

M E M O R A N D U M



Agenda Item 7a

TO: Joint MTC Planning Committee with the
ABAG Administrative Committee

FR: Executive Director

RE: Horizon Perspective Paper #5: Preview - The Future of Jobs

DATE: January 4, 2019

Background

Staff will provide a preview of work completed to date on the fourth Horizon Perspective Paper - *The Future of Jobs*. This paper explores how economic changes over the coming decades, ranging from automation to changes in job locations, might affect the Bay Area. While this month's presentation focuses on the paper's objectives and initial findings, it will also touch on economic strategies that address challenges and seize opportunities in the coming decades. The paper also leverages recent work from the Bay Area Comprehensive Economic Development Strategy (CEDS), which assesses the region's economic strengths and opportunities and informs an action plan for a Bay Area Regional Economic Development District. Staff will return to these committees with priority strategies in the spring, prior to the paper's release.

Perspective Paper Objectives

The Future of Jobs Perspective Paper is intended to:

- **Review key trends** affecting the regional labor market and job prospects of Bay Area residents, including automation of jobs, the emergence of the "gig economy", and an aging labor force, among others
- **Consider** impacts on both *what* jobs entail as well as *where* they might be performed, including how the region might address long-standing jobs / housing imbalances
- **Identify strategies** on the state, regional, and local levels to address planning challenges associated with a changing regional economy
- **Continue the conversation** related to the emerging economic development role of the regional agencies following the adoption of the CEDS

Work to Date: Key Findings

Staff analysis to date has explored how the Bay Area economy has been changing in recent years, as well as trends expected to be important to the region in the foreseeable future. Overall, the Bay Area's technology sector has been very competitive in the past few decades and has pushed per-capita gross regional product to the top among major metro areas. High-wage job growth has been concentrated in a few key sectors, primarily technology and other STEM occupations. At the same time, occupations with modest skill requirements and lower pay have also seen strong growth, especially in the service sector. Job growth has been strongest in the core counties containing the major cities, and more modest in the North Bay.

As we look ahead to 2050, the Perspective Paper has explored four primary issue areas related to the future of jobs: **technological** changes, **organizational** changes, **compensational** changes, and **locational** changes. Key findings are summarized below:

- **Technology:** In the past 15 years, growth in regional productivity has outpaced job creation, notwithstanding healthy growth in jobs. Going forward, new technologies from automation to artificial intelligence may *substitute* or *complement* labor - though most likely both. The effects of automation will likely be felt across many industries, offering increased productivity, but also disruption to labor markets. The transportation industry could be one of the sectors most disrupted by new technologies.

- **Organization:** In recent decades, there has been a rise in workers employed in alternative work arrangements including more temporary jobs and contract work. This rise of the “gig economy” presents new opportunities and challenges. While these shifts can bring added flexibility, income, and opportunity for workers, it can also entail less stable wages, spotty benefits, and difficulty saving for retirement.
- **Compensation:** During the past few decades, strong economic growth in the region has been accompanied by increasing income inequality. As the world becomes increasingly digital, the education system must evolve to equip tomorrow’s workforce with the requisite skills to navigate it and narrow achievement gaps.
- **Location:** As technology changes the ability to communicate across distance, some jobs may seek to disperse across or outside the region. Yet, jobs in the most knowledge-intensive sectors requiring development of new designs, programs or campaigns continue to gravitate toward the region’s established centers, with more local-serving jobs often further afield.

Next Steps

During the next month, staff will assemble focus groups of businesses and other stakeholders to discuss how they see the economy changing and the effects it will have on the labor market. Staff will use that to develop a list of strategies to foster economic resilience in the face of the identified changes and the challenges they bring. Feedback from MTC/ABAG committees, as well as working groups such as the RAWG, will shape *The Future of Jobs* Perspective Paper before its release in March 2018.

Economic development strategies developed in this Perspective Paper will ultimately be tested against the three futures (“what if?” scenarios) for Horizon to understand how they could help improve outcomes and align with the Guiding Principles. Furthermore, the Perspective Paper will help inform preparation of the regional forecast for Plan Bay Area 2050, and it will play a role in shaping the Economic Development element of the Plan.

Requested Feedback

Staff requests feedback from the Committees on the following questions:

- What are your key concerns related to the future of the Bay Area economy?
- How can we leverage technology to foster a productive, yet inclusive, economy?
- How can we support new organizational forms and the flexibility they bring, while ensuring economic benefits for workers at all income levels?
- What policies and strategies should state, regional, and local policymakers consider to support labor markets of today and tomorrow?
- How can we enhance the regional growth framework (*Priority Development Areas* as well as the potential *Priority Production Areas*) to better consider employment location?



