

# Artificial Intelligence, Robots, Reskilling & Ethics – Fourth Revolution Board of Director Imperatives & the Chair's Evolving Role

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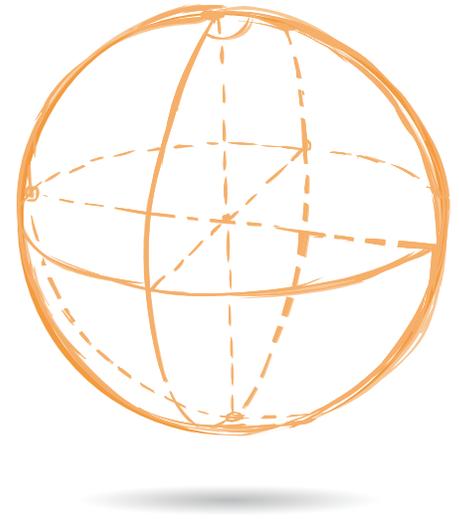
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## The Rise of Robotics & the Advent of Artificial Intelligence

Robotics and AI are predicted to have \$258 billion of revenue by 2020, a trillion dollars of revenue by 2025, and shortly thereafter, anticipated to become the largest global industry.



The Agricultural Revolution resulted in increased labor and land productivity, catapulting population growth and decreasing the agricultural portion of the labor force. What resulted was an urban workforce, paving the way for the Industrial Revolution. Moving from hand production methods to machine tools and factories, rapid industrialization led to increases in average incomes for workers. The Industrial Revolution created the modern-day labor market model. A Third Revolution came about in the mid-twentieth century, coined the "Information Revolution." It heralded computerization and electronic technology. Today, we are experiencing the Fourth Industrial Revolution, which focuses on artificial intelligence (AI), robotics, and various combinations of technologies. This revolution is characterized by a fusion of many technologies and is evolving exponentially faster than past revolutions.

The key digital influences of the Fourth Revolution each have different impacts on people and need to be considered separately. The first being automation which displaces jobs. The second being augmentation (both cognitive and physical, which enhances human capability) thereby elevating jobs and freeing up the minds of curious and imaginative experts. The third being the use of digital technologies to search for new sources of revenues/cost improvements and answers to tough questions.

While some are apprehensive about the impact the Fourth Industrial Revolution may have on businesses, jobs, and the economy, many see this revolution as an opportunity to shape our future for the better.

A lot of media attention has focused on the destruction of jobs due to automation. However, technology and automation positively affect the workplace. While job destruction is a real effect of automation, historically, efficiency and productivity gains from automation helped create jobs. We see the same phenomenon with the Fourth Industrial Revolution.

Collaborative augmentation tools powered by AI can provide significant competitive advantages to organizations that successfully incorporate them into existing operations. This alleviates otherwise costly and time-consuming operational bottlenecks. Moreover, intelligent augmentation tools can lower the barrier to entry for otherwise non-traditional competitors to participate in historically resource-intensive industries.

## **BIG PICTURE: How Will Implementation of AI & Robotics Affect the Workplace?**

**A recent World Economic Forum report estimated that by 2022, 75 million workers will be displaced; however, the same technology will bring with it new roles for an estimated net gain of 58 million positions.**

The compound annual growth rate forecasts of robotics and AI are astounding with good reason. Robots and collaborative robots are increasingly dexterous, "smarter" when ingrained with AI, easily reprogrammable, more affordable, and more widely accepted by their human co-workers. Similarly, human enhancement tools such as exoskeletons, exosuits, biometric wearables, and telepresent and telemanipulation devices are helping increase worker safety and productivity. The companies

outperforming competitors and creating greater workplace equities are utilizing data and machine-learning tools to ask predictive model questions such as: *how do we identify diverse new talent from non-traditional sources? Which applicants are most likely to be the best performers? Which employees are the most adaptable to change, or the most critical to the organization?*

## **IT'S A FACT: BOARDS NEED TO PLAY OFFENSE AND DEFENSE – BOTH COMPLIANCE AND CORPORATE GOVERNANCE AROUND TRANSFORMATIVE TECHNOLOGIES**

Many companies are preparing for AI and robotics in the workplace, with many already using those technologies today. However, only a small percentage of businesses feel that their human resources departments are prepared for the new way of working that AI and robotics bring. Companies agree that using robots will not replace workers as much as they transform tasks performed by human labor.

Instead, the transition will be much more nuanced. Businesses should not only think of jobs holistically, they should also break down the tasks within each job. Whatever tasks can be automated should and will be automated. For employers to understand what tasks should be automated, they must first look to each position and uncover work variation and realize what business process complexities are present in each task.

