ABOUT THE INSTITUTE FOR THE FUTURE (IFTF) AND ITS ROLE

The Institute for the Future (IFTF) is working with the California Labor Secretary and larger State Team to coordinate the work of the Commission. IFTF draws on its over 50 years of research and experience in convening discussions of urgent future issues to support the efforts of the Commission to build a strong vision for the future of work in the state. IFTF has been a leading voice in discussions about the future of work for the past decade, seeking positive visions for a workforce undergoing transformational change. As a facilitator of the Commission’s work, it will help guide the convenings, helping establish the comprehensive understanding necessary to build a world-class workforce of the future. IFTF will draw on the work of its Equitable Futures Lab to frame these discussions of future jobs, skills, and labor policy in terms of creating an equitable economy where everyone has access to the basic assets and opportunities they need to thrive in the 21st century.

ABOUT IFTF

Institute for the Future is the world’s leading futures organization. For over 50 years, businesses, governments, and social impact organizations have depended upon IFTF global forecasts, custom research, and foresight training to navigate complex change and develop world-ready strategies. IFTF methodologies and toolsets yield coherent views of transformative possibilities across all sectors that together support a more sustainable future. Institute for the Future is a registered 501(c)(3) nonprofit organization based in Palo Alto, California. www.iftf.org

For more information, please contact
Anmol Chaddha | achaddha@iftf.org

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## SCHEDULE OF CONVENINGS

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OVERVIEW

EDUCATION, SKILLS & JOB QUALITY

The previous convening on ‘Technological Change and its Impact on Work’ suggested that technological changes are more likely to have greater impacts on job quality than job loss—with increased pressures to work faster, under algorithmic management and surveillance, and in changing workplace contexts. This convening will delve deeper into challenges of improving job quality, beyond how it might be shaped by technological change. Some ideas about education and training that were introduced in the opening convening are revisited in this overview to contextualize this day-long convening on education, skills and job quality.

As the labor market connects workers to jobs, (i) the skills of workers and (ii) the kinds of jobs that actually exist are critical to determining outcomes. In recent decades, major shifts in both of these factors have profoundly shaped the present realities of work in California. The labor force has become increasingly educated, as the share of workers with college degrees has increased significantly. With the shift from a manufacturing to service economy, the returns to a college degree relative to a high school diploma rose, as the manufacturing jobs that had once provided decent wages for high school graduates began disappearing. Technological transformations and policy changes favored those with higher levels of education; prospects for other workers have generally deteriorated. There have also been important shifts in the kinds of jobs that actually exist in the economy. There has been considerable growth of both low-wage and high-paying jobs, and a hollowing out of jobs in the middle.

Looking ahead, these two factors (the skills of workers, and the kinds of jobs that actually exist) will continue to change and will drive the future of work in California. While training and upskilling workers is a popular strategy for improving outcomes for low-wage workers, skills and training can only do so much if the jobs that actually exist and are created in the labor market do not provide economic security and mobility for workers.

Education is generally considered to be a primary path for upward mobility and an equalizing force in society; but an unequal education system actually reproduces and further entrenches inequality. In general, those with higher levels of education earn more on average, although the returns to education are different across social groups and have been changing over time. We know that a person’s chances of upward mobility are profoundly shaped and nearly determined by social factors other than education, like their neighborhood, race, and class. To the extent that those with lower levels of education will bear a disproportionate burden of the effects of technological transformation, inequality and disparities in skills and education are especially critical to address.

We can distinguish between two general approaches to improving labor market outcomes: upgrading workers and upgrading jobs. To be sure, these strategies are not mutually exclusive; both are critical elements to a comprehensive approach to addressing the problems of low-wage work. On average, higher skills or training is correlated with higher earnings for individual workers. The key difference between these approaches is in whether interventions focus primarily on the supply side (i.e. workers) or on the demand side of the labor market.
Focusing primarily on upskilling and training individuals cannot address the underlying structural factors that have created a polarized labor market with an expansion of low-wage and high-wage jobs, and disappearing jobs in the middle. Despite widespread notions about a general skills gap—which suggests that there are not enough skilled workers in the labor market—we have the most skilled workforce in history. The disappearance of middle-wage jobs leaves few opportunities even for workers who increase their skills.

The jobs that actually exist in the labor market define the set of opportunities available to workers. Job quality is typically understood as a combination of wages, access to benefits (e.g. health, retirement, sick leave, family and medical leave), and conditions of work (predictable schedules, fair and safe work environment, and worker voice).

Despite the longest economic expansion in U.S. history and very low unemployment, the majority of working Americans are not in “good” jobs today. According to recent research by Gallup, only 40 percent are in “good” jobs, 44 percent are in “mediocre” jobs, and 16 percent are in “bad” jobs. California trails these national figures. In our state, only 38 percent are in “good” jobs and nearly a quarter (23 percent) are in “bad” jobs.

Job quality has declined over time, even though worker skills, education and productivity have consistently increased. Nonetheless, a declining share of workers receive any health or retirement benefits—important sources of economic security and key measures of job quality.

Education, skills and training alone do not protect people from landing in low-wage jobs. One in five workers who makes less than $15 per hour in California has an associate’s or bachelor’s degree. Skills and training can increase worker demand and productivity; mainstream economic theory suggests that higher productivity should correspond to higher wages. However, the macro-level relationship between productivity and wages has essentially been decoupled in recent decades, which makes the expected relationship between education and earnings more tenuous.

There is nothing inherent about any particular job or occupation that means it cannot be a good job. We can and have improved job quality through policy measures and other tools. While manufacturing jobs are commonly considered the standard of what a “good job” can be, jobs in manufacturing used to come with low pay, long hours, and unsafe working conditions. Manufacturing jobs became the “good jobs” of the 20th century when government, workers, and employers enacted new rules, policies, and practices for these jobs. Policy interventions have had a longstanding role in shaping job quality throughout the past; they can be used to ensure that the future of work in California is one with high-quality jobs.

California has an extensive public workforce development infrastructure, made up of state-level entities and 45 local workforce development boards across the state. These local boards receive about $400 million in federal funding, most of which supports job career centers to connect jobseekers to jobs and provide services like resume workshops and job fairs. The broader system of workforce education and training—including college career education, adult schools, apprenticeship programs, training provided through the corrections system, among others—amounts to approximately $6 billion annually in state and federal funding. Some critiques of the system range from failure to serve the hardest to employ; job placement measured solely in terms of numbers rather than job quality, retention, or economic security; inefficiencies due to the variety of funding sources; and competition among workforce boards. While some workforce boards are engaged in creative initiatives at the local level, many do not have a job quality lens or measure others factors such as job retention or the efficacy of existing partnerships.

Economic development efforts can incorporate a “high-road” strategy that focuses on creating quality jobs, particularly for those facing employment barriers. The state is currently promoting a high road model that focuses on job quality as critical to workforce development and on bringing workers, unions, and employers together in industry-driven and sector-based initiatives that are relevant to the needs of regional economies and labor markets, and focus on jobs, industries and communities impacted by climate change. State-sponsored High Road Training Partnership initiatives target a range of industries, including hospitality, building maintenance, mass transit, freight movement, and healthcare.
ABOUT THE CONVENING

The third convening of the Future of Work Commission will be its first in Southern California, taking place in Riverside. Unlike the previous convenings in which the Commission primarily heard from external experts throughout the day, the afternoon will be dedicated entirely to discussion among Commissioners about the substantive work facing the Commission.

The convening will begin with a welcome from UC Riverside Interim Provost Tom Smith, followed by insights on the local context of jobs and work in the Inland Empire region from Angelov Farooq, Chair of the California Workforce Development Board and the elected President of the Riverside Board of Education. William Emmons (Federal Reserve Bank of St. Louis) will briefly present insights from his research on the shifting value of a college degree, in terms of both income and wealth—raising key questions about the effects of a college degree for younger generations and people of color and whether education currently reduces or reproduces inequality. This will be followed by a discussion about the uneven landscape of labor markets across California and new, previously unreleased research on job quality in California. The Commission will then discuss the business case for a job quality strategy from the view of employers with Sarah Kalloch (Good Jobs Institute) and a model for using investment funds to promote job quality with Noah Bernstein (Quality Jobs Fund).

In the afternoon, the Commission will collectively review existing recommendations and proposals developed by others who have attempted to address similar issues. Following this discussion, Commissioners will draw on the first set of convenings to identify critical issues and develop a shared understanding of the scope of the Commission’s work.

SOME QUESTIONS TO CONSIDER

1. Who would be key actors in a strategy to improve the quality of currently existing jobs and to create new good jobs? What is the potential role of policy in this strategy?

2. How can we develop strategies that combine training and skills development with improving job quality?

3. What are significant challenges facing employers in addressing various aspects of job quality?

SELECTED RESOURCES


The Commission collectively developed the following design principles to create and evaluate recommendations.

**Bold:** nothing should be excluded on the basis of political feasibility

**Forward-Facing:** let's not solve for the last war

**Work-Adjacent:** include work plus housing, transportation, living

**Context-Sensitive:** take into account implications across gender, race, age, geography

**Coalition-Building:** bring together multiple stakeholders

**Portfolio-Based:** easy/fast to hard/long-term

**Scalable:** achieve high impact

**Agile and Iterative:** can be prototyped and adapted as needed

**Measurable:** identify clear areas of potential impact

**Actionable and Practical:** grounded in real-world solutions that can be implemented
THURSDAY, NOVEMBER 14

9:30am Arrive

10:00am Opening / Welcome
Tom Smith, Interim Provost, University of California, Riverside
Angelov Farooq, Chairman, California Workforce Development Board; President, Riverside Board of Education

10:45am What is a College Degree Worth (and for Whom)?
William R. Emmons, Lead Economist, Center for Household Financial Stability, Federal Reserve Bank of St. Louis
Moderated by Lande Ajose, Senior Policy Advisor for Higher Education

11:20am Break

11:30am What Do We Know About Job Quality and Labor Markets in California?
Anmol Chaddha, Research Director, Institute for the Future

12:10am Job Quality: The Business Case
Sarah Kalloch, Executive Director, Good Jobs Institute
Noah Bernstein, Senior Program Officer and Director, Quality Jobs Fund, New World Foundation
Moderated by Julie Su, Secretary, Labor and Workforce Development Agency

1:00pm Lunch

1:30pm Commissioner Discussion, Part 1: Imagining a Policy Agenda on the Future of Work
Facilitated by Natalie Foster, Senior Fellow, Aspen Institute Future of Work Initiative

2:15pm Commissioner Discussion, Part 2
Facilitated by Lyn Jeffery, Institute for the Future

3:25pm Break

3:35pm Commissioner Discussion, Part 3
Facilitated by Lyn Jeffery, Institute for the Future

4:30pm Public Comment
NOTE: The Commission may not discuss or take action on any matter raised during the public comment session, except to decide whether to place the matter on the agenda of a future meeting (Government Code sections 11125, 1125.7(a)).

5:00pm Adjourn
PANELISTS

OPENING / WELCOME

TOM SMITH
Interim Provost
UC Riverside

Tom Smith is Interim Provost of UC Riverside. He previously served as interim vice chancellor for student affairs during 2018, joined UCR in September 2014 as dean of the Graduate School of Education (GSOE). He is a nationally recognized scholar who was recently named a 2019 Fellow of the American Educational Research Association (AERA), the largest national interdisciplinary research association devoted to the scientific study of education and learning. Before coming to UCR, Smith was a professor and director of graduate studies in the department of Leadership, Policy, and Organizations at Peabody College of Education and Human Development, Vanderbilt University. Prior to arriving at Vanderbilt in 2001, he conducted and managed statistical research activities at the U.S. Department of Education’s National Center for Education Statistics (NCES), the Organisation for Economic Cooperation and Development (OECD), and the National Science Foundation.

DR. ANGELOV FAROOQ
Chairman
California Workforce Development Board
President
Riverside Board of Education
@AngelovFarooq

Dr. I. Angelov Farooq was appointed as the Chairman of the California Workforce Development Board under Governor Gavin Newsom's administration and has served on the Board since 2013. Angelov was appointed by Controller Betty Yee on her Council of Economic Advisors and serves as the co-chair for Treasurer Fiona Ma’s Housing, Economic Development, Job Creation & Opportunity Zone Advisory committee. He was elected as the President of the Board of Education for Riverside Unified School District that governs 50 public schools. Angelov is the Founding Director of the UC Riverside Center for Economic Development & Innovation. He is on the Board of Directors for Planned Parenthood Pacific Southwest chapter. Angelov is the Founding Board of Director for the ExCITE technology incubator/accelerator. He earned his Bachelor’s Degree from the University of California, Berkeley, and his Executive Master and Doctorate of Policy, Planning and Development degrees from the University of Southern California. Angelov is proudly born and raised in the Inland Empire by his mom. She instilled in him her life-long held values of advancing equity through sharing her poverty experience as a South Asian immigrant. Angelov is married to Vessy and they have a daughter named Maya.
WHAT IS A COLLEGE DEGREE WORTH (AND FOR WHOM)?

WILLIAM R. EMMONS
Lead Economist
Center for Household Financial Stability, Federal Reserve Bank of St. Louis
@stlouisfed

Bill Emmons is an Assistant Vice President and Economist at the Federal Reserve Bank of St. Louis. He also serves as Lead Economist in the Bank’s Center for Household Financial Stability (HFS) and as President of the St. Louis Gateway Chapter of the National Association for Business Economics (NABE). He conducts research and speaks frequently on topics including the economy, housing and mortgage markets, banking, financial markets, financial regulation, and household financial conditions. Mr. Emmons has been with the St. Louis Fed since 1995. He also serves as an Adjunct Professor of Finance in the Olin Business School at Washington University in St. Louis. Prior to joining the St. Louis Fed and Washington University, he was on the faculty of the Amos Tuck School of Business at Dartmouth College, in Hanover, New Hampshire. Mr. Emmons received a PhD degree in Finance from the Kellogg School of Management at Northwestern University. He received bachelor’s and master’s degrees from the University of Illinois at Urbana-Champaign. Mr. Emmons is married with three children.

WHAT DO WE KNOW ABOUT JOB QUALITY AND LABOR MARKETS IN CALIFORNIA?

ANMOL CHADDHA
Research Director
Institute for the Future
@anmol
@iftf_inequality

Anmol Chaddha leads the Equitable Futures Lab at the Institute for the Future in Palo Alto, CA, which develops solutions to the problems of social inequality in response to ongoing economic and technological transformations. He has extensive policy and social science research experience in economic inequality, racial inequality, low-wage work and job quality, debt and wealth. He previously developed policy and research at the Federal Reserve Bank of Boston on the problems of economic inequality. At the Fed, he established an initiative to improve the quality of jobs in low-wage industries, led quantitative research on racial wealth inequality, and examined the rising debt burdens of low-income families. He has been a visiting scholar at the Stanford Center on Poverty and Inequality and the African Centre for Cities at the University of Cape Town in South Africa. He serves on the advisory group of the Aspen Institute’s initiative on consumer debt and financial security. Anmol holds a PhD from Harvard University, where he was a Fellow in the Multidisciplinary Program in Inequality and Social Policy at the Kennedy School of Government, and a BA from the University of California, Berkeley.
PANELISTS

JOB QUALITY: THE BUSINESS CASE

SARAH KALLOCH
Executive Director
Good Jobs Institute
@sarahkalloch
@goodjobsinst
Sarah Kalloch is the Executive Director of the Good Jobs Institute, whose mission is to help companies thrive by creating good jobs. She builds partnerships with companies looking to implement the Good Jobs Strategy, and creates tools and resources to guide the transformation process. Sarah previously spent more than a decade in international health policy and operations. At Oxfam America, she built global partnerships to support socially responsible corporate supply chain policy. At Physicians for Human Rights, Sarah served on the executive management team, co-founding two health and human rights organizations in East Africa and advocating for billions of dollars in global health / workforce investment. Sarah graduated magna cum laude with a degree in Social Studies from Harvard. She received her MBA from MIT Sloan School of Management, where she studied sustainable operations and won the Seley Scholarship for leadership and academic achievement. She is a 2018-2019 Aspen Institute Job Quality Fellow and has guest lectured on good jobs and sustainable operations in MIT Sloan’s Executive Education and MBA programs.

NOAH BERNSTEIN
Senior Program Officer and Director
Quality Jobs Fund, New World Foundation
@NoahSBernstein
@QualityJobsFund
@NewWorldFound
Noah S. Bernstein is a Senior Program Officer and Director of the Quality Jobs Fund at the New World Foundation. Noah’s work has successfully built economic and community development models that advance skill development, job readiness, and civic training in disadvantaged communities nationwide. Noah also supports fiscally-sponsored projects, donor-advised funds, and staff services to family foundations housed at the New World Foundation. Noah received his undergraduate degree from Wheaton College in Massachusetts in Religion where he graduated Phi Beta Kappa. He received his M.P.A. in Public and Non-Profit Management and Policy at New York University’s Robert F. Wagner School of Public Service.
IMAGINING A POLICY AGENDA ON THE FUTURE OF WORK

NATALIE FOSTER
Senior Fellow
Aspen Institute Future of Work Initiative
Co-Founder
Economic Security Project
@nataliefoster

Natalie Foster is a senior fellow at the Aspen Institute Future of Work Initiative, and is the co-chair and co-founder of the Economic Security Project, an organization that advocates for a guaranteed income. Prior, Natalie co-founded and was the CEO of Peers and Rebuild the Dream with Van Jones, and ran the digital team for President Obama’s Organizing for America and the Sierra Club. She’s been awarded fellowships at Institute for the Future, Rockwood Leadership Institute and New America California, and is on the board of the California Budget and Policy Center, the Change.org global foundation, and Liberation in a Generation, a project to close the racial wealth gap.
Institute for the Future

COMMISSIONERS

ROY BAHAT
Venture Capitalist
Bloomberg Beta
@roybahat

Roy Bahat invests in the future of work as a venture capitalist, with a focus on machine intelligence. Prior to his life as a VC, Bahat founded start-ups, served as a corporate executive at News Corp., and worked in government in the office of New York City mayor Michael Bloomberg. As the head of Bloomberg Beta, an investment firm with 150 million dollars under management, Bahat and his team have invested in areas like automation, data, robotics, media, productivity tools, and many others. Fast Company named Bahat one of the Most Creative People in Business and noted “Bahat is a natural innovator ... one of the most candid people you’ll ever meet (check out his LinkedIn profile).” He organized “Comeback Cities,” where he leads groups of venture capitalists and members of Congress on bus tours to find the untapped beds of talent and entrepreneurship in America. He also co-chaired the Shift Commission on Work, Workers, and Technology, a partnership between Bloomberg and think-tank New America to look at automation and the future of work 10 to 20 years from now.

DOUG BLOCH
Political Director
Teamsters Joint Council 7
@TeamsterDoug

Doug Bloch has been political director at Teamsters Joint Council 7 since 2010. In this capacity, he works with over 100,000 Teamsters in Northern California, the Central Valley, and Northern Nevada in a variety of industries. He was the Port of Oakland campaign director for Change to Win from 2006 to 2010 and a senior research analyst at Service Employees International Union Local 1877 from 2004 to 2006. Mr. Bloch was statewide political director at the California Association of Community Organization for Reform Now (ACORN) from 2003 to 2004 and ran several ACORN regional offices, including Seattle and Oakland, from 1999 to 2003. He was an organizer at the Non-Governmental Organization Coordinating Committee for Northeast Thailand from 1999 to 2003.

DR. SORAYA M. COLEY
President
Cal Poly Pomona
@PresColeyCPP

Dr. Soraya M. Coley, a veteran administrator with more than 20 years of experience in higher education, became the sixth president of Cal Poly Pomona in January 2015. Coley transitioned to Cal Poly Pomona from Cal State Bakersfield, where she was the provost and vice president for academic affairs from 2005 to 2014. She also served as interim vice president for university advancement in 2011-12. Her experience includes serving as Cal State Fullerton’s dean of the College of Human Development and Community Service, as administrative fellow, and professor and department chair for the human services department. She was the system-wide provost and vice president for academic affairs at Alliant International University, from 2001 to 2003. Coley earned a bachelor’s in sociology from Lincoln University, a master’s in social planning and social research from Bryn Mawr, and a doctoral degree in social planning and policy from Bryn Mawr. She is married to Ron Coley, Lt. Col. (Ret.) USMC, who serves as the vice chancellor for business and administrative services at UC Riverside.

LLOYD DEAN
Chief Executive Officer
CommonSpirit Health
@LloydHDean

Lloyd Dean is chief executive officer of CommonSpirit Health, a newly created national health care system formed by Dignity Health and Catholic Health Initiatives. He is co-chair of the California Future Health Workforce Commission, chair of the Board of Directors for the Committee on Jobs in San Francisco, and a member of the McDonald’s Board of Directors. Dean holds degrees in sociology and education from Western Michigan University and received an honorary Doctor of Humane Letters degree from the University of San Francisco. A strong advocate for health care reform, he has been actively engaged with President Obama and the White House Cabinet on healthcare issues.
JENNIFER GRANHOLM
Former Governor
State of Michigan
@JenGranholm

Jennifer Granholm served two terms as Michigan’s 47th governor from 2003 to 2011, and was the Michigan Attorney General from 1998-2002. As Governor, Granholm led the state through a brutal economic downturn that resulted from the Great Recession and a meltdown in the automotive and manufacturing sectors. She worked relentlessly to diversify the state’s economy, strengthen its auto industry, preserve the manufacturing sector, and add new, emerging sectors, such as clean energy, to Michigan’s economic portfolio. After leaving office, Granholm served as an advisor to Pew Charitable Trusts’ Clean Energy Program, where she led a national campaign for clean energy policies. She also hosted Current TV’s political news analysis show “The War Room with Jennifer Granholm” and co-authored A Governor’s Story: The Fight for Jobs and America’s Economic Future, which tells how Michigan pioneered ways out of an economic storm and offers proven advice for a nation desperate to create jobs. Currently, Granholm is a contributor to CNN, a Senior Advisor to the progressive political groups Media Matters and American Bridge, is head of the sustainability practice at Ridge-Lane, and sits on numerous private sector and non-profit boards.

LANCE HASTINGS
President
California Manufacturers & Technology Association
@lance_hastings

Hastings has held several leadership roles at MillerCoors the past 15 years. He served most recently as Vice President of National Affairs for MillerCoors. Prior to that he served as Head of Regulatory & Tax Affairs for SABMiller. He also represented Miller Brewing Company and MillerCoors in Sacramento as Director of State Government Affairs, where he served on CMTA’s Board of Directors. Before his long career as a manufacturing executive Hastings was the Vice President and Director of Government Relations from 1998 to 2003 at the California Grocers Association. Hastings also worked in the California State Legislature for almost a decade as a chief consultant, starting in 1989. Hastings has a Bachelors of Arts in Economics and a Minor in Government from California State University at Sacramento.

MARY KAY HENRY, CO-CHAIR
International President
Service Employees International Union (SEIU)
@MaryKayHenry

Mary Kay Henry is International President of the 2 million-member Service Employees International Union (SEIU), and her leadership is rooted in a deep-seated belief that when individuals join together they can make the impossible possible. Under her leadership, SEIU has won major victories to improve working families’ lives by strengthening and uniting healthcare, property services, and public sector workers with other working people across the United States, Canada and Puerto Rico. In 2010, Mary Kay Henry became the first woman elected to lead SEIU, after more than 30 years of helping unite healthcare workers. By 2015, she was named one of the 100 most creative leaders by Fast Company magazine and was included in the top 50 visionaries reshaping American politics by Politico magazine for SEIU’s innovative leadership in propelling the fight for living wages embodied in the historic movement known as the “Fight for $15.” Henry believes that to better fulfill the promise of a just society America has always aspired to be, we must fight for justice on all fronts including defending the gains accomplished for access to affordable healthcare for all families under the Affordable Care Act, comprehensive immigration reform and a path to citizenship for all hardworking immigrant families, and safety and justice in all communities of color across the country.
CARLA JAVITS
President & CEO
Roberts Enterprise Development Fund (REDF)
@cjavitsredf

Carla Javits is President and CEO of REDF (The Roberts Enterprise Development Fund), a pioneering venture philanthropy galvanizing a national movement of social enterprises—purpose-driven, revenue-generating businesses that help people striving to overcome employment barriers get good jobs, keep those jobs, and build better lives. Through her stewardship, REDF has invested in 183 social enterprises in 26 states. These businesses have generated $755 million in revenue and employed 37,700 people—and counting. REDF’s goal is to see 50,000 people employed by 2020, contributing their skills and talents to our communities and helping to build a stronger, more inclusive society.