Steve Heminger

Attachment:

- Attachment A: *Future of Jobs* Perspective Paper (PowerPoint Presentation)

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H O R I Z O N

The Future of Jobs

Perspective Paper #5 - Work to Date/Preview

Aksel Olsen

Joint MTC Planning Committee with the ABAG Administrative Committee

January 11, 2019

Perspective Paper 5: The Future of Jobs

Purpose

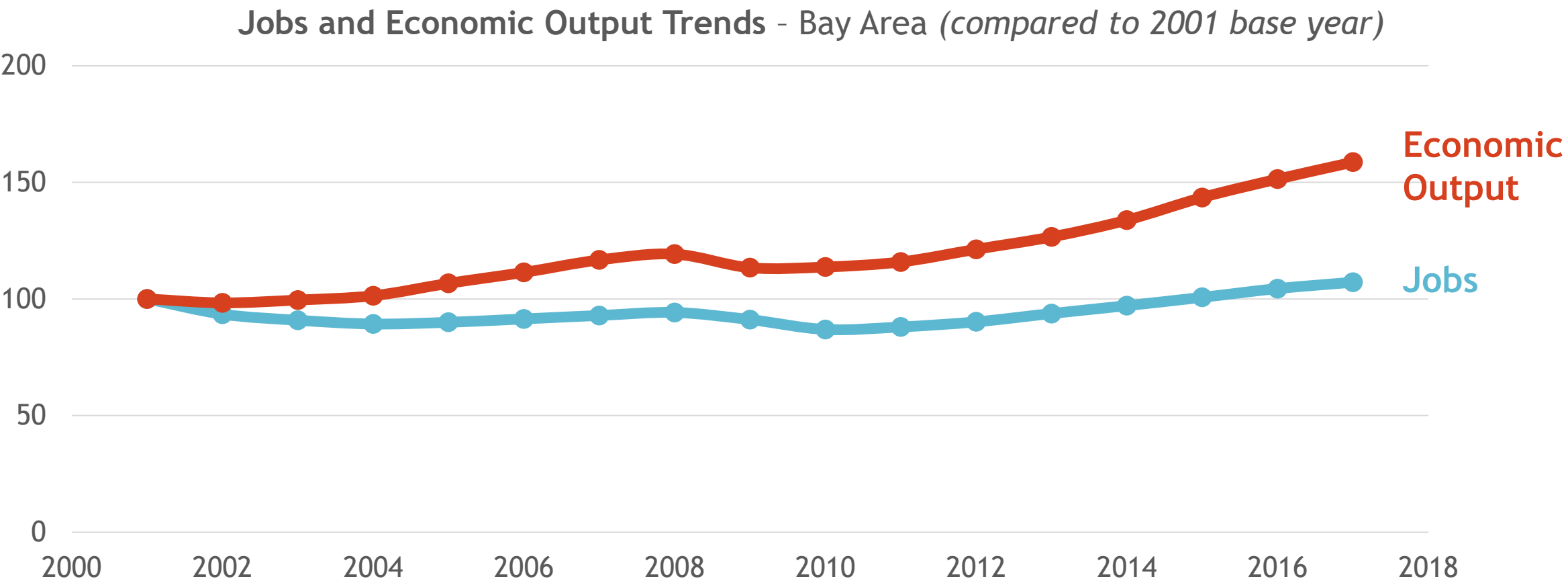
Review key trends affecting the regional labor market and job prospects of Bay Area residents

Consider impacts on both what jobs entail as well as where they might be performed, and analyze emerging employment locational trends

Identify strategies on the state, regional, and local levels to address planning challenges associated with a changing regional economy

