



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



LKDF Forum 2021 - Outcome Book

**Digital Skills for an
Inclusive Future**

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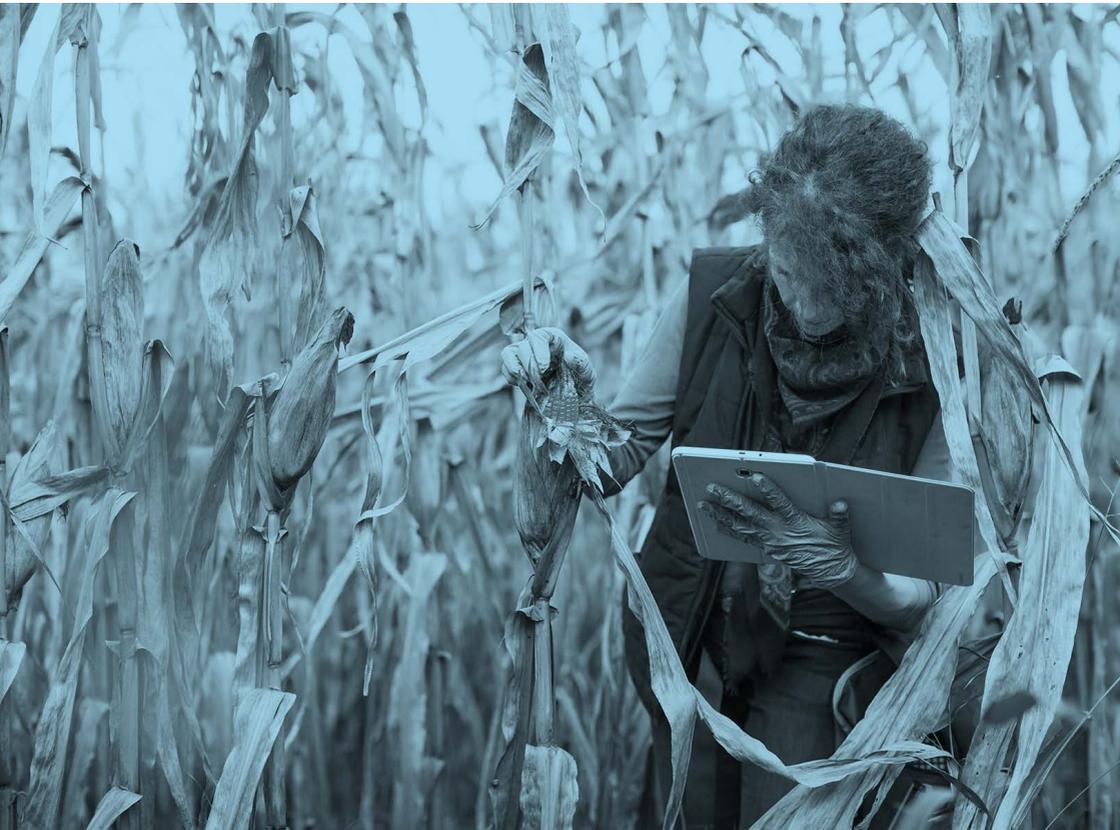
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EXECUTIVE SUMMARY

Major digital innovations facilitated by increased internet access have affected capacity building and skills development for the digital economy. Deploying digital technologies to learn, work and build skills has advanced the COVID-19 pandemic's digital divide, exacerbating social and economic inequities. Having digital skills is becoming increasingly vital in order to take advantage of digitalization's benefits and meet new work criteria. A World Economic Forum research estimates that by 2022, 54% of the population would need major reskilling, with the need in emerging countries being much larger. Digital skills are not only necessary for adequate jobs, but also serve as a catalyst for social inclusion.

Against this backdrop, the LKDF Forum 2021 convened virtually on the 22nd of September, under the theme of *Digital Skills for an Inclusive Future*, to discuss how fostering digital skills in the midst of the Fourth Industrial Revolution will ultimately result in a more inclusive future for all. As part of the LKDF Forum, UNIDO, in cooperation with the European Training Foundation and WorldSkills International, hosted a virtual hackathon on the 23rd and 24th of September to build on the theme of the LKDF Forum 2020 edition Green Skills for a Sustainable Future and create the best green skills solution.



The **official opening**, by UNIDO Director General Li Yong and Director General Carin Jämtin of the Swedish International Development Cooperation Agency (Sida), emphasized the importance of closing the digital divide and the fact that no one should be left behind in the transition to a greener, more digitized and more equitable society.

A series of **speeches** were delivered **by nine high-level officials** from recipient countries, the donor community, and UN sister organizations, stressing that the pandemic has exposed rather than created many of the challenges affecting skills development and calling on the global community to harness the Fourth Industrial Revolution to finally achieve a truly inclusive future of work. A **Theme Talk Session** featuring industry leaders such as Cecilia Ugaz Estrada of UNIDO, David Hollands of HP, and Gori Yahaya of UpSkill Digital, explored the issues women and disadvantaged groups experience in gaining access to digital skills as well as approaches aimed at addressing digital inclusion. **Six sessions** led by experts from businesses, intergovernmental organizations, and academia covered topics such as: anticipating skill needs, inclusive business innovation, and digitalization in inclusive education, workforces with diverse needs, re- and upskilling investments, and life-long learning motivation.

A **call-to-action Closing Ceremony** featured young leaders, emphasizing the need to make digital skills training open and accessible to all, as well as raising the topic of how the international community can help. The Managing Director of UNIDO's Directorate of Digitalization, Technology and Agribusiness, Bernardo Calzadilla-Sarmiento, urged the international community to take action to achieve an inclusive future for everyone and to contribute to Agenda 2030 and the Sustainable Development Goals.

The Forum was a unique opportunity to provide a platform for action-oriented debates on potential solutions to reduce the job-skill mismatch, bridge the digital skills gap, and foster future collaborations.





INTRODUCTION

Digital skills development challenges

In 2020, the world faced tremendous challenges and had to adapt quickly to new socio-economic demands. In 2021, the global community had to improve its ability to solve such problems in an innovative and collaborative manner.

The world experienced a massive jump in digitalization during the pandemic, which opened up new opportunities and increased the demand for digital skills, but it also exposed new kinds of inequalities, such as the digital divide across countries. The Fourth Industrial Revolution, as well as the potentially disruptive impact of technology on the future of employment, have created both uncertainty and unprecedented opportunities.

According to the World Economic Forum, in the least developed countries, less than one in every five individuals has access to the internet, limiting economic development and access to the Fourth Industrial Revolution's potential. However, having access to the internet is not sufficient to ensure the development of digital skills. Indeed, one of the most significant impediments to digital adoption is people's lack of capacity and digital skills, which are much more pronounced in developed and developing countries, as well as among marginalized and disadvantaged groups such as women, the elderly, and people with disabilities.

Unemployment is undoubtedly at the top of the list of major global concerns, and despite advances in education, the job prospects of more vulnerable groups and young women remain typically less favourable. The challenge lies in the content and quality of technical training in many countries, as they do not always match the private sector's demands. As a result, graduates are unable to find work, and employers are unable to locate qualified employees.

Demand for digital skills training and the need for robust reskilling is predicted to rise in the future decade, as all businesses, including those that did not previously require them, will do so. Apart from the necessity to create new digital skills in order to keep up with innovation, the most important challenge is to reduce the digital divide across countries in a way that is inclusive.

The 2030 Agenda's mandate of leaving no one behind requires that the world's poorest, most vulnerable, and discriminated against be empowered. Young people, refugees, internally displaced persons and migrants, indigenous peoples, people with disabilities, and those afflicted by conflicts, disasters and other humanitarian crises are among those who are affected. Beyond monetary disparities, a new generation of inequalities encompasses the knowledge and skills required to succeed in today's world.