SARU JAYARAMAN
President
ROC United & ROC Action, Director of the Food Labor Research Center
@SaruJayaraman

Saru is President of Restaurant Opportunities Center (ROC) United & ROC Action (based in Oakland, California), and co-founded ROC in New York after 9/11 together with displaced World Trade Center workers, which have organized those who work in restaurants to win workplace justice campaigns, conduct research and policy work, partner with responsible restaurants, and launch cooperatively-owned restaurants. Saru is a graduate of Yale Law School and the Harvard Kennedy School of Government. She was profiled in the New York Times’ “Public Lives” section in 2005, named one of Crain’s “40 Under 40” in 2008, was 1010 Wins’ “Newsmaker of the Year” and New York Magazine’s “Influentials” of New York City. She was listed in CNN’s “Top10 Visionary Women” and recognized as a Champion of Change by the White House in 2014, and with a James Beard Foundation Leadership Award in 2015. Saru authored Behind the Kitchen Door (Cornell University Press, 2013), a national bestseller, and has appeared on CNN with Soledad O’Brien, Bill Moyers Journal on PBS, Melissa Harris Perry, UP with Chris Hayes on MSNBC, Real Time with Bill Maher on HBO, the Today Show, and NBC Nightly News with Brian Williams. Her most recent book Forked: A New Standard for American Dining (Oxford University Press) has received widespread press coverage and acclaim. @SaruJayaraman

TOM KALIL
Chief Innovation Officer
Schmidt Futures

Tom Kalil has been Chief Innovation Officer at Schmidt Futures since 2017. He was deputy director of the White House Office of Science and Technology Policy for President Obama from 2009 to 2017. Kalil was special assistant to the Chancellor for Science and Technology at the University of California, Berkeley from 2001 to 2008 and was chair of the Global Health Working Group for the Clinton Global Initiative in 2007 and 2008. He also served on the White House National Economic Council from 1993 to 2001 and from 2000 to 2001, was deputy assistant to President Clinton for technology and economic policy.

ASH KALRA
Assemblymember
California Assembly District 27
@Ash_Kalra

Assemblymember Ash Kalra was elected to represent the 27th California State Assembly District in 2016, and was appointed Chair of the Assembly Committee on Labor and Employment and sits on the Aging and Long Term Care, Education, Judiciary, Water, Parks, and Wildfire committees. Assemblymember Kalra has established himself as a leader on issues ranging from the environment and conservation, to criminal justice reform, health care sustainability, housing affordability, growing our transportation infrastructure, and expanding economic opportunity to all Californians. Previously, Kalra served as a San Jose City Councilmember, and as a deputy public defender in Santa Clara County. Kalra earned a Juris Doctor degree from the Georgetown University Law Center and is the first Indian-American to serve in the California Legislature.
STEPHANE KASRIEL
Chief Executive Officer
Upwork
@skasriel

Stephane Kasriel has been Chief Executive Officer of Upwork Inc. since 2015, after being Vice President of product at Upwork’s predecessor company oDesk, and subsequently Senior Vice President of Product and Engineering from 2012 to 2015. He held multiple positions at PayPal from 2004 to 2010, including Managing Director for PayPal France, Global Head of Consumer Products and Global Head of Mobile Business Development. Kasriel serves as co-chair for the World Economic Forum’s Council on the New Social Contract and previously served as Co-chair for the World Economic Forum’s Council on Education, Gender and Work. Kasriel earned a Master of Business Administration degree from Institut Européen d’Administration des Affaires (INSEAD) and a Master of Science degree in computer science from Stanford University.

FEI-FEI LI
Co-Director and Professor
Human-Centered AI Institute, Stanford University
@dfeifei

Dr. Fei-Fei Li is the inaugural Sequoia Professor in the Computer Science Department at Stanford University, and Co-Director of Stanford’s Human-Centered AI Institute. She served as the Director of Stanford’s AI Lab from 2013 to 2018. During her sabbatical from Stanford from January 2017 to September 2018, she was Vice President at Google and served as Chief Scientist of AI/ML at Google Cloud. Dr. Fei-Fei Li’s main research areas are in machine learning, deep learning, computer vision and cognitive and computational neuroscience. She has published nearly 200 scientific articles in top-tier journals and conferences, including Nature, PNAS, Journal of Neuroscience, CVPR, ICCV, NIPS, ECCV, ICRA, IROS, RSS, IJCV, IEEE-PAMI, New England Journal of Medicine, etc. Dr. Li is the inventor of ImageNet and the ImageNet Challenge, a critical large-scale dataset and benchmarking effort that has contributed to the latest developments in deep learning and AI. In addition to her technical contributions, she is a national leading voice for advocating diversity in STEM and AI. She is co-founder and chairperson of the national non-profit AI4ALL aimed at increasing inclusion and diversity in AI education.

JAMES MANYIKA, CO-CHAIR
Senior Partner
McKinsey & Company

James Manyika is Senior Partner at McKinsey and Company and Director of the McKinsey Global Institute. He was appointed by President Obama as Vice Chair of the Global Development Council at the White House (2012–present), and by US secretaries of commerce to the Digital Economy Board of Advisors (2016) and the National Innovation Advisory Board (2011). He serves on several other boards, including the Council on Foreign Relations, Aspen Institute, and John D. and Catherine T. MacArthur Foundation. He is a non-resident Senior Fellow of Brookings Institution and a Fellow of DeepMind and the Royal Society of Arts. A Rhodes Scholar, he holds a BSc in Electrical Engineering from University of Zimbabwe, and an MSc, MA and DPhil from Oxford University in Robotics, Computation.

JOHN MARSHALL
Senior Capital Markets Analyst
United Food and Commercial Workers

John Marshall is a Senior Capital Markets Analyst with the United Food and Commercial Workers’ (UFCW) Capital Stewardship Program. At the UFCW, Marshall conducts financial research on public and private companies and works closely with investors and analysts on corporate governance matters. For the past two years, Marshall has been the UFCW staff liaison to the AFL-CIO’s Commission on the Future of Work and Unions. Marshall graduated from the University of California at Santa Cruz with a degree in American Studies, received his MBA from the UCLA Anderson School of Management and is a holder of the Chartered Financial Analyst (CFA) designation. Prior to joining the UFCW, Marshall was Research Director for the SEIU Capital Stewardship Program. He has also held positions at Ullico, Inc., SEIU Local 250, and UNITE HERE Local 2.
COMMISSIONERS

ART PULASKI
Executive Secretary-Treasurer and Chief Officer
California Labor Federation @ArtPulaski
Art Pulaski is the Executive Secretary-Treasurer and Chief Officer of the California Labor Federation. Since his election in 1996, Pulaski has reinvigorated grassroots activism in unions and championed support for new organizing. Under Pulaski’s leadership, the California Labor Federation’s achievements have included restoring daily overtime pay, raising the minimum wage, increasing benefits for injured and unemployed workers, creating collective bargaining opportunities for hundreds of thousands of public sector workers, and passing the nation’s first comprehensive Paid Family Leave law. In 2010, the Federation led the successful campaign to ensure every California Democrat in Congress voted in favor of the landmark federal health care reform legislation. Pulaski has led the California labor movement in new strategies of political action and economic development. Since he took office at the California Labor Federation in 1996 the labor group has more than doubled in size.

MARIA S. SALINAS
President & CEO
Los Angeles Area Chamber of Commerce @salinas_ms
Maria S. Salinas is the President & CEO of the Los Angeles Area Chamber of Commerce, the largest business association in Los Angeles County representing more than 1,600-member companies and serving the interests of more than 235,000 businesses across the Los Angeles region. Ms. Salinas took the helm of the organization in August of 2018 and became the first woman and Latina to lead the L.A. Area Chamber in its 130 year history. An accomplished business woman, entrepreneur, and a stalwart community leader, Ms. Salinas’ business acumen and financial expertise provides her with the right experience to lead the Chamber. Ms. Salinas is a graduate of Loyola Marymount University (LMU), earning a Bachelor of Science in Accounting in 1987. She is currently Chair of the Board of Regents and member of the Board of Trustees at LMU, Board Chair of UnidosUS, and member of the founding Board of Directors of Kaiser Permanente School of Medicine. Over the years, she has served numerous esteemed civic and nonprofit organizations and has been recognized for her leadership and community service. Ms. Salinas lives in Pasadena, California, with her husband Raul, a prominent Los Angeles attorney, and their four sons.

PETER SCHWARTZ
Senior Vice President of Strategic Planning
Salesforce @peterschwartz2
Peter Schwartz is an internationally renowned futurist and business strategist, specializing in scenario planning and working with corporations, governments, and institutions to create alternative perspectives of the future and develop robust strategies for a changing and uncertain world. As Senior Vice President of Strategic Planning for Salesforce, he manages the organization’s ongoing strategic conversation. Peter leads the Salesforce Futures LAB—a collaboration between strategic thinkers at Salesforce and its customers around provocative ideas on the future of business. Prior to joining Salesforce, Peter was co-founder and chairman of Global Business Network. He is the author of several works. His first book, The Art of the Long View, is considered a seminal publication on scenario planning. Peter has also served as a script consultant on the films “The Minority Report,” “Deep Impact,” “Sneakers,” and “War Games.” He received a B.S. in aeronautical engineering and astronautics from Rensselaer Polytechnic Institute in New York.
HENRY STERN
State Senator
California Senate District 27
@HenrySternCA

Senator Henry Stern was elected to represent the 27th California State Senate District in 2016. He chairs the Senate Natural Resources and Water Committee and formerly chaired the Elections and Constitutional Amendments Committee. Senator Henry Stern is a sixth-generation Californian and native of this district. He is a former environmental lawyer, lecturer, senior policy advisor and civics teacher. Senator Stern has lectured at UCLA and UC Berkeley, enjoys volunteering at his local Boys & Girls Club and is a member of the Santa Monica Mountains Conservancy Advisory Committee, the Jewish Federation, the American Jewish Committee, and the Truman National Security Project. He earned a Juris Doctor degree from the University of California, Berkeley School of Law.

MARIANA VITURRO
Deputy Director
National Domestic Workers Alliance (NDWA)

Mariana Viturro is the Deputy Director at the National Domestic Workers Alliance (NDWA), the leading organization working to build power, respect, and fair labor standards for the estimated two million nannies, housekeepers, and elderly caregivers in the United States. She started organizing in the San Francisco Bay Area in 1998. Mariana has been organizing with immigrant communities and communities of color for the last 15 years. Prior to NDWA, as the Co-director of St. Peter's Housing Committee, Mariana guided a programmatic transition from service provision to organizing and then facilitated the organizational merger with a sister organization resulting in the creation of Causa Justa::Just Cause. Since March 2011, she has used her strong operational and organizing skills and a commitment to creating a culture of support and accountability to NDWA.

BETTY T. YEE
Controller
State of California
@BettyYeeforCA

State Controller Betty T. Yee was elected in 2014, following two terms on the California Board of Equalization. Reelected as Controller in 2018, Ms. Yee is the 10th woman in California history to be elected to statewide office. As the state’s chief fiscal officer, Ms. Yee chairs the Franchise Tax Board and is a member of the California Public Employees’ Retirement System (CalPERS) and the California State Teachers’ Retirement System (CalSTRS) Boards. These two boards have a combined portfolio of more than $570 billion. Ms. Yee also serves on the Ceres Board of Directors, a nonprofit working to mobilize many of the world’s largest investors to advance global sustainability and take stronger action on climate change. Ms. Yee has more than 35 years of experience in public service, specializing in state and local finance and tax policy. Ms. Yee previously served with the California Department of Finance where she led the development of the Governor’s Budget, negotiations with the Legislature and key budget stakeholders, and fiscal analyses of legislation. She previously served in senior staff positions for several fiscal and policy committees in both houses of the California State Legislature. Ms. Yee received her BA in sociology from the University of California, Berkeley, and holds a master’s degree in public administration.
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Not Just a Job: New Evidence on the Quality of Work in the United States

JONATHAN ROTHWELL AND STEVE CRABTREE
Jonathan Rothwell is the principal economist at Gallup.
Steve Crabtree is a research analyst at Gallup.

This report draws on the Great Jobs Demonstration Survey. Funding for that survey and this report was generously provided by Lumina Foundation, the Bill & Melinda Gates Foundation, and Omidyar Network. The authors would like to thank these foundations and a number of individuals for helpful discussion of the survey and various drafts of this report, including Courtney Brown, Tracy Williams, Caira Woods, Michael George, Jenny Marlar, Grant Buckles, Brandon Busteed, and Audris Campbell. We are grateful to Anne Schulte of Gallup for her editing of this report. The authors would also like to thank Lawrence Katz, Nichole Smith and Bledi Taska for comments on the draft survey. The data for this survey will be posted on Gallup’s website and made available for free to the public. For questions on the data and this report, email Jonathan_Rothwell@gallup.com.

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Executive Summary

U.S. leaders need a more nuanced measure of job quality.

Introduction

Recent studies have focused on the availability of higher-paying jobs.

The Great Jobs Study broadens the concept of job quality to 10 dimensions workers care about.

Findings

Less than half of American workers are in good jobs.

Low-income workers are far less likely to receive employment benefits, from health insurance and retirement plans to maternity and sick leave.

Older workers, white workers and those with high levels of education are most likely to be in good jobs.

Among sub-baccalaureate workers, certifications are strongly associated with good jobs.

Workers in rural areas and small towns give higher job quality ratings despite lower average incomes.

Workers across income levels generally agree on the most important job quality dimensions.

Low-income workers are more likely to be “disappointed” with all aspects of job quality.

Most workers say their pay has improved in the last five years, but other aspects of their job have not.

Two-thirds of U.S. workers say they are currently in their “best job ever.”

Job quality varies systematically by type of job (full time, part time, multiple), organization size, type of work, occupation, and sector.

Implications

Appendix: Methodological Details
Executive Summary

The current economic expansion is now the longest in U.S. history, but not all Americans are feeling the benefits. Wage stagnation and shifting labor market needs have many U.S. workers stuck in low-paying jobs. And labor force participation, even among prime-age adults, is below levels achieved decades ago.

Since 1980, economic gains have increasingly gone to the wealthiest 10% — and even 1% — of income earners. While the resulting rise in inequality is troubling in and of itself, this trend has implications for Americans’ wellbeing beyond their financial status. Higher-income jobs tend to confer advantages that extend far beyond salary, including access to benefits, career advancement, control over their schedule, job security, daily enjoyment and even a sense of purpose.

Remarkably, there is no widely recognized, comprehensive measure of job quality in the U.S. The few indicators developed in recent years are either based solely on income or on a small set of factors, such as access to healthcare and retirement plans, in combination with income. Lack of data on preferences for a broader range of job characteristics has meant that scholars have had to assume what workers value most.

The Great Jobs Study aims to address this deficit. This research examines how Americans define high-quality jobs by asking more than 6,600 U.S. workers about the factors that matter most for overall job quality, and how their jobs stack up on those characteristics. The resulting measure includes not just common considerations such as income and employment benefits, but also career advancement opportunities, autonomy and control over their working lives, job security, and other attributes important to workers.

Our primary measure of job quality combines worker ratings of satisfaction and importance across 10 dimensions of job quality. We classify our job quality index into “good,” “mediocre” or “bad” based on the average response to these 10 items, giving higher weight to the items deemed more important to workers.

The result is a more comprehensive indicator of job quality, one that incorporates American workers’ views on the job characteristics most likely to help them lead better lives amid changing labor market conditions. The analysis pays specific attention to income groups, reflecting the recognition in previous studies that income is central to any discussion of job quality in America. Finally, we ask workers about how their job quality has changed over time to get a sense of how their jobs have been evolving.
KEY FINDINGS FROM THE STUDY INCLUDE:

Less than half of U.S. workers are in good jobs.

- Forty percent of employed Americans are in good jobs, meaning they express high satisfaction across 10 important job characteristics. Workers in good jobs provide an average rating of “4” or higher on a five-point scale across these 10 characteristics of their job. Forty-four percent of U.S. workers are in mediocre jobs, while 16% are in bad jobs.
- Job quality is closely related to quality of life. While most workers in good and mediocre jobs rate their overall quality of life as “high,” most of those in bad jobs do not. Specifically, 79% of workers in good jobs have an overall high quality of life, compared to 63% in mediocre jobs and only 32% in bad jobs. Job quality is similar to health status and more powerful than income in terms of how well it predicts overall quality of life.

Income inequality translates into inequality in job quality across every dimension.

- Just 28% of those with incomes in the bottom one-fifth of all U.S. workers (roughly equivalent to those making less than $24,000 per year) are in good jobs, compared to 63% of workers in the top one-tenth of incomes (those making $143,000 or more).
- Lower-income workers are much less likely to be satisfied with all 10 aspects of job quality included in the good jobs measure — including those unrelated to income. Thus, income inequality corresponds with different experiences that reach far beyond income, including autonomy and the dignity associated with having a good job.
- Older workers, white workers and those with high levels of education are more likely to be in good jobs than other types of workers.
- Regional differences in job quality are not significant. Workers in the Midwest tend to have a small share of workers in good jobs, but a low share in bad jobs.
- Workers in nonmetropolitan towns and counties tend to have slightly higher average job quality than those in large metropolitan areas, despite lower incomes. These modest differences are largely driven by greater satisfaction among rural workers with enjoyment of day-to-day work, control over hours and stability of pay.
Workers at all income levels generally agree on the job quality dimensions most important to them. Enjoying one’s work and having a sense of purpose are broadly prioritized; few workers want their employment situation to be “just a job.”

- Enjoying their day-to-day work, having stable and predictable pay, and having a sense of purpose each rate more highly than level of pay among U.S. workers’ criteria for job quality — even among those in the bottom 20% of incomes.
- The largest sources of job quality disappointment (the gap between satisfaction and importance) are in pay and benefits, factors commonly rated as important but for which satisfaction ratings are especially low. Just 54% of workers overall are satisfied with their current pay level. This finding is particularly worrisome in light of the current economic expansion — the number of quarters without a recession — now the longest in U.S. history.
- Workers’ satisfaction is also low relative to their importance ratings for the power to change things at work and the potential for career advancement. Only 48% of workers are satisfied with their ability to change things about their job that they’re unhappy with, suggesting that many need better mechanisms for voice and influence in the workplace.¹

Race, ethnicity and gender are strongly correlated with job quality.

- Nearly one-third (31%) of black women work in bad jobs, a higher percentage than in any other large racial or gender group. Black women are also more likely than members of any other large racial/gender group to express disappointment with their job — as measured by a gap between satisfaction and importance ratings of specific job characteristics. These low scores from black women are driven by low-satisfaction in aspects of work unrelated to pay, such as control over schedule, stability of pay and enjoyment of day-to-day experiences.
- Asian workers express significantly lower job quality than white Americans despite higher levels of education and income. This result is largely due to the relatively low percentage of Asian workers who say they have the opportunity to do what they do best every day.
- White non-Hispanic males express the least disappointment with job quality, followed closely by white non-Hispanic females. Hispanic men and black women express the most disappointment.

Most workers say their level of pay has improved in recent years, but that other dimensions of job quality have not.

- Fifty-nine percent of U.S. workers say they have seen pay increases in the last five years, whereas only 11% say their pay has gotten worse. By contrast, no more than 37% of workers say any aspect of job quality unrelated to pay has improved during the last five years. That includes employee benefits; 23% say their benefits have improved over the past five years, while a similar 21% say they have gotten worse.
- High-income workers are much more likely to report a pay increase than low-income workers, but for dimensions unrelated to pay, high-income workers are generally no more likely than those in lower-income groups to say their work situation has improved in the last five years.
- Low-income workers give consistently low job evaluations when asked to rate their employment situation from five and 15 years ago — though most are optimistic about their future situation. By contrast, ratings from high-income earners indicate a rapid escalation in job quality that they expect to continue; many believe they will be in or close to their best job imaginable 15 years from now.

Workers are more likely to have good jobs if they work for larger organizations and are in roles that allow them to be creative, learn new skills and do their best work.

- Full-time jobs are associated with higher job quality than part-time jobs, but workers who put in 55 or more hours per week have relatively low job quality and usually work multiple jobs.
- Low-income workers are more likely to report higher job quality if they work for larger organizations; 42% of those in companies with 500 or more employees are in good jobs, versus 21% of those in companies with 20-499 employees and 29% of those in companies with less than 20 employees.
- Those who work multiple jobs out of necessity are unlikely to be in good jobs; just 23% give ratings that put their primary job in this category, while 30% have bad jobs. Such findings highlight job quality challenges facing many workers who may be piecing together a living in the “gig” economy.
- Workers who strongly agree that they are expected to be creative or innovative in their work are much more likely than those who disagree to be in a good job (54% vs. 19%, respectively); this positive effect is consistent across income groups. Likewise, workers who strongly agree that they have the opportunity to do their best work every day are far more likely to be in a good job than those who strongly disagree (62% vs. 13%, respectively). Most workers in low-paying jobs (51%) nonetheless qualify as having a good job when they get to do what they do best.
- The occupations with the highest job quality are managers and computer workers, with 50% and 49% in good jobs, respectively; meanwhile, just 29% of production workers, 23% of healthcare support workers and 18% of food preparation workers are in good jobs.
- Manufacturing workers are the most likely to have been terminated from their best job ever but score above average on job quality (42% are in good jobs). More than half (51%) of workers in the construction industry are in good jobs, compared to 23% of those in hospitality and food services.
Workers in low-quality jobs are less likely to be satisfied and more likely to be actively looking for another job.

