



# Future-Proofing Your Organization:

## The Skills Your Employees Will Need To Tackle The Future of Work – 2020 And Beyond

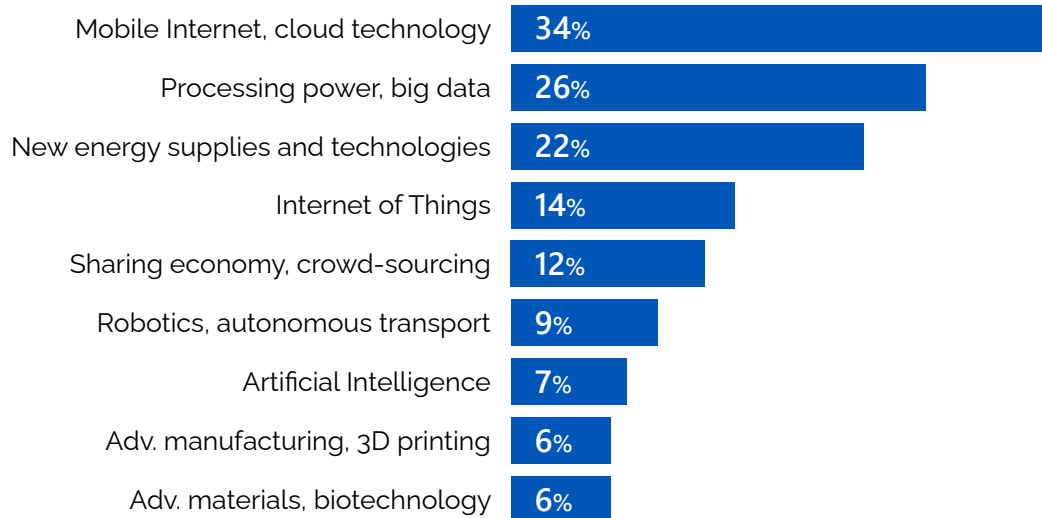


...and while we've been witnessing rapid change in the landscape of business for decades, the pace continues to accelerate. If nothing changes, then businesses will soon experience productivity decline from a workforce unprepared and unable to provide the competitive advantage needed to survive in the modern environment. The companies most likely to avoid this less-than-desirable prospect are those "future-proofing" their organizations. They are developing their employees' skills and reinforcing their behaviors to enable them to embrace change, evolve their roles and thrive in a business environment where the only certainty is change.

Future proofing isn't preventing or avoiding change – it is creating strength and resiliency through people and processes and seeing change as an opportunity, and making the best of it. We will never be able to forecast the future with certainty – which trends will become mainstream and what technical skills will be needed. Technological advances will drive many of the changes (see Figure 1), while others will be the result of shifts in socio-political dynamics. Regardless of the types of changes, they'll be virtually impossible to predict – but what we can see clearly are signs that the future will be radically different from the business environment of today. In anticipation of these changes, employees must

look beyond their current job roles and work environments and adopt forward-looking mindsets and skillsets to help them adapt to changes as they occur. Many are referring to this as “The Future of Work.”

**figure 1**  
**Technological Drivers of Change**



*Source: Future of Jobs Survey, World Economic Forum*

During January 2016, The World Economic Forum released their [Future of Jobs report](#) – a study that examines and explains the changes taking place globally and the specific skills employees will need to be successful in the business and industrial environment during the next few years. The study found that by 2020 more than one-third of the skills important today will have changed across almost all industries. It also found that the impact of technological and other changes are shortening the shelf-life of employees' existing skill sets.

With the acceleration of change forecasted to continue for the foreseeable future, chief human resources and strategy officers continue to identify complex problem solving, critical thinking and decision making as three of the top skills needed to thrive in the near-term business environment (Figure 2).