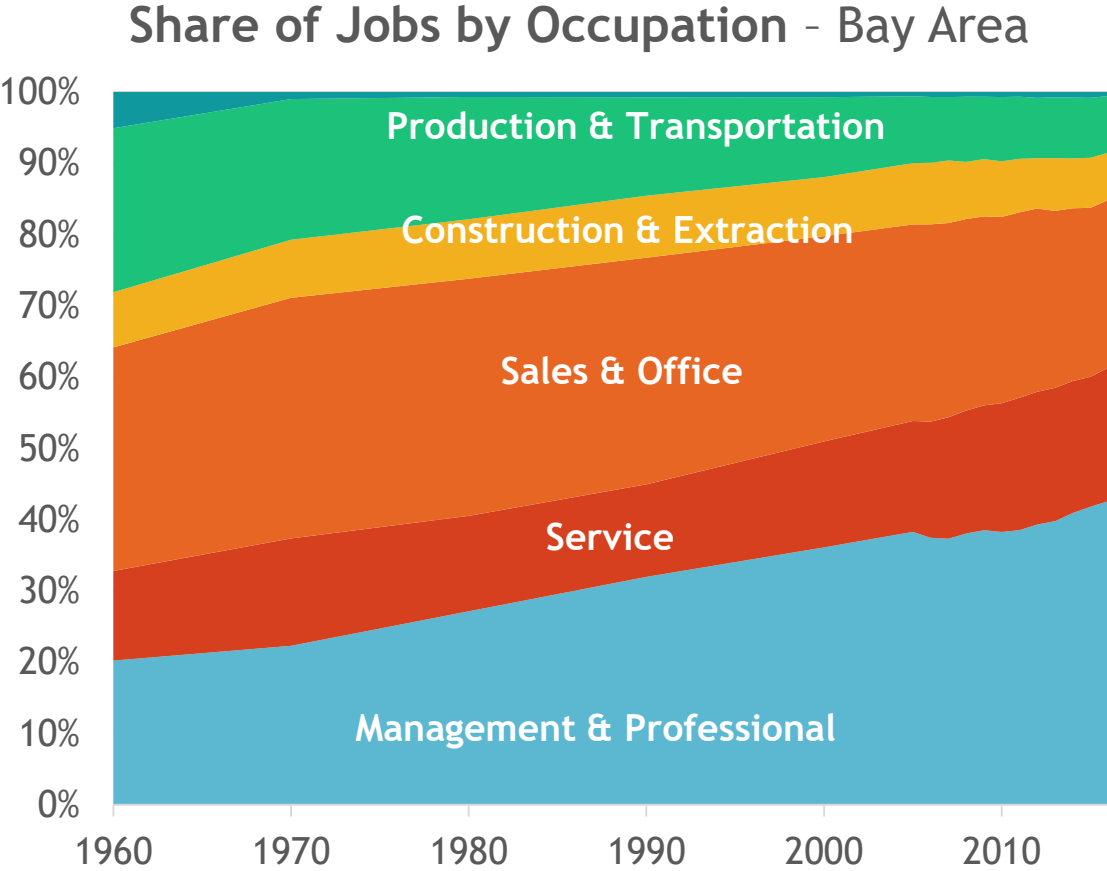
Continue the conversation related to the emerging economic development role of the regional agencies in preparation for *Plan Bay Area 2050*

Productivity Grows at Faster Rate than Jobs



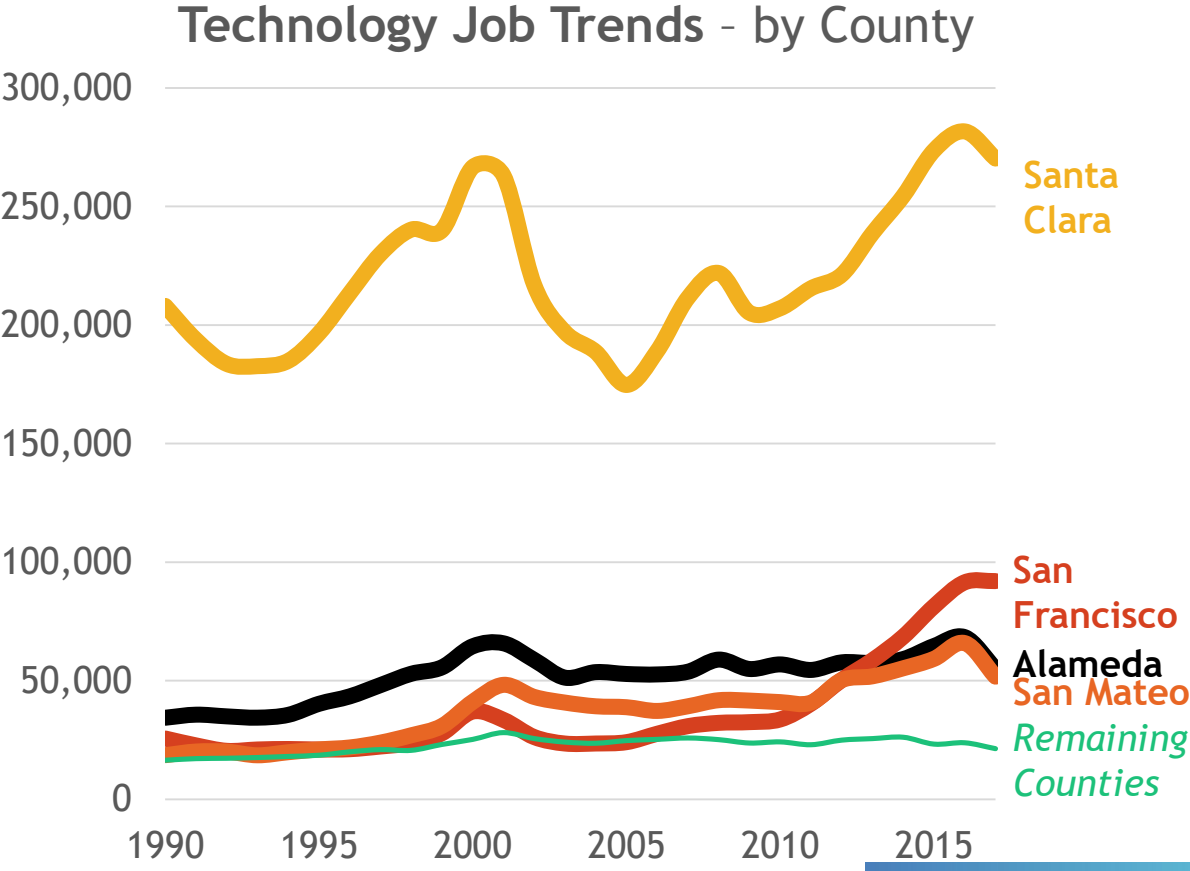
Sources: Bureau of Economic Analysis, 2001 to 2017

