

White paper

# **Lifelong learning**

Improving productivity  
and resilience

# Why is it important for companies to invest in lifelong learning?

## A call to arms for businesses to embed lifelong learning within their corporate cultures.

**Research exploring the gap between global labor supply and demand has revealed a dramatic shortfall. The statistics are stark and suggest that unless businesses begin to address the impending skills shortage, a global shortage of talent could cost states trillions of dollars a year in unrealized revenues. A business that develops a culture of lifelong learning also benefits from greater productivity and resilience to unexpected events such as the recent global pandemic.**

Elke Thamm, Head of Corporate Personnel Development at Bühler

In 2018 the global organizational consultancy Korn Ferry carried out research to explore the gap between labor supply and demand for different sectors, geographical regions, and skill sets. The research covers 20 developed and developing economies across the Americas, Europe, the Middle East, and Africa. It found that, if left unchecked, the demand for skilled workers will outstrip supply by 2030, resulting in a global talent shortage of an estimated 85.2 million people, or 11% of the total workforce. The report also found that the resultant potential loss in unrealized revenue could reach US\$8.452 trillion annually.<sup>1</sup>

The skills shortage has already begun and is set to get worse. For example, last year the education technology company EdTech questioned 9,300 IT workers globally and found that 76% of IT leaders are reporting a skills gap in their departments. This is a 145% increase in the skills shortfall compared to 2016.<sup>2</sup>

Fortunately, there is time to mitigate the risk, but it will be down to businesses to help address the impending skills shortfall beyond just IT skills through a process of lifelong learning. This will involve inculcating a culture of learning within organizations and facilitating learning through flexible education programs. So, this white paper calls on businesses to join forces and accelerate impact together to help make a culture of lifelong learning the norm within organizations. “For many years Bühler has seen a culture of lifelong learning as essential to help us flourish through the current technological revolution,” explains Irene Mark-Eisenring, Chief Human Resources Officer at Bühler. “But the skills shortfall has made it a global requirement for companies everywhere to help build resilience and train employees for both the present and the future.”

### Digitalization and automation

As companies benefit from the power of digitalization and cloud technology in the form of Industry 4.0, the fear expressed by some academics in the past is that jobs will ultimately be absorbed by automation.<sup>3</sup> The findings of the Korn Ferry report show the reverse to be true.<sup>1</sup> While automation may have promised great gains in productivity, especially in the field of manufacturing, it is creating a massive demand for people able to innovate, create, manage, and apply new technological developments. The statistics show that rather than jobs disappearing, they are evolving. Businesses need to adapt to this change by offering employees the opportunity to learn and develop their skills to meet the new demands needed in the marketplace.

### Demographic shift

Global demographic shifts are also responsible for the skills shortage. European countries have experienced low birth rates for decades. In America, over just one year in 2020, three million mostly skilled baby boomers exited from the US workforce creating a skills shortfall that will not be easily filled.<sup>4</sup> This shortfall is being compounded by record-low participation in the labor force by American workers aged between 25 to 54 and the lowest birth rate in US history.<sup>4</sup> Other examples include Japan, where a low birth rate and tight immigration controls are contributing to a depleted talent pool.<sup>1</sup> China’s workforce is expected to shrink by over 20 million by 2030 as vast numbers reach retirement age and the impact of the one-child policy squeezes demographics.<sup>1</sup> Out of the 20 developed and developing economies assessed in the Korn Ferry report, India is the only country where the supply of highly skilled labor is growing faster than demand.<sup>1</sup> India’s median age is predicted to be just over 31 by 2030, meaning

it has a vast supply of working age citizens. The government has also been focusing on programs to boost workers’ skills and capabilities.<sup>1</sup>

### Covid-19

The UN is warning that the disruption caused by the Covid-19 global pandemic is estimated to have wiped out 20 years of education gains.<sup>5</sup> During the pandemic, education systems across the globe were brought to a halt and a UNICEF report published in January 2022 shows that two years after the start of the outbreak, 616 million children were still affected by full or partial school closures.<sup>6</sup> The scale of losses in educational gains caused by the pandemic has been described by the UN as “nearly unsurmountable”, and the consequences will feed into the job market, compounding the existing skills shortfall.<sup>6</sup>