The Learning and Knowledge Development Facility (LKDF)

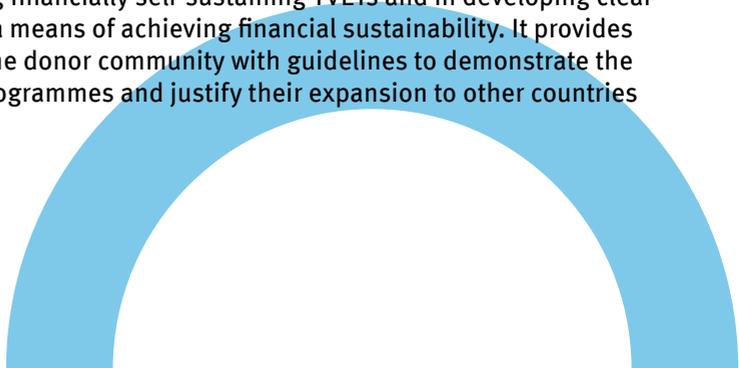
The Learning and Knowledge Development Facility (LKDF) is a platform promoting industrial skills development among young people in developing economies. It supports the establishment of industrial training academies that help meet the labour market's demand by upskilling employees. It also provides Technical and Vocational Education and Training (TVET) to students who have recently graduated from school as well as skill upgrading training, such as reskilling and upskilling of workers, ultimately contributing to inclusive and sustainable industrial development (ISID).

Many developing countries lack quality educational systems and training programmes. The LKDF creates model academies that can be scaled up and made more sustainable so that they may be used for many years; it also provides policy recommendation, while creating the link between governments, national and international private companies. This way the skills gap is addressed to meet new technological, social and environmental demands and seizes the opportunity in technological progress (SDG4, SDG9).

UNIDO therefore identifies the skills gap in developing countries and collaborates with Public-Private Development Partnerships (PPDP) to develop and scale up training centres that innovate curricula and equip young female and male students with demand-driven future skills.

The PPDP projects support social and environmental standards, such as gender equality, women empowerment (SDG5) and climate resilience (SDG13). Our TVET projects achieved 35% female participation in male-dominated sectors, and 60% of trainees were able to upgrade their job status.

To ensure the long-term success of the industrial academies, the LKDF supports practitioners in building financially self-sustaining TVETs and in developing clear business strategies as a means of achieving financial sustainability. It provides the policymakers and the donor community with guidelines to demonstrate the cost-effectiveness of programmes and justify their expansion to other countries or sectors.



THE LKDF FORUM 2021

The Theme

With a focus on digital skills and social inclusion, the LKDF Forum 2021 convened to provide solutions to reduce the job-skill mismatch, bridge the digital skills gap, and promote dialogue for future partnerships, leaving no one behind. It is part of our challenge to discuss and promote skills demanded by the private sector, and nowadays, digital skills are a necessity and a prerequisite for effective participation in society and in the world of work.

Digital skills are defined by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as “a range of abilities to use digital devices, communication applications, and networks to access and manage information. They enable people to create and share digital content, communicate and collaborate, and solve problems for effective and creative self-fulfillment in life, learning, work, and social activities at large.”

Inequalities in digital skills are mainly associated with the socioeconomic structure, including the gender gap and educational background (ITU, 2020). Promoting the development of digital skills across all regions involves creating a more inclusive society. Furthermore, keeping up with innovation to close the digital divide may also have significant economic advantages, as reducing the global skills gap will add \$11.5 trillion to global GDP by 2028 (World Economic Forum, 2019).

A lack of digital skills exists across the entire world, but the situation in Africa is significantly more critical (International Finance Corporation, 2019). Almost 65% of workers in Africa do not have basic digital skills. The gap exists at all levels, but intermediate skills are the most critical for the region. By 2030, more than 200 million jobs requiring digital skills will be created in Africa, which means that there will be 600 million training opportunities. Digital education is, therefore, pivotal for employability and the ensuing alleviation of poverty.

Moved by a wide global consensus on the most pressing challenges to be addressed, the LKDF aspires to do its part by promoting public-private development partnerships to develop demand-oriented digital skills in an inclusive industry, ultimately contributing to a generation of equality. As a result, the theme for the LKDF Forum 2021 is Digital Skills for an Inclusive Future (of Work). On this occasion, experts from various sectors and backgrounds gathered at the annual LKDF Forum to address the importance of digital skills in the midst of the Fourth Industrial Revolution and their role in social inclusion.

Statistics

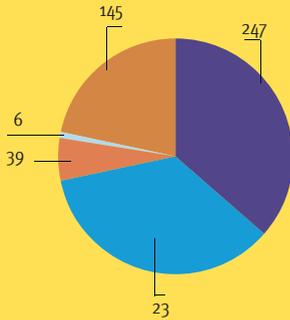
648
registrations

10
high-level
speakers

46
speakers
in total

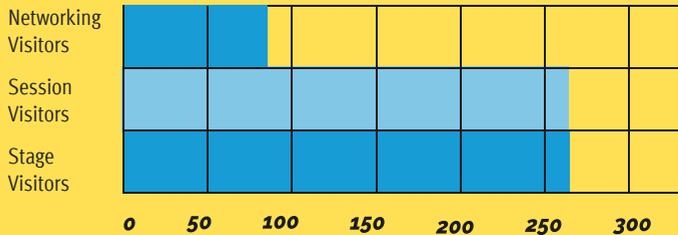
9
sessions

96
Countries



Africa Europa America
Asia Australia

Sector Breakdown



 **Twitter**

 Retweets: **326**

 Likes: **624**

 New followers: **67**

 Post impressions: **76.9k**

 **LinkedIn**

 Likes: **293**

 New followers: **79**

 Post impressions: **17k**

 Search appearances: **908**

THE OPENING CEREMONY



Director General of United Nations Industrial Development Organization, LI Yong, and Ms. Carin Jämtin, the Director General of the Swedish International Development Cooperation Agency (Sida)

officially opened the LKDF Forum 2021 recognizing that the digital divide can no longer be ignored and that the transition to a green and digitalized society must be equitable, inclusive and sustainable, with no one left behind.

Quick facts

Less than 1 in 5 people in the least developed countries are connected to the internet (WEF).



In 2020, youth employment fell by 8.7 % compared to 3.7 % for adults.

“

“We must support each other in our global drive towards the 2030 Agenda for Sustainable Development, strengthening the dialogue for private public development partnerships and the development of demand-oriented digital skills in the inclusive, gender responsive and sustainable industry, ultimately contributing to a generation of equality”.

Director General of UNIDO,
LI Yong



“It is important that the transition to a green, climate neutral economy and to an automated and digitalized society is guided by the 2030 Agenda and the global goals. The transition has to be just, inclusive and sustainable, leaving no one behind. The LKDF 2.0 is an important enabling platform – it allows governments, private sector, training institutions, students, as well as the investors to build partnerships, stronger local economies, create jobs and improve working conditions”.

Director General, Swedish International Development Cooperation Agency (Sida),
Ms. Carin Jämtin



A series of speeches, delivered by high-level dignitaries from beneficiary countries, the donor community and UN sister agencies, followed the official opening, sharing thoughts and experiences on how we can leverage digital skills for a more inclusive future.



Maha Ali

Jordanian Minister of Industry
Trade and Supply

The COVID-19 pandemic strongly impacted global economies and supply chains, posing new challenges and requiring workers to acquire new and fast changing skills. **Maha Ali, the Jordanian Minister of Industry Trade and Supply**, emphasized that “sectors such as manufacturing need special qualifications including vocational training to be upgraded in terms of techniques and curricula that meet digital transformation requirements”.



**Abdulkadir Shariif
Sheikhuna Maye**

Somali State Minister of
Commerce and Industry

The Somali State Minister of Commerce and Industry, Abdulkadir Shariif Sheikhuna Maye, encouraged all stakeholders to “develop frameworks that help to identify long-term digital skills development, encourage life-long learning and innovative ways to measure the digital skills to prepare for jobs of the future” as these could boost the economy of post conflict countries such as Somalia and generate employment”.



In a post pandemic world, governments need to focus on "establishing robust strategies and policy frameworks that include financial investments (...) in digital infrastructures and technical skills (...) to guarantee a quick, robust and sustainable economic and social recovery", said the **Minister Delegate of the Cambodian Ministry of Industry, Science, Technology and Innovation, Chhem Kieth Rethy**.

Only by investing in “quality, accessible and relevant education, [curricula] and training including digital skills development [can] ensure that young people are empowered to reach their full potential”, underlined **Jayathma Wickramanayake, Secretary General of the UN Youth Envoy**.

“Half of the world population still does not have access to the internet,” said **Doreen Bogdan-Martin, Director of the International Telecommunication Union**, and “what is equally concerning is that often times where people do have access to an affordable internet connection, they lack the digital skills to use it meaningfully. (...) Universal connectivity and the associated digital capacities have never been more urgent, nor the time more ripe”.