Knowledge-Based Jobs Continue to Grow, Particularly in the Tech Sector...



Source: PUMS, 1960 to 2016

[Overview](#)



Source: QCEW, 1990 to 2017

... While Industrial and Manufacturing Jobs Continue to Decline.

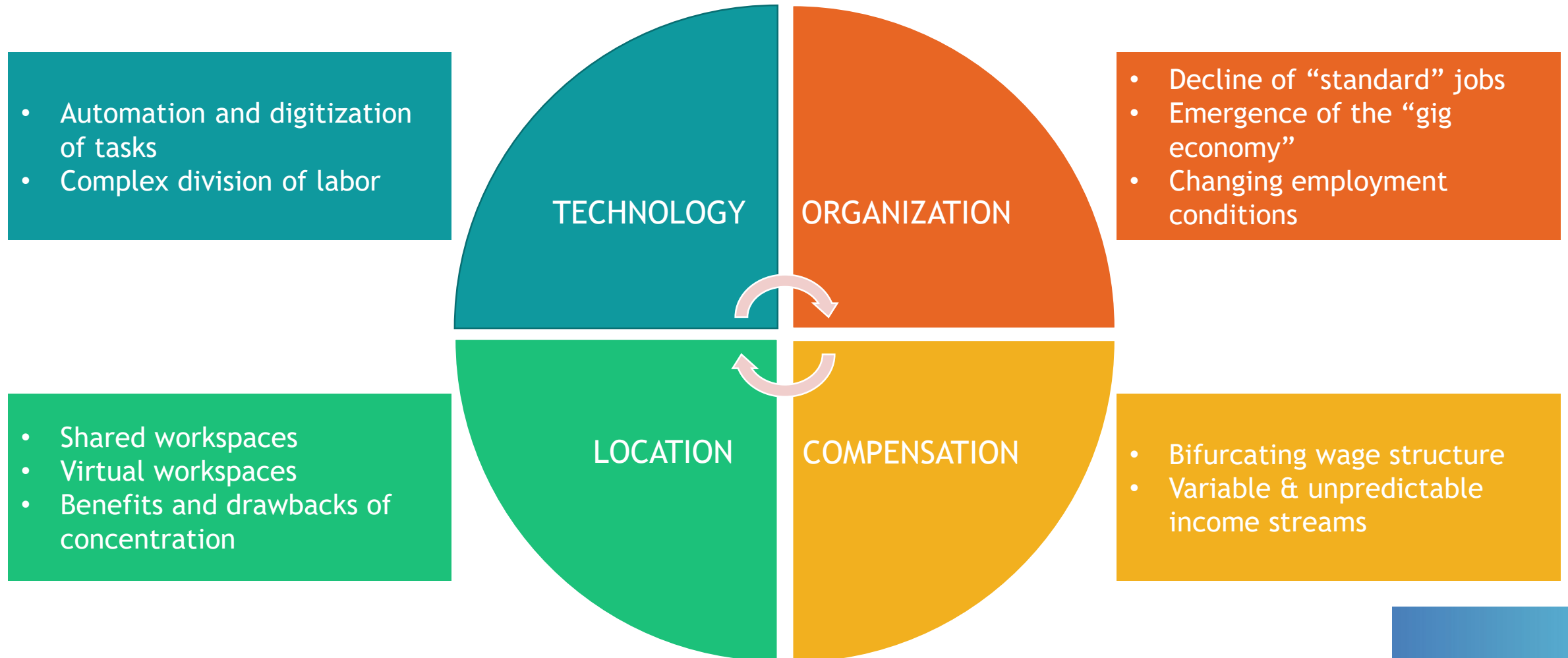
- **Jobs requiring physical labor have declined** in recent years, including industrial and construction jobs.
- In addition to the rise of knowledge-sector jobs, **service-sector jobs** (such as food preparation, healthcare, and personal care) have grown significantly.

