



United Nations  
Educational, Scientific and  
Cultural Organization

UNEVOC

International Centre  
for Technical and Vocational  
Education and Training



# Bridging Innovation and Learning in TVET

**Kick-off Conference  
Bonn, Germany, 10-11 July 2019**

**Summary report**





**UNESCO-UNEVOC International Centre for TVET**

UN Campus

Platz der Vereinten Nationen 1

53113 Bonn

Germany

Phone: +49 228 8150-100

Fax: +49 228 8150-199

[unevoc@unesco.org](mailto:unevoc@unesco.org)

[www.unevoc.unesco.org](http://www.unevoc.unesco.org)



[unevoc.bilt@unesco.org](mailto:unevoc.bilt@unesco.org)

[www.unevoc.unesco.org/bilt](http://www.unevoc.unesco.org/bilt)

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Bridging  
Innovation and  
Learning in TVET



This report captures the key outcomes of the BILT Kick-off Conference held at UNESCO-UNEVOC in Bonn, Germany, on 10-11 July 2019. The conference agenda and the participant contact details can be found in the annex.



Group picture of the representatives from the European UNEVOC Centres, BMBF, OECD, European Commission, BIBB, and UNESCO-UNEVOC

# Foreword

In view of ongoing social, environmental, and economic disruptions, TVET institutions need to be proactive and address the challenges and opportunities of the 21st century. Moreover, to cope with the current global disruptions successfully, innovation is needed to drive change in institutions and TVET systems. Considering the pivotal role of innovation, UNESCO-UNEVOC is focusing on developing and implementing initiatives that foster greater collaboration and promote innovation within the UNEVOC Network, namely through the launch of the Bridging Innovation and Learning in TVET (BILT) project, the Skills for Innovation Hubs (i-hubs) initiative, and the knowledge platform for UNESCO's Youth Employment in the Mediterranean (YEM) project.



The BILT Kick-off Conference was an important step forward in addressing current transformational challenges through reinforced cooperation within the European UNEVOC Cluster. Overall, fifty-one participants attended the BILT Kick-off conference on 10-11 July in Bonn, including representatives from UNEVOC Centres in sixteen countries, and observers from Austria, France and Germany. We were grateful to our opening speakers from the German Federal Ministry of Education and Research (BMBF), the German Federal Institute for Vocational Training (BIBB), OECD, and the European Commission. We believe that the participation of all these stakeholders from within and outside of the UNEVOC Network enriched the conference and was an important element of its success.

Over the course of two days, participants were actively engaged in key thematic work streams of the BILT initiative, sharing innovative practices from the European context and generating interest and ideas for collaboration within BILT. The conference was also an opportunity to welcome the Swiss Federal Institute for Vocational Education and Training as a new member of the UNEVOC Network. The outputs of the BILT Kick-off Conference will inform and guide our next steps in planning and implementation of the project, first within Europe, and later with Africa and Asia.

We strongly believe that sharing of experiences and peer learning are a key to successfully address the current and future TVET needs of Europe and beyond. We are very excited that the BILT project provides such a platform for exchange among European TVET institutions, contributing to a better understanding of new qualifications and competencies, attractive career paths, and a quicker and more effective response to TVET challenges in greening, digitalization, entrepreneurship, and related to migration.

None of this would be possible without the BMBF's dedication to TVET and its financial support. We wholeheartedly thank the BMBF for enabling this opportunity and look forward to sharing the project's outcomes next year.

We would also like to thank our colleagues from the BIBB for their close collaboration and support, and look forward to jointly implementing the BILT project.

Shyamal Majumdar  
Head of UNESCO-UNEVOC



| Opening session

## Background

To remain relevant for the world of work and attractive to learners and potential employers, modern TVET systems need to adapt to new technologies and structural changes in the labour market. A main challenge of TVET is to create modern professions and career paths which attract and integrate youth. With ever-faster innovation cycles, the demand for peer learning is also increasing, both in Europe and internationally.

In Europe, there is already a wealth of experience in addressing some of these challenges, but little space to exchange on the experience of implementing new ideas and concepts. Such an exchange, however, could help improve, speed-up or, in some instances, initiate relevant action to ensure modern and relevant TVET both in Europe and beyond.

In particular, there is a high demand within TVET systems to capitalize on the opportunities from digitalization trends, to contribute to sustainability through green career pathways and competencies, and to foster entrepreneurial skills. There is also a high demand to understand how TVET can help address the challenges presented by migration, both at the sending and the receiving end of population flows.

The BILT project seeks to support TVET institutions in addressing these transformative challenges and explore innovative approaches and new practices. Having national competencies in view, the project will support collaboration activities that are targeted to enhance national as well as multinational TVET capacities, generate new knowledge, and share this information within TVET systems. The project will mobilize and reactivate the European UNEVOC Network cluster as a platform to foster learning and to establish content-oriented synergies in TVET. It will also act as a springboard for trans-regional action, involving innovative UNEVOC Centres in the Asia-Pacific and African regions through bridging opportunities that facilitate shared capacity building.

The BILT project is carried out in collaboration with the UNEVOC Network members, coordinated by UNESCO-UNEVOC, with support of the German Federal Institute for Vocational Education and Training (BIBB) and sponsored by the German Federal Ministry of Education and Research (BMBF).

BILT is a fifteen-month project from June 1, 2019 to August 31, 2020. A prospective, subsequent phase would focus on bridging experiences between Europe and Africa, as well as Europe and Asia.

