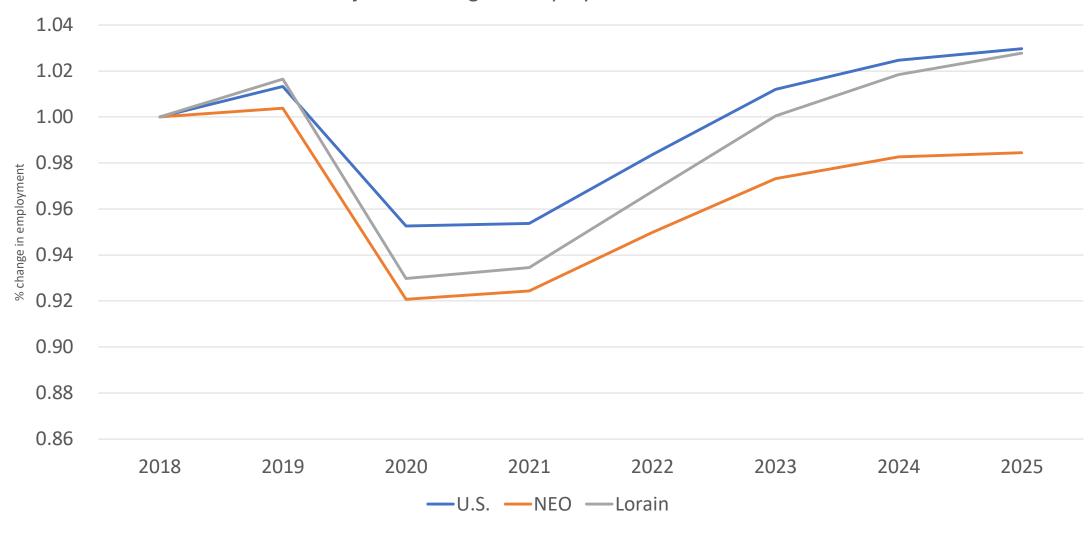
Early Projections on the Potential Impact of COVID-19 September 18, 2020 Jacob Duritsky



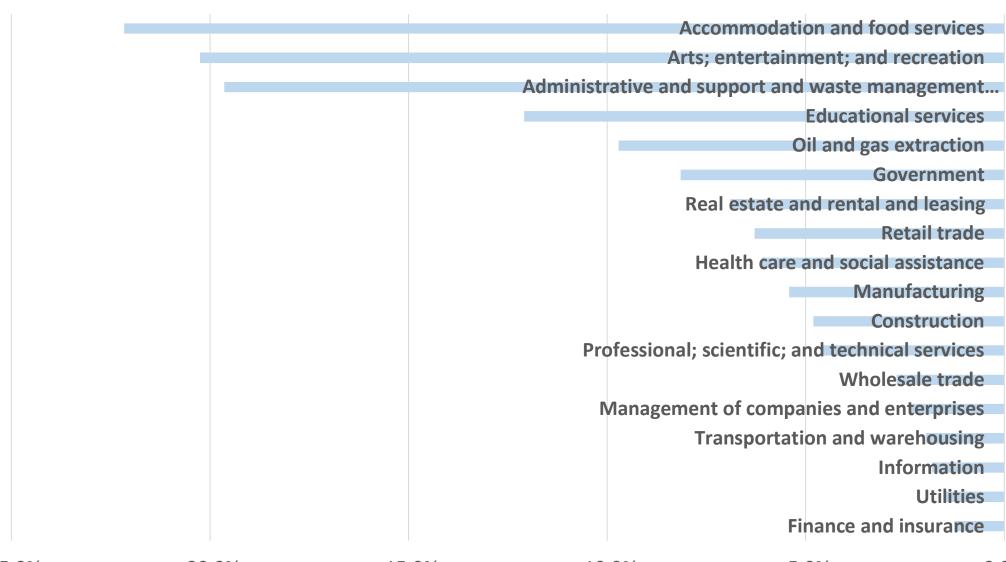
Assumptions Underlying the Analysis

- Analysis is based on June annualized national and local projections to employment and GDP from Moody's Analytics
 - Anticipates 2nd round of federal stimulus (with similar target audience)
 - Interest rates maintained until 2022
 - No additional significant shutdowns
 - Continued Fed quantitative easing
 - Vaccine in 2021
- We will be leveraging the projections for two primary purposes:
 - To reevaluate how we think about targeting companies based on early indicators
 - To help inform the community on a rapidly changing economic situation
- Caveats to keep in mind:
 - It is still VERY EALRY into the COVID-19 crisis, and as such, all projections are highly subject to change
 - The timing and strategy for re-opening the economy post-pandemic will be a large factor in determining how we come out of this crisis
 - Moody's preliminary estimates have already been significantly revised nationally
 - Fully calculated data on the true impact to employment and GDP at the local level could take 18-24 months to understand
 - Early projections are likely to be conservative, as nationally forecasted changes for 2020 pre-COVID data have not been fully analyzed at the local level

