



The skilling challenge

How to equip employees for the era of automation and digitization – and how models and mindsets of social entrepreneurs can guide us



McKinsey&Company

The skilling challenge

Contents

Automation will create more jobs than it cuts. The skill gap is likely to be the real problem	6
Required future skills are not just digital skills: human and meta skills also become extremely important	8
Organizations need to radically change how they conceptualize their skilling	10
Organizations need to start to develop their skilling agenda now – but other stakeholders will need to play their role, too	19

The report is the result of collaborations between Ashoka Germany and McKinsey & Company, Inc. The underlying analysis builds on interviews with leading experts, including among others several Ashoka Fellows and experts on the skilling challenge in the private and public sector. The authors thank these experts for their invaluable contributions.

Automation will create more jobs than it cuts. The skill gap is likely to be the real problem

Within the next 10 to 20 years, 65% of all activities that are currently performed by humans will be automatable. According to a report from the McKinsey Global Institute on “Harnessing automation for a future that works”¹, 50% of all tasks currently performed by humans are automatable with technology available today. Another 15% will be automatable soon; the remaining 35% of tasks currently performed by humans will not be automatable soon.

While many jobs will become obsolete, automation and the resulting increase in productivity will also create new jobs (Exhibit 1). According to current forecasts, automation will replace about 15% of jobs in Western economies. At the same time, new positions equal to 21% of today’s labor demand will be created, mainly because of rising incomes, healthcare for ageing populations, investments in infrastructure, buildings and energy, as well as technological development and a growing market for previously unpaid work².

Exhibit 1

While many jobs will become obsolete, automation and the resulting increase in productivity will create new jobs

ROUGH ESTIMATE

Demand driver	Explanation	Estimated change of labor demand until 2030 globally, Mio. employees	
Baseline labor demand	Baseline labor demand, in world without automation	0	~ 0%
Jobs replaced by automation¹	Jobs replaced by automation	-400	~ 15%
New jobs created directly by automation²	Potential jobs created from 7 catalysts of labor demand, e.g., rising incomes, ageing health care, technology spending	+390	~ 14.6%
Incremental job creation from step-up scenario²	Incremental job creation from step-up scenario, e.g., added investments in infrastructure, real-estate construction	+165	~ 6.2%
Net effect on future labor demand		+155	~ 5.8%

¹ Based on mid-point adoption scenario ² Based on low-demand-for-work scenario

SOURCE: McKinsey analysis

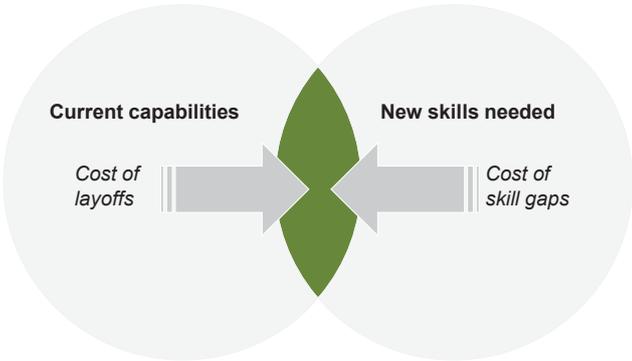
1 <https://www.mckinsey.com/global-themes/digital-disruption/harnessing-automation-for-a-future-that-works>

2 <https://www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages>

Accordingly, automation has the potential to create more positions in the coming years than it will cut. However, in order to ensure full employment, many workers – the latest MGI report “Future of Organizations and Work” estimates 75 to 275 million workers (i.e., 3 to 14% of the global workforce) – will need to switch occupational activities. In Germany, up to 32% of the workforce will have to switch occupational activities until 2030.

It is thus not the quantity of jobs that is the issue, but rather that there is a gap between the skill requirements of the old and new jobs. This skill mismatch could become the main problem for the labor market (Exhibit 2). In the worst-case scenario, the result will be millions of unemployed despite massive numbers of vacant positions, and the related overall economic costs of this worst-case scenario could easily exceed EUR 1 trillion for Germany alone by 2030.

Exhibit 2 **Maximize overlap between capabilities and needed skills**



This report therefore focuses on innovative answers how to manage the radical shift required for skilling the labor force in these times; other factors that impact the quantity of jobs and the skills required are further detailed in the latest MGI report³.



