



## Working Group: Emerging Technologies and the Future of Work

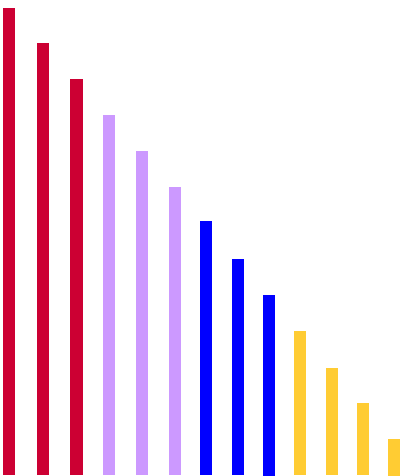
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### Participating Organizations:

Accenture  
AstraZeneca  
Bloomberg  
British American Tobacco  
Caterpillar  
Cornell  
Dell  
ING Bank  
GE Healthcare  
McKesson  
Johnson & Johnson  
Shell  
Vodafone

### Key Takeaways:

1. The future of work, jobs, and the HR function is being shaped by a number of macro factors, including digitalization and new approaches to commerce and retail; increasing consumer voice; greater use of big data, 3-D printing applications, artificial intelligence, robotics, and automation. These changes lead to the creation of new jobs; it will also lead to massive changes, reduction, and potentially elimination of others. These changes will put pressure on HR leaders to determine how to best help impacted employees continue to update skills for current roles, develop capabilities to move to emerging roles inside the company, or develop skills to move to roles in other organizations.
2. Changes related to the future of work have put a spotlight on certain employee capabilities. First, there is an ever increasing number and range of technology and other knowledge-based roles in large multinational companies resulting from the need for organizations to compete differently. Further, keys to longer term performance center around individual and collective capabilities for agility and flexibility, continuous learning and development, customer centricity, and continuously challenging and evolving business models based on technology advancements.
3. The changing nature of the type of work done by employees in large multinational companies has put an increased pressure on HR leaders and the HR function to be able to attract, develop, and retain top talent in areas such as computer sciences, engineering, digital marketing, and data analytics/data modeling. These changes also have big impact on key underlying competencies, traits, and skills for all types of employees which will put new pressures on the HR function to help reskill the workforce, select and develop new capabilities, and rethink the design of work and the HR function.
4. The changing nature of work and advancements in technology will also continue to reshape how HR is delivered and the underlying critical capabilities of HR leaders. Some key competencies and performance differentiators for HR leaders include courage, ability to develop insights from data, use of new tools such as design thinking, external engagement, project management, agility, and intellectual curiosity.



Over the last five to eight years there has been a steady increase in technological advancements that have impacted how companies operate and how work gets done and these changes are expected to escalate in size and scope in the next five years. The changing nature of work and impact of new technologies has enormous implications for how organizations may need to rethink work, organizational structures, and job design which will have important implications for HR leaders and for the delivery of HR over the next five to 10 years. In this CAHRS working group, we discussed the future of work, underlying people and HR challenges, and implications for the HR function, impact of technology on the delivery of HR, and potential competencies for HR leaders going forward. A few of the key themes and insights that emerged during the day are summarized below.

## Changing Nature of Work

The first topic that the group discussed is how the nature and types of work done by employees of large multinational companies have changed in Europe over the last 10 years with a particular focus on how technology is disrupting jobs and the way that work is done. Many participants noted that there have been a large and distinct shift in the types of work completed in Europe that is reflective of radical changes in technology, models of consumer and business-to-business commerce, speed of change in the market, and continuing globalization. Below are some of the more important new types of work in this market.

- Because of advancement in technology and increase in digital forms of communication, more multinationals see the need to have digital sales and marketing models to connect with customers — both individual consumers and business-to-business. This requires that multinational companies have the capability to do digital marketing and sales, have in-market supply chains, greater use of automation, etc.
  - Increased use of automation in production, supply chain, operations functions of most organizations: For example, most companies have introduced robots and or other forms of computer-aided machines in factories and operations facilities that have impacted jobs. Also there is an increased use of chatbots, artificial intelligence, and machine learning solutions that have displaced white collar, call center, and service jobs in many companies. For example, an increasing amount of basic accounting and finance work and process documentation work can be completed with use of artificial intelligence. Similarly, artificial intelligence and chatbots are increasingly being used to handle first-line customer service calls. Current trends would suggest that an increasing amount of both front line and white collar work that is routine and repetitive will be completed by machines rather than people.
  - Because of the fast changing consumer trends, speed of competitor responses, and need to predict future directions faster and more effectively, companies increasingly need to work with big data for more robust analytics, and use artificial intelligence and automation to improve decision making. In addition, companies are increasingly looking to introduce beta versions of products in markets and then use data, customer insights, etc. to continue to refine the product/service over time — this requires more of the knowledge based work around product/service design, data analysis, and refinement to take place in market in order to enable speed and efficiency.
  - Consumers are increasingly expecting greater levels of customization and experiences that are frictionless (i.e., experiences that are easy to navigate with few pain points). In order to improve customer experiences, companies will see an increase in the volume of knowledge-based work that needs to be completed across and within major markets in order to enhance the understanding of local consumer needs and be flexible in design and delivery of customized solutions.
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## Impact on Employees/Work and Implications For HR Leaders and the HR Function