# Welcome and opening

**Shyamal Majumdar, Head of Office, UNESCO-UNEVOC**  
**Kornelia Haugg, Director General, General Education and Vocational Training, Lifelong Learning, BMBF**  
**Hubert Ertl, Director of Research and Vice President, BIBB**

Shyamal Majumdar opened the conference by highlighting the role of TVET skills and new qualifications and competencies to support economic and environmental sustainability in today's fast changing world. Today, these changes affect all occupations and professions, from traditional and established areas, to emerging and new. Across the world, there is a need to anticipate future skills demands and prepare youth for new jobs, professions and occupations. Europe has already developed many instruments and tools to tackle this challenge. At the same time, countries in Africa and Asia-Pacific are also trying to cope with these new labour market needs. UNESCO-UNEVOC believes that the skills change is a global issue and that it should be dealt with through new global synergies.

Kornelia Haugg emphasized the importance of TVET and its position at the forefront of German education policy as qualified work is the basis of German society and a core element of its economy. To maintain the strong reputation and attractiveness of the German TVET system, the BMBF has launched a series of measures to address this, the most important of which is maintaining close contact with business sectors, industry, and social partners in order to meet



*TVET challenges have no borders, just like climate and digitalization. These are global issues, and new cross-regional synergies are needed to mitigate their impact.*

*Shyamal Majumdar,  
UNESCO-UNEVOC*



*Building bridges of innovation and learning in TVET is timely and necessary. Isaac Newton once said: 'We have built too many walls and not enough bridges'. This is especially true in VET, so let us all start building bridges today.*

*Kornelia Haugg, BMBF*

demands and to modernize TVET professions. Kornelia Haugg referred to TVET as being a 'fascinating challenge and a necessary element to secure qualified labour as well as social integration'. On these grounds, Germany is eager to observe and understand international approaches to the TVET issues of today and tomorrow. The BILT project is a concrete step towards addressing challenges facing European TVET systems. Despite starting in Bonn, this project is not solely a German initiative, but is an international initiative based on shared goals and aims to be truly global and cooperative.

Hubert Ertl subsequently outlined the overarching rationale of the project: to mobilize and reactivate the European UNEVOC cluster and to reinforce synergies with other regional UNEVOC Networks. He stressed that the essence of the UNEVOC Network is bringing TVET institutions together, and that collaboration opportunities should be used, as they are always mutually beneficial. With this in mind, the BILT project will provide a framework for exploring innovative practices that can help TVET community to steer the current transformations, and not just react to them.

## European and global VET scenarios

**João Santos, Deputy Head of Unit of the Directorate General for Employment, Social Affairs and Inclusion, European Commission**

**Anthony Mann, Head of VET and Adult Learning Team, Centre for Skills, Organization for Economic Cooperation and Development, OECD**

João Santos first talked about the importance of understanding the consequences and seizing the opportunities of global technological and demographic changes. As life expectancy is increasing globally, new generations are exposed to transitions much more frequently than before. The main paradigm change is the shift from the idea of receiving an education once, to the idea of a lifelong learning engagement that goes beyond the grounds of education and training and forms an active citizen. Presently, countries seek to address the complexity of the globalized world through trans-national cooperation. These changes have to be seen in a global dimension and not only in a local or country dimension. As 'we rise by lifting others', this idea of cooperation and working together is given a special importance at the European level. João Santos went on to emphasize the role of UNESCO-UNEVOC in enabling countries to work together:

*“We see UNEVOC as a sort of a window to the world and as a strategic partner in helping the European Commission to reach out beyond Europe, especially because some of our initiatives have a global dimension. Therefore we very much welcome the cooperation with UNESCO-UNEVOC.”*

Anthony Mann later presented global TVET scenarios, noting that as the current challenges align well at the European and global level, it is a good time for internationalization in TVET. The speaker outlined major global changes in TVET, including: automation and digitalization, demographic change, migration, globalization, growing inequalities and non-standard jobs. He stressed that in order to be resilient, TVET must be even more deeply embedded in the labour market than ever before.



| João Santos, European Commission





Left to right: Michael Wiechert, BIBB; Hubert Ertl, BIBB; Kornelia Haugg, BMBF; Shyamal Majumdar, UNESCO-UNEVOC; Anthony Mann, OECD; Oliver Diehl, BMBF

## Context setting

### **Oliver Diehl, Deputy Head of Regulation of Vocational Training, BMBF**

Oliver Diehl provided information on why TVET is important to the BMBF and Germany. He explained that TVET is on one hand a safeguard for the industry, and on the other a driver of integration in the labour market and in German society. Moreover, TVET enables young people to make their own career, their own living, and to live independently.

Mr Diehl also underscored that the BILT project, funded by BMBF, is not only German, but is based on international cooperation. An important objective is to allow continuous innovation and change in TVET through learning from other examples in Europe and elsewhere. With such a vision, there are resources available to support such ambition, and the project needs to aim high in order to reinforce the importance of TVET and show that it is a valid and productive pathway to address the concerns of young people, employers and policy-makers.



Oliver Diehl, BMBF

# The BILT Project – Framing

## Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC

The global UNEVOC Network is a strategic resource for inter-regional exchange, TVET policy learning and sharing of good practices. The European cluster has a wealth of expertise, but this expertise is presently underutilized in the UNEVOC Network. Even though there is high demand on learning and the resources developed by institutions are rich, these resources lack visibility and access. The aim of the BILT project is to ensure that UNEVOC Centres exchange experiences and benefit from peer learning across the Network.