One way of doing this is to evaluate each task as either routine or non-routine. "Routine" tasks are those with minimal deviation, which produce simple rule-based output and can be performed in isolation without social interaction. Tasks such as scheduling calendar invites, customer support communications, and calculating numbers lend themselves to being enhanced by automation because of their routine nature. For example, AI can help free up HR representatives' time by quickly screening thousands of resumes or streamline a doctor's tasks by scanning through many radiology images to detect illnesses more efficiently. "Non-routine" tasks are those involving significant people management and problem-solving abilities, such as interacting with people, thinking over long time lines, developing strategies, and managing complicated work scenarios. These tasks are less likely to be automated.



## Leaders Must Agree On...

Timelines, Employee Communications, What Resources Will Be Used, and the Main Goal of Automation

### **THE SKILLS GAP: It's 2025. Do You Know Where Your Employees Are?**

According to a recent study by Deloitte, the skills shortage is expanding. By 2025, it is predicted that 2 million positions will go unfilled due to that skills gap. And that unmet need is expected to grow to 2.4 million unfilled positions by 2028. Reskilling programs may help.

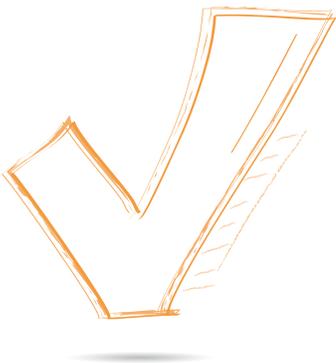
To stay competitive and in step with advancing technologies, chairpersons should ensure that as part of any executive leadership's strategic plans, there is clear coordination and directive for human resource departments to analyze the functions within existing jobs. This will allow them to ascertain which job tasks could be automated in a way that increases employee productivity and morale (for example, the mechanical automation of certain dangerous and repetitive manual tasks was at times welcomed by workers during the Industrial Revolution, as long as it didn't make the worker themselves ultimately obsolete to the organization). Afterwards, they should analyze and customize retraining experiences to worker skill sets and future skills gaps and look for mass on-line learning courses, e-learning podcasts, or virtual reality (VR) and augmented reality (AR) training opportunities to help bridge that gap.



Today, we are living in a time that necessitates constant relearning and reskilling. Every industry is being disrupted by AI, robotics, and automation, and the board's duty of oversight should include asking for reports from Chief People Officers on the potential for reskilling and repositioning employees to align with future job needs resulting from automation. However, some staff may feel uncomfortable with retraining. The best way to deal with this is to have strong management create an office culture that embraces change. One way to achieve this is to actively support and encourage workers during the transition. Instead of rushing through hours of training in a short time period, management should be patient and creative. They understand that the training process is an important part of humans becoming comfortable with their "cobots" and AI assistants.

Preparing workers for different, and with new technology, will be overwhelming for some. With advancements in automation and reprogrammability of tools, like AR and collaborative robots, along with increasingly affordable costs of adoption, businesses should view this as an opportunity to build a solid foundation for staff to work with rapidly innovating technology. The Nanodegree program is one example of how a company can implement a comprehensive retraining program. The major telecommunications company that launched this initiative had over 10,000 users enrolling in the program, including over 1,000 company employees. The program offers more than helping employees do better at their jobs. The courses are also designed to prepare employees to enter new positions. Nanodegree is accessible online, can be completed in less than a year, and is affordable, at around \$200 a month. Programs like this reinforce the notion of lifelong learning in the workplace, and also allow employers to increase retention rates and address skills gaps.

Different approaches to organizational effectiveness and change will become possible as cells of agile culture build up around successful digital implementations and localized self-management becomes possible and desirable. Agility is key.





# Chairperson & Board's Duty of Care

**Monitoring and reporting mechanisms must be in place to support calculated risk taking around new technologies. Adoption is slowed and the competitive edge lost when executive leadership is not charged and held accountable to present the board calculated options to make smart decisions that mitigate risk.**

The board's duty of oversight includes helping make the right decisions centered around understanding the company's two, five and ten year strategic plans. This entails not only setting aside the monetary and physical resources, but also careful vetting of the right technologies through validation studies, proper notices and consents, and pilot programs.

With major disruptions in every industry and significant turnover of the Fortune 500, it has become a chairperson's and board's responsibility to understand AI's impact on their business model. This includes learning best ways to mitigate risk, while embracing opportunities of such technology. Retraining and reskilling are not just employee initiatives; boards must help with the corporate governance aspects behind the transition. Defensive compliance is insufficient for survival. Agility, measured risk taking and education are key to an offensive corporate governance strategy. Failing to plan, and just hoping to be a fast follower, will leave a corporation behind and threaten survival.

