

# DIGITAL SKILLS

PREPARING YOUNG PEOPLE FOR THE FUTURE OF WORK IN THE DIGITAL ECONOMY



#### Digital Skills

### 1 Decent Jobs for Youth – the global initiative for action

### 1.1 Objective

**Decent Jobs for Youth is the global initiative to scale up action and impact on youth employment under the 2030 Agenda for Sustainable Development.** Launched in 2016 with the endorsement of the executive heads of the United Nations, Decent Jobs for Youth is a unique platform for partners to address fragmentation and catalyse effective, innovative and evidence-based action at country and regional levels.

### 1.2 Partners

**Decent Jobs for Youth brings together the resources and expertise of multiple partners to create linkages that maximize the effectiveness of youth employment investments.** The initiative recognizes the important roles of governments, social partners, the UN System, youth and civil society, the private sector, regional institutions, parliamentarians, foundations, academia and the media in promoting decent jobs for youth. The partners of Decent Jobs for Youth subscribe to 15 guiding principles, which steer their actions and investments on youth employment.

### 1.3 Strategy



**Building a strategic alliance** to advocate, ensure policy convergence, stimulate innovative thinking and mobilize resources

**Scaling up evidence-based action and impact** across eight thematic priorities in line with the 2030 Agenda for Sustainable Development



**Sharing and applying knowledge** by capturing, analysing and sharing best practices, highlighting innovative approaches and facilitating learning

**Mobilizing resources** by securing high-level commitments from national, regional and international actors

### 1.4 Priorities for action

**Eight thematic priorities to make a difference in the lives of young women and men – and in our world.** Thematic plans identify areas for enhanced action and impact on decent jobs.



Green jobs for youth



Youth transitioning to the formal economy



Digital skills for youth



Youth in the rural economy



Quality apprenticeships



Youth entrepreneurship and self-employment



Youth in fragile situations



Young workers in hazardous occupations

### 2 Why action is needed

The digital economy is rapidly transforming the employment landscape across industries including financial services, health, entertainment, transportation and, of course, information and communication technologies (ICTs).<sup>1</sup> A growing number of public and private sector decision-makers across the world are seeking to foster the building blocks of the digital economy, which includes increasing the number of young women and men who possess digital skills. This recognizes that digital skills, especially high-level skills, stimulate innovation in a digital economy and support the infrastructure that the private sector, governments and customers rely on.<sup>2</sup>

**Digital skills are increasingly required in workplaces around the world.** In developing countries, on average one-third of urban workers use digital technologies at work, <sup>3</sup> while in many developed countries, digital skills permeate work environments to the extent that they have become almost necessary for employment. Around 90 per cent of jobs in the European Union (EU) require at least some level of digital skills, rising to 98 per cent for managerial positions.<sup>4</sup>

Moreover, there will be tens of millions of jobs for people with advanced digital skills in the coming years, with some economies predicting a talent gap for workers with advanced digital skills and others ranking ICT specialists among their fastest-growing roles. In China, 7.5 million out of 18 million information technology roles could go unfilled by 2020, <sup>5</sup> while the EU forecasts a high-tech skills demand of 9,174,000<sup>6</sup> by 2020. The United States Bureau of Labor Statistics (BLS) forecasts 3,475,000<sup>7</sup> computer and information technology job openings between 2016 and 2026 and predicts that these jobs will grow by 13 per cent during this time – faster than the average for all occupations tracked by the BLS. Since some of these jobs could be done remotely, they promise job opportunities for young people around the world. In addition, there are likely to be many more openings globally as more countries digitize.

**Digital skills are linked to higher earning potential.** On average, workers in OECD countries with middling to more advanced ICT skills earn 27 per cent more than workers with no or only basic ICT skills. Such pay gaps rise to 50 per cent in certain OECD countries, including England, Singapore and the United States, while workers with no ICT skills earn 10 per cent less than those with the most basic ICT skills. In Ghana, digital jobs can offer wages up to 5.5 times higher than the official minimum wage.<sup>8</sup>

While young people are often considered "digital natives", the majority of them do not actually possess sufficient job-relevant digital skills to fill vacancies. This includes both the high-level

 <sup>6</sup> Empirica (2017). Innovation Leadership Skills for the High-Tech Economy – Demand, Supply and Forecasting, https://www.slideshare.net/TobiasHsing/innovation-leadership-skills-demand-supply-and-forecasting.
<sup>7</sup> United States Bureau of Labor Statistics (2016), <u>https://www.bls.gov/emp/ep\_table\_110.htm</u> and

https://www.bls.gov/ooh/computer-and-information-technology/home.htm.