- At a time of near-historic low unemployment, workers in bad jobs are roughly twice as likely as those in good jobs to be looking for new work (60% vs. 33%, respectively). It stands to reason that businesses can boost retention and productivity by enhancing the quality of employees’ work experience in ways that matter most to them.
The future of work in America: People and places, today and tomorrow

Extracts from McKinsey Global Institute reports
Published January 2017 to July 2019
This brief presentation draws from four reports published by the McKinsey Global Institute

- **A future that works**: Automation, employment, and productivity  
  *January 2017*

- **Jobs lost, jobs gained**: Workforce transitions in a time of automation  
  *December 2017*

- **Skill shift**: Automation and the future of the workforce  
  *May 2018*

- **The future of work in America**: People and places, today and tomorrow  
  *July 2019*

This brief presentation was created for an in-person narrated presentation. Full detailed analysis and discussion of the summary perspectives in this brief presentation can be found in the published reports. The full reports can be downloaded for free at: [www.mckinsey.com/mgi](http://www.mckinsey.com/mgi)
Topics summarized in this presentation

Automation’s impact on work

US people and places highlights

California people and places highlights

What to solve for
Roughly half of activities (not jobs) have a high technical automation potential

Technical automation potential across activity categories

<table>
<thead>
<tr>
<th>Time spent in all US occupations %</th>
<th>Manage</th>
<th>Expertise</th>
<th>Interface</th>
<th>Unpredictable physical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time spent on activities that can be automated</td>
<td>7</td>
<td>14</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Total wages in US, 2014 $ billion</td>
<td>596</td>
<td>1,190</td>
<td>896</td>
<td>504</td>
</tr>
<tr>
<td>Collect data</td>
<td>17</td>
<td>16</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Process data</td>
<td>1,030</td>
<td>931</td>
<td>766</td>
<td></td>
</tr>
<tr>
<td>Predictable physical</td>
<td>51% of US activities</td>
<td>~$2 trillion in wages</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: A future that works: Automation, employment, and productivity (McKinsey Global Institute, 2017)
Automation potential spans from high- to low-wage occupations (key is density of automatable activities in each occupation)

Occupation automatability and wages
% of time on activities that can be automated in each occupation

While about ~10% of occupations have >90% of tasks automatable…
Most occupations will have portions of their tasks automated
~60% of occupations have ~30% of tasks automatable

Source: A future that works: Automation, employment, and productivity (McKinsey Global Institute, 2017)
Automation will impact all sectors, some more than others

Sector density of most automatable activities

Highest density of automatable activities

- Accommodation and food services (53–73%)
- Manufacturing
- Transportation and warehousing
- Agriculture
- Retail trade
- Health care and social assistance

Lowest density of automatable activities

- Professionals
- Management
- Educational services

Based on currently demonstrated technologies

Source: A future that works: Automation, employment, and productivity (McKinsey Global Institute, 2017)
Several factors affect the speed and scope of automation, each of which are evolving and will vary across occupations, sectors and countries: (hence the difficulty of making predictions and the benefit of scenarios)

- Technical automation feasibility and pace of breakthroughs
- Cost of developing and deploying technologies (incl replacement)
- Labor and related supply-demand dynamics (incl quality, quantity, wages)
- Benefits including and beyond labor substitution
- Regulatory and social acceptance factors

Source: A future that works: Automation, employment, and productivity (McKinsey Global Institute, 2017)
But still, will there be enough jobs? Midpoint scenario suggests more jobs will be gained than lost by 2030

Midpoint scenario of Jobs Lost and Jobs Gained based on assessments of seven catalysts driving demand for work

Million, 2016–2030

United States

<table>
<thead>
<tr>
<th>Jobs displaced by automation</th>
<th>Jobs created by growth and 7 catalysts analyzed</th>
<th>Demographic change in labor force</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>

Scenarios will depend on:

- Pace of AI and automation adoption
- Economic growth and business dynamism
- Growth in demand for work
- Labor-market dynamism

Note: We identified seven catalysts of labor demand globally: rising incomes, health-care spending, investment in technology, buildings, infrastructure, and energy, and the marketization of unpaid work. We compared the number of jobs to be replaced by automation with the number of jobs created by our seven catalysts as well as change in labor force, between 2016 and 2030. The results shown on this page are the result of several scenarios described in the research report to indicate the range of possibilities, and are not intended to be predictions.

Source: Jobs lost, jobs gained: Workforce transitions in a time of automation (McKinsey Global Institute, 2017)
Even with more Jobs Gained than Jobs Lost, there will be 5 key transitions to address for workers and work

1. Skills demand will shift
   - As demand for some skills decline and demand for others grow, the shift is significant
   - Skill shifts could amount to 20% of hours worked; US equivalent of 26 million FTEs

2. Occupation mix will shift
   - As jobs in some occupations decline (Jobs lost) and jobs in some occupations grow (Jobs gained), transition could affect as many as 375 million workers globally

3. Potential pressure on wages
   - Due to occupation mix shift, skill-biased tech change, and partial automation
   - Potential net loss of 5-10 million middle-wage US jobs

4. Varied impact on people and places

5. Organization and workflow redesign and alignment with technology use

Source: Jobs lost, jobs gained: Workforce transitions in a time of automation (McKinsey Global Institute, 2017)
In recent decades, public spending on training and labor market supports has been declining

<table>
<thead>
<tr>
<th>Total public spending on worker training</th>
<th>Total public spending on labor markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of GDP, 2015</td>
<td>% of GDP, 2015</td>
</tr>
<tr>
<td>Germany</td>
<td>Denmark</td>
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<tr>
<td>0.20</td>
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</tbody>
</table>

Topics summarized in this presentation

Automation’s impact on work

US people and places highlights

California people and places highlights

What to solve for
National highlights extracted from ‘Future of work in America: People and places, today and tomorrow’ report

• The United States is a complex mosaic of local economies, with widening gaps between them
  — We analyzed 315 cities and more than 3,000 counties, using more than 40 variables to segment these cities and counties into 13 distinct community archetypes with varying demographic and economic profiles
  — While all archetypes saw employment decline during the recession, twenty-five megacities and high-growth hubs, where 96 million people live, have generated most of the nation’s job growth during the recovery, with high-growth industries, high-wage jobs, young and educated workers, but notable inequality
  — By contrast, 54 trailing cities and roughly 2,000 rural counties, home to 78 million people, have older and shrinking workforces, higher unemployment, and lower educational attainment, and have seen flat or declining employment even during the recovery
  — Between these extremes, 94 million people live in thriving niche cities and a large “mixed middle” with modest economic growth
  — Despite these gaps, geographic mobility is at a historic low, and Americans are not moving from low-growth to high-growth areas

• The future of work may lead to divergent outcomes for different people and places, with the potential to further widen the gaps
  — Net job creation will be concentrated in the same 25 cities and peripheries that led post-recession recovery, which could capture 60 percent of US job growth to 2030
  — The mixed middle and trailing cities are also positioned for modest job gains, but rural counties could see a decade of flat or even negative job growth, only further widening the gap that has begun to emerge
  — Automation could also amplify the variation in labor market outcomes across demographic groups, with a higher risk of displacement for workers with a high-school diploma or less, Hispanics and African Americans, and young workers aged 18-34 plus workers 50 and above

• Companies will face different challenges, depending on their footprint and workforce characteristics
  — White-collar workforces comprise 25-30M people with relatively high automation potential, necessitating investments from companies in fields like banking, insurance, and government agencies into retraining and reskilling workers, especially with new digital and technical skills
  — Companies with large workforces with lower education levels – what we call ‘Nationwide customer facing’, ‘Movers and builders’, and ‘Makers and extractors’ – also face high displacement rates, leading to a need to reskill and redeploy talent into new roles or adjacent occupations, and building technical capabilities and talent
  — Highly educated workforces – ‘Specialized practitioners’ such as healthcare and education, and ‘STEM-based workforces’ – will need to encourage continuous learning and adapt to new technologies, through their location strategies and business models

• Priorities will vary for different archetypes and solutions will be needed that match to these differences, but it will take concerted efforts by all stakeholders to solve the challenges and achieve good outcomes for work and workers

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
We used more than 40 variables to segment cities and counties...

Example variables

**Drivers of current and future growth**
- Share of establishments with 500+ employees
- Share of employment in manufacturing

**Skills, education, and experience of labor pool**
- Share of population with a bachelor’s degree or above
- Employment/population ratio

**Measures of vitality and growth**
- Post-recession GDP growth
- Unemployment rate

**Indicators of new ideas and renewal**
- Number of patents
- Number of research universities

**Factors used to understand size and location**
- Population
- Driving distance from major metropolitan statistical area

**Indicators of quality of life and social environment**
- Poverty rate
- Gini coefficient

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
The result: the United States is a complex mosaic of local economies, with 13 distinct community archetypes

Map of county types (color-coded by segment)

Note: Segmentation of US cities and counties into 13 archetypes was derived using a hierarchical clustering analysis based on more than 40 variables.

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
The 13 archetypes have varying demographic and economic profiles
Sample economic and labor market indicators, by the 13 archetypes

<table>
<thead>
<tr>
<th>Less economically favorable</th>
<th>More economically favorable</th>
<th>Example economic Indicators</th>
<th>Industry mix</th>
<th>Example labor market indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>House-hold income, $ thousand</td>
<td>GDP growth, 2012–17, CAGR</td>
<td>Empl. growth, 2012–17, CAGR</td>
</tr>
<tr>
<td>Urban core</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Megacities</td>
<td>12 cities, 74.3M people</td>
<td>New York, NY, San Francisco, CA</td>
<td>68.8</td>
<td>2.5</td>
</tr>
<tr>
<td>High growth hubs</td>
<td>13 cities, 21.0M people</td>
<td>Seattle, WA, Austin, TX</td>
<td>65.6</td>
<td>3.7</td>
</tr>
<tr>
<td>Periphery</td>
<td>Urban periphery</td>
<td>Arlington, VA, Riverside, CA</td>
<td>69.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Niche cities</td>
<td>Small powerhouses</td>
<td>Provo, UT, Reno, NV</td>
<td>63.5</td>
<td>4.9</td>
</tr>
<tr>
<td>Silver cities</td>
<td>11 cities, 5.0M people</td>
<td>The Villages, FL, Prescott, AZ</td>
<td>53.7</td>
<td>2.4</td>
</tr>
<tr>
<td>College-centric towns</td>
<td>26 cities, 6.1M people</td>
<td>Chapel Hill, NC, South Bend, IN</td>
<td>55.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Mixed middle</td>
<td>Stable cities</td>
<td>Detroit, MI, Columbus, OH</td>
<td>55.6</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>36 cities, 39.3M people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent economies</td>
<td>94 cities, 26.0M people</td>
<td>Little Rock, AR, Providence, RI</td>
<td>57.9</td>
<td>2.0</td>
</tr>
<tr>
<td>America’s makers</td>
<td>50 cities, 11.2M people</td>
<td>Grand Rapids, MI, Greensboro, NC</td>
<td>52.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Low-growth and rural areas</td>
<td>Trailing cities</td>
<td>Bridgeport, CT, Flint, MI</td>
<td>53.2</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>54 cities, 14.8M people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americana</td>
<td>1,118 counties, 44.0M people</td>
<td>Cameron, TX, Caddo Parish, LA</td>
<td>48.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Distressed Americana</td>
<td>972 counties, 18.1M people</td>
<td>Coahoma, MS, Pittsylvania/Danville, VA</td>
<td>38.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Rural outliers</td>
<td>192 counties, 1.5M people</td>
<td>Kauai County, HI, Juneau Borough, AK</td>
<td>57.5</td>
<td>1.1</td>
</tr>
</tbody>
</table>

1 Full list of counties by archetype can be found in the published report.
2 Compound annual growth rate.
3 Calculated as total net migration between 2010 and 2017 divided by 2017 population.
4 Information; finance and insurance; real estate / rental leasing; professional, scientific, and technical services; and health care and social assistance.

Source: US Census American Community Survey, Moody’s Analytics; The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
While all archetypes saw employment decline during the recession, job gains during the recovery have been relatively concentrated.

### Annual employment by county segment

<table>
<thead>
<tr>
<th>County segment</th>
<th>National total</th>
<th>Jobs gained as % of 2007 workforce, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small powerhouses</td>
<td>350</td>
<td>16%</td>
</tr>
<tr>
<td>High growth hubs</td>
<td>1,544</td>
<td>14%</td>
</tr>
<tr>
<td>Urban periphery</td>
<td>2,049</td>
<td>11%</td>
</tr>
<tr>
<td>Megacities</td>
<td>3,100</td>
<td>9%</td>
</tr>
<tr>
<td>College-centric towns</td>
<td>238</td>
<td>8%</td>
</tr>
<tr>
<td>Silver cities</td>
<td>162</td>
<td>7%</td>
</tr>
<tr>
<td>Independent economies</td>
<td>754</td>
<td>6%</td>
</tr>
<tr>
<td>Rural outliers</td>
<td>42</td>
<td>5%</td>
</tr>
<tr>
<td>Stable cities</td>
<td>689</td>
<td>3%</td>
</tr>
<tr>
<td>America's makers</td>
<td>141</td>
<td>3%</td>
</tr>
<tr>
<td>Trailing cities</td>
<td>24</td>
<td>0%</td>
</tr>
<tr>
<td>Americana</td>
<td>(27)</td>
<td>0%</td>
</tr>
<tr>
<td>Distressed Americana</td>
<td>(332)</td>
<td>-5%</td>
</tr>
<tr>
<td>National total</td>
<td>8,735</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
Geographic mobility is currently at historically low levels
Inter-county move rates: 1950-2017

Move rate
%


- Different county, different state move rate
- Different county, same state move rate

1. Data for 1971-1974 and 1976-1979 extrapolated as no comparable question was asked during those years

Few in lower-growth areas are moving to high-growth places
US migration patterns by community segment

Domestic outflow
Migrants (2012–16)

Urban core
3.6 M

Urban periphery
2.5 M

Niche cities
1 M

Mixed middle
3.6 M

Low-growth and rural
4.5 M

Domestic inflow
Migrants (2012–16)

Urban core
3.3 M

Urban periphery
2.6 M

Niche cities
1.2 M

Mixed middle
3.7 M

Low-growth and rural
4.4 M

Source: US Census Bureau County-to-County Migration Flows 2012-2016; The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)

1 Analysis excludes all migration within a core-based statistical area that is within the same segment (e.g., migration from one New York City CBSA megacity county to another).
People have been moving out of the largest US cities, but those losses have been more than offset by immigration and natural population increases

Population changes 2010–17,¹ millions

<table>
<thead>
<tr>
<th>Category</th>
<th>Domestic migration²</th>
<th>International migration³</th>
<th>Natural population increase⁴</th>
<th>Total change, million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Megacities</td>
<td></td>
<td></td>
<td>3.3</td>
<td>4.9</td>
</tr>
<tr>
<td>High-growth hubs</td>
<td>0.8</td>
<td>0.8</td>
<td>1.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Urban periphery</td>
<td></td>
<td></td>
<td>1.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Small powerhouses</td>
<td>0.3</td>
<td></td>
<td>0.1</td>
<td>0.7</td>
</tr>
<tr>
<td>Silver cities</td>
<td></td>
<td></td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td>College-centric towns</td>
<td></td>
<td></td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Stable cities</td>
<td>-0.6</td>
<td></td>
<td>0.8</td>
<td>1.5</td>
</tr>
<tr>
<td>Independent economies</td>
<td>0.4</td>
<td>0.4</td>
<td>0.8</td>
<td>1.6</td>
</tr>
<tr>
<td>America’s makers</td>
<td>-0.1</td>
<td></td>
<td>0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Trailing cities</td>
<td>-0.5</td>
<td>0.3</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Americana</td>
<td>-0.5</td>
<td>0.3</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Distressed Americana</td>
<td>-0.5</td>
<td></td>
<td>0.1</td>
<td>-0.4</td>
</tr>
</tbody>
</table>

¹ All migration data are for April 2010 to July 2017. Rural outliers excluded due to small numbers.
² Domestic in- and outmigration reflects population movement within the United States (excluding Puerto Rico).
³ Any change of residence across the borders of the United States. This includes net international migration of the foreign born; net migration between the United States and Puerto Rico; net migration of natives to and from the United States; and net movement of the armed forces population between the United States and overseas.
⁴ The difference between births and deaths.

Source: US Census Bureau, 2010–17 population estimates; The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
Scenarios looking forward: 
Net job creation through 2030 will likely be relatively concentrated

Estimated net job growth in midpoint adoption scenario, 2017–30, %

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)

Note: This chart reflects a midpoint scenario for adoption of automation. The pace of disruption from automation will depend on how rapidly companies adopt the new technologies. We model a range of different adoption scenarios based on historical experience that take local wage differentials into account. Our modeling is not intended to product a forecast; it is a mechanism for assessing and sizing a range of potential outcomes.
Urban counties, with higher levels of education, are likely positioned for stronger job growth

County average educational attainment and employment growth in midpoint adoption scenario, 2017–30

1 Midpoint adoption scenario. Counties above the line have positive growth, and counties below the line have negative growth.
2 Scaled from 0-10 where 0 is less than high school, 2.5 is high school, 5 is some college, 7.5 is bachelor’s degree, and 10 is graduate degree, multiplying the share of each by its value.

Note: This chart reflects a midpoint adoption scenario and is not intended to be a forecast.

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
Health and STEM occupations could post rapid growth while office support, food service, and manufacturing production jobs could decline

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health professionals</td>
<td>48</td>
<td>6.1</td>
<td>Property maintenance and agriculture</td>
</tr>
<tr>
<td>STEM professionals</td>
<td>37</td>
<td>7.0</td>
<td>Builders</td>
</tr>
<tr>
<td>Health aides, technicians, and wellness</td>
<td>30</td>
<td>11.9</td>
<td>Transportation services</td>
</tr>
<tr>
<td>Creatives and arts management</td>
<td>21</td>
<td>2.8</td>
<td>Mechanical installation and repair</td>
</tr>
<tr>
<td>Business/legal professionals</td>
<td>20</td>
<td>14.1</td>
<td>Community services</td>
</tr>
<tr>
<td>Managers</td>
<td>18</td>
<td>8.7</td>
<td>Production work and machine operations</td>
</tr>
<tr>
<td>Education and workforce training</td>
<td>18</td>
<td>10.2</td>
<td>Food service</td>
</tr>
<tr>
<td>Customer service and sales</td>
<td>10</td>
<td>16.5</td>
<td>Office support</td>
</tr>
</tbody>
</table>

Note: This exhibit displays net job growth, factoring in both job losses due to automation and expected job creation. Customer service and sales, for instance, is one of the occupational categories with the largest number of potential displacements, yet our model finds that enough jobs will be added over the same period to produce positive net growth overall. This chart only includes a sample of employment categories, and reflects a midpoint adoption scenario and is not intended to be a forecast.

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
Some of the jobs with highest displacement potential likely have skewed demographic concentrations

<table>
<thead>
<tr>
<th>Top ten occupations with highest potential displacement</th>
<th>Displacement rate, %</th>
<th>Number of jobs potentially displaced, thousand</th>
<th>% of 2017 workforce</th>
<th>Gender</th>
<th>Age</th>
<th>Race/ethnicity</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Female</td>
<td>18-34</td>
<td>35-50</td>
<td>51-65</td>
</tr>
<tr>
<td>Food preparation workers</td>
<td>28</td>
<td>1,375</td>
<td>2.8</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Retail salespersons</td>
<td>23</td>
<td>1,180</td>
<td>2.9</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Office clerks, general</td>
<td>34</td>
<td>1,159</td>
<td>2.0</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Stock clerks and order fillers</td>
<td>46</td>
<td>1,020</td>
<td>1.3</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Bookkeeping, accounting, and auditing clerks</td>
<td>49</td>
<td>921</td>
<td>1.1</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Cashiers</td>
<td>24</td>
<td>917</td>
<td>2.3</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Secretaries and administrative assistants</td>
<td>30</td>
<td>824</td>
<td>1.6</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Waiters and waitresses</td>
<td>25</td>
<td>726</td>
<td>1.7</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Cooks, restaurant</td>
<td>47</td>
<td>638</td>
<td>0.8</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Customer service representatives</td>
<td>16</td>
<td>507</td>
<td>1.8</td>
<td>Blue</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
</tbody>
</table>

1 Measured by comparing share of persons fitting each demographic profile in an occupation with share in total US workforce.
2 2030 midpoint adoption scenario.
3 Includes associate’s degrees.

Note: This chart reflects a midpoint adoption scenario and is not intended to be a forecast.

Different archetypes of employers will likely face different challenges depending on their workforce characteristics and geographic footprint

<table>
<thead>
<tr>
<th>Workforce characteristics (Subset of factors)</th>
<th>Examples</th>
<th>Example challenges²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>White-collar workforces</strong></td>
<td>Insurance Banking HO functions Gov't agencies</td>
<td>Retraining and redeployment to new roles within the company, especially digital hiring required tech talent</td>
</tr>
<tr>
<td>White-collar workforces</td>
<td>White-collar workforces</td>
<td>25M-30M 35-45% 20-25%</td>
</tr>
<tr>
<td><strong>Nationwide customer-facing</strong></td>
<td>Retail Food service Hospitality</td>
<td>Balancing tech-enabled business imperatives with large scale people impacts Economics of retraining may be challenging Redeployment challenges Diverse impacts on people and places</td>
</tr>
<tr>
<td>Nationwide customer-facing</td>
<td>Nationwide customer-facing</td>
<td>15M-20M 15-25% 25-30%</td>
</tr>
<tr>
<td><strong>Movers and builders</strong></td>
<td>Parcel delivery Warehouses Construction</td>
<td>Training employees to integrate, operate, and maintain technologies Finding adjacent middle-skill occupations to redeploy workers</td>
</tr>
<tr>
<td>Movers and builders</td>
<td>Movers and builders</td>
<td>10M-15M 5-15% 20-25%</td>
</tr>
<tr>
<td><strong>Specialized practitioners</strong></td>
<td>Healthcare Education Professional services</td>
<td>Continuous learning to adopt new technology Finding new business models that leverage technology, including remote service delivery</td>
</tr>
<tr>
<td>Specialized practitioners</td>
<td>Specialized practitioners</td>
<td>5M-10M 50-60% 10-15%</td>
</tr>
<tr>
<td><strong>STEM-based workforce</strong></td>
<td>Pharmaceutical Tech Software</td>
<td>Attracting and retaining top talent and continuous learning Rethinking location strategy based on cost and access to talent</td>
</tr>
<tr>
<td>STEM-based workforce</td>
<td>STEM-based workforce</td>
<td>5M-10M 65-75% 10-15%</td>
</tr>
<tr>
<td><strong>Makers and extractors</strong></td>
<td>Manufacturing Oil and gas Mining</td>
<td>Building technical capabilities; attracting talent to remote areas or retraining existing employees Potential for community disruption</td>
</tr>
<tr>
<td>Makers and extractors</td>
<td>Makers and extractors</td>
<td>5M-10M 5-15% 25-30%</td>
</tr>
</tbody>
</table>

1 Automation displacement rate under a midpoint adoption scenario. This is not intended to be a forecast.
2 Illustrates challenges relatively unique to each archetype, not intended to be comprehensive and some challenges not listed will be common to all employers

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
Topics summarized in this presentation

Automation’s impact on work

US people and places highlights

California people and places highlights

What to solve for
California highlights extracted from ‘Future of work in America: People and places, today and tomorrow’ report

These findings on California are drawn from a national analysis and county segmentation, and highlight comparisons to the national findings:

- **California is a mosaic of local economies, and thus faces unique labor market and economic diversity challenges, especially in urban areas**
  - 10 of the 13 archetypes of counties represented in the US are found in California. California’s population is more urbanized than the rest of the country: a majority of the state’s population lives in the urban core, while less than 8% live in low-growth and rural areas, versus over 24% for the country as a whole.
  - Net migration in California’s urban counties has been lower than the US average; for example, 458K residents moved out of LA between 2010-17, although this was offset by 319K international arrivals, and natural population increases.

- **While California faces similar divergence between people and places as observed at the national level, cities and counties in California have seen greater economic and employment growth than the national average across all segments**
  - Santa Clara, the state’s only county in the high-growth hub segment, saw a GDP growth rate of 8% since 2010, versus the average of 3.7% for high-growth hubs, and has an average household income of $107K – 34% higher than the high-growth segment as a whole.
  - California counties in the mixed-middle archetypes achieved GDP growth ~3% and employment growth over 2.5% since 2010, versus US averages <2%.
  - Low-growth and rural segments in California, while falling behind the rest of the state, also performed better than the national average, with positive GDP and employment growth versus the flat or declining employment faced by most counties in this segment across the country.

- **Looking ahead, growth is expected to be relatively more geographically distributed in California than in the rest of the country**
  - California could grow jobs from 2017-30 at 9%, equivalent to the national average; the state is also a microcosm of the national automation displacement rate, with a 22.9% displacement compared to 23.1% for the national average under a midpoint automation scenario.
  - 39 of California’s counties – 67% of counties which cover 98.8% of 2017 California jobs – will see positive growth from 2017-30; this compares nationally to 43% of counties that are growing, but which only make up 88.7% of national jobs.
  - A handful of rural counties, with a population of ~200K in California, have lower education levels and are posed for negative growth.