Chhem Kieth Rethy
Minister Delegate of the
Cambodian Ministry of
Industry, Science, Technology
and Innovation



**Jayathma
Wickramanayake**
Secretary General of the
UN Youth Envoy



Doreen Bogdan-Martin
Director of the International
Telecommunication Union

As noted by **David Hoey, Chief Executive Officer of WorldSkills International**, “the pandemic did not create the digital divide. It has just made it more visible by bringing the challenges faced by many young people to light. It should be a wakeup call, (...) a driver for inclusivity, prosperity and social stability.”

As we have been faced with such a dramatic transition, **Mr. Sidi Mohammed Drissi Melyani, General Manager of the Digital Development Agency** stressed that “it is timely today to reflect on the introduction and implementation of continuous training courses that are specific to each field and which address the changes and trends generated by the technological and digital revolution, [as well as] better anticipating the talents and qualifications that industrial ecosystems will need”.

It emerged as a result from the response of the pandemic that appropriate and up-to-date “skills were not sufficiently present” in the labour market, added **Cesare Onestini, Director of the European Training Foundation**. We need to “make sure that we put people at the center of our efforts and that we see that innovation and transformation serve the purposes of inclusion and the purposes of making sure that we produce a better life for all”, he concluded.



David Hoey
Chief Executive Officer of
WorldSkills International



**Sidi Mohammed
Drissi Melyani**
General Manager of the
Digital Development
Agency



Cesare Onestini
Director of the European
Training Foundation

Key Messages

▶▶ Life-long learning and skills development are key building blocks to productive development and employment.



Digital skills are necessary for the employability of work forces and for strengthening the competitiveness of businesses.



Collaboration and public-private dialogue need to ensure inclusive and demand-oriented skills development policies.



To close the digital divide and ensure a smooth transition into the job market, we must invest in young people's digital skills, education and infrastructure.

THEME TALK SESSION

**Digital Skills for an
Inclusive Future**

What are digital skills? How can we leverage them for a more inclusive future? To set the scene and initiate the discussion, the LKDF prepared a background paper to examine the relationship between social inclusion and the level of digital skills held by different populations, highlighting the importance of skills development for equal access to opportunities and resources.

“Above all, digital skills are a contemporary necessity and a prerequisite for effective participation in society, allowing workers to readapt to rapid changes while enabling companies to keep up with innovation”, said the authors of the paper, **Stefania Bait and Mattias Larsen from UNIDO**.



The main findings from this analysis are that there is a link between the level of gender equality and inclusion and the level of digital skills held by the population; this link is even stronger in the cases of African countries. In addition, the analysis shows that the correlation between digital skills and educational or vocational training is significantly stronger than between such skills and the years of schooling. For the occasion, a 2 minute animated [video](#) was presented to the audience to introduce

the key findings of this analysis and three major experts took part in the “Theme Talk” session of the Forum to discuss the topic in more detail.

Cecilia Ugaz Estrada, Director of the Gender Equality and Empowerment of Women Office at UNIDO, highlighted how the digital divide affects mostly women. She used an example from the manufacturing sector, where women are frequently assigned tasks that are less technologically intense, resulting in lower added value, lower pay and worse working conditions. “They are not able to move to other branches of industry where they would potentially be better utilized and would be contributing to the shaping of these new technologies”.

“Only 35% of STEM graduates are women, and only 14% are working in cloud computing. Society needs to change the way it looks at things and empower girls and young women to step in with technical education.”



Cecilia Ugaz Estrada

Director of the Gender Equality and Empowerment of Women Office at UNIDO



David Hollands

Education strategist at Hewlett Packard (HP)

David Hollands, an education strategist at Hewlett Packard (HP), talked about the importance of considering programmes that develop communities’ digital skills in the long-term, ensuring that people are not left behind in a world that is constantly changing. “The whole idea of digital skills is that they need to be quite flexible and ready to change at a moment's notice”, said Hollands. He also highlighted that governments, in both developing and developed countries, need to have a sense of inclusion around programmes for digital skills.



Gori Yahaya

Chief Executive Officer of UpSkill Digital

Accessibility to skills development programmes was another concern highlighted by **Gori Yahaya, the Chief Executive Officer of UpSkill Digital**, a global digital skills training agency empowering people and organizations to succeed through technology.

The COVID-19 pandemic has accentuated even more the need for digital skills in the current workforce. Making sure that communities are aware of the most relevant skills being requested by the market and how they can access those skills is essential for building an inclusive workforce.

“I think one of the first steps is really thinking about what you need to train in and how you make it attractive to those individual minorities groups, and then [you] create that accessible learning path for them to be able to get onto the programmes that [...] equip them to get into the labour market”, explained Yahaya.

“An important step when creating digital skills programmes, especially when targeting individuals who have a lower socioeconomic background in hard-to-reach communities, is focusing on places such as youth centres or churches”, Gori Yahaya explained. Finding these individuals is key as they need to be given greater access to such schooling programmes.



In their final remarks, the three experts called for more cooperation and engagement among stakeholders to ease the access to digital skills training. “Do not go isolated with your engagement, go as wide as you can and turn that into your action”, encouraged David Hollands. Cecilia Ugaz Estrada finalized by pointing out how digital skills are not only the skills of the future, but of the present. “If we really want to move towards a more inclusive society, we definitely need to work towards having these skills accessible to all”, said Estrada. Gori Yahaya added to this by suggesting that while designing skills development programmes, policymakers should seek to simplify their language and “make it accessible”.

Questions from the audience



What are currently the best digital assessments to use for hard-to-reach communities?

Gori Yahaya pointed out that, unfortunately there are not many tools tailored for hard-to-reach communities. He mentioned [DigComp](#), the European Digital Competence Framework developed by the European Commission, which can help individuals self-evaluate their digital competence, establishing learning goals, facilitating job searches, and recognizing training opportunities.

Yahaya also refers to [MyDigiSkills](#), a tool that can help citizens understand their level of digital skills according to the areas elaborated by the European Digital Competence Framework. Cecilia Ugaz Estrada added to this by referring to the [Digital Literacy Global Framework](#) (DLGF) developed by UNESCO, a project that was built based on DigComp and serves as a foundation for Sustainable Development Goal (SDG) thematic Indicator 4.4.2: “Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills”.

Within the African context, how can one increase access to online programmes? What is the role of policy frameworks for partnerships in establishing and delivering educational digital skills programmes on the continent?

Gori Yahaya explained that working with governments is fundamental to engage educational establishments and scale programmes, increasing their visibility to all demographics and communities. In addition, he stressed that partnerships with private organizations are also key when aiming at more accessible programmes. Another important aspect for accessibility is making programmes free of cost.

Key Messages



Easily accessible and free of charge programmes are key for more inclusivity within digital skills development.



Cooperation among different stakeholders and sectors is needed to ensure that digital skills are fostered across all communities.



Digital skills curricula need to be flexible as they are rapidly evolving.

SESSION 1

How can we anticipate skill needs?

Organiser: SkillLab

Speakers: Simon Schmid (SkillLab), Michael Fung (SkillsFuture Singapore), Gary Gan (JobKred)



Mismatches between available skill supply and labour market demand are high on governments' agendas, both for developed and developing countries. The session focused on how we might use big data and AI to anticipate skill needs and to better understand skill demand.

When it comes to analyzing skill needs and availability, the use of AI and big data may provide feasible and more real-time alternatives to traditional tools, like qualitative and quantitative approaches, which, most of the time, can be expensive, time consuming and imprecise.

Michael Fung, Deputy Chief Executive for Industry and Chief Human Resource Officer at SkillsFuture Singapore, a government agency from the Ministry of Education focusing on building an integrated education training system and life-long learning, explained that “traditional approaches towards skills anticipation are pretty clunky” and the skills framework documents developed through these approaches are “like a 400-500 page document [that] take us about a year and a half to develop. He emphasized:



“

“We need a much more agile approach [...], a real time way of being able to look at the kinds of job skills needed and anticipate what is needed for each industry, sector and job type”.