<sup>8</sup> Dalberg (2013). Digital Jobs in Africa: Catalyzing Inclusive Opportunities for Youth, <u>https://www.rockefellerfoundation.org/report/digital-jobs-in-africa-catalyzing-inclusive-opportunities-for-youth/</u>.

<sup>&</sup>lt;sup>1</sup> ITU (2014). Digital Opportunities: Innovative ICT solutions for youth employment, <u>http://www.itu.int/en/ITU-D/Digital-Inclusion/Youth-and-Children/Documents/YouthReport 2014.pdf</u>; ITU (2016). Coding bootcamps: A youth employment strategy, <u>http://www.itu.int/en/ITU-D/Digital-Inclusion/Pages/Reports.aspx</u>; World Economic Forum. <u>The Future of Jobs</u>.

<sup>&</sup>lt;sup>2</sup> OECD (2016). *Skills for a Digital World*, <u>http://www.oecd.org/employment/emp/Skills-for-a-Digital-World.pdf</u>. <sup>3</sup> World Bank Group (2016). *World Development Report 2016: Digital Dividends*. Chapter 2: Expanding opportunities, <u>http://documents.worldbank.org/curated/en/896971468194972881/310436360\_20160263021240/additional/102725-</u> <u>PUB-Replacement-PUBLIC.pdf</u>.

<sup>&</sup>lt;sup>4</sup> European Commission (2017). *ICT for work: Digital skills in the workplace*, <u>https://ec.europa.eu/digital-single-market/en/news/ict-work-digital-skills-workplace</u> and <u>https://ec.europa.eu/digital-single-market/en/news/new-report-shows-digital-skills-are-required-all-types-jobs</u>.

<sup>&</sup>lt;sup>5</sup> China Ministry of Education, Ministry of Human Resources and Social Security and Ministry of Industry and Information Technology (2011). *Guidance on talent development and planning in the manufacturing industry*.

skills required to create ICTs and the more basic digital skills needed for other work-related tasks. In Africa, it is estimated that less than 1 per cent of children leave school with basic coding skills.<sup>9</sup> In OECD countries, 58 per cent of younger adults (aged 25 to 34) are unable to complete tasks involving multiple steps and requiring the use of specific technology applications.<sup>10</sup> Furthermore, the overall lack of skills, in particular skills in using accessible ICT such as accessible websites, online content and mobile apps, further exacerbates the employment challenges facing young persons with disabilities. In the EU, young persons with disabilities are less likely to possess digital skills. In fact, one in three persons with disabilities in the EU has never used the internet, which represents 54 per cent of those who have never been online.<sup>11</sup> In addition, since there are a growing number of persons with disabilities who require accessible ICTs, new job opportunities are also expected for accessible ICT developers.

Governments, social partners, the private sector, academia, civil society and other key stakeholders need to ensure that young people are equipped with the digital skills to benefit from employment and entrepreneurship opportunities and to ensure an inclusive digital economy and society. Training young people in coding or other advanced ICT skills demanded by employers promises to result in positive labour market outcomes and can boost innovation and trigger entrepreneurship opportunities for young people. Mobile application development and emerging areas such as the Internet of Things (IoT), blockchain technologies and big data management are expected to create new jobs. These areas require skills such as hardware engineering, circuit design, machine learning, big data analysis, cryptography and multiple coding languages. To ensure that young people can harness these employment opportunities, young women and men need to be equipped with digital skills.

