

STRUCTURAL CHALLENGES AND PRACTICAL QUESTIONS FOR EMPOWERING AND DIVERSITY TECHNICAL WORK IN THE “NEW ECONOMY”

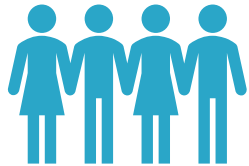
MAY 19, 2020
SHARLA ALEGRIA



UNIVERSITY OF
TORONTO

BOUNDLESS

EMPOWERING AND DIVERSIFYING THE TECHNICAL WORKFORCE



Current state of demographic affairs



Fails, fixes, and further “new economy” challenges

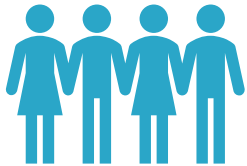


Questions and agendas for a more inclusive future



Intense private and public sector interest in diversity.

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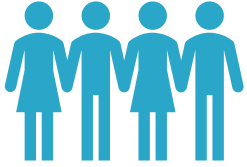
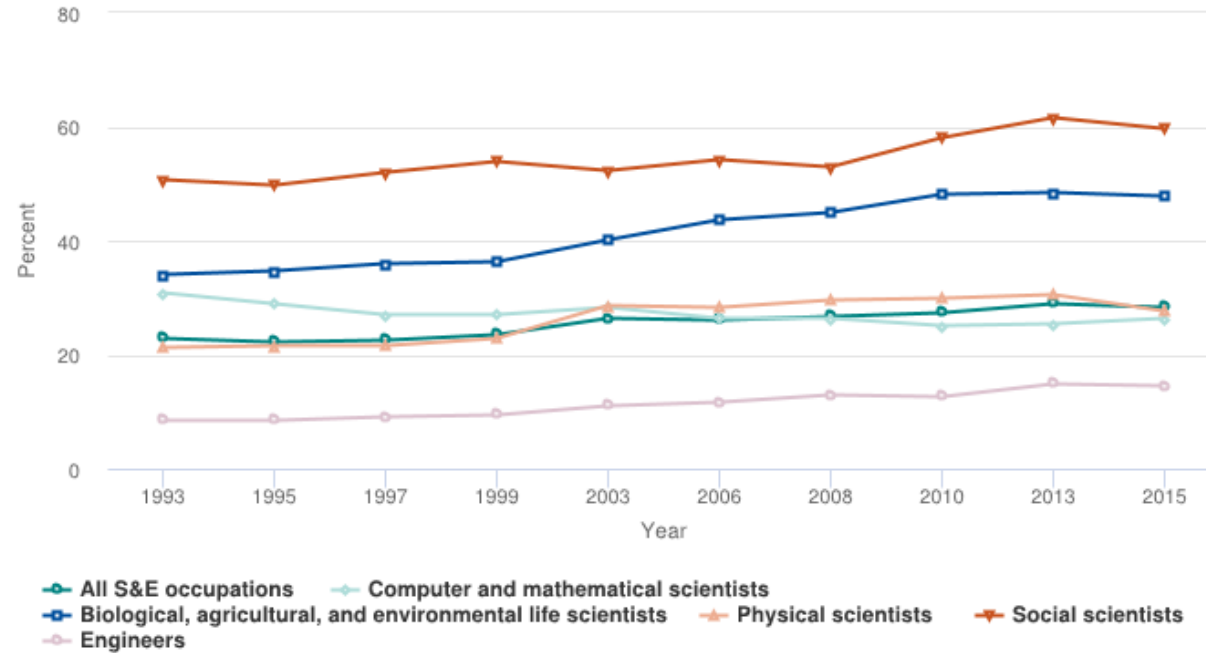


Figure 3-27

Women in S&E occupations: 1993–2015



Note(s): National estimates were not available from the Scientists and Engineers Statistical Data System (SESTAT) in 2001.

Source(s): National Science Foundation, National Center for Science and Engineering Statistics, SESTAT (1993–2013), <https://www.nsf.gov/statistics/sestat/>, and the National Survey of College Graduates (NSCG) (2015), <https://www.nsf.gov/statistics/srvygrads/>.

Science and Engineering Indicators 2018

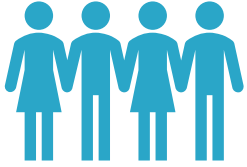
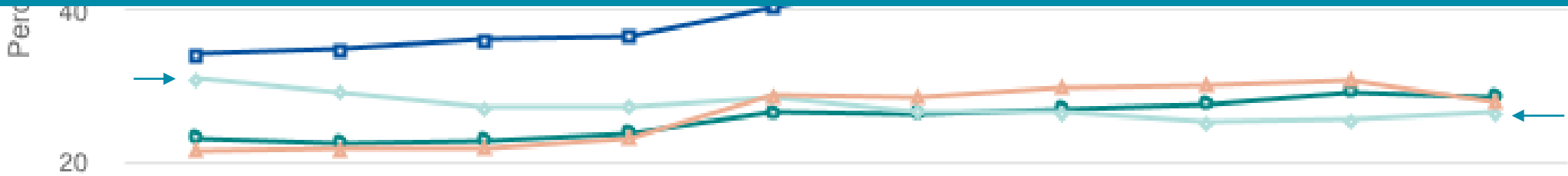
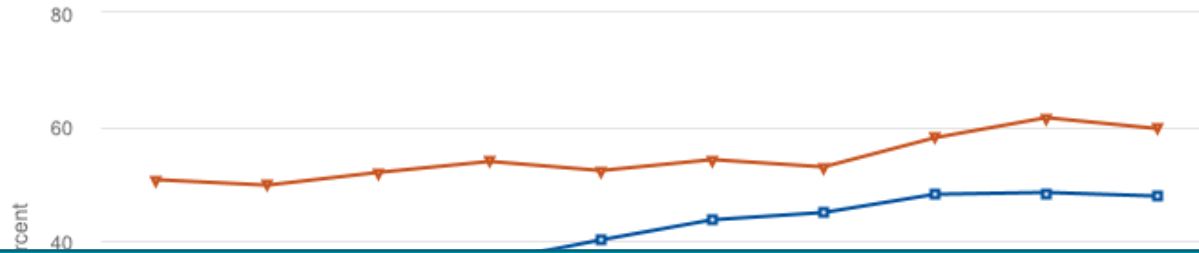


