



# AUSTIN METRO AREA MASTER COMMUNITY WORKFORCE PLAN JUNE 2017





## ACKNOWLEDGEMENTS

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American YouthWorks	Greater Austin Black Chamber of Commerce
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Austin Regional Manufacturers' Association	Healthcare Workforce Alliance of Central Texas
Austin Area Urban League	Intertech Flooring
Austin Community College	LifeWorks
Austin Gay and Lesbian Chamber of Commerce	Literacy Coalition of Central Texas
Austin Technology Council	Mission Capital
Austin Young Chamber of Commerce	Pflugerville Community Development Corporation
Brotherhood of Electrical Workers	Pflugerville Chamber of Commerce
Capital Area Council of Governments	Plumbers & Pipefitters Local Union 286
Capital IDEA	Ray Marshall Center, University of Texas at Austin
Center for Public Policy Priorities	Samsung Austin Semiconductor
Central Health	Seton Healthcare Family
City of Austin	Silicon Labs
Dynamic Manufacturing Solutions	Skillpoint Alliance
E3 Alliance	St. David's HealthCare
Goodwill Industries of Central Texas	TechHire
Greater Austin Asian Chamber of Commerce	Travis County

## ABOUT US



**WORKFORCE SOLUTIONS CAPITAL AREA WORKFORCE BOARD** (WFS Capital Area) is the leadership and governing body for the regional workforce system. We are responsible for the planning, oversight, and evaluation of workforce development activities in the Austin/Travis County area. We are a private, publicly-funded non-profit organization.

Through the fostering of partnerships and collaborations, researching and sharing of labor market and economic information, identifying workforce needs of employers and residents, and consulting and advising on public policy, WFS Capital Area helps to connect and align the efforts of the regional workforce system. Together we are enabling people and businesses to be competitive in a global market.

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**THE AUSTIN METRO AREA MASTER COMMUNITY WORKFORCE PLAN: ROADMAP**

<b>VISION</b>	A workforce system that effectively engages employers, community-based organizations, and educational institutions, empowers residents to more efficiently match employers’ skill needs and successfully prepares economically disadvantaged residents for family-sustaining careers.			
<b>CONTEXT</b>	By 2021, the Austin Metro Area is projected to have more than 60,000 job openings that require more than a high school diploma but less than a bachelor’s degree. The first priority of the Austin Metro Area Master Community Workforce Plan is to improve economically disadvantaged residents’ access to these middle-skill jobs.			
<b>GOAL</b>	To make living in Austin more affordable by improving economically disadvantaged residents’ access to better economic opportunities.			
<b>OBJECTIVE</b>	10,000 residents living at or below 200% of poverty will secure middle-skill jobs by 2021.			
<b>STRATEGIES</b>	<b>AWARENESS &amp; ENROLLMENT:</b> Cultivate interest in high-demand, middle-skill careers	<b>TRAINING:</b> Equip workers with the skills they need to succeed	<b>PLACEMENT:</b> Connect employers with local talent to fill middle-skill jobs	<b>ADVANCEMENT:</b> Assist frontline workers in acquiring skills to advance into middle-skill jobs
<b>OUTCOMES &amp; TARGETS</b>	Economically disadvantaged residents are more aware of middle-skill career opportunities and training options	More economically disadvantaged students earn credentials	More economically disadvantaged residents secure middle-skill jobs	More economically disadvantaged residents are upskilled and advanced in their workplaces
	<b>TARGET:</b> 30,000 economically disadvantaged residents enroll in middle-skill training programs	<b>TARGET:</b> 12,000 economically disadvantaged residents earn a middle-skill credential	<b>TARGET:</b> 8,000 economically disadvantaged residents placed in middle-skill jobs	<b>TARGET:</b> 2,000 economically disadvantaged residents advance (raises, promotions) in jobs after upskilling

## EXECUTIVE SUMMARY

The Austin-Round Rock Metropolitan Statistical Area (Austin Metro Area) is undergoing a period of unprecedented economic growth and prosperity. However, not all residents share in this prosperity. Many families in the region are already struggling to make ends meet, even those that are working, and the Austin Metro Area is quickly becoming even more unaffordable as housing prices continue to climb.

Strong demand for workers is expected to continue over the next five years and the labor market is expected to continue to tighten. For the region’s economically disadvantaged residents—those who earn less than 200 percent of the Federal poverty line—this prospective job growth represents better economic opportunity. In particular, middle-skill jobs—those requiring more than a high school diploma but less than a four-year degree—offer a pathway out of poverty for many of these individuals.

This pool of local talent also represents an opportunity for employers. Employers benefit from hiring local candidates because candidates are more readily available for in-person interviews, vetting references is easier, relocation packages are not required, start-time lags are reduced, and turnover is often lower due to improved cultural fit. In addition, a pool of highly qualified economically disadvantaged residents offer employers a more diverse set of candidates.

Accessing local talent, however, is not always easy. Connecting local talent with employers will require a deliberate and collaborative effort on the part of the many institutions and organizations that are charged with developing the regional workforce.

The Austin Metro Area Master Community Workforce Plan (Master Plan) lays out a common agenda and establishes a framework for collaboration to coordinate the efforts of the region’s workforce development organizations and educational institutions. The work of the Master Plan will be carried out by the Austin Metro Area Talent and Opportunity Network (the Talent Network), which will be a network of partners committed to implementing the systems change and strategies associated with the Master Plan. The Talent Network will be supported by Workforce Solutions Capital Area, acting as the backbone organization. The efforts of the Talent Network will reach scale through the collective efforts of Talent Champions, who are employers and organizations that actively align their workforce efforts with the Master Plan.

## AUSTIN METRO AREA TALENT & OPPORTUNITY NETWORK



### VISION:

A more **demand-driven** workforce system that:

- *effectively engages employers, community-based organizations, and educational institutions;*
- *empowers residents to more efficiently match employers’ skills needs; and*
- *successfully prepares economically disadvantaged residents for middle-skill jobs*

### GOAL:





*To make Austin more affordable by improving economically disadvantaged residents’ access to better economic opportunities.*

### OBJECTIVE:

**10,000**

*residents living at or below 200% of poverty will secure middle-skill jobs by 2021*



PRIMARY STRATEGIES	
 <p><b>1. AWARENESS &amp; ENROLLMENT</b> CULTIVATE INTEREST IN HIGH-DEMAND, MIDDLE-SKILL CAREERS</p> <p>1.1. LABOR MARKET INFORMATION. Package and publish labor market and career information to support outreach activities</p> <p>1.2. GENERAL AWARENESS. Design and execute campaigns targeted at key populations to raise awareness of high-demand, middle-skill careers</p> <p>1.3. CAREER EXPLORATION. Provide meaningful career exploration opportunities for residents entering the labor force or considering changing careers. Such opportunities could include career fairs, job shadowing, work-based learning, site/workplace tours, and integration with career and technical education programs</p> <p>1.4. CAREER NAVIGATION. Increase the use of career navigators in helping economically disadvantaged students and workers define career directions and set career goals</p>	 <p><b>2. TRAINING</b> EQUIP WORKERS WITH THE SKILLS THEY NEED TO SUCCEED</p> <p>2.1. ALIGNMENT. Centralize demand-side input to ensure that training curricula are aligned with regional employers’ needs and a 21st century workplace</p> <p>2.2. CAPACITY. Grow capacity of regional training providers to meet the demand for middle-skill workers</p> <p>2.3. ACCESS. Increase economically disadvantaged residents’ access to middle-skill training</p> <p>2.4. PERSISTENCE. Enhance economically disadvantaged students’ persistence and completion rates</p>
 <p><b>3. PLACEMENT</b> CONNECT EMPLOYERS WITH LOCAL TALENT TO FILL MIDDLE-SKILL JOBS</p> <p>3.1. COMPETITIVENESS. Increase the number of earn-and-learn opportunities in the region to expose employers to a broader range of candidates and improve candidates’ employability skills</p> <p>3.2. CONNECTIONS. Create opportunities for employers and students in middle-skill training programs to connect before program completion</p> <p>3.3. LOCAL HIRING. Promote local hiring for middle-skill positions by facilitating the discovery of high-quality candidates</p> <p>3.4. HIRING PRACTICES. Implement promising and evidence-based hiring practices to fill middle-skill positions</p>	 <p><b>4. UPSKILLING</b> ASSIST FRONTLINE WORKERS IN ACQUIRING SKILLS TO ADVANCE INTO MIDDLE-SKILL JOBS</p> <p>4.1. AWARENESS. Encourage the upskilling of frontline workers into middle-skill jobs</p> <p>4.2. CAPACITY. Support employers in upskilling their frontline workers through programming and technical assistance</p>

The implementation of strategies will take a sector-based approach, beginning with three of the Austin Metro Area’s key economic drivers: **Healthcare, Information Technology, and Skilled Trades**. As these three sectors represent some of the best middle-skill career opportunities for economically disadvantaged residents, outreach and engagement strategies will be targeted specifically to these sectors and integrated into overall plan implementation. At the same time, the systems change envisioned by the Master Plan will not be exclusive to these three industries. The plan’s implementation will enhance the supply-side alignment of the workforce system overall, to the benefit of all participating employers and residents.

The Austin Metro Area Master Plan lays out an ambitious agenda for collaboration and coordination to address one of the region’s most persistent challenges. Successful implementation of the plan will require the many organizations involved in the regional workforce system to come together around a common vision and goal. Over the next several months, the structure of the Austin Metro Area Talent and Opportunity Network will be put into place. As these pieces come together, the Master Plan will provide a strong direction and foundation for alignment and collective impact of the Austin Metro Area’s workforce system.



# MASTER COMMUNITY WORKFORCE PLAN

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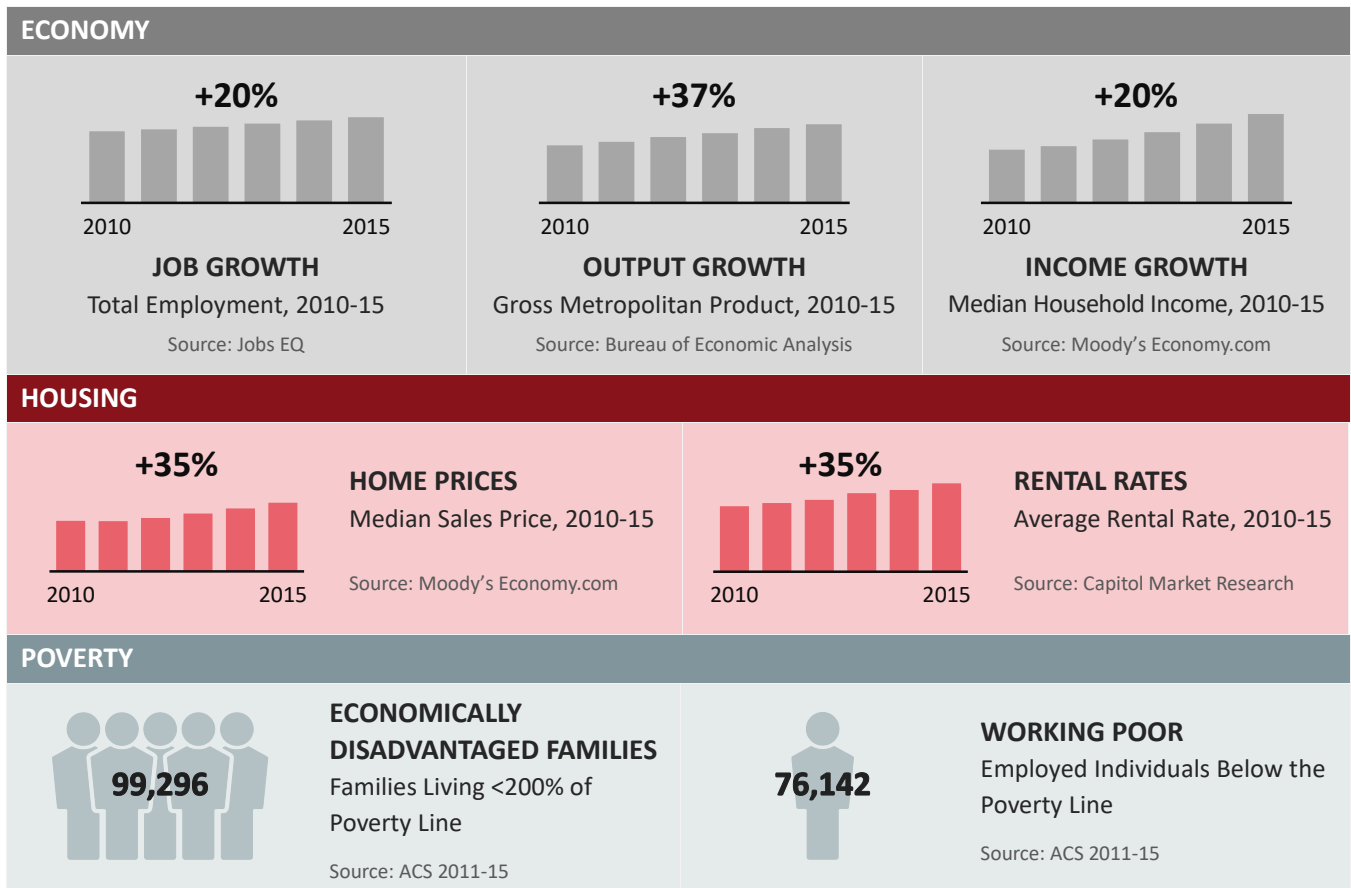
## INTRODUCTION

### THE CHALLENGE

The Austin-Round Rock Metropolitan Statistical Area (Austin Metro Area) is undergoing a period of unprecedented economic growth and prosperity. Total employment in the region grew more than 20 percent between 2010 and 2015, from almost 820,000 to just over 980,000. Over the same period, gross metropolitan product increased 37 percent, unemployment dropped to 3.2 percent, and median household income increased by almost 20 percent.

However, not all residents of the metro area have shared in this prosperity. Although the median household income has risen, the cost of housing has risen more quickly. The median home price and average rental rates both increased by about 35 percent between 2010 and 2015. The most current data shows that 23 percent of homeowners and 48 percent of renters pay more than 30 percent of their incomes towards their mortgage or monthly rent. Furthermore, more than 99,000 families in the region live at or below 200 percent of the federal poverty level, and more than 76,000 individuals living below the poverty level are employed. In other words, many families in the region are already struggling to make ends meet, even when they are working, and the Austin Metro Area is quickly becoming even less affordable as housing prices continue to climb.

FIGURE 1. AUSTIN METRO AREA BY THE NUMBERS



Note: The Austin-Round Rock Metropolitan Statistical Area includes Travis, Williamson, Hays, Bastrop, and Caldwell Counties.

## THE MIDDLE-SKILL OPPORTUNITY

In the Austin Metro Area, strong demand for workers is expected to continue over the next five years and the labor market is expected to continue to tighten. By 2021, the region is expected to add another 121,000 new jobs. Over this same period, about 132,000 replacement jobs are expected to require filling; these are openings due to general turnover as well as workers leaving the workforce (see Figure 2).

For the region’s economically disadvantaged residents—those who earn less than 200 percent of the Federal poverty line—this prospective job growth represents better economic opportunity. In particular, middle-skill jobs—those that require more than a high school diploma but less than a four-year degree—offer a pathway to sustainability for many of these individuals (see Figure 3).

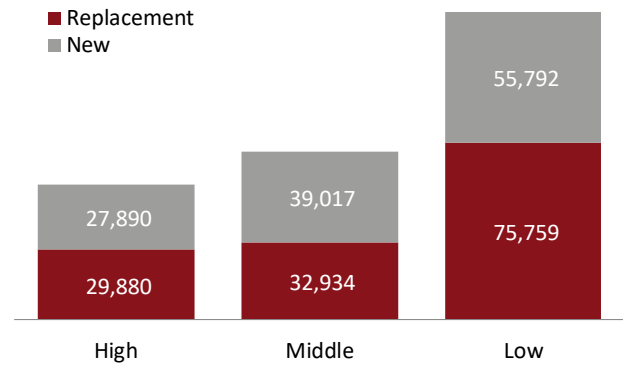
### OVER THE NEXT FIVE YEARS, THE AUSTIN METRO AREA WILL HAVE MORE THAN 60,000 MIDDLE-SKILL OPENINGS TO FILL.

These openings are spread across 103 occupations and include both new and replacement positions. There are almost 29,000 openings in 47 different middle-skill occupations that pay an average annual wage greater than \$40,840, which would provide financial stability to a family of three or fewer. Of these middle-skill openings, just over 50 percent are in the healthcare, information technology, or skilled trades occupational sectors (see Figure 4).

This pool of local talent also represents an opportunity for employers. Employers benefit from hiring local candidates because candidates are more readily available for in-person interviews, vetting references is easier, relocation packages are not required, start-time lags are reduced, and turnover is often lower due to improved cultural fit. In addition, a pool of highly qualified economically disadvantaged residents would offer employers a more diverse set of candidates.

Accessing local talent, however, is not always easy. In the context of the tight labor market, finding suitable candidates in the regional labor pool can be competitive. Anecdotally, some employers are finding it easier to recruit talent from outside the region. Employers who actively seek qualified talent from relevant training programs and community-based organizations can be better positioned for success than those that take a more passive approach to recruiting local talent. Many employers are establishing their position as employer of choice by cultivating their own talent pipelines, using a dual strategy of building

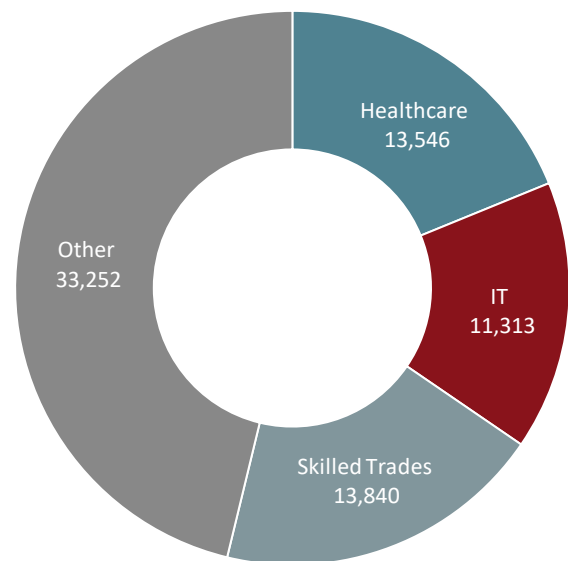
**FIGURE 2. JOB OPENINGS BY SKILL LEVEL**  
2017-2021, AUSTIN-ROUND ROCK MSA



**FIGURE 3. MIDDLE-SKILL OPPORTUNITIES WITH WAGES > 200% OF POVERTY LINE\***

Household/ Family Size	200%	Better Middle Skill Opportunities (Openings 2016-21)
1 person	\$24,120	58,569
2 people	\$32,480	47,507
3 people	\$40,840	28,847
4 people	\$49,200	24,131
5 people	\$57,560	19,467

**FIGURE 4. OPENINGS BY CLUSTER**  
MIDDLE-SKILL ONLY, NEXT 5 YEARS



Source: JobsEQ, TIP Calculations  
\* 200% incomes are based on 2016 Federal Poverty Guidelines for the 48 contiguous states. By comparison, the CPPP’s family budgets calculator estimates a necessary annual income of \$44,916 for a family of 3

relationships with students before they graduate and maintaining relationships with relevant training programs and organizations.

Connecting local talent with employers will require a deliberate and collaborative effort on the part of the many institutions and organizations that are charged with developing the regional workforce.

## THE RESPONSE

The Austin Metro Area Master Community Workforce Plan (Master Plan) lays out a common agenda and establishes a framework for collaboration to coordinate the efforts of the region’s workforce development organizations and educational institutions. The overarching vision for this plan is a more demand-driven workforce system that effectively engages employers, community-based organizations, and educational institutions; empowers residents to more efficiently match employers’ skills needs; and successfully prepares economically disadvantaged residents for good jobs. Achieving this vision will require increased coordination and alignment of the regional workforce system’s supply-side and a strong platform for employer engagement. This systems change will be the foundation for a subsequent, scaled-up initiative that will more fully integrate demand-side input and reach beyond economically disadvantaged individuals and middle-skill opportunities.

The work of the Master Plan will be carried out by the Austin Metro Area Talent and Opportunity Network (the Talent Network), which will be a network of partners committed to implementing the systems change and strategies associated with the Master Plan. The Talent Network will be supported by Workforce Solutions Capital Area, acting as the backbone organization. The efforts of the Talent Network will reach scale through the collective efforts of Talent Champions, who are employers and organizations that actively align their workforce efforts with the Master Plan.

Over the next five years, the Talent Network will work to improve economically disadvantaged residents’ access to better economic opportunities, specifically middle-skill jobs. We will help at least 10,000 of the more than 60,000 middle-skill jobs go to economically disadvantaged residents, who live at or below 200% of the Federal poverty line.

The chart on the next page illustrates recommended membership and roles for the groups that comprise the Talent Network.

## AUSTIN METRO AREA TALENT & OPPORTUNITY NETWORK



### VISION:

A more *demand-driven* workforce system that:

- *effectively engages employers, community-based organizations, and educational institutions;*
- *empowers residents to more efficiently match employers’ skills needs; and*
- *successfully prepares economically disadvantaged residents for middle-skill jobs*

### GOAL:

*To make Austin more affordable by improving economically disadvantaged residents’ access to better economic opportunities.*

### OBJECTIVE:




**10,000**

*residents living at or below 200% of poverty will secure middle-skill jobs by 2021*

NAME	MEMBERSHIP	ROLES
<b>LEADERSHIP COUNCIL</b>	<ul style="list-style-type: none"> <li>• Talent Champions &amp; Community Leaders</li> <li>• Key Investors                             <ul style="list-style-type: none"> <li>◦ Provide financial support for backbone, working group activities, relevant education and training efforts</li> </ul> </li> <li>• Backbone Organization</li> <li>• Working Group Chairs                             <ul style="list-style-type: none"> <li>◦ Industry Partnerships</li> <li>◦ Education &amp; Training</li> <li>◦ Systems Change</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Identifies key stakeholders that need to be engaged and leverages relationships to solicit involvement</li> <li>• Leads the establishment and continuous monitoring of shared vision, goals</li> <li>• Leverages relationships, resources to finance Network initiatives</li> <li>• Commissions research and analysis to support planning efforts</li> <li>• Provides coordination and accountability for working groups</li> <li>• Sets agenda for quarterly Network meetings</li> </ul>
<b>INDUSTRY PARTNERSHIPS</b>	<ul style="list-style-type: none"> <li>• Employers hiring for middle-skill occupations in the targeted industries</li> <li>• Industry associations, Chambers, etc.</li> <li>• Optional: Key relevant training providers</li> </ul>	<ul style="list-style-type: none"> <li>• Provide input on talent needs, potential solutions</li> <li>• Provide feedback on education/training programs to inform continuous improvement and capacity building efforts</li> <li>• Organize industry career exploration events and activities</li> <li>• Assist in identifying appropriate measures of performance and with data collection</li> </ul>
<b>EDUCATION &amp; TRAINING</b>	<ul style="list-style-type: none"> <li>• Representatives of relevant education/training providers</li> <li>• Should be senior representatives with decision-making authority</li> </ul>	<ul style="list-style-type: none"> <li>• Explores opportunities for collaboration, alignment to better address industry skill needs and worker education/training needs</li> <li>• Identifies capacity building needs</li> <li>• Proposes strategies to grow program quality and capacity, respond to challenges identified through Networks' Data/Evaluation efforts</li> <li>• Collaborates around data collection strategies</li> <li>• Collaborates around addressing education/training/work support needs of workers</li> </ul>
<b>SYSTEMS CHANGE</b> Data & Evaluation Communications Policy	<ul style="list-style-type: none"> <li>• Data, database, &amp; evaluation experts</li> <li>• Industry Associations &amp; Chambers</li> <li>• Public affairs experts from Network businesses</li> <li>• Marketing/communications experts from Leadership Council organizations, other Network members</li> </ul>	<ul style="list-style-type: none"> <li>• Assists in identifying appropriate performance/outcome measures, targets, and related data collection strategies</li> <li>• Assists with data analysis, evaluation, and reporting as appropriate</li> <li>• Devises advocacy, other strategies to address policy and regulatory barriers identified through the Talent Network</li> <li>• Advocates for funding as appropriate</li> <li>• Builds public will, awareness of issues through publications, online/social media presence, community events</li> <li>• Supports/coordinates industry awareness-building activities of Industry Partnerships</li> <li>• Helps establish and maintain the Network's brand</li> <li>• Interfaces with media</li> </ul>






To ensure that at least 10,000 of the more than 60,000 middle-skill jobs go to economically disadvantaged residents who live at or below 200% of the Federal poverty line, the Talent Network will forge strong partnerships between stakeholders to collectively strengthen the regional workforce system. The framework for collaboration is structured around four stages of workforce intervention:

	<b>1. AWARENESS &amp; ENROLLMENT</b> CULTIVATE INTEREST IN HIGH-DEMAND, MIDDLE-SKILL CAREERS
	<b>2. TRAINING</b> EQUIP WORKERS WITH THE SKILLS THEY NEED TO SUCCEED
	<b>3. PLACEMENT</b> CONNECT EMPLOYERS WITH LOCAL TALENT TO FILL MIDDLE-SKILL JOBS
	<b>4. UPSKILLING</b> ASSIST FRONTLINE WORKERS IN ACQUIRING SKILLS TO ADVANCE INTO MIDDLE-SKILL JOBS

The implementation of strategies will take a sector-based approach, beginning with three of the Austin Metro Area’s key economic drivers: **Healthcare, Information Technology, and Skilled Trades**. As these three sectors represent some of the best middle-skill career opportunities for economically disadvantaged residents, outreach and engagement strategies will be targeted specifically to these sectors and integrated into overall plan implementation. For example, industry sector partnerships in each of these sectors could carry out specific awareness activities, provide input to relevant training programs, and collaborate on placement and upskilling.

At the same time, the systems change that is envisioned by the Master Plan and the strategy implementation will not be exclusive to these three industries. It will enhance the supply-side alignment of the workforce system overall to the benefit of all employers and residents engaged in the system.

OPPORTUNITY SECTORS	
	<b>HEALTHCARE</b> 13,546 openings over the next 5 years \$46,384 average annual salary
	<b>INFORMATION TECHNOLOGY</b> 11,313 openings over the next 5 years \$91,146 average annual salary
	<b>SKILLED TRADES</b> 13,840 openings over the next 5 years \$42,092 average annual salary

Source: JobsEQ.