**The digital economy requires a wide range of digital skills.** These are skills that lead to specific outputs or complementary skills that are needed to perform jobs in the digital economy. Decent Jobs for Youth classifies these skills as follows:

- Advanced digital skills: skills necessary to create, manage, test and analyse ICTs. They relate to technology development, including coding, software and app development, network management, machine learning, big data analysis, IoT, cybersecurity and blockchain technology.
- **Basic digital skills**: these are generic ICT skills required for nearly all jobs. They relate to the effective use of technology, which is necessary in most professions. They include web research, online communication, use of professional online platforms and digital financial services.
- **Mid-level digital skills**: these include digital graphic design and marketing, desktop publishing and social media management, both for job and entrepreneurship opportunities.
- **Soft skills**: complementary to technical skills, these are skills necessary for all professionals to ensure collaborative and effective work in the digital economy. They include leadership, communication, teamwork and client focus, among others.
- **Digital entrepreneurship**: digital skills required by entrepreneurs, including online market research, strategic planning and business analysis, using financing and crowdfunding platforms, online marketing, online networking and establishing mentoring relationships.

 <sup>&</sup>lt;sup>9</sup> SAP (2015). A New Generation of Innovators for Africa, <u>https://news.sap.com/new-generation-innovators-africa/</u>.
<sup>10</sup> OECD (2016). Skills for a Digital World, <u>https://www.oecd.org/els/emp/Skills-for-a-Digital-World.pdf</u>.

<sup>&</sup>lt;sup>11</sup> European Disability Forum (2015). Recommendations for an Inclusive Digital Single Market, <u>https://ec.europa.eu/futurium/en/content/european-disability-forum-recommendations-inclusive-digital-single-market</u>.

**Decent Jobs for Youth aims to support young women and men in benefiting from the full range of digital and soft skills** required to compete in today's increasingly digital economy. It also aims to improve young people's employment and entrepreneurship outcomes, thereby supporting implementation of the 2030 Agenda for Sustainable Development.

### 3 Evidence and innovations

### 3.1 What works in digital skills for youth employment

#### 3.1.1 Basic and advanced digital skills

**Creating opportunities in the digital economy through basic, mid-level and advanced digital skills training requires rigorous evidence on what works and what doesn't.** Yet there is little evaluation evidence about the impact of digital skills. The Working Group on Education of the Broadband Commission for Sustainable Development emphasizes the need to enhance evaluation practices and build a rigorous evidence base. This requires the leadership of governments, especially those able to work across the education and technology sectors.<sup>12</sup> Recent evaluation efforts on the impact of rapid technology skills development training (coding bootcamps) on youth employability in emerging markets are welcome and must be expanded, along with interventions in developing countries.<sup>13</sup>

**Investing in young people through skills training does pay off.** Comprehensive measures combining training and other services tend to improve labour market outcomes, especially in the long term. Multi-setting approaches enhance the acquisition of relevant skills and lead to better labour market outcomes. This may involve the exposure of trainees to different environments, particularly by combining in-classroom with on-the-job training. Furthermore, promotion of decent and productive employment for young people is easier to attain if young disadvantaged and low-income women and men are an explicit target group.<sup>14</sup>

Although there is growing evidence of the need to include digital skills in education programmes at all levels and across disciplines as a core competency,<sup>15</sup> very few developing countries include digital skills in secondary school curricula. Moreover, few secondary school teachers have been trained to teach these skills. The skills most demanded by employers, according to LinkedIn, are all ICT related and include cloud computing, statistical analysis, web architecture, mobile development, and network and information security, among others.<sup>16</sup>

**Digital skills are needed to find a job or start a business.** Job search and recruitment processes increasingly take place online. Hence, young jobseekers lacking digital skills and labour market information face challenges in connecting to employers and vacancies, hindering their employment prospects. Even basic web navigation skills can bring great benefits to young people in underserved areas. Furthermore, digital skills have been shown to incentivize entrepreneurial activity among young women and men and strengthen young business owners' links to markets. Evidence from Morocco shows how digital skills opened an online market to

<sup>&</sup>lt;sup>12</sup> Broadband Commission for Sustainable Development, Working Group on Education (2017). Digital skills for life and work. What are the educational implications of the 'broadband society' for the development of digital skills for life and work?

<sup>&</sup>lt;sup>13</sup> World Bank. Decoding bootcamps, <u>http://www.decodingbootcamps.org/</u>.