Given what participants noted in terms of key changes in the market and changes in work, the group next focused on what these changes mean for employees, work design, and the HR function. Below, we identify several clear trends regarding changes to work and jobs and then highlight what this means for the HR function.

- 1. Impact on jobs with high levels of repetitive and routinized work.** As we continue to see advances in artificial intelligence, robotics, chatbots, 3-D printing, etc., an increasing number of jobs and employees are likely to be impacted by technology. These advances in technology will push many companies to replace work that was done by people because smart machines may be able to complete this work more reliably, more cost effectively, in higher volume, etc. While early evidence suggests that non-routine work is not easily completed by machines, many companies are switching to technology solutions because of cost, reliability, or talent shortage concerns. While other trends suggest that there will be job growth in other areas, there is a projection of large scale job declines in routinized and repetitive jobs.

### How does this Impact the Role of HR Leaders and the HR Function?

- Participants noted that the above changes create an increased need for data analytics in HR and more advanced models for strategic workforce planning. HR leaders need to become more knowledgeable of technologies and how these technologies will be applied to their industry and what jobs are most likely to be impacted. HR leaders need to be able to identify these trends in order to make better decisions regarding employee resourcing, job structure and organizational design, investments in employee learning and development, etc.
  - Many of the participants noted that their companies are spending more time thinking about how to help employees that they expect will be impacted by technology changes and advancements. For example, several participants noted that they have been working on some combination of: (1) upskilling employees' skills and abilities to grow in their current roles so that they have the capabilities to complete new or more advanced tasks after their roles are impacted by technology, (2) grow and develop employees' skills and knowledge to move into different internal roles if their current roles will be eliminated through technology, and (3) develop employees' skills and abilities for roles outside the company if/when their current roles are displaced by technology.
- 2. Core future skills and capabilities.** Because of the complexity introduced by increased speed of change in technologies, great demand from customers for customization, increased global competition, fast changing trends, increasing number of new entrants from adjacent industries and startup companies and etc., participants noted that they increasingly need employees with deep technological knowledge who can work with others across disciplines in order to jointly create solutions. A core theme here is that employees must also have a stronger understanding and appreciation for customers' needs and expectations, be more agile to adapt to quickly changing environments and business plans, and develop stronger data analytic capabilities to enhance decision making.
    - In order to be able to adapt and respond to frequent and larger numbers of changes, employees need to have a greater learning orientation, growth mindsets, and be agile and adaptive.
    - To handle the complexity of work, employees must also increasingly be able to work on multiple projects simultaneously and have a process orientation. These capabilities enable employees to have a problem and solutions orientation rather than be focused on task completion as the latter mindset is predicated on stability rather than a rapidly changing environment.

- There is huge need for companies to attract and develop data scientists that are able to understand data needs, collect or acquire critical data, model and evaluate complex data, and work with others to interpret and generate insights from data.
- Participants also noted a growing need for digital marketing capabilities — marketing talent with the ability to use social media, online advertising, digital campaigns, collect and interpret digitally collected data to generate insights on customer needs, etc.
- There has also been a steady increase in the skillsets and capabilities required of engineers who now need to be able to design and engineer products and processes from scratch to meet needs of the local market, have deeper design capabilities to move from consumer needs to prototypes, to market ready products, and have the ability to work across engineering disciplines to develop complex products.
- There is also a greater need for engineers and scientists to develop artificial intelligence, robotics, and other forms of automation that are a fit for the company's business model and/or help adapt these technologies for effective applications within the company.