**figure 2. Top 10 Skills for 2020**

In 2015		In 2020
Complex Problem Solving	1	Complex Problem Solving
Coordinating with Others	2	Critical Thinking
People Management	3	Creativity
Critical Thinking	4	People Management
Negotiating	5	Coordinating with Others
Quality Control	6	Emotional Intelligence
Service Orientation	7	Judgment and Decision Making
Judgment and Decision Making	8	Service Orientation
Active Listening	9	Negotiating
Creativity	10	Cognitive Flexibility

*Source: Future of Jobs Report - World Economic Forum*

The skills summary from the WEF report is consistent with observations that hiring practices are shifting focus from specific technical skills with limited useful lifespans to the fundamental thinking skills required for the agility and adaptability employees need to evolve as their job role changes.

Learning & Development (L&D) and Human Resources (HR) functions will have a pivotal role in leading this effort – by guiding employees to the tools, techniques and resources to help them [navigate change, as a thought leader that is finding big problems and solving them](#), and doing it with, "Speed, speed, speed!" L&D and HR staff must be agile and adaptable and take an active role as champions and enablers of change in their organizations, understanding the relevant trends and facilitating the workforce transformation journey.



### Trends that are changing everything

Major trends that have been forecasted for a few years are now everyday business realities. These trends are drastically changing the types of technical skills and reinforcing the fundamental thinking skills that workers need to survive and thrive. Commonly referred to as the [Fourth Industrial Revolution](#), or Industry 4.0, this technical revolution is a monster, changing business and all aspects of our society. As noted in the article above, "The speed of current breakthroughs has no historical precedent." Here are just a few of the major changes taking place.

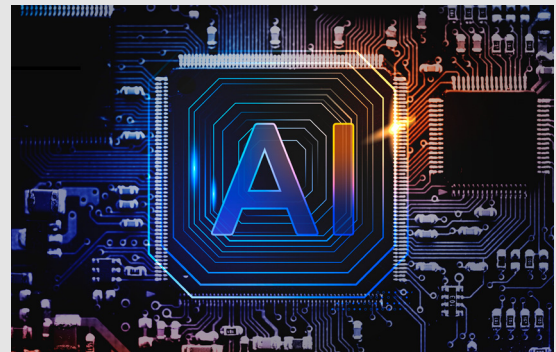
## Future-Proofing Your Organization

**Digital transformation** – is the application of digital technologies that will fundamentally impact all aspects of business and society.



**Automation/Robotics** – According to a [2016 report from the International Federation of Robotics](#), industrial robot use worldwide will increase from approximately 1,631,600 units at the end of 2015 to 2,589,000 units at the end of 2019. Every new robot added to an American factory during recent decades reduced employment in the surrounding area by 6.2 workers, according to a March 2017 study by the [National Bureau of Economic Research](#).

**Artificial intelligence (AI)** and machine learning – Of all the trends, Artificial Intelligence is set to be the one most explosive and difficult to predict. AI is, “a collection of technologies that allow machines to sense, comprehend and learn.” Potentially, the most important aspect of AI is machine learning: machines continue to improve without human programming or intervention. AI is still in its infancy and so unpredictable there are even [dire predictions](#) about its future.



How individuals and companies translate broader trends into requirements for specific skills and apply them to business opportunities will determine the level of competitive advantage that can be achieved.

### Why are these changes so impactful?

Evolution of the business environment is not a new phenomenon, but there are a couple of factors within the current environment that makes the changes we are experiencing today different and particularly impactful.





### The current workforce is proportionately skilled for jobs that are at risk of disappearing.

During the past 20 years, as free-trade policies, industrial automation and transportation efficiencies have enabled companies to utilize the global workforce better, employees have developed specialized job skills that were once in high demand, but are now at risk of disruption from modern technology. A [2013 Oxford study](#) projected that as many as 47% of all jobs could be made obsolete by 2034 because of automation and technology. This focus on technical specialization has led to a lack of skill transferability, impacting the ability of employees to develop the new skills in high demand.

There will be a supply-and-demand mismatch of the skills businesses will need and those the current workforce can supply. Although the overall size of the workforce is likely sufficient to fulfill businesses' needs, some critical skills are projected to be in short supply while the surplus of (un-needed) legacy skills grows.