- **However, automation will disproportionately impact certain groups of people in California – especially Hispanics and those employed in agriculture**
  - California has a higher share of displacement than the national level in property maintenance and agriculture related activities, with a 19.5% displacement rate compared to 15.3%; office support and food services have the highest displacement rate in the state at 36%, both at a higher level than US average.
  - California has a higher share of displacement for the Hispanic population than US average; Hispanics hold 37% of jobs and make up 41% of displacements through 2030, compared to 17% of jobs and 19% of displacements nationally.

- **Similar to the national picture, there is need for concerted effort by all to solve for and achieve good outcomes for work and workers**

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
California is a diverse state, with 10 of the 13 national archetypes represented

CA county segment breakdown

**CA archetypes, (not represented in CA)**

- Megacities
- High-growth hubs
- Urban periphery
- Small powerhouses
- Silver cities
- College-centric towns
- Stable cities
- Independent economies
- America’s makers
- Trailing cities
- Americana
- Distressed Americana
- Rural outliers

Note: This analysis reflects archetypes defined by a hierarchal clustering analysis of cities and counties at the national level, and therefore exhibits the extent to which archetypes defined nationally are present in California. A clustering of counties within California could have yielded different results.

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
California’s community archetypes have varying demographic and economic profiles

Sample economic and labor market indicators, by county type

<table>
<thead>
<tr>
<th>Less economically favorable</th>
<th>More economically favorable</th>
<th>CA County Examples</th>
<th>Example economic Indicators</th>
<th>Industry mix GDP in high-growth industries, 2018</th>
<th>Example labor market indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban core</td>
<td></td>
<td></td>
<td>Household income, 2013-17 $ thousand</td>
<td>GDP growth, 2013–18, CAGR</td>
<td>Empl. growth, 2013–18, CAGR</td>
</tr>
<tr>
<td>Megacities</td>
<td></td>
<td>Los Angeles, San Francisco</td>
<td>73.0</td>
<td>3.8</td>
<td>2.3</td>
</tr>
<tr>
<td>High growth hubs</td>
<td></td>
<td>Santa Clara</td>
<td>106.8</td>
<td>8.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Periphery</td>
<td></td>
<td>San Bernardino, Marin</td>
<td>66.9</td>
<td>3.5</td>
<td>3.4</td>
</tr>
<tr>
<td>Niche cities</td>
<td></td>
<td>Sonoma</td>
<td>71.8</td>
<td>4.3</td>
<td>2.8</td>
</tr>
<tr>
<td>College-centric towns</td>
<td></td>
<td>Santa Barbara, Santa Cruz</td>
<td>70.3</td>
<td>2.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Stable cities</td>
<td></td>
<td>San Diego, Sacramento</td>
<td>63.7</td>
<td>3.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Independent economies</td>
<td></td>
<td>Butte</td>
<td>61.1</td>
<td>2.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Mixed middle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trailing cities</td>
<td></td>
<td>Madera, Sutter</td>
<td>48.8</td>
<td>1.8</td>
<td>1.6</td>
</tr>
<tr>
<td>Americana</td>
<td></td>
<td>Alpine, Mariposa</td>
<td>50.6</td>
<td>2.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Distressed Americana</td>
<td></td>
<td>Humboldt, Modoc</td>
<td>42.3</td>
<td>2.4</td>
<td>2.3</td>
</tr>
</tbody>
</table>

1 Compound annual growth rate.
2 Calculated as total net migration between 2010 and 2018 divided by 2018 population.
3 Information; finance and insurance; real estate / rental leasing; professional, scientific, and technical services; and health care and social assistance.

Note: This exhibit shows only a sample of the more than 40 variables used in a clustering analysis to segment communities across the United States.

Source: US Census American Community Survey, Moody’s Analytics; The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
All archetypes lost jobs during the Great Recession, but most segments have made moderate employment gains during the recovery

Annual employment by CA segment, % of 2007 employment

Example segments and national average

<table>
<thead>
<tr>
<th>County segment</th>
<th>Total jobs gained 2007-17, K</th>
<th>Jobs gained as % of 2007 workforce, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>High growth hubs</td>
<td>176</td>
<td>19%</td>
</tr>
<tr>
<td>Urban periphery</td>
<td>195</td>
<td>9%</td>
</tr>
<tr>
<td>Independent economies</td>
<td>74</td>
<td>9%</td>
</tr>
<tr>
<td>Megacities</td>
<td>594</td>
<td>8%</td>
</tr>
<tr>
<td>Small powerhouses</td>
<td>16</td>
<td>8%</td>
</tr>
<tr>
<td>Trailing cities</td>
<td>53</td>
<td>8%</td>
</tr>
<tr>
<td>Stable cities</td>
<td>178</td>
<td>7%</td>
</tr>
<tr>
<td>College-centric towns</td>
<td>19</td>
<td>6%</td>
</tr>
<tr>
<td>Americana</td>
<td>6</td>
<td>2%</td>
</tr>
<tr>
<td>Distressed Americana</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>National total</td>
<td>1,314</td>
<td>8%</td>
</tr>
</tbody>
</table>

Note: This exhibit reflects jobs gained from 2007 to 2017. Our clustering of county segments included data on employment growth from 2013 to 2018. Job growth reflected on this page may appear inconsistent with clustering of archetypes due to different time horizons used.

Source: Moody's Analytics; The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
People have moved out of some of the largest cities, but those losses have been more than offset by immigration and natural population increases.

County population changes 2010–17,¹ thousands

<table>
<thead>
<tr>
<th></th>
<th>Domestic migration²</th>
<th>International migration³</th>
<th>Natural population increase⁴</th>
<th>Total change, thousands⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Megacities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Los Angeles County</td>
<td></td>
<td></td>
<td></td>
<td>345</td>
</tr>
<tr>
<td>San Francisco County</td>
<td>54</td>
<td>23</td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Orange County</td>
<td>-44</td>
<td>90</td>
<td>137</td>
<td>180</td>
</tr>
<tr>
<td><strong>Stable cities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego County</td>
<td>112</td>
<td>169</td>
<td></td>
<td>242</td>
</tr>
<tr>
<td>Sacramento County</td>
<td>36</td>
<td>63</td>
<td>14</td>
<td>112</td>
</tr>
<tr>
<td><strong>High growth hubs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Clara County</td>
<td>-75</td>
<td>133</td>
<td>100</td>
<td>156</td>
</tr>
<tr>
<td><strong>Urban periphery</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riverside County</td>
<td>103</td>
<td>108</td>
<td>23</td>
<td>233</td>
</tr>
<tr>
<td><strong>Independent economies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monterey County</td>
<td>-14</td>
<td>7</td>
<td>30</td>
<td>23</td>
</tr>
<tr>
<td>Solano County</td>
<td>-9</td>
<td>9</td>
<td>15</td>
<td>32</td>
</tr>
<tr>
<td><strong>Americana</strong></td>
<td>-1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

¹ All migration data are for April 2010 to July 2017.
² Domestic in- and outmigration reflects population movement within the United States (excluding Puerto Rico).
³ Any change of residence across the borders of the United States. This includes net international migration of the foreign born; net migration between the United States and Puerto Rico; net migration of natives to and from the United States; and net movement of the armed forces population between the United States and overseas.
⁴ The difference between births and deaths.
⁵ Numbers may be slightly different than the sum of the bar chart segments due to rounding error.

Source: US Census Bureau, 2010–17 population estimates; The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
Scenarios looking ahead:
Within California there could be a range of job growth outcomes
California projected net job growth in mid-point automation scenario, 2017-2030, %

- **Los Angeles (Megacity)**
  - Net job growth: 7%

- **San Francisco (Megacity)**
  - Net job growth: 12%

- **San Jose (High growth hub)**
  - Net job growth: 17%

- **Susanville (Distressed Americana)**
  - Net job growth: -16%

- **Sacramento (Stable city)**
  - Net job growth: 11%

- **San Diego (Stable city)**
  - Net job growth: 9%

Note: City net job growth calculations use the following CBSAs, San Francisco-Oakland-Hayward CBSA, San Jose-Sunnyvale-Santa Clara CBSA, Los Angeles-Long Beach-Anaheim CBSA, Sacramento—Roseville—Arden-Arcade CBSA, and San Diego-Carlsbad CBSA. This chart reflects a midpoint adoption scenario and is not intended to be a forecast.

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
Urban counties, with higher levels of education, are likely positioned for stronger job growth

County average educational attainment and employment growth in midpoint adoption scenario, 2017–30

1 Midpoint adoption scenario. Counties above the line have positive growth, and counties below the line have negative growth.
2 Index based on the population breakdown between less than high school, high school, some college, B.A., and graduate degree.

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
In California, health and STEM occupations could post rapid growth while office support, food service, and production jobs could decline.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health professionals</td>
<td>44</td>
<td>0.6</td>
<td>Property maintenance and agriculture</td>
</tr>
<tr>
<td>STEM professionals</td>
<td>36</td>
<td>1.0</td>
<td>Builders</td>
</tr>
<tr>
<td>Health aides, technicians, and wellness</td>
<td>29</td>
<td>1.5</td>
<td>Transportation services</td>
</tr>
<tr>
<td>Business/legal professionals</td>
<td>19</td>
<td>1.8</td>
<td>Community services</td>
</tr>
<tr>
<td>Managers</td>
<td>18</td>
<td>1.1</td>
<td>Mechanical installation and repair</td>
</tr>
<tr>
<td>Creatives and arts management</td>
<td>18</td>
<td>0.5</td>
<td>Production work and machine operations</td>
</tr>
<tr>
<td>Education and workforce training</td>
<td>17</td>
<td>1.2</td>
<td>Food service</td>
</tr>
<tr>
<td>Customer service and sales</td>
<td>8</td>
<td>1.8</td>
<td>Office support</td>
</tr>
</tbody>
</table>

Note: This exhibit displays net job growth, factoring in both job losses due to automation and expected job creation. Customer service and sales, for instance, is one of the occupational categories with the largest number of potential displacements, yet our model finds that enough jobs will be added over the same period to produce positive net growth overall. This chart only includes a sample of employment categories, and reflects a midpoint adoption scenario and is not intended to be a forecast.

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
Some of the jobs with highest displacement potential likely have skewed demographic concentrations

<table>
<thead>
<tr>
<th>Top ten occupations with highest potential displacement</th>
<th>Displacement rate, 2%</th>
<th>Number of jobs potentially displaced, 2 thousand</th>
<th>% of 2017 workforce</th>
<th>Gender</th>
<th>Age</th>
<th>Race/ethnicity</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office clerks, general</td>
<td>34</td>
<td>126</td>
<td>1.8</td>
<td>Female</td>
<td>18-34</td>
<td>African American</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Retail salespersons</td>
<td>24</td>
<td>122</td>
<td>2.5</td>
<td>Male</td>
<td>35-50</td>
<td>Hispanic</td>
<td>Some college³</td>
</tr>
<tr>
<td>Stock clerks and order fillers</td>
<td>47</td>
<td>119</td>
<td>1.3</td>
<td>Female</td>
<td>51-65</td>
<td>White</td>
<td>High school</td>
</tr>
<tr>
<td>Farmworkers and laborers</td>
<td>33</td>
<td>117</td>
<td>1.7</td>
<td>Female</td>
<td>18-34</td>
<td>African American</td>
<td>Less than high school</td>
</tr>
<tr>
<td>Bookkeeping, accounting, and auditing clerks</td>
<td>49</td>
<td>114</td>
<td>1.1</td>
<td>Male</td>
<td>35-50</td>
<td>Hispanic</td>
<td>High school</td>
</tr>
<tr>
<td>Cashiers</td>
<td>24</td>
<td>106</td>
<td>2.2</td>
<td>Male</td>
<td>51-65</td>
<td>White</td>
<td>Less than high school</td>
</tr>
<tr>
<td>Food preparation and serving workers, incl fast food</td>
<td>22</td>
<td>92</td>
<td>2.1</td>
<td>Male</td>
<td>18-34</td>
<td>Some college³</td>
<td>Less than high school</td>
</tr>
<tr>
<td>Secretaries and administrative assistants</td>
<td>30</td>
<td>87</td>
<td>1.4</td>
<td>Female</td>
<td>35-50</td>
<td>African American</td>
<td>Less than high school</td>
</tr>
<tr>
<td>Waiters and waitresses</td>
<td>26</td>
<td>80</td>
<td>1.5</td>
<td>Female</td>
<td>51-65</td>
<td>Hispanic</td>
<td>Less than high school</td>
</tr>
<tr>
<td>Cooks, restaurant</td>
<td>47</td>
<td>73</td>
<td>0.8</td>
<td>Male</td>
<td>18-34</td>
<td>African American</td>
<td>Less than high school</td>
</tr>
</tbody>
</table>

1 Measured by comparing share of persons fitting each demographic profile in an occupation with share in total US workforce.
2 2030 midpoint adoption scenario.
3 Includes associate’s degrees.

Note: This chart reflects a midpoint adoption scenario and is not intended to be a forecast.

Topics summarized in this presentation

Automation’s impact on work

US people and places highlights

California people and places highlights

What to solve for
10 overall things to solve for

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Strengthen</strong> demand, unlock investment, and revive economic and productivity growth</td>
</tr>
<tr>
<td>2</td>
<td><strong>Foster</strong> business dynamism, job creation, and entrepreneurship</td>
</tr>
<tr>
<td>3</td>
<td><strong>Evolve</strong> education systems and learning for a changed workplace</td>
</tr>
<tr>
<td>4</td>
<td><strong>Step up</strong> investments in human capital, not unlike investments in other types of capital</td>
</tr>
<tr>
<td>5</td>
<td><strong>Improve</strong> labor market dynamics and enable more diverse forms of work</td>
</tr>
<tr>
<td>6</td>
<td><strong>Redesign</strong> workflows and workspaces to support human-machine complementarity</td>
</tr>
<tr>
<td>7</td>
<td><strong>Rethink</strong> incomes and worker supports (including benefits, safety-nets, dislocation supports, etc.)</td>
</tr>
<tr>
<td>8</td>
<td><strong>Support</strong> workers in transition and test new approaches</td>
</tr>
<tr>
<td>9</td>
<td><strong>Take on</strong> major investments that are good for the economy and for jobs, e.g., infrastructure</td>
</tr>
<tr>
<td>10</td>
<td><strong>Embrace</strong> AI and automation technologies safely (including privacy, security, bias etc.)</td>
</tr>
</tbody>
</table>

In addition, local priorities will vary based on each archetype’s challenges

Archetypes face different future of work challenges, with differing priorities for intervention

<table>
<thead>
<tr>
<th>Archetype</th>
<th>Example priorities</th>
<th>Share of US population, %</th>
<th>Share of CA population, %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban core</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Megacities</td>
<td>• Increase affordable housing near employment centers</td>
<td>30</td>
<td>51</td>
</tr>
<tr>
<td>High-growth hubs</td>
<td>• Involve employers in creating high school and community college programs to develop key skills needed in growing fields</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Target job training and placement to low-income and marginalized populations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Improve transportation links within city and with periphery</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Urban periphery</strong></td>
<td>• Attract investment in high-value businesses to diversify beyond local services</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>• Link tertiary education programs to urban employers to create talent pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Improve transportation links with city and within periphery</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Niche cities</strong></td>
<td>• Promote startup clusters and innovation (technology businesses in small powerhouses, healthcare in silver cities, university spin-offs in college-centric towns)</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Small powerhouses</td>
<td>• Adopt varying local strategies: silver cities need to attract young workers in growing industries; college-centric towns need to prevent brain drain and address poverty rates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silver cities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College-centric towns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mixed middle</strong></td>
<td>• Create a clear value proposition and economic development strategy to attract investment to create a thriving economic cluster</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>Stable cities</td>
<td>• Facilitate entrepreneurship through incentives, access to capital, and streamlined regulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent economies</td>
<td>• Retrain and redeploy workers at scale to avoid unemployment and slow-growth downward spiral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>America’s makers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Low-growth and rural areas</strong></td>
<td>• Identify potential anchor industries that can be growth engines building on local advantages (e.g., low-cost land)</td>
<td>24</td>
<td>8</td>
</tr>
<tr>
<td>Trailing cities</td>
<td>• Improve / update skills through high school completion programs, apprenticeships, training boot camps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Americana</td>
<td>• Expand digital infrastructure and teach digital skills to enable remote work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distressed Americana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural outliers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: The future of work in America: People and places, today and tomorrow (McKinsey Global Institute, 2019)
This report provides an overview of the state of work in the Inland Empire region of Riverside and San Bernardino Counties, an area that accounts for one of every 9 California residents. The region has added over 300,000 jobs since the peak of unemployment in July 2010, with logistics and healthcare driving much of the gains. At the same time, only about 4 in 10 jobs pay enough for working families to make ends meet. This problem is particularly acute for communities of color, a majority of the region’s workforce.

Growing employment in health care, social assistance, and education has provided many middle-class jobs for workers and has extended vital services to the public. Yet, many public sector workers in the region are also experiencing economic insecurity from low wages, possible layoffs, and erosion of employment benefits. Educational attainment is also relatively low, constraining the ability of workers in the region to pursue higher paying professional jobs.

There also appears to be a substantial mismatch between job opportunities and affordable housing in Southern California. Shortages of good-paying job opportunities in Riverside and San Bernardino, along with the lack of affordable housing in neighboring coastal counties, means that over 350,000 Inland Empire residents are employed outside the region.

Economic development strategies also need to take better advantage of progress in workforce development. The region’s colleges and universities graduate tens of thousands of students each year, but the growth of high-skilled jobs in the region is too meager to absorb most of these young workers.

Importantly, various local and regional initiatives to improve wages and benefits and promote economic mobility are underway, and show significant promise. Deeper collaborations between public agencies, businesses, community groups, and labor organizations are needed—to increase public and private-sector investments that attract more high-skilled jobs, increase access to middle-skill jobs, and improve the quality of all jobs in the region.

Improving earnings, benefits, and job stability for workers in the Inland Empire would not only help families in poverty, it would also increase consumer spending and local revenues, creating positive ripple effects for the entire regional economy.
What is OASIS?

A sustainability innovation park, building on a century of industry and research strength in agriculture, natural resource management, and clean logistics

◆ Anchors a cluster that leverages strengths and connections to CARB, agriculture, environment, health, and logistics industry partners

◆ Strengthens partnerships with workforce development in both counties and with other cleantech incubators in Los Angeles and San Diego

◆ Is a welcoming and inclusive setting that inspires the next generation of diverse STEM and business leaders

OASIS
Case Summary

OASIS is uniquely positioned to create an impactful movement to address grand challenges in sustainability facing the state and nation

➔ The Inland Empire has long served the nation by promoting innovations in air quality research, agriculture, natural resources, clean logistics, and climate change
  ◆ Many of these innovations have been developed to address pressing challenges facing the region

➔ Social mobility, inclusion, and equity are hallmark features of our higher education institutions, including in STEM-related fields

➔ OASIS builds on this legacy by
  ◆ Leveraging investments and relationships involving public, private, and philanthropic partners
  ◆ Meaningfully engage the region’s initiatives in Opportunity Zones and Innovation Districts
  ◆ Strengthening the state’s commitments to Sustainability, Innovation, and Social inclusion

Everyone is welcome at the OASIS

The future of California is Inland...

... and the future of Southern California is the Inland Empire

➔ The Inland Empire is expected to grow by 44% in 40 years, adding about 2 million residents
  ◆ By contrast, the rest of the state will only grow by 23%, adding about 8 million residents
  ◆ Population pressures and climate change will require the region to accelerate its innovations in agriculture, natural resource management, and clean logistics

➔ Powerful innovations emerge when societies focus on tackling their thorniest problems
  ◆ The world has benefits from Japan’s investments in robotics to address its shrinking workforce
  ◆ The United States has benefited from India’s development of low-cost generic drugs

The Inland Empire’s strongest and most innovative contributions are likely to emerge from the interplay of its historical strengths in research and workforce development, combined with the pressing need to address challenges posed by population growth and environmental sustainability

OASIS
Social inclusion adds to the region’s innovative strengths

➔ **Strong reputation as a champion for diversity, equity, and inclusion (DEI)**
  ◆ Only UC campus without a black enrollment decline after Proposition 209
  ◆ UCR, CSU-San Bernardino, the region’s community colleges and many K-12 institutions are designated Hispanic Serving Institutions
  ◆ Many regional institutions also specialize in support for Native American, AAPI, undocumented students, and justice-involved populations
  ◆ Strong support for under-represented business leadership through SBDC, regional incubators such as Excite and EPIC, and workforce development partners
  ◆ The mission of UCR’s School of Medicine is community-oriented

➔ **Advancing students of color in STEM-related fields**
  ◆ Over 800 STEM graduates annually in the region, most are students of color
  ◆ Competitive national grants on STEM success for underrepresented minority (URM) students
  ◆ RUSD ensuring equitable access to STEM excellence, building high school on UCR campus open to all

A Long Tradition of Green Tech: Government, Industry, and University Partnerships

➔ **The region is a global leader for research on growing food in hostile environments and considering the impact of climate change**
  ◆ California’s citrus boom began in the 1870s, with experimental cultivations of navel oranges in Riverside County
  ◆ The University of California established a Citrus Experiment Station in 1907, establishing a framework for university-industry partnerships that has grown into a $9 Billion/year industry
  ◆ UC Riverside (est. 1954) produces globally competitive research in entomology, plant biology, and plant pathology

➔ **One of UC Riverside’s 2 resident Nobel winners pioneered research that has led to environmentally-friendly production of fuels and synthetic fibers**
Recent Milestones in Green & Clean Tech

➔ UCR was the key regional R&D asset that attracted the Southern California relocation of California’s Air Resources Board
➔ California citrus growers in $8 million public-private partnership, constructing biological safety-level 3 laboratory
➔ 29,000 acres for plant research with significant industry partnership
➔ Salton Sea partnerships include researchers, government, industry, and community
➔ Of the $1.3 billion in UCR research investments since 2010, $475 million has been in STEM-related fields
➔ The region boasts R&D strengths in environmental monitoring, battery technology, and robotics

New Investments Continue the Cleantech Tradition

California Air Resources Board (CARB) is a $420 million investment in the region, with Riverside as its new Southern California headquarters, along with approximately 450 high-paying jobs.

The 380,000-square-foot building will be home to one of the largest and most advanced vehicle emissions testing and research facilities in the world.

The new structure, designed to house research and testing of next-generation vehicles, continues a more than 50-year legacy of CARB’s previous labs where CARB set groundbreaking pollution standards for cars and trucks.
OASIS Hubs Will Include

- High Tech Laboratories
- Incubator Space & Entrepreneurial Support
- Training & Public Outreach Space
- Industry Collaboration & Visitor Space
- Integrated Office & Retail Space for Community

Program Support

Companies and organizations that we seek to support
- Established corporations specializing in cleantech and sustainability
- Startups that would benefit from access to world-class researchers and facilities
- Nonprofit organizations and community groups
- Educational partners (K-12, certificate programs, 2- and 4-year colleges)
- Organizations and shared services to support tenants and partners (lawyers, accountants, investors, HR specialists)
- EDA representatives from different cities
- Providers and partners to CARB and companies that want to test their products with CARB and need technical support from CE-CERT
Partnerships

OASIS innovation hub is the culmination of a number of local and state initiatives

In partnership with local and national organizations

P-16 Educational Institutions

Civic & Community Partners

Industry & Business Partners

Aspirations for the Region

➔ Attract high value industry R&D
➔ Retain STEM talent, reducing outmigration and commute times
➔ Facilities and programs to properly train the local workforce for the influx of technical jobs
➔ Multiplier effect on other supportive high- and middle-skill occupations in professional services, health care, and more
➔ Diversify the regional economy and grow sectors that offer higher-wage jobs with benefits
Far Reaching Benefits of OASIS

To state

➔ Attract interest and properly showcase world-class sustainability research breakthroughs
➔ Reduce long commutes to LA, Orange County, and San Diego
➔ Demonstrate the social impact of Opportunity Zones
➔ Diversification of STEM fields and business talent
➔ Diversify regional economy for economic and environmental resilience
➔ Breakthroughs in sustainability research and practice to meet GHG reduction goals

To industry partners

➔ Proximity that increases collaboration and spurs breakthrough innovation
➔ Access to world-class facilities and research talent

OASIS

Ongoing Steps

➔ Expand and deepen partnerships to improve strategic alignment between regional, state, and national goals
➔ Deepen engagement between university, industry, and government partners
➔ Engage grassroots leaders and communities of color to further vision of inclusive growth
➔ Further refine financial and operational structure of OASIS
➔ Expand and deepen investor partnerships statewide and nationally, and boost the region’s reputation for sustainability and innovation

OASIS
For more information

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OASIS  Working Acronym: Opportunities to Advance Sustainability, Innovation, and Social inclusion
Tagline: Everyone is welcome at the OASIS
Is college still worth it? That was precisely the question posed at the Center for Household Financial Stability’s biennial research symposium held in May of last year. To help answer that question, the Center commissioned original research from leading scholars in the fields of economics, sociology, education and public policy. As one might expect, the findings were rich and varied.

