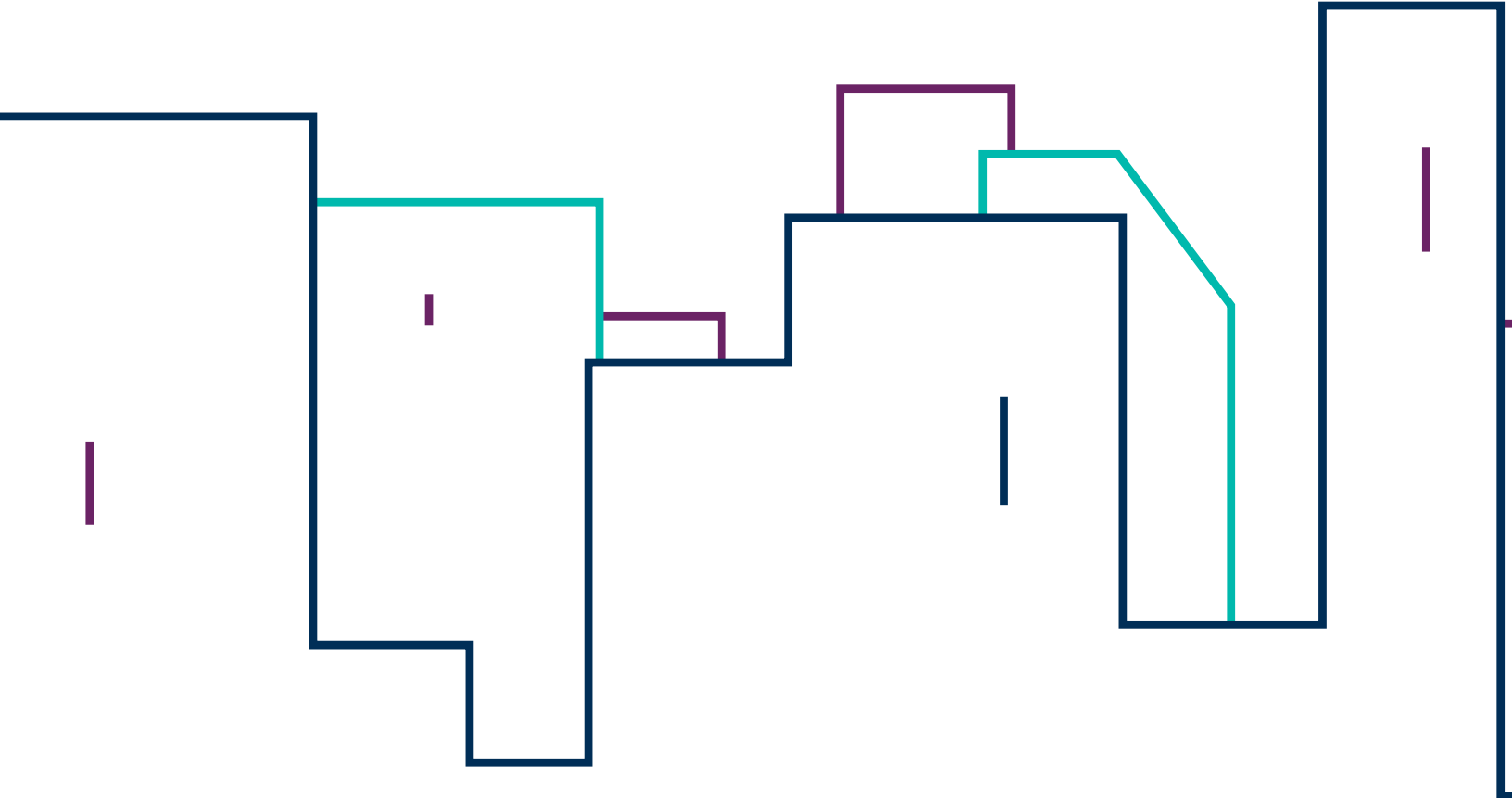

Uniquely Human: Talent Implications of Technological Disruption in the Workforce



Few changes in the world have created more uncertainty in the workplace than the recent, seemingly sudden advancements in automation and artificial intelligence.