Projected Change in Employment: 2018 - 2025

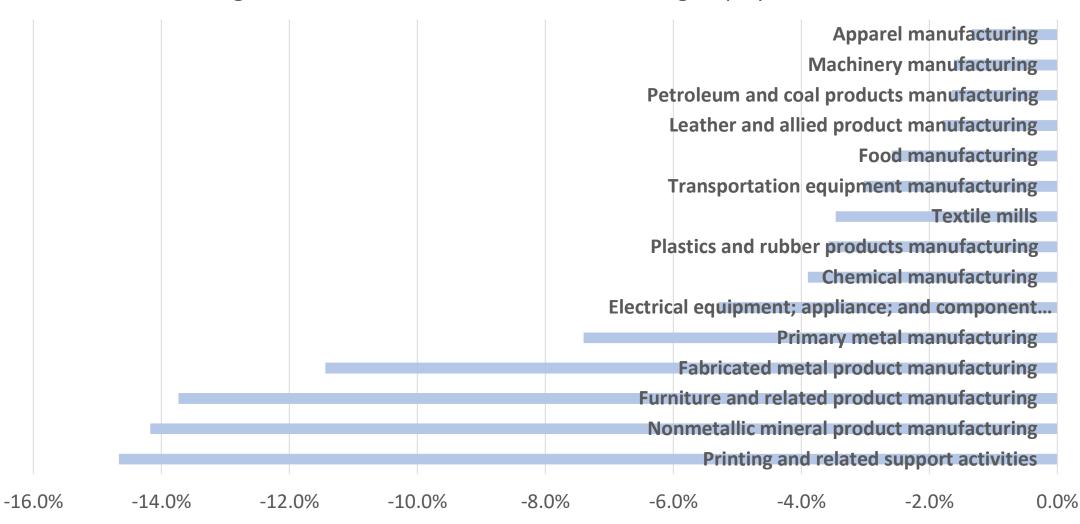


Projected Employment Change by Major Industry Sector in Northeast Ohio: 2020

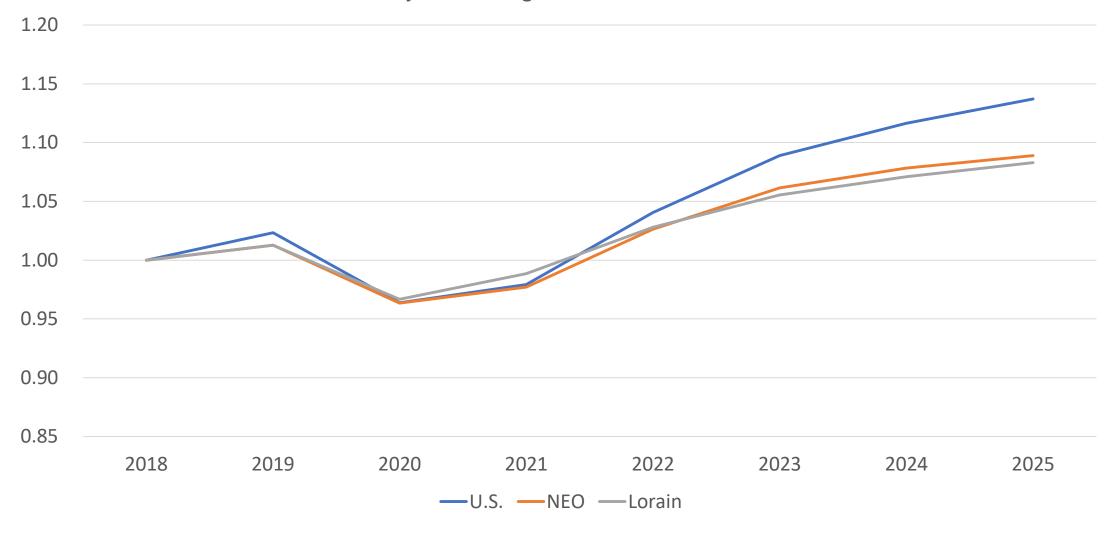


-25.0% -20.0% -15.0% -10.0% -5.0% 0.0%

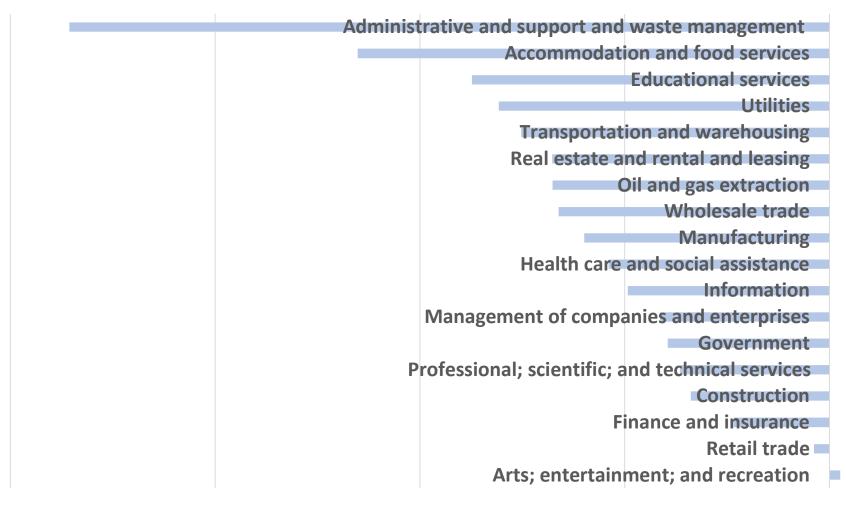
Largest Declines in Northeast Ohio Manufacturing Employment: 2020



Projected Change in GDP: 2018 - 2025

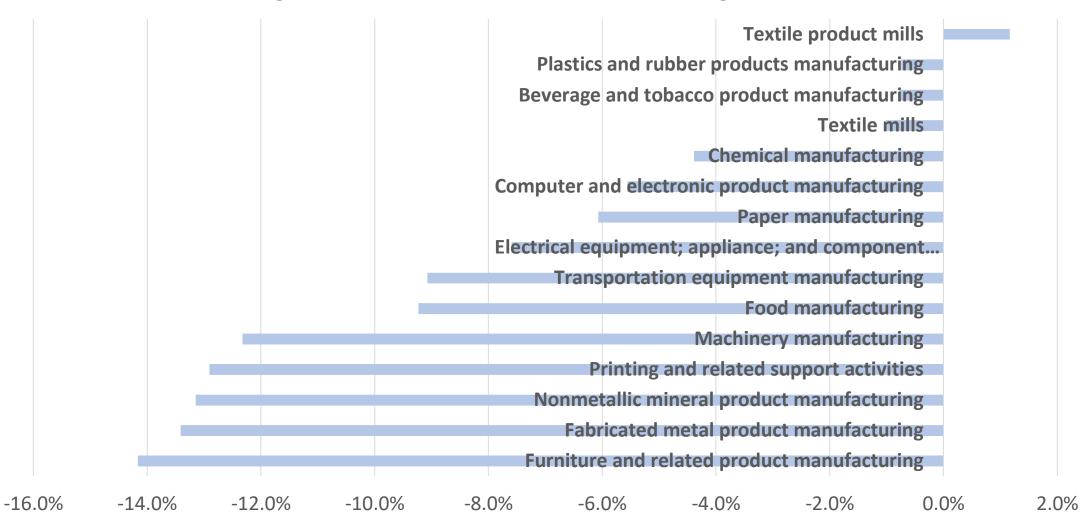


Projected GDP Change in Major Industry Sectors in Northeast Ohio: 2020



-20.0% -15.0% -10.0% -5.0% 0.0% 5.0%

Largest Declines in Northeast Ohio Manufacturing GDP: 2020



Preliminary Insights on the COVID Economic Impact

- In the short-term, this remains a health crisis, and little can be done to influence collateral macroeconomic impacts to other sectors disrupted by necessary policy decisions
- COVID-19 will have wide reaching impacts, both nationally and regionally, and the full extent of those impacts will likely depend on the duration of the crisis, and the ability of the economy to respond after
- The degree to which Northeast Ohio is directly impacted will depend on several factors, some of which include:
 - Supply chain disruptions
 - Lack of product demand
 - Talent shortages
- Early indications from partners indicate many companies are not fully feeling the impact of these potential disruptions yet, and many have enough liquidity for the next 30-60 days
- While not wanting to appear tone-deaf to the very real challenges facing many individuals and companies right now, this could provide an opportunity to leverage the economic development community to address key challenges around:
 - Talent gaps
 - Supply chain opportunities
 - M&A potential
 - New market growth

So What's Next?