The Conventional Wisdom about the Benefits of College

We corroborated the conventional wisdom that, on average, a college degree is associated with higher family income and wealth over one’s lifespan. However, the extent of the returns depended on several demographic characteristics—most notably, when people were born and their races or ethnicities. In particular, the financial benefits one can expect from a college degree appear to be lower among people born in the 1980s, and they remain unequal across racial and ethnic groups.

Separately, we also found that the likely payoff to a college degree depends on whether you have a college-educated parent. First-generation college graduates typically receive an income and wealth boost, but they fall short of college grads whose parents also have college degrees.

A Declining Boost from College Degrees, Especially for Wealth Accumulation

We examined the income and wealth of college graduates and postgraduate degree holders born between 1930 and 1989 and found two consistent trends.
First, the average college and postgrad income premiums (the amount a family headed by a four-year or postgrad degree holder earns in excess of an otherwise similar family) have declined somewhat across successive birth-decade cohorts (born in the 1930s, in the 1940s, etc.) but remained substantial.

In terms of earnings, college is clearly still worth it. This was true for all races and ethnicities, including non-Hispanic white, black, Hispanic of any race and all other families. (The latter two, and results for postgraduate degree holders, are shown in our paper.)

At the same time, the college wealth premium has declined more noticeably over successive generations of college grads and precipitously for people born in the 1980s.

Disturbingly, the wealth benefits of college and postgraduate degrees were much lower among non-white family heads born in the 1970s and 1980s. (The results for white and black families with exactly a four-year degree are shown below.)

In terms of wealth accumulation, college is not paying off for recent college graduates on average—at least, not yet.
We explored several potential explanations for the striking deterioration of the wealth-accumulation benefits from college even while the income benefits remained significant. We suggested three reasons:

- The rising cost of higher education
- The greater availability (and risks) of consumer debt
- The luck of when someone was born since investment opportunities vary over time

We also ruled out explanations such as expanded college enrollments over time reducing the selectivity represented by a college degree. (This would have also resulted in sharply declining income premiums, which we did not observe.)

The Roles of Asset Choice and Early Financial Experiences

Our findings were broadly consistent with other research presented at the conference. Alina Bartscher, Moritz Kuhn and Moritz Schularick showed that college-educated families’ wealth outpaced that of nongrad families due to greater exposure to the stock market and higher rates of small business ownership.²

Center Visiting Scholar Bradley Hardy and Dave Marcotte found that exposure to poverty and income volatility negatively affects high school graduation, college matriculation and persistence. Poverty occurring close to the end of high school was the most detrimental.³

The Rising Stakes of Achieving a College Education

In his symposium remarks, Fabian Pfeffer described how family wealth itself increasingly predicts both college attendance and persistence among children.

Separately, Pfeffer and co-authors Matthew Gross and Robert Schoeni found in their symposium paper that a large part of growing wealth inequality can be traced to the increasing challenges noncollege graduate households have accumulating wealth over time.⁴
Likewise, keynote speaker Susan Dynarski stressed deteriorating financial outcomes among noncollege graduates. Echoing our discussion, Dynarski also emphasized rising college costs due to consistent cuts to public funding for college in slowing college grads’ wealth accumulation.

Finally, Kevin Carey called for greater consumer protection within higher education during his remarks. In particular, Carey suggested that colleges should be required to provide a standardized and transparent estimate of the costs and financial aid being offered.

So, Is College Still Worth It?

On average—that is, across all birth years, races and ethnicities—college is still worth it in terms of earnings. We found that college and postgrad degree holders generally earn significantly higher incomes than nongrads.

However, for recent generations and for non-white students, the payoffs are somewhat lower than average. This is especially true for wealth accumulation. Considering all of the evidence, we conclude that the conventional wisdom about college is not as true as it used to be.

Notes and References


Additional Resources

- Center for Household Financial Stability: Is College Still Worth It?
- On the Economy: The College Boost: Grads Still Do Better Than Nongrads Financially
- On the Economy: The College Boost: Is the Return on a Degree Fading?
ARTICLE
OPERATIONS
The Financial Case for Good Retail Jobs

by Katie Bach, Sarah Kalloch and Zeynep Ton
Many retailers have been operating in mediocrity for decades. Their focus on minimizing labor costs has led to bad jobs, high employee turnover, and unreliable attendance. This labor instability — combined with out-of-touch decisions from the silos at headquarters — leads to poorly run stores. There are too many products, pilots, tools, and changes. Employees have little to no empowerment. Store managers are too busy fighting fires to develop staff and really manage the business. Not surprisingly, stores are full of operational problems and deliver a poor customer experience. Everyone is frustrated. But if companies cannot quantify both the true costs of this mediocrity and
the potential financial gains of building a better system, too few will be convinced they need to prioritize fixing what is broken. In this article, we describe a method for making this calculation.

Breaking out of mediocrity often entails increasing wages and benefits, improving work schedules, and building systems to develop and promote employees. It also requires improving the work employees do — for example, standardizing certain tasks while empowering employees to solve customer problems as they arise. Such job improvement is an investment: It ensures that employees are productive and can contribute to higher sales and lower costs. The result is that they cost more but are worth even more than that. We call this combination of investment in people with operational choices that allow for a motivated and capable workforce the good jobs strategy.

Retail executives typically don’t prioritize such a strategy because, although it sounds good, they’re not convinced it’s affordable. The heavy costs, such as wage or benefit increases, are immediate and easy to quantify, while the greatest benefits are further out and harder to quantify. Further, the costs of continuing with the status quo are often hidden. Top management doesn’t realize how much it is losing every day and how seriously the company’s competitiveness is being undermined.

To make the financial case for increasing the company’s investment in its people and improving their work, retail executives can quantify three types of benefits:

1. **Cost reductions** from improving employee turnover, operational execution (e.g., shrink), overtime and unplanned labor, and legal and compliance fees

2. **Higher revenues** from better operational execution (e.g., fewer stockouts and abandoned transactions), and increased basket size (i.e., customers buying more per store visit) and higher number of transactions (from higher traffic) that come from a better customer experience

3. **Labor productivity gains** from better workload management (e.g., cross-training employees and smoothing the workload) and from less time wasted by poor task allocation, poor logistical systems (such as long delivery windows), and frequent and last-minute changes.

From our observations at multiple retailers, we estimate that about 25% of employee time is often wasted — and even more for managers.

Using different assumptions about the amount of improvement or uplift achievable, executives can run scenarios on the bottom-line impact of a good jobs system. In addition to giving an overall “size of prize” range, quantifying these benefits can help them understand what would have to be true — specific improvements in metrics like turnover, shrink, and basket size — to justify a given investment in creating a good jobs system.

As an example of how executives may quantify the upside, we created GroceryCo, a fictional 500-store grocery chain. It has $9 billion in annual revenues and $200 million in profits. It has industry-
average performance in employee turnover (60%) and in operational execution (3.6% shrink, 4.0% stockouts, 0.5% abandoned transactions). (The abandoned transaction estimate comes from our work with companies. We did not calculate overtime and legal costs for GroceryCo because we do not have a good estimate and we expect these costs to be small at many retailers).

For GroceryCo, a 25% improvement in employee turnover, shrink, stockouts, and abandoned transactions would amount to nearly $120 million in operating income impact — nearly 60% of current total profits. This does not include higher sales due to increased customer satisfaction and loyalty from better service (e.g., helpful, knowledgeable employees, clean stores with fully stocked shelves, and shorter checkout lines), which is often the biggest upside of a good jobs system. For example, a 1% increase in daily transactions and in transaction size would add $45.2 million in gross profit per year. For context, a $165 million bottom-line gain would be sufficient to offset a 20% wage increase for all hourly employees — raising the average hourly wage from $13.50 to $16.20. In addition, we estimate that with a good jobs system, GroceryCo could free up 7 million hours in redeployable labor each year.

These estimates are grounded in the experience of both small and large retailers. In 2014, for example, Mud Bay, a pet store chain with 45 stores in the northwestern United States, committed to a good jobs journey. By 2017, it had raised wages by about 30%, increased the percentage of employees working over 30 hours a week (and hence receiving benefits) from 65% to 82%, and had made many changes to its operations, from simplifying assortment to smoothing workload to standardizing processes. The results were impressive: Mud Bay reduced employee turnover by 35% and increased sales per square foot from $317 to $394, sales per employee hour from $133 to $149, and inventory turnover from 6.8X to 7.5X. From 2011 to 2013 — that is, before the good jobs effort — average annual same-store sales growth was 6.5%, but from 2015 to 2017, it was 9.3%.

Walmart is also on a good jobs journey. The company has been investing in people; for example, it raised starting wages by 50% over the past four years, improved schedules, and invested in more training. At the same time, it is trying to improve the associates’ work; for example, it has created new work standards (which it calls “one best way”), deployed technology to increase associate productivity, and simplified the assortment in parts of its stores. These efforts are bearing fruit: Walmart’s Q1 2019 same-store sales growth was the highest in nine years. As CEO Doug McMillon commented, “We have a stronger foundation in place with our stores.”

There is also a strong competitive case for good jobs. Mediocrity in operations is a poor match for today’s fierce retail environment: competition from e-commerce, increased customer expectations, a tight labor market, rising minimum wages, scheduling legislation, and a crowded retail space (the United States has the world’s highest retail square footage per capita). To compete, many retailers are trying to grow through digitalization, new offerings, or M&A activity — building additional complexity on a weak foundation.
Those that have built good jobs systems, however, find themselves in a much stronger competitive position. While other pet store chains have lost traffic to e-commerce, Mud Bay’s sales keep growing and customers send love letters expressing their loyalty. Moreover, stronger operations and motivated and capable employees now enable Mud Bay to adapt to customer needs much more quickly than before. Walmart’s stronger store foundation is also critical to the digital transformation the company is undertaking.

Retailers that want to thrive in today’s and tomorrow’s ever-more-competitive markets have to offer a better customer experience. That’s just not possible without improving both the employee experience and operations. The moral reasons for improving retail jobs are clear. Quantifying the costs of the status quo can help executives make the financial case that a good jobs journey is worth prioritizing.

*The authors thank Max Kagan, Megan Larcom, and Kate Lazaroff-Puck for their help with creating the methodology for making the financial case for good jobs.*

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THE GOOD JOBS SOLUTION

MILLIONS OF JOBS ARE LOUSY, LOW-PAYING, DEMORALIZING — AND BAD FOR THE BOTTOM LINE. IT’S TIME TO FIX THEM, FOR THE GOOD OF WORKERS AND BUSINESSES.

BY ZEYNEP TON
THE CASE FOR GOOD JOBS

BETTER PAY AND MORE OPPORTUNITIES. YOUR WORKERS WANT THOSE THINGS. SO SHOULD YOU.

BY ZEYNEP TON

Yes, there are millions of jobs at retail stores, restaurants, call centers, hotels, and day cares — but most of them are lousy and have been for decades. They offer low pay, few benefits, and no career paths. Conventional wisdom holds that bad jobs are the unavoidable price of low-cost service. They are not — and some companies are realizing that the way they run their operations, including treating their employees as replaceable commodities, is not sustainable. In the past three years large companies including Walmart, McDonald’s, GAP, and Aetna have raised wages. Walmart is investing more in training and is streamlining operations to help store workers be more productive. GAP is experimenting with more-predictable schedules. And Aetna is letting call center reps use more discretion to meet customer needs.

Together these moves may herald a radical shift. Why are companies investing in and empowering their workers after treating them so poorly for so long? Largely because of a new competitive landscape. Companies in saturated markets need more growth from their existing units. Those facing increased competition from brick-and-mortar and online rivals need to give customers a compelling reason to buy from them. And companies are realizing that engaged workers are more productive, provide better service, and are less likely to jump ship — an especially big deal in retail and restaurants, where turnover in 2016 averaged 65% and 73% respectively.

Beyond boosting companies’ competitiveness, improving service workers’ jobs could have a huge impact on the U.S. economy. It would increase the earnings
and spending power of the working poor and reduce the enormous amount of public assistance they receive. In 2016 the median hourly wage of the country’s nearly 9 million retail workers was $10.37; it was $9.50 for the more than 7 million restaurant workers. Both figures put employees below the poverty threshold for a family of four — even those working 40 hours a week, which many employers don’t allow.

Just treating workers better, however, will not boost a company’s competitiveness. A radically different operating system — one designed to better serve customers’ needs and increase workers’ productivity, motivation, and overall contributions — is needed.

That’s a hard message for many executives in retail and services to hear. Radically revamping operations and investing more in labor seems counterintuitive, even dangerous, when profits are under pressure. Yet Mercadona, a Spanish supermarket chain with 1,620 stores and 79,000 employees, proved it can be done, and others are making the transformation.

I’ve been researching retail and other service operations, including Mercadona’s, for more than 15 years. In a 2012 HBR article I made a case for why good jobs — ones with decent wages, predictable hours, sufficient training, and opportunities for growth — are good for retailers. Since then I’ve studied and worked with a variety of retailers, call centers, and other service companies in various stages of adopting what I call the Good Jobs Strategy (GJS). I’ve accumulated volumes of evidence that this approach is not just a good idea; it works. In what follows — the first of a two-part article — I’ll share what I have learned about the bad-jobs and good-jobs systems and how to assess whether your organization could benefit from making the transition to the latter.

ALIGNMENT BETWEEN HEADQUARTERS AND STORES
One basic difference between good-jobs and bad-jobs businesses is the way decisions are made vis-à-vis headquarters and customer-facing units. At good jobs retailers, functions at headquarters don’t make decisions without considering the impact on the productivity of store employees and the level of customer service they can provide. Costco buyers coordinate product introductions so that new items are brought out at staggered times, smoothing out workloads at stores. Mercadona works with vendors to create shipments that can be quickly shelved (for example, olive oil is displayed in its shipping boxes, which open up in front). Its logistics department gives stores short delivery windows (15 to 20 minutes) so that receivers know exactly when to be ready and don’t waste time. Logistics sends the same driver repeatedly to a given store so that the parties can learn to work efficiently together. Such actions allow companies to give employees higher pay (thanks to increased productivity) and more-predictable schedules (thanks to a smooth and predictable workload) and to achieve low turnover (below 10% at both retailers above).

At good jobs companies, communication is two-way, and headquarters incorporates stores’ input into decisions affecting frontline work. Mercadona uses frontline input when standardizing processes such as the handling of deliveries. If a store needs extra time because of its layout, the owner of the delivery process for the chain will adapt the process for that store. When Mercadona developed a new decentralized-ordering system, it implemented employee suggestions such as removing information that workers found irrelevant and confusing.

At bad jobs companies, functions at headquarters make decisions in silos and rarely consider the
effect on employee productivity and customer service. They see stores largely as places that execute headquarters’ decisions. Here are some things I have witnessed:

• **Six-hour delivery windows.** Large time frames probably helped logistics minimize transportation costs, but they made it hard for stores to plan resources to handle deliveries.

• **Big swings in the number of promotions.** Several sales one week would be followed by none the next. So labor needs varied, making it difficult for store managers to give staffers consistent hours from week to week.

• **Frequent display changes.** Employees spent most of their time moving products around; they had no time to help customers and often didn’t know where items were. Employees would set up a display only to have to change it hours later. Seeing their efforts repeatedly go to waste made them feel there was little point to giving their all.

• **Mistakes in the prices sent to stores.** Store associates had to redo ticketing, wasting time and undermining morale.

• **Problems arising from coupons.** One associate said she had been instructed to follow the policies printed on the store’s many coupons. But when she would not honor an expired coupon, the angry customer might appeal to a manager, who would often grant the discount. “You feel like an idiot,” the associate said. “But you can’t give it to them yourself; you can get fired for that.”

• **Last-minute changes.** A typical example: Merchandising decides to move a promotion from Friday to Wednesday to stimulate demand. This doesn’t seem like a big deal at headquarters. But the store manager must shift dozens of hours of labor from Friday to Wednesday, forcing employees to rearrange their lives, which in turn drives absenteeism and turnover. And employees have less time to set up the promotion and do their other work, so mistakes are more likely.

• **Inadequate staffing levels.** One chain based its staffing on time studies conducted at headquarters, which did not reflect realities in the field, such as different layouts from store to store and customers’ asking for help from employees who were stocking shelves or pricing items. As a result, stores were...
often understaffed and employees were brusque with customers.

**EXPECTATIONS**

When operations are designed to allow frontline workers to be productive, empowered, and customer-focused, companies and workers can expect a lot from one another — and at good jobs companies, they do. When operations are not designed that way — and chaos, low morale, and high rates of turnover and absenteeism are the norm — expectations all around are dismally low.

At good jobs companies, high expectations start with hiring — those companies are more selective. QuikTrip, a chain with more than 700 convenience stores in 11 states, centralizes recruiting in each city, and experts use structured interviews and cognitive tests. Even so, new hires must “graduate” from training; about 20% of full-time trainees and 14% of part-time ones don’t make it.

Once hired, QuikTrip’s store employees are held to high standards. For instance, they must initially each completed task. And peer pressure helps maintain standards, because part of everyone’s pay is tied to the store’s customer-service score, and full-timers enjoy profit sharing.

But it’s not a one-way street. Employees of good jobs companies expect to be rewarded for their productivity and contributions. The annual take-home pay of a new full-time QuikTrip employee is nearly $40,000. All store managers are promoted from within.

Employees of good jobs companies also expect their employers to respect their time and knowledge and to allow them to shine in front of customers. QuikTrip sells a lot of coffee; if the coffee machine breaks, employees expect facilities management to fix it immediately so that they don’t have to disappoint customers. When frontline employees at Mercadona find that a product takes too long to shelve because it is badly packaged, they expect that buyers will work with suppliers to fix the problem. When I told the CEO of a good jobs company about the last-minute changes I’d seen at other retailers, he said, “Our stores would scream at us if we did that!”

Bad jobs companies and their employees don’t — and can’t — have such high expectations of one another; their operations and people are too unstable. Headquarters decisions that waste employee time and increase workload variability contribute to low wages and workforce instability. At several chains I observed, well over half the store employees worked part-time, and last-minute changes in, say, the timing of a sales promotion or the delivery of merchandise meant that store managers frequently altered employees’ work schedules. Those are some of the reasons workers often called in sick, came in late, or left for better jobs. Annual turnover averaged 40% to 120%.

With staffing so unstable, it was hard to know who should do or had done what. When a display or pricing error was made or when a section was dirty, it was difficult to identify the source of the problem. Equipment was often inoperative or disappeared. I saw broken fitting-room and bathroom fixtures, water fountains, and Wi-Fi systems at numerous chains. Sarah Kalloch, my colleague at the Good Jobs Institute — a nonprofit organization I cofounded — worked nine weeks at a large retailer. When shelving goods, she often didn’t even have a box cutter. How can you care about a company that cares so little about how well you can do your job?

**STORE MANAGERS**

Good-jobs and bad-jobs companies also differ radically in terms of store managers’ roles and attitudes. At the former, store managers feel like owners. They believe that taking care of customers and developing their employees are their most important tasks, and the operating system is designed accordingly. The Costco store managers we interviewed repeated cofounder Jim Sinegal’s mantra that 90% of their time should be spent teaching. They constantly walked the floor asking area managers open-ended questions such as “Why do we have five pallets of blankets here?” and “Why is this item not selling well?” The questions were intended to improve the store’s performance and help new managers develop. Almost all the store managers at good jobs companies were promoted from within, and they took great satisfaction when their employees got ahead. A store manager at Costco said, “There is nothing more satisfying to me than to see people move up in their careers.”

At bad jobs companies, store managers spend most of their time handling day-to-day crises and making sure the most immediate tasks get done. Because stores are often understaffed, they end up shelving merchandise, running cash registers, and performing other employee tasks themselves. Frequent staffing, equipment, and customer-service problems leave them no time to train workers or give feedback.

At one retail chain, employees often found themselves with no assignments; the store manager hadn’t had time to make them. One manager said he was caught in a vicious circle: High turnover meant he had to keep hiring new people. But all the firefighting meant he couldn’t devote much time to hiring, so the
new employees were often poor fits. Many would soon quit, increasing the time he needed to spend firefighting and looking for new people.

JUSTIFYING THE GJS STRATEGY
At the Good Jobs Institute, we developed a scorecard that can help you ascertain whether your organization needs the GJS. It begins with an assessment of frontline jobs. How well does your company meet employees’ basic needs and foster engagement? Although such things as living wages, predictable schedules, and career opportunities may not in themselves be motivators, poverty-level wages, life-disrupting schedules, and a lack of opportunities make it hard to hire, motivate, and keep good people.

I’ve been surprised by how little corporate leaders know about the hourly jobs at their companies. Executives at one organization were startled to learn that most of their hourly employees worked fewer than 15 hours a week and that the average annual take-home pay was less than $10,000. Executives at another company thought they were providing employee schedules three weeks in advance — but some stores were scheduling just a week in advance.

The second element of the scorecard relates to the customer experience. How well does your company meet customers’ basic needs and create conditions that engender loyalty? Efficient checkouts and clean floors may not generate an emotional connection with customers, but slow checkouts and dirty floors will drive them away.

The scorecard’s final element involves data on operational problems, employee turnover and absenteeism, productivity, sales, and costs. Once you’ve collected that, the scorecard can help you identify potential gains from the GJS in the following realms:

Financial. An honest and factual discussion about current performance and what performance could be if your company operated differently will suggest the dollar value of adopting the GJS. At Quest Diagnostics, a provider of medical diagnostic services, 60% of call center reps left within a year, resulting in up to $10.5 million annually in direct turnover costs. That was a compelling reason to implement the GJS in the call centers.

GOOD JOBS COMPANIES CAN ADAPT TO THE ECONOMY’S UPS AND DOWNS OR AN INCREASE IN THE MINIMUM WAGE BETTER THAN THEIR RIVALS CAN.
Working with a large retail chain, my students and I found that increasing a store’s average employee hours from fewer than 15 a week to 30 (without increasing total hours), decreasing schedule variability, and reducing employee turnover by almost half could lift sales productivity by more than 20%. We saw strong correlations between indicators of bad jobs, such as high turnover and frequent last-minute schedule changes, and costly operational problems, such as stockouts, inventory shrinkage and inaccuracies, and low conversion rates (the percentage of customers who buy something).

**Competitive.** At Quest, the high turnover among call center reps undermined service. Patients and staffers in physicians’ offices had to wait more than two minutes to have a phone call answered. And the inexperienced, undertrained rep who finally did pick up often couldn’t field the question and transferred the call to someone else, resulting in more waiting. Quest had already lost important customers.

Brick-and-mortar retailers also have compelling competitive reasons to adopt the GJS. Consider the challenge from e-commerce: As of August, more than 6,300 U.S. store closures—one of the highest annual counts ever—had been announced in 2017, with competition from online rivals a significant cause. Physical retailers that fail to create a compelling shopping experience and establish an emotional connection with customers risk the same fate. Another competitive reason is market saturation: Many chains can no longer profitably grow by adding stores. They should focus on **getting more out of their existing stores**—which requires the GJS.