Michael Fung
Deputy Chief Executive
for Industry and Chief
Human Resource Officer at
SkillsFuture Singapore

He provided a very practical example from SkillsFuture Singapore of leveraging the use of data analysis and databases in real time, in the case of workers that have been displaced due to the pandemic, and he demonstrated how SkillsFuture Singapore provided training in those skills that were high in demand and took these workers “from jobs that they lost into jobs that were still growing”.

Gary Gan, CEO of JobKred, a digital skills development platform using AI and big data to understand and provide real-time labour market information, highlighted that, this system works well in developing economies, however it is more challenging in developing countries due to the lack of quality and quantity of data (especially coming from the informal sector) as well as the lack of capacity and technology to run such analysis.



Gary Gan
CEO of JobKred

“That is where a company like ours [JobKred] would come in [...] to provide [developing countries with] the capability, but also the experience and technological platforms to make that [the data analysis] faster and to scale”. Focusing on the needs of the job seekers and those at risk of unemployment is essential and the provision of career guidance and orientation helps people understand their own skill profile and their place in the labour market.



Simon Schmid
Responsible for the public sector at SkillsLab

Simon Schmid, responsible for the public sector at SkillsLab, a social impact company providing data-driven and personalised career orientation, highlighted the importance of relying on an approach that focuses on the individual, and used the example from a joint project with the World Food Programme, EMPACT, where they provide “individual skill pathways, not just from a societal perspective, but looking at what the individual can do”. term unemployed, etc.”

He also stressed that when developing skills frameworks, it is critical to “find ways to make this understandable and digestible to users, who in our case, are mostly marginalized job seekers, migrants, lower skilled workers, long-term unemployed, etc.”

These approaches need to be inclusive. As Michael Fung said, “we should not be just looking at high skills jobs [...]. There is an even more challenging sector, the informal sector”. It is important to also look at low skilled jobs and career pathways, including the informal sector.

Questions from the audience

What are the AI subfields or techniques mostly used for skill needs predictions? And what are the related challenges?

Gary Gan, CEO of JobKred, replied that some of the techniques used are natural language processing, hierarchical clustering, collaborative filtering, ranking, taxonomy customization, etc. For example, JobKred uses a natural language processing algorithm to recognize text from CVs and job portals and turn that into a taxonomy of skills. One of the main challenges that was noted is that the language used in many job vacancies is not comprehensive enough or does not even encompass all the skills needed for that occupation, resulting in a mismatch between the job vacancy and the CV.



Key Messages



Data is key. We may not have the full set of data, but we need to have sufficient data to be able to make sense of which skills are in demand and how to anticipate those skills.



We need a multi-stakeholder approach to get the whole ecosystem involved in the skills transformation agenda and be inclusive as we map out the skills and the skill shifts.



Anticipation (a clear view on the future of jobs and skills), accessibility (workers and their employers are able to upskill themselves) and affordability (the marginalized groups are offered support and get the same training opportunities) are key elements for an inclusive future of work.

SESSION 2

How can businesses innovate inclusively?

Organiser: European DIGITAL SME Alliance

Speakers: Sebastiano Toffaletti (European DIGITAL SME Alliance), Oliver Grün (European DIGITAL SME Alliance and Federal Association of IT SMEs of Germany, BITMi), Geraldine Schmitz (Federal Association of IT SMEs of Germany, BITMi) and Clarisse Iribagiza (HeHe Limited)



Power disparities between so-called industrialized and developing countries are frequently reinforced or even aggravated in development discourses. But innovation comes from Africa, Latin America, and Southeast Asia just as often as it does from Europe and the United States. Taking innovation from developing countries seriously is one of the most critical steps toward greater inclusion. This session, moderated by **Sebastiano Toffaletti, Secretary General of the European DIGITAL SME Alliance**, introduced the perspective of how businesses can promote and generate inclusive innovation.

Oliver Grün, President of the European DIGITAL SME Alliance and President of the Federal Association of IT SMEs of Germany (BITMi), the information technology industry association that exclusively represents the interests of SMEs in Germany, referred to the Access in International Partnerships in IT (AIPi) initiative between BITMi and the Rwanda ICT Chamber. It is more than a partnership, it is a win-win exchange platform, where Rwanda can learn from the strong business experience from Germany but also Germany can learn a lot from the Rwandan experience, for instance in the field of digitalization for education, where already in 2008 Rwanda introduced a “One Laptop Per Child” policy. From a business perspective, inclusion can have several meanings.



Sebastiano Toffaletti

Secretary General of the European
DIGITAL SME Alliance

A greater representation of women and minority groups in the workplace is an important first step. Yet, inclusivity can also be understood as seeing trading partners from different geographies as equals. Exploring the idea of “eye-level” cooperation, the experts highlighted the importance of partnerships and collaboration with regions that are not traditionally associated with innovation, such as African countries.



Oliver Grün

President of the European DIGITAL SME
Alliance and President of the Federal
Association of IT SMEs of Germany
(BITMi)

“If you want to grow, if you want to keep expanding your business, then think inclusively”



Clarisse Iribagiza
CEO and co-founder of HeHe

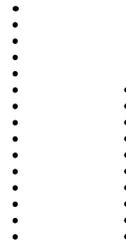
said **Clarisse Iribagiza**, Chief Executive Officer and co-founder of HeHe, a Rwandan-based mobile technology company. The CEO pointed out how essential it is to include, for example, women and young people to expand market opportunities. “It is an opportunity for growth and sustainability”. Iribagiza also emphasized the importance of quality education and skills development in Africa for greater access to opportunities and competition in the global market: “This is where the dream of creating Hehe Innovation Academy started from”, a research and innovation initiative that provides training programmes to the young generation, and a SMEs incubation programme with over 60% female participation, she further explained.

“As African economies, investing in our people, making sure that we have quality education will enable us to be at a much more level playing field with the rest of the world”.

The anthropologist, **Geraldine Schmitz**, whose focus of work is on economic systems in Africa, is also the **Project director** of the German-Rwandan initiative Access to International Partnerships in IT (AIPI) at the **Federal Association of IT SMEs of Germany (BITMi)**. She highlighted that there are many opportunities for growth and knowledge exchange for both Rwandan and German businesses when bringing those players together: “we know that there is not just potential in Rwanda, but there are skills”. Answering the question on how businesses can innovate inclusively, she stated that it is by “breaking down paradigms, through trade relations and economic partnerships at eye level.



Geraldine Schmitz
Project Director of the Federal Association of IT SMEs of Germany (BITMi) and anthropologist



Questions from the audience

What hinders governments and countries to raise the capacities of their people?

Geraldine Schmitz explained that, according to her experience, the people who benefit from capacity development programmes are rarely consulted by those implementing it. “They have the quantitative numbers [...], but they miss out the qualitative research, which is basically talking and living with the people who should benefit from what is happening”.



Key Messages



Economic partnerships and eye-level cooperation are vital for countries' development.



Quality education and skills development can foster inclusivity in the global economy.



Innovation arises from all places. Taking innovation from developing countries seriously is one of the most critical steps towards greater inclusion.

SESSION 3

How can digitalization help achieve inclusivity in education?

Organiser: International Training Centre of the ILO (ITCILO)

Speakers: Stefano Merante (ITCILO), Vanessa Gray (ITU), Raphaël Dard (ITC), Simone Schmid (Festo Didactic), Canice James (Generation Connect), Enrique Castro (Generation Connect), Daniel Kalemi (Generation Connect), Emmanuella Ablé (Generation Connect)



W We have seen how young people have adapted to new modalities of learning in these times of rapid change. The session, moderated by **Stefano Merante, Skills Development and TVET Programme Officer from the International Training Centre of the ILO (ITCILO)**, focused on the e-learning experiences of young people today and explored how digital technologies can increase the youth's interest in green skills and equip them with the skills and education they need for a sustainable future, thereby supporting green technology development and the transition to a green and circular economy.

“The evolving role of digital technologies in education: an opportunity for an inclusive greener future?”



Vanessa Gray

International Telecommunication
Union (ITU)

During the pandemic, when remote and online learning turned out to be the new normal, connectivity became more important than ever. “Digital technologies enabled many young people to continue learning, but for others, it proved to be a major barrier as they were lacking access to equipment, connectivity and skills” highlighted **Vanessa Gray from the International Telecommunication Union (ITU)**.