Figure 3-27
Women in S&E occupations: 1993–2015



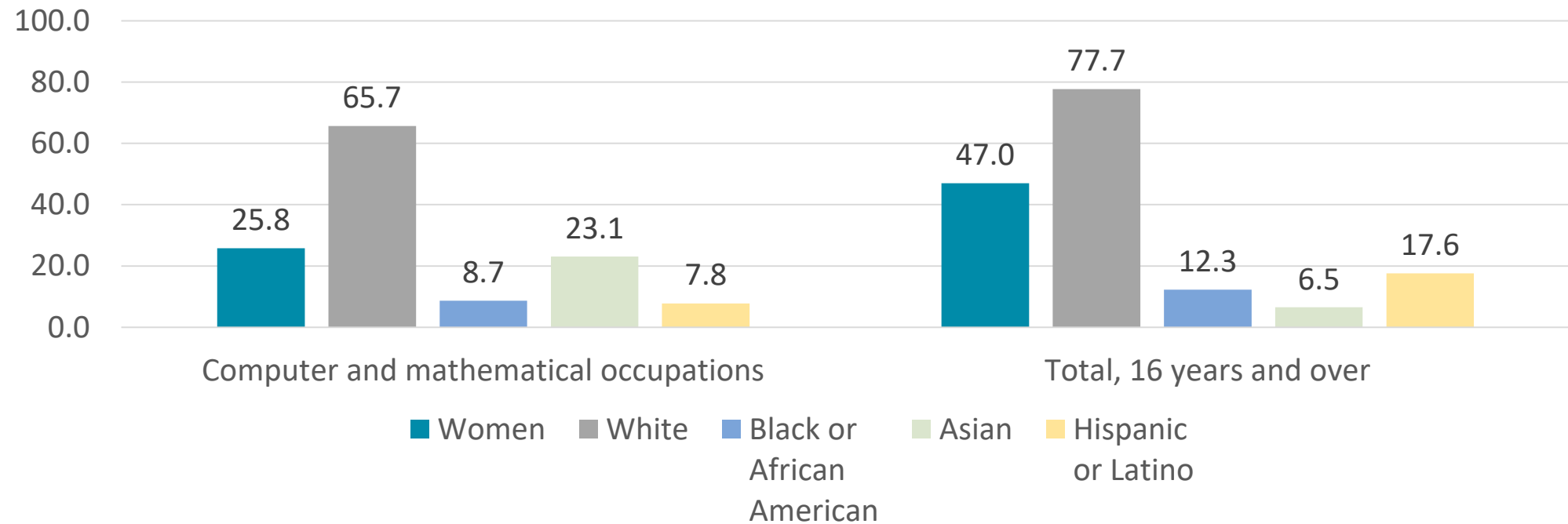
◆ All S&E occupations ◆ Computer and mathematical scientists
◆ Biological, agricultural, and environmental life scientists ▲ Physical scientists ▼ Social scientists
◆ Engineers

Note(s): National estimates were not available from the Scientists and Engineers Statistical Data System (SESTAT) in 2001.

Source(s): National Science Foundation, National Center for Science and Engineering Statistics, SESTAT (1993–2013), <https://www.nsf.gov/statistics/sestat/>, and the National Survey of College Graduates (NSCG) (2015), <https://www.nsf.gov/statistics/srvygrads/>.

Science and Engineering Indicators 2018

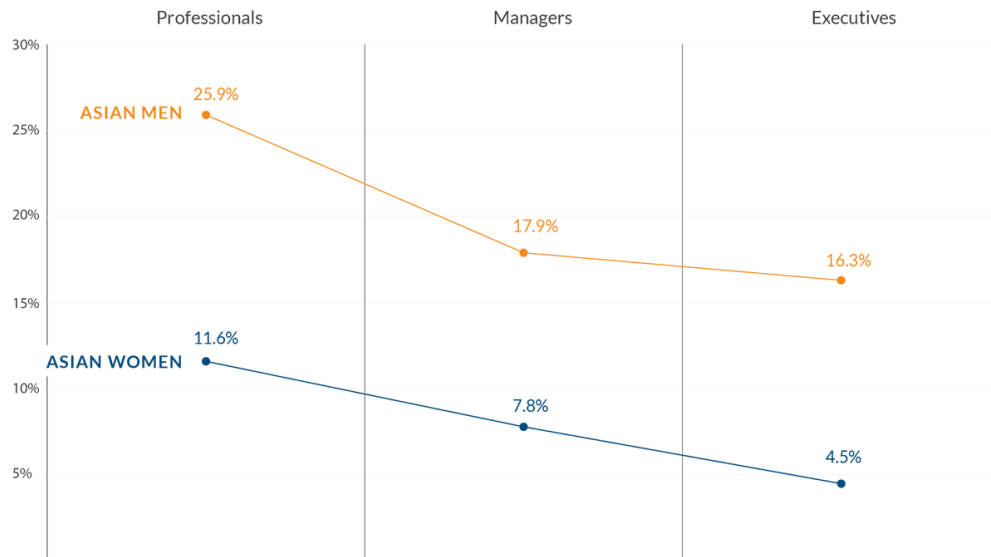
Percent of Total Employed in Computing and All Occupations in U.S. by Race and Gender, 2019.



Source: Bureau of Labor Statistics. 2019. "Labor Force Statistics from the Current Population Survey."
<https://www.bls.gov/cps/cpsaat11.htm>