³ <https://www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages>

Required future skills are not just digital skills: human and meta skills also become extremely important

The disruptions of digitization will not make all jobs “digital“. On the contrary, those activities that are inherently human and therefore not automatable will gain importance (Exhibit 3).

Exhibit 3 21st century skills include renowned digital skills, but also human skills as well as meta skills as an overarching element

Meta skills	
Flexibility and adaptability <ul style="list-style-type: none"> Embrace change Be flexible 	Initiative and self-direction <ul style="list-style-type: none"> Manage goals and time Work independently Be self-directed life-long learner
	Leadership and responsibility <ul style="list-style-type: none"> Be a changemaker Guide and lead others Be responsible to others

Digital skills	Human skills
Digital skill level Example skills Digital Expert  <ul style="list-style-type: none"> Produce IT products and services (such as programming, developing applications, managing networks) Optimize search engines, e.g., for marketers 	Creativity and innovation <ul style="list-style-type: none"> Think and work creatively with others Implement innovation
Digital Fluent  <ul style="list-style-type: none"> Participate in online spaces and online services Use several programming languages Can solve almost all problems using digital technology 	Critical thinking and problem solving <ul style="list-style-type: none"> Reason effectively Use system thinking Make judgements and decisions Solve problems
Digital Literate  <ul style="list-style-type: none"> Use of digital technologies for professional purposes Accessing information online or using relevant software 	Social intelligence <ul style="list-style-type: none"> Communicate clearly Collaborate with others Be empathetic
Digital Aware  <ul style="list-style-type: none"> Save and store files Communicates mobile Aware of collaboration tools Aware of security issues 	Productivity and accountability <ul style="list-style-type: none"> Manage projects Produce results

SOURCE: P21 framework; OECD; European Commission; World Bank; team analysis

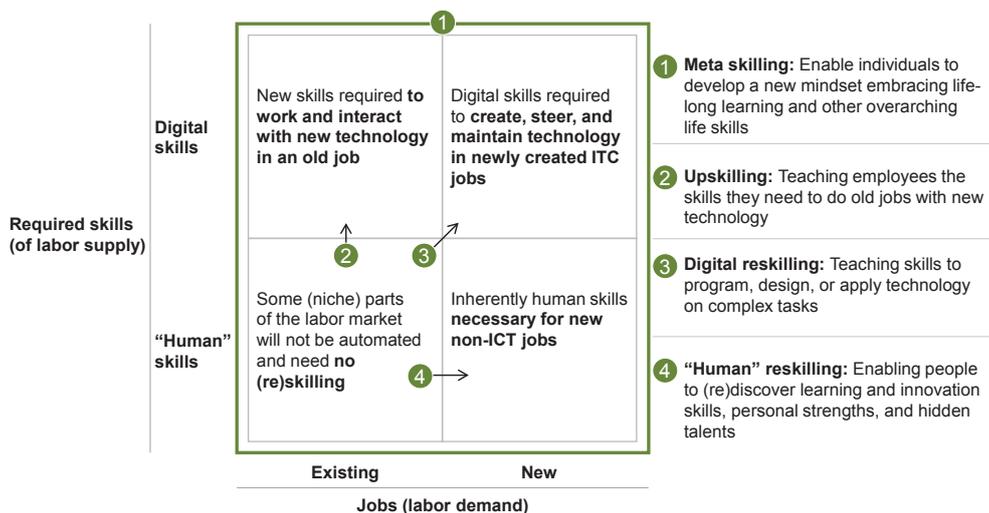
Within the digital skills and human skills needed in the future, we can distinguish those that are required for newly created jobs and those that are needed for an existing job (Exhibit 4). This has an effect on the depth and the goal of respective skilling measurements:

Upskilling: Additional digital skills for an old job; examples are checkout clerks who need to learn how to assist customers with checkout machines, and how to maintain these machines. Another example could be an assembly line worker whose role continuously shifts from actively assembling towards quality control and the ability to troubleshoot the machines.

Digital reskilling: Acquiring skills for an ICT job. This could be in robot manufacturing, cloud computing, data engineering, etc. The boundaries between II and III can become somewhat blurred: online marketing, for example, could still be regarded an “old” job because it still fulfills the same aim, but the activities and required skill set differ significantly and are oftentimes complementary to traditional offline marketing.