The digital transformation will also have a great impact on a greener, cleaner and more sustainable future. It is therefore crucial to invest in a “green-minded education for the next generation of leaders” stressed Vanessa Gray.

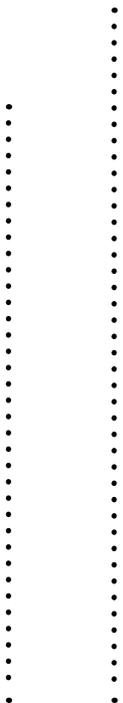
Daniel Kalemi from the Europe Youth Envoy at Generation Connect, the overarching initiative of the ITU Youth Strategy, which aims to engage youth globally in the digital change through skills empowerment, underlined that to achieve an inclusive digital world, there “needs to be an equitable system where we try [to use capacity building programmes and digital skills sessions] to help both students on how to learn and engage, as well as professors, students and mentors, who are involved in the process.”



Simone Schmid
Project Manager STE(A)M & Bionics
Education, FESTO Didactic

“We have to encourage more digital [learning] communities” in non-formal and informal learning. Only providing the people with connectivity will not “teach [them] how to use the internet and [how to] learn and improve their skills”, added **Enrique Castro**, a self-taught student in coding **from the Americas Youth Envoy at Generation Connect**.

It is key to understand how we want to learn new skills and which tools are available out there, as the internet these days offers a wide variety of resources, according to **Simone Schmid, Project Manager STE(A)M & Bionics Education, FESTO Didactic**, a global leader in industrial skilling and upskilling for manufacturing and process automation. Nowadays, it is important to have a combination of physical and virtual learning, “a blended learning approach is the best you can offer for a hands-on learning approach and [to make] a valuable contribution to a sustainable future in technical education” she stated.



As an example, Simone mentioned the initiative from FESTO Didactic that provides e-learning courses on bionics and robotics that are specifically targeted at young students to spark interest in STEM disciplines at an early age.

“Are digital technologies a job creation enabler for excluded youth within the green economy?”

Digital technologies have the potential to support in the transition to a more inclusive, greener and sustainable future and can provide a unique opportunity for empowerment and employment for traditionally marginalized and vulnerable groups.

According to **Emmanuella Ablé**, from **Africa Youth Envoy at Generation Connect**, adapting the educational system to the job market with digital technologies requires having a clear vision of the field in which we want to acquire expertise and encouragement in self-training [...]. We are young and we should be interested in training [opportunities].”

Digital tools such as online hackathons and innovation competitions can help young people drive the digital transformation by bringing together like-minded individuals from the broader community, including traditionally marginalized groups, to generate innovative ideas for achieving the SDGs, added **Canice James from the Americas Youth Group at Generation Connect**.



Canice James
Americas Youth Group at
Generation Connect



Raphaël Dard
Learning Solutions
Programme Manager at the
International Trade Centre
(ITC)



Stefano Merante
Skills Development and TVET
Programme Officer from the
International Training Centre
of the ILO (ITCILO)

When it comes to designing green skills and educational programmes for youth, three important factors should be considered, highlighted **Raphaël Dard, Learning Solutions Programme Manager at the International Trade Centre (ITC)**: increasing motivation by designing appealing content, providing the audience with meaningful content that they can relate to, and including a green perspective by providing solutions with a tangible environmental impact.



Questions from the audience

How can we integrate hands-on activities in vocational education with digital learning?

According to Simone Schmid, training programmes should include a combination of physical and virtual learning, the so-called blended approach. Stefano Merante also added that learning is taking the shape of augmented and virtual reality, which are enhancing the learning experience by mixing digital and practical learning methods.



Key Messages



We need to ensure that our future is both more connected and more sustainable as the digital world will bring significant social, economic and employment impacts.



Digital tools are merely an instrument for effective learning; what matters is the attitude to learn and engage in acquiring new skills and be flexible to the changes brought by the digital transformation.



As we move toward a more digital and green society, we must guarantee that no one is left behind by providing inclusive and sustainable educational environments, particularly for disadvantaged and underrepresented groups in education, training, and in the job market.

SESSION 4

How can we serve a changing workforce with diverse needs?

Organiser: University of Johannesburg

Speakers: Tshilidzi Marwala (University of Johannesburg), Colin Blackwell (Enablecode), Fernando Buarque (University of Pernambuco), Jianming Gong (Nanjing Tech University)



Addressing the skills gap is an urgent matter, especially in times of a pandemic. Helping the workforce to thrive in challenging times is an arduous task, given the continuous social and technological changes and developments.

“There is a consensus that there is a need for extensive discussions on how to address the ever-changing workforce and to explore the different pathways to close the gap. According to the “World Economic Forum Future of Jobs Report”, developing and enhancing human skills and capabilities through education, learning and meaningful work, are key drivers of economic success, of individual well-being and societal cohesion”, said the session’s moderator **Tshilidzi Marwala, Vice Chancellor and Principal of the University of Johannesburg**, in his opening remarks.



Tshilidzi Marwal

Vice Chancellor and Principal of the University of Johannesburg

The session explored the disruptions brought by technology and the effects of the pandemic on the future of work, as well as addressing viable solutions for equitable access and participation in the labour market by a workforce with diverse needs. “We should have our mind open for emerging issues.



Jianming Gong

Vice President of the Nanjing Tech University, China

We should have our mind open for emerging issues. We have to accept a changing world with confidence to solve new problems

said **Jianming Gong, Vice President of the Nanjing Tech University, China.**



Colin Blackwell
Founder of Enablecode

Colin Blackwell, the founder of Enablecode, a social enterprise based in Vietnam that employs programmers and computing experts with disabilities, pointed out the importance of life-long learning. “When digital transformation hits a job, some of the statistics we are looking at in Asia is that 20% of people, when faced with a job that revolutionarily changed, will do very well, 40% will exit that job and do something related but probably lower level, and 40% may lose their jobs. It is incredibly important that people do keep up with the speed of change”, explained Blackwell.

Fernando Buarque, Head of the Computational Intelligence Research Group, and Senior Associate Professor at the University of Pernambuco in Brazil, urged that universities should adapt to those changes and be more flexible, and prepared to accommodate students’ needs. “Academia can only have a place in the future if it embraces new postures and values [...] Technology is changing rapidly, whereas universities and education are lagging behind”. Fernando Buarque further explained that social cohesion and stability should not be forgotten. “If we do not equip the people with the right tools and mindset, we will end up with very unhappy societies”. The Professor advocates for a workforce that is equipped technically and personally with the elements and skills that will allow them to be functional and balanced individuals.



Fernando Buarque
Head of the Computational Intelligence Research Group, and Senior Associate Professor at the University of Pernambuco

Questions from the audience

How is the online gig economy transforming the world of work?

Colin Blackwell explained that the gig economy can be an effective and valuable entrance door to the world of work for the most vulnerable. “For example, in the gig economy when doing technology work, someone maybe who did not have the mobility, the money or the opportunity to go to university before, can now go straight into that kind of work because the learning is an entirely different experience”, argued Blackwell. The CEO further explained that this transformation is also fragmenting work processes. “I just had a very good piece of work done by someone in Brazil, who was recommended by someone in Switzerland. Language is not necessarily a barrier either”.



Key Messages

- ▶▶ Life-long learning can mitigate the effects of technological disruptions on jobs.
- 🗨️ Academia should be prepared for societal changes and adapt accordingly.
- 📺 The gig economy can be an opportunity for the most vulnerable to enter the job market.

SESSION 5

How can we increase the effectiveness of models for skilling, reskilling, and upskilling?

Organiser: International Finance Corporation (IFC)

Speakers: Amy Refaat Abdel-Razek (IFC), Tania Lozanski (IFC), Dina Nicholas (IFC), Wanjira Kamwere (Microsoft), Peter Osei Boamah (Bolgatanga Technical University), Harold Wilson (Central University)



The ability to work and contribute successfully in today's fast-changing world requires digital skills and life-long learning, yet developing-world children are falling behind. This session, moderated by **Amy Refaat Abdel-Razek, Senior Private Sector Specialist at IFC**, examined how to equip youth with the skills they need to compete in today's labour market, and how regulators might help education systems adapt to changing employment and skill demands. **Tania Lozanski, Senior Manager of Advisory for Manufacturing, Agribusiness and Services sectors at the International Finance Corporation (IFC)**, highlighted some of the major findings from a recent joint World Bank Group/IFC study, “Demand for Digital Skills in Sub-Saharan Africa. Key Findings from a Five-Country Study: Côte d'Ivoire, Kenya, Mozambique, Nigeria, and Rwanda”, conducted in Africa on the challenges and opportunities for digital upskilling.