People of color rare in Silicon Valley management

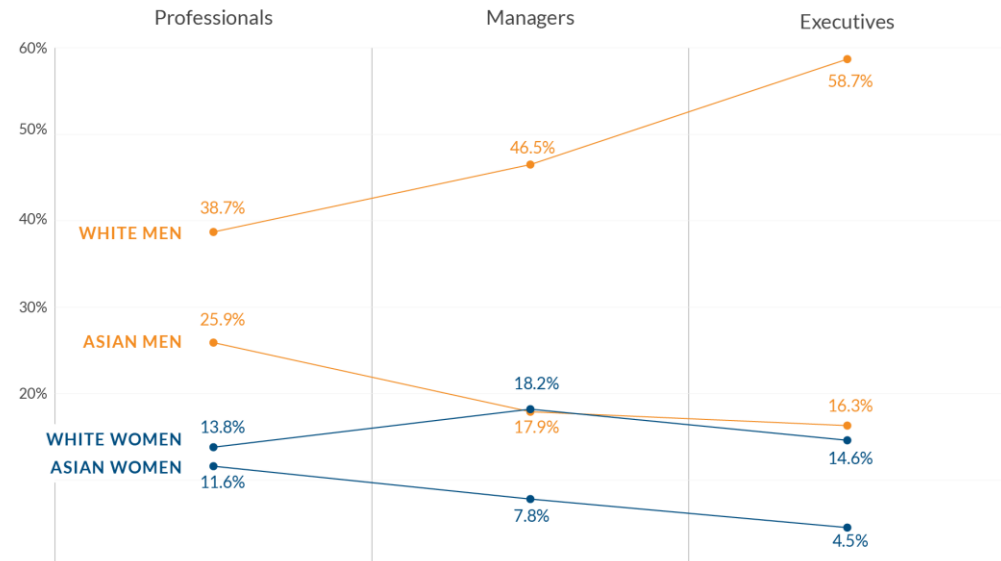
Latino and black employees in particular are significantly underrepresented at all levels at large tech companies, but especially at the managerial and executive levels.



Source: Center for Employment Equity. Averages for 177 Silicon Valley companies based on data from 2016 EEO-1 reports.
Credit: Gabriel Hongdsusit and Sinduja Rangarajan/Reveal

Narrowing stairway to the top, except for white employees

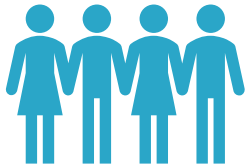
Asian employees make up a greater share of Silicon Valley's professional workforce than other minority groups, but their representation decreases at the managerial and executive levels. White women have poor overall representation in the tech industry, but their percentages are relatively consistent across levels.



Source: Center for Employment Equity. Averages for 177 Silicon Valley companies based on data from 2016 EEO-1 reports.
Credit: Gabriel Hongdsusit and Sinduja Rangarajan/Reveal

Rangarajan, Sinduja. 2018. "Bay Area Tech Diversity: White Men Dominate Silicon Valley." *Reveal News*. Retrieved February 12, 2020 (<https://www.revealnews.org/article/heres-the-clearer-picture-of-silicon-valleys-diversity-yet/>).

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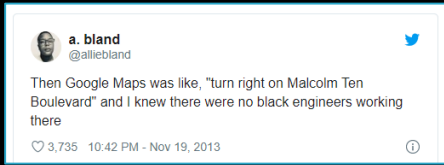
Current state of demographic affairs



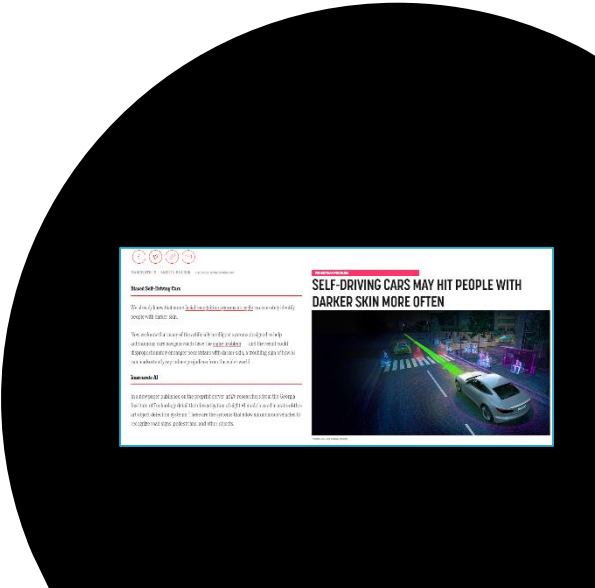
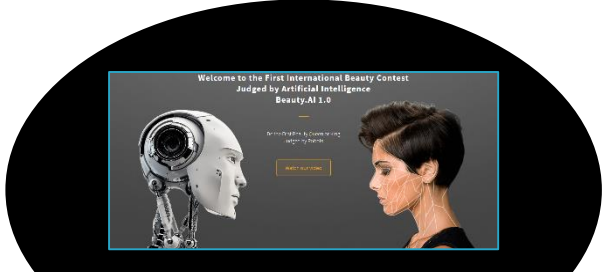
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Questions and agendas for a more inclusive future



DIVERSITY MATTERS



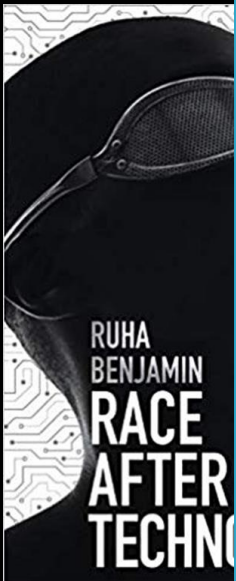
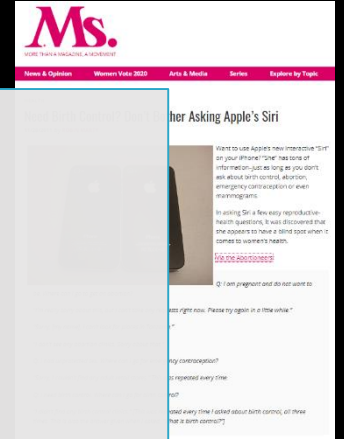
Diversity

