

Managing Organizations

Automation Will Make Us Rethink What a “Job” Really Is

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As businesses enter the uncharted waters of machine intelligence – where machines learn by experience and improve their performance over time – researchers are trying to predict its impact on jobs and work. Optimists suggest that by taking over cognitive but labor-intensive chores the intelligent machines will free human workers to do more “creative” tasks, and that by working side by side with us they will boost our imagination to achieve more. Experience with

Robotic Process Automation (RPA) seems to confirm this prediction. Pessimists predict huge levels of unemployment, as nearly half of existing jobs appear prone to automation and, therefore, extinction.

More nuanced analysis points to a less dystopian future where a great number of activities within jobs will be undertaken by intelligent systems rather than humans. This view, in effect, calls for a re-examination of what a “job” actually is: how it is structured, and how it should be reconfigured, or perhaps redefined, in the age of intelligent automation. How should companies rethink the value of a job, in terms of increased performance through machine intelligence? What set of skills should companies invest in? Which jobs should remain within the company, and which should be accessed via talent platforms, or perhaps shared with peers, or even competitors?

Conventional wisdom has long suggested that, as job performance increases, so does the value or return to the company. This myth of a consistent relationship between job performance and value across all jobs within a company has since been debunked, most recently in *Transformative HR*, which illustrates the variance in roles where great talent makes a difference and where good enough suffices.

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The Automation Age

How robotics and machine learning are changing business.

However, with technology, digitalization, and artificial intelligence accelerating changes to jobs, the relationships between performance and value become even more complex and yield potentially exponential

opportunities for value creation. Return on Improved Performance (ROIP) – similar to Return on Investment – measures the value of improved performance in a given position (i.e., not just the value of average performance in a job). Let’s look at an example that most of us directly interact with for hundreds, if not thousands, of hours annually: the airline industry.

Pilots are a critical pool of talent for an airline; there must be a sufficient supply with appropriate skills to operate the airline. But this is a segment where “good enough” suffices. As the chart below illustrates, beyond a certain standard, having higher performing airline pilots will not yield additional business value (defined as customer loyalty) to the organization, although having even one pilot “below minimum standards” can have a significantly negative impact on the performance and reputation of the organization as well as compromise the integrity of the business model.

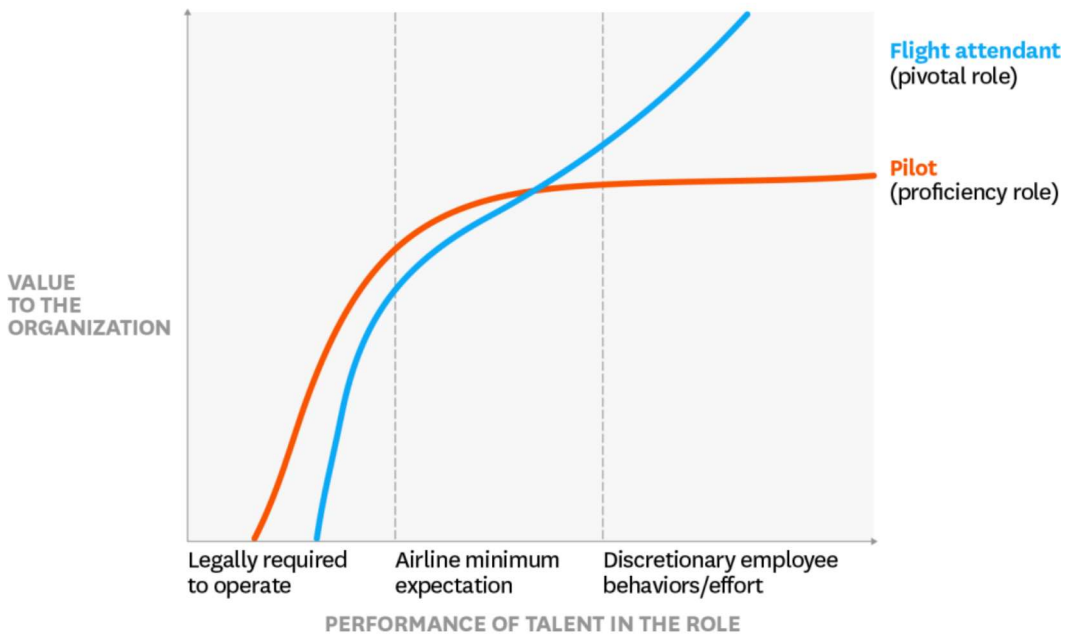
This is the reason airlines invest in elongated career paths for pilots. For instance, it takes 20 years to move from the “right seat” of an Embraer 175 doing a short haul flight to the “left seat” of a Boeing 747 going across the Pacific Ocean. Significant investment also takes place in cockpit technology as well as in training and development (e.g., minimum simulator hours required) among other things, in order to take the left side of the curve out of play. This is a classic *proficiency role*: though the skills are high level, beyond a certain standard, higher performance won’t yield more value.