### Learning & Development can't keep pace with the quickly changing skills businesses need their employees to develop.

Learning & Development functions must adapt to support the scale of workforce re-tooling that will be necessary during the next few years; and there's evidence they're already having trouble with the pace of change. Many L&D professionals lack a clear understanding of how learners currently consume information and what they need for their job.

[The half-life of a learned skill is 5 years](#) - This means that much of what you learned 10 years ago is obsolete and half of what you learned 5 years ago is irrelevant. Because of the speed of technology and business change that we are experiencing today, traditional education industries, such as universities and trade schools, are unable to retrain the general workforce with updated skills fast enough to fulfill business needs. In the modern environment, L&D must take the lead to understand workforce needs, develop a culture of employee mobility and continually develop specific skills, both theirs and others, both to execute today and prepare for the business of the future.

## Focus on fundamental thinking skills

As far back as 1965, Drs. Charles Kepner and Benjamin Tregoe observed, in their seminal management book, *Rational Manager*, "The pace of technical change is so great..." Things were changing too fast 50 years ago! Their antidote to address change was to focus on fundamental thinking skills and, as mentioned above, decades later such skills as complex problem solving, critical thinking and decision making will continue to be critical for The Future of Work. Why? Each is explained in more detail below:

**Complex problem solving**, as defined by the WEF report, consists of "developed capacities used to solve novel, ill-defined problems in complex, real-world settings." Business environments are changing frequently, especially with the fusion of IT and technology in virtually everything we do, and the increased complexity comes from interdependencies between systems and processes. You must be ready, therefore, to solve a problem never previously confronted, and determine the cause fast. Employees must develop the ability to separate complex problems into a set of smaller/more manageable challenges/ tasks that can be addressed effectively, rapidly and concurrently.

**Critical thinking** consists of “using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.” Trusting your gut may feel good, but has been well proven to be an insufficient method to approach new and uncertain problems. [Slowing down, or slow thinking, at the right time](#) to gather and analyze data and leverage the experience of subject-matter experts for insight will continue to be critical regardless of where The Future of Work takes us. Critical thinking may have been first examined 2,500 years ago, but it's never been more relevant. [Social science research is helping organizations](#) take full advantage of it in a way that was unimaginable only a generation ago.



To future-proof your organization for Industry 4.0, employees must be able to apply problem solving, critical thinking and decision making creatively and collaboratively with others.

**Decision making's** definition has always been an important leadership characteristic – choosing the best, most-durable option to fulfill current and future needs, with minimum risks. For companies to remain current with the accelerating pace of change, all employees must be engaged in making and implementing decisions. To accomplish this goal, they must understand the fundamental purpose of decisions and how they relate to the goals of their function or organization, and be aware of the risks associated with implementing the decision.



Additionally, to future-proof your organization for Industry 4.0, employees must be able to apply these skills creatively and collaboratively with others.

Traditional leadership programs focus on vision, strategy and people leadership. By all means, those will remain relevant during 2020 and beyond. We should also ask ourselves, however, if these are sufficient and how leadership is evolving. Future leaders should also be masters of problem solving, decision making and critical thinking. If future leaders will ask their employees to be strong in problem solving, decision making and critical thinking, then they should be as well. More than ever, we must ensure our leadership programs ingrain these fundamental thinking skills.

### The workforce transformation journey

With companies taking the lead in transforming the workforce, developing the right strategy and implementing it effectively is critical. Updating employee skills to future-proof a company's workforce can't be accomplished with one-off workshops or catalog training programs. Workforce transformation is a journey that requires a holistic approach, sustained management support and company-wide engagement. This transformation must impact all employees from Millennial new-hires through the most senior-seasoned employees. Depending on your company's starting point, it could take a significant change in focus and sustained investment.