In low and middle-income countries, learning losses as a result of school closures have left up to 70% of 10-year-olds unable to read or understand a simple text.<sup>6</sup> That figure is up from 53% pre-pandemic. In the US, significant learning losses are being recorded in eight states including Texas, California, Colorado, and Tennessee. In Texas, for example, two thirds of children in the third grade (8 to 9 years old) tested below standard compared with half in 2019.<sup>6</sup> As a result of Covid-19, South African children are up to a full year behind in their educational attainment while in Brazil three quarters of grade two (7 to 8 years old) children are behind in reading.<sup>6</sup>

Covid-19 has also impacted lifelong learning programs across the world. In Kenya, the African Milling School was forced to close for almost a year. As the only milling school in Africa, the closure badly impacted short and long-term learning in the milling sector. “Covid was a disaster for everyone and is still a disaster, but we are slowly coming out of it,” explains Lameck Nyakoe, Bühler Head of Customer Service for East Africa. “We were able to come up with an online module to keep the students going, but that was just the theory, and they were unable to learn from the practical elements of the course.”

### Sustainable Development Goals

In its 2030 Agenda for Sustainable Development, the United Nations recognizes the integral role of lifelong learning in ensuring sustainable development. There are 17 Sustainable Development Goals (SDGs) in total with SDG 4 specifically dealing with education.<sup>7</sup> It calls on member states to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. Within SDG 4 there are 10 further targets including “equal access to affordable technical, vocational and higher education”, “increase the number of people with relevant skills for financial success”, and “eliminate all discrimination in education”.<sup>8</sup> But the benefits of lifelong learning are not limited to just impacting SDG 4. It will also

improve gender equality (SDG 5), create decent work and economic growth (SDG 8), improve health and wellbeing (SDG 3), support responsible consumption and production (SDG 12), and help mitigate climate change (SDG 13).

Bühler is striving to innovate for a better tomorrow for its customers and the UN’s SDGs act as a guide when achieving this objective and outline what we should focus on to ensure that humanity moves forward in the right direction. Ina Toegel is Professor of Learning and Organizational Change at IMD Business School in Switzerland, where she regularly partners with corporations to design and deliver custom-made leadership development programs. “The Sustainable Development Goals are always in our mind so that whenever we design executive programs for our clients, we try to ensure they address at least one of these goals, it might be around gender equality or the environment, but they are always at the core of what we do,” explains Professor Toegel.

### What is meant by lifelong learning?

In the past, learning has been associated with academic institutions and ends when our formal education is completed. Today learning is seen as a continuum, something that is ongoing and that can take place in many different forms with the support of employers. Flexibility is a key characteristic of lifelong learning as it should be something that you can fit into your everyday routine or complement your professional life. Lifelong learning is also about encouraging a culture of learning within your organization. “The mistake these days is that companies approach lifelong learning from the perspective of training people, which I think is the wrong way to go about it because companies need to engage their employees in order to ultimately build a corporate culture of learning,” explains Professor Toegel. “Human beings thrive when they are intrigued, not when they are under pressure to perform. The inherent challenge for employers is how to pique that curiosity and how to keep it alive so people want to self-develop.”

An example of lifelong learning in action is the Bühler B-Learning platform, designed to deliver different learning programs through a range of different mediums including videos, e-learning, classroom training and webinars. “An important principle of lifelong learning is that it must be for everyone regardless of age, location, or career stage, which is why we have established flexible learning programs to help employees choose the most appropriate learning medium at their different life stages,” explains Mark-Eisenring.

Bühler recently built on its existing lifelong learning program by introducing a new range of skill-building webinars on topics such as high-performance teams, values-based leadership, mental health and wellbeing, and innovation and collaboration

across cultures. Bühler is also exploring learning innovations that meet the modern learner's need for training formats that are short, relevant, engaging, personalized, and available around the clock.