A key part in the planning requires the boards achieve involvement in considering who is best placed to advise on the nature and scale of the digital opportunities. Can the leaders of the last revolution be relied upon to break with legacy and advocate for the future? Where are the people best placed to see opportunity and understand risk?



**A board that fails to engage with management on matters of AI and robotics is not only breaching fundamental fiduciary duties, but is also repeating a terrible mistake from the early days of electrification: many assumed that the "much-hyped technology" was just for replacing lights and hence missed the reality that it would reshape commerce, culture, and consumerism across the entire globe. AI and robotics promise even bigger disruptions.**

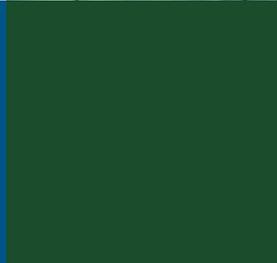
F. Daniel Siciliano,  
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A board's duty of care also entails ethics compliance. In a digitalized world where regulations will not keep up with technology, this charge is a difficult one. Society, including industries, foundations, government, academia, and international organizations must work together to develop AI principles for universal adoption. Untethered and unmonitored, deep learning tools and robotics ingrained with AI can have massive societal impacts. Each chair must accept that part of the charge in leading a board should include oversight of ethical principles associated with adoption of transformative technologies.

New technologies will enable radically more extensive collaboration both within and beyond the enterprise, particularly for firms with the confidence to compete on the basis of their ideas and to share data. A board has the duty to consider how this might affect business models and the choices of technology made from the outset.

# COMMUNICATE

Nothing kills company morale more than fear-inducing silence. In these times of rapid disruption and uncertainty, as the workforce changes, transparency through open communication of the when and why matters.



# Managing Morale Through Adoption

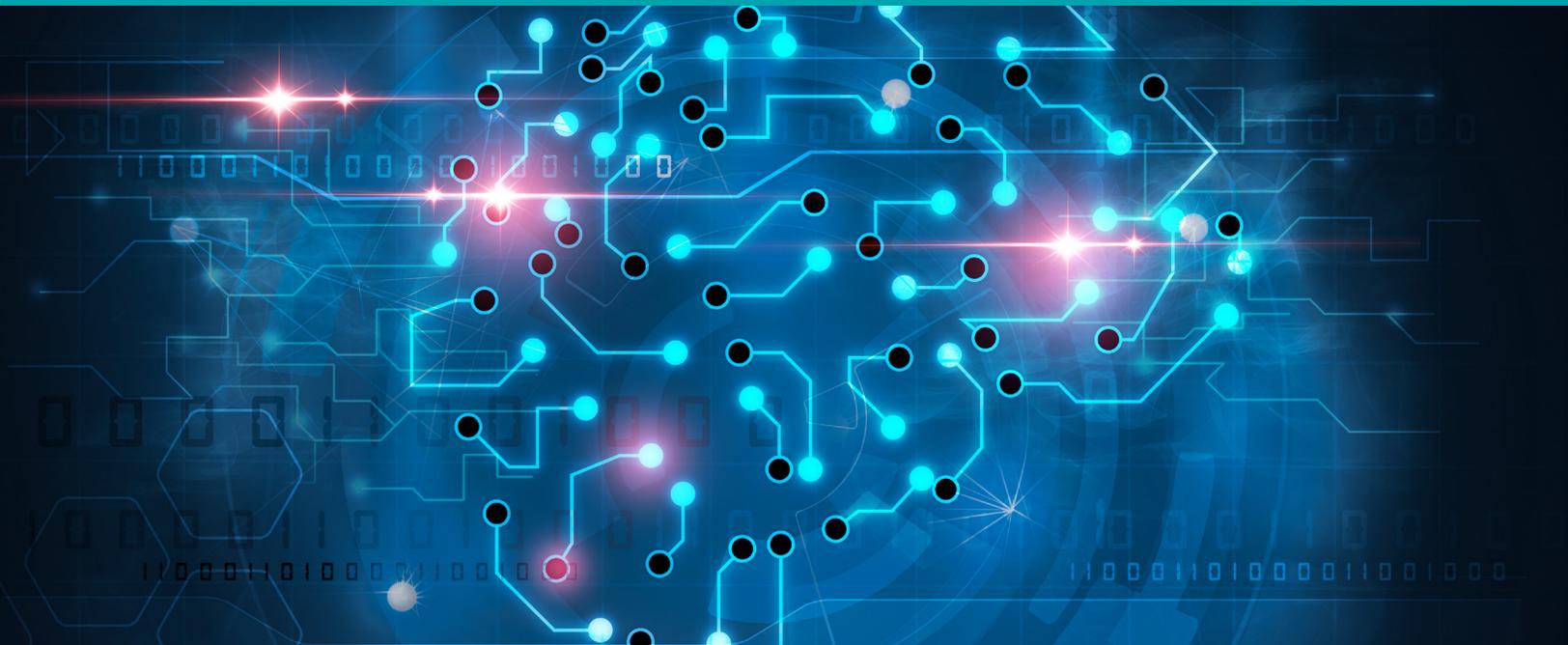
**WITH NEARLY HALF OF ALL JOBS CHANGING THROUGH RAPID AUTOMATION, HAVING BUSINESS LEADERS UNDERSTAND HOW TO INTEGRATE ROBOTS AND AI STRATEGY INTO THE WORKPLACE, AND ENSURING ALIGNMENT WITH LEADERSHIP, ARE CRITICAL FOR SUCCESS.**