The BILT project has evolved over a longer period of time and was substantively co-designed with the input of UNEVOC Centres. Jens Liebe reminded participants of the evolution of the BILT Project. Some European UNEVOC Centres first came together in September 2017 for a scoping workshop which aimed to identify the demands and potential interests of the European cluster. Following this workshop, a survey was conducted to have an overview of the engagement interest in different thematic areas within the UNEVOC Network. A second consolidation workshop organized in March 2018 identified the work streams and themes in greater detail, and provided a better idea of UNEVOC Centres which may want to lead and contribute to each individual work stream.



| Jens Liebe, UNESCO-UNEVOC

The work streams and themes identified in March 2018 were:

### Greening

#### 1. Compile practices and resources on greening TVET

##### Themes

- a. Greening the curriculum
- b. Greening the community and cities
- c. Greening the campus

#### 2. Engage in research and knowledge exchange on the application of circular economy in agriculture

##### Theme

- a. Research on circular economy

### Entrepreneurship

##### Themes

- a. Teacher and trainer training (pre- and in-service)
- b. Curricula development
- c. New technologies for entrepreneurship

### Digitalization/Industry 4.0

##### Themes

- a. Teaching and learning materials
- b. Teacher and trainer training
- c. Addressing SMEs and engaging them in the VET training cycle

### Migration

##### Themes

- b. Analysis of role of TVET and migration
- c. Case study on how TVET has assisted integration

This background work led to the definition of the Bridging Innovation and Learning in TVET (BILT) initiative, which is funded by the BMBF. The BILT project will tackle TVET challenges through peer learning on greening, digitalization/industry 4.0, entrepreneurship and migration. A fifth, additional work stream was identified to address how new qualifications and competencies find their way into practice.



## Our vision

**A consolidated European UNEVOC Cluster, geared up to engage in bridging innovation and learning with Africa and Asia-Pacific**

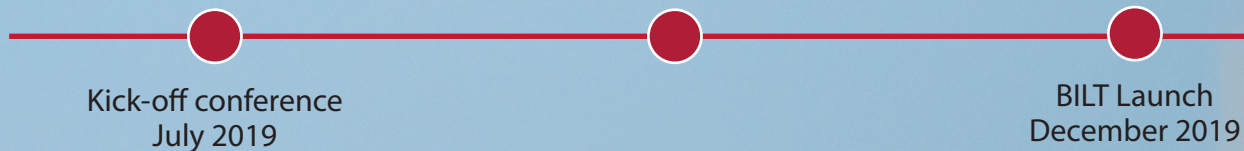


## BILT Goals

- To exchange on innovative practices and how TVET systems address their integration
- To activate the European Cluster of the UNEVOC Network through collaboration in innovation and learning bridges
- To identify the pathways and examples to include new qualifications and competences which are needed for modern, competitive TVET systems and attractive career paths
- To create opportunities and identify potentials to bridge innovation and learning experiences between Europe, Africa and Asia-Pacific

## Project timeline

Work stream kick-off events  
October - November 2019



## SFIVET welcomed as a new UNEVOC Centre

### Goals of the Kick-off conference

The goals of the Kick-off Conference were to concretize outputs for different themes, confirm focal points and contributors, and tentatively plan work stream kick-off events, which will initiate the collaborative work of UNEVOC Centres in the BILT project. The thematic group discussions were conducted in sequence with all participants or in a World Café format.

The outcomes of each thematic discussion were later presented in plenary, in order to identify additional UNEVOC Centres with a collaboration interest, gather additional input and to assess the relevance of the proposed actions according to the key criteria for 'BILT actions': transferability and added value of the output.



Erik Swars, Head of International Affairs, SFIVET, receives the UNEVOC plaque from Shyamal Majumdar, Head of UNESCO-UNEVOC

On the occasion of the BILT Kick-off Conference, Swiss Federal Institute for Vocational Education and Training (SFIVET) was welcomed as a new member of the UNEVOC Network. As part of its mission, SFIVET forms VET practitioners, provides VET research, develops careers and further assists international education and training cooperation. The institute acts as an interface between trade associations, professional organizations and the twenty-six cantons, with hundreds of vocational schools and professional colleges. As a national institute, SFIVET plays an important role for these partners, acting as a central point of contact for all matters relating to development projects and the basic and continuing training of TVET professionals.