Here’s another competitive advantage of good jobs companies: They can adapt to changes such as the economy’s ups and downs or an increase in the minimum wage better than their rivals can. Mercadona emerged from the 2008–2009 financial crisis with higher market share because it was able to cut prices by 10% while maintaining profitability. Many of its cost-cutting ideas came from employees. They knew their customers and were empowered to identify products and processes that could be improved or eliminated—and they knew top management would take their insights seriously. They also knew the company wouldn’t use their cost-cutting ideas as an excuse for layoffs.

**Moral.** Many executives and managers don’t like leading bad jobs companies; they would rather provide good jobs. Mark Bertolini, Aetna’s CEO, found it unacceptable for a thriving Fortune 500 company to have employees on welfare. Costco’s Jim Sinegal told my students, “We didn’t want to build a low-cost business on the backs of employees.” Although the GJS is likely to offer financial and competitive advantages to any low-cost service organization, doing right by your employees may be justification enough.

**A DIFFERENT SYSTEM**

If company leaders conclude that the good jobs opportunity is worth pursuing, they will need to redesign their operations. The most important lesson I’ve learned is that the GJS is a system and all the parts must work together. The system consists of (1) investment in people in terms of hiring, training, compensation, high performance standards, and meaningful career paths, and (2) four operational choices you must make: focus and simplify, standardize and empower, cross-train, and operate with slack.

These operational choices require employee investment, but they also make that investment possible, by increasing employees’ productivity and contributions. To illustrate some of the dependencies that are crucial to the GJS, let’s examine how Mercadona can offer employees stable schedules and supply them a month in advance even though customer traffic varies greatly throughout the day and week. (Daily transactions in one store ranged from 1,700 on weekdays to 3,000 on Saturdays.)

Understanding that stable schedules require stable workloads, Mercadona looks for ways to smooth
the latter out. It schedules activities such as deliveries, display changes, equipment maintenance, and product introductions when traffic is likely to be low. Operational simplification (fewer products, no promotions, predictable deliveries, and so on) and the standardization of routine processes (such as unloading trucks, shelving, and cleaning) further reduce variability and make it possible to more accurately forecast workloads. Mercadona knows where to simplify because there’s clarity about what value it offers its customers: the best quality-to-price ratio, the highest level of service, and the ability to complete purchases quickly. Everyone is aligned on delivering that value.

Stable schedules require cross-training so that employees can shift between customer-facing tasks (such as helping people find products and manning the cash register) and non-customer-facing ones (cleaning, re-stocking, and so forth) according to traffic. Specialists in areas such as produce, bakery, and cosmetics are empowered to order products, talk to customers to understand their needs, and improve their work. They have time for all this because Mercadona operates with slack. The specialists feel ownership of and are accountable for their area’s performance.

A caveat: I’ve observed that when some elements of the system are missing, performance falls short of its potential. One big-box retailer I studied paid at least 50% more than the industry average and invested more than two weeks of training in each new employee. That sounds like the Good Jobs Strategy, but it fell short. The company had no mechanism for hearing employee ideas, so the disconnect between headquarters and the front lines persisted. All decisions related to merchandising were made at headquarters. Product variety in some categories was so high that employees spent a lot of time on tedious shelving tasks. The result was not only mediocre performance but also a low Glassdoor score as a place to work, despite the high investment in the workforce.

As a human-centered system that yields operational excellence, the GJS resembles the Toyota Production System (TPS) in many ways. At a car factory employing TPS, using common parts and specifications and leveling the volume and sequence of production simplifies and stabilizes work. Developing standardized work with operator input and involving operators in identifying problems and improving standardized work drives operator engagement, quality, and productivity. Cross-trained assembly-line operators can respond to changes in demand by rebalancing the line.

Staffing one offline team leader for every four to six assembly-line operators creates buffer capacity for training and for responding to problems, higher demand, and operator emergencies (a form of operating with slack). Toyota is known to have worker-friendly policies, such as no layoffs, and to share the values of GJS companies: Customers come first, employees are the most important resource, and the focus is on continuous improvement.

Adopting the GJS requires a system change, but that’s worth it, and it’s doable! In part two of this article, “How to Build a Business on Good Jobs,” I’ll explore how to get from here to there.
A growing number of service companies that have long offered frontline workers low pay, few benefits, unpredictable schedules, and dead-end careers are abandoning or at least questioning their model. As discussed in part one of this article, "The Case for Good Jobs," financial, competitive, and moral reasons are prompting them to seek an alternative approach — one that gives frontline employees a living wage, adequate training, predictable schedules, and career opportunities; one in which everyone in the company works to help those employees be highly productive and deliver great products and outstanding service. I call this the Good Jobs Strategy, or GJS. Making the transition to it is daunting but achievable. In what follows I will explore how to get from here to there.

Leaders should recognize several things at the outset. First, you must be patient. Moving to a good jobs system will most likely take years, even if your organization is small. Mercadona, Spain’s largest supermarket chain, began to make the transition in 1993, when it had roughly 150 stores, and it took about three years for its financial performance to improve significantly. Some types of performance might temporarily decline. Costs might go up, owing to higher wages and bigger investments in training. Sales might fall as promotions are reduced. Turnover might increase. Some headquarters employees might leave because they don’t like the loss of control, are uncomfortable learning from frontline staff, or think their expertise has been devalued. Some frontline employees might not like the higher standards and quit, while others might prove incapable of meeting the new standards and need to be dismissed. (When Quest Diagnostics, a provider of medical diagnostic services, adopted a stricter absenteeism policy and set higher performance expectations at its call centers, turnover increased for a while but then fell below previous levels.)

Trusting the process is crucial. So is learning from transformations to similar systems, such as the Toyota Production System (TPS). Here are some of the most important steps:

**ALIGN ON THE GOAL AND DIRECTION**

As in any transformation, it is important to (1) create a compelling vision around customers and employees that appeals to both heads and hearts; (2) form a centralized implementation team — sponsored by the CEO or the COO and including executives, field managers, and representatives of home office functions that affect frontline work — with the power, expertise, credibility, and leadership to create an implementation strategy; and (3) maintain constant and honest communication about the transformation, through town halls, short videos, memos, and so on.

**Elect a transition team.** In 2014, when the executive team at Mud Bay, a chain of 44 pet stores in the northwestern United States, decided to implement the GJS, co-CEO Lars Wulff launched eight weeks of small group discussions for 67 store managers and headquarters staff, during which they discussed the GJS and how Mud Bay could benefit from it. The company then charged a team of six store managers elected by their peers, six...
home-office staffers elected by their peers, three district managers, and five top executives with creating a vision and strategy for the transformation.

This up-front effort generated companywide buy-in. Store employees were excited enough to talk about the transformation with customers, who then felt even better about shopping at the chain.

**Hold workshops.** Educating your organization about the GJS ahead of time through workshops with store managers, district and regional managers, headquarters functions, and senior leaders is important for several reasons. Workshops help the functions, some of which have never worked with one another, to have honest discussions and start breaking out of their silos. I have run workshops in which store leaders felt comfortable telling headquarters functions how much trouble their decisions had caused. Workshops also help the functions understand how and why the GJS works as a system and what their role in it is.

I often divide participants into five groups representing investment in people and the four operational choices of the GJS and ask each group what needs to change within that element to create a better customer and employee experience and what will be required from the other groups. This helps participants immediately grasp the dependencies.

Finally, workshops will help you identify and address objections early on. For example, many retailers already feel desperate about slides in traffic. So marketing or finance’s response to the principle of focusing and simplifying might be: “Are you crazy? We’re getting killed. We need to sell more products, run more promotions, stay open longer.” That needs to be talked through.

**Promise no layoffs.** Some changes in a good jobs transformation may temporarily decrease revenue, and some functions might wonder about the effects on their compensation, while people at any level might fear for their jobs. I recently asked a store employee how she thought the backroom replenishment process could be streamlined. She said she wouldn’t want it to be, because it might mean she could lose her job.

All such objections need to be heard and addressed. One of the best practices we have learned from TPS implementations is to make a public commitment that apart from seasonal workers, no one will be laid off because of the transformation.

**START SMALL AND LEARN WHAT WORKS**

In multiunit service organizations, the desire to show results quickly and the habit of top-down decision making often tempt companies to implement one big top-down change at a time. That urge should be resisted.

**Work up from the front lines.** Given that the GJS is a complex system in which many things, big and small, will change, and given uncertainty around the order of changes, top-down implementation is too slow, expensive, and tone-deaf to unit-level realities. If the front lines aren’t involved in creating the initiative, their buy-in and commitment will be low.

The transformation may be largely planned at headquarters, but it should be executed from the front lines up. Not every company is willing to do this. When I suggested it to the chief people officer at a big-box retailer, she replied, “We typically don’t ask them; we tell them.” You can’t implement the GJS that way.

**Prototype and scale up.** An approach that has worked well in TPS transformations is to implement the new system in one unit or a few, learn and adjust, and then scale up. Prototyping lets the centralized team discover how to break down functional silos and collaborate. This approach also builds momentum and converts cynics, because it’s easier and faster to show success.

Choosing units with strong leaders who are excited about the transformation and with average performance — so that meaningful improvements will be visible within a few months — makes success more likely. Lessons can be scaled up more easily if the prototype units are of average or typical size, location, and format. Choosing units reasonably close to headquarters lets the centralized team visit regularly.

**DETERMINE WHAT TO CHANGE FIRST**

The good jobs scorecard discussed in part one of this article might tell you that your company needs to change and highlight the biggest gaps that need to be closed, but it doesn’t specify what to change. Here’s how to figure that out.

**Diagnose yourself.** This will help you identify priorities. Which GJS elements do you already use? Where could you improve? You will probably find many things to change, such as:

- how stores recruit, train, pay, and empower associates
- whether headquarters functions take frontline work into account when making decisions and coordinating with one another
- whether the relationship between headquarters and the stores is a two-way street so that, for example, store processes are standardized with input from frontline workers and headquarters has a mechanism for hearing ideas from the field
- You can’t overhaul everything at once, and revamping some elements of your operating model will be hard. That said, some changes will have good results only if complemented with others. Getting functions to coordinate decisions may require new incentives,
leadership, and organizational structures. Higher pay won’t make your employees more productive or engaged if their work remains unstable. But it will inspire more of them to stay longer and become better at what they do, which will help you stabilize operations.

**Start by providing stability.**
At Quest’s call centers, the GJS implementation began with this step. The centers suffered from high turnover and a 12% absentee rate. Supervisors spent most of their time fielding calls that inexperienced reps couldn’t handle, and customers were frustrated. Conversations with reps and supervisors revealed that the main reasons for the turnover had to do with pay and career paths — basic employee needs. The work was more complicated than that at a typical call center, yet the pay was about the same, and it didn’t rise as employees acquired new skills.

To address these issues, Quest implemented step-based pay and a higher starting wage and provided clear career paths. To subsidize the higher starting wage and provided lower costs and increased customer satisfaction. For example, many physicians preferred receiving normal test results by fax rather than by phone. Many patient calls concerned location, hours, or scheduling — things that don’t require a rep’s expertise — so Quest made that information more accessible online.

By simplifying and focusing on the most important value it offered customers — important medical information as quickly and accurately as possible — Quest cut costs and improved service. Much more had to follow, and did, but the later steps probably wouldn’t have been possible if employees hadn’t first been given good reasons to stay with the company long enough to get really good at helping customers.

Quest’s task of stabilizing first is a good model. Until work processes, workloads, turnover, and absenteeism are addressed, companies will find it hard to implement changes such as cross-training, creating high expectations, and empowering employees to make decisions.

**Look for little opportunities.**
Quest sought other small but meaningful ways to improve work, engagement, and customer service. One rep came up with an idea dubbed the “Spanish whisper.” Although a caller could select English or Spanish, the bilingual rep who answered did not know which had been chosen and would lose about 20 seconds finding out. Working with a prototype team, the centralized team programmed the phones so that when a Spanish-speaking caller was on the line, the word “Spanish” was whispered into the rep’s headset before he or she picked up the call. In addition to its direct usefulness, this small change helped break down silos, because several functions had to work together to implement it. (Another lesson from Toyota is that solving small problems helps formerly isolated departments learn to coordinate and collaborate.) It also signaled to reps that their opinions now counted.

Making many small improvements rather than a few big changes is also powerful: Researchers have found that the sum of many small improvements often has a large impact and that small wins help sustain momentum. Big changes must come eventually. But they are more likely to succeed if a foundation has been laid.

**SCALE, ADAPT, AND CONTINUOUSLY IMPROVE.**
Executives of chains may have some problems with the prototype approach. They may be uncomfortable devoting many centralized resources to a few prototype units for several months. And relying on just a few units to drive change in hundreds or thousands of others may not feel right. If the company is under pressure to improve performance, executives will want to implement companywide change as soon as possible. You can address these concerns in three ways:

1. **Identify changes that have few dependencies and can work in isolation.**
   - Examples include daily huddles, a better checkout process, a better cleaning process, and better recruiting. Empower units other than the prototypes to experiment with improvements and share results with the good jobs team. You can then create the first versions of new standards using store input. This approach can produce improvements across the chain in a few months and start changing the culture to one that involves the frontlines.

2. **Apply some of what the prototypes learned across the organization while the pilot efforts are still under way.**
   - For example, once headquarters learns from a few prototype units how to reduce workload variability (say, by reducing delivery windows or avoiding last-minute changes to promotions or deliveries), you can apply the new methods companywide. Simplifying work as Quest did can also enable you to increase pay or benefits across the chain without overly hurting short-term performance.

3. **Establish a channel for sharing successes with other units so that they will be eager to make the same changes.**
   - When Quest’s prototype teams presented their results to other teams, supervisors lined up to try the new approach. Depending on the size of a prototype unit and the level of initial stability, implementing all elements of the GJS
In the three years preceding the 2014 launch of its good jobs transformations, Mud Bay’s same-store sales grew at an average annual rate of 6.5%. From 2014 to 2016 same-store sales growth averaged 11.0%, and the company’s overall sales grew much faster than the industry’s as a whole. The average hourly wage of Mud Bay’s store employees, including managers, was 18% higher in 2016 than in 2013, and employee turnover in 2016 was 33% — down from nearly 45% three years earlier. Customer satisfaction is now at its highest level ever: Stores get love letters from customers and seldom receive fewer than five stars on Yelp (the largest 100 retailers average 3.2 stars). In 2013 just 65% of store employees worked 30 or more hours a week. The 2017 figure thus far is 82%.

Quest started its good jobs transformation in July 2015. Since then it has seen a 20% reduction in its call-transfer rate (calls that must be passed on to someone else because the first rep can’t field the question) and a 40% improvement in how quickly calls are answered. By March 2017 turnover had dropped by 53%, absenteeism by 66%. Within eight months of implementation reps had submitted 1,556 ideas for improvement, 1,001 of which have been implemented. Of $2 million in savings, $1.2 million came from those ideas.

Better jobs make for a better society. Employees do higher-quality work when they are knowledgeable and empowered, when they have sufficient resources, and when they and the work they do are respected. Customers — which means all of us — are treated better and are more likely to come away satisfied. In the past century we saw that higher pay and better working conditions in manufacturing contributed to a bigger middle class and a stronger economy. Now it’s the service sector’s turn.

An economy with more good jobs is neither inevitable nor utopian. It is a choice we can make. The Good Jobs Strategy has proved that the trade-off between pay and prices can be broken. The CEOs of service companies have a unique opportunity to generate more value for their investors and customers while creating meaningful work for millions of people — work that will allow them to escape poverty and join the middle class. That’s a privilege and a responsibility.

THE PAYOFF
Good jobs transformations have worked well — for employees, customers, companies, and investors — in a variety of settings.
Over the past 30 years two insights have shaped my thinking about jobs in America and convinced me that we urgently need to restructure many of them. Each insight came from a colleague. The first was from Michael Porter, with whom I worked in the late 1980s and the 1990s. The second was from Richard Florida, a colleague at the Rotman School since 2007.

Both insights are valuable on their own, but when they are viewed through a single lens, as Florida and I decided to do in 2015, it becomes clear that bad jobs in America is a burning platform on which we need to take action.

**THE MICHAEL PORTER INSIGHT**

This insight arose from the vast body of work captured in the 1990 book *The Competitive Advantage of Nations*. Porter shows that it really matters whether you work in an industry that’s clustered in one or a few small geographic areas (as in pharmaceuticals and software) or in one that’s dispersed fairly evenly across the country (as in retail and health care services).

Industries with clustered employment sell their products and services far beyond their immediate areas — pharmaceutical companies in New Jersey don’t sell only in the Garden State, of course. As a result they can scale up, invest in R&D and branding, and help their employees achieve high productivity, which is reflected in high wages.

Industries with dispersed employment sell only within their local areas, so they realize fewer economies of scale and tend to invest much less in R&D and branding (the market demand for, say, a local landscaping company doesn’t warrant considerable capital investment). As a result productivity is lower than in clustered industries and wages are significantly lower.

**THE RICHARD FLORIDA INSIGHT**

This insight, captured in the best-selling 2002 book *The Rise of the Creative Class*, focuses not on the industry in which you work but rather on the content of your job. Florida draws a distinction between the amount of independent judgment and decision making a job involves and sees two basic kinds of jobs. The first are creativity-intensive; they involve a high level of independent judgment and decision making. Consider marketing executives and doctors: They are given the space and freedom to create value for their employers, which means they earn high wages. The second kind of jobs are routine-intensive; they involve little, if any, independent judgment and decision making. Think of payables clerks in marketing departments and orderlies in hospitals: They are unable — often, they’re not allowed — to create as much...
value as creativity-intensive workers. So they earn significantly lower wages.

PORTER + FLORIDA
Florida and I decided to combine the two insights to see how industry type and job content intersect. We started by creating a two-by-two matrix for all U.S. jobs. This gave us four types of jobs to examine, as shown above. Next we needed to know what share of the U.S. economy is represented by each job type (we drew on the most recent data available, from 2012). Perhaps not surprisingly, routine-in-dispersed jobs — ones that lack creativity and are in lower-productivity industries with limited ability to scale up — dominate, as shown below left.

What is surprising is what happened when we plotted the average wage for each type of job against the average wage for all U.S. workers. As the graphic below right shows, those holding a creativity-intensive job in a clustered industry are in the proverbial catbird’s seat. On average, they earn almost 80% more than the national average, and far more than workers in any other category. Yet they make up the smallest share of the workforce.

Do the good fortunes of these employees result from having creativity-intensive jobs, or from working in a clustered industry? It appears to be the former; creativity-intensive workers in dispersed industries also earn more than the national average, although their premium is less than half that afforded to their creative counterparts in clustered industries. On average, workers in both routine categories earn far less than the national average. Those in clustered industries, who are fewer in number (they represent the second-smallest category), earn significantly more than those in dispersed industries. The latter earn very low wages indeed — and they account for almost half the workforce.

MOVEMENT ACROSS GROUPS
We wondered whether the picture painted by the 2012 data was stable, so we looked at the earliest consistent data set, from 2000. We expected to find little difference over just 12 years, but we were wrong. (See the exhibit “The Changing Share of Job Types and Compensation for Jobs in the Modern U.S. Economy.”)

The changes are dramatic and worrisome. The most disadvantaged category of workers, routine-in-dispersed, grew significantly, and...
little independent judgment and
decision making not because that’s
inherently better for corporations
but because executives imagine it is
better.

In “The Case for Good Jobs” and
“How to Build a Business on Good
Jobs,” the two-part article anchoring
this package, Zeynep Ton argues
that by increasing the independent
judgment and decision making called
for in formerly routine-intensive jobs,
companies will do better — because
workers will become vastly more
productive. That means that employers
in turn can comfortably increase
wages. The Good Jobs Institute,
a nonprofit Ton and I founded, is
helping companies undertake the
transformation. The upside will be
large for businesses and employees
alike.

About the author: Roger L. Martin
is the
director of the Martin Prosperity Institute
and a former dean of the University of
Toronto’s Rotman School of Management.
He is a coauthor of
Creating Great Choices:
A Leader’s Guide to Integrative Thinking

wages for that group deteriorated
sharply, whereas the earnings
advantage of creativity-intensive
workers rose steeply.

The only ray of hope is that the share
of creativity-intensive jobs grew by
more than two percentage points.
But by and large, that growth didn’t
lift people out of the lowest-earning,
routine-in-dispersed group. It drew
mainly from the less-disadvantaged
routine-in-clustered cohort, which
decreased in size by almost four
percentage points.

THE IMPLICATIONS FOR AMERICA

Soon the breadwinners of more than
half the families in America will hold
the lowest-value, routine-in-dispersed
jobs. They will surely start to wonder
why they should support democratic
capitalism when it doesn’t work for
them, and won’t anytime soon.

And although it’s good news that
the share of creativity-intensive jobs
has grown, that growth isn’t helping
workers escape the very worst type of
jobs.

The best — and, I believe, the only —
chance to save America’s form of
democratic capitalism is to forget
about moving people from one job
category to another and instead to
change what it means to be in the
bottom categories. We can transform
the nature of routine jobs. They involve

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<tr>
<th>JOB TYPE</th>
<th>2000</th>
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<tr>
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<td>13.9%</td>
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<th>AVERAGE WAGES COMPARED WITH THE NATIONAL AVERAGE</th>
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<td>Routine-in-clustered</td>
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SOURCE ROGER MARTIN, RICHARD FLORIDA, MELISSA POGUE, AND CHARLOTTA MELLANDER © HBR.ORG
early 9 million people in the United States work in retail. In November and December those ranks swell with temporary holiday employment. If you’ve stood in line at the grocery store, hunted for a sweater in a department store, or ordered a hamburger at a fast-food restaurant, you know that most of those jobs are not good jobs.

If you employ people in retail, you probably know that too. But you also know the conventional wisdom: To offer low prices and make money in businesses with razor-thin margins, you must keep labor costs down. That doesn’t manifest itself just in low wages; it also results in unpredictable schedules and few opportunities for success and growth.

Zeynep Ton’s Good Jobs Strategy refutes this trade-off. It advocates for higher wages and deeper investment in frontline workers and for making smart operational choices that leverage the investment in people. The Good Jobs Strategy results in better customer service and higher productivity — and prices that are just as low.

Ton and the Good Jobs Institute, a nonprofit she cofounded, recognize that implementing the Good Jobs Strategy isn’t easy. Part of understanding how to make the transformation involves taking the current measure of retail. To that end Ton’s colleague Sarah Kalloch took a short-term job as a frontline worker at a local outlet of a major U.S. retailer. She clocked in and out for nine weeks to understand what it is like to work in retail and what challenges prevent workers from delivering a great customer experience. I recently spoke with Kalloch about what she learned during her time on the job. Edited excerpts follow.

**APPLYING AND TRAINING**

HBR: Why go through this exercise?

KALLOCH: When I joined Zeynep to spread the Good Jobs Strategy, I wanted to understand how systems help or hinder frontline workers in terms of the customer experience and the company’s goals. I learn best by doing. I had never worked in retail, but I love to organize things, I love to make shelves look good, and I love to help people. I was excited, and I wanted to really understand the work and to go through the whole cycle of applying, interviewing, training, and serving customers. I also wanted to work hard and earn my $11 an hour. You call it an exercise, but this was a real job for me, and I wanted to deliver.

Did you choose the retailer because you specifically wanted a good- or a bad-job experience?

No. I applied online to several retail stores to work in frontline roles, and I got a call for an interview from two. I drove half an hour to one interview only to have them tell me that their computer system had been down all day and they could not interview me. I had a brief interview at the second store, and they did a background check — and I was hired. They didn’t call my references, which was a little surprising — I had never worked in retail and had kind of a crazy résumé. If I had been the hiring manager, I would have done more due diligence.