 <sup>&</sup>lt;sup>14</sup> Kluve et al. (2016). Interventions to improve the labour market outcomes of youth: a systematic review of training, entrepreneurship promotion, employment services, and subsidized employment interventions (ILO).
<sup>15</sup> European Commission (2017). New report shows digital skills are required in all types of jobs,

<sup>&</sup>lt;u>https://ec.europa.eu/digital-single-market/en/news/new-report-shows-digital-skills-are-required-all-types-jobs</u>. <sup>16</sup> LinkedIn (2016). Top skills 2016, https://learning.linkedin.com/week-of-learning/top-skills.

female entrepreneurs,<sup>17</sup> while in China, several rural villages are opening businesses and improving access to economic opportunities nationwide through online platforms.<sup>18</sup>

Social dialogue and tripartism are a means to promote better wages and working conditions as well as peace and social justice. They are key success factors to foster cooperation and economic performance, helping to maximize the impact of skills training and create an enabling environment for the realization of the objective of decent work for young women and men.

#### 3.1.2 Soft digital skills

Young people need soft skills. There is a growing awareness that, combined with technical and academic achievement, soft skills are critical to young people's success in the workplace and their development in all domains of life. A review of what works in soft skills development for youth employment<sup>19</sup> highlights the implications that profound global changes in the use of technology and the nature of work have for how young people are educated and prepared for the labour market. The report finds a growing body of evidence<sup>20</sup> suggesting that soft skills are linked to a broad range of social and health behaviours and can result in a wider range of positive outcomes, including conflict and violence prevention, active and responsible citizenship, and improved sexual and reproductive health. While these are important in themselves, they can also positively affect employment outcomes.

**Soft skills complement the necessary technical skills.** They can include the ability to work in teams on a project, to listen to clients, and to develop products and services that respond to clients' needs. ICTs can provide and reinforce soft skills training. Many soft skills development opportunities exist online, such as online courses and online mentoring networks for entrepreneurs. Fostering networks is considered particularly important in the context of new businesses and entrepreneurial activities, as it can generate new investment and funding opportunities.<sup>21</sup> The ICT Resources for Youth Employment and Entrepreneurship database<sup>22</sup> developed by ITU collects and disseminates such online resources.

<sup>18</sup> World Bank Group (2016). World Development Report 2016: Digital Dividends. Overview,

<sup>&</sup>lt;sup>17</sup> World Bank Group (2016). *World Development Report 2016: Digital Dividends*. Chapter 2: Expanding opportunities, <u>http://documents.worldbank.org/curated/en/896971468194972881/310436360\_20160263021240/additional/102725-PUB-Replacement-PUBLIC.pdf</u>.

http://documents.worldbank.org/curated/en/961621467994698644/pdf/102724-WDR-WDR2016Overview-ENGLISH-WebResBox-394840B-OUO-9.pdf

<sup>&</sup>lt;sup>19</sup> Youth Employment Funders Group (2017). *What Works in Soft Skills Development for Youth Employment? A donors' perspective*, <u>http://www.mastercardfdn.org/wp-content/uploads/2017/09/soft-skills-youth-employment.pdf</u>.

<sup>&</sup>lt;sup>20</sup> S. Gates et al. (2016). Key Soft Skills for Cross-Sectoral Youth Outcomes (Washington, DC, USAID).

<sup>&</sup>lt;sup>21</sup> G20 Digital Economy Ministerial Declaration. Ministerial Conference, Düsseldorf, 6–7 April 2017,

https://www.bmwi.de/Redaktion/DE/Downloads/G/g20-digital-economy-ministerial-declaration-english-version.pdf.

<sup>&</sup>lt;sup>22</sup> ITU, <u>http://www.itu.int/net4/ITU-D/CDS/sis/Youth/Resources/index.asp</u>.

### 3.2 What are innovations in digital skills development?

### 3.2.1 Incorporating digital skills training programmes in national and regional strategies

**Designing and adopting policies that develop and catalyse the digital economy is an innovation on its own.** To tap into the growth potential of the digital economy, public decision-makers across the world are adopting policies and measures that foster digital technologies, enable a better business climate and prepare the labour force for digital jobs.