Highlighted Changes in Bay Area Jobs: 2009 to 2017

	+88,000	Food preparation & serving
	+47,000	Business & financial operations
	+42,000	Healthcare practitioners and technicians
	+27,000	Arts, design, sports entertainment & media
	+24,000	Personal care & service
	-16,000	Construction & extraction
	-16,000	Transportation & material moving
	-45,000	Office & administrative support
	-51,000	Production

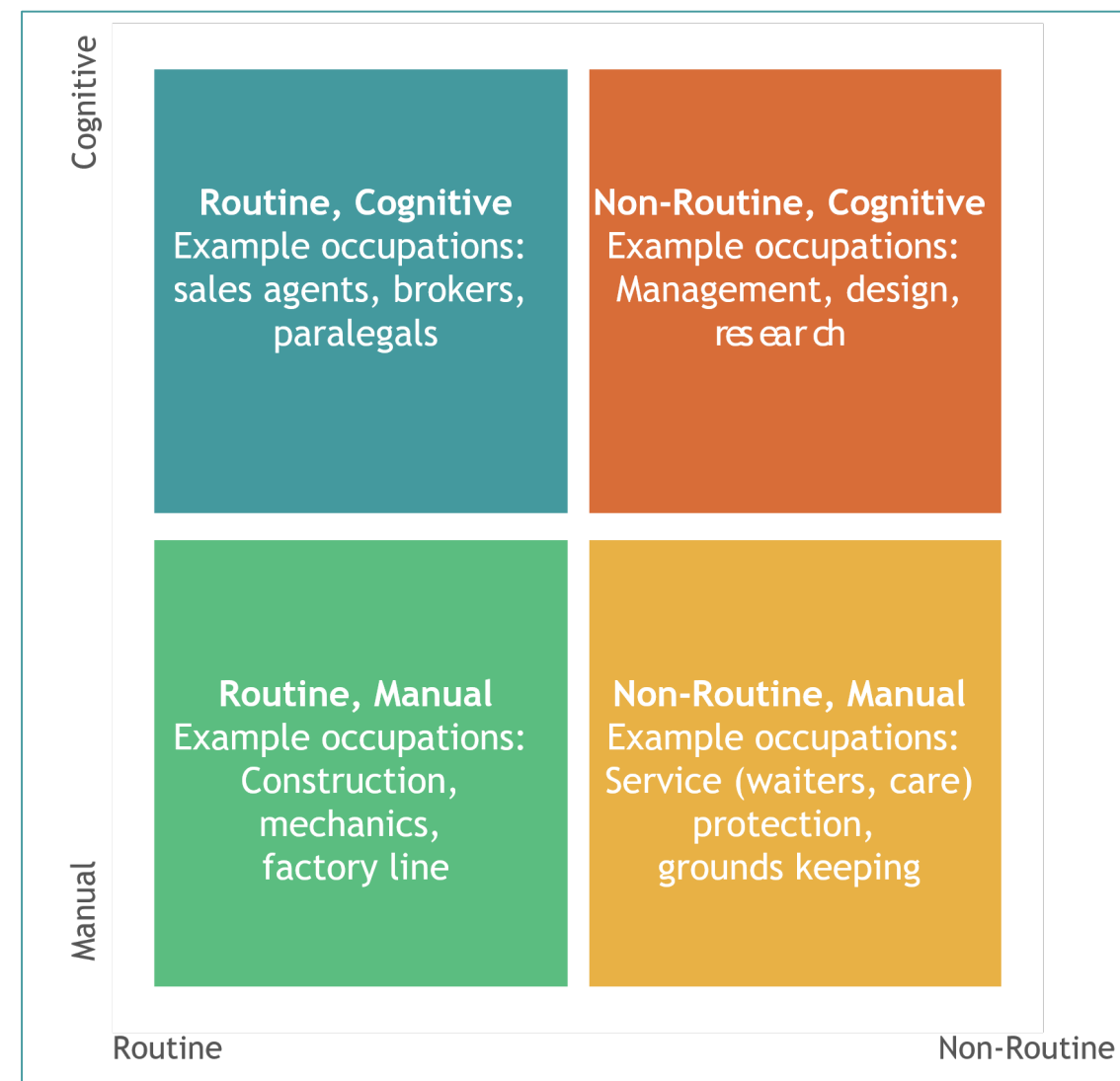
Source: BLS OES

Jobs Are Changing in Several Ways...