BILT Learning summit and launch  
of BILT Europe-Africa/Asia  
Q3 2020



# New qualifications and competencies for competitive TVET careers

**Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC**

**Michael Schwarz, Deputy Head of Division 'International Advisory Services', BIBB**

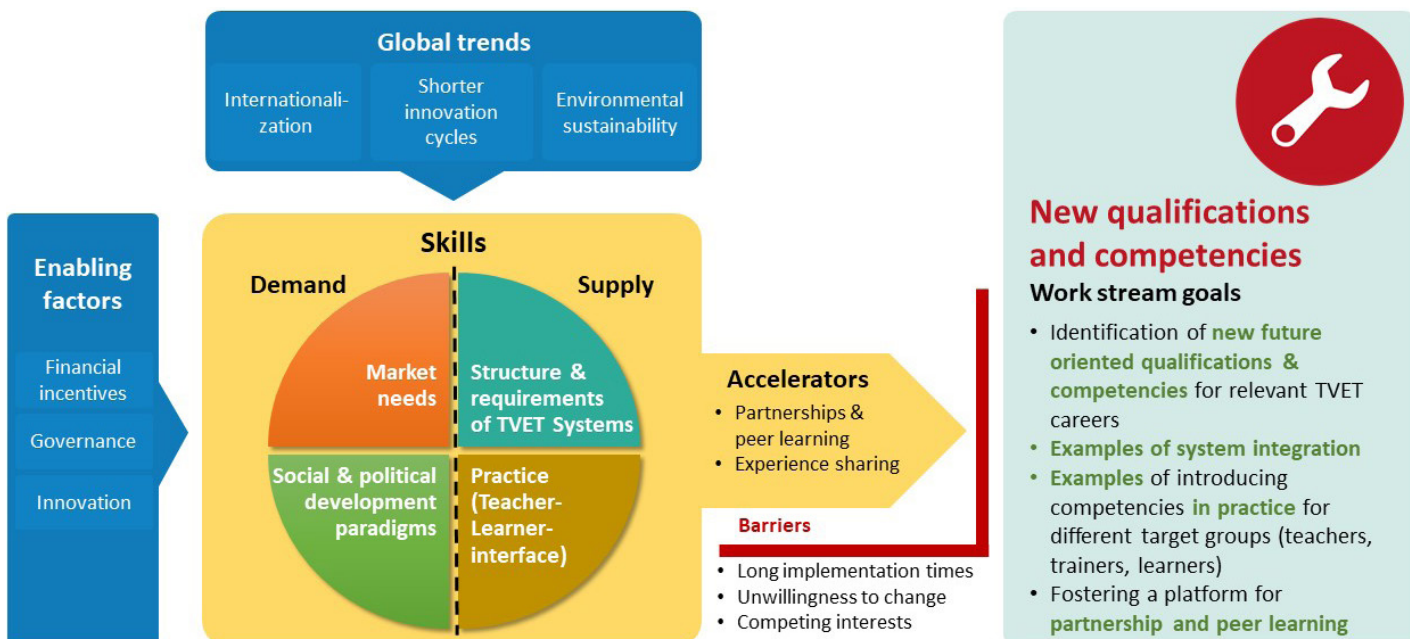
## Purpose of the work stream

Jens Liebe stressed one of the key challenges of TVET: to remain relevant for the world of work and attractive to learners, modern TVET systems need to adapt to global trends, such as internationalization, new technologies and shorter innovation cycles, and the desire for greater environmental sustainability. A key issue for education stakeholders worldwide is to identify and put into practice future-oriented qualifications and competencies which both serve the market needs, appeal to youth and integrate them into promising career paths. Mr Liebe outlined that the drive for new qualifications and competencies accelerated with enabling factors, such as financial instruments, new policies and governance, and, last but not least, the rise of technological innovations. Together, global trends and enabling factors pose structural challenges to the labour market, which TVET has to address to remain relevant and attractive.

## New qualifications and competencies for competitive TVET careers framework

The new qualifications and competencies ecosystem can be split up into skill demand and skill supply. The demand for future-oriented qualifications and competencies is largely defined by labour market needs, and by social and political development paradigms. To ensure that these newly identified qualifications and competencies find their way into practice, a collaboration between government, public administration, private sector and industry bodies is fundamental.

Bringing future oriented qualifications and competencies for relevant TVET careers into practice is not an easy task. On the skill supply side, it is necessary to look first into how new qualifications and competencies are phased into curricula at the systemic level, and then into how their implementation in practice is supported, such that teachers are trained and learners benefit accordingly.



While many countries make their own experiences, partnerships, peer learning and the exchange of experiences can serve as effective accelerators to this process. The learning potential for those engaged will be significant.

The goals of this work stream are to:

- 1 Identify new future-oriented qualifications and competencies for relevant TVET careers
- 2 Collect examples of introducing competencies on a systemic level in curricula and training regulations (inclusion of occupational profiles as a cross-cutting task or phasing in additional competences)
- 3 Collect examples of introducing competencies in practice, e.g. in the field of sustainability and digitalization through pilot projects in different sectors and occupational fields for different target groups (teachers, trainers and learners)
- 4 Foster a platform for partnership and peer learning

### Implementation and connection to other work streams

Michael Schwarz provided participants with some details on the implementation of this work stream. The work stream will be led by UNESCO-UNEVOC with the support of BIBB and will build upon the experience of other European UNEVOC Centres and further outstanding institutions in Europe. The intention of the New Qualifications and Competencies work stream is to identify and absorb relevant information from the other four work streams (greening TVET, entrepreneurship, digitalization/Industry 4.0 and migration), but not depend on them to make overall progress.

This work stream will identify qualifications and competencies for relevant TVET careers in the future under two different aspects:

- 1 At the systemic level, the focus will be on introducing new competencies into curricula, training regulations and occupational profiles. Here, two approaches will be considered:
  - the integration of cross-cutting competencies: analysis of cross-cutting green, digital and entrepreneurial competencies in curricula in different sectors (e.g. logistics, construction and services)
  - the integration of additional competencies in these sectors
- 2 At the practical level, the focus will be on concrete examples of how new competencies are introduced in initial and continuing TVET in different sectors. Here, a collection of pilot initiatives and products in the field of greening, digitization and entrepreneurship will be targeted.



Michael Schwarz, BIBB

# Tackling the challenges of greening TVET

**Louis Aquilina, Director, Partnerships Office, MCAST, Malta**  
**Päivi Korhonen, Director of Communications, Omnia, Finland**  
**Iñigo Araiztegui, International Manager, and Susana Espilla, International Manager, Tknika, Spain**  
**Ken Barrientos, Programme Officer, UNESCO-UNEVOC**

Ken Barrientos set the tone by providing the context of UNESCO-UNEVOC's work in greening TVET and education for sustainable development. As a thematic area of priority for UNESCO-UNEVOC, partners in the UNEVOC Network are mobilized to adopt sustainable actions at the institutional level and to enhance communities of practice through peer learning. UNESCO-UNEVOC also encourages UNEVOC Centres to pay attention to improving and building the capacities of leaders and teachers, thereby informing and guiding the TVET sector's response to the greening demands of economy and society.