The media headlines can be dire: Vikram Pandit, previously the head of Citigroup, has predicted that technology will eliminate up to 30 percent of banking jobs in the next five years.¹ A recent article in Harvard Business Review posits that AI could soon replace “even the most elite consultants.”² And in one recent Russell Reynolds Associates survey of executives, 46 percent of respondents said technological innovation, artificial intelligence, and similar advancements will have the most significant impact on how people work in the future.³

Workers are paying attention. A recent study by PricewaterhouseCoopers reveals that the number of employees worried about losing their jobs to automation has increased 60 percent in the last three years.⁴ Across all geographies, industries, and sectors, workers who previously felt confident and secure in their ability to find employment, apply their skills, and earn a living are now wondering if they’ll soon be replaced by an algorithm – losing out on jobs to a distant relative of their Roomba or Alexa.

That uncertainty exists despite robust discussion about artificial intelligence and its impact on the economy. A lot is being said, but few questions seem to be definitively answered. To help address that knowledge gap, Russell Reynolds Associates recently analyzed 103 common management, administration, and finance jobs, looking at a total of 1,880 workplace tasks (as identified by the US Department of Labor, Bureau of Labor Statistics), and analyzed each task to measure the likelihood that it will be replaced, or significantly augmented, by automation in the next few years. Collectively, this data paints a picture of a workforce where some jobs are at risk of being replaced entirely, others disrupted to one extent or another, and some that are – for the time being at least – safely in the hands of human workers.

As the scientist Roy Amara once said, “We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run.” We may find ourselves a few years from now looking back and realizing today’s concerns over the impact of these emerging technologies on the workforce were overblown. But regardless, the results of this analysis indicate that there is a clear need for senior leaders to rethink how workers are spending their time, how companies should be redesigning the work experience to better utilize technology and related advancements, and ultimately, what employees are doing that is “Uniquely Human.”

¹fortune.com/2017/09/13/the-former-head-of-citigroup-says-30-of-bank-jobs-will-be-gone-in-five-years/

²hbr.org/2017/07/ai-may-soon-replace-even-the-most-elite-consultants

³www.russellreynolds.com/insights/thought-leadership/our-future-leaders

⁴www.pwc.com/us/futureworkforce?WT.mc_id=CT1-PL52-DM2-TR1-LS2-ND30-BPA30-CN_WoFFFG-

At Risk for Replacement

The loss of a specific job due to technological advancement (“technological unemployment”) has been a regular occurrence throughout history. We often experience – and perhaps encourage – this disruption without even realizing it: When we use an automated check-out at the store, we are using technology that has replaced a human cashier. When we withdraw cash, deposit checks, or check our bank account balance at an automated teller machine (ATM), we are interfacing with a piece of technology that has replaced a human bank teller.

Like cashiers and bank tellers, there are a number of roles in the workplace today that are at heightened risk of technological unemployment.

Why are these jobs so at risk? The answer can be found in the tasks these employees are asked to do. For example, credit authorizers “keep records of customers’ charges and payments,” and order fillers, wholesale and retail sales, “keep records of out-going orders.” Both of these tasks are quickly being fulfilled by computer systems that keep and update records automatically based on the receipt of payment or the shipping of goods.

Other roles require routinized physical labor. Postal service mail sorters, processors, and processing machine operators spend time “move containers of mail, using equipment, such as forklifts and automated trains,” a task which is being augmented or replaced in many warehouses by robots.

These jobs are inherently at risk of significant downsizing, if not outright elimination, because of technological advancements. Workers with these jobs need to be reskilled for other roles. But what to do next? Ideally, these individuals should be supported as they move into jobs that require more human interaction, or an increasing need for the use of judgment. Both of these things add complexity to work; increase the need for problem solving, especially in unstructured situations; and frequently shift the burden of work from physical labor to mental tasks. All of these changes decrease the likelihood of these workers being replaced (again) by technology in the near future.