Human reskilling: Acquiring/rediscovers skills for a job in which human skills are particularly needed; jobs in this area will grow strongly where the “human” touch is deemed the main unique selling point (USP) in a world where products are otherwise produced by machines. Highly relevant examples of these jobs include customer service and customer care: advising customers, understanding them, offering them a set of products tailored to their needs, and assisting them with problems.

Exhibit 4 Different types of skilling can be differentiated, meta skilling for the workforce at large, as well as upskilling and reskilling



But digitization also disrupts the way we work at large, leading to a labor market that is defined by volatility, uncertainty, complexity, and ambiguity – this is true for individuals as well as organizations. The skills needed to thrive in this new environment that has evolved beyond repetitive work and predictable career paths are referred to as “meta skills” in this paper. Accordingly, the acquisition of these meta skills is called “meta skilling”.

Meta skills revolve around adaptability, self-direction, leadership, and entrepreneurial mindset. They are almost identical to what Ashoka calls “changemaker skills”: cognitive empathy, teamwork, leadership, and creativity. Sadly, most young people would not count these among the most important skills they learned at school. But today, every single person in the labor market will need these meta skills – not only for reasons of personal life satisfaction and to be an active citizen and problem solver for society, a changemaker. But also because, across all industries, meta skills offer by far the most long-term value for employability. Upskilling and reskilling are necessary as short-term measures to master a single wave of technical innovation. However, the multiple waves that follow are much easier to master when employees have already been trained in how to deal with change, how to identify and set goals for their own career and learning paths, and how to effect change using their own initiative – both in organizations and in society at large.

Organizations need to radically change how they conceptualize their skilling – only few examples exist at present

If we consider the current status of skilling in public and private sector organizations, it is clear that we are not at square one: Across all industries and sectors, many organizations have understood that skilling is the answer to many of the challenges brought about by digitization, and they are already seeing bottlenecks today. 55% of European executives believe they will need to retrain or replace more than a quarter of their workforce between now and 2023 due to advancing automation and digitization⁴. Nevertheless, organizations still seem to think in the old paradigm of skilling, and fail to appreciate that the reach, pace, and depth of skilling for the digital labor market is unprecedented and requires a completely new mindset and approach. It also requires new structures.

This chapter explores the current status quo of skilling in public and private sector organizations across six dimensions. For each of them, we also offer an alternative mindset and approach with new imperatives, outlining the target scenario for the future and illustrating it with practical examples of organizations that are frontrunners in some of these dimensions. Some of these examples are taken from large international corporations that are already putting some of our theory into practice. Approaches that truly shift mindsets, however, can be found in the examples of highly innovative social entrepreneurs, who have pioneered the philosophy and shift in mindset that is needed.

Dimension 1: Strategic foresight and coherence Use collective intelligence to link strategy and skilling agenda!

While organizations report a massive skill gap to realize their digital agenda, only 4% of companies have aligned their training program with this digital agenda. Looking at the skilling programs created in recent years, we can see some initial approaches as to how to reskill and upskill parts of the organization, sometimes even achieving an impressive scale within the whole organization. However, there is no strategy detailing how to adapt holistically to the disruptions of a digital world – this should be the starting point and baseline to any skilling program. Thinking about how to adapt to a digital world means defining an organization's future relevance in this digital world, and it is fundamentally linked with the future role of each and every individual in an organization – this is therefore more than just a simple strategy exercise of the C-level, and the result is more than just a digitization strategy.

⁴ <https://www.mckinsey.com/global-themes/future-of-organizations-and-work/retraining-and-reskilling-workers-in-the-age-of-automation>

Exemplary social entrepreneurs



It is not easy to bring everybody to the table. However, social entrepreneurs have excelled in developing and applying empowerment and participation models. One example is Ashoka Fellow Frank Escoubes from Canada with his tech start-up Bluenove. He specializes in harnessing the collective intelligence of public and private organizations, empowering everyone to become “inventors of a world that is possible”. Bluenove works with multinational companies, public entities, and governments to run large scale debates (deliberations through structured online conversations) on strategy, transformation, and leadership issues.

In a recent project, Frank worked with a French national telecommunications company, where 20,000 employees from around the world came together online for two months to co-design the future leadership model of the company. Such processes not only revolutionize decision making through the massive engagement of thousands of stakeholders, but are often also the first real digital experience for many employees, going beyond the typically shallow engagement level in conventional corporate social networks.