Almost two-thirds of HR leaders surveyed as part of the World Economic Forum study reported future workforce planning as a high priority of their company's senior leadership. This is good news, because it indicates that executives are aware of the problem. Almost half of the respondents, however, thought their organization's future workforce strategy was inadequate to prepare for the changes ahead – an indication that there is not a good understanding of what actions should be taken, or the focus and investment required.

To be effective and have a lasting impact, there are 4 pillars that a successful workforce-transformation program should include. Future-proofing your workforce requires changing how your company thinks about and executes each of the 4 pillars.



#### 1. Hiring practices

Companies must look for candidates not only with the right skills and experience, but also with the right abilities and mindset to learn and evolve as the organization and business environment do. During the course of an employee's tenure with a company, his or her role will change often. Hiring practices must focus on attracting employees to the organization who can evolve as the company and business climate evolve to create long-term value for the company. Near-term hiring needs should not be ignored, but rather a balance is required to satisfy near-term needs and establish sustainable, long-term value.



When hiring new college graduates or early-career employees, skills gaps may extend beyond technical skills to critical-thinking and problem-solving skills. Few universities and colleges provide focused training in these areas, which contributes to this gap between the [skills employers want in new grads and what hiring managers are finding](#). During the interview process, HR staff and hiring managers, in addition to asking about technical skills, must also ask candidates about how they have applied fundamental thinking skills to work through challenging issues.

### 2. Re-tooling employee skillsets through training

The cost of acquiring and integrating new employees into the workforce is typically quite high and takes time, so re-tooling the existing workforce through training can enable you to extend the value of investments your company has already made in human resources quicker and at a lower cost. To receive maximum, sustainable value, training investments should be balanced and include a mix of:

The cost of acquiring and integrating new employees into the workforce is typically quite high and takes time, so re-tooling the existing workforce through training can enable you to extend the value of investments your company has already made in human resources quicker and at a lower cost. To receive maximum, sustainable value, training investments should be balanced and include a mix of:

- **Fundamental thinking skills**, such as problem solving, critical thinking and decision making, to increase the value created from technical skills, knowledge and experience.
- **Technical knowledge** to serve near-term needs (even if these have a short shelf-life).
- **Change management skills** that enable employees to adapt and make the most of a dynamic environment.

Static training programs may not be as effective in a highly dynamic environment as encouraging and enabling employees to take the lead in personalizing training to their individual job role and career aspirations. A [2016 Harvard Business Review article](#) expanded on this notion by exploring how L&D approaches are becoming more agile – just in time, just enough and just for me. The ways/methods of how we are training the workforce will continue to evolve, but making it personal is key – training is an investment in the employee, not the role.



How is this accomplished? It seems like the learning industry is moving in the right direction. One of the most interesting trends is [adaptive learning](#). It's here where learning is actually adjusted to the participant, so he or she learns as efficiently as possible. Micro-learning is another key to matching the "just-enough-for-me" trend; however, acquiring new skills that must be applied in a dynamic and complex workspace in just 5-minute increments can be ineffective. This puts considerable pressure on the learning designer to determine how, when and where learners will interact with the content and ensure they can apply it to their jobs.

One last trend is gamification and simulation. [While different](#), the purpose of both is to make learning not only more enjoyable for a generation of video gamers, but also deepen learning, so they're ready for whatever challenges they face when they return to their jobs.



When the mode of learning, including games and simulations, is oriented towards the learner's needs, everyone wins (pun intended).

It also must be noted that, with the trends mentioned above, the classroom, with a tried-and-true teacher, will continue to be a foundation of learning for many years. According to the Brandon Hall Group, [in-person, instructor-led classroom training](#) still leads in use and is very effective compared to other modes of learning. As Figure 5 in the above article shows, there's also little doubt that the right formula of technology, gaming, mobile, classroom, simulation, on-the-job, etc. (i.e., mixed) will most likely emerge versus one of these trends becoming most dominant.