Amy Refaat Abdel-Razek
Senior Private Sector
Specialist at IFC

Lozanski pointed out that “70% of the demand is actually in basic digital skills across all sectors”. Therefore, she emphasized that “digital skills have to become a new literacy” and they need to be learned “at the same time that you learn your math, your reading and your writing”. In addition, the study “estimated that between now and 2030 in sub-Saharan Africa alone, the training opportunities are upwards of \$130 billion [and] the bulk of that is going to have to be met through models that go from business to business, including traditional educational institutions, but also business to government”.



Tania Lozanski
Senior Manager of Advisory for
Manufacturing, Agribusiness
and Services sectors at IFC

There is a need to collectively find “innovative ways that people can partner across the public and private sector” as “half of the training opportunities are going to be for reskilling and upskilling workers who are already in the workforce.”

On campus internet and computers, ICT labs open to students during evenings and weekends, online learning resources, and training on computer literacy and advanced ICT courses for both students and faculty were highlighted by **Bolgatanga Technical University Pro Vice-Chancellor Peter Osei Boamah**.



Peter Osei Boamah

Bolgatanga Technical
University Pro Vice-Chancellor



Harold Wilson

Senior Assistant Registrar at
the Central University College
in Ghana's Centre for Open
and Distance Learning

To achieve digital transformation, every educational institution “should be in a position to train both students and staff to the same level of digital skills.” Others, like Ghana's Central University College, are digitally transforming and implementing a learning approach that blends online and classroom education. **Harold Wilson, Senior Assistant Registrar at the Central University College in Ghana's Centre for Open and Distance Learning** said that, as a result from a recent assessment, it became clear that partnering with telecommunication companies like Vodafone and NTM to give free internet access was critical.

Wanjira Kamwere, Microsoft Africa's Business Development Manager for Skilling Initiatives, says that private sector firms like Microsoft need to do more to provide students with the skills they need to actually create change in these areas.

In order to educate students in STEMs and future prepare with the proper technological skills, empower institutions with the correct curriculum and certification, and link institutions with cooperation, Microsoft launched Microsoft Learn. Investment in infrastructure is vital for academic institutions to stay relevant in the future, she said.

"You become competitive when you are offering relevant skills for students"

This may be done by working with governments and policymakers to make educational infrastructure and gadgets more affordable for students.

Wanjira Kamwere

Microsoft Africa's Business Development
Manager for Skilling Initiatives





Dina Nicholas
Platform Lead for
Employability for Higher
Education at IFC

Digital skills are part of a larger set of skills that increase an individual's employability and higher education institutions play a key role in providing students with essential employable skills. **Dina Nicholas, Platform Lead for Employability for Higher Education at IFC**, described how the IFC's Vitae programme, helps educational institutions with employability support by conducting an assessment of their current practices and assists them in implementing recommendations based on these assessments.

"We are interested in making sure that this is not just an assessment tool, but also a tool that allows higher education institutions to learn from going through the process", explained Nicholas.

Questions from the audience

With reference to the initiative from Microsoft in Rwanda, what has the government of Rwanda done to help with the provision of computer devices for students?

The government of Rwanda worked with a large device manufacturer to establish a device assembly facility in Rwanda, where the devices could be deployed and made available to local public high schools and universities, significantly reducing the costs for public institutions and their students.

Key Messages

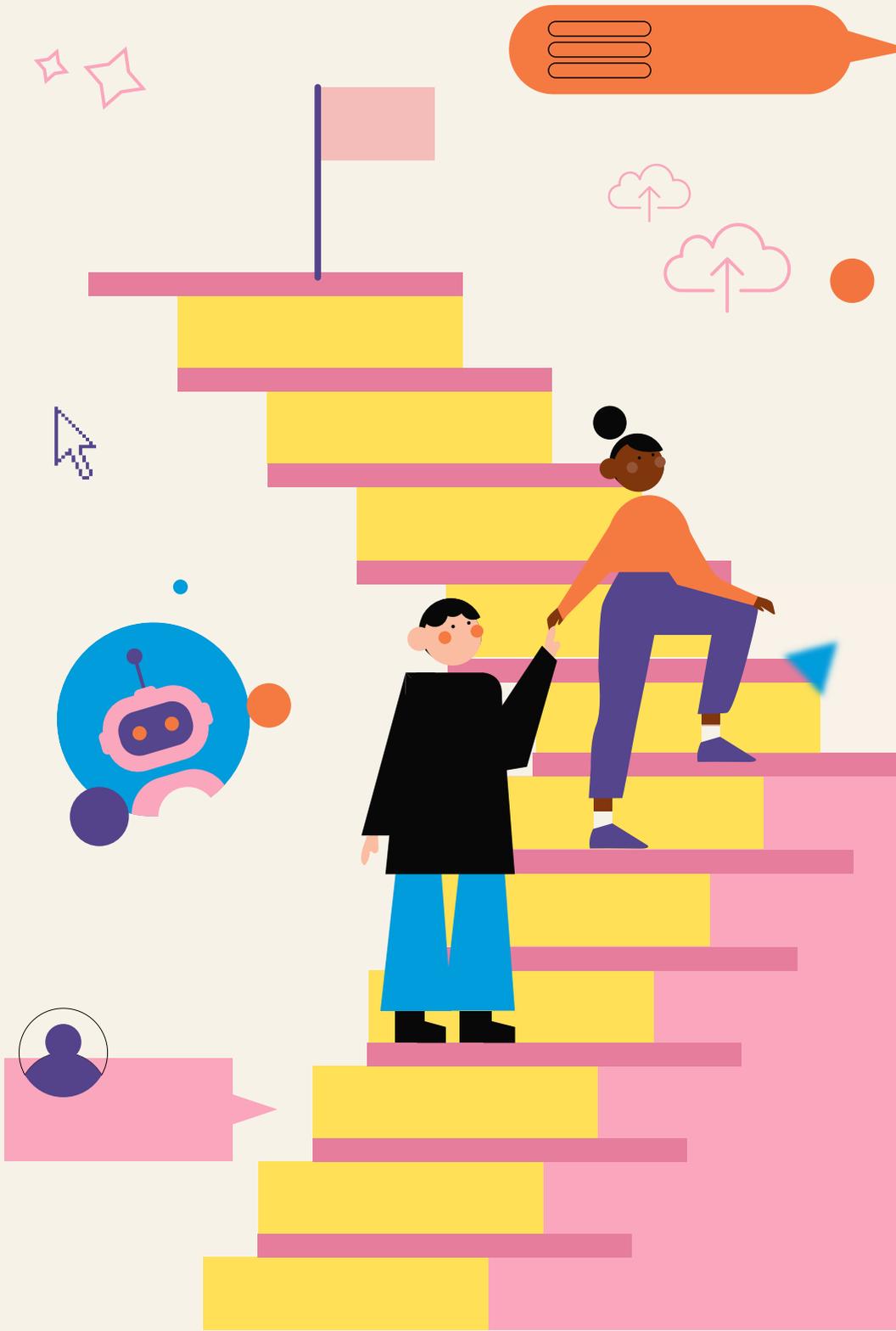
- ▶▶ Skills development and life-long learning are key to accessing decent work and enabling a smooth transition into the labour market but also to remain competitive in the workplace in times of rapid change.
- 🔄 Learning no longer happens only in academic institutions. We need to continuously upskill ourselves and invest in life-long learning if we want to be competitive in today's workplace.
- 🔗 We need to engage policymakers, governments, the private sector and civil society to make the learning experience more student-centered and to make data and resources available at affordable prices to the end users of education, namely students and academia.

SESSION 6

How can we motivate people to learn new skills?

Organiser: European Training Foundation

Speakers: Didier Gelibert (European Training Foundation), Farrukh Alimdjano (UNIDO), Aneta Petrovska-Rusomarski (EVN Macedonia), Ayşe Erdem (Tab Gıda), Daniela Chiti (PSA Peugeot-Citroën)



A highly trained workforce is a catalyst for innovation and a requirement for the development and adoption of new technologies. In the aftermath of the Covid-19 pandemic, adapting employee skills and roles to new ways of working and new market realities will be critical to operating-model resilience.