Following this initial framing, Louis Aquilina provided an overview of the key challenges of greening TVET. He discussed technological developments and growing concerns about climate change, environmental degradation, and the scarcity of resources that are changing the nature of work. These developments demand that TVET develops skills and provides knowledge to facilitate the transition to green economies and sustainable societies. In his presentation, Louis Aquilina stressed that TVET is crucial in reorienting society to adopt the low-carbon mentality essential to addressing climate change. He noted that it is difficult to think of making gains in poverty reduction, job creation and decent work provision without transforming TVET via greening.

In the following, participants discussed three topics:

## *Circular economy (focal point: Tknika)*

A circular economy is one in which economic development and environmental sustainability are interdependent, with a strong emphasis on minimizing pollution while maximizing reuse and recycling.

As a suggested work stream output, the group agreed on the idea for a comparative analysis in order to create a module that can be used and applied to the context. The four following steps were identified:

- Case-study compilation of circular economy models
- Identify indicators
- Create framework
- Reference model development



| Louis Aquilina, MCAST



| Iñigo Araiztegui, Tknika



### Greening the campus (focal point: MCAST)

Greening the campus is one of the five approaches to promoting sustainability in TVET institutions as mentioned in UNESCO-UNEVOC's *Greening TVET - a practical guide for institutions*. This approach aims to promote an integrated management of the campus to strengthen the operational sustainability mechanism. The group highlighted the importance of persuading senior-level administrators and the executive to implement initiatives. The main work stream output will be a report that will demonstrate the benefit of greening the campus (benefits, as well as pros and cons of the programme), eventually followed by the implementation of a number of concrete activities.



| Discussing strategies to green the campus

### Greening the community and cities (focal point: Omnia)

Greening the community and cities aims to develop and implement sustainability plans and programmes that pursue shared goals with enterprises, and in which sustainable practices and lifestyles are the norm, not the exception. The main output identified in course of the discussion was a training programme for management that would involve the stakeholders and go beyond the borders of a campus, engaging the wider community in collaborative solutions. The objective would be to engage with external stakeholders to demonstrate the benefits of greening communities, thereby ensuring the buy-in of community and promoting shared ownership of solutions devised in partnership with cities and urban stakeholders.

Following the discussions, the participants of the greening session agreed upon the common challenges of the work stream, which are advocacy, mind-set and readiness. These challenges are present in four dimensions: environmental, social, economic and cultural.



| Päivi Korhonen, Omnia

# Tackling the challenges of digitalization/industry 4.0

**Ronny Sannerud, Professor, OsloMet, Norway**  
**Harry Stolte, Head of Division, GIZ Magdeburg, Germany**  
**Max Ehlers, Associate IT Officer, UNESCO-UNEVOC**

Framing this session, Max Ehlers provided an overview of digitalization and industry 4.0 from UNESCO-UNEVOC's perspective. This stressed the importance of designing TVET systems that are responsive to the needs of digital economies. As a result of the digitalization of processes in all areas of work due to computers, the internet and mobile technology, TVET graduates increasingly need to acquire 21st century competencies and specialized IT skills such as programming, networking, process thinking, data security and understanding interfaces. For teachers and implementers, new technologies can substantially impact and improve learning and TVET teachers have a key role to play in understanding and implementing these processes.

Afterwards, Ronny Sannerud talked about the benefits of close cooperation between industry and education/TVET at a national level, using the example of Learning Factories – an on-site learning approach – implemented in Norway. The objectives of the Learning Factory initiative are to:

- Increase learning outcomes and innovation
- Enable economic growth
- Promote green industry

Learning Factories provide additional benefits to the communities, offering employment opportunities for young people in rural areas and providing a rationale to stay within their communities and contribute towards the prosperity of the region. For employers, a motivated population that wants to learn and participate in the workforce contributes towards their business goals, reinforcing the link between industry, TVET and community.

From there, the group discussed two topics:

## *Teacher and trainer training (focal point: TVET for Sustainable Development, GIZ Magdeburg)*

The group identified the following specific challenges relating to teacher and trainer training:

- The rapidly evolving demands placed on teachers due to the changing requirements in terms of didactics and methods
- There are a limited number of TVET teachers with the skillsets needed and flexibility is required to lead on teaching these areas



| Tristan Cole, UNESCO-UNEVOC

- The level of collaboration between teachers and trainers should be increased
- To impart to students the 21st century skills needed to be successful, continuous training is required for the teachers to be aware of current industry best practises
- Existing linkages between industry and TVET institutions are not strong, and very few teachers have current industry experience and come from industry to the TVET sector as instructors

With a range of defined challenges, the conversation was robust on innovative ways to address them, with six separate institutions contributing. Proposed actions to support these included: the development of additional skills and implementation guidelines; the translation of curricula for use by industry and TVET institutions; measures to increase collaboration opportunities and foster cooperation between the learning providers; allowing teachers and trainers to participate in learning opportunities within companies for exposure to the current work environment which can then be taken back to the classroom.