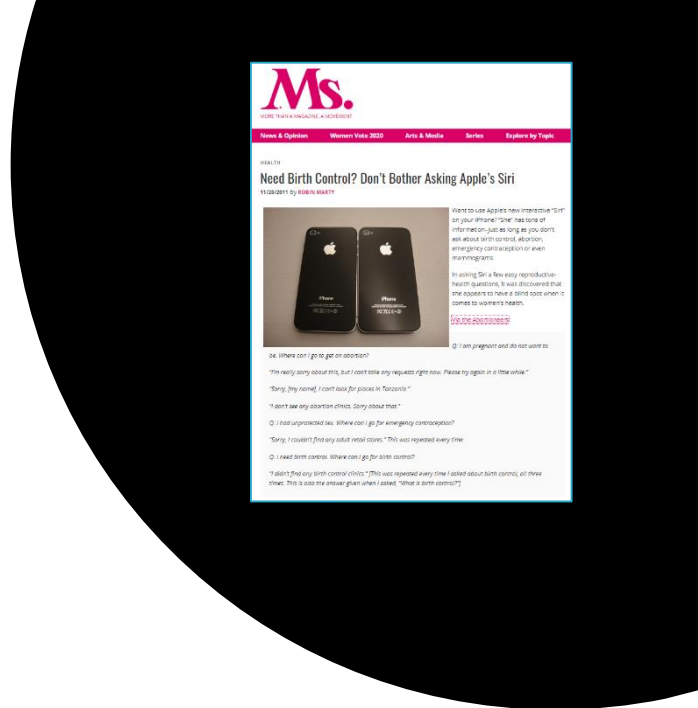
Intellectual

Demographic

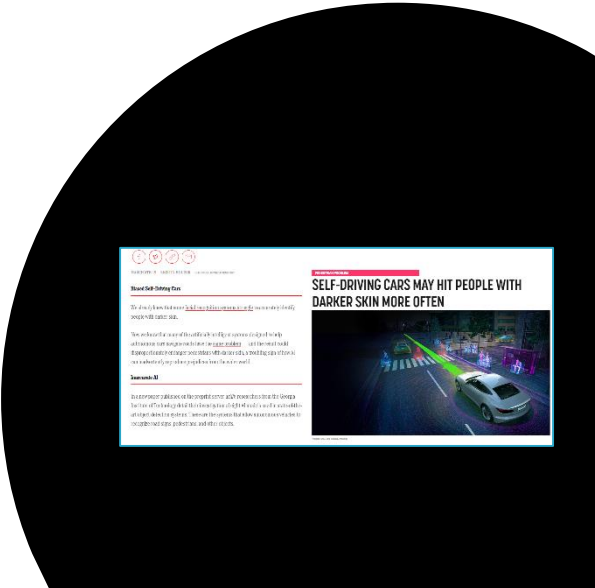
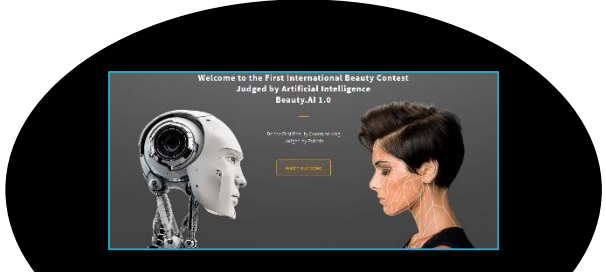
DIVERSITY MATTERS

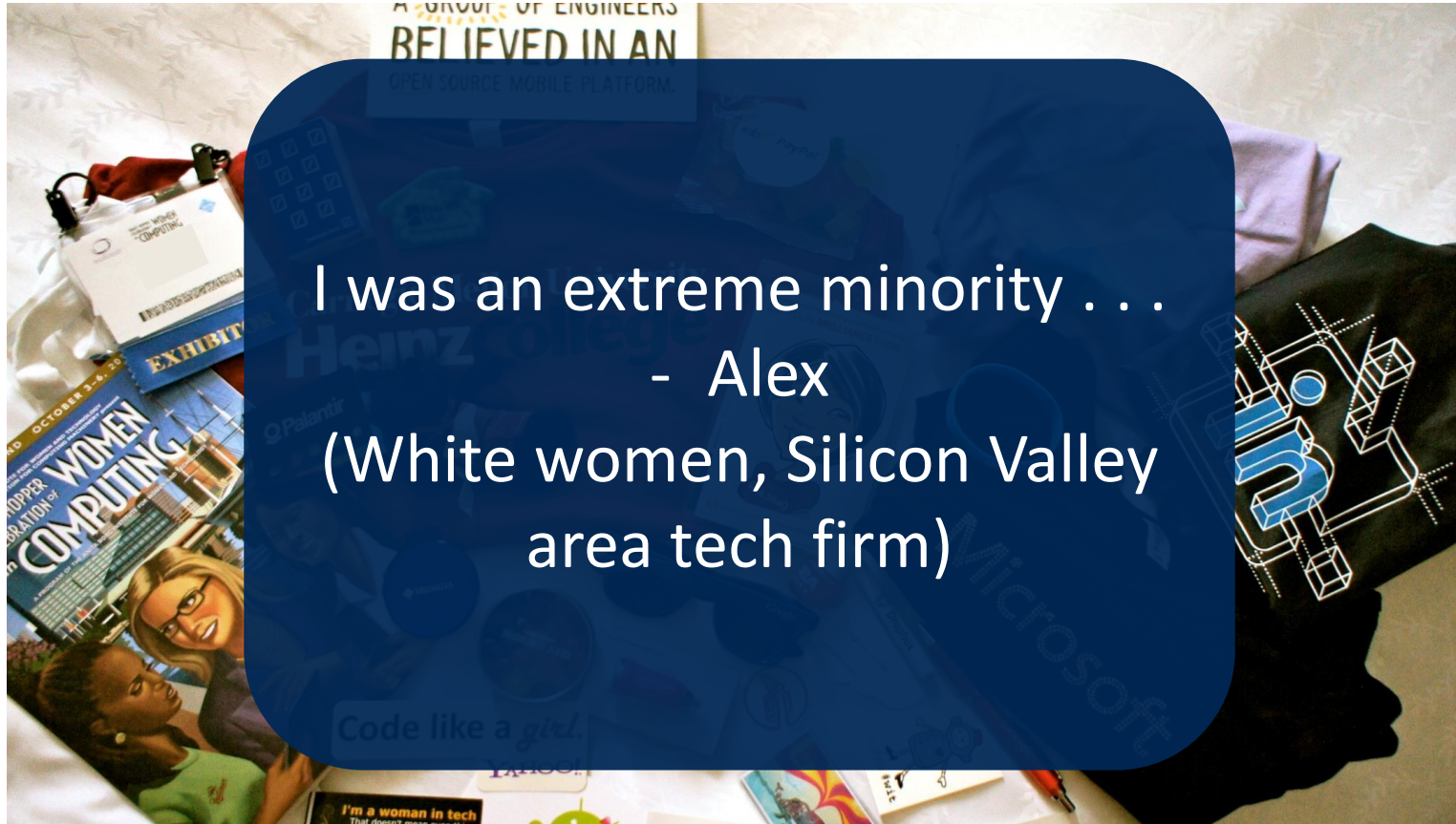
Smith-Doerr, Laurel, Sharla N. Alegria, and Timothy Sacco. 2017. "How Diversity Matters in the US Science and Engineering Workforce: A Critical Review Considering Integration in Teams, Fields, and Organizational Contexts." *Engaging Science, Technology, and Society* 3(0):139–53.