The session explored the priorities for setting strategies to stimulate employees to skill, upskill and reskill, and aimed at helping stakeholders evaluate different approaches to motivate people to undergo training and fill current or future skills gaps.

Aneta Petrovska-Rusomaroski, Head of Human Resources and Organisation at EVN Macedonia, a power distribution and supply company in North Macedonia, highlighted the importance of mentoring and knowledge transfer among employees.

A black and white portrait of Aneta Petrovska-Rusomaroski, a woman with long dark hair and glasses, wearing a dark blazer over a white top. She is standing with her arms crossed, looking towards the camera with a slight smile. The background is a solid yellow color.

"We have a very big portion of our workforce, which will be lost rapidly over the next 10 years due to retirement and turnover. But these employees from the older generations possess undocumented and documented knowledge, experience, and competencies, which we try to transfer to the younger generation to support and upgrade the sustainable energy system".

Aneta Petrovska-
Rusomaroski

Head of Human Resources
and Organisation at EVN
Macedonia



Ayşe Erdem

Training & Brand Standards
Senior Manager, Tab Gıda

According to Petrovska-Rusomarovski, motivation through career development should be done through financial and non-financial incentives, and companies should develop a strong learning culture.

Informing the employees about career development as a tool for motivation was also stressed by **Ayşe Erdem, Training and Brand Standards Senior Manager at Tab Gıda**, a leading company of the fast service restaurant industry in Turkey. “Because employees have a deeper understanding of every position and the technical knowledge, they have the opportunity to reflect this in their job and to their career life immediately”.

Reskilling also proves to be an important tool for motivating workers, an instrument that can impact not only the lives of individuals but also increase the numbers of employment in companies from different sectors. **Farrukh Alimdjano, Industrial Development Officer at UNIDO**, showcased a successful UNIDO project on upgrading the textile industry in Armenia.

The sector was losing momentum in terms of exports, and companies that were exporting were losing markets because their products were not market-oriented or harmonized. To address this, UNIDO organised a training of trainers programme for them to become mentors and collaborated with the companies to create new designs. Alimdjano highlighted:

“In three years, the industry could triple exports and more than double employment in the company”



Farrukh Alimdjano
Industrial Development Officer
at UNIDO

To motivate people who want to improve, we need to show them the difference. “And this would be the clear stimulus for them to move forward and to contribute to their companies, economies, and to their countries’, explained Alimdjanov.

Other important tools for motivation, according to **Daniela Chiti, Senior Digital Learning Specialist at PSA Peugeot-Citroën**, are the recognition of employees’ work, team spirit, training, and building a skills development plan. “We must protect professional development. We must see what skills are to be developed, and once a year this must be discussed between the manager and the employee”, added Chiti.



Didier Gelibert

Human Capital Development
Expert at the European
Training Foundation (ETF)

To attract and retain the right employees, employers need to provide them with the opportunity to gain new skills and to advance in their career through career development programmes, concluded the session’s moderator, **Didier Gelibert, a Human Capital Development Expert at the European Training Foundation (ETF)**.

Questions from the audience

How can a learning culture be developed in a company?

Aneta Petrovska-Rusomarovski explained that creating a learning culture is done when all levels of the organization accept it and there is no imposition. “We have a very comprehensive mentoring development programme and when we train mentors, we do not train only first level contact of the new employee or of the apprentices. We have a mentor from all levels of the organization.”

Key Messages



Mentoring and training may have a positive impact on employees' motivation for career development and on the company's revenue.



Companies should cultivate a learning culture.



Creating a concrete skills development plan can assist employees and employers.

Closing Ceremony

UNIDO's Call-To-Action



"Youth are the future and they should be the ones saying what is needed. We need to involve young people in the decision making in order to develop the training and the upskilling that they need. The strong involvement of all stakeholders is key if we want to make education and skills accessible to all"

Bernardo Calzadilla-Sarmiento

Managing Director of the Directorate of Digitalization, Technology and Agri-Business at UNIDO



Andrea Remes

CEO of Erandi Aprende

The Closing Ceremony featured a call-to-action from UNIDO and young leaders to the international community to promote digital skills for inclusivity. "21st century skills [...] have become essential for anyone, anywhere if they wish to get a job." highlighted **Andrea Remes**, a young female leader from Mexico, co-founder and CEO of the personalised STEM e-learning education platform Erandi Aprende and global winner of the Generation Unlimited Youth Challenge 2.0.



Anurag Saha Roy

CO-founder of Wikilimo

More than ever, we must work together to bridge the gender gap in digital skills and ensure that the younger generation has the essential skills to enter the job market with the help of skilling, reskilling, and upskilling.

Anurag Saha Roy, a young quantum electronics engineer and co-founder of Wikilimo, a climate informatics startup, highlighted that “there is already a lot of knowledge available on the benefits of digital skills and particularly for the younger generation.

However, this knowledge is not made accessible to all which is a major problem, particularly for the excluded communities”, when addressing the international community.

Bernardo Calzadilla-Sarmiento, **Managing Director of the Directorate of Digitalization, Technology and Agri-Business at UNIDO**, in his call-to-action urged the international community and policymakers to take real steps towards making education and skills accessible to all and conveyed these key messages

Key Messages



Build strong public-private development partnerships, at national, regional and global levels.



Help policymakers design demand-oriented digital skills policies for an inclusive industry.



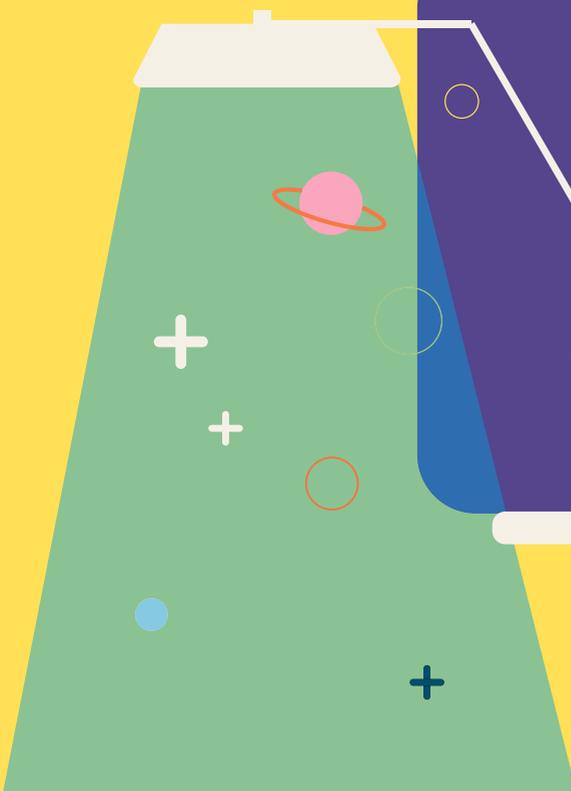
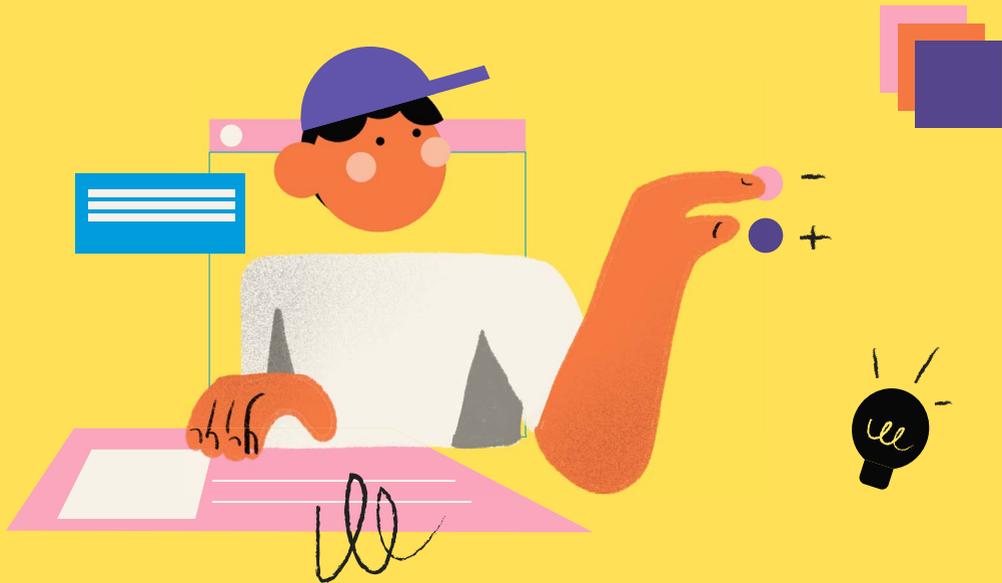
Promote more gender-sensitive approaches to digital inclusion and digital literacy to help close the gender gap.