While just a few short years ago in-person, instructor-led classroom training was still the leading alternative, in the past year and a half L&D teams have learned a lot about transitioning everything to digital. New best practices emerged very quickly to rally remote workers to continued engagement, productivity, purpose, and job satisfaction. Now, perceptions will not go back to pre-pandemic naiveté. According to [Brandon Hall](#) Group research, "54 percent of companies will either increase or remain at current usage levels of digital learning, as the pandemic eases.

### 3. Managing people who are resistant to change



Some employees will be either unable to embrace or resist change and adapt to the evolving requirements of the business. The quicker HR and managers identify this situation, the more likely they will be able to work with the employee to help him or her "be a good fit" – creating a higher probability of success for the individual and avoiding morale issues that can have a negative impact on the organization.

When managing these employees, it is important to distinguish between the change taking place in the business or the job role and the individual's previous performance. Showing respect and appreciation for past contributions can be a helpful tool to reassure the employee of the shared commitment to his or her individual success and the opportunity for him or her to be an integral part of the company's future.

### 4. Culture of Change



Success in the modern business environment requires embedding change management into your company's DNA by creating a culture where individual and organizational change is embraced, supported and encouraged. Obstructionist behavior must be managed and progressive attitudes must be fostered. A culture of change begins by rewarding personal growth and skills acquisition and providing opportunities for new job roles, so people can evolve. New skills aren't enough, however, – an organization must adapt its business processes and systems to support and reward employees for using those new capabilities.

There are two important considerations for organizations to support and ensure employees use the new skills effectively – coaching and mentoring. The role of coaches is to help employees better leverage their new skills on the job by providing guidance when they return to old habits and feedback to improve. Coaches must also master these skills and be able to provide SMART feedback (Specific, Measurable, Actionable, Relevant, and Timely) to encourage adoption of the new behaviors. Mentors are important contacts with which employees can speak and in which they can confide openly. Often, mentors are senior to employees and potentially have another role in the organization, but provide advice, which can be particularly helpful during a time of change.

How do you ensure change becomes part of company culture? Many companies now have change management or organizational transformation functions (Kepner-Tregoe certainly does). These functions can be a valuable tool not only executing on change initiatives, but also influencing change culture in the organization. Even in industries where longevity and experience are important, growth and change must be encouraged.

### The role of HR and the Learning & Development function



It's time for HR and L&D to step up to their leadership role and take an active part in shaping the future vs. waiting for direction from the C-suite. In the age of knowledge, talent is every company's most valuable asset. As the pace of change and growth in the skills gap increases, senior leaders will rely more on L&D for advice on the talent landscape and actionable insights to improve business performance.

To overcome this challenge, HR and L&D must be agile and adaptable to champion and enable change in their organizations by understanding the

relevant trends and facilitating the workforce transformation journey. One implication of this is managing and enabling change that will become more of a focus for the L&D function – employing new kinds of analytical tools to spot talent trends and emerging skills gaps and providing proactive insights on which workforce investments will have the greatest impact.

As the horizon for assessing and providing the skills needed for the future of work extends to the 2020–2022 period and beyond, Learning and Development leaders also must consider how to convince employees to envision what their jobs will be and take ownership of developing the skills they will need to be successful. In this context, traditional management and career-track training programs may not be effective for the rapidly evolving environment. Companies should consider shifting towards training programs personalized to individuals and specific job roles. To support this shift, both training-program content and delivery methods must evolve in support of employee mobility by making the latest information and skills available when employees need them.



### Don't wait!

The speed of business and technology evolution is accelerating. Maintaining the status quo is not an option. Rather, hop in the driver's seat and begin future-proofing your organization to take control of "The Future of Work" and outpace your competition.

**With more than 60 years of experience**, the problem-solving experts at Kepner-Tregoe have traveled this road often and have helped customers across industries embrace change in their environment and transform their workforce to achieve sustainable performance. Problem solving, critical thinking and decision making are at the heart of the KT approach. **To learn more about KT's experience, customer success stories and current offerings, visit [www.kepner-tregoe.com](http://www.kepner-tregoe.com).**