Another aspect regarding a strategy for the digital world is that it is never final. It will constantly evolve and needs a very agile approach to implementation.

Dimension 2: Holistic scope Go beyond upskilling!

A holistic strategy for the digital age will also lead to a holistic scope of skilling programs. As described, the future role of an organization is linked to the future role of employees in this organization – and depending on their skills and interests today, it allows us to deduct the required levels of meta, up- and reskilling. At the same time, it is also important to acknowledge that the labor market in a digitized world is not a fixed target state, it is the pinnacle of an ever-evolving system. Training programs need to constantly evolve with it.

What we see today is that the main focus is on upskilling of digital basics that are directly related to the job description, but with very little attention paid to meta skills and helping employees to understand and leverage existing “hidden“ skills – both of them are of overarching importance. It is these meta skills that are the basic core of skilling because they define the purpose and the relevance of lifelong learning and enable individuals to become active drivers of their learning program.

When it comes to “human” skills, there is only so much you can teach and learn – and to a large extent, it is about “rediscovering” them, acknowledging that they have often been ignored or played down as “soft” skills.

Many Ashoka Fellows work on digital upskilling initiatives that include human and meta skills – often working with the unemployed or with other disadvantaged groups to prepare them for corporate jobs.

Exemplary social entrepreneurs



Jose María Luzárraga from Spain founded MTA Academy as a part of Mondragon, one of Spain's largest corporations with 75,000 employees. Working in various programs, students and employees create a real “learning” venture that they lead together as a team. This “teampreneurship through experimentation” approach has led to more than 50 new companies and numerous intrapreneurial initiatives. All MTA graduates describe it as a turning point in their personal and professional lives.



Mariana Costa from Peru identifies young women from underserved backgrounds, equips them with skills for the digital economy, and connects them to the rapidly growing tech sector job market. Unlike other education and training approaches, her organization Laboratoria also prioritizes personal growth and the development of social and emotional skills such as perseverance, self-confidence, and teamwork. Over 800 web developers have graduated from Laboratoria across Peru, Chile, and Mexico, with placement rates of over 80% in their latest cohorts. It plans to become the leading source of female tech talent in Latin America by 2020.



Foundation Santa María la Real from Spain, lead by José María Pérez, helps the unemployed to re-enter the labor market with new skills and an entrepreneurial attitude. His program Lanzaderas is based on groups of unemployed people offering mutual support and their ability to work in teams. Each group consists of 20 volunteers aged between 20 and 60, who agree to work together, help each other to find a job, take up a new activity, or improve their professional qualifications. Their placement rates are 25% higher than other models. Recently, Google and Lanzaderas co-created a MOOC to prepare people for digital jobs – with Lanzaderas contributing its experience in creativity, teamwork, and other human skills.

Assessing hidden skills does not mean starting with what employees should know and be able to do based on their current job description and CV (and prescribing training based on that), but rather starting with what these people are actually good at and like to do. Similarly, looking at skills which are related to currently required skills may reveal additional suitable jobs for these employees – employers can consciously provide tools that help people to identify these on their own. This will further enable them to identify their next potential role and the corresponding upskilling and reskilling programs required.



Exemplary corporate program

Amazon is an example of a corporate player who introduced skilling opportunities that reach far beyond the current job description and even the company. Their Amazon Career Choice program launched in 2012 is also a frontrunner in its collaboration with public entities (e.g., labor and certification agencies). So far more than 10,000 workers from 10 countries have participated in the Career Choice program with expectations of reaching 20,000 by 2020 in the US alone.

Degrees can be obtained in skills relevant for Amazon, but also external high-demand occupations as identified by public labor agencies (e.g., transportation, healthcare, mechanical and skilled trades as well as IT and computer science in the US).

The Career Choice Program pre-pays 95% of tuition and fees for employees to earn certificates and associate degrees. Depending on the country of participation one to two years of tenure are required. The financial assistance goes up to EUR 2,000 per year for up to four years.

Dimension 3: Mindset of organizations and individuals Empower employees to manage themselves!

“Culture” is the single biggest hurdle that companies cite when it comes to implementing their digital transformation. Conversely, the kind of culture that is a barrier to the transformation is upheld by the leaders of many of these corporates, who seem to believe that having a digital training offer is an end in itself (Exhibit 5).