Building a Resilient Supply Chain and Addressing Regional Talent Gaps





Heading into 2020, Calling Strategy was Based on Projected Growth

- Initial plans were to target high-growth companies and sectors as the core of our strategy based on several factors:
 - Employment
 - Revenue
 - Share of regional GDP
- COVID 19 changed the way we need to think about targeting companies. While the industries remain the same, the approach likely needs to change
- Working with Industry and Innovation, partners, and companies, we are attempting to reevaluate our process for engaging companies
- Factors influencing this include:
 - Supply chain disruptions
 - M&A potential
 - Talent shortages





moodys.com/coronavirus

The How

We will use the Northeast Ohio Industry Insight document to enact a strategy around:

- 1) Influencing JobsOhio/State of Ohio Government on new programs and policies
- 2) Developing target lists in NEO for growth, retention, and consolidation
- **3) Developing target lists outside of NEO** for inbound investment (likely mostly FDI)
- **4) Conducting outreach campaigns** locally, nationally and internationally to show these targeted companies NEO's value proposition, such as:
 - 1) Proven demand/ Market access
 - 1) Tariff relief
 - 2) Logistical access for 60% of North America
 - 3) Talent
 - 4) Existing Supply Chain

But what about reshoring/onshoring?

U.S. companies with operations abroad are generally there because they serve that foreign market. They are unlikely to pack up in places like China to move to the U.S.

Companies in low cost markets (like China) are unlikely to immediately look to invest in the U.S. due to the trade war and cost differential of some goods.

Our best opportunity is in finding out the overall demand for particular goods that our value proposition matches with.



Misaligned Opportunities:

How Racial Inequities Lead to Skills Gaps in Northeast Ohio





IN PARTNERSHIP WITH Delta Dental

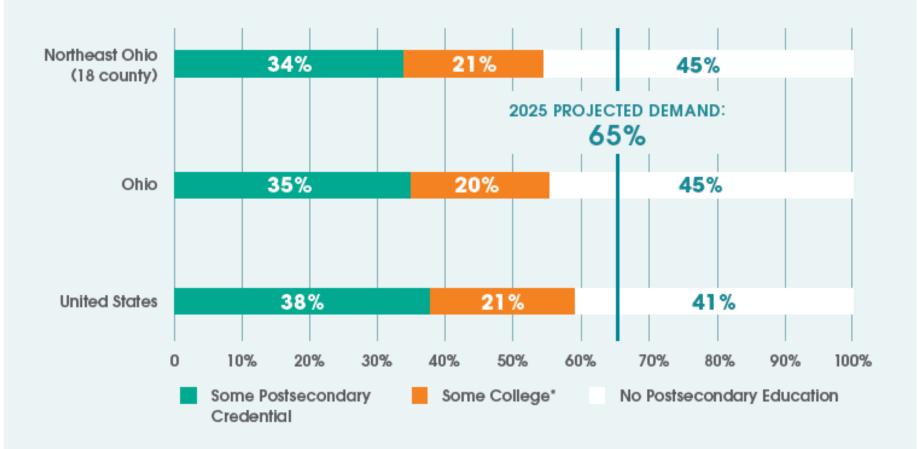








Gap Between Education Required by 2025 & Educational Attainment of Population 2018



In the short term, alignment of credentials with in-demand jobs will be even more important.

^{*&}quot;Some College" Includes both those who have started, but not completed, a college degree program and those who may hold a certificate or other training credential that is not a degree.











2001 - 2018 IN NORTHEAST OHIO

Population dropped by 155,000 to 4.278 million

Labor force dropped by 146,000 to 2.111 million

Looking Ahead

The post COVID-19
economy will
demand even more
credentialed
workers.

As our population and labor force continue to shrink, it is imperative to educate talent for the jobs of the future.