Nevertheless, as airlines increasingly pursue competitive advantage by differentiating the customer experience – particularly for premium passengers – flight attendants become a *pivotal* workforce segment. Often they are only “face of the organization” to most passengers – which suggests that higher levels of performance, particularly when it comes to delivering an experience that truly delights a passenger, can yield significantly greater customer loyalty, as the work of the flight attendant steadily shifts from the transactional to the relational. This is a classic *pivotal role*: higher performance yields more value.

So armed with this insight about the differential relationship between employee performance and value to the company, how can we apply the rapid advances in artificial intelligence to further enhance the impact of these roles? Indeed, how can we ensure that task automation does not merely reduce labor cost but also delivers

Variance in the Value of Work

Where great talent makes a difference (pivotal role) and where good enough is sufficient (proficiency role).



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increased performance for the human workers? To answer these questions, we need to begin disaggregating work and understanding how automation and AI can differentially handle various aspects of work.

Let's go back to our flight attendants and think specifically about how cognitive automation might enable them to take the work of delivering the optimal customer experience to a whole new level – in this case with augmented reality powered by cognitive computing to deliver an unprecedented level of insight. If we deconstruct the job into the three categories defined in the chart above, you would ensure that the legally required and airline minimum elements of work were highly standardized and performed to the minimum acceptable standard while empowering and enabling the flight attendant to unleash all his discretionary effort on a highly personalized level of service. Imagine flight attendants wearing a version of Google Glass, through which they can access customer data and personalized preferences. No nut dishes served to Charles in 3C given his allergy, but black coffee and a predisposition for onboard duty free. Early seating meal for Sarah in 2A so she can get to sleep quickly. And so on.

In a scenario such as this, machine intelligence overlaid on augmented reality further increases the steepness of the curve for the discretionary portion of this pivotal role's work. For the flight attendant using this technology a unit improvement in individual performance provides even greater increases in organizational value, as premium passengers are treated with a level of personalized service where it matters that would be otherwise unfathomable.

Conversely, consider how robotic process automation can change the left side of the curve for a pilot (i.e., the legally required element). Instead of investing the aforementioned resources to minimize the possibility of human error, AI (in this case, robot pilots or autonomous airplanes) can replace the routine and repetitive elements of the pilot role, flattening that portion of the curve. The emphasis could shift to having highly skilled pilots act as overseers from a distance for multiple flights, intervening when an unforeseen event moves the work beyond the routine. This would allow airlines to leverage the experience and insight of skilled pilots in a much more efficient way. The net effect is both a reduction in labor cost (as fewer pilots are required) and a reduction in the risk of an accident.

And yet...as we have seen countless times, the very idea of a robot making a mistake is terrifying to humanity. Consider the difference in the public reaction to the recent news of the Tesla autopilot accident versus the statistics about the countless lives lost every day due to human drivers' texting while driving. It doesn't matter that we know that IBM Watson's success rate in diagnosing lung cancer is close to 90% while our human oncologists average 50%. We trust humans and expect robots to be infallible. Will we as a society be willing to allow the robots to learn? How long will it take the flying public to get comfortable putting their lives in the hands of a robot?

Given these challenges, here are five steps we recommend companies take to rethink work in light of automation and AI:

- Gain clarity on pivotal vs. proficiency roles in your organization

- Understand the specific nature of the relationship between performance and value for your pivotal and proficiency roles
- Disaggregate the different parts of the curve shown in the chart above and determine how AI can play a role
- Determine the specific activities that these different forms of AI might transform, and the relevant cost, capability, and risk implications
- Plan for how stakeholders can be engaged in understanding and embracing the potential changes to work, recognizing the aforementioned biases and resistance factors

Recognizing how technology and AI can transform the performance and value equation provides a significant competitive advantage. Successful leaders will translate the evolving pivot points in their business models into specific implications for work, looking beyond jobs, and understand the transformative role AI can play in redefining the performance curve for the work of the future.

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