Exhibit 5 Which are the most significant challenges to meeting digital priorities in your organization?

Percent of respondents

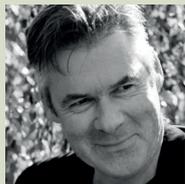


SOURCE: McKinsey "Culture for a digital age"; McKinsey team analysis

While every organization can and should have their own interpretation of what a digital culture can mean for them, there are common aspects of this culture that will become almost obligatory:

- Rewarding an agile way of working and dissolving hierarchies and decision cycles that stand in the way
- Acknowledging the importance of lifelong learning for the corporation and for the individual; creating flexible structures that allow people to discover and shape their learning agenda.

Exemplary social entrepreneurs



One of the most radical and consequential examples of an agile culture was created by Ashoka Fellow Jos de Blok from the Netherlands. His home-care company Buurtzorg with 10,000 nurses and 4,000 care workers consists entirely of more than 900 independent, self-directed nurse teams. Classical leadership positions do not exist and the nurse teams have full autonomy over all decisions regarding their daily work. The admin staff of the whole company amounts to around 50 employees. The result is not only unprecedented levels of collaboration and collective wisdom to drive forward the company's strategy, but Buurtzorg has also been selected as the most attractive Dutch employer four times in a row and has higher patient satisfaction than all competitors.

Overall, there is little recognition among employers or employees of the fact that the age of digitization requires a whole new culture of lifelong learning building on the right meta skills.

In the "traditional" paradigm of corporate learning, the top management and supervisors decide where their employees should develop, what they need to learn and how they do it. Acknowledging that the digital age will require people to adapt to a new working world much more frequently than before – and that this adaptation may often also mean changing profession several times in a career – employers will need to give their employees much more space, and empower them to drive their own learning agenda.

Accordingly, empowering employees to discover their own strengths and development potentials and become proactive drivers of their own change. Applying the same principles for the corporation: making it more dynamic, constantly developing and re-inventing its role and purpose by involving the grass roots of the organization, and turning away from the top-down approach where possible.

Another aspect of the static traditional culture is also how private and public-sector organizations typically deal with overcapacities – and this is an area where yet another shift in mindset is needed. Employee overcapacities/redundancies are typically regarded as a liability – a hurdle on the way to realizing a new strategy. Mostly benevolent, corporations seek to reduce this liability where they can, and approaches to doing so include early retirements and lay-off payments, as well as – where possible – looking for open positions within the same organizations that could be an alternative.

This search for an alternative position rarely involves skilling – the skill set of those that need a new position is fixed – and analogously, organizations seldom look for a long-term solution, anticipating the needs for new talent early. In summary, there is often no long-term strategy for skilling and job rotations within companies.

Looking at the numbers discussed up front, we see how millions of people will lose their jobs, yet even more new positions will be created. The scarcity of skilled labor could stretch to many more areas than those where it already prevails – in many digital jobs, for example, demand is outgrowing supply more than fourfold, and vacancy periods for open positions are rising in many areas. Indeed, lost productivity due to dramatically increasing vacancy periods could be digitization's biggest cost driver in the labor market, and even today, it is a top-3 hurdle to a successful digital transformation in companies. Organizations that understand this early have a clear advantage – the new paradigm will be to regard labor overcapacities as a major asset, and early/anticipatory reskilling opportunities as the key to unlocking and utilizing their potential instead of provoking their redundancy.

To enable this type of reskilling, we need to rethink education – a new qualification does not need a university diploma or long-term apprenticeship. We need shorter-term training programs (on and off the job) that allows people to work and train at the same time.

Exemplary
social
entrepreneurs



The social enterprise Simplon, founded by Ashoka Fellow Frédéric Bardeau, is a great example that shows how significant numbers of employees can be upskilled and reskilled – and even how employees with little or no prior knowledge can be trained in complicated and complex topics in short-time frames. Simplon helps companies to upskill and digitally reskill their employees with a full- or part-time six-month in-house training curriculum. It adopts a variety of reskilling approaches ranging from in-class training and blended learning approaches to at-point hackathons. Simplon has already organized 24 hackathons for companies such as Arte, Orange, and SNCF Réseau. Peer-to-peer training by colleagues from the original target group facilitate a shift in mindset toward enthusiasm for the new skills.