If Northeast Ohio grew retention to 57% annually, the region could retain:









IN PARTNERSHIP WITH Delta Dental

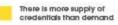


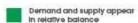


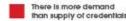
Demand-Supply Alignment

	Occupation Group	Total Demand 2019	Entry-Level Demand 2019	Credentials Awarded 2018	Allgnment	Entry-Level Allgnment
IT	Computer & IT Workers	17,442	6,457	2,208	(15,234)	(4,249)
Manufacturing	Metal & Plastic Workers	5,979	2,546	161	(5,818)	(2,385)
	Installation, Maintenance & Repair Occupations	6,901	2,659	519	(6,382)	(2,140)
	Skilled Production Workers	9,478	5,189	1,423	(8,055)	(3,776)
Health Care	Health Diagnosing & Treating Practitioners	19,857	8,071	6,735	(13,122)	(1,336)
	Health Technologists & Technicians	9,562	5,566	2,778	(6,784)	(2,788)
	Health Care Therapist Aldes & Support Workers	1,094	338	539	(555)	201
	Nursing, Psychiatric & Home Health Aldes	5,503	1,456	590	(4,913)	(866)
Life Sciences/ Education/ Engineering	Architects & Engineering Technicians	3,383	1,436	1,828	(1,555)	392
	Education	10,406	1,919	8,209	(2,197)	6,290
	Engineers	4,661	1,925	2,177	(2,484)	252
	Life Science Workers	2,295	821	6,105	3,810	5,284
Finance & Business Services	Financial Clerks	6,198	3,324	162	(6,036)	(3,162)
	Financial Specialists	6,260	2,541	2,118	(4,142)	(423)
	Information & Record Clerks	12,987	4,954	220	(12,767)	(4,734)
	Secretaries & Administrative Assistants	6,305	2,406	413	(5,892)	(1,993)
Management	Managers, Professional & Health	12,666	4,146	10,965	(1,701)	6,819
	Supervisors of Skilled Workers	4,497	2,299	190	(4,307)	(2,109)















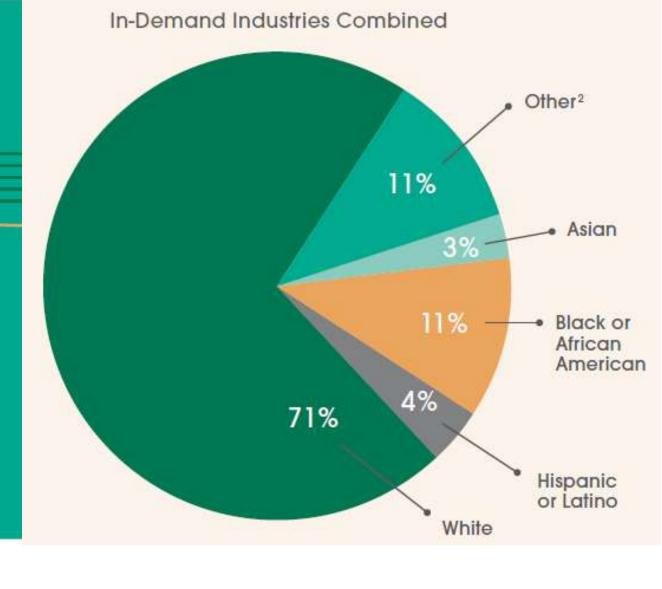




Misaligned Opportunities:

How Racial Inequities Lead to Skills Gaps in Northeast Ohio

2020 REPORT









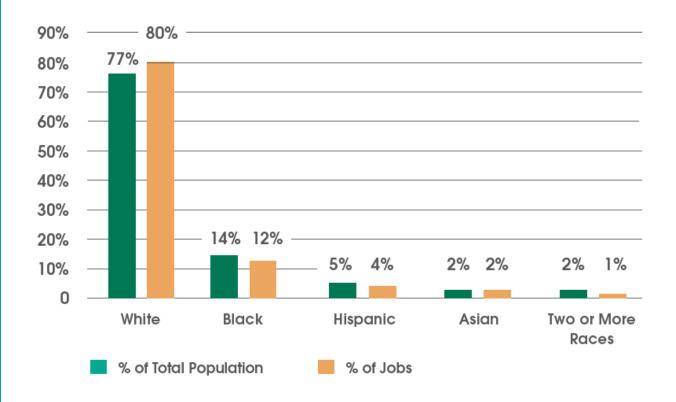




Level Setting

Minorities in Northeast Ohio Represent 19% to 23% of Population and Employment Throughout the Region.