#### **How does this Impact the Role of HR Leaders and the HR Function?**

- HR leaders need to drive better employee experience to attract and retain talent. Participants noted that there is a massive shortage in technical talent and talent who are agile, learning oriented, and digital natives. Further, many noted that they are having some challenge in attracting this talent and younger employees who may more naturally gravitate to startup firms or hot technology companies. This puts increasing pressure on the HR function to rethink all aspects of the employee experience, including from the design of the work space, performance management and rewards, organizational structures and work design, onboarding, learning and development, projectization of work, and sourcing and selection.
- Participants also noted that the HR function and senior leaders need to rethink organizational culture and leadership models/capabilities. New leadership models and company cultures need to think about how to create and support agility, employee empowerment, creating greater inclusiveness to reap the rewards of an increasingly diverse workforce, effectively manage remote teams, and promote knowledge sharing across employees, work units, and geographies.
- Participants also noted that HR leaders and teams need to evaluate new tools and technologies to help better assess employees and applicants for core capabilities and traits such as learning orientation, agility, inclusiveness, inquisitiveness, etc.
- As companies rethink their business models, they will also need to rethink which roles to retain as regular full-time employees and which roles and tasks might be completed through other forms of labor including consultants, temporary workers, independent contractors, etc. HR leaders need to develop a better understanding of how to allocate work to these different kinds of labor, how to effectively ensure that these different kinds of labor are engaged and delivering to a required level of performance, and how the different forms of labor blend together with regular, full-time employees to create seamless customer experiences and execution of the business strategy.

#### **Underlying Competencies/Capabilities For the HR Function and HR Leaders**

The work and workforce trends noted above have a number of critical implications for the HR function for multinational companies in order to effectively attract, develop, engage, and retain key talent. Below are some of the key HR capabilities that are needed or will need to continue to advance and/or develop for large multinationals to successfully support the business in light of all of these changes.

- Systems orientation for both HR business partners and HR specialists to ensure that changes in

one aspect of the HR system work in harmony with other aspects of the HR system to create a smooth employee experience. Systems orientation also includes focus of the full end-to-end delivery of an HR activity (e.g., employee resourcing, onboarding, performance management) to ensure that changes in one aspect of the activity (e.g., introduction of technology to the job application process) works effectively and creates a common, high level of employee experience with the steps before and after it in the complete journey/employee experience of the activity.

- Understanding and identification of new technologies and how they are likely to impact the company's business model, customer service, etc. Further, it's necessary to be able to translate these changes into better projections of workforce demands and strategic workforce planning. Often, imperfect data based on scenario planning and trend assessment make it impossible to complete this task with 100% accuracy as technologies and business are moving too fast.
  - Better understanding of design thinking, customer experience, and agile concepts to help rethink the delivery of HR practices and activities.
  - Constant scanning and assessment of new technologies that can enhance the delivery of HR activities and practices for enhanced employee experience and/or cost effective delivery.
  - Importance of organizational design to think about job and work design, workflow, organizational structure. This model should include reporting structure, work flow design, new models of employment and labor, reporting and decision making to enhance agility, etc.
  - Need for country HR leaders or HR business partners who support a division to have an ecosystem approach to getting work done — what is core to the company, what to bring in through strategic partnerships, what to bring in through short-term talent (freelancers, consultants, etc.)
  - To support the rapid growth in the market and enable greater speed and customization, there is a need to continue to build capabilities that enable the development and growth of local leaders. This includes both developing a robust talent management function and HR business partners that can effectively coach and help develop leaders on-the-job.
  - Stronger internal communications to provide better information to employees, help them to understand internal employment and resource changes, and navigate careers in-market.
  - HR leaders need to develop a better understating of workplace and workspace design to help drive and support the culture, enable more effective employee collaboration, and provide the work environment that engages, motivates, and retains key talent.
  - Learning and talent management specialists need to better understand how to drive on-demand learning, use artificial intelligence and automation to predict training needs and push training solutions to employees, and use a blend of internal and external learning to support employee learning needs.
  - Increasingly, within market, HR teams and employees need to be able to collect, evaluate, and drive change based on data. Because of the unique nature of the market and employee needs and expectations, analytics might need to be driven more on the country-level rather than waiting for a centralized plan at corporate headquarters.
  - Across business partner and specialist roles, HR leaders need to develop a stronger customer centric mindset that enables them to better understand how to design HR interventions and practices that enhance the employee experience, remove barriers that are negatively impacting employees, and ensure better connections and levels of service across aspects of the HR function.
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**This Summary Report was prepared by Chris Collins for participants of the Emerging Technologies and the Future of Work CAHRS Partner Working Group.**

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