Simplon is a story of great success. Frédéric has already worked with 23 companies and has trained more than 1,000 company employees. He is piloting a large-scale digital skilling program for the French Postal Service, BNP Paribas, and the French Unemployment Agency. He is also currently working on a program to digitally reskill 12,000 employees at L'Oréal.

Dimension 4: Scale and range

Train everybody, not just senior management!

There are a variety of good examples of skilling programs already embracing many of the aspects raised in this report – conversely, these often tend to get stuck at senior level – enabling the top management to train and develop critical new skills and embrace a mindset of lifelong learning and agile working. Of course, corporate change needs this top-down element, and it is an important lever in activating and motivating leadership on the journey toward a digitized working world – but programs should not stop there. Accordingly, in the new mindset, any exclusive skilling offer for the leadership of an organization includes an approach for translating insights and newly acquired mindsets into effective change at large.

A significant hurdle to large-scale training programs is time: most companies cannot afford to have their employees participating in multiple training boot camps while the day-to-day work remains undone. What is needed are new approaches as to how large-scale in-service training can become a reality. That is, programs that allow employees to follow their training goals on the job and sparing some dedicated time during the week for training, while still allowing for their normal work to be done and without compromising the employees' work-life balance.

There is no one-size-fits-all solution to this. Instead, organizations should feel encouraged to think of new ways to make in-service training happen.

Exemplary social entrepreneurs



One example is the online company Alison, created by Ashoka Fellow Mike Feerick from Ireland. Alison is one of the world's largest online learning platforms with around 12 million learners and 1.5 million graduates. It offers more than 1,000 courses on workplace skills, from business English to IT skills to classic soft skills. All courses are free of charge and self-paced. Thus, learners are not restricted to specific hours, but can set their own learning times and paths. Alison is creating new employment opportunity for graduates present in every country and works with corporations, NGOs, and governments as well as individuals worldwide.



Another example that is less in-service, but definitely out-of-the-box is MAAM, a social venture founded by Ashoka Fellow Riccarda Zezza from Italy. MAAM provides companies with a blended (digital and life-based) training program suited to employees with children up to three years of age, that transforms the parental experience into an opportunity to improve their human and meta skills. The program can be accessed from home also by pregnant women and employees on parental leave. Employers and managers receive a closing aggregate report when the employee completes the program. MAAM is involving thousands of users in Italy and international pilots are taking place in over 10 countries worldwide. After self-rating their skills development, users show significant improvement, for example, time management and setting priorities show a 31% improvement, communication a 25% improvement, and decision making a 22% improvement.

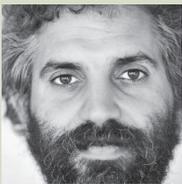
Dimension 5: Affordability

Benefit from smart business models that cut prices dramatically!

For many skilling programs that stop at the top management, the high costs are the reason not to roll it out any further. Indeed, skilling a large organization for a digital world requires significant investment, but there are ways to make programs more affordable.

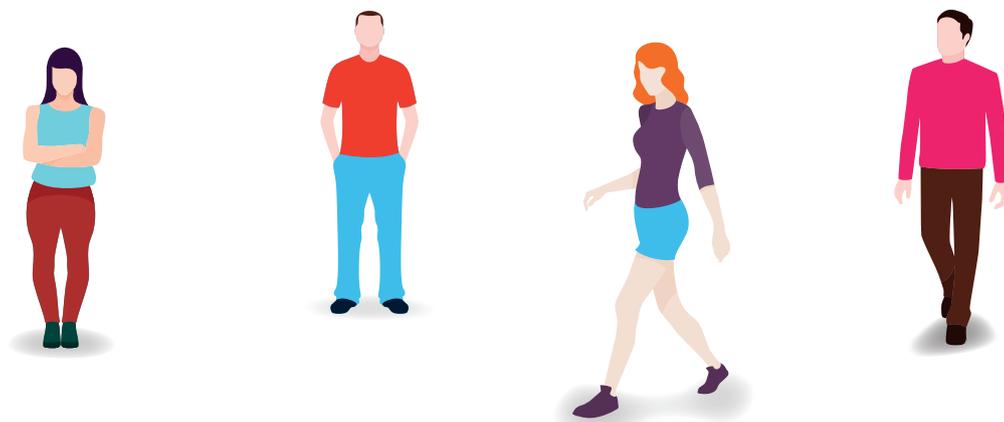
Exemplary social entrepreneurs

One example is Simplon, mentioned above, which uses a low-budget, yet high-impact skilling approach. Similarly also, Alison's courses are all free – a core feature of a platform built by a social entrepreneur who wants to close the education gap worldwide. Alison makes money through advertising, merchandise, and the sale of optional certificates and diplomas to graduates and companies.