## How companies benefit

By implementing lifelong learning, companies are not only building resilience against the impending skills shortfall. In Deloitte's 2021 Global Human Capital Trends report, just under three quarters of executives questioned highlighted the ability of their employees to adapt and learn new skills as a priority for navigating future disruption.<sup>9</sup> Continuous learning is seen as key to the capacity of employees to adapt. A four-year study carried out by Middlesex University's Institute for Work Based Learning<sup>10</sup> found that three quarters of UK employees believe they are not achieving their potential at work and are eager to improve their skills. There is also evidence that companies with strong educational cultures are up to 50% more productive than competitors who fail to make learning a priority.<sup>11</sup> The evidence shows that lifelong learning meets a demand, builds resilience, and improves productivity.

But the benefits do not end there. Once you adopt a learning culture within your company it has the potential to spread and break down barriers. "Learning first gets embedded in individuals but I like to think of levels of learning. So, once you have self-starting individuals with self-awareness about learning then you start to get team learning and ultimately the whole organization starts to learn and drives performance," explains Professor Toegel. "Once you have cross-functional learning then you start to bridge what people call the silo culture that many organizations complain about, where people don't get what other functions actually do."

## Creating a learning culture

Lifelong learning starts with creating an environment that enables employees to have time to learn. Learning comes in many different forms. One of the few positives to come out of the Covid-19 pandemic is an explosion of creative ways that remote and screen-based learning can be delivered. The arrival of the Metaverse and virtual reality is now opening a raft of new ways to achieve experience-based learning while concepts like micro-learning - bite-sized learning activities delivered over mobile phones and designed for between three and 10-minute consumption - can be slotted into busy schedules. New technologies are increasing the different mediums by which training can take place enabling each employee to customize their learning so that it best fits their lifestyle.

According to Professor Toegel, there are some basic steps that can be taken to enable lifelong learning in an organization. A culture of curiosity that encourages learning from colleagues is key. Finding out what works is also important. "Look outside your organization and look at who is using best practice and

bring their ideas back into your organization and look at how you can embed these best practices," she says. Employees also need a safe environment in which to learn so that they feel it is OK to make mistakes and fail. Professor Toegel argues that learning from mistakes can be very beneficial and is often a foundation for innovation. Enabling employees to take ownership of their learning is also important. This can best be achieved by providing choice and, as much as possible, by adopting a personalized approach to course structures.

## Responsibility as a corporate citizen

Responsibility for lifelong learning does not end at the company door. Examples of how lifelong learning can extend beyond your own employees include Bühler's Application & Training Centers in 24 locations around the globe, where customers can train their staff and are encouraged to experiment with new product ideas. Other examples of lifelong learning include the Bühler apprenticeships, the Partners in Food Solutions program, and their global network of schools, in particular the African Milling School in Kenya. Bühler is also involved in a number of degree-level programs and partnerships to help nurture future industry leadership.

### • Application & Training Centers

Bühler's 24 Application & Training Centers are spread all over the world and so address local tastes and market needs while providing a unique learning experience for customers and their staff. Bühler subject experts and technologists support customers to experiment with recipes or run trials in food processing and advanced material production. By being able to test ideas in real time and off site, customers do not have to disrupt their own production processes. Last year, Bühler and its partners opened two new centers for alternative proteins, the Protein Innovation Center in Singapore and the Technology Center Proteins of the Future, in Germany. Bühler shares process knowledge with customers and helps generate new ideas through demonstrations, networking opportunities, or co-creation events. In Bangalore, India, Bühler has an Application & Training Center specializing in flour and rice milling, while two schools in Brazil focus on consumer foods and optical sorting technology. In Jakarta, Indonesia, the Application & Training Center specializes in product development for cocoa, chocolate, coffee, and flour, and the global battery Application & Training Centers in Japan, China, and Switzerland help customers test new battery products on state-of-the-art Bühler process solutions. Over 2022, Bühler has focused on learning within the field of insect processing technology with the opening of the Insect Technology Center in Uzwil, Switzerland. Bühler's Application & Training Centers provide the opportunity to share knowledge and learn from specialists while providing access to the latest generation of Bühler technologies and so support customers in providing learning to their employees.