Population vs. Employment in Northeast Ohio

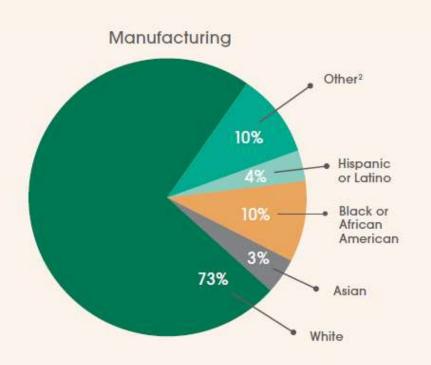


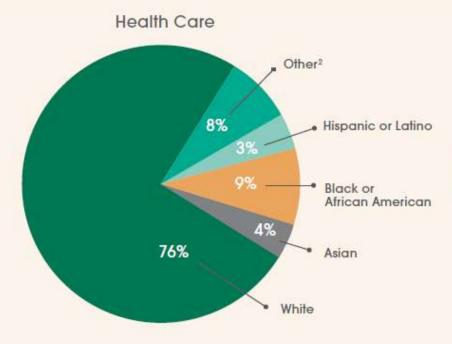


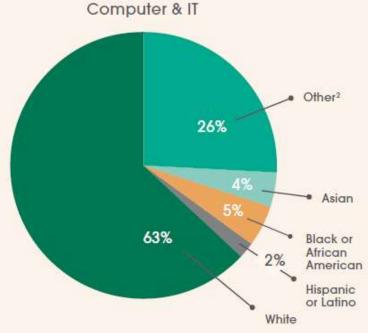




Some of These Disparities Can be Explained through the Lack of Minority Credentialing for In-Demand Occupations



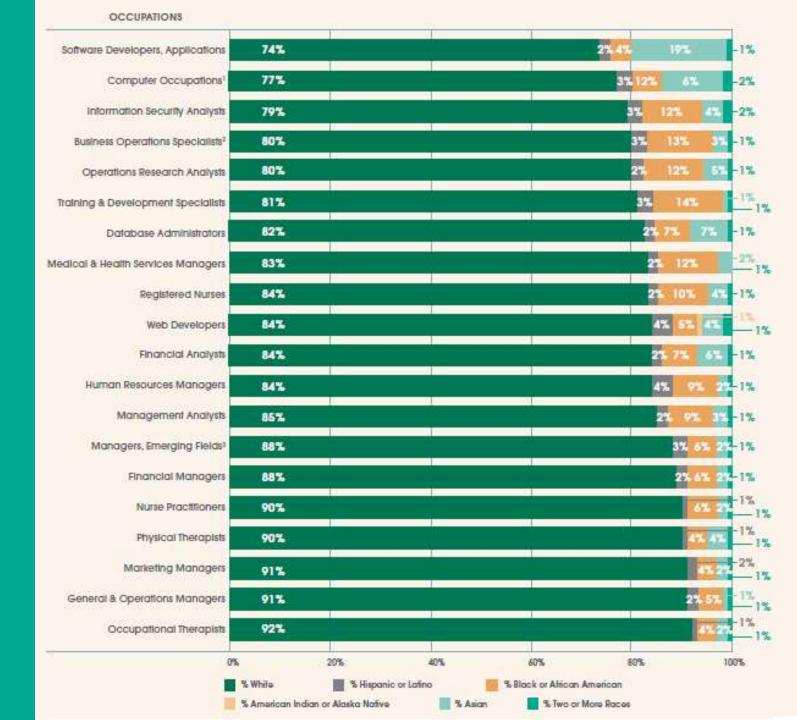








Minorities in Northeast Ohio are Underrepresented in 19 of 20 Key In-Demand Occupations.



Key Takeaways

- Supply chain disruptions provide an opportunity to think differently about how we think through reshoring and onshoring
- Manufacturers may look to diversify their supply chains and products in light of these disruptions
- Technology adoption in manufacturing will likely be accelerated
- Healthcare, IT, and Manufacturing continue to drive the largest share of unfilled jobs; It is likely that due to COVID, many of these trends will be accelerated
- There is no "silver bullet" to address these challenges, and multi-pronged strategies will be required to build the workforce of the future
- Equity will be a key component to how we address these challenges
- Minorities represent less than their proportionate share in 19 of the 20 most indemand occupations
- Educational attainment can mask the fact that the best paying, most in-demand occupations are still significantly lower represented by people of color Demographic headwinds will only heighten the need for greater equity in the labor force
- Bringing parity to the equity gap could close the overall alignment gap by 20-30%

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