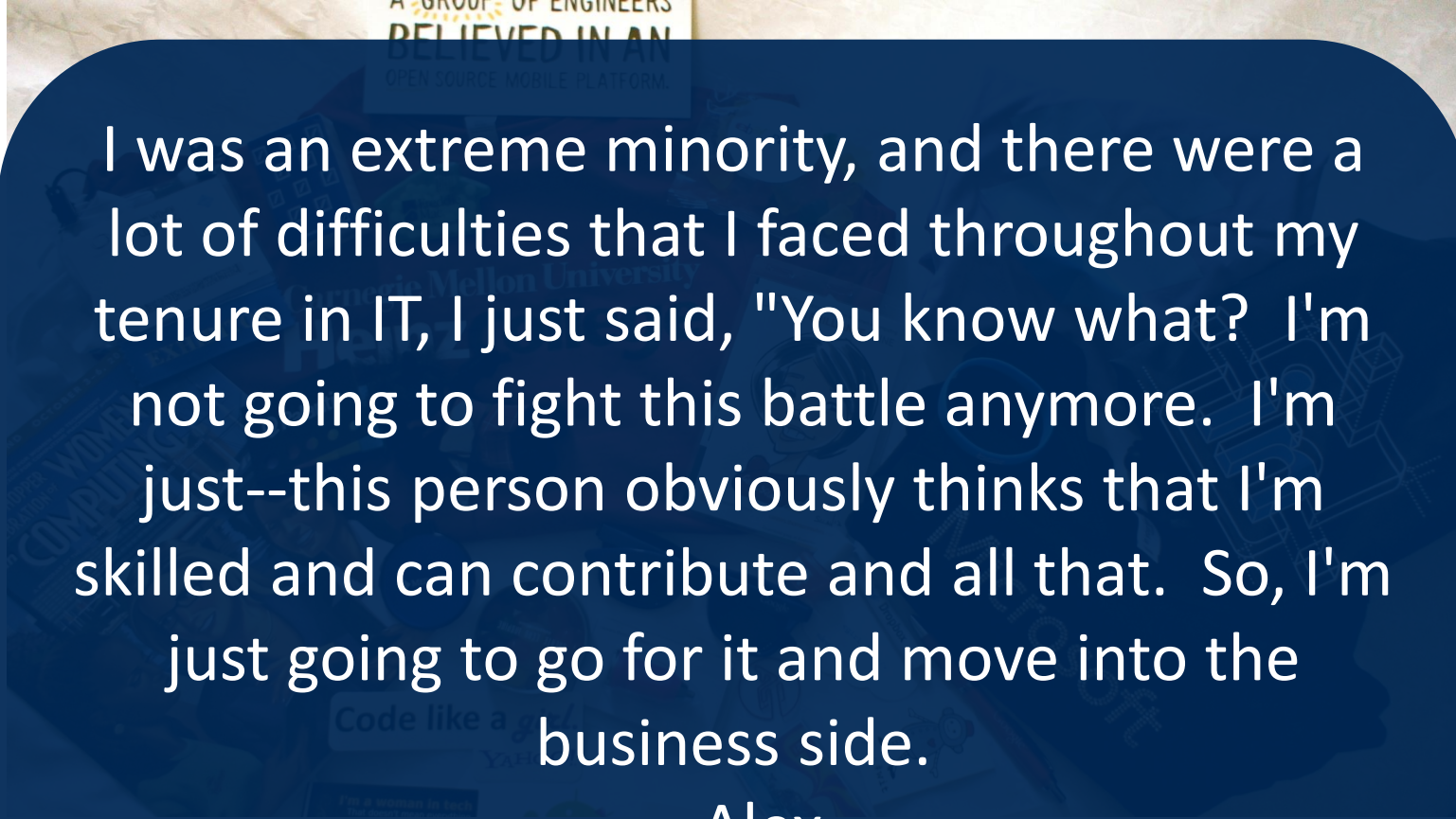


DIVERSITY MATTERS





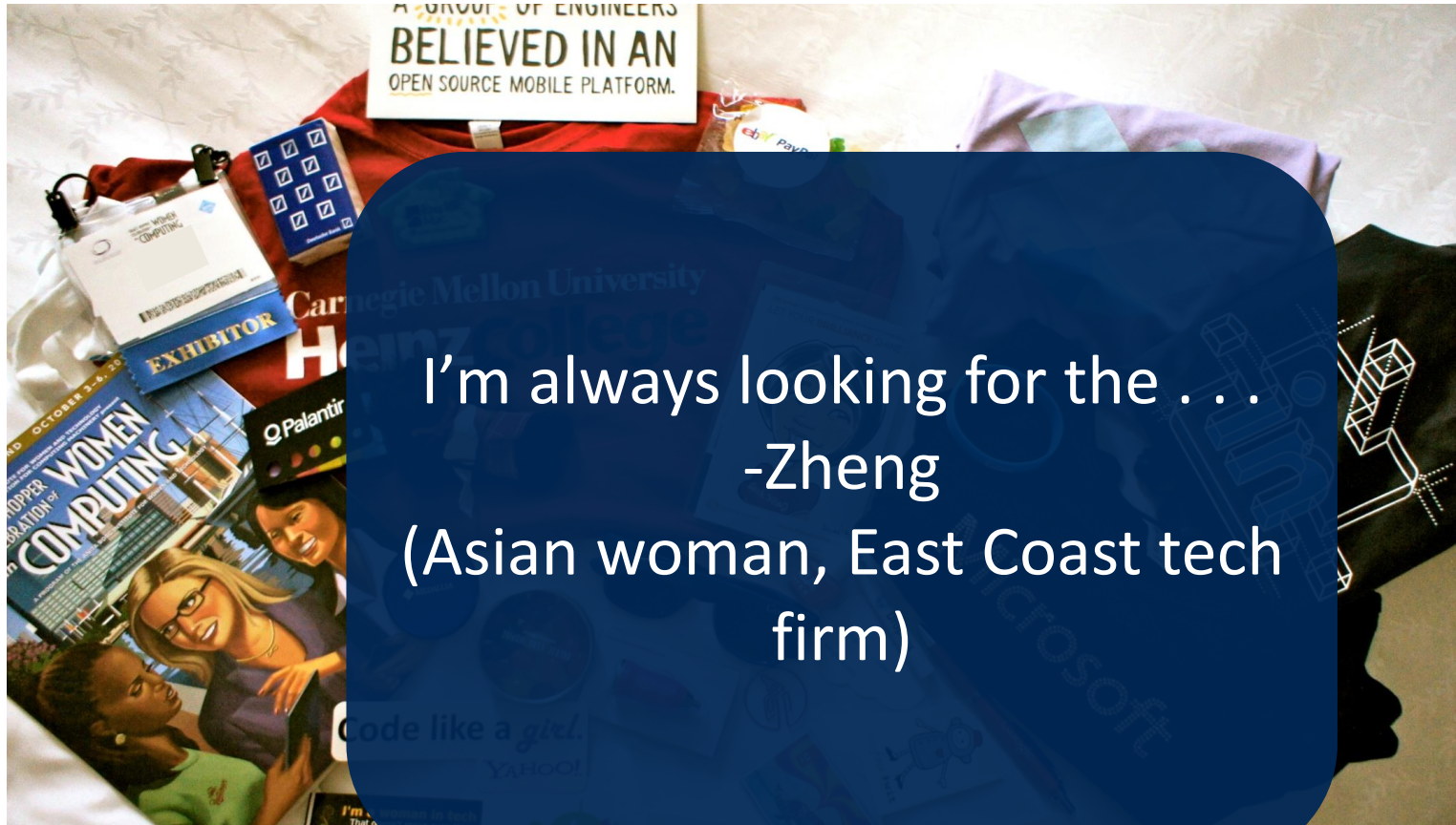
I was an extreme minority . . .
- Alex
(White women, Silicon Valley
area tech firm)



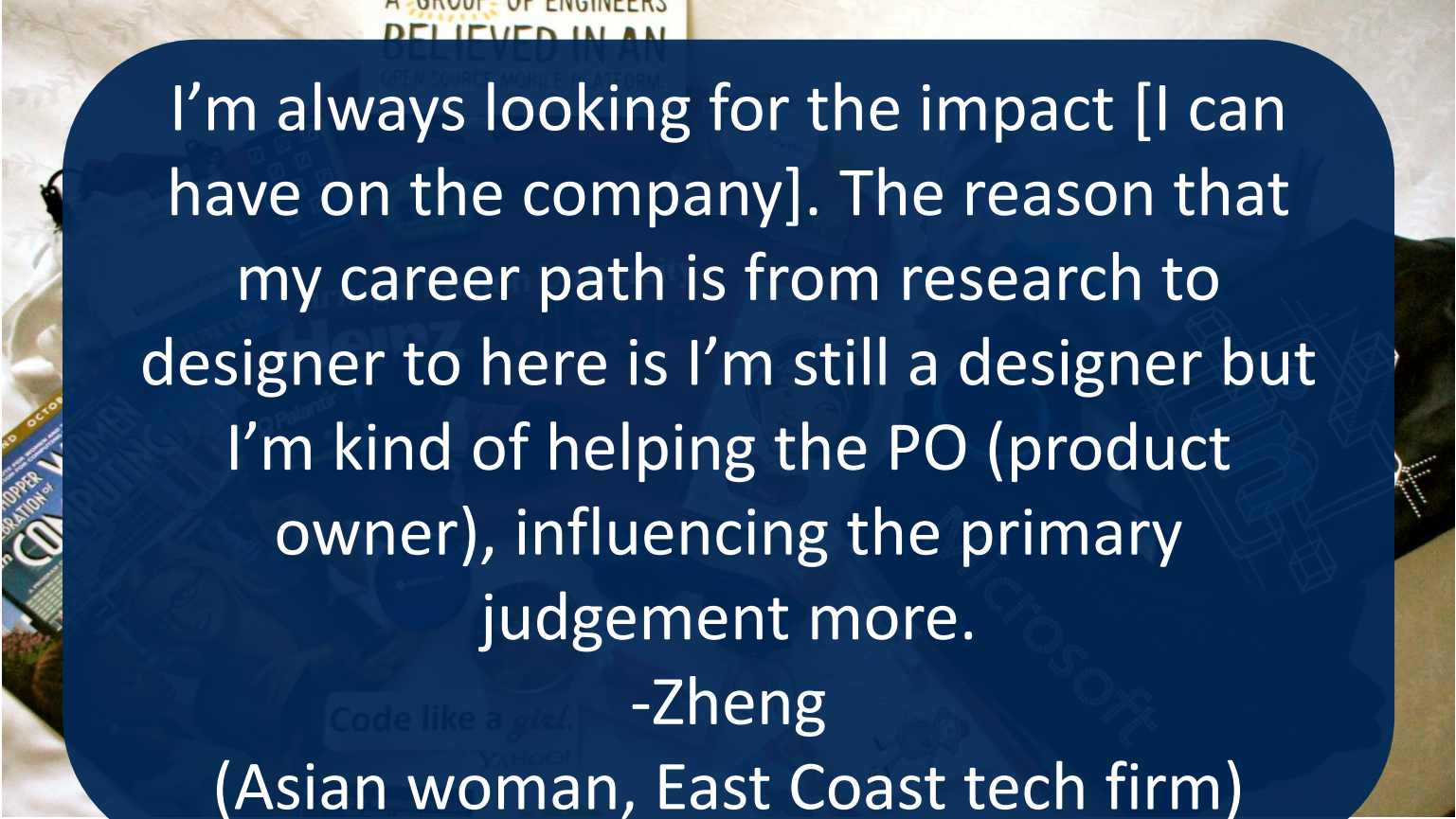
I was an extreme minority, and there were a lot of difficulties that I faced throughout my tenure in IT, I just said, "You know what? I'm not going to fight this battle anymore. I'm just--this person obviously thinks that I'm skilled and can contribute and all that. So, I'm just going to go for it and move into the business side.