Top 10 jobs with the highest percentage of job tasks at risk for replacement by automation and artificial intelligence



Open for Redesign and Redefinition

Order fillers, marking clerks, payroll and timekeeping clerks, and others are spending the majority of their time on tasks that can be replaced by automation. But other jobs – most jobs – require some activities that can be augmented by technology, even if the entire job won't quickly disappear. Workers in these roles shouldn't feel an acute fear of technological unemployment, but they are likely to be faced with an opportunity to redesign tasks, and redefine entire jobs, to better utilize technological advancements.

What makes these tasks so susceptible to redesign is that they are often a combination of an activity that can be automated and an activity that requires the application of judgement or human interaction. Take a tax preparer, for example. The task to "use all appropriate adjustments, deductions, and credits to keep clients' taxes to a minimum" can largely be done through online tools today, as any user of TurboTax or H&R Block software knows. But in complex circumstances, tax preparers can apply their judgment to better structure deductions, recommend strategies for reducing future tax burdens, or help their clients meet other financial or non-financial objectives – all activities automation can't always accomplish.

In other cases, jobs require an individual to answer questions or provide guidance to third parties. Operations research analysts need to "educate staff in the use of mathematical models," patient representatives need to "teach patients to use home health care equipment," and switchboard operators "answer simple questions about clients' businesses, using reference files." Oftentimes, especially when providing structured, factual information, these tasks can be fulfilled by automated systems or online tools. But humans are needed when the information is unstructured, the person asking questions doesn't understand the topic enough to make a clear request, or when a customer needs advanced assistance due to the complexity or advancement of their request.

These jobs are ripe for redesign. Workplaces have an opportunity to utilize technology to augment human skills and abilities (in fact, the development of collaborative robots, or "cobots," that can assist workers in a shared workspace, is increasing). This will free up human workers to move on to more complex tasks, or to focus more effort on other parts of their role.

Top 10 jobs with the highest percentage of job tasks ready for redefinition and redesign



Uniquely Human

Despite the clear impact technology can have on the majority of the workforce, some roles seem better able to weather the disruption. These jobs are overwhelmingly comprised of tasks that are “Uniquely Human” – that is, the tasks generally require both human interaction and the application of judgment simultaneously:



Given the need to combine both human interaction and the application of judgment, it’s not surprising that managerial jobs score highly in both areas. In fact, chief executive officers (CEOs) come out near the top of the rankings.