### *Small- and medium-sized enterprises (SMEs) and engaging them in VET training cycle (focal point: OsloMet)*

The group identified two main challenges of engaging SMEs in VET training cycle:

- The integration of SMEs in the qualification design process at the systemic level, and
- The cooperation of learning venues

The participants outlined that government stakeholders need to be invested in this process. The main output of this component will be the development of implementation manuals for engaging SMEs in TVET. Inspired by the idea of the UNESCO-UNEVOC Greening TVET Guide, discussion was held on using that as a framework but focussing on a new question: How do we implement digitalization skills within TVET, and how to remain relevant? Multiple UNEVOC Centres identified themselves as having capacity and experience in these areas and be willing to contribute to the project through sharing and joint capacity building.

In the second round of the discussion on engaging SMEs in VET training cycle, additional issues were identified:

- How to help SMEs to develop training strategies
- SMEs are often not willing, or able, to invest in training and instead hire workers from abroad who are cheaper
- Transitioning from the different cultures of learning between school and company
- The need for more learning and technological clusters

The proposed actions were to equip sector skill councils and the parts of organizations in order to provide efficient training strategies oriented to SMEs, and to identify existing learning and technology clusters and develop them further. The output of these activities would be the identification of the degree of digitalization development that is needed per occupation.

# Tackling the challenges of entrepreneurship in TVET

**Iñigo Araiztegui, International Manager, Susana Espilla, International Manager, Tknika, Spain**  
**Paolo Nardi, International Affairs Officer, Cometa, Italy**  
**Ronny Sannerud, Professor, OsloMet, Norway**  
**Miki Nozawa, Programme Specialist, UNESCO-UNEVOC**

Miki Nozawa opened the session with a framing presentation on the necessity of entrepreneurial skills in TVET, informing participants on the mainstreaming of entrepreneurial learning by UNESCO-UNEVOC. The speaker noted that entrepreneurship is a set of skills and attitudes that need be learned and enhanced through education and training. Promotion of entrepreneurial skills and mind-sets contributes to better equipping youth to access the world of work and to improve their capability to adapt to changing skill demands, as well as to nurture personal development. UNESCO-UNEVOC has worked towards the mainstreaming of entrepreneurial learning through consolidation of knowledge base; namely, the International Centre organized a Virtual Conference on Entrepreneurial Learning in TVET during November and December 2018.

Following this, Iñigo Araiztegui highlighted the main challenges of entrepreneurship in TVET, noting that there are currently too many initiatives to foster entrepreneurship which dilute the overall focus of learning. Additionally, there is a missed opportunity as students are not being trained to develop entrepreneurial competencies and mind-set which would facilitate learning and lead to increased success. To complicate this, education systems vary across Europe by country, and different types of UNEVOC Centres approach the concept of entrepreneurship in different ways which leads to a lack of a standardized approach. Reflecting on this, Iñigo Araiztegui presented ideas on how these challenges can be dealt with through the UNEVOC Network. For instance, at the government level, a plan to coordinate initiatives to foster entrepreneurship in each country would help tackle the issue of having too many entrepreneurial initiatives. As part of this session, participants then discussed the following three topics in greater detail:

## *Teacher and trainer training (focal point: Cometa)*

Paolo Nardi stated that developing entrepreneurship skills is essential for students' future careers and this would continue to be an important part of skills training. One particular challenge in developing entrepreneurial skills is changing students' and teachers' mind-sets around what entrepreneurship training is and how it can benefit students and lead to productive and rewarding careers. The group looked for concrete examples of practice to keep teaching pedagogy updated in order to boost entrepreneurship instruction and thinking. Participants discussed



| Ronny Sannerud, OsloMet



| Paolo Nardi, Cometa

good practices of teaching and developing entrepreneurial skills among students. The output of this work stream would be a collection of practices according to a specific framework, in order to identify process, conditions and impacts. This could lead to the creation of a training course for teachers and trainers to share these new ideas to boost entrepreneurship in TVET in Europe and beyond.

#### *Use of new technologies for entrepreneurship (focal point: OsloMet)*

The group discussed the challenges of using technology in entrepreneurship and outlined the importance of role models and mentors to boost entrepreneurship among young people. For role models and mentors, providing actual examples of successful entrepreneurs was identified as a significant method of inspiring students. Mentorship, too, was recognized as being important as a coach, inspiration and validator of ideas for aspiring entrepreneurs. The challenges of using technology in entrepreneurship was highlighted by participants that indicated that little investment was made in technology, and so there was limited exposure to this to date. Others highlighted that current pedagogy around entrepreneurship did not use technology and that this was a gap. The group proposed some concrete actions to tackle the challenge of using new technologies in entrepreneurship, including an innovative 'Entrepreneurs Conference' to show positive role models about setting up a business and practical training for teachers.

The proposed outputs included:

- A work package for skills relating to teaching with new technology
- A collection of Europe-wide success stories of entrepreneurs and role models
- The digitalization of business processes and highlighting the benefits of this

# Tackling the challenges of migration and TVET

**Annelie Dahlin-Jones, Teacher, Centre for Flexible Learning, Sweden**

**Alexander Studthoff, Research Associate, BIBB, Germany**

**Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC**

**with contributions from Volker Wedekind, Professor, Nottingham University, United Kingdom**

Jens Liebe first gave an overview of global migration trends. According to UNHCR, global forced displacement topped 70 million at end-2018. The overall number of international migrants has continued to grow faster than the world's population in recent years, reaching 258 million in 2017. While Europe often perceives itself as a receiving end, a lot of African and Asian countries receive migrants and refugees at a massive scale too, since, for instance, 80% of the world's displaced people are hosted by their neighbouring countries. The integration of migrants into the workforce is a global challenge and bridging European experiences with Africa and Asia in this field might be useful. Mr Liebe emphasized that there cannot be a one-size-fits-all solution for integrating different groups of migrants, but that the approach may vary depending on whether migration is driven by displacement, employment, education or climate change.