- Alex

(White women, Silicon Valley area tech firm)



I'm always looking for the ...
-Zheng
(Asian woman, East Coast tech firm)



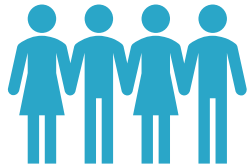
I'm always looking for the impact [I can have on the company]. The reason that my career path is from research to designer to here is I'm still a designer but I'm kind of helping the PO (product owner), influencing the primary judgement more.

-Zheng

(Asian woman, East Coast tech firm)



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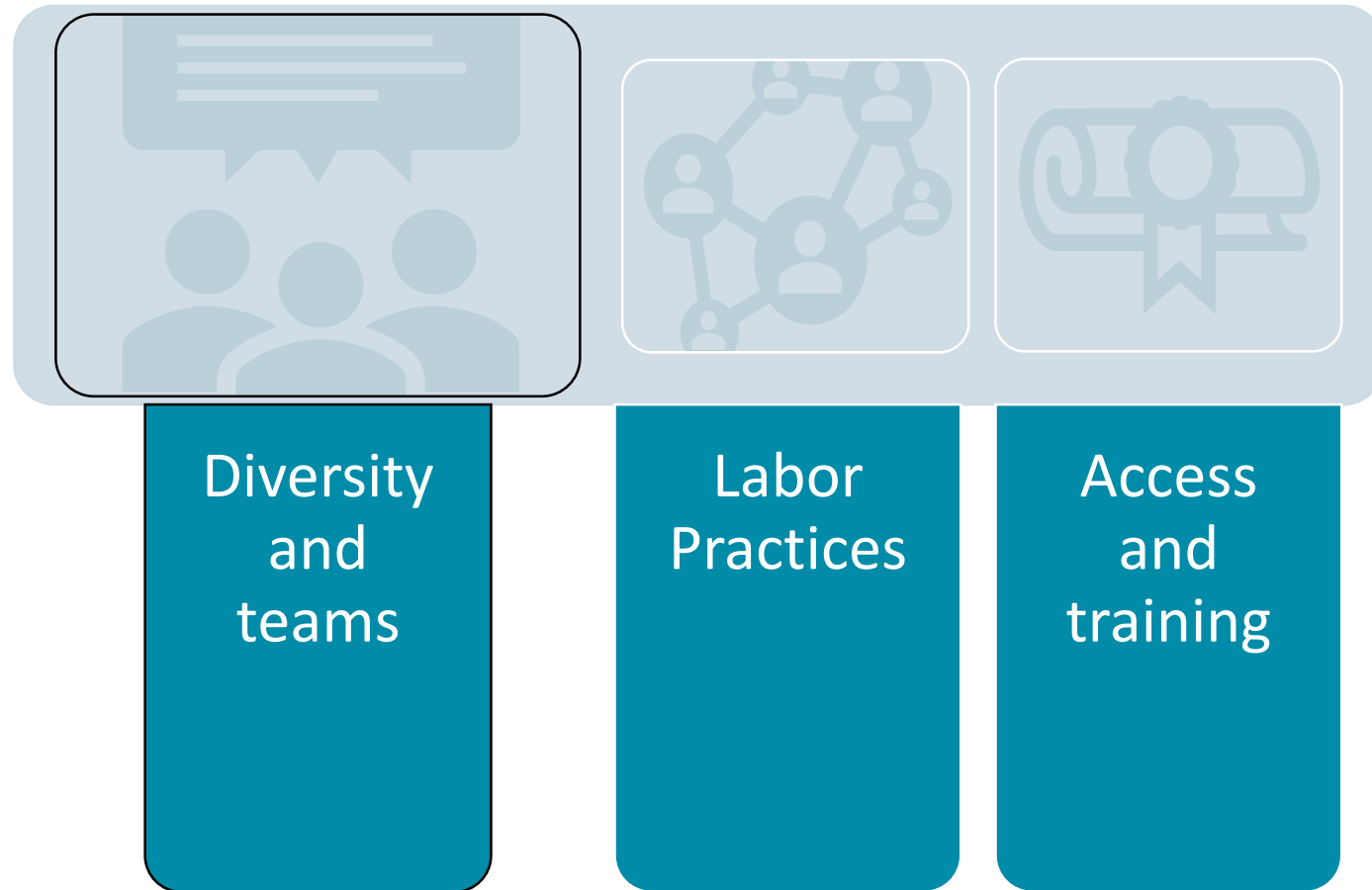