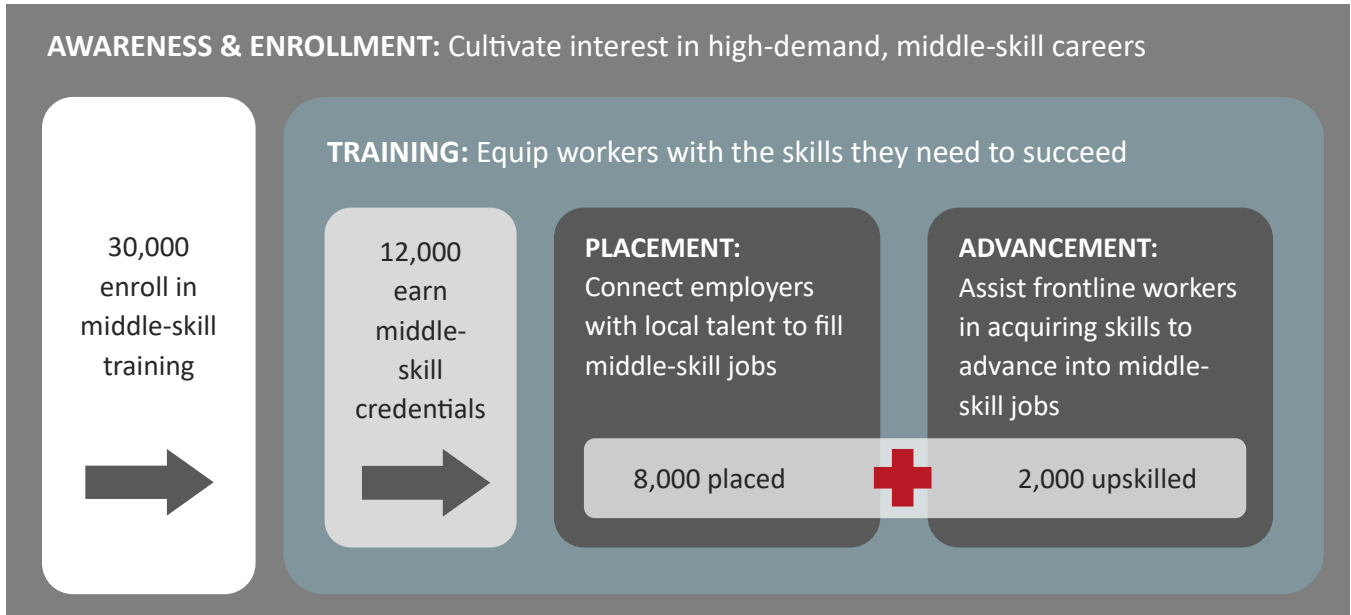
In all, the implementation of the four strategies will lead to increased enrollment, credential attainment, job placement, and upskilling among the region’s economically disadvantaged population. Goals in each of these areas have been identified: **30,000 economically disadvantaged residents enroll in middle-skill training programs; 12,000 earn a credential; and 8,000 are placed in middle-skill jobs. In addition, 2,000 workers who currently earn 200 percent or less than the Federal poverty line will be upskilled and secure a better middle-skill job.** (See Figure 5, page 12.)

The roadmap for the Master Plan is visualized in Figure 7, page 13. This summary outlines the vision, context, goal, and objective. It also highlights the four key strategies and targeted outcomes.

In addition, key performance indicators will demonstrate system efficiency and be instrumental in ensuring that the Master Plan objective is met. The Data and Evaluation Partnership will identify the indicators and define a process for tracking and reporting them.

The strategic action plan is presented on pages 14-29. For each strategy, we have developed a set of actions and tactics to reach the 2021 goals. We have also recommended lead and support roles for the partnerships involved in the Talent Network. Detailed recommendations on the structure for implementing the plan begin on page 30.

**FIGURE 5. HOW THE STRATEGIES & METRICS WORK TOGETHER**



**FIGURE 6. KEY PERFORMANCE INDICATORS**

	AWARENESS & ENROLLMENT	TRAINING <i>Completions Rate, Students at 200% of Poverty &amp; Below</i>	PLACEMENT	ADVANCEMENT
<b>Baseline</b> (Annual, based on 2015 data)	<ul style="list-style-type: none"> <li>General Awareness Building (3% Awareness to Enrollment)</li> <li>Career Exploration (20-40%)</li> <li>Career Navigation (70-80%)<sup>1</sup></li> </ul>	<b>2,354</b> (39% persistence rate) <sup>2</sup>	<b>1,295</b> (55% employment rate after completion) <sup>3</sup>	N/A
<b>2017-2021</b> (5-year Goal)	<ul style="list-style-type: none"> <li>General Awareness Building</li> <li>Career Exploration</li> <li>Career Navigation</li> </ul> <p><b>140,000 reached</b> <b>29,733 enrolled</b></p>	<b>12,675</b> (44% persistence rate)	<b>8,317</b> (75% employment rate)	<b>2,000<sup>4</sup></b>

<sup>1</sup> Conversion rates (awareness to enrollment) based on similar marketing and outreach activities, including [www.wordstream.com/blog/ws/2014/03/17/what-is-a-good-conversion-rate](http://www.wordstream.com/blog/ws/2014/03/17/what-is-a-good-conversion-rate) and [www.readytalk.com/resources/webinar-marketing/infographics/webinars-qualified-leads#.WMLqQfnyvic](http://www.readytalk.com/resources/webinar-marketing/infographics/webinars-qualified-leads#.WMLqQfnyvic)

<sup>2</sup> Based on average completion rate reported by the American Association of Community Colleges and cross-checked with data on economically disadvantaged completers reported by the Community College Research Center.

<sup>3</sup> Based on the weighted average of placement rates reported by the Ray Marshall Center.

<sup>4</sup> Some individuals received upskilling via ACC or another training provider and are counted in the Placement Strategy, while others received upskilling via in-house training from their employers. We will work with the Systems Change/Data and Evaluation Work Group to create methods to de-duplicate upskilled workers from the rest of those who have completed training and found employment.

**FIGURE 7. THE AUSTIN METRO AREA MASTER COMMUNITY WORKFORCE PLAN: ROADMAP**

<b>VISION</b>	A workforce system that effectively engages employers, community-based organizations, and educational institutions, empowers residents to more efficiently match employers’ skill needs and successfully prepares economically disadvantaged residents for family-sustaining careers.			
<b>CONTEXT</b>	By 2021, the Austin Metro Area is projected to have more than 60,000 job openings that require more than a high school diploma but less than a bachelor’s degree. The first priority of the Austin Metro Area Master Community Workforce Plan is to improve economically disadvantaged residents’ access to these middle-skill jobs.			
<b>GOAL</b>	To make living in Austin more affordable by improving economically disadvantaged residents’ access to better economic opportunities.			
<b>OBJECTIVE</b>	10,000 residents living at or below 200% of poverty will secure middle-skill jobs by 2021.			
<b>STRATEGIES</b>	<b>AWARENESS &amp; ENROLLMENT:</b> Cultivate interest in high-demand, middle-skill careers	<b>TRAINING:</b> Equip workers with the skills they need to succeed	<b>PLACEMENT:</b> Connect employers with local talent to fill middle-skill jobs	<b>ADVANCEMENT:</b> Assist frontline workers in acquiring skills to advance into middle-skill jobs
<b>OUTCOMES &amp; TARGETS</b>	Economically disadvantaged residents are more aware of middle-skill career opportunities and training options	More economically disadvantaged students earn credentials	More economically disadvantaged residents secure middle-skill jobs	More economically disadvantaged residents are upskilled and advanced in their workplaces
	<b>TARGET:</b> 30,000 economically disadvantaged residents enroll in middle-skill training programs	<b>TARGET:</b> 12,000 economically disadvantaged residents earn a middle-skill credential	<b>TARGET:</b> 8,000 economically disadvantaged residents placed in middle-skill jobs	<b>TARGET:</b> 2,000 economically disadvantaged residents advance (raises, promotions) in jobs after upskilling

# STRATEGIC PLAN



## 1. AWARENESS & ENROLLMENT

### CULTIVATE INTEREST IN HIGH-DEMAND, MIDDLE-SKILL CAREERS

People make career choices based on a complex set of factors, including the context in which they live, information from key influencers, personal aptitudes, and educational attainment.<sup>5</sup> Often, career exploration primarily takes place through family and social networks where mentors or role models play influential roles in career choice. This approach, however, limits the careers considered to those that are known through this existing network. An important outcome of this approach is the over or under-representation of minority groups and genders in certain occupations or occupational groups.

In the face of tighter labor markets and growing skills gaps, the workforce development community must play a larger role in building awareness of a broader range of career opportunities through more formalized campaigns and career exploration activities that reach diverse audiences. This provides individuals with knowledge of a larger universe of career choices. Connecting these career exploration activities to labor market demand allows individuals to make more informed career choices. One of the most promising areas of growth, Information Technology, poses its own recruiting challenges, since there is a lack of awareness about the skills and certifications that jobseekers need to succeed in many IT occupations.

Furthermore, building awareness of opportunities in high-demand careers is a necessary part of initiatives to strengthen talent pipelines that support employers' critical hiring needs and provide better access to a more diverse set of candidates. Without interested individuals, training programs cannot produce enough graduates, and employers will not likely have enough candidates to fill open jobs.

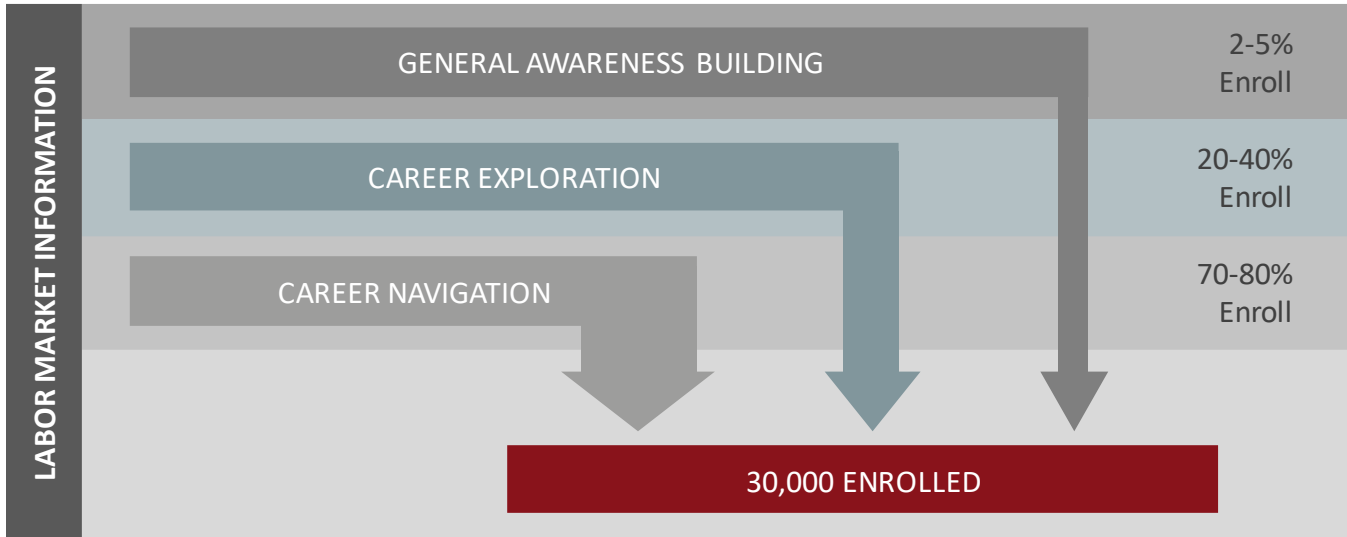
A comprehensive approach to awareness building includes a range of activities that vary by scale, costs, and level of engagement. All of these activities are focused on the desired outcome for the strategy, which is getting more economically disadvantaged individuals interested in high-demand, middle-skill careers and training programs. The additional interest is intended to lead to more individuals enrolling in middle-skill training programs. Well-targeted awareness campaigns share information on high-demand, middle-skill careers with larger audiences. Career exploration activities provide more focused and hands-on experiences to a smaller number of individuals. Career navigators are the highest touch and the most effective at building awareness. Since they work one on one with residents, the approach is both time intensive and costly. **A combination of all three of these activities, targeted toward and tailored for key audiences, will be required to ensure that at least 30,000 economically disadvantaged residents enroll in training programs.**

At the foundation of these awareness-building activities is accurate information about the region's labor market, its in-demand careers, and the associated career pathways. This information must be current, employer-validated, and distributed across the Talent Network. This ensures consistent information is shared in the different awareness-building activities and individuals are armed with good information to make their career choices.

KEY AUDIENCES	
1	High school students/parents in economically disadvantaged and high-diversity zip codes
2	Opportunity youth: 16 to 24-year olds who are not in school and not working
3	Economically disadvantaged workers: Supplemental Nutrition Assistance Program (SNAP) & community-based organization clients
4	Veterans
OUTCOME	
Students and workers are more aware of career opportunities and training options in key industry sectors and in high-demand middle-skill jobs	
<b>TARGET:</b> 30,000 economically disadvantaged residents enroll in middle-skill training programs	

<sup>5</sup> Ferry, Natalie. "Factors Influencing Career Choices of Adolescents and Young Adults in Rural Pennsylvania." *Journal of Extension*. June 2006, Volume 44, Number 3.

FIGURE 8. STRATEGIC FRAMEWORK FOR AWARENESS



1.1. LABOR MARKET INFORMATION. Package and publish labor market and career information to support outreach activities



1.1.1. Analyze real-time and traditional labor market information (LMI) to identify high-demand, middle-skill occupations and establish in-demand career pathways.

- Document the following for each occupation:
  - Number of openings
  - Minority and gender representation
  - Skills and training requirements
  - Available training programs
  - Training capacity and completions
- Maintain a log of hiring events (expansions, relocations, lay-offs), that might significantly impact future workforce demand, to augment the LMI
- Use this information to define career pathways that are considered in-demand

1.1.2. Validate information on critical occupations and skills

- Convene 12 to 25 industry leaders for key industries to review the data on relevant middle-skill occupations and career pathways and provide input on their hiring needs, sources of talent, and preferred training providers
- Adjust the LMI and career pathways to reflect feedback from industry participants

**FACILITATION GUIDE FOR INDUSTRY INPUT:  
CRITICAL OCCUPATIONS AND LMI VALIDATION**

1. Have employers identify top three to five most critical occupations
2. Record these occupations and group by occupational category (e.g. production, engineering, transportation, etc.)
3. Lead a conversation about these occupations:
  - What makes them critical?
  - What skills or competencies are entry-level candidates in these positions frequently lacking?
  - How would a person advance into and out of these positions?
4. Use this information to map occupations and career paths in the industry
5. Ask employers to validate the map and to provide additional input on preferred programs, sources of talent, and recruitment practices

Adapted from: Building Industry-Driven Career Pathway Systems in Colorado: A Step-by-Step Guide, 2016.

- 1.1.3. Maintain this information in a regularly updated database of high-demand occupations and career pathways that can be used to create materials (hand-outs, brochures, presentations) that will support outreach activities
- Update traditional LMI on a quarterly basis as new data is released
  - Release validated, more detailed information on an annual basis after industry input is completed and incorporated

**1.2. GENERAL AWARENESS. Design and execute campaigns targeted at key populations to raise awareness of high-demand, middle-skill careers**



- 1.2.1. Distribute labor market and career information to partner organizations to ensure consistent and accurate messages are guiding workforce development activities across the Talent Network
- Make materials accessible online in a “self-serve” format for partner organizations to use to educate themselves and their clients
  - Deliver this information to key groups such as school counselors, caseworkers, career counselors, and career navigators who advise students and workers on job searching and careers

- 1.2.2. Identify the most effective communication and distribution channels for key target audiences
- Choose two to three target audiences to begin with, and add target audiences as capacity allows
  - For each audience, consider the following:
    - Which partners already have relationships with the audience?
    - Where does the audience already gather (where are they captive)?
    - What mechanisms work best for reaching them?
    - How should career awareness information be communicated? What messages have the most impact / carry the most weight for this audience?
    - Who can best deliver this message?
  - Conduct community conversations with the target audiences to help answer the questions above, as needed
  - Tailor labor market and career information for each target audience to support the campaign

**SAMPLE OUTREACH ACTIVITIES**

- **Online Career Exploration Portal.** An online destination for interested individuals to seek more information on high-demand careers, employers who are hiring, and where to get training. Examples: petrochemworks.com and www.skillful.com
- **Event or Activity Attendance.** Information distribution at events where target audiences will be. Examples: booth at Community Tax Centers, Women’s Resource Fair, Austin ISD Back to School Bash
- **Speaker Series.** A panel discussion led by near-peers or recent graduates who are working in a high-demand, middle-skill career to share their experiences and answer questions
- **Information Sessions.** A presentation that provides an overview of high-demand, middle-skill careers and available resources to support individuals seeking to secure a job in one of these careers

- 1.2.3. Conduct outreach activities and deliver a consistent message about career opportunities
- Assign a lead communications volunteer chairperson for each target audience to manage a campaign and assemble a team to conduct the campaign

- Identify volunteers, who are employees of the key sectors, that are willing to participate in campaign activities and integrate these volunteers into the campaign team
- Organize at least one annual event (See Strategy 1.3.4, page 18) and two activities that can be performed on at least a monthly basis to efficiently reach the target audience

**1.3. CAREER EXPLORATION. Provide meaningful career exploration opportunities for residents entering the labor force or considering changing careers. Such opportunities could include career fairs, job shadowing, work-based learning, site/workplace tours, and integration with career & technical education programs**

<b>RESPONSIBILITY:</b>	Backbone	Industry	Data & Evaluation	■ Lead
	Communications	Education & Training	Policy & Systems Change	■ Support ■ Advisory Role

- 1.3.1. Develop a handbook/toolkit to help with the development of career exploration programs, including work-based learning and earn-and-learn opportunities
  - Use this toolkit to support outreach activities and the development of effective programs
  - Make the toolkit available online to improve distribution of the materials
- 1.3.2. Generate more interest in developing and hosting career exploration programs and inventory programs
  - Hold information sessions and one-on-one meetings with industry partners as well as education and training partners, to discuss the importance of career exploration and how participation can benefit employers and job seekers alike
  - Identify partners who are interested in providing more career exploration activities
  - Create a database of partners who wish to participate in career exploration opportunities, capturing specific contact names and what kinds of opportunities they provide or support
- 1.3.3. Support the development of new career exploration programs and enhancement of existing programs
  - Connect interested employers with education and training providers who are organizing these activities for students and workers to provide individualized and small-scale opportunities
  - Hold workshops with providers and employers to train them on how to organize effective career exploration/coaching activities, use toolkits, and exchange ideas and experiences
  - Recognize employers and providers who develop successful programs to celebrate their efforts, raise awareness of successful programs, and promote the replication of successful models

**CAREER EXPLORATION TOOLKITS**

Career exploration includes activities that provide opportunities for hands-on exploration of careers, including job shadowing, plant tours, internships, summer jobs, career simulations or role play, and project-based learning that includes “real-life” career-related problem solving.

Multiple toolkits have been published online and can be helpful examples to pull from. Examples include:

- [Coaching for College & Career](#) (Skillworks)
- [Setting up a Job Shadowing Program](#) (Education Planner)
- [Career Exploration Lesson Plans](#) (Applied Educational Systems)
- [Work Based Courses](#) (Jobs for the Future)
- [Various Toolkits for Work-Based Learning and Employer Engagement](#) (New Ways to Work)
- [Work-Based Learning Toolset](#) (Earn & Learn East Bay)
- [When I Grow Up](#) (WFSCA, AISD, E3 Alliance)

**1.3.4. Organize larger scale events and opportunities that raise awareness and provide career exploration such as Manufacturing Day or Healthcare Week**

- Leverage national events organized by industry associations, where possible, to take advantage of the outreach materials and toolkits that are part of these events
- Enlist employers to provide a site tour or other type of experiential learning activity to individuals from target audiences (or a sub-set of the target audiences)
- Coordinate with training providers to line up participants for the employers’ events
- Organize, promote, and scale up the event

**1.4. CAREER NAVIGATION. Increase the use of career navigators in helping economically disadvantaged students and workers define career directions and set career goals**



**1.4.1. Increase the adoption of the career navigation model across the Talent Network**

- Assess the region’s current use of career navigators, cataloguing where they are used, what their focus is, and how many individuals they serve
- Promote the establishment and adoption of coaching and case management standards
- Identify additional strategic venues to house career navigators that can easily access key target audiences and look for opportunities to extend college counseling services
- Work with these venues to launch or host a career navigation program by connecting them with resources and technical expertise as needed

**1.4.2. Enhance the support available to career navigators**

- Create an active network of career navigators to ease the distribution of information among them
- Develop an online repository of resources and tools to support career navigators, including updated labor market information
- Organize a regular forum for peer exchange and professional development for navigators

**CAREER NAVIGATOR RESOURCES**

Career navigators provide individual guidance and assistance to economically disadvantaged individuals to help them access and succeed in training programs, attain credentials, and pursue quality careers. Example resources are provided below:

- [Career Navigation Best Practices Guide](#) (Washington Integrated Sector Employment)
- [Career Navigation Resource Guide](#) (Aspen Institute)
- [Promising Practices](#) (Corporation for Skilled Workforce)





## 2. TRAINING

### EQUIP WORKERS WITH THE SKILLS THEY NEED TO SUCCEED

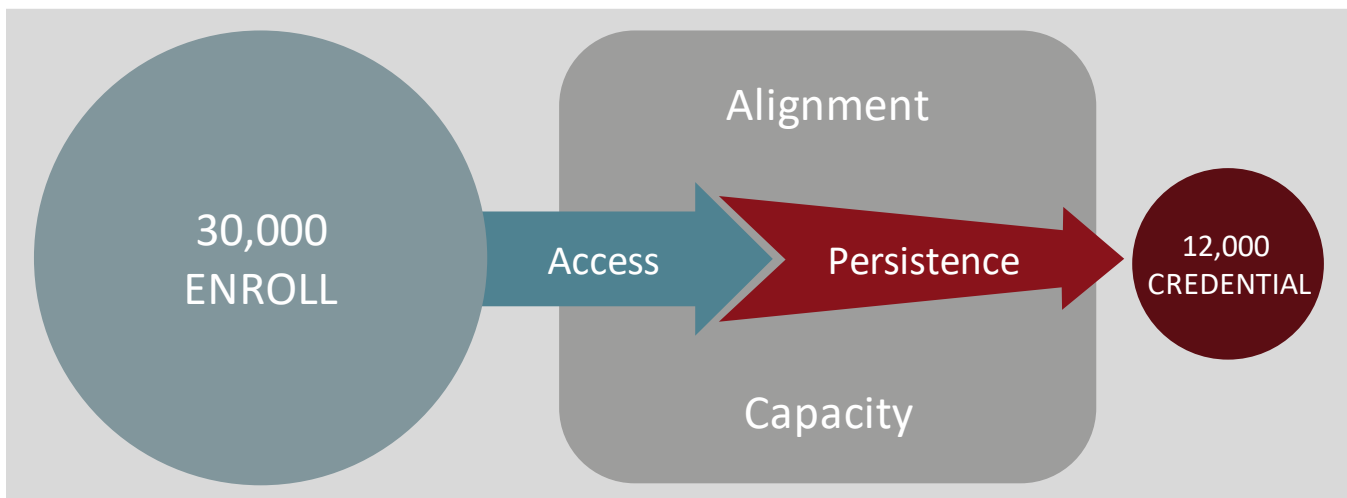
Middle-skill training programs typically have a business advisory function to help keep the programs grounded in employers’ needs. However, many training providers struggle with finding businesses to serve as advisors and with engaging these businesses at the level needed for meaningful input. At the same time, employers are often asked to serve on many different advisory councils and provide the same input multiple different times. As a result, they must prioritize their time and choose which, if any, organizations to engage with. Centralizing this input function by industry can be an effective means of engaging employers more fully and obtaining the level of input needed to align programs to employers’ needs. This approach allows employers to engage through a single platform that shares their input across the network of training providers. This also allows training providers to better coordinate their response to employer input.

KEY PARTNERS
① Community-based organizations/training providers
② Post-secondary institutions
③ School districts
OUTCOME
More economically disadvantaged students earn credentials
<b>TARGET:</b> 12,000 economically disadvantaged residents earn a middle-skill credential

Once employer needs are better defined, the network of training providers is better able to analyze their capacity and identify areas of need. As a network of providers, taking this step reduces duplication of efforts and provides a more holistic assessment of regional training capacity in the context of industry demand. This collaborative approach also creates opportunities to jointly pursue resources for expanding capacity. Coordinating an industry needs assessment and a system-wide training capacity evaluation can ensure that regional programs are well aligned with industry needs, providing candidates with the right skills to fulfill employers’ hiring needs.

While programmatic alignment ensures students are trained with the right skills, training providers must also ensure that students complete the programs. Students from economically disadvantaged backgrounds, in particular, face a variety of barriers to success in pursuing and completing training programs. These barriers include the distance to training sites, a lack of financial resources, and a lack of prerequisite or basic skills needed to enter a program. In addition, individual training providers’ screening practices and scheduling can serve as other barriers. Once a student begins a program, completing the program can be difficult. A range of services from childcare to financial literacy can help these students trouble shoot problems to enable them to persist in their training program. Addressing these barriers for students across the regional workforce system is necessary for reaching the goal of helping **12,000 disadvantaged residents earn a middle-skill credential**.

FIGURE 9. THE STRATEGIC FRAMEWORK FOR TRAINING



**2.1. ALIGNMENT. Centralize demand-side input to ensure that training curricula are aligned with regional employers’ needs and a 21<sup>st</sup> Century workplace**

**RESPONSIBILITY:**

Backbone	Industry	Data & Evaluation	<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"><span style="width: 10px; height: 10px; background-color: #800000; margin-right: 5px;"></span> Lead</div> <div style="display: flex; align-items: center;"><span style="width: 10px; height: 10px; background-color: #4F81BD; margin-right: 5px;"></span> Support</div> <div style="display: flex; align-items: center;"><span style="width: 10px; height: 10px; background-color: #666666; margin-right: 5px;"></span> Advisory Role</div> </div>
Communications	Education & Training	Policy & Systems Change	

- 2.1.1. Engage employers to identify the three to five most critical occupations in their industries (See Strategy 1.1.2)
  - For each critical occupation, use O\*NET and real-time labor market information to define the relevant knowledge, skills, and abilities (KSA) and create a “strawman” job description
  - Map each critical occupation to regional training programs
- 2.1.2. Assemble an employer task force for each industry to develop competencies and refine the profiles for each critical occupation
  - Assess the relevancy of the KSAs and job description to define what entry-level workers are expected to be able to do in each critical occupation
  - Use this input to develop and refine skill standards and profiles for each critical occupation
  - Share task force findings across the Talent Network

**DEVELOPING SKILL STANDARDS**

Assessing and documenting the specific knowledge, skills, and abilities of critical occupations provides a useful tool for industry, education, and training providers. Industry partnerships are essential for obtaining employer input, feedback, and the collaboration needed to accomplish this task.

For each occupation, organize two input sessions to assess the KSAs:

- Hiring authorities – the supervisors directly responsible for managing people in the occupation
- Employees – high-performing employees that can speak directly to what the occupation entails

In each session, facilitate discussions of entry into and out of each occupation, tasks and functions, and skills necessary to perform those functions. Use this input to refine job descriptions and define skill standards.

Adapted from: Building Industry-Driven Career Pathway Systems in Colorado: A Step-by-Step Guide, 2016.