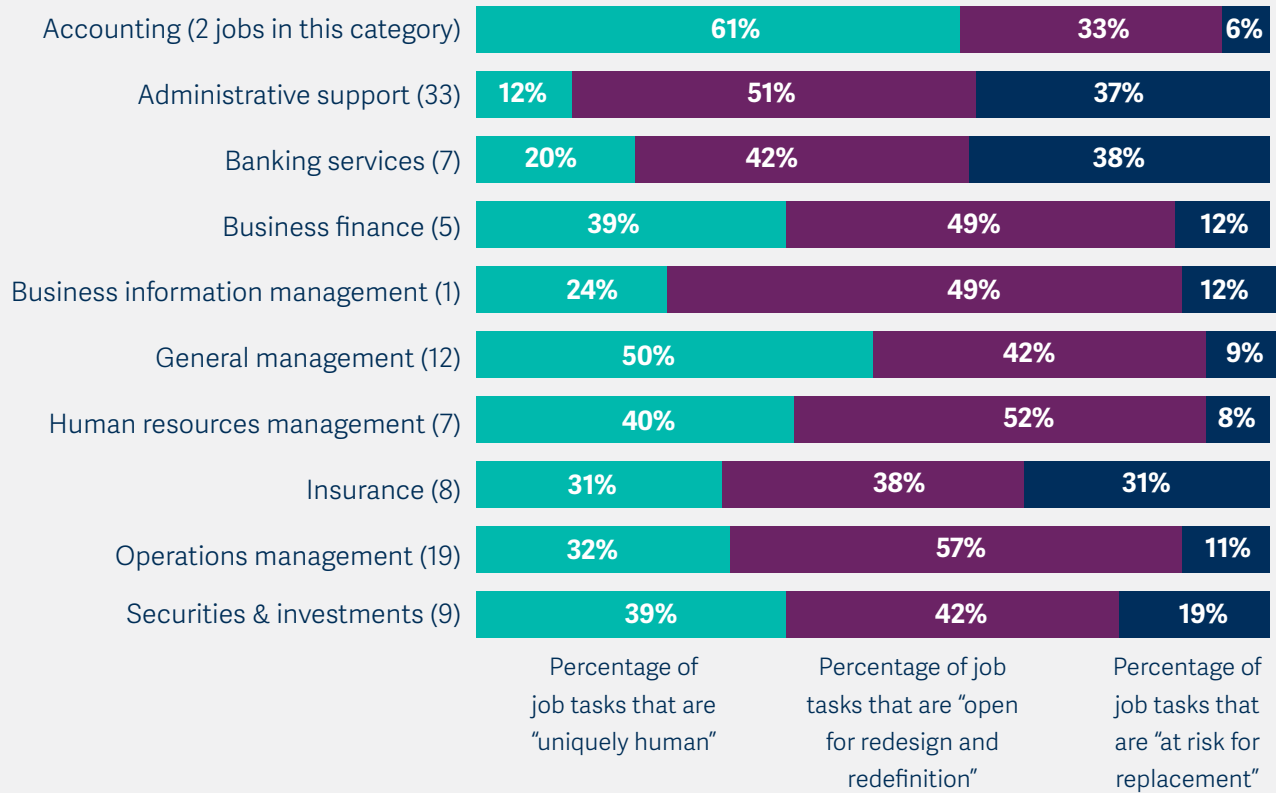
These jobs involve tasks such as hiring, directing, and supervising people, interviewing, testifying, and advising groups of stakeholders, and perhaps most complex of all, negotiating directly with customers, regulators, workers, and other parties. For the foreseeable future, these are all Uniquely Human activities – and they comprise the majority of tasks undertaken by these workers.

That isn’t to say, however, that there aren’t some opportunities to redesign aspects of these jobs to better leverage technological advancements. Technology can help loss prevention managers “maintain databases such as bad check logs, reports on multiple offenders, and alarm activation lists” and “analyze retail data to identify current or emerging trends in theft or fraud.” Likewise, it can assist accountants to “develop, maintain, and analyze budgets, preparing periodic reports that compare budgeted costs to actual costs,” especially once the business is tracking performance against a developed budget. And multiple positions can benefit from technology’s ability to create, store, and retrieve documentation and records based on structured requests and needs. There are fewer opportunities like this among Uniquely Human jobs, but they do exist, and should be sought out.

Top 10 jobs with the highest percentage of job tasks with uniquely human requirements



The 103 positions organized in this study are classified by the Bureau of Labor Statistics into ten broad categories. This chart shows the average percentage of job tasks in each category that are Uniquely Human, open for redesign and redefinition, or at risk for replacement.



Embracing Disruption

Much of the discussion over technological innovation and its impact on the workforce pits humans against machines as if it is a winner-takes-all competition. The reality is more complex. Technology is going to augment the work we do and the role we play in organizations. There will be an increasingly opportunity to partner with technology like never before. Some roles – those "at risk of replacement" – will be impacted more than others – the "Uniquely Human" jobs – but every worker, and every organization, will experience change.

Leaders know that confusion and doubt in the workplace negatively impacts the business. Distracted employees aren't concentrating on their work and they're not serving clients to the best of their abilities. Senior executives should move swiftly to address the talent implications of technological disruption, and to let the workforce know the company is acting and will be transparent in their efforts. Forward-thinking organizations will seek out ways to embrace technology early, partnering with their workers to help ease the transition and minimize potential disruption. These organizations will likely benefit from their foresight, both from increased efficiency and performance, but also from reducing their employees' fear and uncertainty about the future.

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