Likelihood of Automation Highest in Routine Occupations

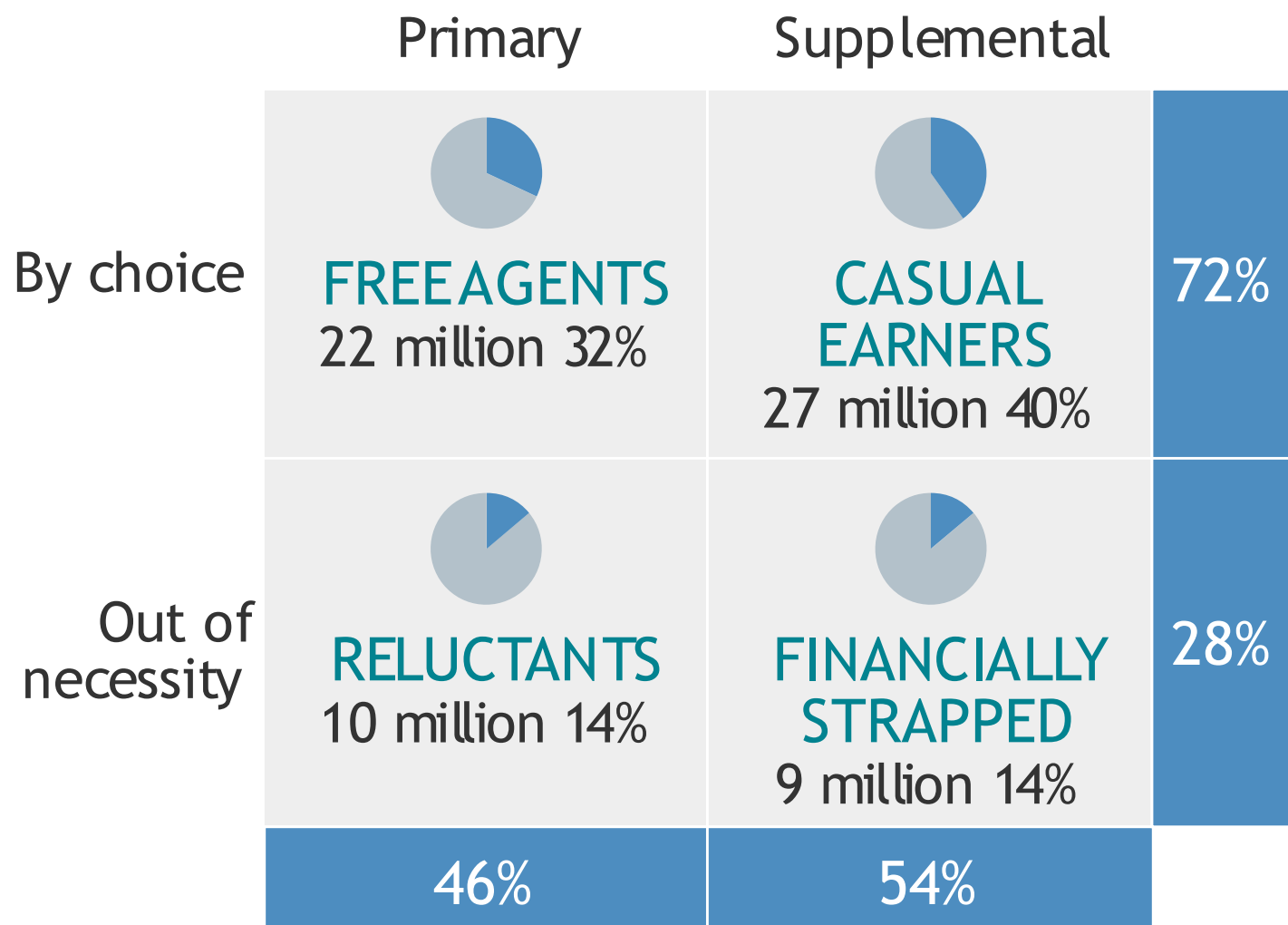
- **Non-routine** jobs are more unpredictable and require judgment - making them harder to standardize and automate.
- This means that **both manual routine** jobs (such as factory workers) as well as **cognitive routine** jobs (such as paralegals) are at risk.