**2.2. CAPACITY. Grow capacity of regional training providers to meet the demand for middle-skill workers**

**RESPONSIBILITY:**

Backbone	Industry	Data & Evaluation	<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="display: flex; align-items: center;"><span style="width: 10px; height: 10px; background-color: #800000; margin-right: 5px;"></span> Lead</div> <div style="display: flex; align-items: center;"><span style="width: 10px; height: 10px; background-color: #4F81BD; margin-right: 5px;"></span> Support</div> <div style="display: flex; align-items: center;"><span style="width: 10px; height: 10px; background-color: #666666; margin-right: 5px;"></span> Advisory Role</div> </div>
Communications	Education & Training	Policy & Systems Change	

- 2.2.1. Create a comprehensive inventory of training resources, including credit and non-credit courses, at regional colleges, ISDs, and for-profit/non-profit training providers
  - Develop a crosswalk of high school endorsements offered by districts to programs and fields of study offered at post-secondary institutions
  - Document any constraints to program growth (e.g. student interest, instructor availability, classroom space, lab/instructional equipment, etc.)
  - Analyze capacity constraints and prioritize regional programmatic needs
- 2.2.2. Identify available funding sources to support program expansion and work with partners to secure this funding
  - Advocate for additional public funds where appropriate
  - Create partnerships or consortia to seek grants to fund program expansion
  - Facilitate the creation of partnerships with employers to increase employer involvement in training (e.g. donated equipment, instructor-on-loan, work-based learning) and in funding additional capacity

**2.3. ACCESS. Increase economically disadvantaged residents’ access to middle-skill training**

RESPONSIBILITY:	Backbone	Industry	Data & Evaluation	■ Lead
	Communications	Education & Training	Policy & Systems Change	■ Support ■ Advisory Role

- 2.3.1. Provide greater access to programs by offering classes at training sites more closely linked to economically disadvantaged zip codes and in/near work places
  - Identify additional training sites that could be served by the existing partner network at minimal cost (e.g. existing classroom or training space that could be utilized for in-demand training courses)
  - Evaluate the feasibility of using a mobile training unit for certain high-demand skills where a shortage of training space exists
- 2.3.2. Grow the availability of and educate potential students about financial aid, including state and federal programs, scholarships, and employer-sponsored tuition assistance
  - Maintain a database of available financial aid to support training for high-demand occupations and make this information available to relevant partners across the talent network
  - Provide education, outreach, and support for employers interested in launching a tuition assistance program
  - Advocate for additional state and federal funding for financial aid
  - Continue to work with students to encourage them to complete FAFSA forms
- 2.3.3. Grow the availability of free or low-cost, publicly funded (e.g., WIOA, SNAP E&T, WERC) education and training offerings focused on the targeted industries
  - Work with training and education partners to ensure they are accessing available funds effectively
  - Amend training providers’ policies to allow public funds to support qualified distance learning
  - Advocate for additional state and federal funding for training in high-demand careers in targeted industries
  - Create a local workforce development scholarship fund that is targeted to economically disadvantaged zip codes and neighborhoods
  - Raise awareness of available training to drive student interest in these programs
- 2.3.4. Expand options for students with basic skills/English barriers or economically disadvantaged backgrounds
  - Scale up efforts to accelerate academic readiness/developmental education
  - Increase utilization of evidence-based practices such as I-BEST
  - Ensure students have both access to assessment tools to help them identify and overcome weaknesses and access to basic employability skill classes that can help them understand workplace etiquette and other soft skills
- 2.3.5. Evaluate student screening practices and scheduling, particularly for training programs that support high-demand, middle-skill occupations
  - Analyze acceptance criteria to determine whether the criteria are inclusive of applicants that come from economically disadvantaged areas and adjust, as needed
  - Ensure that working students’ schedules are accommodated through non-traditional course access such as block scheduling, online courses, and hybrid (online/in person)

**2.4. PERSISTENCE. Enhance economically disadvantaged students’ persistence and completion rates**

<b>RESPONSIBILITY:</b>	Backbone	Industry	Data & Evaluation	■ Lead
	Communications	Education & Training	Policy & Systems Change	■ Support ■ Advisory Role

**2.4.1. Work with training providers to analyze and address key drivers of persistence challenges**

- Set up a data and evaluation system to help providers identify where, when, and why economically disadvantaged students are dropping out
- Provide regular reports to providers that document their performance and provide helpful benchmarks against other providers
- Organize peer exchanges that include data experts from the Systems Change working group to assist providers in addressing their unique challenges

**2.4.2. Adopt the use of evidence-based models for improving persistence among economically disadvantaged students**

- Create a repository of evidence-based models and best practices
- Identify and launch models support multiple training providers throughout the region
- Work with individual training providers to evaluate the feasibility of adopting other evidence-based models that are tailored to their unique needs

**2.4.3. Enhance and expedite access to wraparound services for economically disadvantaged students, including dependent care, career coaching, early warning/intervention systems, emergency financial assistance, legal assistance, health and mental healthcare, and financial literacy**

- Adopt a common assessment tool that can help partner organization identify and document student needs and connect them with services. This assessment tool can also be used to document the specific needs of the Austin Metro Area’s economically disadvantaged students to be aggregated and analyzed at a regional level
- Hold regular training sessions for career navigators, counselors, and advisors to provide them with better information on referring their clients to services and helping them access services
- Identify specific shortages of wraparound services, and work collectively to identify resources and increase regional capacity to meet student needs



### 3. PLACEMENT

#### CONNECT EMPLOYERS WITH LOCAL TALENT TO FILL MIDDLE-SKILL JOBS

The Austin region’s tight labor market makes finding and hiring local talent competitive. Local hiring yields strong benefits for employers; yet, if the competition for local talent remains as steep as it is now, Austin’s position as a talent magnet can make recruiting talent from outside the region easier than finding local talent. To advance the Master Plan’s goal of **placing 8,000 economically disadvantaged residents in middle-skill jobs**, this paradigm must shift.

Building clearly defined opportunities for employers to cultivate their own talent pipelines will help overcome this challenge. Earn-and-learn opportunities, work-based learning activities, networking and program sponsorship are ways that employers can connect with prospective candidates and develop relationships with them. This also helps employers establish or enhance potential employees’ perception of their companies, which improves their ability to attract local talent.

In addition, making it easier for employers to find high-quality candidates within the region will facilitate local hiring. A platform for candidate searches that crosses organizations provides employers with a better tool for accessing work-ready candidates to fill their middle-skill positions. Assisting candidates in presenting themselves well when seeking out local employers will help them stand out in the applicant pool. Finally, supporting employers in assessing their own hiring practices can help remove any barriers that may impact the competitiveness of local talent.

Regional employers’ propensity to hire local will increase if local candidates are work-ready and more accessible during training and while seeking employment. Providing employers with opportunities to build a positive perception of their company among prospective employees, and giving prospective employees an opportunity to showcase their skills and abilities can also facilitate local hiring and retain local talent.

KEY PARTNERS
1 Community-based organizations/training providers
2 Post-secondary institutions
3 School districts
4 College career centers
5 One-Stop Centers/American Job Centers
OUTCOME
More economically disadvantaged residents secure jobs
<b>TARGET:</b> 8,000 economically disadvantaged residents placed in middle-skill jobs

FIGURE 10. THE STRATEGIC FRAMEWORK FOR PLACEMENT



**3.1. COMPETITIVENESS. Increase the number of earn-and-learn opportunities in the region to expose employers to a broader range of candidates and improve candidates’ employability skills**

**RESPONSIBILITY:**

Backbone	Industry	Data & Evaluation	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #800000; margin-bottom: 5px;"></div> Lead                 <div style="width: 15px; height: 15px; background-color: #4F81BD; margin-bottom: 5px;"></div> Support                 <div style="width: 15px; height: 15px; background-color: #666666; margin-bottom: 5px;"></div> Advisory Role             </div>
Communications	Education & Training	Policy & Systems Change	

**3.1.1. Organize a marketing and outreach campaign targeted at employers to increase the number of earn-and-learn slots available (Coordinate with Strategy 1.3)**

- Develop marketing collateral (including webpage and printed brochure) that describes earn-and-learn opportunities, makes the case for offering them, and directs employers to resources available
- Partner with industry associations and chambers of commerce to distribute information to employers about the benefits of supporting working learners through channels such as newsletters, speaking engagements, webinars, and workshops
- Where possible, showcase employers with successful earn-and-learn programs and provide them with a platform to celebrate their success and share their best practices with other employers
- Coordinate with existing programs such as the Texas Workforce Commission’s internship program

**EARN-AND-LEARN RESOURCES**

Earn-and-learn experiences provide opportunities for individuals to learn and develop their skill sets while working. Internships, apprenticeships, and summer jobs are commonly used earn-and-learn models.

Examples of resources to support the development of earn-and-learn opportunities are listed below:

- [Work-and-Learn Guidebook](#)  
(National Network of Business and Industry Associations)
- [Building Registered Apprenticeship Programs](#)  
(US Department of Labor, Education & Training Administration)
- [Internship Resource for Employers](#)  
(Texas Internship Challenge)

**3.1.2. Provide support to employers interested in scaling up internship, summer job, and apprenticeship programming including curriculum development, coordination of classroom training across employers, and guidance on navigating FLSA**

- Distribute the employer toolkit (see Strategy 1.3.1) to provide additional guidance on how to set up earn-and-learn opportunities
- Organize workshops on topics related to developing and managing earn-and-learn programs
- Assess whether employer interest exists to create a forum to exchange ideas and share best practices about earn-and-learn programs
- Seek and support grants that expand access to work-based learning opportunities

**3.2. CONNECTIONS. Create opportunities for employers and students in middle-skill training programs to connect before program completion**

**RESPONSIBILITY:**

Backbone	Industry	Data & Evaluation	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #800000; margin-bottom: 5px;"></div> Lead                 <div style="width: 15px; height: 15px; background-color: #4F81BD; margin-bottom: 5px;"></div> Support                 <div style="width: 15px; height: 15px; background-color: #666666; margin-bottom: 5px;"></div> Advisory Role             </div>
Communications	Education & Training	Policy & Systems Change	

**3.2.1. Promote work-based learning activities and earn-and-learn opportunities for students who have the skills and abilities that employers seek**

- Conduct outreach across partner network to generate interest among strong candidates for earn-and-learn opportunities
- Strengthen partnerships with career centers at key regional higher education institutions (public and private) to ensure their counselors are well informed of opportunities and the kind of candidates that employers seek
- Ensure that professors and instructors of programs relevant to earn-and-learn programs are familiar with opportunities that would support their students

**3.2.2.** Partner with career centers and career counselors to tailor activities and events that allow employers to identify promising talent, and provide education/training providers with opportunities to showcase their talent

- Leverage awareness activities as part of Strategy 1: Awareness and Enrollment and add on networking activities, pitch contests, or experiential learning activities that could provide a platform for interaction between employer and prospective talent
- Engage employer representatives as volunteers for practice interviews, resume review workshops, and guest speakers to expand early preview of prospective hires

**3.2.3.** Provide opportunities for employers to be integrally involved in training programs of interest to them (e.g. P-TECH, sponsorship of networking event, train-to-hire models)

- As part of education and training inventory (see Strategy 2.2), identify opportunities for employers to become more involved in the programs as instructors, sponsors, or in specific modules or lessons
- Distribute this information to interested employers and connect them with the relevant education and training providers

**3.3. LOCAL HIRING. Promote local hiring for middle-skill positions by facilitating the discovery of high-quality candidates**

<b>RESPONSIBILITY:</b>	Backbone	Industry	Data & Evaluation	■ Lead
	Communications	Education & Training	Policy & Systems Change	■ Support ■ Advisory Role

**3.3.1.** Encourage employers to seek local talent first to fill their middle-skill talent needs

- Make the case for hiring local in interactions with and outreach to businesses
- Recognize employers who are deliberate about hiring local and successful in local talent recruitment

**3.3.2.** Develop a cross-organizational platform for local candidate searches to facilitate local hiring for middle-skill positions

- Create a consortium of community-based organizations who work together to ensure hiring needs of employers are fulfilled with high-quality, work-ready clients and that suitable wrap-around services are provided to clients as they settle into employment
- Assign an intermediary to be the primary point of contact for employers seeking qualified candidates. This person would conduct an “intake” interview with the employer to identify specific needs

**THE BUSINESS CASE: 4 REASONS TO HIRE LOCAL**

1. Decreased hiring costs:
  - No need to pay relocation expenses
  - Candidates are readily available for in-person interviews
  - Vetting local candidate references is easier
2. Reduced start-date time lags due to relocation
3. Lower turnover due to improved cultural fit
4. Put money back into the local economy, including locally-owned businesses

Sources: U.S. News & World Report, 2014; Forbes, 2016; LCStaffing

- Create a communications protocol for distributing requests for qualified candidates and submitting resumes of work-ready clients
- Organize a screening committee of representatives of the community-based organizations to evaluate resumes and identify best qualified clients
- Market the service to employers

**3.3.3.** Assist community-based organization clients and local students in positioning themselves to be more competitive for middle-skill jobs in the local labor market

- Provide a common set of resources to distribute through education and training programs for local talent to use to find opportunities to connect with employers
- Help local talent access assessment tools and workshops that help them strengthen their basic hard and soft skills (see Strategy 2.3.4)
- Train clients to create effective online profiles through websites such as LinkedIn and Indeed and to adopt the best strategies to search for local jobs online

**CASE STUDY: SKILLFUL**

SKILLFUL is an initiative that provides tools to connect middle-skill job seekers with employers, educators, and community coaches so that they can advance their skills.

For job seekers, SKILLFUL provides information on which companies are hiring, what kinds of jobs are available, the skills required, and where to find training to get those skills. Through SKILLFUL, job seekers have access to career navigators and coaches.

For employers, SKILLFUL provides a larger talent pool to fill their open middle-skill positions. For educators, SKILLFUL makes it easier to tailor their programs to meet current and future industry demand.

The Markle Foundation teamed up with LinkedIn, Arizona State University, and edX to launch SKILLFUL. The model has been launched in Phoenix and Colorado.

For more information, visit: [www.skillful.com](http://www.skillful.com)

**3.4. HIRING PRACTICES. Implement promising and evidence-based hiring practices to fill middle-skill positions**



**3.4.1.** Provide training and knowledge sharing about competency/skill-based hiring practices

- Create a repository of evidence-based hiring practices
- Organize a half-day summit on competency-based hiring practices to raise awareness of best practices
- Host a series of workshops to help employers roll-out these practices

**3.4.2.** Engage interested employers in learning communities around diversity, inclusion, and impact hiring

- Set up learning communities for employers to provide them with a forum to exchange information and best practices
- Invite national subject matter experts to share knowledge with the learning communities





## 4. UPSKILLING

ASSIST FRONTLINE WORKERS IN ACQUIRING SKILLS TO ADVANCE INTO MIDDLE-SKILL JOBS

“Upskilling” refers to the training and development of current employees to provide them with enhanced skills to perform better and advance to higher-skilled / higher-wage positions.

For some employers, engaging their existing talent base through upskilling opportunities and providing clear pathways for career advancement are critical talent retention strategies. However, many employers still seek talent from outside their organizations to fill higher-skill roles rather than mining their existing talent base for potential. In fact, Deloitte estimates that as many as 24 million frontline workers face little to no upward career mobility.<sup>6</sup>

Yet, employers are finding it increasingly difficult to fill open positions. In the Manpower Group’s 2016 survey, 46 percent of US employers are having difficulty filling jobs. In the face of a growing talent shortage nationally, developing talent from within an organization has already become a key to successfully competing for, and retaining, talent. In the same Manpower survey, the number of employers who report training and developing existing employees to fill open positions has increased from 20 percent in 2006 to more than half in 2016. Supporting employers in expanding their capacity to execute upskilling strategies will better position regional employers in the “war” for talent. The Master Plan’s goal of ensuring **2,000 economically disadvantaged residents advance in jobs after upskilling** will be met by raising awareness of the advantages of developing talent from within and by building a support and learning network that promotes upskilling in the workplace.

KEY PARTNERS
<ul style="list-style-type: none"> <li>① Community-based organizations/training providers</li> <li>② Post-secondary institutions</li> <li>③ Employers</li> </ul>
OUTCOME
<p>More economically disadvantaged residents are upskilled and advanced</p> <p><b>TARGET:</b> 2,000 economically disadvantaged residents advance (raises, promotions) to middle-skill jobs after upskilling</p>

FIGURE 11. THE STRATEGIC FRAMEWORK FOR UPSKILLING



<sup>6</sup> Deloitte. A Guide to Upskilling America’s Frontline Workers, 2015. [http://www.upskillamerica.org/wp-content/uploads/2015/04/Upskilling\\_Employer\\_Handbook\\_042015.pdf](http://www.upskillamerica.org/wp-content/uploads/2015/04/Upskilling_Employer_Handbook_042015.pdf)

**4.1. AWARENESS. Encourage the upskilling of frontline workers into middle-skill jobs**

**RESPONSIBILITY:**

Backbone	Industry	Data & Evaluation	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 10px; height: 10px; background-color: #800000; margin-bottom: 5px;"></div> Lead                 <div style="width: 10px; height: 10px; background-color: #4F81BD; margin-bottom: 5px; margin-left: 10px;"></div> Support                 <div style="width: 10px; height: 10px; background-color: #666666; margin-left: 10px;"></div> Advisory Role             </div>
Communications	Education & Training	Policy & Systems Change	

- 4.1.1.1.** Conduct outreach to employers to raise awareness of the business case for advancing workers and resources available to support this
- Develop marketing collateral (including webpage and printed brochure) that describes upskilling opportunities, makes the case for offering them, and directs employers to resources available
  - Join with UpSkill America to leverage this national campaign’s resources to engage employers in upskilling their workers
  - Partner with industry associations and chambers of commerce to distribute information to employers about the benefits of upskilling through channels such as newsletters, speaking engagements, webinars, and workshops
  - Where possible, showcase employers with successful upskilling programs and provide them with a platform to celebrate their success and share their best practices with other employers

**THE BUSINESS CASE FOR UPSKILLING**

According to a recent survey by Deloitte and the Manufacturing Institute, 94 percent of business leaders agree that internal training and development programs are among the most effective workforce development strategies. Upskilling helps employers:

- Address the skills shortage—upskilling increases employees’ productivity and skill sets to bridge the skills gap
- Retain talent—opportunities for career progression (or lack thereof) are key drivers of retention and turnover
- Strengthen their organizational culture and brand—a reputation of investing in people strengthen companies’ reputations as employers of choice and corporate citizens

*For more information, see [A Guide To Upskilling America's Frontline Workers: A Handbook for Employers](#) by Deloitte*

**4.2. CAPACITY. Support employers in upskilling their frontline workers through programming and technical assistance**

**RESPONSIBILITY:**

Backbone	Industry	Data & Evaluation	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 10px; height: 10px; background-color: #800000; margin-bottom: 5px;"></div> Lead                 <div style="width: 10px; height: 10px; background-color: #4F81BD; margin-bottom: 5px; margin-left: 10px;"></div> Support                 <div style="width: 10px; height: 10px; background-color: #666666; margin-left: 10px;"></div> Advisory Role             </div>
Communications	Education & Training	Policy & Systems Change	

- 4.2.1.1.** Strengthen employers’ capacity to execute upskilling strategies
- Organize a training series to help employers evaluate their upskilling ability and put in place a program to improve it
  - Develop a one-on-one technical assistance model to help individual employers put in place the foundational components to support an upskilling program, identify specific efforts to undertake, and adopt the necessary internal practices and procedures needed to execute the initiatives
  - Encourage employers to join a forum for employers with upskilling initiatives to exchange ideas and share best practices or create a regional forum if interest exists

**UPSILLING RESOURCES**

Resources to support upskilling include the following:

- [Investing in Entry-Level Talent](#) (FSG)
- [Upskilling Resources](#) (UpSkill America)
- [Career Stat](#) (National Fund for Workforce Solutions)

**4.2.2.** Connect employers with relevant training resources to support their upskilling initiatives

- Help employers identify training needs and relevant training programs to meet those needs
- Use this needs assessment to identify training providers or other resources that could best meet their training needs

**4.2.3.** Increase availability and access to funds that support upskilling

- Structure tuition-assistance programs to encourage upskilling
- Apply for funds through Texas Workforce Commission, Department of Labor, private philanthropy, and others to fund training
- Advocate with the Business Leaders United for Workforce Partnerships<sup>7</sup> to secure more Federal funds for upskilling and work-based learning

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<sup>7</sup> Business Leaders United for Workforce Partnerships is an initiative of the National Skills Coalition. BLU is a coalition of employers working with training partners to close skills gaps, hire locally and advocate for policymakers to champion an invest in developing the skills of American workers. <http://www.nationalskillscoalition.org/national-initiatives/business-leaders-united>.

## IMPLEMENTATION

The implementation of this strategic plan is managed by a backbone organization with the support of a network of working groups that forms the Austin Metro Area Talent Network. The scale and reach of the efforts, however, will be driven by one key engagement initiative—the Talent Champion Initiative. Each of these is described in more detail in the following sections.

### THE BACKBONE ORGANIZATION

The Austin Metro Area Master Community Workforce Plan provides a common set of goals and strategies that serves as a collective impact agenda to address the region’s key workforce challenges. Implementing the strategy will require a great deal of ongoing collaboration, communication, and coordination.

A formalized steering committee – the Talent Network Leadership Council – should serve a governance role to monitor implementation. Key stakeholders who are vital to the successful implementation of the plan could be invited to join the steering committee. The committee should meet regularly to review indicators, recognize successes and challenges, and identify any additional actions that could advance a strategy quickly or more effectively.

Designating an organization to serve a central coordination role, known as the backbone organization, can help ensure continued implementation progress. Workforce Solutions Capital Area has served in that role during the development of this plan.

As the backbone organization, Workforce Solutions Capital Area should have sufficient staffing capacity to fulfill the following roles:<sup>8</sup>

#### 1. Maintain strategic coherence of the effort

- Ensure accountability by collecting and reporting data on key performance metrics
- Monitor metrics and evaluate progress
- Build and maintain strong relationships with the Leadership Council (LC) members and the broader stakeholder community
- Facilitate knowledge sharing, such as best practices and research among LC members and key stakeholders
- Organize and provide support—logistics, administrative, and research—for LC meetings and activities

#### 2. Manage fundraising and outreach activities

- Develop communications materials, with input from the LC, to be used for community outreach
- Engage with a broader audience to build buy-in from additional stakeholders
- Coordinate with other major initiatives, as appropriate, to align and leverage one another’s activities
- Create and lead the execution of a fundraising plan, with input from the LC, to ensure the fiscal sustainability of the Master Plan infrastructure and initiative

#### PARTNERS

- Workforce Solutions Capital Area
- City of Austin
- Travis County
- Austin Community College
- Post-Secondary Institutions
- School Districts
- Community-Based Organizations
- Industry Associations
- Chambers of Commerce
- Individual Employers
- Local and Regional Foundations
- Texas Workforce Commission

<sup>8</sup> Excerpt from the Backbone Toolkit, published by the Collective Impact Forum and developed by FSG.

**3. Provide additional project management and support**

- Serve as the central point of contact for information regarding the initiative
- Conduct any needed research relevant to strategy implementation
- Serve as the primary convener and facilitator in support of the working groups
- Maintain a document library to support the initiative and share as appropriate
- Organize, launch, and manage the working groups that are established to move strategies forward
- Serve as a resource for partners to troubleshoot or provide additional staffing capacity

**THE AUSTIN METRO AREA TALENT AND OPPORTUNITY NETWORK**

The structure for strategy implementation—the actual doing—is another consideration. For this project, the Talent Network Leadership Council with support of the backbone organization will establish and manage working groups that will collaborate to form the Austin Metro Area Talent and Opportunity Network. The proposed working groups are listed in Figure 12.

**FIGURE 12. WORKING GROUP STRUCTURE**



These working groups will be composed of a chair and members who will be selected based on the specific roles of the group. The specific roles of the working groups will be defined by the Talent Network Leadership Council. Suggested membership and roles for each of the working groups are outlined in Figure 13.

**FIGURE 13. SUGGESTED MEMBERSHIP AND ROLES**

NAME	MEMBERSHIP	ROLES
<b>LEADERSHIP COUNCIL</b>	<ul style="list-style-type: none"> <li>• Talent Champions &amp; Community Leaders</li> <li>• Key Investors                             <ul style="list-style-type: none"> <li>◦ Provide financial support for backbone, working group activities, relevant education and training efforts</li> </ul> </li> <li>• Backbone Organization</li> <li>• Working Group Chairs                             <ul style="list-style-type: none"> <li>◦ Industry Partnerships</li> <li>◦ Education &amp; Training</li> <li>◦ Systems Change</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Identifies key stakeholders that need to be engaged and leverages relationships to solicit involvement</li> <li>• Leads the establishment and continuous monitoring of shared vision, goals</li> <li>• Leverages relationships, resources to finance Network initiatives</li> <li>• Commissions research and analysis to support planning efforts</li> <li>• Provides coordination and accountability for working groups</li> <li>• Sets agenda for quarterly Network meetings</li> </ul>
<b>INDUSTRY PARTNERSHIPS</b>	<ul style="list-style-type: none"> <li>• Employers hiring for middle-skill occupations in the targeted industries</li> <li>• Industry associations, Chambers, etc.</li> <li>• Optional: Key relevant training providers</li> </ul>	<ul style="list-style-type: none"> <li>• Provide input on talent needs, potential solutions</li> <li>• Provide feedback on education/training programs to inform continuous improvement and capacity building efforts</li> <li>• Organize industry career exploration events and activities</li> <li>• Assist in identifying appropriate measures of performance and with data collection</li> </ul>
<b>EDUCATION &amp; TRAINING</b>	<ul style="list-style-type: none"> <li>• Representatives of relevant education/training providers</li> <li>• Should be senior representatives with decision-making authority</li> </ul>	<ul style="list-style-type: none"> <li>• Explores opportunities for collaboration, alignment to better address industry skill needs and worker education/training needs</li> <li>• Identifies capacity building needs</li> <li>• Proposes strategies to grow program quality and capacity, respond to challenges identified through Networks' Data/Evaluation efforts</li> <li>• Collaborates around data collection strategies</li> <li>• Collaborates around addressing education/training/work support needs of workers</li> </ul>
<b>SYSTEMS CHANGE</b> Data & Evaluation Communications Policy	<ul style="list-style-type: none"> <li>• Data, database, &amp; evaluation experts</li> <li>• Industry Associations &amp; Chambers</li> <li>• Public affairs experts from Network businesses</li> <li>• Marketing/communications experts from Leadership Council organizations, other Network members</li> </ul>	<ul style="list-style-type: none"> <li>• Assists in identifying appropriate performance/outcome measures, targets, and related data collection strategies</li> <li>• Assists with data analysis, evaluation, and reporting as appropriate</li> <li>• Devises advocacy, other strategies to address policy and regulatory barriers identified through the Talent Network</li> <li>• Advocates for funding as appropriate</li> <li>• Builds public will, awareness of issues through publications, online/social media presence, community events</li> <li>• Supports/coordinates industry awareness-building activities of Industry Partnerships</li> <li>• Helps establish and maintain the Network's brand</li> <li>• Interfaces with media</li> </ul>

## THE TALENT CHAMPION INITIATIVE

The implementation of the plan will also require scaling up the community-wide partnership and greater coordination between the business community, education and training providers, community-based organizations, as well as the public and philanthropic sectors who contribute to our workforce system. The Talent Champion Initiative has been designed to engage these partners around the Master Plan’s common goals. In addition, it provides a structure for coordination and measuring the impact of the partnership’s collective efforts.

