined, labor force participation has also declined in all categories except sub-high school.



Source: BLS Current Population Survey, 12 Month Moving Averages

Takeaways

- Labor force participation has not recovered after the recession.
- Compared to pre-recession, less young people are in the labor force, and older residents are working longer.
- Minority populations experience higher levels of unemployment and less consistent levels of labor force participation.
- Compared to pre-recession, less educated workers are in the labor force.