Adapted from Autor, Levy and Murnane (2003); Schwab (2018)

What Do We Know About “Gig Economy” Workers?

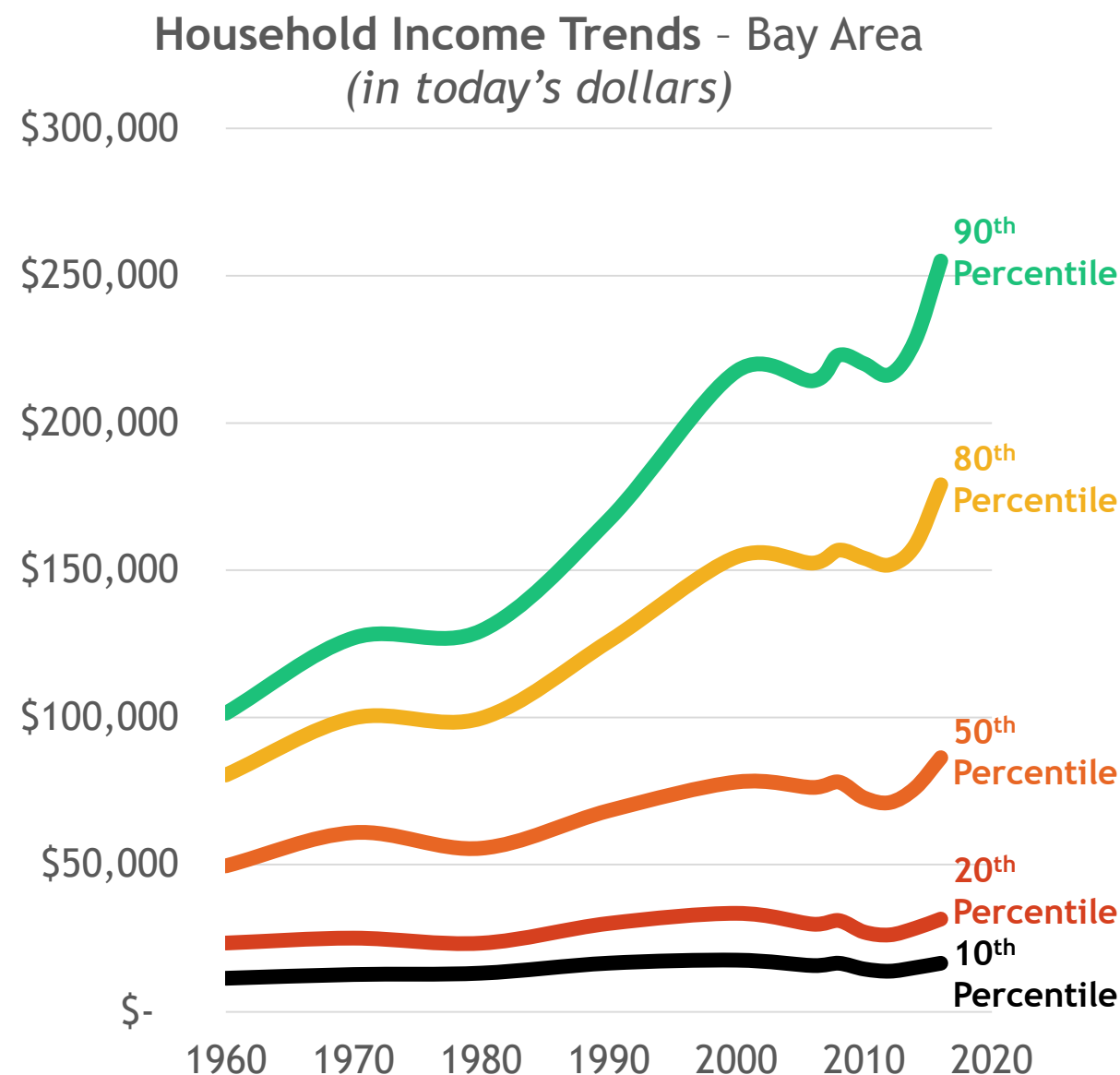
- Just under half of all “gig economy” workers are relying on this work as their **primary source of income**.
- “Casual earners” are the largest demographic, accounting for 4 in 10 workers.



Source: US data, Manyika et al. (2016)

Incomes are Growing - but Not for Everyone

- **Wages are bifurcating**, with growing incomes for the wealthy while lower-income households' earnings remain relatively stagnant.
- **Income is becoming less predictable** at the same time as benefits have become more limited, especially for lower-income workers.
- **Income inequality has been rising since the 1970s**; the Bay Area now has a similar level of inequality as the nation of Turkey.

