Digital Skills Playbook for the EU

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Introduction

The talent gap is one of the biggest challenges facing businesses today. With a shortage of workers with science, technology, engineering, and mathematics (STEM) skills, companies including IBM are missing the high-skilled workers needed to further develop digital technology solutions.

The EU Digital Decade policy set out to ensure 80% of working age Europeans have basic digital skills by 2030. So far, the EU is at 54%. It also set a target of 20 million IT specialists by 2030 – currently only at 9 million. Over 70% of businesses in the EU say the lack of staff with adequate digital skills is an obstacle to them investing. The skills shortage drives up the cost of tech-enabled investments in the EU, stalling innovation, competitiveness, and growth.

Digital skills are needed across an increasing variety of occupations, making the battle for talent even more fierce. This means companies must have a clear value proposition to potential employees, including tools for continual learning. IBM therefore fully shares the overall goals of this European Year of Skills - tackling skills shortages by increasing the talent pool, better matching workers' aspirations with the skills needed in the labour market, and equipping people to grasp the opportunities of the digital and green transitions.

This is especially urgent in the context of cybersecurity and the rapid increase in cyberthreats. In 2022, the European Cyber Security Organisation put the shortage of cybersecurity professionals in the EU at 500,000. We also predict a sharp increase in the need for quantum skills. Training Europe's cybersecurity and quantum workforce requires significant investments from companies and governments to upskill tech professionals - so we are protected, and the development of technologies is not stalled due to a lack of talent. The EU should use its Cybersecurity Skills Academy to leverage government action.

This is also urgent for the people and communities missing out on well-paying jobs and fulfilling careers because they don't have the necessary digital skills. Tackling the skill shortage helps foster diversity and inclusion - a societal goal that's also good for business.

Governments have stepped up to develop and support more diverse and agile learning opportunities and pathways to the labour market, including vocational education and training (VET) and microcredentials. This is reinforced with attention on digital skills in the EU recovery and resilience facility and the EU Council Recommendations on digital skills, VET, and microcredentials. However, according to Cedefop, there is a wide disparity between EU member states' performance. The focus should be on fewer, effective initiatives and encouraging national governments to implement what already exists.

To make progress and embrace continuous learning, a change of mindset is needed. That's why IBM is investing in the future of work with a holistic approach that ensures our employees are on a continual learning path, fosters access to education and training for job seekers and creates a more diverse pipeline of talent. EU institutions and national governments have a crucial role in setting the right framework, and businesses also have a responsibility.

Here, we share our playbook and policy recommendations to help drive the change needed for today's – and most importantly our future – workforce.

Talent acquisition, development, and retention

Success Factors:

–   Take a skills-first approach to hiring by looking at a candidate's skills and ability to learn, and continually review job requirements to ensure the bar is not so high it reduces the talent pool.

–   Embrace a culture of continual learning across the organisation – on the employer and employee side – and devise measures to motivate workers to upskill and reskill throughout their career.

–   Invest in tools to support employee learning and career development, including by leveraging technology.

The key to winning the battle for talent is having a successful talent acquisition, development, and retention strategy. For IBM, this includes continually reviewing the skills needed as a company and looking at the broader talent pool.

In the U.S., IBM takes a skills-first approach to hiring by looking at people's skills and ability to learn rather than only their formal qualifications. This expands opportunities for well-paying and rewarding jobs to more people. It also helps create a more diverse workforce, fuelling innovation as people with different backgrounds bring different ideas to the company. A BCG study shows that companies with above-average diversity produce a greater proportion of revenue from innovation (45%) than from companies with below average diversity (26%).

To retain and build the talent we already have, IBM provides its employees with the tools to develop within their profession and across the technology industry. We encourage our employees to accelerate their upskilling with at least 40 hours of learning each year. In 2022, each IBMer completed over 80 hours of learning on average. Additionally, our digital credentials are recognised by industry, which helps create career pathways within IBM and fill skills gaps across labour markets.

IBM's employee learning uses AI to create personalised recommendations and track progress. Still, each employee can decide whether to follow the recommendations or pursue a different course. The use of AI is clearly beneficial here, by supporting human decision making.

Building pathways for disadvantaged groups

Success Factors:

- Empower underrepresented communities in technology through free training to help close the skills gap.

- Support agile learning options, including by leveraging technology.

- Prioritise job-readiness in learning offers, whilst allowing room for personal development.

- Develop digital credentials which are recognized across industries and markets.

- Partner with organisations that have expertise to help reach underrepresented groups.

As a member of the EU Pact for Skills and digital ecosystem partnership, IBM has committed to help close the skills gap by skilling 30 million people globally by 2030. We also support the EU Council Recommendations on Microcredentials and Individual Learning Accounts, important tools to promote agile learning opportunities and transferability of learning outcomes across jobs and sectors.

A recent IBM global study administered by Morning Consult highlighted that even though job seekers, students, and career changers are keen to pursue STEM roles, many are not familiar with the career options or don't believe they have the academic degree or skills to access them. And whilst online training and digital credentials are gaining recognition, many are not aware of them or still believe they're too expensive.

IBM SkillsBuild is a free education programme focused on underrepresented communities in technology that helps adult learners and secondary and university students develop valuable new skills, obtain digital credentials, and access career opportunities by making them job ready. The programme includes an online platform that is complemented by customized practical learning experiences delivered in collaboration with a global network of partners.

The open version of IBM SkillsBuild offers over 1,000 courses in 20 languages on technical disciplines including cybersecurity, data analysis, and cloud computing. Once completed, participants earn IBM-branded digital credentials that are recognized by the market. This helps IBM increase its talent pool, provides people with a route into employment and helps fill the overall skills gap.