“Talent Champions” will be businesses and other organizations that pledge their commitment to supporting this initiative. In the first year, we hope to enlist at least 200 Talent Champions. Employers should comprise at least 60 percent of all Talent Champions. By the end of 2021, we would like to have 1,000 employers enroll as Talent Champions.

To become a Talent Champion, organizations will:

- Register on the Talent Champion Initiative website and pledge their support of the 2021 goal
- Share information about the actions (see below) they’re already taking or plan to take to promote a skilled regional workforce
- At the end of the year, report on the outcomes of their actions via a brief survey so we can gauge our progress from 2017 to 2021

The list below is a sample of actions for **employers**:

### WHY BE A TALENT CHAMPION?

The Talent Champion initiative will:

- Improve the feedback loop between employers and education/training providers, resulting in a **more responsive, demand-driven workforce system**
- Provide employers with **better access to local and diverse talent pools**, reducing the need to recruit talent from outside the region and reducing hiring costs
- Create **better economic opportunities** for Travis County residents, which helps address the need to keep Austin affordable and promotes shared prosperity
- **Recognize** businesses and other organizations that are investing their time, talent, and resources to cultivate a skilled local workforce

CULTIVATE INTEREST IN HIGH-DEMAND CAREERS	EQUIP WORKERS WITH THE SKILLS THEY NEED TO SUCCEED	CONNECT EMPLOYERS WITH LOCAL TALENT	RETAIN & ADVANCE SKILLED WORKERS	PARTNERING WITH LOCAL LEADERS
<ul style="list-style-type: none"> <li>• Provide speakers to schools and community groups</li> <li>• Attend a Talent Champion Job Fair</li> <li>• Offer tours of their facility or job-shadowing</li> <li>• Co-invest in a local campaign to raise awareness about careers in their industry</li> </ul>	<ul style="list-style-type: none"> <li>• Provide a paid internship</li> <li>• Provide summer jobs for youth</li> <li>• Donate equipment to training programs</li> <li>• Loan experts from their company to serve as faculty for training programs</li> <li>• Provide scholarships or funding to local education and training programs</li> </ul>	<ul style="list-style-type: none"> <li>• Create earn-and-learn opportunities</li> <li>• Adopt new hiring practice (competency-based or inclusion)</li> <li>• Hire economically disadvantaged residents (&lt;200% of poverty)</li> </ul>	<ul style="list-style-type: none"> <li>• Upskill current employees so they can earn a raise or promotion:                             <ul style="list-style-type: none"> <li>○ On-the-job training</li> <li>○ Apprenticeships</li> <li>○ Mentoring</li> <li>○ Job shadowing</li> <li>○ Tuition assistance</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Participate in an industry partnership</li> <li>• Advise Workforce Solutions on industry needs</li> </ul>

Sample actions community-based organizations, education and training providers, and other partners might take include:

CULTIVATING INTEREST IN HIGH-DEMAND CAREERS	EQUIPPING WORKERS WITH THE SKILLS THEY NEED TO SUCCEED	CONNECTING EMPLOYERS WITH LOCAL TALENT	RETAINING & ADVANCING SKILLED WORKERS	PARTNERING WITH LOCAL LEADERS
<ul style="list-style-type: none"> <li>• Invite speakers to present to groups</li> <li>• Organize field trips that include facility tours and job shadowing days</li> <li>• Assist youth in finding summer employment</li> <li>• Participate in campaign to raise awareness of careers in key industries</li> <li>• Host or support career navigators</li> </ul>	<ul style="list-style-type: none"> <li>• Design program to use instructors on-loan to expand teaching capacity</li> <li>• Incorporate latest equipment into training programs</li> <li>• Assist clients in securing paid internships</li> <li>• Match scholarships from employers for training programs</li> </ul>	<ul style="list-style-type: none"> <li>• Partner with employers to provide opportunities to engage with prospective employees</li> <li>• Encourage clients to utilize talent portal</li> <li>• Help connect clients with local employers</li> </ul>	<ul style="list-style-type: none"> <li>• Place clients in apprenticeships</li> <li>• Help employers access training grants and other support for on-the-job training</li> <li>• Provide a match for employer-sponsored tuition assistance</li> </ul>	<ul style="list-style-type: none"> <li>• Seek input from industry partnerships</li> <li>• Collaborate with other workforce partners</li> </ul>

Over the next five years, these Talent Champions will actively participate in the implementation of the Master Community Workforce Plan and help to carry out the systemic changes in the workforce system necessary for our region to meet the demand for middle-skill workers and provide better economic opportunities for our residents. The engagement of the business community as Talent Champions will be a critical success factor in the initiative.

## CONCLUSION

The Austin Metro Area Master Community Workforce Plan lays out an ambitious agenda for collaboration and coordination to address one of the region’s most persistent challenges. Successful implementation of the plan will require the many organizations involved in the regional workforce system to come together with the goal of systems change.

Over the next several months, the structure of the Austin Metro Area Talent and Opportunity Network will be put into place. As these pieces come together, the Master Plan will become a living document that will evolve over the next five years as actions are taken and evaluation processes provide feedback to inform course corrections and strategic “tweaks.” As this transformation takes place, the strategic framework of the Master Plan will provide a strong direction and foundation for alignment and collective impact of Austin Metro Area’s workforce system.



# APPENDICES

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## APPENDIX A. LIST OF MIDDLE SKILL OCCUPATIONS

SOC	DESCRIPTION	INDUSTRY	2016 JOBS	AVERAGE ANNUAL WAGE
27-1019	Artists & Related Workers, All Other	Arts	93	\$48,800
27-1021	Commercial & Industrial Designers	Arts	265	\$56,600
27-1012	Craft Artists	Arts	107	\$30,400
27-1013	Fine Artists, Incl. Painters, Sculptors, & Illustrators	Arts	246	\$56,000
27-1024	Graphic Designers	Arts	2,130	\$47,600
27-1014	Multimedia Artists & Animators	Arts	663	\$51,600
27-2042	Musicians & Singers	Arts	1,320	\$59,700
27-4021	Photographers	Arts	994	\$31,000
25-2012	Kindergarten Teachers, Except Special Education	Education	1,123	\$47,800
25-2011	Preschool Teachers, Except Special Education	Education	3,101	\$31,400
25-9041	Teacher Assistants	Education	8,667	\$21,900
31-9091	Dental Assistants	Healthcare	2,170	\$37,000
29-2021	Dental Hygienists	Healthcare	1,371	\$75,500
29-2032	Diagnostic Medical Sonographers	Healthcare	320	\$75,500
29-2041	Emergency Medical Technicians & Paramedics	Healthcare	1,428	\$37,900
31-1011	Home Health Aides	Healthcare	4,514	\$21,200
29-2061	Licensed Practical & Licensed Vocational Nurses	Healthcare	3,403	\$46,600
29-2012	Medical & Clinical Laboratory Technicians	Healthcare	894	\$38,900
31-9092	Medical Assistants	Healthcare	3,540	\$30,400
29-2071	Medical Records & Health Information Technicians	Healthcare	1,059	\$36,100
43-6013	Medical Secretaries	Healthcare	3,125	\$34,400
31-1014	Nursing Assistants	Healthcare	5,994	\$24,800
31-2011	Occupational Therapy Assistants	Healthcare	168	\$60,000
29-2052	Pharmacy Technicians	Healthcare	1,882	\$31,800
31-9097	Phlebotomists	Healthcare	619	\$30,400
31-2021	Physical Therapist Assistants	Healthcare	395	\$63,800
29-2034	Radiologic Technologists	Healthcare	1,006	\$52,700
29-1141	Registered Nurses	Healthcare	13,339	\$65,300
29-1126	Respiratory Therapists	Healthcare	582	\$56,600
29-2055	Surgical Technologists	Healthcare	501	\$44,700
11-3021	Computer & Information Systems Managers	IT	3,782	\$141,500
15-1143	Computer Network Architects	IT	1,673	\$120,400
15-1152	Computer Network Support Specialists	IT	2,089	\$61,200
15-1199	Computer Occupations, All Other	IT	1,839	\$84,400
15-1131	Computer Programmers	IT	4,105	\$88,000
15-1121	Computer Systems Analysts	IT	6,435	\$79,400
15-1151	Computer User Support Specialists	IT	6,432	\$50,100
15-1141	Database Administrators	IT	1,139	\$74,800
15-1122	Information Security Analysts	IT	883	\$90,600
15-1142	Network & Computer Systems Administrators	IT	3,617	\$79,800
15-1132	Software Developers, Applications	IT	9,994	\$95,100
15-1133	Software Developers, Systems Software	IT	6,514	\$98,900
15-1134	Web Developers	IT	1,593	\$70,700
33-3011	Bailiffs	Legal/Law Enf./Public Safety	98	\$39,200

WORKFORCE SOLUTIONS CAPITAL AREA

SOC	DESCRIPTION	INDUSTRY	2016 JOBS	AVERAGE ANNUAL WAGE
33-3012	Correctional Officers & Jailers	Legal/Law Enf./Public Safety	3,137	\$39,200
23-2099	Legal Support Workers, All Other	Legal/Law Enf./Public Safety	341	\$54,800
23-2011	Paralegals & Legal Assistants	Legal/Law Enf./Public Safety	2,031	\$50,900
33-3051	Police & Sheriff's Patrol Officers	Legal/Law Enf./Public Safety	2,967	\$63,900
33-9021	Private Detectives & Investigators	Legal/Law Enf./Public Safety	268	\$56,800
33-2021	Fire Inspectors & Investigators	Legal/Law Enf./Public Safety	59	\$61,200
33-2011	Firefighters	Legal/Law Enf./Public Safety	1,160	\$49,500
39-5011	Barbers	Personal Services	340	\$30,000
43-4051	Customer Service Representatives	Personal Services	19,487	\$30,800
39-1021	First-Line Supervisors of Personal Service Workers	Personal Services	1,654	\$39,000
39-5012	Hairdressers, Hairstylists, & Cosmetologists	Personal Services	4,251	\$33,600
39-5091	Makeup Artists, Theatrical & Performance	Personal Services	29	\$43,600
39-5092	Manicurists & Pedicurists	Personal Services	882	\$26,600
31-9011	Massage Therapists	Personal Services	1,179	\$39,200
41-9021	Real Estate Brokers	Personal Services	701	\$112,700
41-9022	Real Estate Sales Agents	Personal Services	2,777	\$69,400
39-5094	Skincare Specialists	Personal Services	406	\$30,800
43-3031	Bookkeeping, Accounting, & Auditing Clerks	Professional & Business Services	12,141	\$40,000
43-4011	Brokerage Clerks	Professional & Business Services	336	\$51,200
13-1031	Claims Adjusters, Examiners, & Investigators	Professional & Business Services	1,766	\$57,800
43-6011	Executive Secretaries & Executive Admin. Assistants	Professional & Business Services	5,706	\$54,400
13-1111	Management Analysts	Professional & Business Services		
43-3051	Payroll & Timekeeping Clerks	Professional & Business Services	1,075	\$40,800
11-9141	Property, Real Estate, & Community Association Managers	Professional & Business Services	2,469	\$76,700
13-1023	Purchasing Agents, Except Wholesale, Retail, & Farm Prods.	Professional & Business Services	2,062	\$58,800
43-6014	Secretaries & Admin. Assist., Except Legal, Medical, & Exec.	Professional & Business Services	17,317	\$33,400
43-9111	Statistical Assistants	Professional & Business Services	128	\$47,400
13-2082	Tax Preparers	Professional & Business Services	630	\$38,800
23-2093	Title Examiners, Abstractors, & Searchers	Professional & Business Services	559	\$51,500
49-3023	Automotive Service Technicians & Mechanics	Skilled Trades	4,725	\$39,000
49-3031	Bus & Truck Mechanics & Diesel Engine Specialists	Skilled Trades	1,282	\$44,900
47-2031	Carpenters	Skilled Trades	7,251	\$37,800
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal & Plastic	Skilled Trades	81	\$56,100
49-2011	Computer, Automated Teller, & Office Machine Repairers	Skilled Trades	2,050	\$31,800
49-2093	Electrical & Electronics Installers & Repairers, Transport. Equip.	Skilled Trades	55	\$44,400
49-9051	Electrical Power-Line Installers & Repairers	Skilled Trades	1,178	\$58,300
47-2111	Electricians	Skilled Trades	4,375	\$46,700
49-2096	Electronic Equipment Installers & Repairers, Motor Vehicles	Skilled Trades	84	\$32,000
51-1011	First-Line Supervisors of Production & Operating Workers	Skilled Trades	2,766	\$62,000
49-9021	Heating, A/C, & Refrigeration Mechanics & Installers	Skilled Trades	2,272	\$40,200
53-3032	Heavy & Tractor-Trailer Truck Drivers	Skilled Trades	7,763	\$39,100
47-3013	Helpers--Electricians	Skilled Trades	522	\$28,800
47-3015	Helpers--Pipefitters, Plumbers, Pipefitters, & Steamfitters	Skilled Trades	440	\$27,200
49-9041	Industrial Machinery Mechanics	Skilled Trades	1,341	\$54,200
51-4041	Machinists	Skilled Trades	1,419	\$39,700

SOC	DESCRIPTION	INDUSTRY	2016 JOBS	AVERAGE ANNUAL WAGE
49-9071	Maintenance & Repair Workers, General	Skilled Trades	8,634	\$36,000
47-2152	Plumbers, Pipefitters, & Steamfitters	Skilled Trades	3,383	\$48,800
49-2098	Security & Fire Alarm Systems Installers	Skilled Trades	557	\$42,300
51-9141	Semiconductor Processors	Skilled Trades	801	\$36,700
47-2211	Sheet Metal Workers	Skilled Trades	947	\$43,300
47-2231	Solar Photovoltaic Installers	Skilled Trades	51	\$33,700
51-8031	Water & Wastewater Treatment Plant & System Operators	Skilled Trades	986	\$39,200
51-4121	Welders, Cutters, Solderers, & Brazers	Skilled Trades	1,727	\$36,100
19-4021	Biological Technicians	STEM	511	\$56,400
17-3019	Drafters, All Other	STEM		
17-3023	Electrical & Electronic Engineering Technicians	STEM	1,913	\$67,800
17-2072	Electronics Engineers, Except Computer	STEM	1,581	\$102,900
17-3029	Engineering Technicians, Except Drafters, All Other	STEM	443	\$59,400
17-3025	Environmental Engineering Technicians	STEM	157	\$56,700

Source: JobsEQ, WFSCA research.

## APPENDIX B. THE ECONOMICALLY DISADVANTAGED POPULATION

**FIGURE 14. INDIVIDUALS AND FAMILIES WITH INCOME <200% OF POVERTY LINE**

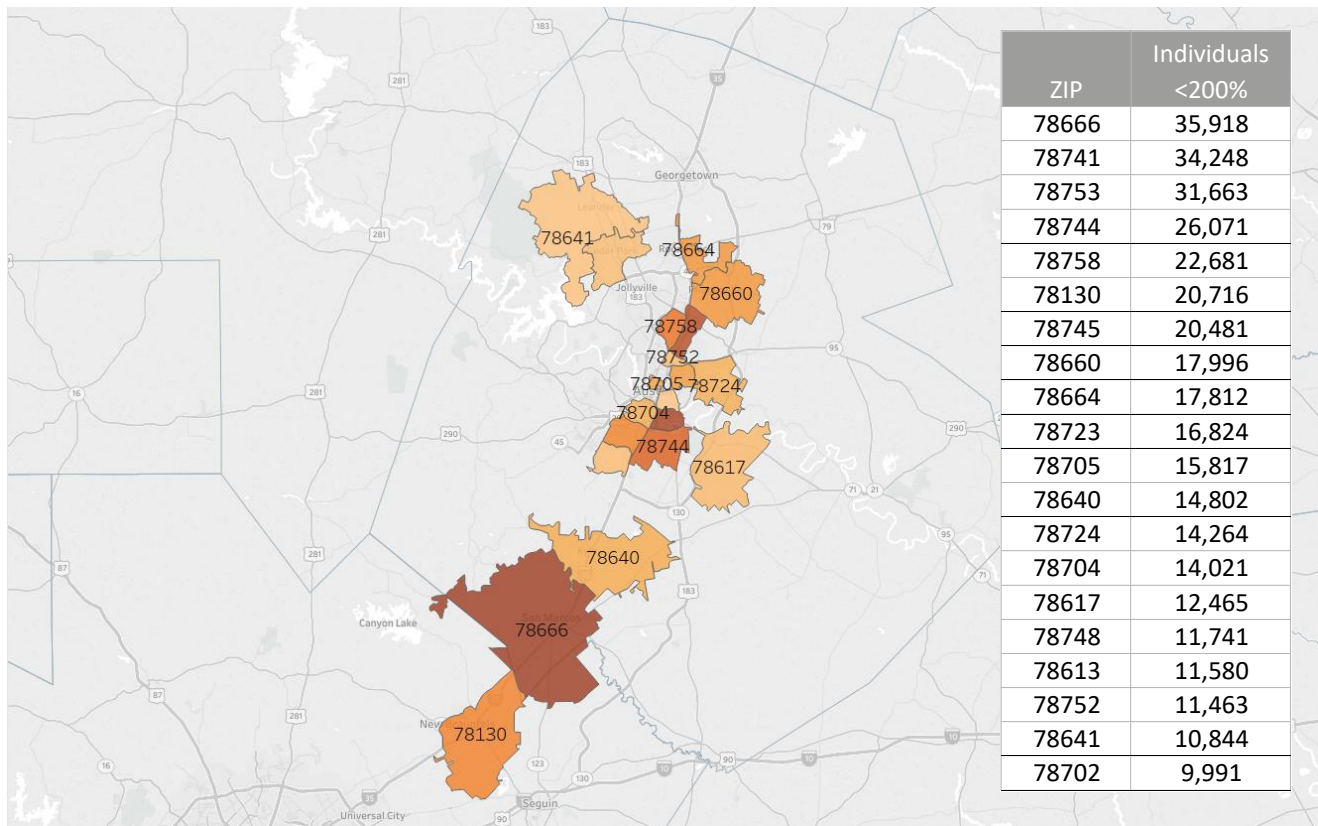
In the Austin-Round Rock MSA, 569,977 individuals with incomes below 200% of the poverty line. This represents just over 30 percent of the total population. Analyzing this by zip codes shows a wide range from very few to 35,918 individuals living below 200% and from 5 percent to 77 percent.

There are 99,296 families with incomes below 200% of the poverty line. This represents about 23 percent of families in the MSA. Analyzing families by zip code shows a similar pattern—a minimum of 26 to a maximum of more than 6,000 and 4 percent to 61 percent.

Source: 2015 5-year American Community Survey

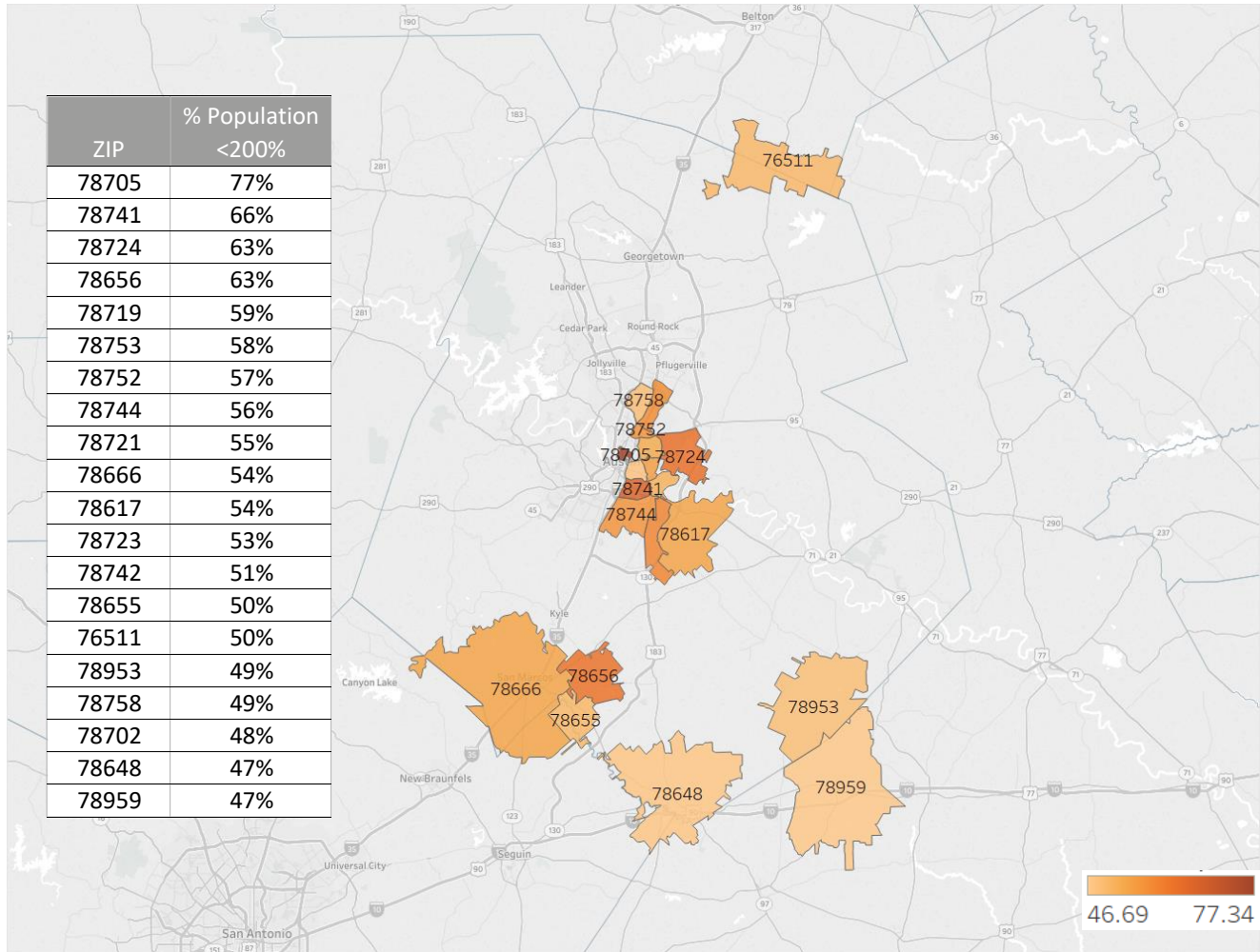
	MSA	Zip Codes	
		Minimum	Maximum
Individuals < 200%	569,977	52	35,918
% of Population <200%	30.8	5%	77%
Families <200%	99,296	26	6,099
% of Families <200%	23.2	4%	61%

**FIGURE 15. INDIVIDUALS WITH INCOMES BELOW 200% OF POVERTY LINE TOP 20 ZIP CODES WITH THE HIGHEST NUMBER OF INDIVIDUALS (<200%)**



Source: American Community Survey 2015 5-year Estimate.

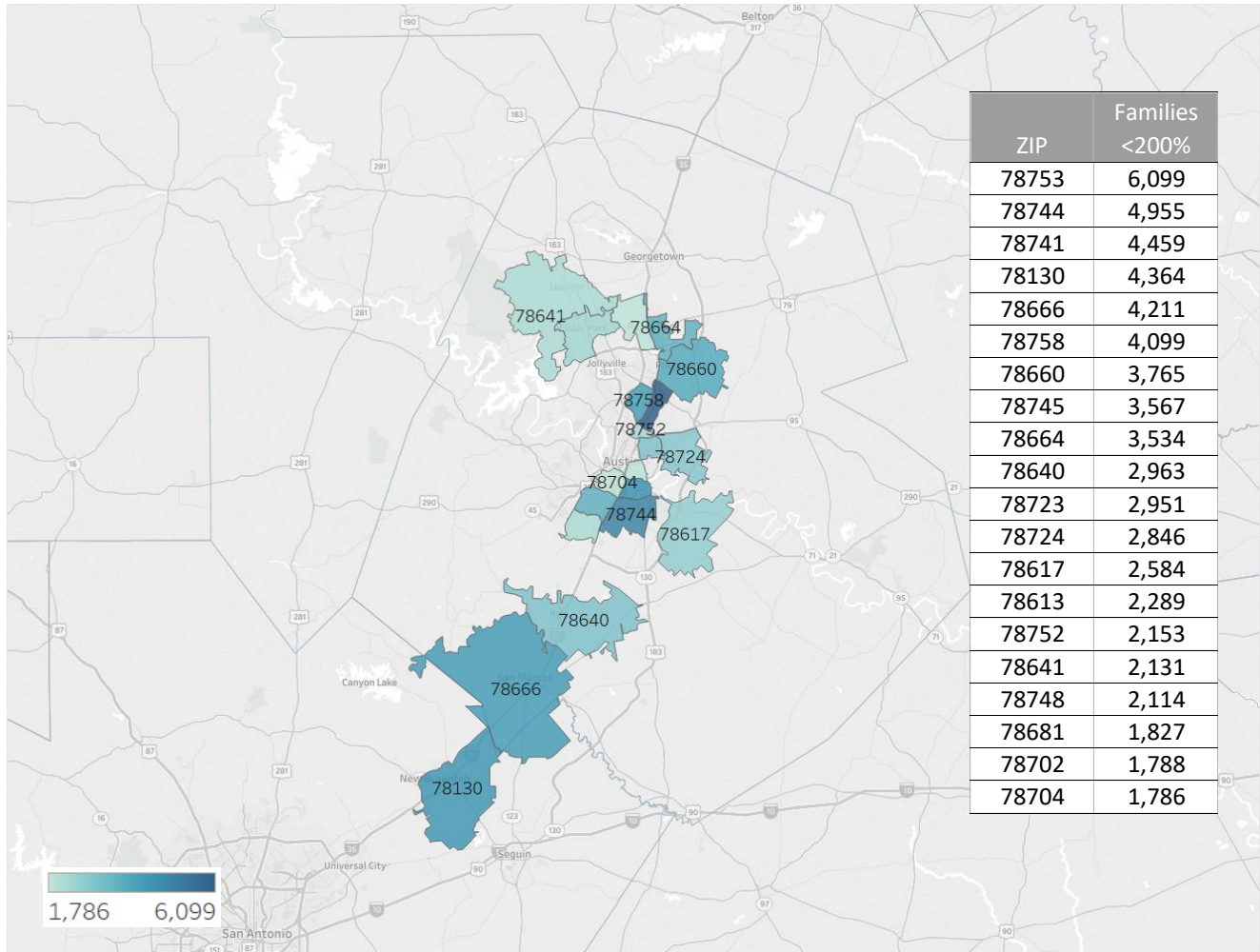
**FIGURE 16. CONCENTRATION OF INDIVIDUALS WITH INCOMES BELOW 200% OF POVERTY LINE**  
**TOP 20 ZIP CODES WITH THE HIGHEST PERCENT OF INDIVIDUALS (<200%)**



Source: American Community Survey 2015 5-year Estimate.