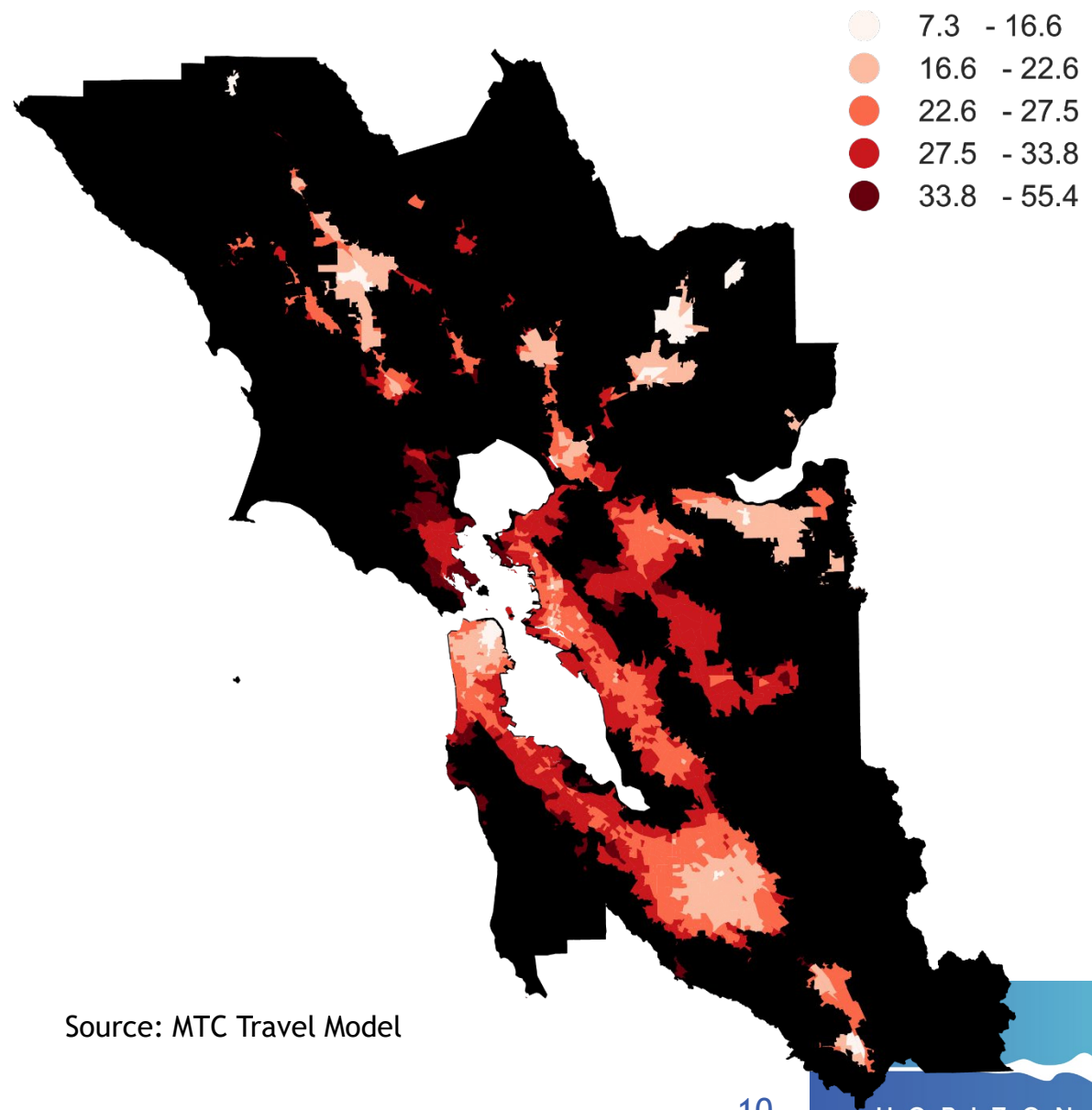


Source: iPUMS, 1960 to 2016

Simultaneous Concentration and Decentralization

- Within the Bay Area, higher-wage jobs continue to concentrate in San Francisco and Silicon Valley - with lower-wage jobs moving to the East Bay and North Bay.
- New technologies could allow for greater decentralization via telecommuting - e.g., virtual reality.

VMT per Employee, Urbanized Areas
by place of work (2010)



Source: MTC Travel Model

What's Next for The Future of Jobs Paper?