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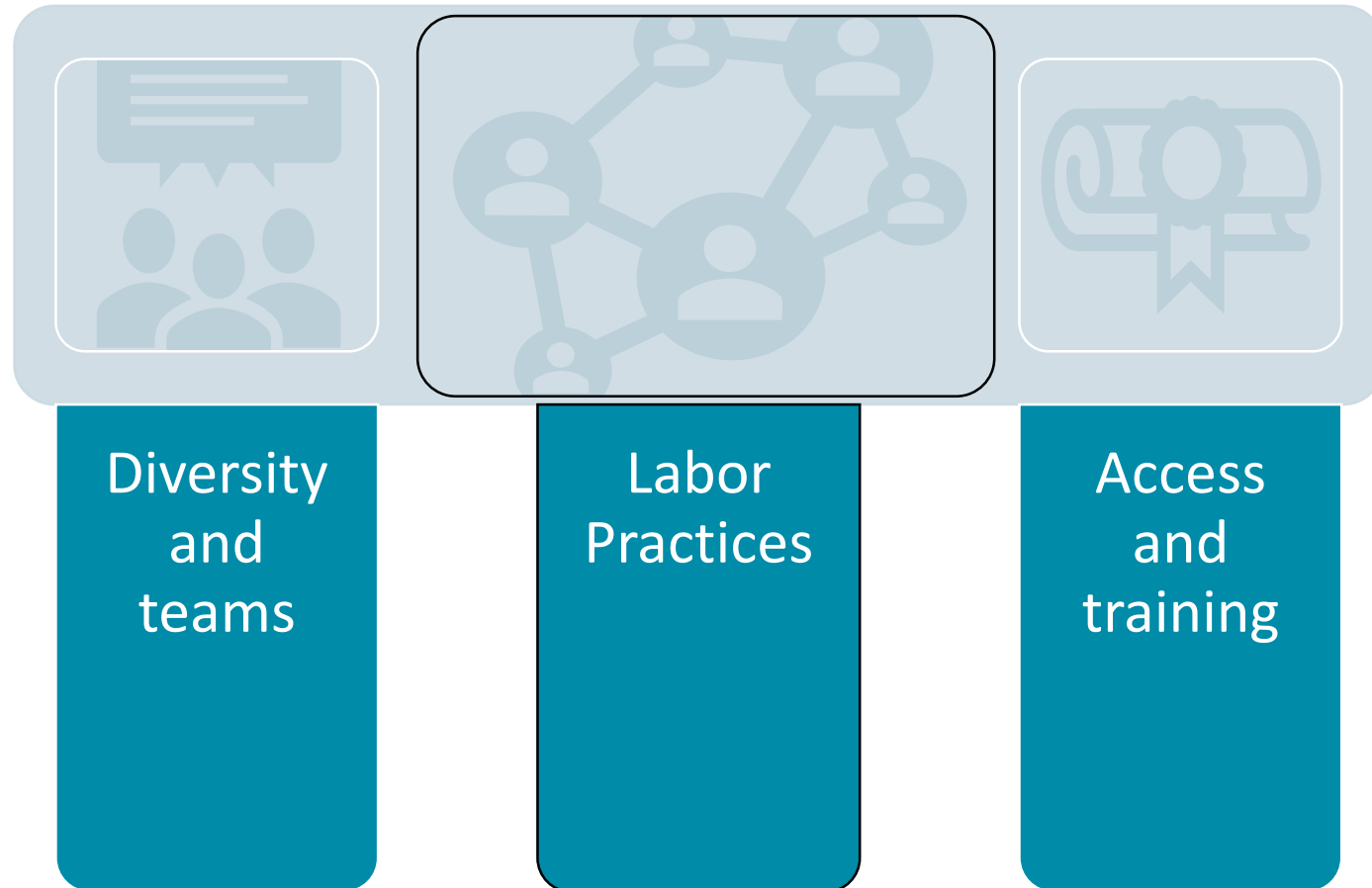


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a more inclusive future

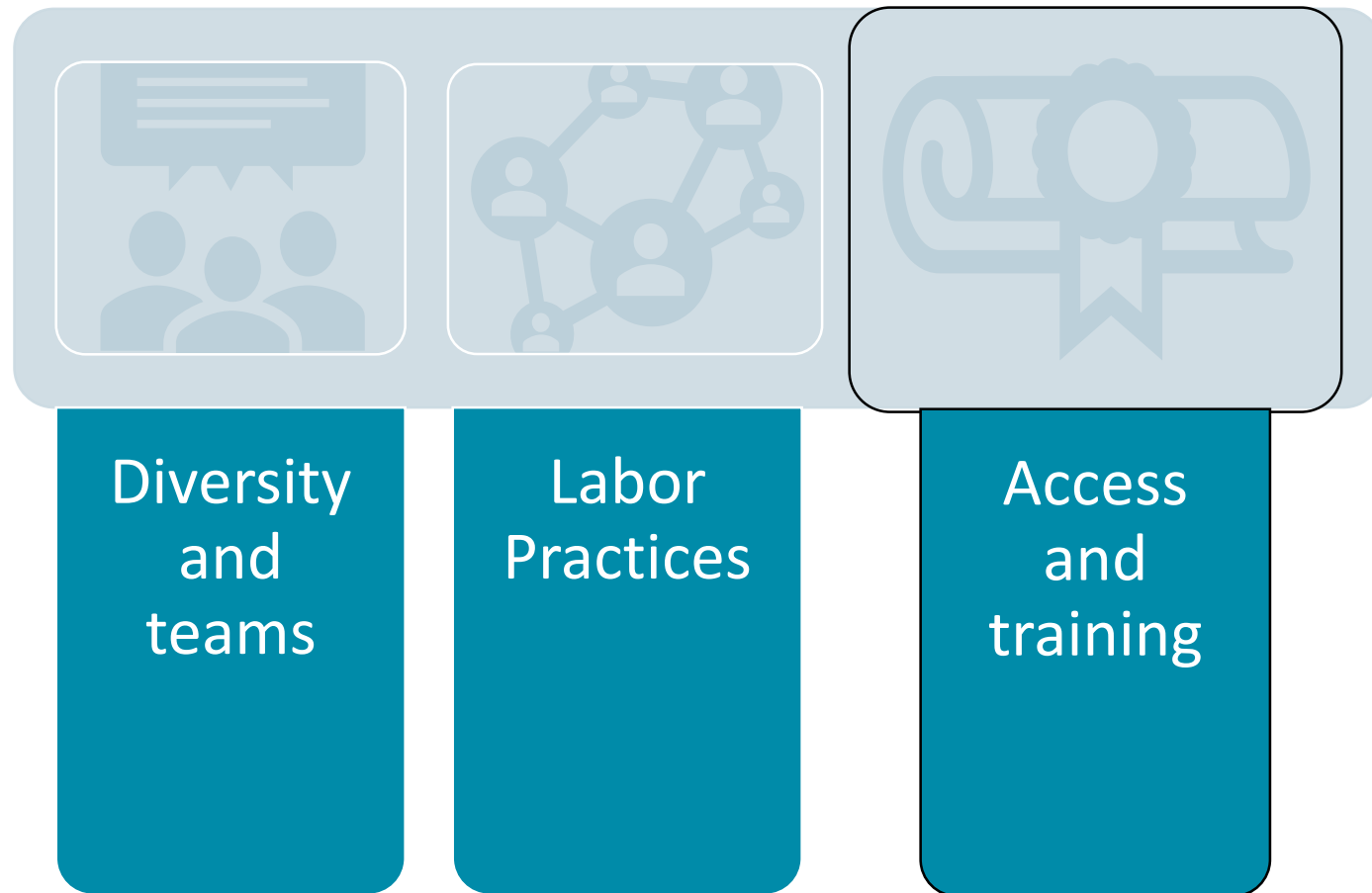
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THANK YOU.

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