Online training is most effective when delivered collaboratively with local partners. Therefore, the open IBM SkillsBuild platform is complemented by customized learning experiences for underrepresented and disadvantaged communities to get a foothold

in the tech industry and labour market at large. Community experts bring a deep understanding of the specific needs of their group of learners and enrich course content through project-based learning. IBM provides mentoring, hands-on job experiences, and the insider know-how on the digital skills needed in the labour market.

IBM SkillsBuild recently created 45 expanded collaborations around the world, including in the Czech Republic with *Czechitas*, France with *CY Cergy Paris Université* and *Social Builder*, and in Sweden with *New to Sweden* and *Young Scientists*. Through these partnerships, we can help specific communities that are underrepresented in technology, such as women and refugees, reach pathways to employment.
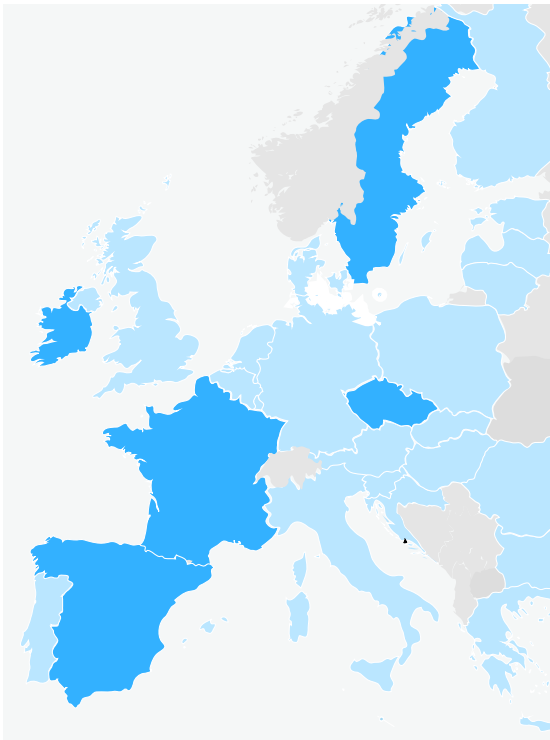
Other IBM initiatives in different EU member states include:

- **In France**, IBM SkillsBuild is collaborating with engineering school EFREI Paris to create cybersecurity and cloud courses. IBM also continues to train unemployed people in AI and cybersecurity through partnership with the French employment agency Pôle Emploi and the training organisations LearnQuest and Needemand Technology.

- **In Spain**, IBM is supporting unemployed individuals through collaboration with local partners including Konecta, DataHack, SkillUp, FUNDAE, BeJob, and Puentes Global on topics including data literacy. In partnership with Creatica, IBM SkillsBuild created content that provides key skills within the European Digital Competency framework, to further benefit students and teachers.

- **In Ireland**, IBM SkillsBuild is partnered with Purpl Unicorn to support training on cybersecurity, AI, machine learning, big data, and future technologies for migrants and refugees to prepare for job applications.

- **In Sweden**, IBM works with War Child on the We Can Do IT!-initiative, supporting young women that have fled war zones, by mentoring and training them through IBM SkillsBuild.

- **In the Czech Republic**, IBM SkillsBuild is partnering with Czechitas to support reskilling Ukrainian refugees.

Plugging the skills gap through IBM business partners

Success Factors:

- Combine core business goals with broader skilling objectives.

- Develop digital credentials which travel with the learner.

- Improve learning platforms to make learning quicker and more targeted.

At the beginning of 2023, IBM announced IBM Partner Plus– a new programme that reimagines how we engage with our business partners through unprecedented access to IBM resources and tailored support to deepen their technical expertise. For the first time, all registered business partners will receive access to the same education programmes, hands-on training, and digital credentials as IBMers – at no cost.

With a dedicated online platform, it will be easier for partners to find the right training at the right time, and to complete learning more quickly - unlocking the resources they need. The training and digital credentials are linked to IBM solutions on Data and AI, Cloud, Automation, Security, Sustainability, Infrastructure. However, they also provide relevant skills for the entire tech sector and across other industries. This means that beyond their job at one of IBM's business partners, the new programme helps workers gain skills and digital credentials that demonstrate industry-recognised expertise - and travel with them in the labour market.

Equipping our business partners with the necessary skills to help them meet client demand helps IBM speed up the journey to market of our technology solutions. It also provides those workers with highly market-relevant digital skills, supporting their employability across the labour market and plugging the skills gap overall.

Policy recommendations to the EU and national governments

- Work closely with business to understand the needs of the labour market, and ensure skills programmes are focused on making people job-ready and employable throughout their career.

- Promote and encourage skills-based hiring by evaluating skills and the ability to learn, as well as formal qualifications, to reach a broader and more diverse pool of talent.

- National governments should expand education and training pathways to in-demand jobs with a strong focus on VET, and by supporting diversity in training providers and scaling successful private sector initiatives.

- National governments should support development of more agile pathways to new skills - including shorter modularised microcredentials and work-based learning - and by implementing the EU Council Recommendations on Microcredentials and Individual Learning Accounts. National governments should also work with successful private-sector training providers to avoid setting overly prescriptive criteria for microcredentials which could be a barrier to training and make it easier to transfer digital learning credits between EU countries.

- The EU should continue to encourage member states lagging behind, by focusing on skills in the recovery and resilience facility, and seek to ensure all national governments develop a strategy to tackle skills shortages by implementing the EU Council Recommendations on digital skills. The EU should avoid an over reliance on certification schemes which risk becoming out of date quickly. Instead, employers should be encouraged to ensure training is labour-market relevant and helps people into work.