Harness the 4IR and related advanced technologies and work in multi-stakeholder partnership to achieve a truly inclusive future of work.

The LKDF Hackathon





LKDF's Hackaton

The LKDF, in cooperation with the European Training Foundation and WorldSkills International, hosted a virtual hackathon on the 20th, 23rd and 24th of September 2021, as part of the LKDF Forum, to address a complex problem:

How can we make supply chain management in agribusiness greener?

Six teams of young people and experienced professionals got together to propose tangible solutions for reducing waste, carbon emissions, and energy usage in agribusiness. The virtual event was based and built on the theme of the LKDF Forum 2020 on Green Skills for a Sustainable Future. Throughout their journey, each team was supported by a dedicated experienced mentor. The event was moderated by Anne-Laure Fayard from the NOVA School of Business and Economics in Lisbon and Giulia Razetti from the Environment Park in Turin.

The solutions proposed

Team 1

OpenFoodScape

a mobile application for food suppliers, citizens, restaurants, and farmers that allows users to locate and view other foodscapes in major cities, improving sustainable and healthy food security.

Team 2

EZ-Eat

an automated aquaponic food production system that cultivates fish and organic vegetables for market chains and groceries. It combines container farming, greenhouse and aquaponic systems which farmers can operate via their smartphones.

Team 3

Agri+

a mobile application for farmers that provides information about sustainable agricultural farming and offers a virtual marketplace that helps the matchmaking between the farmers and the demand.

Team 4

Me2You

an online platform to connect four different stakeholders - producers, restaurants, charity institutions, and the final consumers - in a local food supply chain.

Team 5

SENTS

a mobile application that uses the design of small-scale treatment facilities (i.e. ponds) at farm level to address the problem of polluted water and excessive use of chemical fertilizers.

Team 6

Suntastic

an online platform for consumers, agricultural resources users, the textile industry, communities, and governments that recycles textile waste and compensates users with points and items to address groundwater and soil contamination.

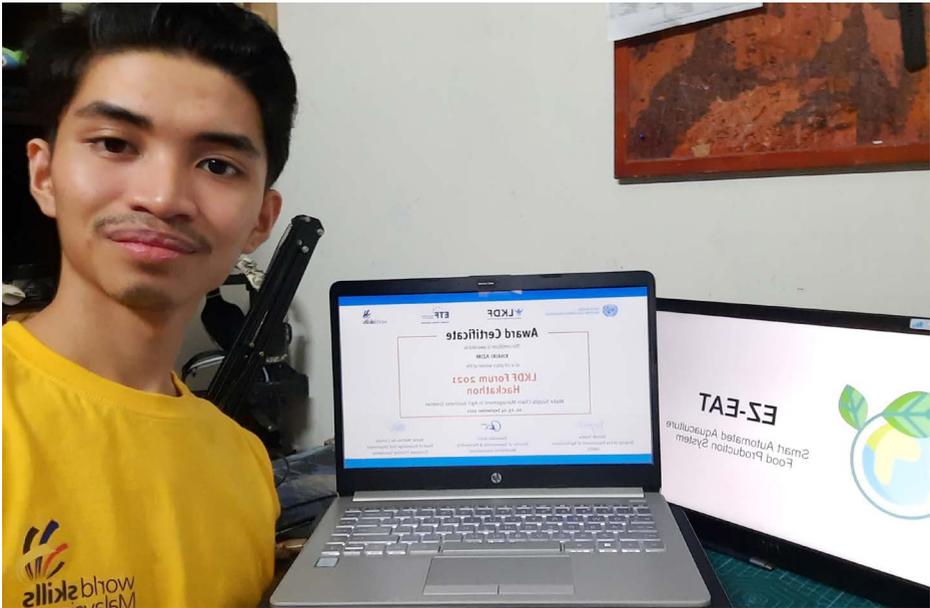
The winners

The judges Dejene Tezera, Director of the Department of Agribusiness at UNIDO; Kristien van den Eynde, Specialist in Entrepreneurship and Enterprise Skills, Policy and Public Outreach Department at the European Training Foundation; Matias Matias, Senior Manager, WW Business Development, Education and Advisory Member for HP Foundation, HP Life Program, HP Inc; and Henrik Gundelach, Researcher at the Centre for Business and Development Studies at the Copenhagen Business School, nominated **Team 2 “EZ-Eat”** as the **winner of the LKDF Hackathon** based on the criteria of “innovation, coolness, impact, and feasibility”.

The winning team proposed an automated food production system that combined container farming, greenhouses, and aquaponic systems to address the problem of low-quality vegetables and fish, as well as restricted access to clean water.

Khairi Azim from Malaysia, Erica Lee from Hong Kong, and Gunay Allahverdiyeva from Azerbaijan were the team members mentored by Osman Malik Atanur, who has more than 20 years of expertise in applied science and technology, R&D, in the management of international projects advising clean-tech start-ups and SMEs and who also managed the UNIDO Global Cleantech Innovation (GCIP) Programme.





“This was an excellent event where I could meet experts with multiple backgrounds to exchange ideas and views”, said Khairi Azim, the 23-year-old student of Electrical Power Engineering from Kuala Lumpur.

The second winning team of the event was Team 6, “Suntastic”. Participants were Suraj Kumar, Khadija Hassan, and Naimur Rashid Maher. They were mentored by Ömer Levent Gökçe.

Team 4 “Me2You” was the third winning team of the LKDF Hackathon. Members of the group were Douglas Maia, Cixin Ma, and Natalia Vasileva. The group was mentored by Mustafa Oz.

[Click here](#) to watch the full livestream and see all groups' pitches and the award ceremony.

98% of the audience participated in the LKDF Forum 2021 to stay up to date on what experts are saying about the future of skills.

What about you?



LKDF 2021: Developing Skills for the Future

There is an enormous workforce that requires education to match the current and future demands of local private sector industries.

By providing the youth with relevant, future oriented competencies needed for the transition to smart manufacturing / Industry 4.0, poverty can be reduced in the long term – and private industries can benefit highly from this future workforce.

With this goal in sight, the public and private sector need to work together in order to create local self-reliant and sustainable working environments.

By answering the following survey, you will help UNIDO improve the support available for the private sector and support the creation of sustainable global labour markets.



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The Forum

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Background Papers

[Theme Talk Background Paper: Digital skills and social inclusion: where are the most powerful links?](#)

[Sessions' Background Papers](#)

The Hackaton

[Hackaton Rules and guidelines](#), [Code of Conduct](#), [FAQs](#)

[Hackathon teaser](#)

[Recording of the LKDF Hackathon 2021](#)

News/media and coverage

UNIDO and LKDF

[How can digital skills nurture social inclusion?](#)

[How do digital skills contribute to an inclusive future?](#)

[These Youth Could Make Agribusiness Greener – Highlights of the LKDF Hackathon 2021](#)

European Training Foundation:

[Hackathons: a new form of learning to boost innovation amongst young people](#)

[Partnering for green innovation: what role can a hackathon play?](#)

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[UNIDO's LKDF Hackathon Sees Innovative New Ideas on How to Improve Agri-Business](#)

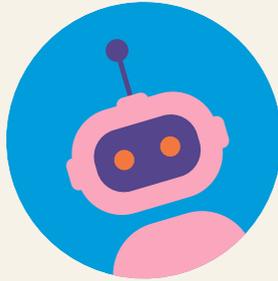
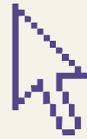
[Partnering for Green Innovation: What Role can a Hackathon Play?](#)

Others:

[LKDF Forum 2021 — How can businesses innovate inclusively?](#)

Visibility material:

[TrelloBoard](#)



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