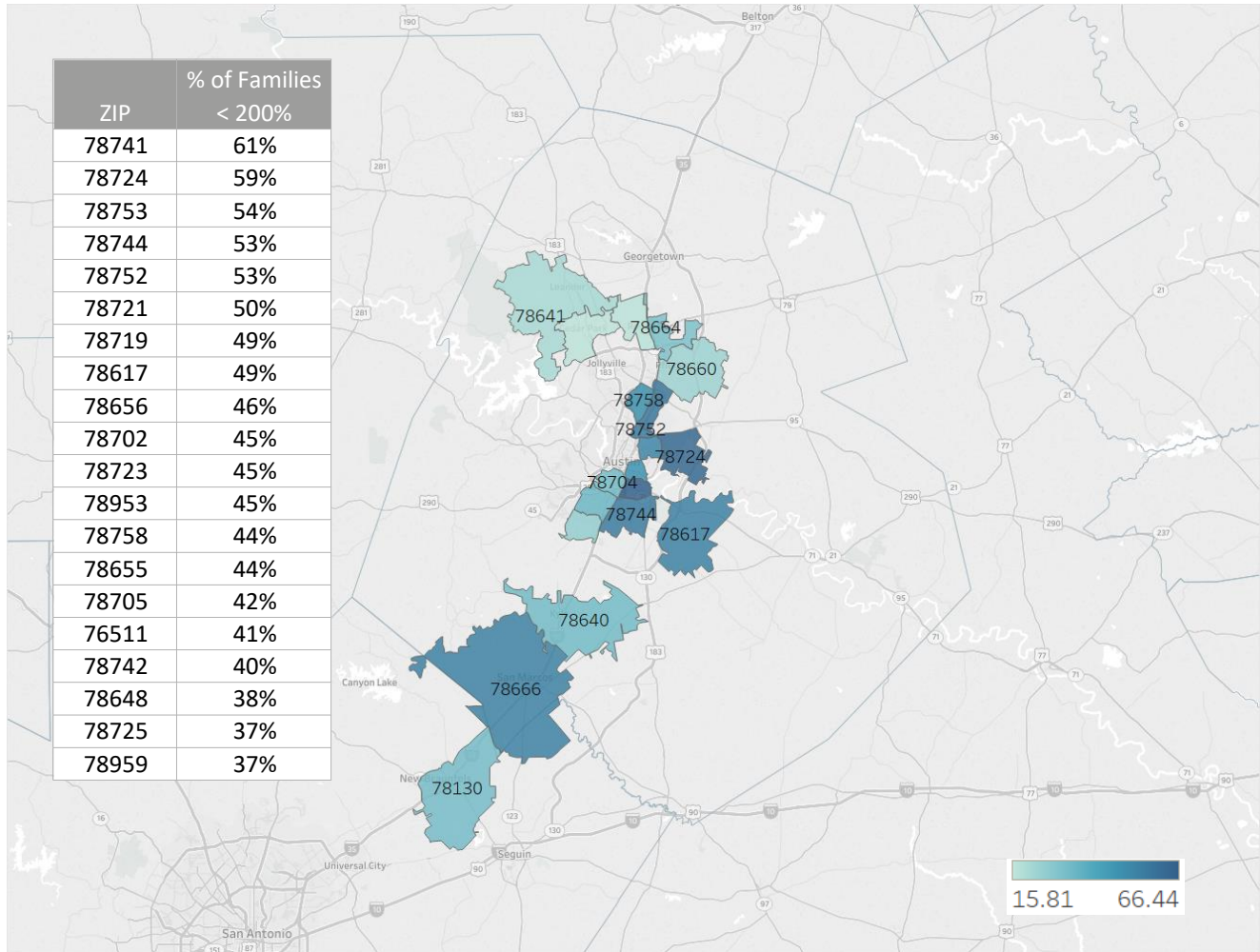
**FIGURE 17. FAMILIES WITH INCOMES BELOW 200% OF POVERTY LINE**  
**TOP 20 ZIP CODES WITH THE HIGHEST NUMBER OF FAMILIES (<200%)**



Source: American Community Survey 2015 5-year Estimate.



**FIGURE 18. CONCENTRATION OF FAMILIES WITH INCOMES BELOW 200% OF POVERTY LINE**  
**TOP 20 ZIP CODES WITH THE HIGHEST PERCENT OF FAMILIES (<200%)**



Source: American Community Survey 2015 5-year Estimate.

## APPENDIX C. PROGRAM INVENTORY AND COMPLETIONS

For the healthcare, information technology, and skilled trades sectors, a detailed inventory of programs was completed. This inventory included the training offerings of Austin Community College, Austin Area Urban League, Skillpoint Alliance, Capital IDEA, WFSCA, Goodwill and American YouthWorks. In addition, for-credit program offerings were identified from other area post-secondary institutions through the National Center for Education Statistics database. For each of the programs, the number of completions in 2015 is noted in the table below.

**FIGURE 19. HEALTHCARE COMPLETIONS**  
THOSE WHO COMPLETED TRAINING 2015 FISCAL/SCHOOL YEAR

Training Program	Other Training Providers (University of Texas, Texas State, St. Edward's University, and Private For-Profit Training Providers)	ACC	AAUL	Skillpoint	Capital IDEA		WFSCA (PY15 TEM)		Goodwill	American YouthWorks	2016 Baseline Output Per Training Program
					Without ACC Duplicates	All Clients - Including ACC Duplicates	Without ACC Duplicates	All Clients - Including ACC Duplicates			
Dental Assistants	119	-	-	-	-	-	-	-	-	-	119
Dental Hygienists	-	10	-	-	-	2	-	-	-	-	10
Diagnostic Medical Sonographers	28	35	-	-	-	2	-	3	-	-	63
Emergency Medical Technicians and Paramedics	-	40	-	-	-	-	-	-	-	-	40
Home Health Aides	-	-	-	-	-	-	-	-	-	-	0
Licensed Practical and Licensed Vocational Nurses	-	49	-	-	-	14	-	11	-	-	49
Medical and Clinical Laboratory Technicians	-	16	-	-	-	1	-	-	-	-	16
Medical Assistants	632	-	-	-	-	-	1	3	-	-	633
Medical Records and Health Information Technicians	17	22	-	-	-	2	1	1	-	-	40
Medical Secretaries	76	-	-	-	-	-	-	-	-	-	76
Nursing Assistants	-	-	-	134	-	-	1	1	69	3	207
Occupational Therapy Assistants	-	16	-	-	-	-	-	-	-	-	16
Pharmacy Technicians	66	36	-	-	-	3	2	3	-	-	104
Phlebotomists	-	-	-	-	-	-	-	-	-	-	0
Physical Therapist Assistants/Aides	-	19	-	-	-	-	-	-	-	-	19
Radiologic Technologists	33	35	-	-	-	-	-	1	-	-	68
Registered Nurses	255	245	-	-	-	22	-	12	-	-	500
Respiratory Therapists Technician/Assistant	-	-	-	-	-	-	-	-	-	-	0
Surgical Technologists	20	27	-	-	-	4	-	5	-	-	47
<b>Total per Training Provider/CBO</b>	<b>1246</b>	<b>550</b>	<b>0</b>	<b>134</b>	<b>0</b>	<b>50</b>	<b>5</b>	<b>40</b>	<b>69</b>	<b>3</b>	<b>2,007</b>

Source: WFSCA Research.

\*Training Provider and ACC Data Source: EMSI and National Center for Education Statistics (2015 Completion Data)

\*Note for all of these tables that some participants enroll in multiple training programs and/or earn multiple certifications. Thus, some participants may be duplicated.

\*2016 Baseline assumes that 2016 output will be the same as 2015 output, the most current data available

**FIGURE 20. HEALTHCARE COMPLETIONS AND DEMAND COMPARISON**  
 THOSE WHO COMPLETED TRAINING 2015 FISCAL/SCHOOL YEAR

Training Program	2016 Baseline Output Per Training Program	Range - Annual Actual & Projected Hiring (JobsEQ, Help Wanted Online)			
		Min	Max	Min	Max
Dental Assistants	119	118	131	101%	91%
Dental Hygienists	10	70	93	14%	11%
Diagnostic Medical Sonographers	63	20	40	315%	158%
Emergency Medical Technicians and Paramedics	40	25	86	160%	47%
Home Health Aides	0	121	329	0%	0%
Licensed Practical and Licensed Vocational Nurses	49	207	234	24%	21%
Medical and Clinical Laboratory Technicians	16	52	66	31%	24%
Medical Assistants	633	214	239	296%	265%
Medical Records and Health Information Technicians	40	58	101	68%	40%
Medical Secretaries	76	148	251	51%	30%
Nursing Assistants	207	210	349	99%	59%
Occupational Therapy Assistants	16	15	32	110%	50%
Pharmacy Technicians	104	71	75	146%	138%
Phlebotomists	0	22	40	0%	0%
Physical Therapist Assistants/Aides	19	28	56	68%	34%
Radiologic Technologists	68	46	98	149%	69%
Registered Nurses	500	760	2,229	66%	22%
Respiratory Therapists Technician/Assistant	0	31	57	0%	0%
Surgical Technologists	47	22	125	218%	38%
<b>Total per Training Provider/CBO</b>	<b>2,007</b>	2,238	4,631	90%	43%

Source: WFSCA Research, JobsEQ, Help Wanted Online.

**FIGURE 21. INFORMATION TECHNOLOGY COMPLETIONS**  
 THOSE WHO COMPLETED TRAINING 2015 FISCAL/SCHOOL YEAR

Training Program	Other Training Providers (University of Texas, Texas State, St. Edward's University, and Private For-Profit Training Providers)	ACC	AAUL	Skillpoint	Capital IDEA		WFSCA (PY15 TEM)		Goodwill	American YouthWorks	2016-2021 Output Per Training Program
					Without ACC Duplicates	All Clients - Including ACC Duplicates	Without ACC Duplicates	All Clients - Including ACC Duplicates			
Computer and Information Systems Managers	130	-	-	-	-	-	9	11	-	-	139
Computer Network Architects	-	-	-	-	-	-	-	-	-	-	0
Computer Network Support Specialists	5	46	-	-	-	-	2	2	-	-	53
Computer Occupations, All Other	638	46	-	-	-	-	-	-	-	-	684
Computer Programmers	3	60	-	-	-	-	3	5	-	-	66
Computer Systems Analysts	-	-	-	-	-	-	5	6	-	-	5
Computer User Support Specialists	19	-	-	-	-	-	14	18	4	7	44
Database Administrators	-	-	-	-	-	-	34	35	-	-	34
Information Security Analysts	-	-	-	-	-	-	-	-	-	-	0
Network and Computer Systems Administrators	58	-	-	-	-	6	10	15	-	-	68
Software Developers, Applications	-	-	-	-	-	-	7	7	-	-	7
Software Developers, Systems Software	-	-	-	-	-	-	2	2	-	-	2
Web Developers	8	-	-	-	-	-	-	-	-	-	8
<b>Total per ACC/CBO</b>	<b>861</b>	<b>152</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>86</b>	<b>101</b>	<b>4</b>	<b>7</b>	<b>1,110</b>

Source: WFSCA Research.

\*Training Provider and ACC Data Source: EMSI and National Center for Education Statistics (2015 Completion Data)

\*Note for all of these tables that some participants enroll in multiple training programs and/or earn multiple certifications. Thus, some participants may be duplicated.

\*2016 Baseline assumes that 2016 output will be the same as 2015 output, the most current data available.

**FIGURE 22. INFORMATION TECHNOLOGY COMPLETIONS AND DEMAND COMPARISON**  
 THOSE WHO COMPLETED TRAINING 2015 FISCAL/SCHOOL YEAR

Training Program	2016-2021 Output Per Training Program	Range - Annual Actual & Projected Hiring (JobsEQ, Help Wanted Online)			
		Min	Max	Min	Max
Computer and Information Systems Managers	139	169	228	82%	61%
Computer Network Architects	0	68	73	0%	0%
Computer Network Support Specialists	53	10	80	530%	66%
Computer Occupations, All Other	684	75	1,338	912%	51%
Computer Programmers	66	105	314	63%	21%
Computer Systems Analysts	5	345	788	1%	1%
Computer User Support Specialists	44	290	720	15%	6%
Database Administrators	34	59	168	58%	20%
Information Security Analysts	0	45	229	0%	0%
Network and Computer Systems Administrators	68	148	795	46%	9%
Software Developers, Applications	7	515	1,568	1%	0%
Software Developers, Systems Software	2	136	265	1%	1%
Web Developers	8	101	973	8%	1%
<b>Total per ACC/CBO</b>	<b>1,110</b>	<b>2,066</b>	<b>7,539</b>	<b>54%</b>	<b>15%</b>

Source: WFSCA Research, JobsEQ, Help Wanted Online.

**FIGURE 23. SKILLED TRADES COMPLETIONS**  
 THOSE WHO COMPLETED TRAINING 2015 FISCAL/SCHOOL YEAR

Training Program	Other Training Providers (University of Texas, Texas State, St. Edward's University, and Private For-Profit Training Providers)	ACC	AAUL	Skillpoint	Capital IDEA		WFSCA (PY15 TEM)		Goodwill	American YouthWorks	2016 Baseline Output Per Training Program
					Without ACC Duplicates	All Clients - Including ACC Duplicates	Without ACC Duplicates	All Clients - Including ACC Duplicates			
					Automotive Service Technicians and Mechanics	-	33	-			
Bus and Truck Mechanics and Diesel Engine Specialists	-	Not offered at ACC	-	-	-	-	-	-	-	-	0
Carpenters	-	19	-	33	-	-	-	-	1	3	56
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	3	-	-	-	-	-	-	-	-	-	3
Computer, Automated Teller, and Office Machine Repairers	-	Not offered at ACC	-	-	-	-	-	-	-	-	0
Electrical and Electronics Installers and Repairers, Transportation Equipment	-	-	-	-	-	4	-	-	-	-	0
Electrical Power-Line Installers and Repairers	-	-	-	-	-	-	-	1	-	-	0
Electricians	57	-	-	26	-	-	-	-	-	-	83
Electronic Equipment Installers and Repairers, Motor Vehicles	-	-	-	-	-	-	-	-	-	-	0
First-Line Supervisors of Production and Operating Workers	-	Not offered at ACC	-	-	-	-	-	-	-	-	0
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	55	36	-	18	-	3	31	32	6	-	146
Helpers--Electricians	57	-	-	-	-	-	-	-	-	-	57
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	-	-	-	-	-	-	-	-	-	-	0
Industrial Machinery Mechanics	-	Not offered at ACC	-	-	-	-	-	-	-	-	0
Machinists	-	Not offered at ACC	-	31	-	-	-	-	-	-	31
Maintenance and Repair Workers, General	-	-	-	-	-	-	-	-	19	-	19
Plumbers, Pipefitters, and Steamfitters	-	-	-	-	-	-	-	-	-	-	0
Security and Fire Alarm Systems Installers	57	Not offered at ACC	-	-	-	-	-	-	-	-	57
Semiconductor Processors	-	-	-	-	-	-	-	-	-	-	0
Sheet Metal Workers	-	-	-	-	-	-	-	-	-	-	0
Solar Photovoltaic Installers	-	-	-	-	-	1	-	-	-	-	0
Water and Wastewater Treatment Plant and System Operators	-	Not offered at ACC	-	-	-	-	-	-	-	-	0
Welders, Cutters, Solderers, and Brazers	-	102	-	-	-	-	-	-	-	6	108
Truck Driving, Heavy & Tractor-Trailer	-	151	-	-	-	-	48	48	64	-	263
<b>Total per Training Provider/CBO</b>	<b>229</b>	<b>341</b>	<b>0</b>	<b>108</b>	<b>0</b>	<b>16</b>	<b>80</b>	<b>82</b>	<b>171</b>	<b>18</b>	<b>947</b>

Source: WFSCA Research.

\*Training Provider and ACC Data Source: EMSI and National Center for Education Statistics (2015 Completion Data)

\*Note for all of these tables that some participants enroll in multiple training programs and/or earn multiple certifications. Thus, some participants may be duplicated.

\*2016 Baseline assumes that 2016 output will be the same as 2015 output, the most current data available.

**FIGURE 24. SKILLED TRADES COMPLETIONS AND DEMAND COMPARISON**  
 THOSE WHO COMPLETED TRAINING 2015 FISCAL/SCHOOL YEAR

Training Program	2016 Baseline Output Per Training Program	Range - Annual Actual & Projected Hiring (JobsEQ, Help Wanted Online)			
		Min	Max	Min	Max
Automotive Service Technicians and Mechanics	124	206	263	60%	47%
Bus and Truck Mechanics and Diesel Engine Specialists	0	61	65	0%	0%
Carpenters	56	153	314	37%	18%
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	3	5	5	56%	56%
Computer, Automated Teller, and Office Machine Repairers	0	2	91	0%	0%
Electrical and Electronics Installers and Repairers, Transportation Equipment	0	2	2	0%	0%
Electrical Power-Line Installers and Repairers	0	6	83	0%	0%
Electricians	83	149	222	56%	37%
Electronic Equipment Installers and Repairers, Motor Vehicles	0	-2	1	0%	200%
First-Line Supervisors of Production and Operating Workers	0	97	164	0%	0%
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	146	115	140	127%	104%
Helpers--Electricians	57	11	25	518%	230%
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	0	8	20	0%	0%
Industrial Machinery Mechanics	0	17	90	0%	0%
Machinists	31	12	84	258%	37%
Maintenance and Repair Workers, General	19	446	484	4%	4%
Plumbers, Pipefitters, and Steamfitters	0	8	158	0%	0%
Security and Fire Alarm Systems Installers	57	34	43	169%	133%
Semiconductor Processors	0	1	54	0%	0%
Sheet Metal Workers	0	17	45	0%	0%
Solar Photovoltaic Installers	0	2	3	0%	0%
Water and Wastewater Treatment Plant and System Operators	0	11	54	0%	0%
Welders, Cutters, Solderers, and Brazers	108	37	102	292%	106%
Truck Driving, Heavy & Tractor-Trailer	263	346	1,835	76%	14%
<b>Total per Training Provider/CBO</b>	<b>947</b>	<b>1,744</b>	<b>4,348</b>	<b>54%</b>	<b>22%</b>

Source: WFSCA Research, JobsEQ, Help Wanted Online.

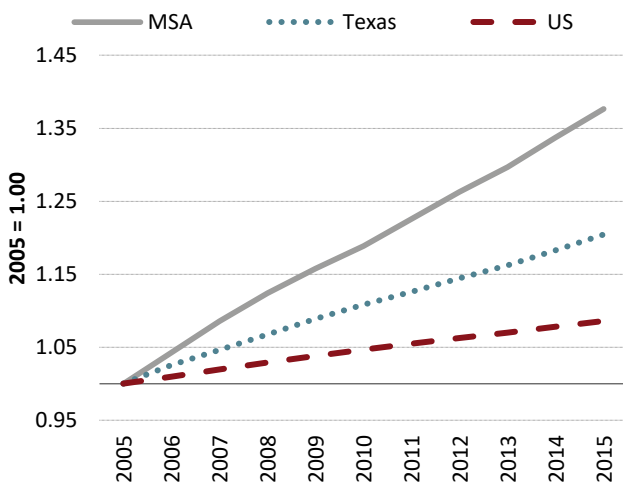
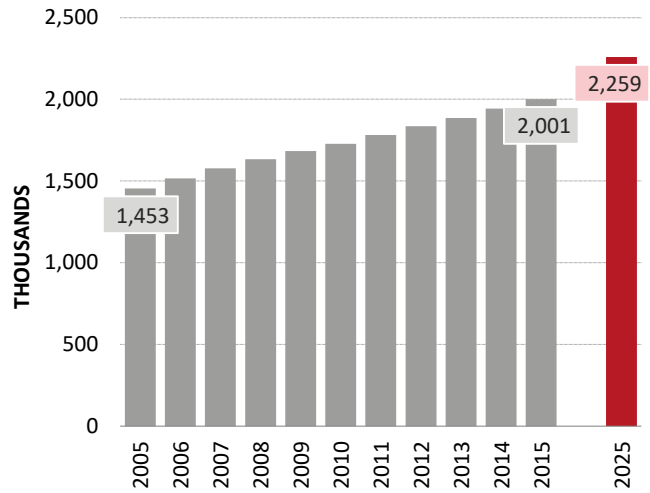
## APPENDIX D. LABOR ANALYSIS

### POPULATION

**FIGURE 25. POPULATION TRENDS, MSA**  
ANNUAL ESTIMATES JULY 1 OF EACH YEAR

Over the last 10 years, the Austin-Round Rock MSA has grown from 1.4 million to just over 2 million. By 2025, the State Demography Office projects that the population will surpass 2.2 million.

Source: US Census Bureau, Population Estimates program via Moody's Analytics. Projections from Texas State Demographer.



**FIGURE 26. POPULATION TRENDS, MSA**  
GROWTH SINCE 2005

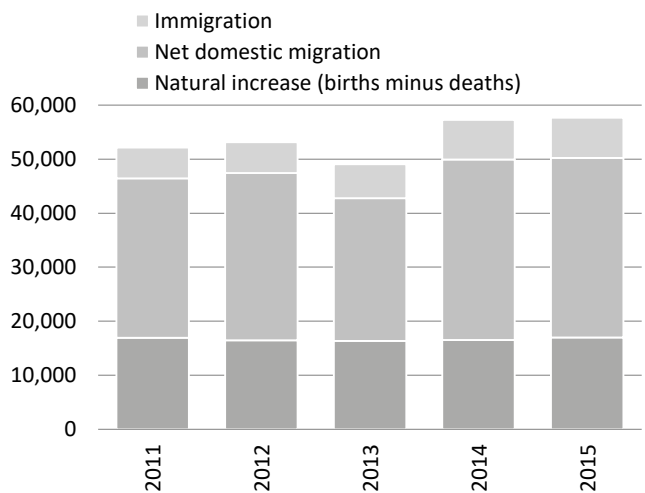
Between 2005 and 2015, the Austin-Round Rock MSA grew 38 percent. At the same time, the State of Texas increased 20 percent and the US increased 9 percent.

Source: US Census Bureau, Population Estimates program via Moody's Analytics.

**FIGURE 27. COMPONENTS OF CHANGE, MSA**  
2011 - 2015

The region's population growth has been driven primarily by domestic migration. Between 2011 and 2015, net domestic migration was responsible for 54 to 58 percent of the region's population change each year. Natural population increase was responsible for 29 to 33 percent. Immigration accounted for only 11 to 13 percent of the region's population growth.

Source: U.S. Bureau of the Census (history) via Moody's Analytics.





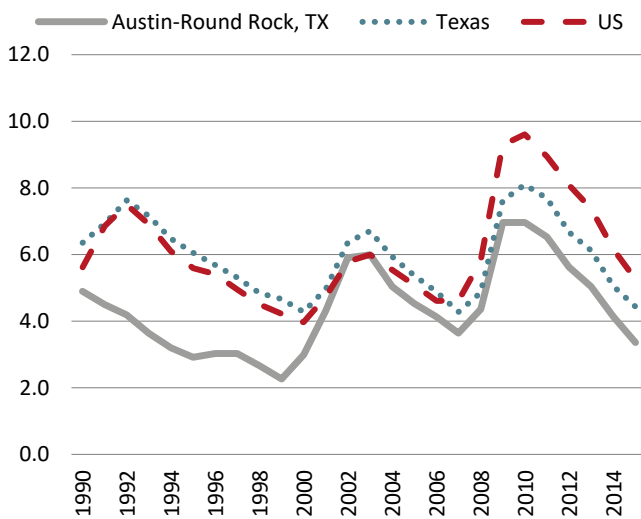
## LABOR FORCE CHARACTERISTICS

**FIGURE 28. LABOR MARKET OVERVIEW**

As of December 31, 2015, the Austin-Round Rock MSA had a civilian labor force of just over 1 million people. Among this labor force, 3.4 percent were unemployed.

GEOGRAPHY	CIVILIAN LABOR FORCE	EMPLOYED	UNEMPLOYED	UNEMPLOYMENT RATE
United States	157,128,167	148,840,583	8,287,833	5.3%
Texas	13,056,551	12,479,148	577,403	4.4%
MSA	1,068,630	1,032,745	35,884	3.4%

Source: US Bureau of Labor Statistics, Local Area Unemployment Statistics (state and county labor market data); US Census Bureau, Current Population Survey (national labor market data) via Moody's Analytics.



**FIGURE 29. ANNUAL UNEMPLOYMENT RATES 1990-2015**

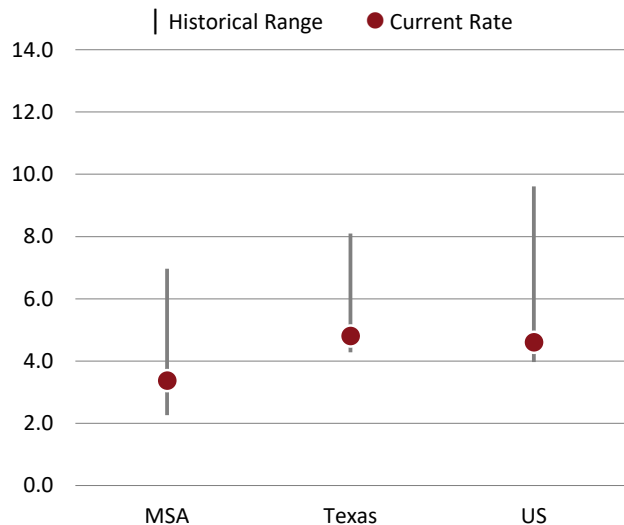
The MSA's unemployment rate is consistently below that of the state and the US. During the recession, the region's unemployment rate peaked at 7 percent in 2009 and 2010, but has declined to pre-recession levels.

Source: US Bureau of Labor Statistics, Local Area Unemployment Statistics (state and local), Current Population Survey (national) via Moody's Analytics.

**FIGURE 30. ANNUAL UNEMPLOYMENT RATES CURRENT RATE VS HISTORICAL RANGE**

Over this period, the unemployment rate in the MSA reached a low of 2.3 percent in 1999 and peaked at 7.0 percent in 2010. This range is more compact and lower than that of the US.

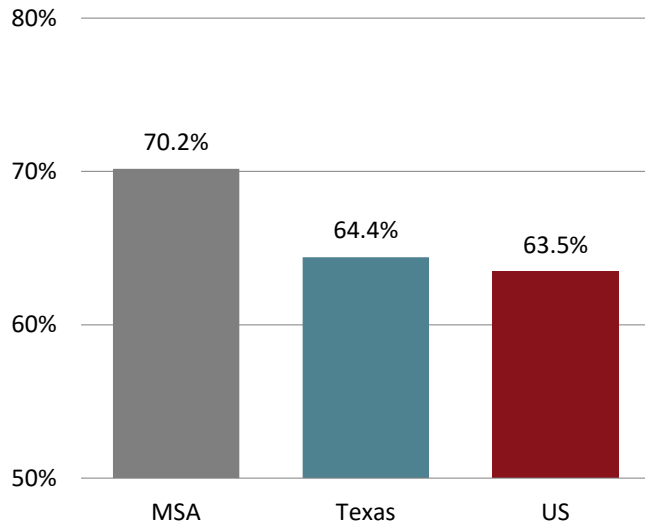
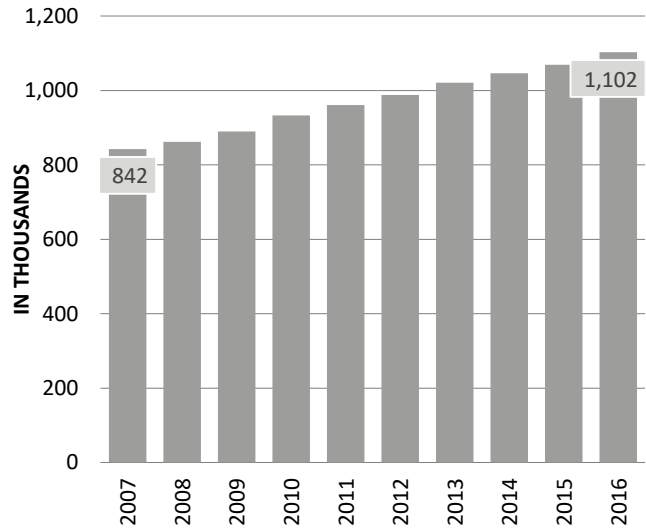
Source: US Bureau of Labor Statistics, Local Area Unemployment Statistics (state and local), Current Population Survey (national) via Moody's Analytics.