Thereafter, Annelie Dahlin-Jones talked about the measures implemented in Sweden after the migration peak in 2016 to help migrants to successfully enter the workforce. In Sweden there is no unskilled labour market, and arrivals need to invest time to learn about the society and the language, in addition to acquiring skills needed to participate in the workforce. To speed up this integration process, the Swedish training approach combines three aspects – language, skills and society – and this combined approach to training allows migrants to enter the workforce within twenty-four months of getting a Swedish residence permit.

Following the introduction, participants discussed two topics in more detail:

## *The role of TVET and migration (focal point: University of Nottingham)*

Within the framework of the BILT project, the University of Nottingham has developed a discussion paper on *Human migration and TVET* that focuses on the definition, the typologies and consequences of migration and its implications for TVET. The discussion paper defines the challenges, barriers and TVET responses to migration. Of course one component of this is a focus on the migrants themselves, but other considerations



| Alexander Studthoff, BIBB

should include efforts to prepare non-migrant communities for interaction with migrants, so that the receiving end understands the particular needs and requirements of this group. Jens Liebe, who presented the outcomes on behalf of the University of Nottingham, outlined that the discussion paper is a strong basis for further work on migration and that the main focus can now be put on collecting and analysing practical examples. These should include policy-level responses, institutional arrangements, curriculum innovation and materials development and pedagogical practices. Several institutions were interested to contribute to this work theme with specific examples of implementation.

The discussion clearly showed that the challenges are similar for both topics, namely the need for an effective TVET response to migration and the integration of migrants into the workforce and society. The world 'society' is here particularly important and has been a long part of the discussion.

### Practical examples (focal point: CFL Soderhamn)

#### Skills and language

Annelie Dahlin-Jones emphasized the importance of combining vocational training with language classes for migrants. She presented a good practice implemented in CFL Soderhamn: restaurant education in combination with Swedish language classes, targeting migrants with little or no previous education or with limited to none restaurant experience. The training responds to the needs of both migrants and the local community (there is a shortage of qualified restaurants workers in Soderhamn municipality) and proved itself to be highly successful: 87 % of students that finished the education in June 2018 are still employed today.

#### Recognition portal

Alexander Studthoff presented another good practice of integrating migrants into the national labour market. To make the recognition process more clear and easy to access, the German federal government designed the online 'Recognition in Germany' (*Anerkennung in Deutschland*) Portal, which provides comprehensive information and guidance on the recognition process, legal framework and required application documents for migrants to use. The main feature of the portal is the "Recognition Finder" tool that helps foreign professionals to find the German reference profession that best fits their qualification, and to identify the right assessment authority for their profession in a few clicks. To date, the portal is available in eleven languages and proved itself to be a practical and popular tool, with 3.2 million visits in 2018 and 250,000 visits each month.



| Annelie Dahlin-Jones, CFL Soderhamn

# Tackling the challenge of new qualifications and competencies for competitive TVET careers

**Tereza Halouzková, Senior Expert, National Institute for Education, Czech Republic**

**Iñigo Araiztegui, International Manager, and Susana Espilla, International Manager, Tknika, Spain**

**Michael Schwarz, Deputy Head of Division 'International Advisory Services', BIBB, Germany**

**Janina Meyer, Research Associate, BIBB, Germany**

**Eva Hanau, International advisor for TVET, BIBB, Germany**

**Helene Arz, Responsibility Strategy and Standards Expert, Deutsche Post DHL, Germany**

**Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC**

To begin this session, Jens Liebe and Michael Schwarz gave a short recapitulative introduction to this new work stream, highlighting that its inclusion was a result of the evolution and planning of the overall BILT project. To highlight the demand for new skills in the private sector, Helene Arz then presented the GoGreen environmental protection programme by the Deutsche Post DHL. The GoGreen initiative is a result of increasing societal and consumer awareness, support for, and demand for greening and sustainable practises, and DHL's interest to increase its efficiency and lead on this issue within industry. The overall goal of GoGreen is to reduce all logistics-related emissions to zero by 2050. As part of DHL's Mission 2050, four sub-targets were defined with one of them being to train 80% of DHL employees to become Certified GoGreen specialists and actively involve them in environmental and climate awareness and protection activities.

Thereafter, UNEVOC Centres introduced three lines of activity within the work stream which then were discussed on three separate tables in a World Café format. The outcomes of each thematic discussion were later presented in the plenary session.



Helene Arz, DHL; Michael Schwarz, BIBB; Jens Liebe, UNESCO-UNEVOC





Discussing integration of digital and green curricula

#### *Curricula development and entrepreneurship (focal point: Tknika)*

In this World Café, the participants collaboratively discussed and identified challenges relating to curricula development for entrepreneurship in Europe, which included:

- Teachers' level of preparedness
- Mismatch between curricula and exams
- Introducing the needs of the labour market in curricula
- Competence (not knowledge) based curricula
- Multitude of informal certificates
- Non-specification of work-based learning in curricula

The main action line of this work stream would be to collect good examples of curricula development using the resources available within the European cluster of the UNEVOC Network. The BILT project can be used as a common platform to share curricula models and see what works well in different countries and analysing the causes of that success, as well as any challenges and lessons learned. At a later stage, this could lead to the design of a common training program for TVET teachers on how to implement competence-based curricula and assess learners by demonstrated competences, and not by content.