But that’s exactly what we’ve observed at other companies. Many managers simply don’t have the time for thorough
hiring. Their stores are experiencing high turnover, and they need to fill positions fast. They end up hiring the wrong people, which is bad for the company, bad for employees who aren’t the right fit, and bad for existing employees, who get a teammate who is unable to contribute.

So you got the job. Then what? Training. My training group of six included one person who probably should not have been hired — I knew within 10 minutes of meeting her that she was not reliable. And it turned out that she was frequently absent, which made work worse for the rest of us. But the manager was contending with tight labor hours, high turnover, and high absenteeism. He needed to fill roles and could not escape that vicious circle.

I was told that after some general computer-based training, I’d be paired with a staffer in my department who would train me in my specific job. I felt good about that plan — but it’s not what happened.

I had about 40 hours of training — but 20 were wasted by technology glitches, unproductive shadowing outside my department, and just waiting to be told what to do next. When I finally got onto the store floor, I was unprepared to do my job. I had not even had a store tour — I had no idea where things were or where they belonged in my area, never mind in the whole store. I was terrified.

DAY ONE: A NEW JOB ALREADY?
What was your first day like?
Orientation started at 9 AM. I was put in a room with several other new hires. No one said anything to us — we were not given an agenda.

For the next two hours the manager called people into his office one at a time to do paperwork. We had nothing to do while we waited for our turns. We just sat in the room. One man fell asleep. Two women left several times for smoke breaks. I read everything on the walls. Finally a staff person came in to talk to us. He started right in with pay periods, schedules, how to clock in, and the attendance policy. He then showed us three completely unrelated and totally bizarre videos: one that seemed to be about customer service, one on how to use heavy equipment, and one on benefits — which I did not qualify for. There was some important safety information; we skipped over that. He did not talk to us about the company’s strategy. Or culture. Or our roles. Or how many people it employs. Or how many customers it serves. Or anything that would provide a foundation for why we were there and what we were part of and why we mattered. By the end of day one all I knew about the job was that I needed to show up.

Do you think this happened because the company didn’t value its frontline employees? Or was it something else? It’s a systemic problem. It was frustrating, because that profoundly disorienting orientation cost the company money and goodwill. We were paid two hours for sitting and waiting. We were not treated with respect or set up to succeed for the customer. The manager orienting us seemed pulled in several directions. And this happens at companies across the U.S. Managers operating without slack in high-turnover environments are often unable to create conditions in which new employees can learn and thrive — and that drives even more turnover.

Now you’re on the job. Did it improve once you got into the flow?
Unfortunately, no. Weirdly, on my first training day a manager told me to shadow a cashier. I was surprised, because I hadn’t been hired for a cashier position. I’d been hired to stock shelves and answer customers’ questions. The first cashier they matched me with did not speak much English and hadn’t been trained as a trainer. In fact, no one had been. The second cashier I was matched with left me alone at the register to use the bathroom. During that time I rang up a mother and son and forgot to give them one of their bags. I was horrified. They had been kind, and I had completely failed them.

This went on for days — ineffective cashier shadowing and failing in front of customers, interspersed with computer-based training. And after all that shadowing, I never cashiered again.

The Good Jobs Strategy encourages cross-training. You want people to have mastery in one or two areas but to be flexible enough to do a couple other jobs as well. But to me, this was the worst way to cross-train. I wasn’t trained well enough on the cash register to feel comfortable working it. Meanwhile, I wasn’t gaining skills in the job I had been hired for. It made me less effective and less able to serve customers.

THE 40-HOUR 20-HOUR WORKWEEK
Did you go to your manager with your concerns?
I almost never saw my manager, partly because we often worked different shifts. Also, because the store had such incredible staff instability, he never knew whether workers would come in or not. I think he kind of gave up on managing and just did the tasks himself. When I came in — every day, and on time — he never had anything planned for me to do.

One day I came in for a nine-hour shift and saw a manager restocking shelves in my section. I thought that was odd — I would be there for the next nine hours, and that was my job. But I moved to a different area and got to work. I work hard, and I work fast. Within 90 minutes the whole section
looked great except for some stockouts, which I was not trained or equipped to solve. I had 7.5 more hours in my shift, but the manager I had seen earlier was gone. I did whatever I could. I put things away and answered customers’ questions, but it probably added up to about 10 minutes of work per hour. It was a gorgeous summer Saturday, and it was not busy. I was basically jumping up and down and waving my arms, screaming, “Give me more work,” but no one cared. That day I wrote in my notes, “How am I supposed to care about my work if no one cares about me?”

The kicker is that I hadn’t wanted to come in that day. I’d asked for the day off so that I could attend an event that night. They’d offered to have me come in and leave earlier, but the schedule never got changed. Our schedules were totally unpredictable. I had asked to work 20 hours a week, but I was usually scheduled for 40 and had to ask the manager to change it. The situation was completely untenable, but everyone had to deal with it — we were told it was a system error, but it happened every week. Nothing was done to correct it. Schedules changed all the time.

I don’t think it was the nature of this particular company that caused the problem. It was the nature of a business in which the labor model generates bad jobs. We have seen this kind of chaos and instability at other retailers. One grocery store manager at a company we studied wanted to develop people and build his team but found himself behind the register several hours a day because people didn’t show up to work. With a tight labor model, there was no slack in the system. Retailers may think this saves money, and it may in the short term — but it is very costly in the long term.

All I wanted to do every day was be busy and productive so that I could contribute to the company and, frankly, so that the time would pass quickly. And I really wanted to be able to help people. But I never had the tools or knowledge I needed — and I hardly ever had assignments.

**COMMUNICATION BETWEEN THE FRONT LINE AND HEADQUARTERS**

**Did you ever feel like taking matters into your own hands when things were going poorly?**

That really wasn’t possible. Headquarters had clear plans for the store — but they did not always correspond with the realities on the ground or the resources we had.

During one of my shifts we got the floor plans for a holiday display. I helped set up the infrastructure for it — hooks and baskets and shelves. It was going to be a good day: I had a big project, and I love holidays.

The plans for the display sent by headquarters looked great. Our final display did not. We were missing maybe a third of the merchandise, and we weren’t allowed to fill in the gaps with holiday merchandise we had on hand for other sections; we had to leave parts of the display empty. As frontline workers, we had no visibility into why that happened. Maybe visual hadn’t talked to planning, or logistics was delayed, or something went wrong outside the store walls. Time, money, and materials were wasted — and the customer suffered.

Supply chains and planning are very complex and will never be perfect, but the best companies simplify whatever they can and empower stores to adjust when things change — and give them the slack to do so. We were not empowered to adjust the floor set, so it sat half empty even though we had merchandise in the back, which hurt business and made me feel we were not trusted to make decisions in our own store.

**Were there things you could do on your own to make the customer experience better? Would you have felt comfortable proposing changes to headquarters or your managers?**

I tried. We always talk about the fact that much of what needs to be improved is invisible to headquarters but clear to frontline workers, and that is totally true. I had ideas for addressing various operational challenges, and so did my coworkers. They were not radical changes; they were easy, often cheap or no-cost solutions that would have saved time and money or given customers a better experience or both.

But we had no outlet for our ideas. In fact, if you brought up a challenge with a manager, you were labeled a troublemaker. I found this out the hard way. I brought up a problematic process to a manager and asked if there might be a better way to do it. She excoriated me in front of other people. I felt she was basically telling me to be quiet and do my job.

A coworker who had been there for years saw this and reached out to me on break. He was very kind and said he was sorry for the way she had treated me — but that was the culture. He said, “If you just do what they say, they will love you. If you bring them problems, they will hate you. If you make them do any extra work, they will hate you.”

Again, in this chaotic environment — which we have seen at other retailers — managers did not have time to problem-solve. They barely had time to get tasks done — forget hiring, training, developing, and leading. I don’t think they were encouraged to solve problems or that they necessarily had the skills and resources to do so. They needed people to keep the boat afloat, not rock it. They could not spend 30 minutes solving a problem even if that could save thousands of hours in the future — there was just too much to do.
in the moment to think long-term and innovate and improve.

**ENDURING AN EMOTIONAL ROLLER COASTER, FOR $100 A DAY**

How would you sum up your nine weeks at the store?

Working in a retail store is physically and emotionally exhausting. Physically, I was lifting heavy boxes, walking all around the store, going up and down ladders, and standing on my feet all day. Emotionally, I was on a roller coaster. When I had a clear assignment or could connect customers with what they’d come in for, I felt good. But most of the time I experienced frustration, boredom, and waste all around me. Every day I came home demoralized and drained, and with less than $100 to show for it.

I had some wonderful coworkers who went above and beyond to do their very best every day, to support one another, and to make the customer experience as good as possible. It takes real skill to ring someone up quickly, and it takes time and attention to get to know hundreds or thousands of products so that when the time comes to help a customer, you can do it well. But the system did not allow any of us to be as productive and engaged as we wanted to be. Operational inefficiencies and a lack of investment in people wasted talent, time, money, productivity, and consumer trust.

Retailers have options: They can invest in people who will be problem solvers and customer service dynamos and who will own their store operations and make them productive and positive — and profitable. Or they can underinvest in people and operations and create chaos and instability for employees and customers. The choice seems really clear to me. We know a lot about how to help companies transform bad jobs into good ones. It is not easy. But neither is operating in chaos. And

...the rewards that come with good jobs and strong operations can ensure that companies weather this tough retail time and come out adaptable, agile, and profitable. That’s a win for everyone.
VIDEO

GETTING STARTED ON GOOD JOBS

In this whiteboard session, Zeynep Ton shows how you can begin implementing the Good Jobs Strategy. by Zeynep Ton

“THE GOOD JOBS SCORECARD HAS THREE COMPONENTS – EMPLOYEES, CUSTOMERS, AND OPERATIONAL PERFORMANCE.”

Zeynep Ton’s Good Jobs Scorecard can help you understand how jobs in your company measure up. Watch above as Ton walks you through how to use it.

Ton outlines how to tell whether you’re meeting your employees’ and customers’ needs and how to assess the impact of those needs on your operational performance. By the end of the session you should be able to start the process of implementing a Good Jobs Strategy.
Walmart has gotten a huge amount of negative publicity over the years for its low pay and benefits, which have forced tens of thousands of store workers to seek public assistance, and for the limited hours and life-disrupting unpredictable schedules it offers all too many of them. But the past few years have brought signs that the company is rethinking its labor policies. It has raised frontline workers' wages (to an average of $13.85 an hour for full-time employees), improved benefits, expanded training, and made statements like “We are committed to unlocking the full potential of the U.S. retail workforce.”

Given that Walmart employees in many states still have trouble making ends meet, it has been hard to know how seriously to take these measures. Are they modest steps implemented to attract and retain workers in a strong job market and to burnish the company’s reputation to win customers who have shunned it for its HR policies? Or do they signal a sea change?

In this edited interview Greg Foran, the president and CEO of Walmart U.S., indicates that it’s the latter. A New Zealander who headed Walmart’s operations in China before assuming his present role in August 2014, Foran subscribes to Zeynep Ton’s Good Jobs Strategy. The GJS is a model for empowering and investing in frontline workers in retail and other service industries and revamping operations to support those workers, helping them be more productive and serve customers better.

A handful of other companies, including Costco, Trader Joe’s, QuikTrip, Mud Bay, Mercadona, and Quest Diagnostics (in its call centers), are pursuing the GJS. But if Walmart U.S., with its 1 million-plus employees and its clout in the market, continues down this path, it could prove a tipping point. Others might be inspired or compelled to follow suit, which would have an enormous impact on the U.S. economy, one comparable to Henry Ford’s 1914 decision to more than double the minimum pay of his workers, to $5 a day — a move that accelerated the expansion of the middle class.

HBR: In 2014, when you became the head of Walmart U.S., how were the stores performing?

FORAN: My perception of Walmart U.S. before I came here was that it was a really strong, vibrant business. But I wasn’t unaware that the financial results indicated that maybe things were not as good as they appeared. So I started digging. What I found out, in no particular order, was that pricing wasn’t where we needed it to be. The stores weren’t where we needed them to be in terms of basic things like cleanliness and items in stock. The engagement of the associates [Walmart’s term for all its employees] wasn’t where we needed it to be. The supply chain wasn’t working as well as
it should have been. Each rock I turned over indicated that our business was past its prime and starting to struggle. That was reflected in our comp store sales. Profits still looked OK, but profit could hide many sins; it's what your customers and associates say about your business that indicates whether it's vibrant and healthy. When you looked at that, it was clear we had some issues.

How did you think about improving performance? What did you do?

Having compiled a fact base, we had a discussion about the need to focus on our store associates. We were paying something like $7.65 an hour, on average, as an opening wage. But as you visited stores, met with frontline associates, and spoke with their managers, you could tell we were having difficulty attracting the right talent to apply for jobs, let alone holding people for any length of time.

That led early on to a board decision to invest more in our workers. We took a pretty bold step, putting about $2.7 billion over a couple years into higher wages, benefits, and training. We knew we also had to address price and remodel a number of stores. We went to Wall Street and said, “If you give us a breather on the bottom line, we’ll deliver an improved top line. But it won’t happen in a year; it’s going to take three years.”

We did a number of things: We raised our minimum wage; started to deal with things like paid time off and benefits; introduced “academies,” which are dedicated facilities where associates in roles such as frontline supervisor, department manager, and assistant manager receive training in retail fundamentals and area-specific skills; changed the way people work in stores by introducing more digitization and increasing their access to information; changed processes — a whole bunch of things. By and large, that’s working for us. It fits pretty well with the Good Jobs Strategy, because all the way through we’ve tried to simplify the business, standardize work processes, and empower associates.

We call our approach to achieving that One Best Way. We have one best way for managing inventory, one for scheduling, one for setting shelves, and so on. Standardization creates efficiency. Getting routine tasks done faster lets associates spend more time serving customers. We’ve still got work to do on cross-training so that associates can perform a wider range of tasks, and on operating with slack — staffing stores with more labor hours than the expected workload calls for. But our journey is well under way, and it’s the right thing to do.

How did you hear about the Good Jobs Strategy?

About a year into our work one of the consultants I use, who challenges what I’m doing and how I’m thinking about things, said, “I came across this book, The Good Jobs Strategy.” I took it home and read it over a couple of days. It resonated with me. I thought, This is so blindingly obvious: If you simplify operations, standardize work processes, and empower your employees, you will get better results. I particularly liked the empower process. Just standardizing isn’t good enough.

I’ve been working in retail for 40 years. If you don’t give people some surety around how many hours they will be given and what their schedules will be like, you create problems. I’ve watched businesses I’ve been associated with do things like cut people’s jobs back so that they get three hours here on Tuesday and four hours there on Wednesday. You can address that through cross-training so that when there’s downtime in one type of job, people can perform another. When I read the book, I went, “Bingo!” I called Zeynep — I didn’t know her — and asked if we could get together. A few weeks later I went to Boston and spent the day with her, touring stores and talking about the ideas in The Good Jobs Strategy and the things we were doing at Walmart.

Zeynep and I have continued talking, and I’ve encouraged my team to think about ways to adopt elements of the strategy, in terms of both how we talk about jobs, and the process itself.

You described at a high level where you are. Could you be more specific about things you’ve done to improve the customer and employee experience and operational performance?

Let me begin at the end. It’s been good to see progress. But to some extent the low-hanging fruit has been gained; the hard work now begins. That’s what I see when I walk around our stores and distribution centers, and it’s what I hear when I talk to our customers and associates. We’ve done some really good foundational things. But over the past three years we’ve been fixing, and now we’re starting to talk about leading. “Fixing” is about getting the basics right. “Leading” is about how we can exceed industry standards rather than simply meet them. When we think about moving from a mindset of fixing to one of leading, we mean the ways in which Walmart will define the future of retail by continuing to transform how we operate and innovate.

In terms of the fixing part: Our stores are cleaner. Food is fresher, because we’ve made changes like reducing the amount of time products spend in the supply chain. Our associates have better tools. For example, they were using a Telxon — a wireless barcode scanner for checking prices and managing inventory, which has been around for a long time. They’ve now got TC70
handheld computers, and we're looking to move to even better technology. The customer experience has significantly improved because of the actions we've taken: remodeled, cleaner stores; better-trained associates who can serve customers more effectively; better in-stock positions; and the ability to get through checkouts quicker.

In terms of the associates, there's a better induction process for new hires. We rolled out a program called Pathways, which gives entry-level associates training and mentoring over their first few months. It's designed to teach skills crucial for retailing, including customer service, merchandising, teamwork, and communication. After successfully completing the program people receive a pay increase, information about the career paths available to them at Walmart, and a clear picture of what experiences and skills are required to grow with the company.

In addition, we have better training in how to use metrics and leverage the available information to help serve associates and customers. Every manager now has the ability to get into significant people metrics — such things as the number of open positions, turnover rates, who's completed training, and who's due to be trained. Finally, we've established 200 academies, where the training lasts anywhere from two days to a week. About 250,000 associates will have been through them by the end of the year.

Something else I'm really proud of is that we've improved what we call My Share. All associates have the ability to earn a bonus. And as you can tell from our latest earnings report, we're doing better financially. That means associates in more and more stores are becoming eligible for a bonus.

Were your actions driven by intensifying competition from online retailers? Or because Walmart has saturated the U.S. market with stores and therefore has to get more out of its existing stores? Or both? Both. Three and a bit years ago Walmart was at a crossroads. We could demonstrate to the market that we had growth opportunities, or we could continue to concentrate on a bottom-line profit. That's a nexus a lot of businesses find themselves in, not just in retail. We made a decision to grow the top line. Part of that would involve developing an e-commerce offer, and part would involve getting more people visiting our stores and putting an extra item into their basket. If you're a shareholder, you're not looking just for bottom-line profits; you're also looking for long-term growth.

There's a second component, which to me is even more important: the DNA of Walmart. If Sam Walton [Walmart's founder] were here today, he would be incredibly disappointed if we weren't doing a good job for our customers and associates. I know that not because I've met Sam but because I spent 12 years with Jack Shewmaker, one of his lieutenants. Jack joined the company when there were only 32 stores and ended up being number two in Walmart's leadership structure. He was the smartest retailer I've ever met. One of the reasons I'm here is Jack; he was a mentor of mine before I joined Walmart. He taught me the value of looking after our customers and associates. So there's a personal component to what I do: I know that if you don't look after your customers and associates, you don't have to worry about the shareholders, because it's just not going to work.

Here are the reasons you take on the kind of transformation we have: First, you've got to believe in it. Second, there's absolutely a financial aspect. And third, you hate losing. Lots of people didn't believe we could do this. They would say, "This isn't going to work. You can't get more people coming into the stores. Walmart is too big to change. It's done; it's run its race." All that did was make me determined to prove them wrong.

What has been the impact of the steps you've taken on turnover, absenteeism, morale, productivity, and customer satisfaction? I believe in the Good Jobs Strategy. I also believe in Net Promoter Scores. Plenty of good businesses have really good Net Promoter Scores. They didn't get them through luck. They got them by working hard. We've significantly improved our Net Promoter Score. In fact, I was told by the chap who coauthored the score that he's never seen a business our size move as quickly as we have in the past three years. So customers are noticing.

In terms of associates, we are still early in the journey. I'd like to tell you we've made massive inroads in terms of turnover and retention. But the reality is that we've bent the curve. We're heading in the right direction, but we're only about 20% of where we need to be.

How about productivity? We're now growing sales faster than costs; we've done that every quarter this year. There are other things I measure: What is our cost per case through distribution centers? How many units are we moving across checkout scanners? All those things are beginning to improve. We have definitely turned the corner; we're starting to head north.

The Good Jobs Strategy is a system — a number of elements working together. Are you applying all the elements? We're rolling out many pieces. We were rolling out some before I read Zeynep's book.
There is a wonderful quote in the book from Oliver Wendell Holmes Jr.: “I would not give a fig for the simplicity this side of complexity, but I would give my life for the simplicity on the other side of complexity.” A lot of people like to simplify things. But they get no prizes for doing so unless they have dealt with the complexity of the issues. I like to get into the details and understand them. Only when you have understood them and dealt with the complexity of them do you have the right to simplify. We do understand the system part of the strategy. There are bits where we are deeper in and others we’re still developing.

Were there elements of the system you had to do before you could consider tackling others? I’m thinking about what you’ve done with pay and benefits.

When I was 17, I started working full-time. I got bored with what I was doing in a store, so I decided to take some night school classes. I learned about Frederick Herzberg, a psychologist who looked at the factors involved in job satisfaction. He studied the industrial revolution and pointed out that it would be really difficult to motivate people to work in a factory unless you provided clean running water, warmth in the winter, cool in the summer — the basics.

What we did with pay addressed one of those basics. It was so visible. And while we will always have more to do in this regard, it gave people a reason to believe. It let us begin to do other things. It was a critical first step.

It sounds like Walmart is planning to implement the whole system. If so, what are the next steps? We’re already doing a whole bunch of elements. We’re still learning about others. There is a strong correlation between what we’re doing and what Zeynep talks about, and there’s a pretty strong correlation between the way she thinks and the way I think. We’re going to continue talking, and as I mentioned, I’m encouraging my team to connect with her and to think about her approach more deeply.

Are you rolling out elements of the system together, or piecemeal?

We tend to focus on one element at a time. Our approach to developing and rolling out new ways to schedule associates is a good example of how we do it. We’ll put a new process into a store, start to work it through, and learn. Then we’ll roll it out to five stores and see what happens. Then we’ll take it to a region of 80 to 100 stores. Then, if we’re happy, we’ll start rolling it out across the country. That’s often how we introduce initiatives. It might also be how we will develop new apps and tools for the associates.

What are the biggest challenges so far?

The single biggest challenge is change and the fact that we’re doing something on a scale most businesses don’t have to deal with. Most major retailers — Costco, H-E-B, Food Lion — have 400 or 500 stores. We have almost 5,000. You can’t underestimate what happens when you go up by a factor of 10. An awful lot of change management and communication is needed to do anything at Walmart. You’ve got to get the army to march.

About the author: Steven Prokesch is a senior editor at HBR.
leaning offices. Assembling modular furniture. Stocking workplace kitchens. Providing security. These are often bad jobs. Have one, and chances are you’re working hard but not bringing home much more than the minimum wage. There’s no promotion in sight. And you have little if any control over your schedule.

Dan Teran knows all too well. In 2014, when he and his cofounder launched Managed by Q — a startup that provides office cleaning and maintenance — he was doing all those jobs, moonlighting as a staffer at the business he ran during the day.

“During our first year I spent almost every night cleaning offices or supervising cleaners, because we didn’t really know what we were doing,” he recalls. “We would pretty much say yes to everything. Whatever tasks you wanted done, we did.”

That was no recipe for success. Employees were stretched thin, doing jobs they weren’t trained or equipped for. A lot of them were unhappy.

“It created bad outcomes for the business, bad outcomes for the customer, and a bad employee experience,” Teran says.

So as the company grew, Teran decided to integrate Zeynep Ton’s Good Jobs Strategy, or GJS, into the business plan for Q Services — the more traditional part of the company, which employs more than 700 W-2 workers. (The firm also provides a platform and marketplace for companies to connect with other service providers.) But there were some basic differences.

Unlike most companies Ton has worked with, Managed by Q is not a retailer. Also, Managed by Q is in a high-growth mode, whereas many of Ton’s retailers are older, more established companies. These things make Teran’s application of the GJS that much more intriguing. It’s not just about cleaning up service jobs; it’s also about making fast-moving startups better.

In applying the GJS, Teran has focused on four things: pay, scheduling, benefits, and advancement. Employees start at $12.50 an hour. Full-time workers average 120 hours a month, and they are offered health insurance and a 401(k) plan. Employees are part owners of the company, and they get stock options.