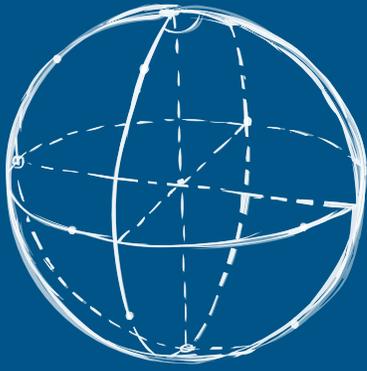
Boards can help identify people at the top that will be the 'face' of the transformation. These leaders will communicate important messages to staff to be transparent about new outcomes that are needed and inspire the participative collaboration required to bring about the required change. A key aspect of this communication is explaining how automation will become an integral part of the corporate structure. Clarifying to staff how automation will create a better user interface for customers, while simultaneously benefiting workers and cutting bottom-line cost, will help staff become excited for this change.

Encouraging people to hone their "human" skills such as empathy and persuasion and encouraging "augmented imagination" will also help the transition into automation. Inspiring people to stay in touch with their emotions and celebrating people skills will create a strong company culture that embraces advancement in technology. People may initially be apprehensive about interaction with AI and robots and how their job tasks will change. Having a clear training plan that explains these roles and transitions at the individual, department, and company levels, as well as the big picture, should help alleviate confusion.

Workers may have concerns about their privacy in the workplace. Because robots, predictive analytics, and biometric devices, such as wearable wristbands, mobile applications for employee surveillance, and even exoskeleton suits, can collect and transmit data, privacy can be violated absent proper notice and consent.

Getting heavily informed consent from staff is the best way to reduce liability. Employers should provide notice regarding how the technology works, how it will enhance the employee's overall job experience, what type of information is collected, to whom it will be disclosed, how it will be safeguarded and used, and for how long it will be retained.





## Now is Time for Adaption and Adoption

Disruptive advanced technologies, including robotics, AI and 21st century automation, are rapidly transforming the domestic and global workplaces, reinventing the way work is performed, and requiring upgraded skills and new roles, for a workforce undergoing massive demographic and social-economic reformation. Employers must recognize these profound changes and prepare for them, or suffer severe consequences, including business failure. Boards play an essential role as part of their oversight responsibilities to work with executive leadership to plan and invest resources now.

The "think big, start small, scale fast" approach that is essential to delivering an effective operationalized digital program should be championed by the boards if organizations are going to impart momentum and develop a truly agile culture. Otherwise, risk aversion tends to lead to a festival of proofs of concepts and little progress of substance.

**We welcome the opportunity for you to participate in the mission and continued discussion.**

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**DETECT.**

**DISRUPT.**

QiO is in the vanguard of a new generation of technology partners for leaders of companies, large and small, with big ambitions of digital and cognitive transformation. We help our clients build the capability and confidence to achieve successful business, organisational and cultural change - through technology-based collaboration rather than infiltration. The impact of the Fourth Industrial Revolution is likely to be such that our clients will need and want to retain sovereignty over their customers, data ecosystems, ideas and innovations. That requires technology and client engagement models which differ radically from those of legacy software vendors. We have built, and proven to operational scale, those new models and can help you to make a difference very rapidly - that's our difference.

At Littler, we understand that workplace issues can't wait. With access to more than 1,500 employment attorneys in over 80 offices around the world, our clients don't have to. We aim to go beyond best practices, creating solutions that help clients navigate a complex business world. What's distinct about our approach? With deep experience and resources that are local, everywhere, we are fully focused on your business. With a diverse team of the brightest minds, we foster a culture that celebrates original thinking. And with powerful proprietary technology, we disrupt the status quo—delivering groundbreaking innovation that prepares employers not just for what's happening today, but for what's likely to happen tomorrow. For over 75 years, our firm has harnessed these strengths to offer fresh perspectives on each matter we advise, litigate, mediate, and negotiate. Because at Littler, we're fueled by ingenuity and inspired by you.

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