The OECD outlined a multi-pronged strategy to promote digital skills training. Some innovations include incentives for further learning in the workplace and leveraging ICT to teach needed skills, including through Massive Open Online Courses (MOOCs). This will involve alternative certification methods such as Open Badges, companies offering certificates for workers who complete MOOC courses, and using virtual reality and games to teach new skills. Technology companies are also making considerable efforts to provide digital skills training to young people in regions relevant to their operations.<sup>23</sup>

Equipping the next generation with digital skills requires more focus on young women and young persons with disabilities. Young women do not participate in the same numbers as young men in advanced digital skills training or education programmes, often because they are discouraged from taking up such technical studies or careers or are unaware of these opportunities, leading to a gender imbalance in jobs requiring advanced digital skills. At the same time, some jobs requiring digital skills can be performed online, which may facilitate access to employment by young women. For young persons with disabilities, ensuring there is accessible ICT in the workplace and training in the use of accessible ICT is important to increase employability. ICT plays a crucial role in improving access to and integration in the job market for young persons with disabilities.<sup>24</sup>

Developing countries are increasingly exploring digital literacy training programmes and placing a stronger focus on young women in ICT. For example, the Africa Smart Women and Girls Declaration, endorsed by African first ladies and leaders from the private sector, civil society and academia at the Smart Africa Women's Summit, selected digital skills development for women and girls as one of its three guiding principles. Similarly, the G20 Ministerial Declaration on the Digital Economy pledges to promote digital literacy policies as well as digital skills in vocational education and training, including the eSkills4Girls initiative,<sup>25</sup> while the European Commission Digital Skills and Jobs Coalition seeks to train people with digital skills for available digital jobs, support the upskilling and retraining of the workforce, in particular in SMEs, and integrate coding and computational thinking in elementary and secondary schools.

<sup>&</sup>lt;sup>23</sup> ITU Digital Inclusion Newslog, <u>http://digitalinclusionnewslog.itu.int/2017/04/05/google-provides-training-for-1-million-africans-through-digital-skills-program/</u> and <u>http://digitalinclusionnewslog.itu.int/2017/03/06/ibm-digital-skills-training-to-african-youth/</u>.

<sup>&</sup>lt;sup>24</sup> OECD (2016). *Skills for a digital world*, Working Party on Measurement and Analysis of the Digital Economy, <u>http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/ICCP/IIS(2015)10/FINAL&docLang</u> <u>uage=En</u>.

<sup>&</sup>lt;sup>25</sup> G20 Digital Economy Ministerial Declaration. Ministerial Conference, Düsseldorf, 6–7 April 2017, <u>https://www.bmwi.de/Redaktion/DE/Downloads/G/g20-digital-economy-ministerial-declaration-english-version.pdf</u> and https://www.eskills4girls.org/.

### 3.2.2 Customize or leverage existing digital skills training materials for national programmes

**Existing digital skills training materials can be customized or leveraged for national programmes.** The digital economy has not only created job opportunities, but ICT has further enabled the creation and sharing of numerous digital skills training materials, including open educational resources, MOOCs (including MOOCs offering coding courses), other free online courses offered by initiatives like Africa Code Week<sup>26</sup> and new alternative models of certification such as Open Badges.<sup>27</sup> In addition, ICT/tech companies and non-governmental organizations (NGOs) have developed their own training materials, many of which have been documented by ITU in its ICT Resources for Youth Employment and Entrepreneurship database.<sup>28</sup>

#### 3.2.3 Rapid coding training and innovations in soft skills training

New and innovative models of immersive, rapid skills development, known as coding bootcamps, promise not only to make graduates job-ready, but also enable graduates to enter junior web and app developer roles. Coding bootcamps are a recent development in providing skills training. Privately operated or run as social enterprises or by NGOs, ready-to-work coding bootcamps offer students three to six months of intensive courses, including the hard and soft skills sought by employers across a range of industries. They teach specific coding languages, tailoring their curriculum to meet employer demands. They also use novel teaching methodologies such as project teams working as junior web developers. Some coding bootcamps are now beginning to offer courses in IoT and big data. Similarly, other non-formal training programmes are providing advanced digital skills training in one to two years on topics such as IoT and big data for those without a university degree.