In addition, the company doesn’t take on jobs requiring specialized knowledge that its employees lack. By not accepting those kinds of tasks (such as taking care of orchids) and focusing on the most frequently requested ones (such as assembling furniture), Teran explains, the company sets employees up for success.

“The Good Jobs Strategy takes what could otherwise be a dead-end job and turns it into a real platform on which to build a career,” he says.

Is it working? Managed by Q has clients in New York, Chicago, Los Angeles, and the San Francisco Bay Area. And it’s profitable.
The Good Jobs Strategy, or GJS — an approach to improving productivity and customer satisfaction in retail and other service industries — works. But the system, which involves paying frontline workers more, providing them with predictable schedules, offering them career opportunities, and supporting them with a specific operations model, is not easy to implement. There haven’t been hundreds of GJS transformations to learn from, but there have been hundreds of implementations of the Toyota Production System (TPS), and they can help us learn how to change an operation.

The GJS has many parallels with TPS in terms of investment in people and the operational choices that leverage that investment. (See the sidebar “The Four Operational Choices in a Good Jobs System.”) Crucial to both approaches is the need for a stable workforce — for employees who show up, stay with the company, and work hard and well.

In TPS, stability means the 4 M’s: machinery, materials, methods, and manpower. The first three M’s are obvious and widely accepted. After all, you can’t run a good operation if your equipment keeps breaking down, your supplies are unreliable in terms of quality or delivery, or your methods depend on exceptions and work-arounds. The fourth M — manpower, or people stability — is often overlooked or misunderstood. But without a capable, reliable, and motivated workforce, TPS can’t succeed, and neither can the GJS.

A good example of an organization that knows people stability is a prerequisite for continuous improvement is Deublin, a company based in Waukegan, Illinois, that manufactures a large variety of rotating unions — complex rotating sealed bearings used in machine tools, paper mills, wind turbines, and many other industries. Deublin has partnered with the Toyota Production System Support Center (TSSC) over the past five years to implement a sophisticated just-in-time production system. (TSSC has helped hundreds of Toyota’s partners and suppliers and many other organizations improve their operations through TPS.)

The just-in-time system dictates that a manufacturing line can be down for minor delays, equipment downtime, rework, or changeovers no more than 15% of the time — a very high standard for complex assembly. But the line making rotating unions was down 31% of the time. Part of the problem was materials, machinery, and methods instability, and Deublin and TSSC made many improvements in those areas. But another big issue was people instability. The line’s complexity required highly trained employees who knew the product and the process, could consistently follow standardized work, and motivated workforces, TPS can’t succeed, and neither can the GJS.

An investigation revealed that Deublin did not have that kind of people stability. The biggest people-stability challenge was high turnover among temporary workers. Deublin was committed to
### THE FOUR OPERATIONAL CHOICES IN A GOOD JOBS SYSTEM

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<th>OPERATIONAL CHOICE</th>
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<td><strong>Focus and simplify</strong></td>
<td>Identify what problems you help solve for your customers and streamline products, promotions, and services to maximize customer satisfaction and employee productivity. Minimize last-minute changes to deliveries and promotions. Focusing and simplifying enables higher wages, more-predictable schedules, and higher motivation for employees; better service for customers; and higher sales and lower costs for companies.</td>
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<td><strong>Standardize and empower</strong></td>
<td>Standardize routine processes (the unloading of trucks, shelving, and cleaning, for example) with input from frontline employees, and empower those employees to improve their work, provide input into merchandising (how much inventory to hold, which products to stock, how to display them, and so on), and solve customer problems. Standardization drives efficiency, while empowerment increases motivation and helps employees contribute to higher sales. Greater employee contributions make possible higher pay.</td>
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<td><strong>Cross-train</strong></td>
<td>Train employees to perform both customer-facing and non-customer-facing tasks so that they can vary what they do depending on customer traffic — and train them in a way that ensures ownership and specialization. Cross-training means more-predictable schedules, higher motivation, better teamwork, employees who are more responsive to customer needs, and higher productivity (because there’s less employee downtime when traffic is slow).</td>
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<td><strong>Operate with slack</strong></td>
<td>Staff your units with more labor hours than the expected workload so that you can meet demand at peak times. Operating with slack lets employees do their work without making mistakes, deliver great service, and have time to identify and communicate ideas for improvement. It enables companies to cut costs and continuously improve.</td>
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Offering stable jobs for permanent workers, but because of seasonal variability in demand, it also used temporary workers. Owing to a weak applicant pool, many temps failed quickly and had to be replaced. Those who did well and would have liked permanent jobs often left for companies that offered clearer career paths and better pay. Before Deublin could improve its production process, it had to address this issue.

First, the firm added a standardized dexterity test, a behavior assessment test, and a process to make sure it hired the right people. Second, it changed its training procedures to provide new hires with mentors and to do a better job helping them master crucial skills. Retailers that subscribe to the GJS, such as QuikTrip (a U.S. convenience-store chain) and Mercadona (Spain’s largest supermarket chain) have similar hiring and training practices. (See “The Case for Good Jobs.”) They’ve found that this higher investment in new employees pays off in people stability and operational excellence.

Third, Deublin worked to keep its strongest performers. It raised the starting wage for temps by 25% and gave them a 20% raise and increased benefits after six months on the job. It also roughly halved the time needed for temps to secure full-time assembly-line positions — from 12 months to six months — and explicitly laid out how they could progress to machinist, supervisor, and mid- and upper-level management roles. Turnover among temps dropped by 50%, and Deublin found itself with a much more stable and productive workforce.

Now the firm was in a position to work with TSSC to implement its own version of TPS, called the Deublin Performance System, and to transform its business. It has increased on-time delivery performance from 50% to approximately 95% (the goal is 100%). And with all employees engaged in continuous improvement — thanks in part to real workforce stability — Deublin knows it can get there.

People stability is also necessary before implementing GJS operational choices, such as empowering people to make decisions and giving people time to identify and solve problems, that can work only with capable and motivated employees. As discussed in “How to Build a Business on Good Jobs,” Quest Diagnostics, a provider of medical diagnostic services, realized it had to stabilize its workforce to improve the performance of its call centers. It raised wages and offered a clear career path before embarking on GJS operational improvements such as cross-training and empowering employees. Like Deublin, Quest has seen significant performance improvements that have delighted customers.

As both the Toyota Production System and the Good Jobs Strategy demonstrate, operational excellence cannot be achieved without great people who show up, are competent, and want to improve. Companies often perceive a trade-off between operational inefficiency and people investment, but it’s a false trade-off. You're going to pay one way or the other. Either you invest in a well-paid, well-trained, well-motivated team that will make your company better every day, or you incur endless high penalties for your mediocre workforce.
in the form of higher turnover, higher inventory costs, lower quality, worse customer service, and less responsiveness and adaptability. Investing in people stability may seem expensive, but the alternative — a poor-performing operation — is much costlier.

About the authors: Jamie Bonini is a vice president of the Toyota Production System Support Center, a not-for-profit organization affiliated with Toyota Motor North America that since 1992 has helped other organizations adopt the Toyota Production System. Sarah Kalloch is the executive director of the Good Jobs Institute, a nonprofit whose mission is to help companies thrive by providing good jobs to frontline workers. Zeynep Ton is an adjunct associate professor at MIT’s Sloan School of Management, a cofounder of the Good Jobs Institute, and the author of the two-part article anchoring this package.
PORTFOLIO

ZEYNEP’S RECOMMENDED RESOURCES

The literature on the benefits of good jobs and the costs of bad jobs practices is growing fast.

ARTICLES →

HBR, where the Good Jobs Strategy found purchase, has published many articles on topics related to good jobs, especially change management. And the popular press has picked up on some of the good jobs work.

“Why ’Good Jobs’ Are Good for Retailers” by Zeynep Ton. This article highlights the costs of bad jobs and shows how four low-cost retailers are thriving by offering good jobs.

“Leading Change: Why Transformation Efforts Fail” by John P. Kotter. This classic article explains the eight largest mistakes that hurt change efforts. A must-read for anyone implementing change.

“Why Change Programs Don’t Produce Change” by Russell Eisenstat, Bert Spector, and Michael Beer. One of my favorites. Beer — a wonderful mentor — and his colleagues explain why top-down change programs rarely work.

“Working Anything but 9 to 5” by Jodi Kantor. Kantor does a great job helping us see what unpredictable schedules do to workers.


“Managed by Q’s ‘Good Jobs’ Gamble” by Adam Davidson. Davidson explains how Dan Teran, a cofounder and the CEO of Managed by Q — a startup that provides office cleaning and maintenance — forwent the gig-economy model of working with contractors and instead offered good jobs.

“The Magic in the Warehouse” by Neal Gabler. Gabler provides a good description of Costco and how it thrives by offering good jobs.

“Spanish Aisles: Why a Low-Price Retailer Is Thriving” The Economist discusses Mercadona.

“Curing the Addiction to Growth” by Marshall Fisher, Vishal Gaur, and Herb Kleinberger. This article presents a methodology for identifying when a retailer should slow its store-opening rate and adopt a new operating approach. It makes clear that good jobs are especially important for mature companies that need to generate more revenue from their existing units.

“Irregular Work Scheduling and Its Consequences” by Lonnie Golden. In many service settings, erratic and unpredictable schedules hurt workers as much as poverty-level wages do.

“Man’s Search for Meaning: The Case of Lego” by Dan Ariely, Emir Kamenica, and Dražen Prelec. At good jobs companies, frontline employees connect their work to making a difference for their customers. Ariely and his colleagues tell us why that matters.

“Quest Diagnostics (A): Improving Performance at the Call Centers” by Zeynep Ton and Cate Reavis. This case makes clear that operational excellence is not possible without people stability.

“The Most Underrated Skill in Management” by Nelson P. Repenning, Don Kieffer, and Todd Astor. Being thoughtful about what problems to solve before taking action is crucial. This paper explains how to do that better.

“QuikTrip” by Zeynep Ton. The QuikTrip convenience-store chain follows the Good Jobs Strategy. If good jobs and outstanding financial performance are possible at convenience stores, they are possible anywhere.

RESEARCH AND CASES →

The literature on the benefits of good jobs and the costs of bad jobs practices is growing fast.

“When Does Paying More Pay Off?” by Hazhir Rahmandad and Zeynep Ton. This paper uses a systems dynamics approach to understand whether good jobs are profit-maximizing in mass-market service industries and to identify strategies for offering good jobs in settings with high demand variability.

“How to Change a Culture: Lessons from NUMMI” by John Shook. The NUMMI transformation is my favorite transformation example. This paper explains how changing work and showing respect to people through better work design can change culture.

“Mercadona” by Zeynep Ton and Simon Harrow. Mercadona, Spain’s largest supermarket company, excels at operations. For an operations professor like me, being at a Mercadona store is like being at a Toyota factory.

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“QuikTrip” by Zeynep Ton. The QuikTrip convenience-store chain follows the Good Jobs Strategy. If good jobs and outstanding financial performance are possible at convenience stores, they are possible anywhere.
These books paint a picture of where the jobs are, what needs to change to transform bad jobs into good jobs, and how to make that change.

**Books**

*The High-Velocity Edge: How Market Leaders Leverage Operational Excellence to Beat the Competition* by Steven J. Spear. Spear, who spent years studying the Toyota Production System, provides an excellent description of how Toyota and other companies use continuous improvement as a strategic weapon.

*Management on the Mend: The Healthcare Executive Guide to System Transformation* by John Toussaint with Emily Adams. Although this focuses on health care, many of its lessons are relevant in other contexts as well.

*The Good Jobs Strategy: How the Smartest Companies Invest in Employees to Lower Costs and Boost Profits* by Zeynep Ton. This covers more than 10 years of my research.


*Good Jobs America: Making Work Better for Everyone* by Paul Osterman and Beth Shulman. This provides great data on where jobs are and on the need to upgrade low-wage jobs.


*Good Jobs Transformation at Quest Diagnostics* by Good Jobs Institute. In this short video, Quest executives talk about the implementation of the Good Jobs Strategy at their call centers.

**Videos**

Hearing the voices of people involved in a good jobs transformation is a valuable way to learn how it works.
NEXT IN THE BIG IDEA:

JANUARY 2018

ENDING SEXUAL HARASSMENT

Public platforms for reporting bad behavior and research on creating safe workplaces both indicate a generational change in how men and women attain — and retain — power in the workplace. HBR explores the risks and rewards for leaders as they seek to address one of business’s most open secrets: Sexual harassment affects too many of us.
ARTICLE
MANAGING PEOPLE

Transforming Today’s Bad Jobs into Tomorrow’s Good Jobs

by Zeynep Ton and Sarah Kalloch
MANAGING PEOPLE

Transforming Today’s Bad Jobs into Tomorrow’s Good Jobs

by Zeynep Ton and Sarah Kalloch
JUNE 12, 2017

All eyes are on the future of work and the impact that automation and machine learning will have on U.S. jobs. The blizzard of conferences, initiatives, articles, and reports on how to prepare for the changes technology will bring to our economy is important. But so is today — and it feels to us like the futurists are leaving behind what’s happening now.
Work currently does not work for millions of Americans. Nearly 11.5 million people who work as retail salespeople and cashiers and in food prep and service — the three largest occupations in the United States — earn poverty-level wages and have unpredictable schedules, few opportunities for success and growth, and little meaning and dignity in their jobs. These workers have bad jobs, and they need and deserve good jobs now, regardless of who’s going to be doing what in the future.

But in fact, transforming these bad jobs into good jobs is a good way to prepare for that future. Keep in mind that many retail and restaurant jobs require nonroutine manual labor, physical dexterity, and social interaction, which, according to MIT researchers Daron Acemoglu and David Autor, are less amenable to automation. But let’s say that automation really does reduce retail and restaurant employment. Good jobs stores and restaurants will do better in leveraging that automation — as well as better serving their customers, employees, and investors today. Here’s why.

**Developing Skills that Will Matter in the Future**

Thought leaders and futurists name complex problem solving, critical thinking, and creativity as the most important future job skills. But at good jobs companies, these very skills are already demanded, developed, and put to use.

Companies that offer good jobs today — with decent wages, predictable schedules, and opportunities for success and growth — do so by combining investment in people with operational choices that increase their employees’ productivity and contributions. We call this approach *the Good Jobs Strategy*. One of the key choices they make is empowering employees to make decisions to benefit their customers and involving employees in improvement.

For example, Mercadona, a good jobs retailer that’s Spain’s largest supermarket chain, uses its employees’ creative and problem-solving skills to suggest product, packaging, and transportation improvements that have already saved the company millions of euros. Mercadona’s store employees are empowered to order products and present them in a way that satisfies their customers and improves company performance.

At Costco, another good jobs retailer, store managers are empowered to display merchandise and provide input into the merchandising system. A merchandising algorithm does provide insight into what should be stocked, but the store managers are on the floor every day, putting their own and their employees’ problem solving, critical thinking, and creativity — the skills of the future — to work today. When that future comes, who will have the competitive advantage?

**Seeing Automation as a Complement to People**

The Good Jobs Strategy enables companies to make the most of their employees’ full potential. So good jobs companies are less likely to focus on machines replacing workers and more likely to focus on machines as a valuable complement to their valuable people. When one of us visited Mercadona’s fully automated distribution center, the director said, “Its construction was based on one premise:
Don’t make a person do what a machine can do. The only effort we want from our employees is for them to give us their skills and their knowledge."

When asked about automation in retail, a good jobs company CEO who recently visited our class at MIT said he saw automation as a force multiplier. Right now, his employees do many tasks (such as mopping floors and counting change) that don’t directly add to the customer experience. If robots can perform these functions in the future, his employees can focus that much more on providing even better customer experience. “Anyone’s employees can mop a floor,” he said, “but not every company trains and supports their staff to provide excellent customer service.” He knows his company already has a competitive advantage — its frontline workers — and that automation will only increase their value.

Indeed, as our colleagues Erik Brynjolfsson and Andrew McAfee argue in their book The Second Machine Age, humans working hand in hand with machines do better work than either does by itself. Chess-playing computers can now beat even grandmasters like Garry Kasparov, but in so-called “freestyle chess,” human-computer teams beat computers. So if Amazon’s new cashier-free test store succeeds and eliminates the need for people to count change, good jobs companies — including their frontline workers — will probably be delighted!

**Ability to Implement New Technologies**

A company that engages its workforce now will not only provide good jobs and good customer experience today but also will be best prepared for whatever the robotics revolution brings. It’s easy to forget that technology rollouts require an engaged frontline. Even in the future, robots won’t just walk in the door, wave to the old employees on the way out, and get to work. Customers will need to be educated and supported along the way to greater efficiencies. Systems that work in labs and boardrooms will have hiccups in stores that require troubleshooting. Collaborative, productive, empowered employees will be best equipped to help companies roll out new innovations. They will gain new skills in the process, a win for everyone.

In fact, rollouts have sometimes gone badly — not yielding the expected benefits on very large investments — partly because the frontlines were not involved in the process. For example, when Bob Nardelli became the CEO of Home Depot, he started investing heavily in systems and technologies. In 2005 alone, Home Depot spent $1 billion on automating merchandising and store processes. But these changes, sensible in themselves, were accompanied by reduced investment in associates and were largely forced on the associates and store managers. Many of the systems either failed or fell short of their promised impact due to mismanaged rollouts, lack of user training, or because of lack of fit to in-store needs — in part because store associates were not involved.

Mercadona, on the other hand, spent €600 million between 2005 and 2008 to install the most up-to-date logistics and in-store retail technologies, and the rollout went smoothly because their workers were engaged in the process. Nobody was laid off — so the workers didn’t see the new technology as the enemy. They were well trained in the new technology and had the time — as well as the
autonomy — to help customers get used to it. It helped that as part of its Good Jobs Strategy, Mercadona has a laser focus on the customer and the new in-store technologies were developed not just to increase efficiencies but also to make the customer experience better.

So despite a large expense and no downsizing, Mercadona’s productivity went up. Sales per employee went from 179,142 euros in 2005 to 232,260 euros in 2008. That is what the Good Jobs Strategy is all about — now and in the future.

Zeynep Ton is a professor of the practice at MIT’s Sloan School of Management and co-founder and president of the nonprofit Good Jobs Institute. She is the author of *The Good Jobs Strategy: How the Smartest Companies Invest in Employees to Lower Costs and Boost Profits*. Follow her on Twitter at @zeynepoton.

Sarah Kalloch is executive director of the Good Jobs Institute, a nonprofit whose mission is to help companies thrive by providing good jobs. Follow her on Twitter at @sarahkalloch.
MEMORANDUM

To: California Commission on the Future of Work  
From: Noah S. Bernstein, Senior Program Officer & Director of the Quality Jobs Fund, New World Foundation  
Date: November 14th, 2019  
Re: November Convening, Supplemental Material on the Quality Jobs Fund

Background

The Quality Jobs Fund (QJF) is a project of the New World Foundation and made possible by a $100 million contribution by the Federal Home Loan Bank of San Francisco. QJF is designed to support economic opportunity and mobility in communities across California, Arizona, and Nevada – along with select innovative national models – by investing in promising quality-job producing businesses, impact funds, and workforce development tied to quality job growth in working class communities through local and regional investment intermediaries.

As of November 2019, QJF has committed $56M to twelve intermediaries that are breaking new ground in key growth industries and sectors of the economy:

- Co-op Conversion
- Small Business Growth, Expansion & Sustainability (access to capital)
- Workforce Development, Training & Placement (hard & soft skills advancement)
- The Gig Economy, Jobs of the Future
- Employment through Anchor Institution partnerships (e.g. colleges & universities, hospitals, etc.)

These intermediaries are in turn making direct investments into companies, organizations, and programs that increase both the number of quality jobs and access to those quality jobs. Additional information on the Fund and select investments can be found at:

www.qualityjobsfund.org
Grassroots Philanthropy Meets Cooperative Bank

QJF is a unique collaboration between two institutions that are aligned in their support of healthy and economically secure families and communities. The New World Foundation, serving as a longtime trusted ally in community and economic equity; and The Federal Home Loan Bank of San Francisco, a cooperative wholesale bank, supporting economic development across the West. Together, through this major initiative, both institutions hope to significantly contribute to building prosperous, vibrant and strong communities.

Within this partnership, our goals are community-based. Through businesses that successfully add good/quality jobs for those they employ; training programs will start moving people from underemployment or low-level jobs into better employment by connecting people to real jobs, whether that’s moving up the ladder where they are or moving onto new opportunities with the skills they have gained.

Prioritizing Quality Job Standards Across the Portfolio

QJF prioritizes key components of what a quality job provides and works with each intermediary to customize and apply quality job standards in relation to their work, industry, geographical location, and socio-economic parameters so that we advance economic mobility. The following are a few significant dimensions:

- A living wage that supports a decent standard of living
- A safe workplace
- A benefits package, including employer paid insurances (health, life, and disability), paid time off (i.e. sick time and paid time off and medical leave), and retirement savings support
- Access to training, education and professional development
- Predictable work schedules
- Potential for upward mobility and wealth-building
- Dignity, respect, and agency
Philanthropic Investment Innovations & Tools of QJF

- **Access to Affordable Capital:**
  - Investments can be made into for-profit and non-profit organizations with forms of financing including patient flexible capital, controlling rates for relending, debt (at 0%), and equity where returns on investment can be reinvested in community development.

- **Pioneering a new investment instrument:**
  - One that mandates meeting quality job targets as the basis for forgiveness and future investment, thus creating a new investment standard around patient, mission-aligned capital with a commitment to impact and experimentation.

- **A Revolving Fund:**
  - All returned capital—through interest, fees, or investment returns will revolve either through the Foundation or the intermediary to strengthen community institutions and programs, support wraparound services, make new investments, or build additional community benefits.

- **Catalytic Infrastructure Budgeting:**
  - The ability of the intermediary to utilize 20% of the overall investment (generally $3-5M) to invest in and develop organizational capacity over the life of the investment term.

- **Training to Job Mandate:**
  - Addressing the employer engagement and training gap by investing in training programs that directly feed into quality job opportunities.
What's Next for QJF?

With over half of the QJF capital committed and being put to work in communities, QJF is at a natural reflection point. We believe this is a moment to learn from our work to date while continuing our commitment to innovation and impact.

Through the first three rounds, QJF has invested in 3 modes of job quality advancement: Business Investment (access to capital), Training & Placement, and Co-ops and Employee Ownership. QJF has made some investments in training people for existing good jobs and some in companies trying to upgrade jobs; we are interested in looking at ways to invest in people and companies to help them step up into the new jobs of today and position them in quality jobs that can support a family and enrich communities.

Through learning from current investments and engaging with allies and partners in the field, QJF is continuing to refine our focus and ensure investments continue to be high-quality, innovative and with the opportunity for significant impact. QJF will both continue to invest in high-quality intermediaries within our core strategies and keep pushing for new types of interventions and experiments on behalf of low and moderate income workers.

QJF expects to identify an additional 10-15 best in class intermediaries who are meeting specific industry needs/demands and addressing problems outlined above as we build a portfolio of strategies to expand skills training and job placement while growing companies that will define the future of work and be successfully responsive to modern economic employment challenges. We want to learn about and engage with these social entrepreneurs, and explore opportunities for employers, trainers and investors as we explore additional rounds of QJF investment. The questions we will be asking in these additional rounds of investment include:

- How is this solution meeting the opportunity created by the jobs of the future?
- Which workforce training problem is this solving?
- How will this investment break new ground? What is unique about it? Would it happen without us?
- Are there creative financing models we can test?
- Are there anchor institutions we can partner with?
- How is this making an impact in the CA, NV, and AZ region?
Policy and Partnership

Through the work to date, we believe we are starting to see innovative solutions and opportunities to test and scale. However, we recognize that there is more demand, more need than can be met with the total resources of QJF. We are excited to partner with additional funders, investors, local communities, and policy leaders—like the California Future of Work Commission—to increase the impact of this work and to grow the focus on quality jobs as the marker of a successful economic development and opportunity strategy.