### • Apprenticeship programs

Switzerland has long been known for its vocational training model offering apprentices a mix of practical and academic training. As part of its lifelong learning program, the Bühler Apprenticeship Scheme offers training to over 500 trainees a year. The courses are designed to develop the skills that future employees will need to help them adapt to fast changing work environments. These three-and-four-year courses cover nine different professional fields and are continually evolving to meet the changing skill sets required by companies. This year, 66% of the apprentices finishing their courses chose to pursue careers within Bühler. The Swiss dual-vocational model has set a global benchmark and has been adapted by other countries including Germany, Austria, India, Brazil, the US, and South Africa.

### • Partners in Food Solutions

Set up in 2008, Partners in Food Solutions (PFS) aims to create a more sustainable food industry through virtual volunteering by providing support to small and medium-sized food processors operating in Sub-Saharan Africa. Bühler has partnered with PFS since 2014 and, along with other members of the food industry, provides employees who volunteer their free time to share their expertise virtually to help address food processing challenges ranging from food safety to grain processing and business development. The independent non-profit organization also works with companies such as General Mills, Cargill, Royal DSM, Hershey, and Ardent Mills. The ultimate objective of PFS is to leverage the power of online lifelong learning to increase food security, improve nutrition, and advance the development of the food processing sector in Sub-Saharan Africa. The power of lifelong learning has, to date, enabled entrepreneurs to grow their businesses while supporting a supplier base of 31,000 farmers and unlocking around USD 50,000 of investment capital.<sup>12</sup>

### • Global School Network

In 1957 the Swiss School of Milling was founded by René Bühler. Thirty-two students graduated from the school in 2021, bringing the total number who have graduated since the school first opened to around 1,800. Students from around the world learn about milling, maintenance, and automation while gaining practical experience in the industrialized school mill, which is equipped with the latest machines and digital solutions.

The principle of offering lifelong learning to customers now extends to different specialist schools around the world including the Cocoa Innovation Competency Centre in Abidjan, Ivory Coast where, along with neighboring Ghana, 70% of the world's cocoa is produced. With only 25% of its cocoa processed in-country, the school aims to develop manufacturing skills to help the Ivory Coast government double this figure.<sup>13</sup> Moreover, Bühler also started the International Rice Milling

Academy in Bangalore, which offers training programs covering the entire rice value chain from seed to packaged rice. Other schools include the Swiss Institute of Feed Technology, founded in 1979, and the African Milling School.

### • African Milling School

The African Milling School (AMS) based in Nairobi, Kenya, opened in 2014 to address a skills shortage in the milling industry across Middle East and Africa. The training is open to employees from all medium to large milling companies regardless of whether they are customers of Bühler. "Before the African Milling School opened companies had to send millers to Europe, China, or India for training, which was expensive and led to trained millers being poached by other companies," explains Nyakoe. As one of only two milling schools on the African continent the AMS' two-year milling apprentice course takes 30 students per module. The formal training program requires students to regularly return to their workplace to apply their training in a real-world setting. "This is unique for Africa because it is a vocational center based on the Swiss education model offering a mix of theoretical and practical education," says Nyakoe.

The example set by the AMS has started to become a trend in Kenya and beyond as more vocational training units open in different manufacturing sectors. "Things are changing in Africa and companies are starting to partner with universities and technical colleges to ensure students entering the market are trained in the practical aspects of their courses. For example, universities are looking at sending their engineering students to us for training in the practical aspects of engineering," explains Nyakoe. In 2016 Kenya launched vocational training institutes located around the country as an alternative to university. The institutes teach a competence-based curriculum designed to address manufacturing skill shortages. This model is being replicated across East Africa as part of the region's shift to lifelong learning.