**Coding bootcamps leverage their ties with employers to obtain job placements for their graduates.** Coding bootcamps have reported job placement rates ranging from 40 to 100 per cent. Moreover, they are graduating more women than university computer science programmes and attracting students who may not have a technical background.<sup>29</sup> Training and technical assistance programmes are supporting stakeholders to launch their own coding bootcamps, including through training of trainers, coding bootcamp management, design of employer-responsive curricula, and relationship building with prospective employers. Existing coding bootcamps are sharing good practices and inspiring secondary schools and universities to take on their model. They are also reaching out to women and marginalized groups, including young persons with disabilities.

#### 3.2.4 Aligning non-traditional training partners

A growing number of informal and non-traditional training providers are assuming an active role in the design and provision of digital skills development; they can be even more effective when they work together. This includes the community of stakeholders that promote women and girls in ICT, which have introduced young women and girls to skills such as programming robots and developing simple mobile apps and websites. These training providers could also be engaged to support women's outreach programmes.<sup>30</sup>

<sup>&</sup>lt;sup>26</sup> Africa Code Week, http://africacodeweek.org/activities/online-courses/.

<sup>&</sup>lt;sup>27</sup> ITU. *Digital Opportunities*, <u>https://www.itu.int/en/ITU-D/Digital-Inclusion/Women-and-Girls/Girls-in-ICT-Portal/Documents/Digital%20opportunities%20youthreport\_2014.pdf</u>.

<sup>&</sup>lt;sup>28</sup> ITU. ICT Resources for Youth Employment and Entrepreneurship, <u>http://www.itu.int/net4/ITU-D/CDS/sis/Youth/Resources/index.asp</u>.

<sup>&</sup>lt;sup>29</sup> ITU (2016). Coding bootcamps: a youth employment strategy, <u>http://www.itu.int/en/ITU-D/Digital-Inclusion/Pages/Reports.aspx</u>.

<sup>&</sup>lt;sup>30</sup> See the International Girls in ICT Day initiative led by ITU, <u>www.itu.int/girlsinict</u>.

### 3.2.5 Training teachers and professors, increasing outreach to young women, and improving ties between training providers

To ensure sustainability and improve job placement, it is crucial to revise and update secondary school and university curricula, strengthen training for teachers and trainers, conduct outreach programmes to attract more women to develop advanced digital skills, and build closer ties between digital skills training providers and employers.

### 4 Action on digital skills for decent jobs

### 4.1 Action areas

Equipping young people, both those in and out of school, with basic or advanced digital skills promises to prepare them for unprecedented job opportunities in the digital economy. This will lead to innovation, higher productivity and competitiveness, as well as expanding markets, access to work and entrepreneurship opportunities. Decent Jobs for Youth aims to:

- 1. equip **5 million young people** around the world with job-ready digital skills by 2030;
- 2. **encourage the creation of new job opportunities** in order to integrate more young women and men in the labour market and help digital economies flourish; and
- 3. **promote an enabling environment** where young people can seize the employment and entrepreneurship opportunities offered by the growing digital economy.

### 4.2 Approach

Decent Jobs for Youth focuses on three mutually reinforcing pathways:

- 1. A global campaign<sup>31</sup> to mobilize political will and resources to equip young people with employment-related digital skills training. The campaign "Digital Skills for Decent Jobs for Youth" part of the Global Initiative on Decent Jobs for Youth seeks to equip young women and men with the skills needed for the digital jobs of today and tomorrow. It incentivizes a wide range of partners to join Decent Jobs for Youth for coordinated, scaled-up action at country and regional level.
- 2. **Concrete actions at country and regional level.** Decent Jobs for Youth will engage with governments and multiple partners to bring the benefits of digital disruption to young people. It will focus on facilitating policy advice and the sharing of experience across sectors and providers. It will promote the implementation of measures to develop digital skills, including basic and advanced digital skills training for young people (whether in or out of school), workplace learning (including ICT apprenticeships and making digital skills a core part of national training programmes for non-ICT jobs), coding bootcamps and other advanced digital skills training programs, digital skills curriculum development and teacher/trainer training.
- 3. **Evidence and data on digital skills development are crucial to enhance the impact.** Further research is needed to improve the effectiveness of digital skills interventions, with a focus on disadvantaged groups (e.g. young persons with disabilities, indigenous young people). Evidence from successful job placement strategies, as well as on the differential impact of