David Cuartielles, another Ashoka Fellow, and his Arduino Verkstad serve as another example demonstrating how high-impact skilling can be very affordable. He developed a toolkit to teach digital skills to young students. The toolkit consists of more than 20 hands-on and easily-assembled electronic projects, an online source for course materials, documentation tools, content-specific reference sections, and professional support services. The product was based on a hardware toolkit that at that time retailed for more than USD 1,000. He was able to offer it for as little as USD 25. This meant that 15,000 students could be trained in digital skills at over 500 schools. 90% of the students state that, after the training, they want to learn more about programming.

The last two examples also prove that expensive external experts are not always needed to conduct effective and meaningful training; Simplon uses very effective peer-to-peer training where formerly unskilled trainees turn into teachers, and the training package from Arduino is applied by teachers with little or no prior education or knowledge in this field.



Dimension 6: Impact measurement

Make skilling goals concrete and testable!

After screening numerous corporate learning programs, a striking bottom line is that it is very hard to judge their actual effectiveness because impact measurement remains anecdotal at best; oftentimes, the desired goals and target impact of learning programs are entirely missing. It is high time to change this: we suggest that the definition of skilling goals and their evaluation sits not only at the core of every skilling program, but also at the core of every employee performance dialog. This is the only way to ensure the continuous development needed in an ever faster changing system.

Exemplary social entrepreneurs

For example, Alison's courses conclude with an assessment where learners must show an 80% pass rate. However, graduates must also be ready to take a similar online, on-the-spot test whenever someone challenges them, for example, when applying for a job or in the event of internal company checks. This ensures that diplomas do not lose their value over time and that learners are able to retain and progress their knowledge.



Another Ashoka Fellow offers a very vivid illustration of the importance of impact measurement: Tom Ravenscroft and his social venture Enabling Enterprise is a very strong advocate of "Essential Skills", a combination of typical soft skills and those that are needed to be successful in the workplace. Tom found that schools do not explicitly teach these skills, and many students are insufficiently prepared for the working world. He was the first to identify the main reason: teachers neglected teaching these skills because they could not measure them and therefore could not grade them. Tom developed a framework and tool called "Skills Builder" with quantified measures and benchmarks based on the school years and covering eight "Essential Skills" such as listening, staying positive, problem solving, aiming high, and creativity. So far, Tom has taught 85,000 students these "enterprise skills". This example shows that skills that are often deemed hard to measure are in fact measurable – it is an example that should also inspire companies with their own skilling programs.

Organizations need to start to develop their skilling agenda now – but other stakeholders will need to play their role, too

To make the target picture described in previous chapter a reality and the transition a success, all relevant stakeholders will need to contribute and play their roles. This includes individuals, social entrepreneurs, educational institutions, and industry associations, labor agencies, and the Legislative, which need to create the much-needed ecosystem for the future of skilling in the labor market. In particular, they need to cooperate on skilling at a much larger scale than they have traditionally done so in the past.

Exhibit 6 Next steps for organizations taking on the skilling challenge



Companies and other organizations eager to get started will connect their skilling agenda to their agile organizational strategy and involve the entire organization. This means that the skilling road map is not sequential, or a one-time or top-management topic only. Instead, it is as agile as the organization and its strategy itself. To get started, however, organizations can take the following steps (Exhibit 6):

- 1. Run a skill supply and demand diagnostic to understand the extent of your organizations' current and future skill challenge.** The HR department needs to make a serious effort to understand the exact skill requirements of each department now and in the next three to five years. At the same time, organizations need to better document and understand the skill levels that their employees have. For the definition of future skill demands, the company's strategy serves as a starting point and employees at all levels are involved in order to define the skills they need to grow in future roles of the company.

To analyze the current skill supply inside the organization, current job descriptions and the resulting skills can only serve as a starting point. Companies also need new systems and tools that allow employees to report their “hidden” skills and interests. These skills and interests do not have to be related to the employees’ current role as they could still be relevant for a completely different future role.