**FIGURE 31. CIVILIAN LABOR FORCE, MSA AS OF DEC 31, 2007–2016**

The civilian labor force in the MSA has grown from 842,000 to 1.1 million over the last 10 years, a gain of 31 percent.

Source: US Bureau of Labor Statistics via Moody's Analytics.



**FIGURE 32. COMPARATIVE LABOR FORCE PARTICIPATION RATES 2010-14**

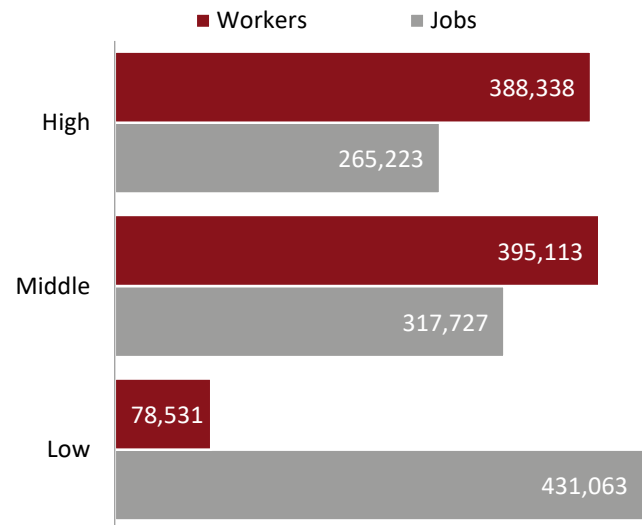
At 70 percent, the regional labor force participation rate is one of the highest in the nation. The region's labor force participation rate is significantly higher than both the state and the US.

Source: Census Bureau, American Community Survey via Moody's Analytics.

**FIGURE 33. JOBS VS LABOR FORCE, MSA EDUCATIONAL REQUIREMENTS AND ATTAINMENT**

A comparison of the education level that jobs require and the educational attainment of the labor force reveals a high degree of mismatch. In the MSA, 26 percent of the jobs require a bachelor's degree or higher while 45 percent of the population age 25 to 64 has achieved that level of educational attainment. On the other hand, 43 percent of jobs require a high school diploma or less while 9 percent of the population has this level of education.

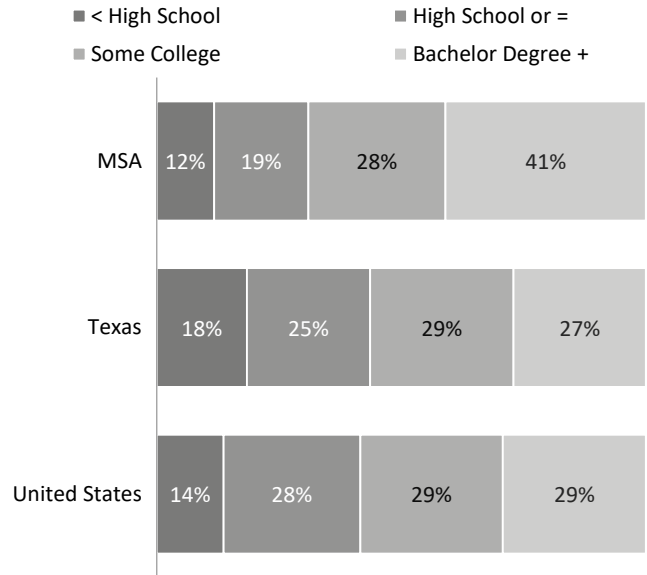
Source: EMSI 2016.1 – QCEW Employees, Non-QCEW Employees, and Self-Employed, ACS.



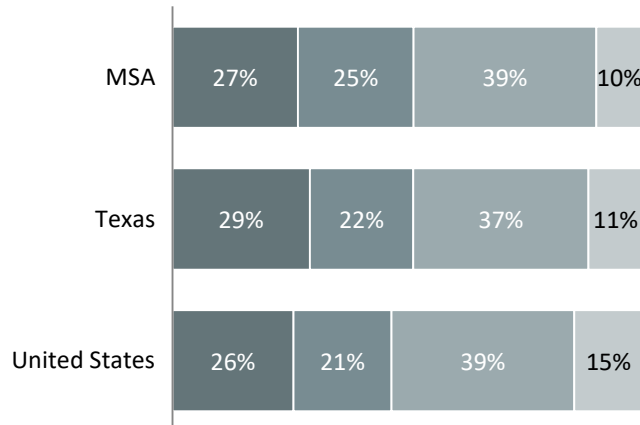
**FIGURE 34. EDUCATIONAL ATTAINMENT**  
POPULATION 25+, 2014

In 2014, 41 percent of the population 25 years of older in the MSA held a bachelor's degree or higher. Another 28 percent had attended some college or earned a post-secondary certificate or associate's degree.

Source: ACS via Moody's Analytics.



- Youth (0-19)
- Young adults (20-34)
- Experienced working age (35-64)
- Seniors (65+)



**FIGURE 35. AGE DISTRIBUTION**  
2014

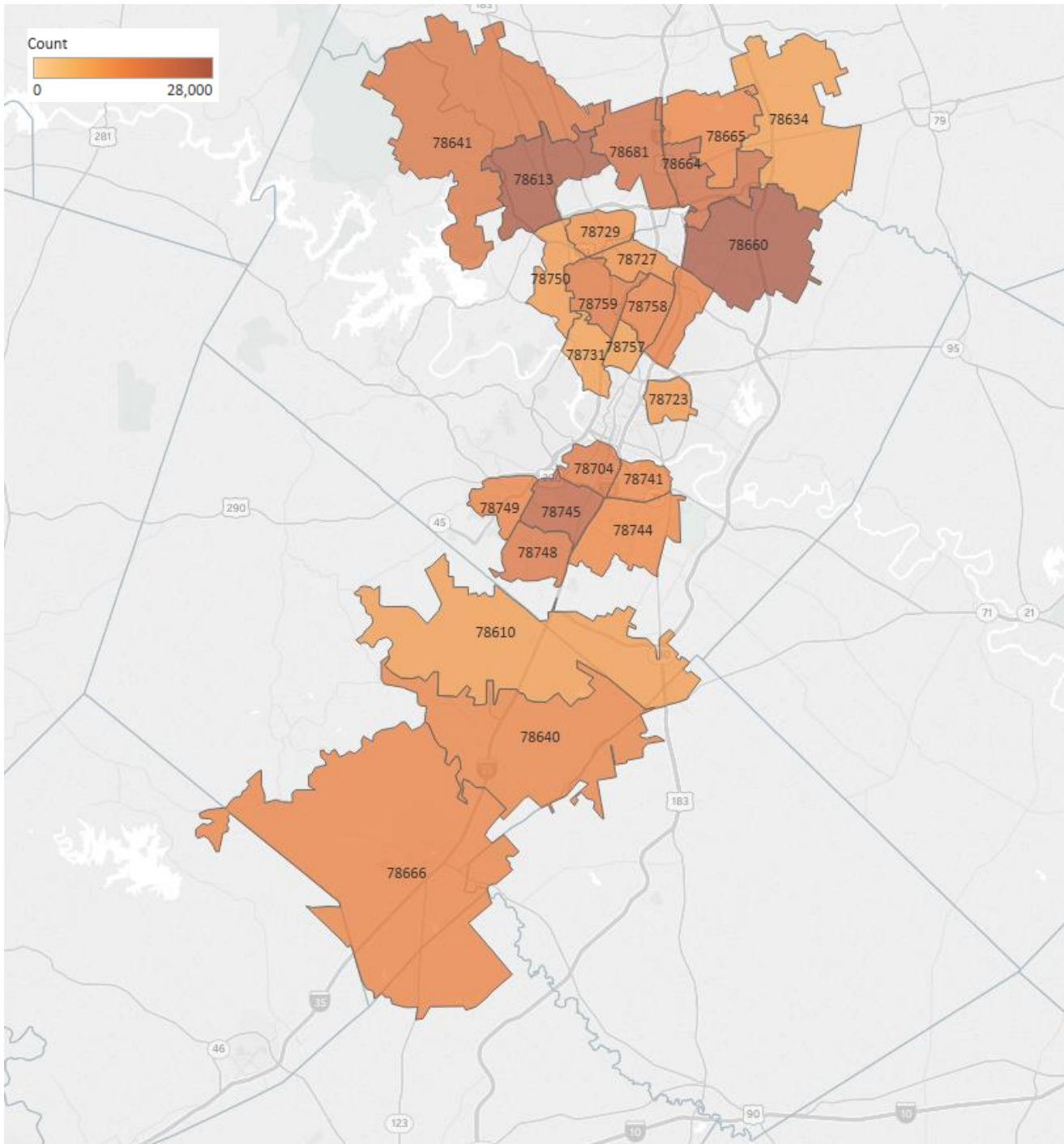
In the MSA, the working age cohort is the largest age cohort. The young adult cohort in the MSA represents a larger share of the population, which is often characteristic of a college town. The senior cohort is 10 percent of the population.

Source: ACS via Moody's Analytics.

## COMMUTING

**FIGURE 36. AUSTIN-ROUND ROCK MSA LABORSHED EMPLOYEES BY ZIP CODE, 2014**

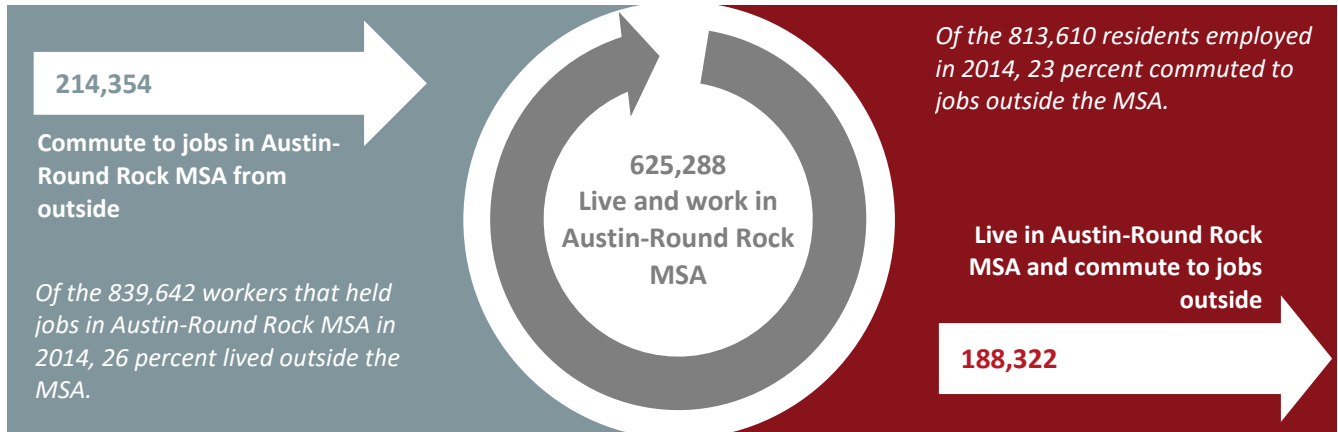
The regional laborshed is dispersed across the five-county metropolitan statistical area with concentrations along key transportation corridors. The top 25 zip codes (shown here) account for almost 60 percent of the region's workforce.



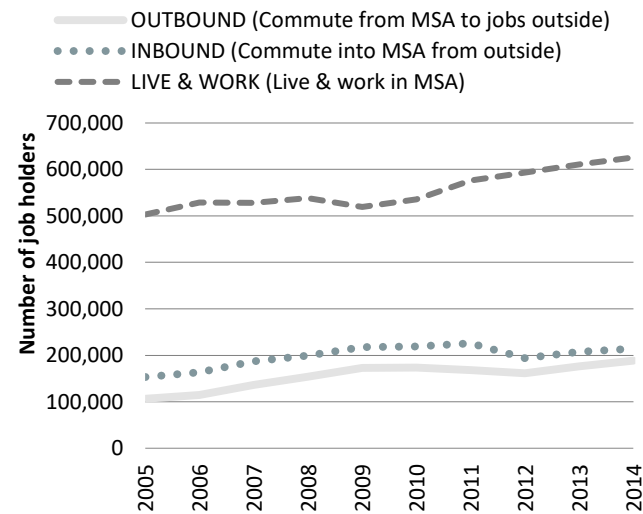
Source: LEHD, On the Map, TIP Strategies Research.

**FIGURE 37. INFLOW/OUTFLOW FOR AUSTIN-ROUND ROCK MSA, 2014**  
FLOW OF WORKERS TO/FROM THE MSA

About three-quarters of the workers in the Austin-Round Rock MSA both lived and worked in the region. The region is a net importer of labor, with more workers commuting into the region than commuting out. In 2014, 23 percent of workers, or 813,610 people, commuted out of the MSA for work and 26 percent, or 214,354 people, commuted into the MSA for work.



Source: US Census Bureau, Local Employment Dynamics.  
Notes: Overlay arrows are for illustrative purposes and do not indicate directionality of worker flow between home and employment locations.



**FIGURE 38. COMMUTING FLOWS, 2005-2014**  
NUMBER OF JOB HOLDERS

The number of workers who live and work in the MSA has increased significantly over the last 10 years. The number of inbound and outbound commuters has also climbed steadily over time, although the number of outbound commuters has increased at a faster rate in recent years and has led to a decline in the net number of commuters since 2012.

Source: US Census Bureau, Local Employment Dynamics.

SELECTED JOBHOLDER CHARACTERISTICS, 2014

SHARE OF WORKERS BY TYPE OF COMMUTING FLOW (INTERNAL, OUTBOUND, INBOUND)

FIGURE 39. AGE DISTRIBUTION

The internal job holders are slightly older than the inbound and outbound commuters, with more workers over 55 years of age and fewer workers less than 29 years old. The internal job holders have the highest share of workers of prime working age (30 to 54 years old).

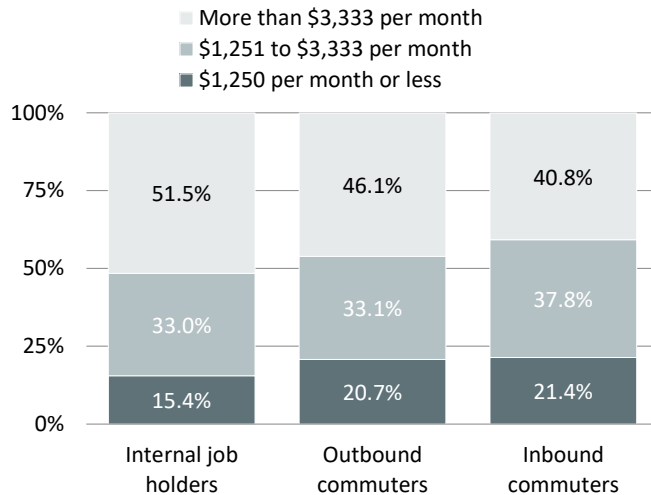
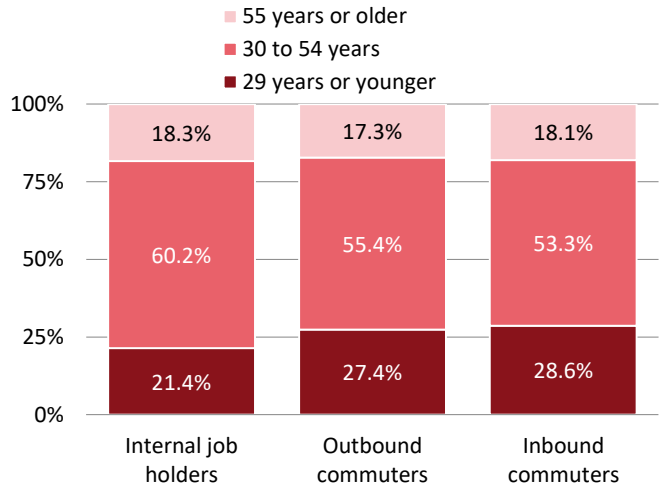
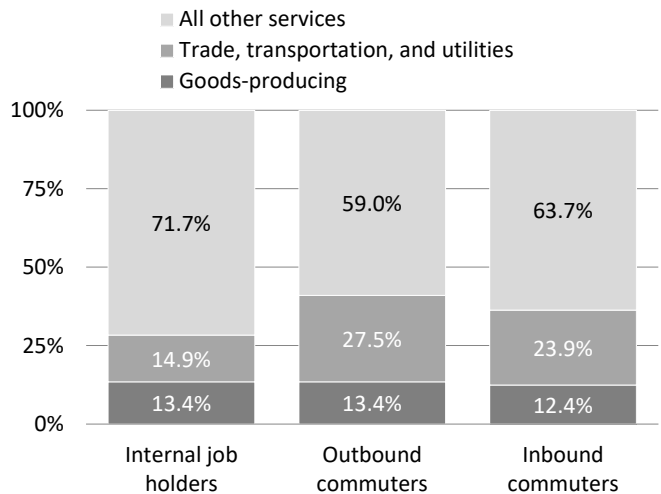


FIGURE 40. EARNINGS

Internal job holders have the highest percentage of workers earning more than \$3,333 a month. Inbound commuters have the highest percentage of workers earning less than \$1,250 a month.

FIGURE 41. INDUSTRY CLASS

The share of outbound commuters working in goods-producing and trade, transportation, and utilities is higher than in the inbound commuter group and the internal job holders. The share of internal job holders who work in services is significantly higher than the other two groups.



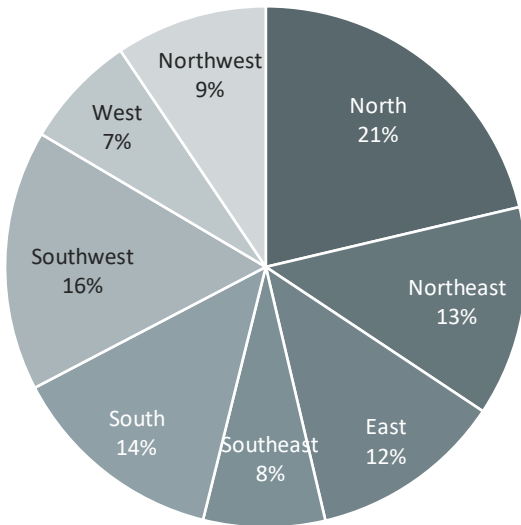
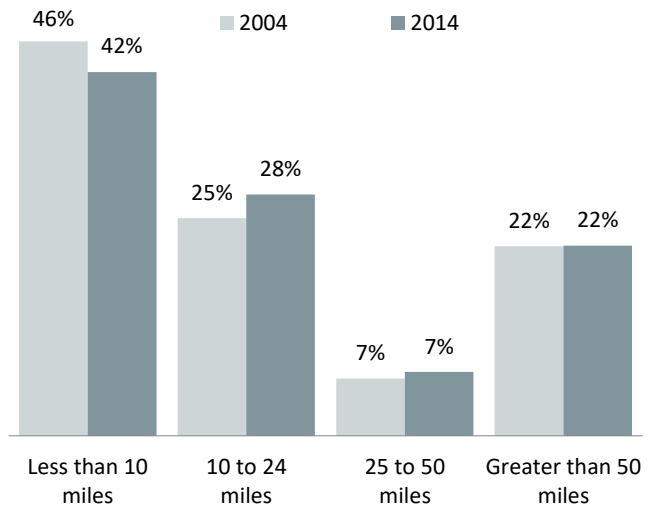
Source: (all figures) US Census Bureau, Local Employment Dynamics.

PEOPLE WHO WORK IN AUSTIN-ROUND ROCK MSA

**FIGURE 42. DISTANCE TRAVELED, 2004 VS. 2014 SHARE OF JOB HOLDERS**

In general, people working in the MSA are travelling greater distances to work. The percentage of people commuting less than 10 miles decreased from 46 percent in 2004 to 42 percent in 2014. The number of job holders travelling 10 to 24 miles increased by three percent.

Source: US Census Bureau, Local Employment Dynamics.



**FIGURE 43. DIRECTION TRAVELED FROM WORK TO HOME, 2014 SHARE OF PEOPLE THAT WORK IN AUSTIN-ROUND ROCK MSA**

The highest percentage of people who work in the MSA travel in a northerly direction on their commute from work to home. The next highest percentage is people who travel southwest from work to home. Relatively few workers travel west on their commute from work to home.

Source: US Census Bureau, Local Employment Dynamics.

**FIGURE 44. DESTINATION, 2014 TOP 10 CITIES WHERE AUSTIN-ROUND ROCK MSA LIVE**

Just over one-third of the MSA’s workers live within Austin city limits. Of the region’s suburban communities, Round Rock is home to the largest number of workers, followed by Cedar Park, and Pflugerville. Almost 3 percent of workers live in San Antonio.

Source: US Census Bureau, Local Employment Dynamics.

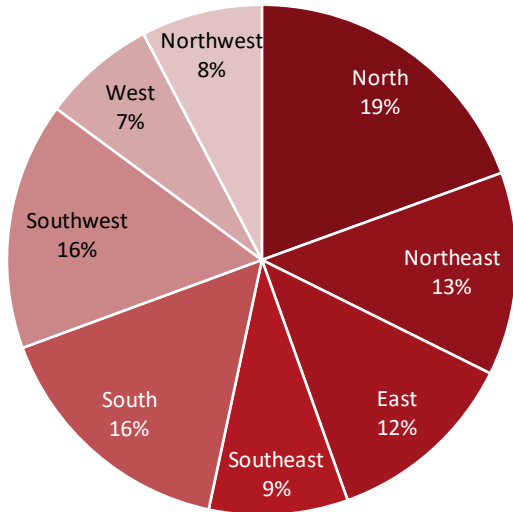
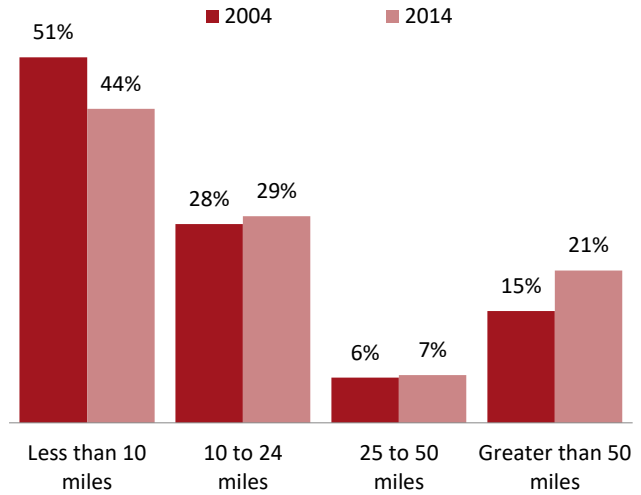
City (Place)	Count	Share
1 Austin city, TX	303,344	36.1%
2 Round Rock city, TX	38,679	4.6%
3 San Antonio city, TX	23,361	2.8%
4 Cedar Park city, TX	22,925	2.7%
5 Pflugerville city, TX	20,110	2.4%
6 Georgetown city, TX	14,361	1.7%
7 Houston city, TX	13,693	1.6%
8 Leander city, TX	10,742	1.3%
9 Kyle city, TX	10,415	1.2%
10 San Marcos city, TX	10,398	1.2%
All Other Locations	193,545	23.1%
<b>Total</b>	<b>839,642</b>	<b>100.0%</b>

**EMPLOYED PEOPLE WHO LIVE IN AUSTIN-ROUND ROCK MSA**

**FIGURE 45. DISTANCE TRAVELED, 2004 VS. 2014 SHARE OF JOB HOLDERS**

Of the employed people who live in the MSA, commute distances have increased as well. The percent of employed residents who commute less than 10 miles decreased from 51 percent in 2004, to 44 percent in 2014. The percent of employed residents who travel more than 50 miles increased the largest amount—6 percent.

Source: US Census Bureau, Local Employment Dynamics.



**FIGURE 46. DIRECTION TRAVELED FROM HOME TO WORK, 2014 SHARE OF PEOPLE THAT LIVE IN AUSTIN-ROUND ROCK MSA**

The highest percentage of workers commute to the north from home to work. The next highest percentage is to the southwest and south. Few employed residents of the MSA commute west from home to work.

Source: US Census Bureau, Local Employment Dynamics.

**FIGURE 47. DESTINATION, 2014 TOP 10 CITIES WHERE EMPLOYED AUSTIN-ROUND ROCK RESIDENTS WORK**

For MSA residents who are employed, the largest regional employment centers are Austin, Round Rock, San Marcos, and Georgetown. Houston, San Antonio, and Dallas employ about 9 percent of employed residents of the MSA.

Source: US Census Bureau, Local Employment Dynamics.

City (Place)	Count	Share
1 Austin city, TX	438,847	53.9%
2 Round Rock city, TX	38,257	4.7%
3 Houston city, TX	30,610	3.8%
4 San Antonio city, TX	25,083	3.1%
5 Dallas city, TX	16,034	2.0%
6 San Marcos city, TX	15,953	2.0%
7 Georgetown city, TX	15,137	1.9%
8 Cedar Park city, TX	11,006	1.4%
9 Pflugerville city, TX	9,995	1.2%
10 Leander city, TX	8,147	1.0%
All Other Locations	204,541	25.1%
<b>Total</b>	<b>813,610</b>	<b>100.0%</b>



Below are the top 20 sources of workers for the Austin-Round Rock MSA. Austin and Round Rock are, by far, the largest employment and residential centers. Cedar Park, Pflugerville, Georgetown, Leander, and Kyle are also important sources of labor for the MSA. San Marcos, Georgetown, and Cedar Park are additional employment centers for the region. San Antonio, Houston and Dallas are all three sources of and destinations for regional workers.