<sup>&</sup>lt;sup>31</sup> This campaign was launched at the World Summit on the Information Society Forum hosted by ITU in June 2017: <u>http://news.itu.int/digital-skills-itu-and-ilo-launch-global-campaign-to-train-5-million-youths/</u>.

training providers (formal and informal) and mechanisms (coding bootcamps and quality apprenticeships), is key to ensure the greatest gains among young people. Data are crucial to improve needs assessments and diagnostics of the employment potential of industries and sectors within the digital economy, particularly in developing countries. For example, information about the number of unfilled ICT jobs or wages across occupations reliant on digital skills will improve diagnostics and the effectiveness of policy decisions.

### 4.3 Engaging partners, reaching scale

Reaching scale requires the active involvement of multiple partners to advocate, mobilize resources, share knowledge and implement tested and innovative interventions. Ministries of ICT, labour and education, national government bodies, social partners, the private sector, training providers, academia, NGOs, UN entities and other stakeholders all play a key role in ensuring the required scale is attained. Their actions and commitments towards Digital Skills for Decent Jobs for Youth may include:

- designing, implementing or funding digital skills development programs for young people (e.g. coding bootcamps or mobile app development training) – including programs that focus on disadvantaged groups, such as young women;
- providing a full array of digital skills and information to existing and potential young entrepreneurs;
- embedding digital skills training in apprenticeship schemes and educational and professional development programmes across sectors and industries; and
- developing and strengthening the capacity of education and training providers to deliver digital skills and adapt their curricula and activities for young people (e.g. professional development, entrepreneurship activities, on-the-job learning and job placements).

The private sector plays a key role as the major employer of digitally skilled young people. Workplace learning is crucial to enhance the long-term employment prospects of young women and men. Hence, employers' offers of quality internships and apprenticeships can make a difference in skills acquisition and transferability into future jobs. Similarly, through sharing of data such as job vacancies, real-time data from online job platforms and related digital skills requirements, the private sector can impact the design and delivery of skills training programmes and support the identification of sectors and industries where young jobseekers can thrive. Close cooperation and involvement of workers' and employers' organizations based on social dialogue and tripartism is a key success factor in promoting digital skills for decent jobs for youth.

**Decent Jobs for Youth leverages the role of UN country teams (UNCTs)** to raise awareness of the importance of digital skills for young people and related employment opportunities. Furthermore, UNCTs and their joint operations with multiple partners at the country level will help bring about action through institutional capacity development and direct delivery of digital and other complementary skills.

### How to reach scale: two-track plan on digital skills for the digital economy

Decent Jobs for Youth follows a two-pronged implementation plan to achieve scale.

### **Country and regional-level actions**

- UN country team (UNCT) briefings with key stakeholders to promote the campaign and the need for digital skills training
- Provide policy advice to support countries to develop their national digital skills training strategies
- Development of training programmes for UNCTs to deliver digital skills training to young people, both in and out of school
- Delivery of digital skills training programmes targeted at young women
- Delivery of coding bootcamp training designed for tech entrepreneurs, startups and universities to support them to launch their own coding bootcamps
- Provide additional targeted support to nascent bootcamps, including curriculum development and building links with industry to increase their job placement rates
- Develop coding and computational thinking curricula for secondary schools and universities to ensure more young people graduate with job-ready digital skills
- Train teachers to teach coding and computational thinking

### Global Campaign: Digital Skills for Decent Jobs in the Digital Economy

- Obtain commitments to train 5 million young people in basic and advanced job-related digital skills, as well as soft skills
- Advanced skills include coding, mobile app development, network management, management and analysis of big data, IoT, cybersecurity, blockchain technology and media production
- Basic skills include filling in online forms, searching for jobs online, maintaining job-appropriate online profiles and using digital financial services
- Soft skills include collaboration, coordination and learning new skills
- Other related training includes how to operate and teach in coding bootcamps to spark more rapid skills training centres
- Use and incorporate lessons learned







## SCALING UP ACTION & IMPACT ON YOUTH EMPLOYMENT

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