- 2. Embed skilling in the organization’s core processes.** The supply and demand diagnostic will result in a skill gap analysis both at a company, but also at an individual employee level. To close skill gaps, the responsible skilling team reviews the company’s current training and development programs, and identifies the missing content needed to close the skill gaps. A skilling road map defines which of the missing content can be developed bottom-up and in-house, and which needs to be sourced externally. It also identifies which on-demand, planned, and social learning methods (e.g., web-based training, mobile apps, learning factories, peer-to-peer training) are most suitable for developing which skills. Moreover, the entire top-management team should champion the skilling agenda and have an appointed skilling team with representatives from all company levels to facilitate its development.
- 3. Help employees at all levels to develop the mindset** as it is the cornerstone of the future of work. Current and future skills gaps will not be closed simply by constantly hiring new people. Instead, the bottom-up involvement and skilling of current employees to take on new roles is a central element of the HR strategy. As explained by Stanford Professor Carol Dweck⁵, employees at all levels need to believe that their talents and skills can be developed (a growth mindset) vs. believing that their talents are innate gifts (a fixed mindset) to become enthusiastic about change and to be ready to grow and develop new skills all the time. Only then and only with the appropriate top-management championship can employees really embrace change.
- 4. Identify relevant learning partners in the skilling eco-system** (e.g., social entrepreneurs, universities, labor agencies) since companies will not and should not be able to manage the transition alone.

5 Dweck, C. (2016). What Having a Growth Mindset Actually Means. Available online [here](#).

To create a successful skilling eco-system, its stakeholders need to take their new responsibilities seriously and start acting now (Exhibit 7).

Exhibit 7 **Skilling eco-system**



¹ Schools, universities, chambers of commerce and crafts, federation of commercial or industrial enterprises, etc.

Individuals that are **changemakers** will embrace a mindset of lifelong learning and constant change. They will regularly ask themselves what kind of skills they need and want to acquire to stay relevant for their current or for any other employer. Changemakers will also not solely rely on their employers to provide them with relevant skills, but will look for external opportunities to acquire them.

Social entrepreneurs can become **thought partners** – not only by providing and developing affordable and effective skilling programs for specific skill sets as illustrated by the Ashoka Fellow examples above. But especially by inspiring all other stakeholders to adopt an understanding of meta skills, i.e., the mindset needed to embrace a world of constant change and how to learn and act in it in self-directed and entrepreneurial ways.

Educational institutions and **industry associations** act as enablers as they provide students with the skills they need for their future. Especially the education system needs to adapt its curriculum to integrate elements that prepare children for a future of constant change. To do so, sufficient time should be allocated to programs dedicated to the development of meta- and human skills. Moreover, continuous collaboration with companies and labor agencies is required to identify changes in skill requirements and to adapt curricula more frequently to meet these changes. Also, new certification programs and degrees will need to be developed faster so that individuals can realize their lifelong learning aspirations.

Labor agencies are bridge builders, and should become lifelong counsellors of individuals as they progress in their careers. Labor agencies should also collaborate more with companies and educational institutions to support lifelong in-house skilling programs that can enhance the employment opportunities for individuals inside and outside their current employer and prevent structural unemployment and its associated costs.

The **Legislative** is the **framework provider** and needs to set legal and economic incentives for companies and individuals to embark on skilling journeys. This could include tax incentives for participating in or providing skilling programs for both companies and individuals. Moreover, it could also include more financial funding for labor agencies and educational institutions to extend skill-counselling efforts and to enable curricula and their respective content to be adapted more frequently.

The skilling challenge is and will be one of the greatest challenges in the coming decade(s) and will not be solved on its own. We all need to start working together on the solutions now!



Key contacts

Rainer Hoell
Ashoka Germany
rhoell@ashoka.org

Matthias Daub
Partner, McKinsey & Company
matthias_daub@mckinsey.com

Anna Wiesinger
Associate Partner, McKinsey & Company
anna_wiesinger@mckinsey.com

Supporting team

Jutta Schrötgens, McKinsey & Company
Tristan Swysen, McKinsey & Company

April 2018

Cover image: getty images; people illustrations by Freepik

Copyright © Ashoka Deutschland gGmbH und McKinsey & Company, Inc.

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0, details: <http://creativecommons.org/licenses/by/4.0/>).