**FIGURE 48. TOP 20 SOURCES OF WORKERS, 2014**  
CITIES WHERE AUSTIN-ROUND ROCK WORKERS LIVE, WITH NET FLOW

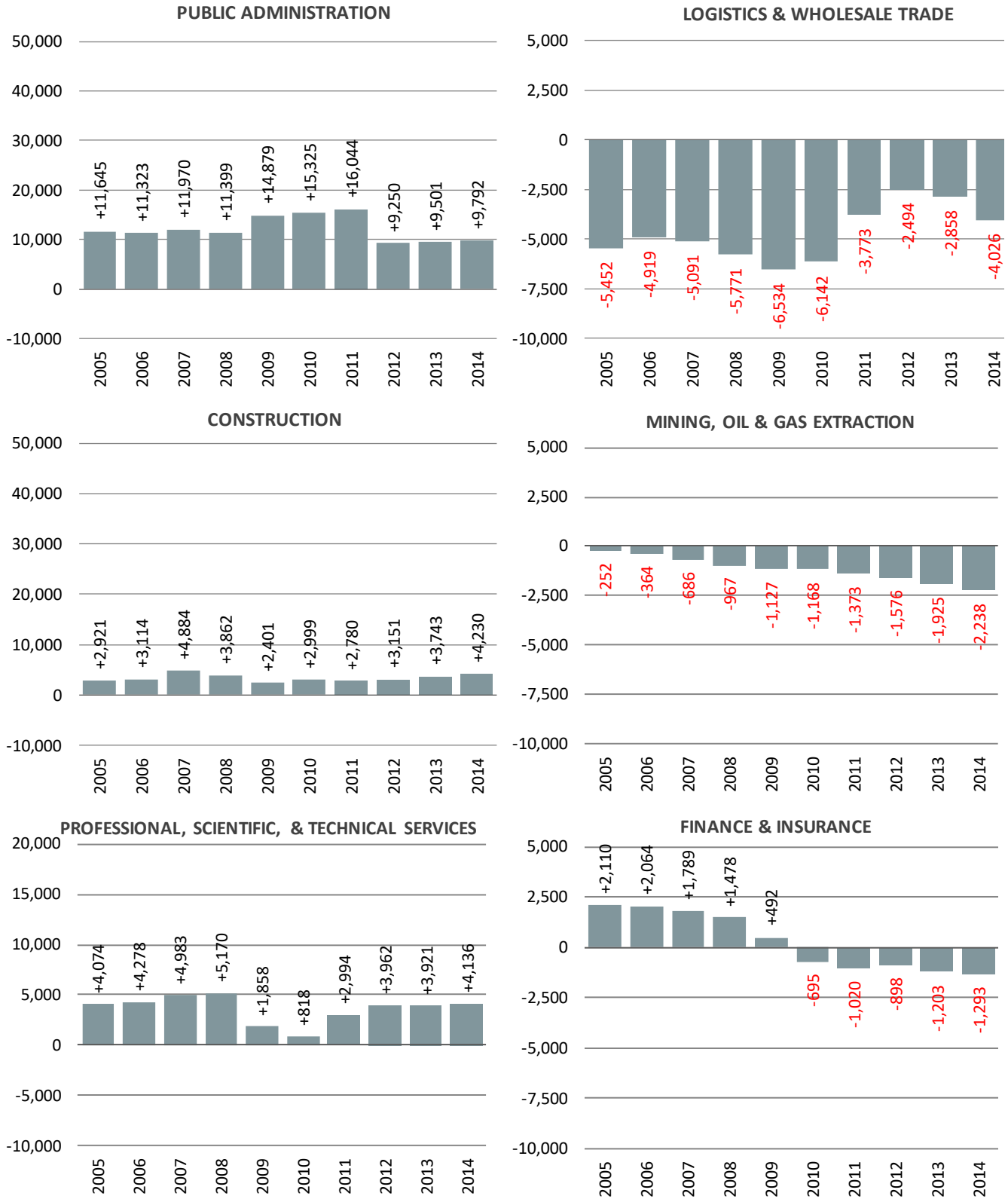
	People who WORK in Austin-Round Rock MSA and live in this city	People who LIVE in Austin-Round Rock MSA and work in this city	Net flow
1 Austin city, TX	303,344	438,847	-135,503
2 Round Rock city, TX	38,679	38,257	+422
3 San Antonio city, TX	23,361	25,083	-1,722
4 Cedar Park city, TX	22,925	11,006	+11,919
5 Pflugerville city, TX	20,110	9,995	+10,115
6 Georgetown city, TX	14,361	15,137	-776
7 Houston city, TX	13,693	30,610	-16,917
8 Leander city, TX	10,742	8,147	+2,595
9 Kyle city, TX	10,415	2,406	+8,009
10 San Marcos city, TX	10,398	15,953	-5,555
11 Brushy Creek CDP, TX	8,455	1,146	+7,309
12 Dallas city, TX	6,790	16,034	-9,244
13 Hutto city, TX	5,971	1,130	+4,841
14 Taylor city, TX	5,355	3,860	+1,495
15 Wells Branch CDP, TX	5,338	5,453	-115
16 Fort Worth city, TX	4,737	4,052	+685
17 Killeen city, TX	4,085	1,869	+2,216
18 Lockhart city, TX	4,070	2,479	+1,591
19 New Braunfels city, TX	3,957	3,076	+881
20 Lakeway city, TX	3,900	3,325	+575

Source: US Census Bureau, Local Employment Dynamics.

In 2014, public administration, construction, and professional and technical services were the industries that drew people (on net) into the MSA for work. After a recession-related adjustment, these three industries have been consistently importing more workers since 2012.

Logistics, oil and gas, and finance and insurance were the industries that drew workers out of the MSA. The MSA has been a net exporter of workers in these industries, for the most part, since 2005, with the exception of finance and insurance. However, 2014 saw considerable increases in the number of workers leaving the MSA in these three industries.

**FIGURE 49. NET COMMUTING FLOWS BY NAICS INDUSTRY SECTOR, MSA**  
 NET FLOWS = INBOUND - OUTBOUND FLOWS



Source: US Census Bureau, Local Employment Dynamics.

## OCCUPATIONAL STRUCTURE

The top five occupational groups in the MSA are office and administrative support, sales and related, food preparation, education, and management.

**FIGURE 50. EMPLOYMENT BY OCCUPATION, MSA**

SOC Code & Description		2016
43	Office and Administrative Support Occupations	154,966
41	Sales and Related Occupations	109,987
35	Food Preparation and Serving Related Occupations	103,407
25	Education, Training, and Library Occupations	64,143
11	Management Occupations	63,958
13	Business and Financial Operations Occupations	57,603
47	Construction and Extraction Occupations	51,676
53	Transportation and Material Moving Occupations	49,673
15	Computer and Mathematical Occupations	47,916
29	Healthcare Practitioners and Technical Occupations	45,296
51	Production Occupations	40,273
49	Installation, Maintenance, and Repair Occupations	38,895
37	Building and Grounds Cleaning and Maintenance Occupations	37,510
39	Personal Care and Service Occupations	35,304
17	Architecture and Engineering Occupations	23,356
31	Healthcare Support Occupations	22,391
27	Arts, Design, Entertainment, Sports, and Media Occupations	21,184
33	Protective Service Occupations	18,809
21	Community and Social Service Occupations	17,291
23	Legal Occupations	9,923
19	Life, Physical, and Social Science Occupations	9,228
45	Farming, Fishing, and Forestry Occupations	1,420

Source: Jobs EQ. Note: Excludes military and unclassified occupations

Both the MSA and Travis County have similar occupational structures, and have the same top three occupational categories as the state and the US.

**DISTRIBUTION (% OF TOTAL)**  
COMPARISON OF MSA WITH SELECTED GEOGRAPHIES AND US

SOC Code & Description	Travis County	MSA	Texas	US
43 Office & Administrative Support	17.5%	17.0%	16.2%	15.3%
41 Sales & Related	9.9%	10.8%	10.7%	10.3%
35 Food Preparation & Serving Related	9.5%	9.8%	8.7%	8.4%
15 Computer & Mathematical	6.6%	5.9%	2.9%	2.8%
13 Business & Financial Operations	6.6%	6.1%	4.7%	5.1%
25 Education, Training, & Library	5.2%	5.8%	5.8%	5.7%
11 Management	4.9%	4.9%	4.5%	5.5%
29 Healthcare Practitioners & Technical	4.5%	4.4%	5.1%	5.5%
47 Construction & Extraction	4.4%	4.9%	5.5%	4.5%
53 Transportation & Material Moving	4.0%	4.2%	6.8%	6.6%
39 Personal Care & Service	3.8%	3.9%	4.4%	4.1%
37 Building/Grounds Cleaning & Maint.	3.8%	3.7%	3.7%	3.8%
49 Installation, Maintenance, & Repair	3.2%	3.4%	4.3%	3.8%
51 Production	3.1%	3.3%	5.4%	6.0%
17 Architecture & Engineering	2.6%	2.4%	1.8%	1.7%
27 Arts, Design, Entertainment, & Media	2.5%	2.3%	1.4%	1.8%
33 Protective Service	2.2%	2.0%	2.3%	2.3%
31 Healthcare Support	1.9%	1.9%	2.6%	2.8%
23 Legal	1.4%	1.2%	0.8%	0.8%
21 Community & Social Service	1.3%	1.3%	1.2%	1.6%
19 Life, Physical, & Social Science	1.1%	0.9%	0.7%	0.8%
45 Farming, Fishing, & Forestry	0.1%	0.2%	0.5%	0.8%

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Notes: Excludes military and unclassified employment. Distribution table: Three largest occupations are highlighted. LQ table: LQs greater than 1.25 are presumed to show competitive advantage and are highlighted.

Relative to the US, Travis County and the MSA have very high concentrations of computer and mathematical occupations, legal, and architecture and engineering. Art and design, business and finance, and scientists are also strong relative to the US.

**OCCUPATIONAL CONCENTRATION (LQ)**  
COMPARISON OF MSA WITH SELECTED GEOGRAPHIES AND US

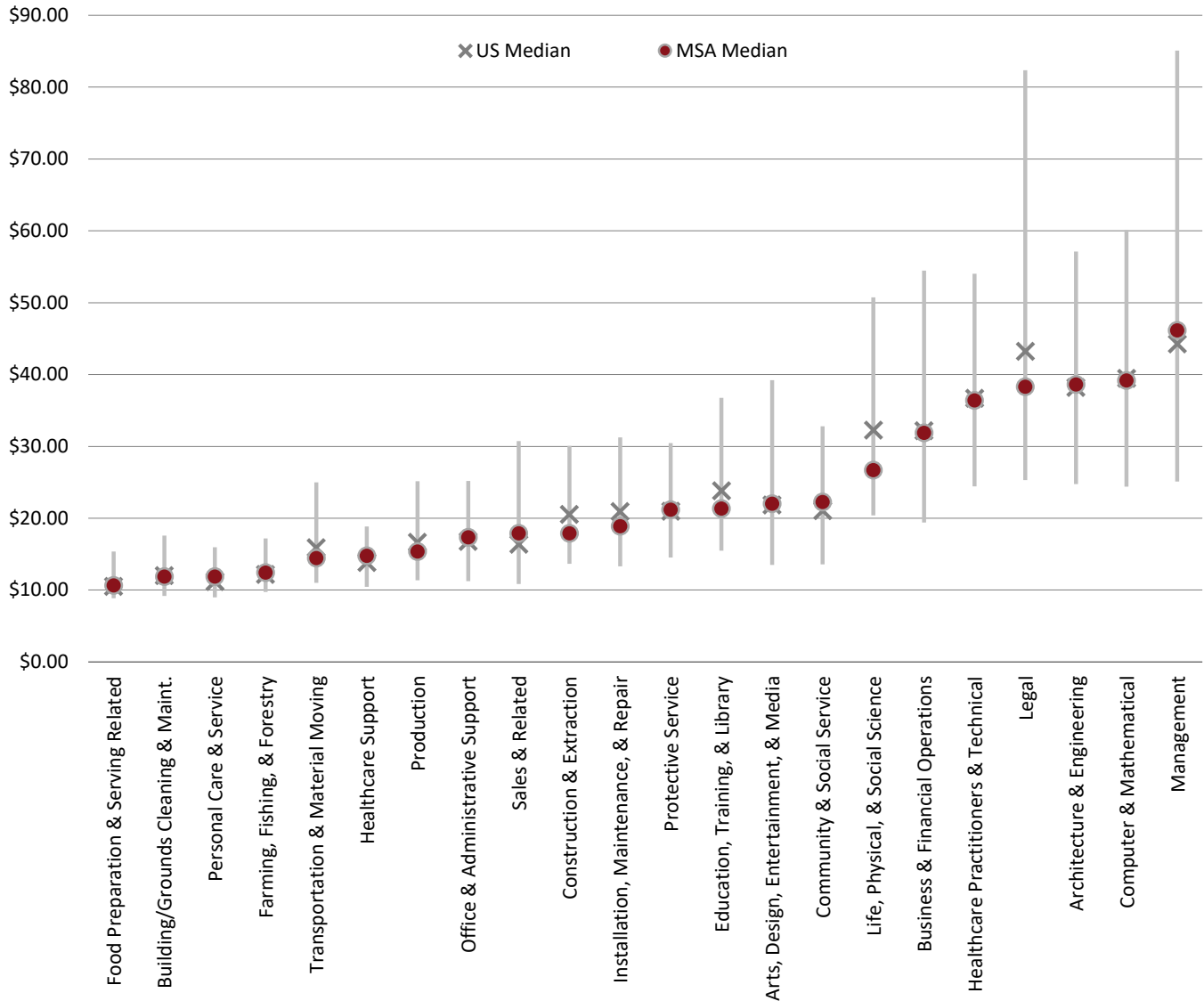
SOC Code & Description	Travis County	MSA	Texas	US
15 Computer & Mathematical	2.36	2.11	1.04	1.00
23 Legal	1.62	1.38	0.93	1.00
17 Architecture & Engineering	1.58	1.45	1.10	1.00
27 Arts, Design, Entertainment, & Media	1.39	1.28	0.77	1.00
13 Business & Financial Operations	1.31	1.21	0.93	1.00
19 Life, Physical, & Social Science	1.30	1.15	0.85	1.00
43 Office & Administrative Support	1.14	1.11	1.06	1.00
35 Food Preparation & Serving Related	1.13	1.16	1.04	1.00
37 Building/Grounds Cleaning & Maint.	0.98	0.95	0.96	1.00
47 Construction & Extraction	0.97	1.09	1.23	1.00
41 Sales & Related	0.97	1.05	1.04	1.00
33 Protective Service	0.96	0.86	1.03	1.00
39 Personal Care & Service	0.93	0.94	1.08	1.00
25 Education, Training, & Library	0.91	1.01	1.01	1.00
11 Management	0.90	0.89	0.82	1.00
49 Installation, Maintenance, & Repair	0.82	0.88	1.12	1.00
29 Healthcare Practitioners & Technical	0.81	0.79	0.92	1.00
21 Community & Social Service	0.78	0.77	0.74	1.00
31 Healthcare Support	0.68	0.68	0.91	1.00
53 Transportation & Material Moving	0.61	0.64	1.03	1.00
51 Production	0.52	0.55	0.90	1.00
45 Farming, Fishing, & Forestry	0.15	0.21	0.66	1.00

Source: 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Notes: Excludes military and unclassified employment. Distribution table: Three largest occupations are highlighted. LQ table: LQs greater than 1.25 are presumed to show competitive advantage and are highlighted.

**FIGURE 51. MSA WAGES IN THE CONTEXT OF THE NATIONAL WAGE RATES BY MAJOR OCCUPATIONAL GROUP**

The median hourly wages in the MSA are, for the most part, in line with the US median with a few notable exceptions. Sales and related, healthcare support, personal care, and community and social service occupations earn the highest premiums over the US median. Education, legal, construction, and science occupations earn at least 10 percent less than the US median.



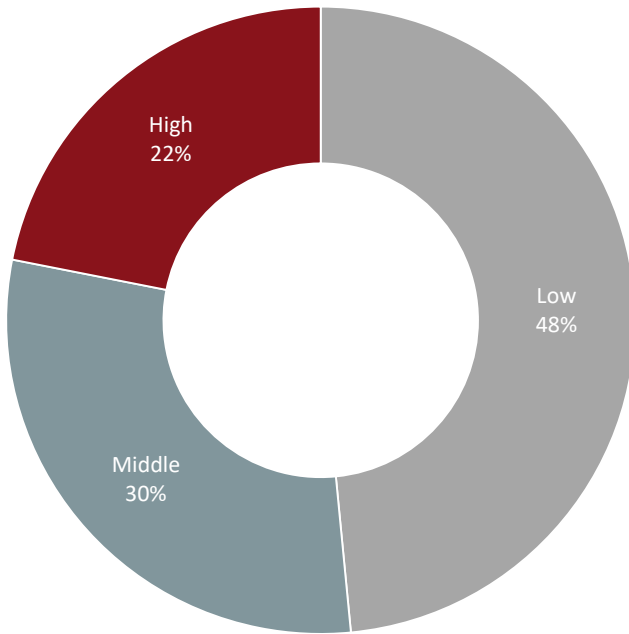
Source: EMSI 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Note: Line = US wage range from the 10th to the 90th percentile. Figures exclude military occupations.

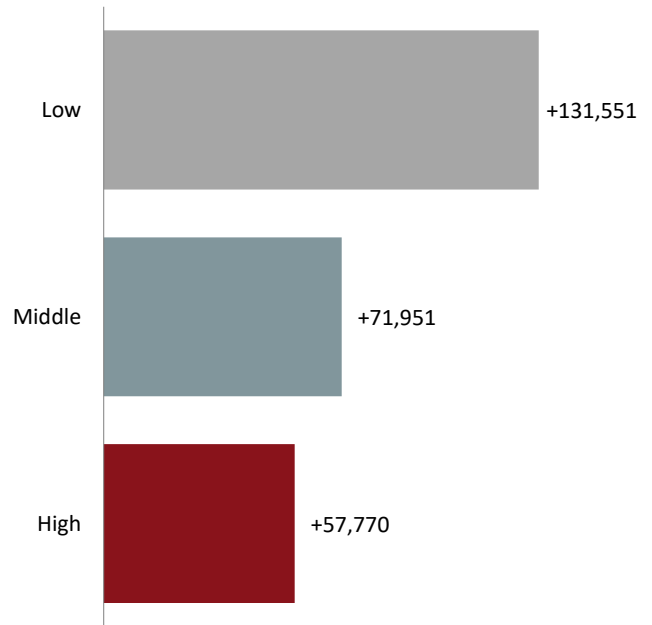
Low-skilled occupations are those occupations that require a high school diploma or less and no on the job training. Middle skill occupations are those occupations that require at least a high school diploma and some additional training but less than a bachelor’s degree. High-skilled occupations are those that require a bachelor’s degree or higher.

In the MSA, low-skilled occupations accounted for 48 percent of the jobs in 2015, middle skill occupations accounted for 30 percent, and high-skilled occupations accounted for 22 percent. Over the next five years, low-skilled occupations are expected to add 131,000 more jobs, while middle skill occupations will add almost 72,000 and high-skilled occupations will add about 58,000.

**FIGURE 52. OCCUPATIONS BY SKILL LEVEL, 2016**  
AUSTIN-ROUND ROCK MSA



**FIGURE 53. EXPECTED OCCUPATIONAL CHANGES BY SKILL LEVEL, OPENINGS NEXT FIVE YEARS**  
AUSTIN-ROUND ROCK MSA



Source: (both figures) Jobs EQ.

The MSA has a number of occupational strengths related to its key industries. There are high concentrations of semiconductor processors, various computer occupations, and electronics engineers and technicians. In most occupations, the wages are in line or below the US average. However, seven of the occupations earn more than 10 percent above the US median hourly wage. Real Estate Agents earn the highest premium.

**FIGURE 54. MSA OCCUPATIONAL STRENGTHS**  
TOP LQS

SOC CODE DESCRIPTION	Austin-Round Rock MSA			
	2016 Jobs	2016 LQ (US=1.00)	Median Hourly Earnings	Wage Premium >10% over US Avg
51-9141 Semiconductor Processors	801	4.73	\$17.97	1.03
13-2081 Computer, ATM, & Office Machine Repairers	1,241	3.84	\$14.00	0.81
17-2061 Software Developers, Systems Software	1,800	3.32	\$47.36	0.93
33-3031 Electrical & Electronics Eng. Technicians	75	2.37	\$32.72	1.11
49-9062 Software Developers, Applications	776	2.31	\$47.66	1.00
49-2011 Computer Programmers	2,063	2.29	\$39.20	1.02
15-1133 Electronics Engineers, Except Computer	6,247	2.20	\$48.89	1.02
39-3021 Computer Network Support Specialists	106	2.12	\$27.77	0.91
51-2022 Computer Network Architects	2,961	2.10	\$56.31	1.16
17-3023 Computer Systems Analysts	1,841	1.96	\$38.34	0.93
15-1132 Computer User Support Specialists	9,944	1.90	\$22.79	0.96
41-9031 Computer & Info. Systems Managers	890	1.83	\$69.60	1.10
25-9021 Information Security Analysts	110	1.83	\$46.77	1.07
25-1191 Web Developers	1,538	1.81	\$31.43	1.07
15-1131 Multimedia Artists & Animators	4,169	1.78	\$22.67	0.91
25-1041 Craft Artists	118	1.78	\$8.96	1.18
41-4011 Management Analysts	4,247	1.77	\$38.59	1.02
17-2072 Database Administrators	1,569	1.75	\$36.61	0.92
49-9069 Network & Computer Systems Admin.	141	1.73	\$38.48	1.01
21-1092 Electrical Power-Line Installers & Repairers	798	1.71	\$28.06	0.87
23-1021 Fine Artists, Incl. Painters, Sculptors, & Illustrators	128	1.70	\$12.95	1.12
15-1152 Correctional Officers & Jailers	2,095	1.70	\$18.54	0.83
15-1143 Security & Fire Alarm Systems Installers	1,697	1.69	\$20.97	1.00
15-1111 Computer Occupations, All Other	278	1.67	\$41.55	1.02
15-1121 Statistical Assistants	6,470	1.65	\$22.60	1.09
19-1023 Real Estate Brokers	197	1.63	\$28.68	1.11
23-1023 Environmental Engineering Techs.	238	1.61	\$25.39	1.08
17-2071 Real Estate Sales Agents	2,009	1.61	\$24.50	1.25
15-1151 Musicians & Singers	6,483	1.61	\$21.31	1.01
17-1011 Graphic Designers	1,261	1.60	\$20.30	0.93

Source: JobsEQ, EMSI 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed.

Note: For occupations with more than 50 jobs.



The tables below highlight the highest demand occupations based on a variety of factors. These lists are dominated by relatively low wage occupations related to retail, food services, administrative services, and healthcare.

**FIGURE 55. TOP 10 OCCUPATIONS, BASED ON VARIOUS INDICATORS, MSA**

Employment in 2016	◀LARGEST	Median hourly earnings
32,110	Retail Salespersons	\$11.79
27,033	Combined Food Preparation & Serving Workers, Including Fast Food	\$9.76
22,559	Cashiers	\$10.64
21,823	Office Clerks, General	\$15.15
20,927	Waiters & Waitresses	\$9.93
19,670	Customer Service Representatives	\$14.42
17,679	Secretaries & Admin. Assistants, Except Legal, Medical, & Executive	\$15.97
16,068	Janitors & Cleaners, Except Maids & Housekeeping Cleaners	\$11.45
15,695	General & Operations Managers	\$46.81
13,595	Registered Nurses	\$32.27

Net change	◀FASTEST-GROWING, 2016-21 (#)	Median hourly earnings
+10,204	Retail Salespersons	\$11.79
+7,895	Combined Food Prep. & Servers, Incl. Fast Food	\$9.76
+7,391	Waiters & Waitresses	\$9.93
+7,264	Cashiers	\$10.64
+5,296	Customer Service Representatives	\$14.42
+4,644	Office Clerks, General	\$15.15
+4,130	General & Operations Managers	\$46.81
+3,865	Registered Nurses	\$32.27
+3,532	Laborers/Freight, Stock, & Material Movers, Hand	\$11.64
+3,454	Janitors & Cleaners, Exc. Maids & Housekeepers	\$11.45

Avg. annual growth (%)	◀FASTEST-GROWING, 2016-21 (%)	Median hourly earnings
+11%	Wind Turbine Service Technicians	\$23.07
+5%	Occupational Therapy Assistants	\$30.69
+5%	Physical Therapist Assistants	\$32.45
+5%	Physical Therapist Aides	\$13.31
+5%	Statisticians	\$37.18
+5%	Massage Therapists	\$17.06
+5%	Home Health Aides	\$10.78
+5%	Physical Therapists	\$41.77
+5%	Nurse Practitioners	\$46.61
+4%	Personal Financial Advisors	\$38.44

Source: JobsEQ, EMSI 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

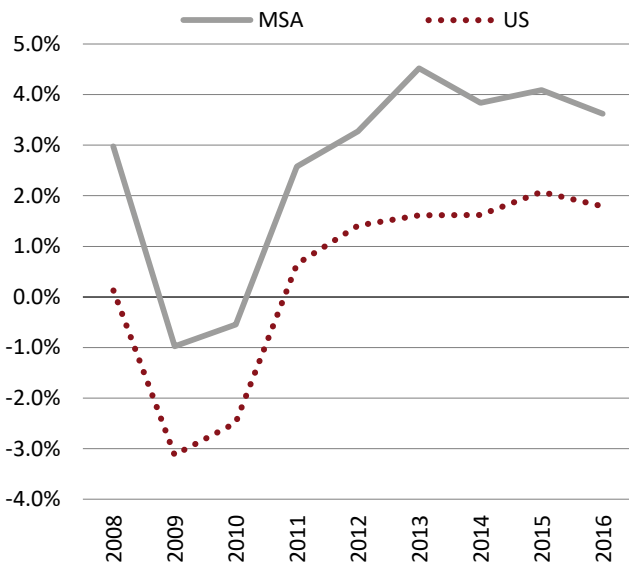
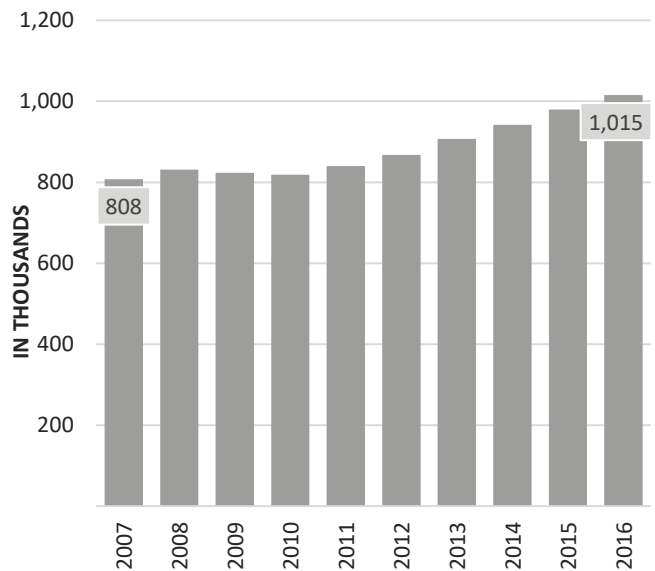
Note: Excludes military (MSA). Includes only those occupations with >50 jobs.

## DEMAND DRIVERS

**FIGURE 56. TOTAL JOBS, MSA**  
2007 TO 2015

Over the last 10 years, employment in the MSA has grown from 808,000 to 1.1 million, an increase of 26 percent. Although employment declined slightly in 2009 and 2010, by 2011 employment had recovered to pre-recessionary levels.