### • Degree Level Programs

Bühler is a founding industry partner with ETH Zurich in Switzerland and Ashesi University in Ghana offering a master's program in mechatronics engineering. The three-year program equips students with specialist competencies and a wide range of skills to pursue careers in the field of production and automation. The program aims to promote the next generation of leaders in Sub-Saharan Africa who will take responsibility for sustainable development in the region.<sup>14</sup> Bühler is also an active Corporate Partner of UNITECH International. This organization connects eight top-tier European universities with 11 different engineering companies with a global reach to develop the next generation of diverse engineering leaders who collaborate, challenge, inspire individuals and ecosystems, and innovate to positively impact organizations, society, and the environment.



## Conclusion

- The need for a wider adoption of lifelong learning is being driven by a shortfall in skills caused by demographic shifts and compounded by Covid-19. The shortfall has the potential to significantly impact earnings by 2030.
- An important aspect of lifelong learning is to pique employees' curiosity and to create a culture of voluntary learning, rather than push compulsory training regimes.
- Targeting training at individuals to meet their specific needs and providing choice is key to employees having a sense of ownership of their lifelong learning program.
- Lifelong learning among employees builds corporate resilience against unexpected events like the recent Covid-19 pandemic, improves productivity, and breaks down silo thinking within organizations.
- Lifelong learning does not end at the company door. As corporate citizens we all have responsibility for learning globally. Guided by the UN SDGs this can be in the form of customer training, apprenticeships, global partnerships, practical learning, or academic alliances.

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### Elke Thamm – Head of Corporate Personnel Development at Bühler



Elke Thamm joined Bühler in September 2020. Prior to that she held several global operational and strategic HR roles in the logistics, aviation, and hospitality industry. With over 15 years of corporate experience in HR, Thamm has a track record of delivering global initiatives with a focus on talent management, leadership development, and organizational change. She read business studies at Vienna University of Business Administration, St. Gallen University, and Paris Dauphine. She holds a degree from WU Wien, has a CEMS Master's in International Management, is a Fellow of the Chartered Institute of Personnel and Development, and has an EMMC accredited Diploma in Mental Health & Wellbeing Coaching from Kingstown College.

### Ina Toegel – Professor of Learning and Organizational Change at IMD Business School, Switzerland



Ina Toegel's research focuses on team dynamics, organizational change management, top management teams during corporate renewal, and founder influence. She is a member of the Academy of Management and of the Strategic Management Society, and she presents at the Organizational Development and Change division during the Academy of Management's Annual Meeting. She started her career as an economist at the World Bank and prior to joining IMD, Professor Toegel taught at the Ecole hôtelière de Lausanne.

### Irene Mark-Eisenring – Chief Human Resources Officer at Bühler



Irene Mark-Eisenring graduated in business administration from the University of Applied Sciences in St. Gallen, Switzerland. She expanded her studies with additional diplomas in HR strategy from Cornell University, personnel management, profiling, psychology, and project management. Mark-Eisenring has extensive experience in human resources and worked more than 20 years in the financial industry, where she held various HR leadership roles and led projects in different countries including the UK and South America. She joined Bühler in 2016 as Head of Corporate Personnel Development and is on the Board of the local Business & Professional Women Network Eastern Switzerland. In September 2020, she was appointed Chief Human Resources Officer for the Bühler Group.

### Lameck Nyakoe – Head of Customer Services for East Africa at Bühler



Lameck Nyakoe is a graduate in Mechatronics Engineering from Jomo Kenyatta University of Agriculture and Technology, in Kenya. Nyakoe joined a local energy and water company as a Sales Engineer in 2011 before joining Bühler as a Service Engineer in 2012. He assisted in the African Milling School as a Technical Trainer for both Apprentice and Short Maintenance courses before being promoted to Area Service Manager. In 2020 he was enrolled for the Master of Bühler Management course offered in conjunction with Ashridge Executive Education, London. In 2022 he became Head of Customer Service, Bühler Limited East Africa.

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