Source: JobsEQ,



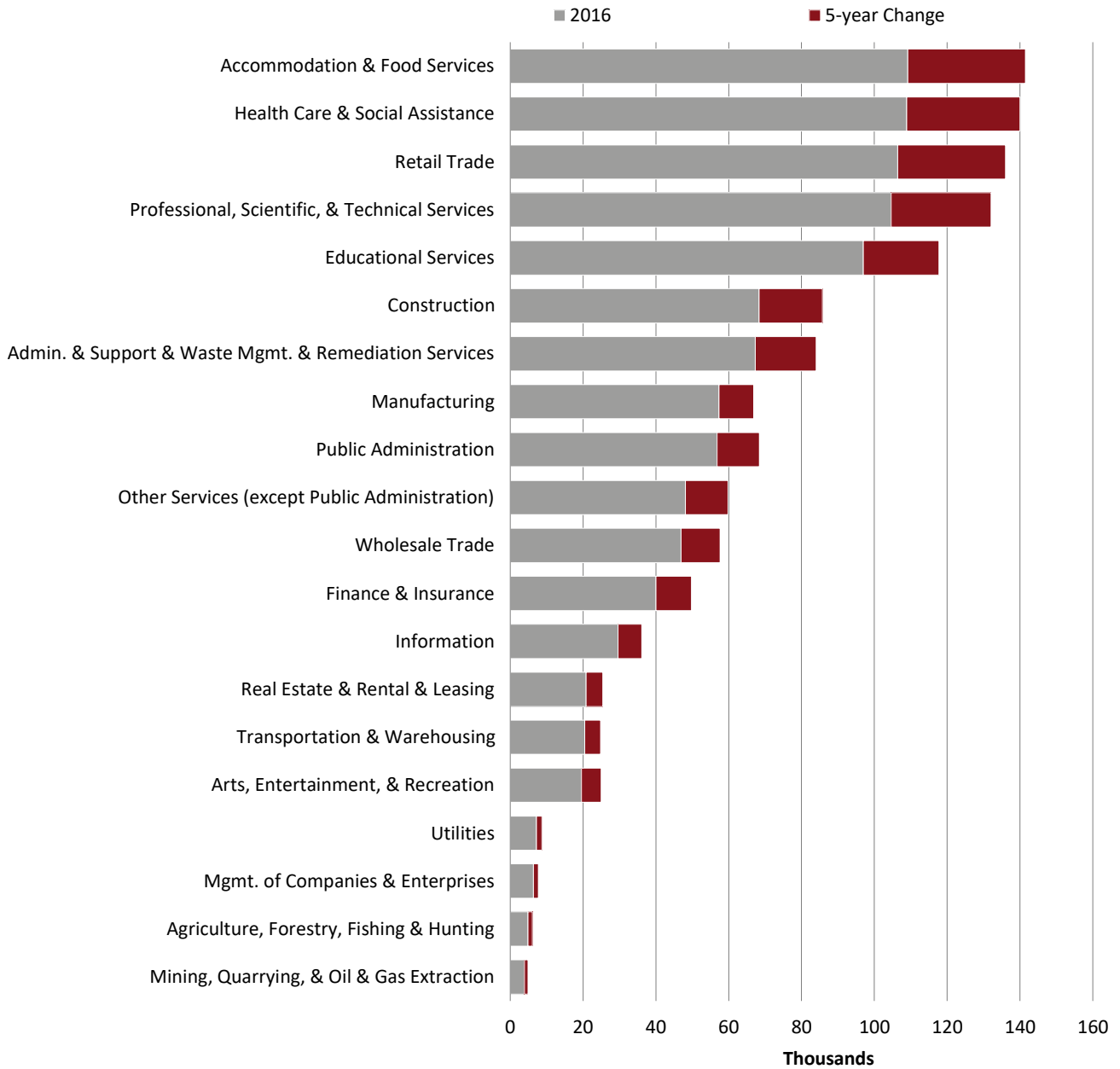
**FIGURE 57. COMPARATIVE CHANGE IN JOBS**  
2007 TO 2016

The Austin-Round Rock MSA has consistently outperformed the US in job growth. Since the recession, the MSA has maintained a growth rate above 3 percent.

Source: JobsEQ,

Accommodation and food services, healthcare, retail trade, professional services, and educational services are the top sectors in the Austin-Round Rock MSA. Over the next five years, these sectors are expected to continue to drive job growth in the region.

**FIGURE 58. TOTAL EMPLOYMENT BY INDUSTRY, MSA**  
 JOB BASE 2015 + PROJECTED 5-YEAR CHANGE



Source: JobsEQ®. Data as of 2016Q4.

**FIGURE 59. DEMAND FACTORS BY SECTOR, MSA**  
 ESTIMATED ANNUAL OPENINGS (THROUGH 2021) WITH ESTIMATE OF NET CHANGE & REPLACEMENT DEMAND

SOC CODE	DESCRIPTION	2016 Jobs	DEMAND FACTORS				Wage Premium over US	DEMOGRAPHICS	
			Projected Annual Openings (Next 5 Years)	New Jobs	Replacement	% 55+ Years		% 65+ Years	
<b>Healthcare</b>									
31-9091	Dental Assistants	2,170	656	58%	42%	1.09	6%	1%	
29-2021	Dental Hygienists	1,371	352	69%	31%	1.01	10%	1%	
29-2032	Diagnostic Medical Sonographers	320	98	71%	29%	1.00	12%	—	
29-2041	Emergency Medical Techs. & Paramedics	1,428	431	72%	28%	1.20	5%	1%	
31-1011	Home Health Aides	4,514	1,646	70%	30%	1.00	16%	6%	
29-2061	Licensed Practical/Vocational Nurses	3,403	1,037	56%	44%	1.04	17%	4%	
29-2012	Medical & Clinical Laboratory Technicians	894	259	61%	39%	1.03	14%	2%	
31-9092	Medical Assistants	3,540	1,069	65%	35%	1.04	7%	1%	
29-2071	Medical Records & Health Info. Technicians	1,059	292	60%	40%	0.88	16%	4%	
43-6013	Medical Secretaries	3,125	742	79%	21%	1.02	18%	5%	
31-1014	Nursing Assistants	5,994	1,746	60%	40%	0.99	13%	4%	
31-2011	Occupational Therapy Assistants	168	73	66%	34%	1.10	11%	—	
29-2052	Pharmacy Technicians	1,882	376	74%	26%	1.01	7%	2%	
31-9097	Phlebotomists	619	199	64%	36%	0.95	8%	—	
31-2021	Physical Therapist Assistants	395	169	64%	36%	1.22	7%	—	
29-2034	Radiologic Technologists	1,006	228	60%	40%	0.95	12%	2%	
29-1141	Registered Nurses	13,339	3,802	58%	42%	0.95	18%	3%	
29-1126	Respiratory Therapists	582	155	56%	44%	0.97	15%	—	
29-2055	Surgical Technologists	501	108	78%	22%	1.00	8%	—	
<b>IT</b>									
11-3021	Computer & Info. Systems Managers	3,782	843	71%	29%	1.10	12%	2%	
15-1143	Computer Network Architects	1,673	339	67%	33%	1.16	8%	1%	
15-1152	Computer Network Support Specialists	2,089	402	64%	36%	0.91	10%	1%	
15-1199	Computer Occupations, All Other	1,839	376	61%	39%	1.02	11%	2%	
15-1131	Computer Programmers	4,105	523	6%	94%	1.02	11%	2%	
15-1121	Computer Systems Analysts	6,435	1,726	73%	27%	0.93	12%	2%	
15-1151	Computer User Support Specialists	6,432	1,452	70%	30%	0.96	10%	1%	
15-1141	Database Administrators	1,139	297	57%	43%	0.92	12%	2%	
15-1122	Information Security Analysts	883	225	74%	26%	1.07	11%	3%	
15-1142	Network & Computer Systems Admin.	3,617	742	67%	33%	1.01	9%	1%	
15-1132	Software Developers, Applications	9,994	2,575	68%	32%	1.00	8%	1%	
15-1133	Software Developers, Systems Software	6,514	1,323	66%	34%	0.93	9%	1%	
15-1134	Web Developers	1,593	506	72%	28%	1.07	6%	1%	

Source: JobsEQ, EMSI 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Notes: Highlights: Wage premium = 10% or higher than US wages; %55+ = 20% or higher; %65+ = 10% or higher. Replacement demand is an estimate of the number of workers required to replace existing workers who leave the occupation due to a variety of factors including retirement, career advancement, or exiting the workforce to raise children or attend school.

**FIGURE 59. DEMAND FACTORS BY SECTOR, MSA—CONTINUED**  
 ESTIMATED ANNUAL OPENINGS (THROUGH 2021) WITH ESTIMATE OF NET CHANGE & REPLACEMENT DEMAND

SOC CODE	DESCRIPTION	2016 Jobs	DEMAND FACTORS			Wage Premium over US	DEMOGRAPHICS	
			Projected Annual Openings (Next 5 Years)	New Jobs	Replacement		% 55+ Years	% 65+ Years
<b>Skilled Trades</b>								
49-3023	Automotive Service Technicians & Mechanics	4,725	1,314	41%	59%	1.01	11%	2%
49-3031	Bus/Truck Mechanics & Diesel Engine Specialists	1,282	325	61%	39%	0.96	16%	3%
47-2031	Carpenters	7,251	1,572	60%	40%	0.89	16%	3%
51-4012	CNC Machine Programmers, Metal/Plastic	81	27	56%	44%	1.11	—	—
49-2011	Computer, ATM, & Office Machine Repairers	2,050	454	48%	52%	0.81	9%	1%
49-2093	Elec./Electronics Install & Repair, Transp. Equip.	55	11	55%	45%	0.79	14%	—
49-9051	Electrical Power-Line Installers & Repairers	1,178	417	40%	60%	0.87	11%	—
47-2111	Electricians	4,375	1,112	65%	35%	0.86	13%	2%
49-2096	Electronic Equip. Install/Repair, Motor Vehicles	84	-9	189%	-89%	0.98	—	—
51-1011	First-Line Supvrs., Production & Operating Workers	2,766	484	46%	54%	1.01	17%	3%
49-9021	HVAC/Refrig. Mechanics & Installers	2,272	574	65%	35%	0.87	12%	2%
53-3032	Heavy & Tractor-Trailer Truck Drivers	7,763	1,728	56%	44%	0.91	17%	5%
47-3013	Helpers--Electricians	522	124	73%	27%	1.13	6%	2%
47-3015	Helpers--Pipelayers, Plumbers, Pipe/Steamfitters	440	98	70%	30%	0.94	7%	2%
49-9041	Industrial Machinery Mechanics	1,341	450	58%	42%	1.08	18%	3%
51-4041	Machinists	1,419	419	49%	51%	0.94	19%	4%
49-9071	Maintenance & Repair Workers, General	8,634	2,230	46%	54%	0.93	18%	5%
47-2152	Plumbers, Pipefitters, & Steamfitters	3,383	789	66%	34%	0.86	13%	2%
49-2098	Security & Fire Alarm Systems Installers	557	169	52%	48%	1.00	8%	—
51-9141	Semiconductor Processors	801	270	11%	89%	1.03	16%	2%
47-2211	Sheet Metal Workers	947	227	54%	46%	0.79	13%	3%
47-2231	Solar Photovoltaic Installers	51	15	67%	33%	0.93	—	—
51-8031	Water/WW Treatment Plant Operators	986	271	50%	50%	0.91	22%	4%
51-4121	Welders, Cutters, Solderers, & Brazers	1,727	509	41%	59%	0.89	13%	3%

Source: JobsEQ, EMSI 2016.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Notes: Highlights: Wage premium = 10% or higher than US wages; %55+ = 20% or higher; %65+ = 10% or higher. Replacement demand is an estimate of the number of workers required to replace existing workers who leave the occupation due to a variety of factors including retirement, career advancement, or exiting the workforce to raise children or attend school.

## EDUCATION AND TRAINING

**FIGURE 60. INSTITUTIONS INCLUDED IN THE ANALYSIS**  
AUSTIN-ROUND ROCK MSA

The Austin-Round Rock MSA has 32 post-secondary institutions, including three public institutions—Austin Community College, Texas State University, and the University of Texas at Austin. In addition, Texas State Technical College has a campus in Hutto, TX, which is in the MSA. This campus has 89 students enrolled, but is not included in the analysis as it was not possible to isolate this campus from the other nine TSTC campuses. The Acton School, which is accredited by Hardin-Simmons University in Abilene, is also not included in the analysis for the same reason.

UNITID	INSTITUTION NAME	CITY	TYPE
222992	Austin Community College District	Austin	Public
228459	Texas State University	San Marcos	Public
228778	The University of Texas at Austin	Austin	Public
247825	Austin Graduate School of Theology	Austin	Private, Non-Profit
223001	Austin Presbyterian Theological Seminary	Austin	Private, Non-Profit
224004	Concordia University-Texas	Austin	Private, Non-Profit
224712	Episcopal Theological Seminary of the Southwest	Austin	Private, Non-Profit
442727	Everest Institute-Austin	Austin	Private, Non-Profit
225575	Huston-Tillotson University	Austin	Private, Non-Profit
227845	Saint Edward's University	Austin	Private, Non-Profit
228343	Southwestern University	Georgetown	Private, Non-Profit
429094	AOMA Graduate School of Integrative Medicine	Austin	Private, For-Profit
444556	Auguste Escoffier School of Culinary Arts-Austin	Austin	Private, For-Profit
458070	Avenue Five Institute	Austin	Private, For-Profit
480888	CyberTex Institute of Technology	Austin	Private, For-Profit
480912	Gemini School of Visual Arts & Communication	Cedar Park	Private, For-Profit
366678	ITT Technical Institute-Austin	Austin	Private, For-Profit
441751	Kussad Institute of Court Reporting	Austin	Private, For-Profit
364973	Le Cordon Bleu College of Culinary Arts-Austin	Austin	Private, For-Profit
456144	MediaTech Institute-Austin	Austin	Private, For-Profit
451875	National American University-Austin	Austin	Private, For-Profit
482307	National American University-Austin South	Austin	Private, For-Profit
482325	National American University-Georgetown	Georgetown	Private, For-Profit
485290	National American University-Harold D. Buckingham Graduate School*	Austin	Private, For-Profit
480073	South University-Austin	Austin	Private, For-Profit
226903	Southern Careers Institute-Austin	Austin	Private, For-Profit
458973	Strayer University-Texas	Austin	Private, For-Profit
430704	Texas Health and Science University	Austin	Private, For-Profit
451820	The Art Institute of Austin	Austin	Private, For-Profit
437635	The College of Health Care Professions-Austin	Austin	Private, For-Profit
485953	The Recording Conservatory of Austin*	Austin	Private, For-Profit
441928	Virginia College-Austin	Austin	Private, For-Profit

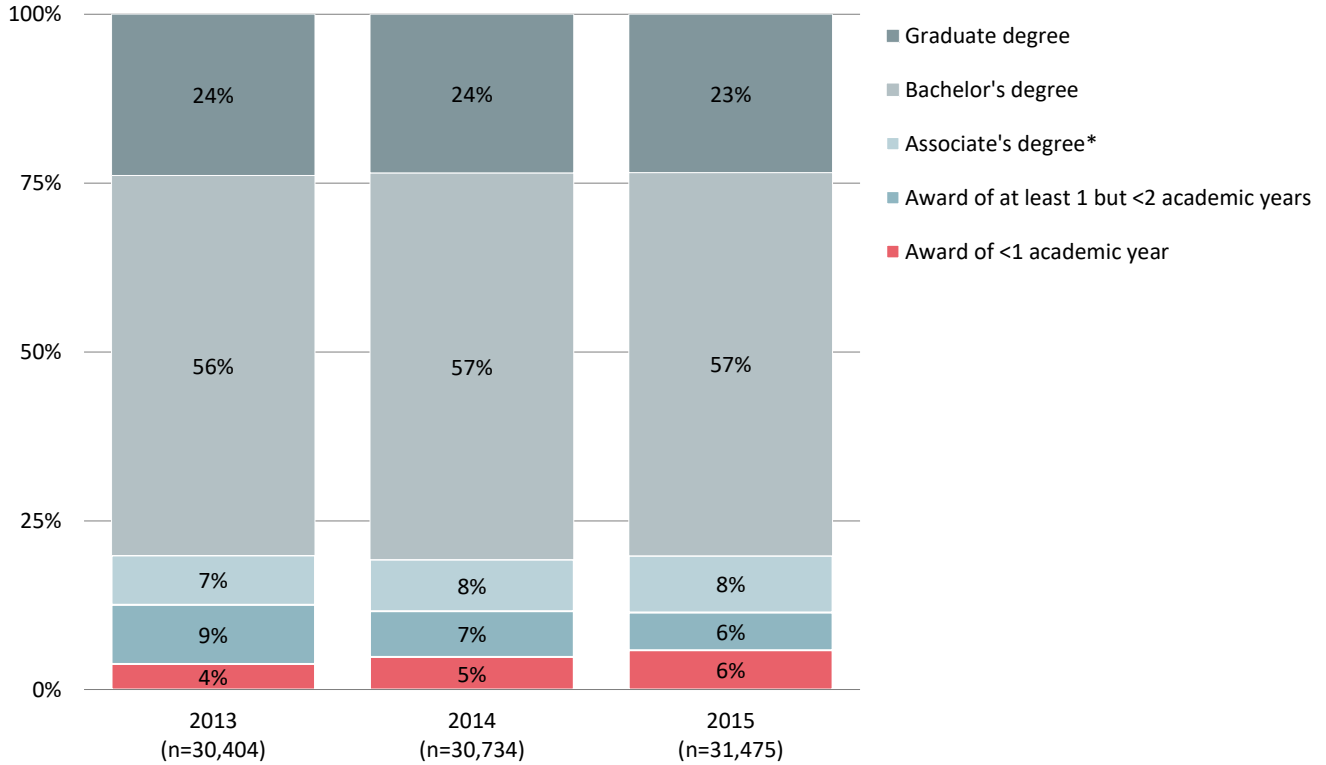
Source: National Center for Education Statistics, IPEDS Survey.

Note: IPEDS data include only schools eligible to participate in federal financial aid programs.

\*School does not appear in all three academic years

**FIGURE 61. DISTRIBUTION OF FOR-CREDIT COMPLETIONS BY AWARD LEVEL**  
 FOR-CREDIT COMPLETIONS BY SELECTED INSTITUTIONS FOR THREE MOST RECENT ACADEMIC YEARS

Over the past three years, the 32 regional institutions have graduated between 30,000 and 32,000 students each year. About 20 percent of these students have completed a program that would be considered “Middle Skill.”



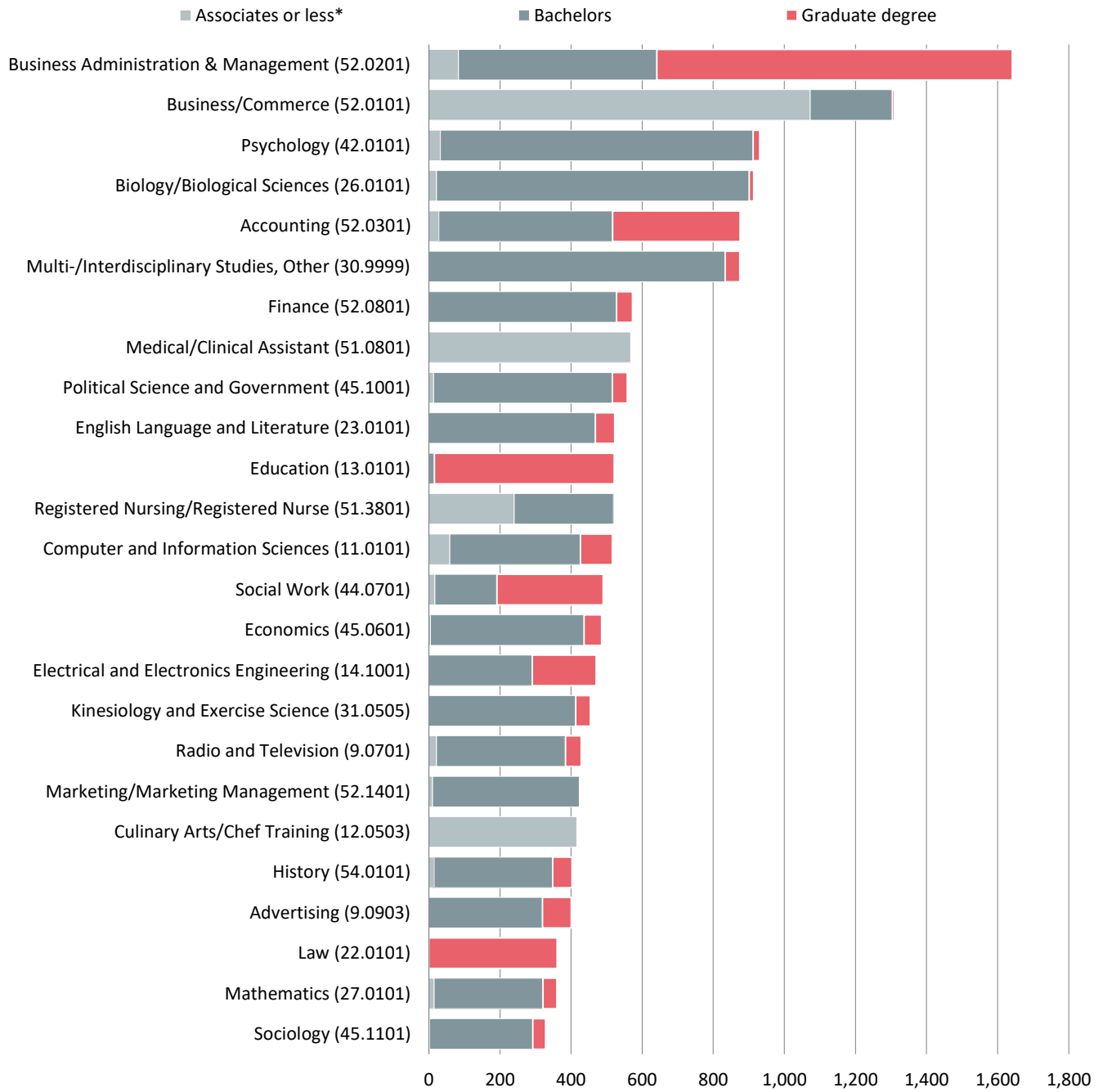
Source: National Center for Education Statistics, IPEDS Survey.

Notes: IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors.

\*Associate's-degree-level completions include a small number of awards categorized by IPEDS as "Award of at least two but less than four academic years."

**FIGURE 62. 25 LARGEST FIELDS OF STUDY AT REGIONAL INSTITUTIONS RANKED BY AVERAGE NUMBER OF COMPLETIONS, ALL AWARD LEVELS**

By far the most popular fields of study are business, psychology, biology, accounting, and interdisciplinary studies.



Source: National Center for Education Statistics, IPEDS Survey.

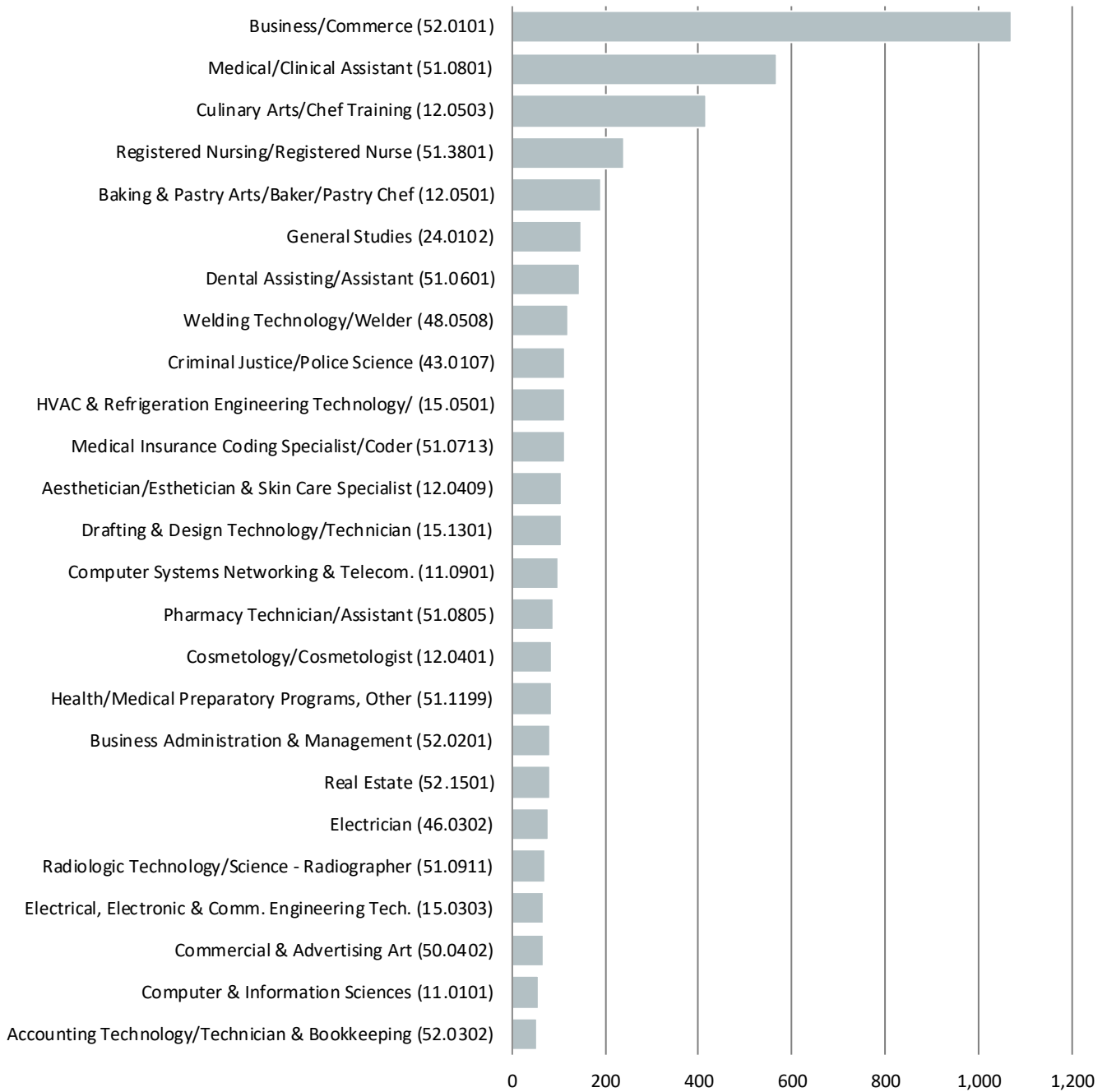
Notes: IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors.

\*Associate's-degree-level completions include a small number of awards categorized by IPEDS as "Award of at least two but less than four academic years."



**FIGURE 63. 25 LARGEST MIDDLE-SKILL FIELDS OF STUDY AT REGIONAL INSTITUTIONS RANKED BY AVERAGE NUMBER OF COMPLETIONS, ASSOCIATE’S OR LESS**

The top middle-skill fields of study are business, medical assistant, culinary arts, registered nurse, and pastry chef.



Source: National Center for Education Statistics, IPEDS Survey.

Notes: IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors.

\*Associate’s-degree-level completions include a small number of awards categorized by IPEDS as "Award of at least two but less than four academic years."



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