#### *Digital and green curricula (focal point: BIBB)*

Despite their variety, a common theme identified and reported across different countries' TVET systems is the need for integration of more digital and green competencies in their curricula. Considering this, there are different approaches and levels of integration required to accomplish these needs:

**Level 1:** cross-cutting (generic) approach

**Level 2:** sector-specific approach

**Level 3:** occupation-specific approach

**Level 4:** additional qualification approach

Participants agreed that after gathering success stories and challenges of introducing or modernizing new qualifications and competencies in national frameworks, identification of overlaps in approaches between different countries should take place. Several institutions were willing to contribute to this work line, either through additional qualification approaches, or comparative analysis of one occupational profile (to be chosen among metal, construction and wholesale-related professions).

**Practical examples of implementation (focal point: NUV)**

Around this table, three practical examples of implementation were presented: the International Roadshow 'Digital Media in TVET' (presenter: Eva Hanau, BIBB), the Pilot project VET for Sustainable Development (presenter: Janina Meyer, BIBB) and the Green Wheels project (presenter: Tereza Halouzková, NUV)

Tereza Halouzková presented the Green Wheels project co-funded by the Erasmus+ Programme of the European Union. The project aims to create open learning materials in the field of operation, repair and service of hybrid and electric cars, by using innovative methods and approaches such as critical thinking, inquiry-based learning, collaborative learning, flipped classroom and peer instructions. This initiative focuses on improving and enriching teacher methodology through innovative methods, extensive teacher trainings and mentoring.

Eva Hanau emphasized that digitally supported education and training can help to make learning more flexible and enhance the quality and attractiveness of TVET. The International Roadshow 'Digital Media in TVET' initiated by BIBB therefore aims to show the potential of digital applications and technologies for teaching and learning in TVET and identify viable solutions for their sustainable integration into TVET practice.

Further, Janina Meyer presented the BIBB Pilot project VET for Sustainable Development. As there is a clear need for a change in attitudes and for organizational competencies that are geared towards sustainability, the project aims to develop solutions to tackle this issue. The first funding line of the project is the development of sector-specific sustainability competencies in commercial occupations, with the goal of proactive qualification of VET personnel through development and dissemination of sustainable learning tasks.



| Tereza Halouzková, NUV





## Next steps in BILT

The BILT Kick-Off Conference was targeted towards the European UNEVOC Network members and selected European institutions. The event re-engaged those UNEVOC Centres who had been participating in the concept stage of BILT, and importantly, allowed new and existing participants to identify and refine the challenges facing European TVET systems in the five thematic areas of greening, digitalization, entrepreneurship, migration, and new qualifications and competencies. This also allowed for reflection on possible responses to these challenges. The outcomes of the discussions inform the next steps of the BILT project that involve a series of thematic work stream workshops planned for October and November 2019.

The thematic work stream workshops will bring together a broader range of stakeholders from the European education sector, including a larger number of UNEVOC Centres willing to contribute to the respective work streams, and thematic experts. During these workshops, participants will discuss the respective issues in depth and work towards the main outcomes of BILT, which are to analyse the European TVET expertise and experiences, and look for transferable learning products that can be bridged within Europe, but also with UNEVOC Centres in Africa and Asia.

The preliminary results of each individual work stream will be presented during the BILT Launch that will take place in December 2019 at UNESCO-UNEVOC in Bonn. The Launch will initiate the cross-regional bridging component and will target European UNEVOC Centres, potential bridging partners from Africa and Asia, representatives from the European Commission, OECD, BMBF, and extended range of subject matter experts.

The BILT Project will conclude with a global TVET Learning summit involving UNEVOC Network members, as well as external TVET stakeholders, and private sector. During this event, tentatively planned for the third quarter 2020, the outcomes of the project and lessons learnt from the collaboration exercise within the European cluster of the UNEVOC Network will be presented. Building on BILT outcomes, further actions will be also discussed, including a possible second phase of BILT that will focus on bridging the experiences of Europe with Africa and Asia, and sharing of good practices and collaborative capacity building.

# Agenda

10 July	Wednesday
08:30-09:00	Registration and welcome coffee/tea
09:00-09:45	<b>Welcome and opening</b> Shyamal Majumdar, Head of Office, UNESCO-UNEVOC Kornelia Haugg, Director General, General Education and Vocational Training, Lifelong Learning, BMBF Hubert Ertl, Director of Research and Vice President, BIBB
09:45-10:15	<b>European and global VET Scenarios</b> João Santos, Deputy Head of Unit, Directorate General for Employment, Social Affairs and Inclusion, European Commission Anthony Mann, Head of VET and Adult Learning Team, Centre for Skills, OECD
10:15-10:45	<b>Group picture followed by coffee/tea break</b>
10:45-11:00	<b>Round of introduction</b>
11:00-11:15	<b>Bridging Innovation and Learning in TVET (BILT) - Context setting</b> Oliver Diehl, Deputy Head of Regulation of Vocational Training, BMBF
11:15-11:45	<b>The BILT-Project - Framing and discussion</b> Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC
11:45-12:15	<b>New qualifications and competencies for competitive TVET careers</b> Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC Michael Schwarz, Deputy Head of Division, International Advisory Services, BMBF Q&A
12:15-13:15	<b>Lunch break</b> (VIP area, 29th floor)
13:15-15:15	<b>Tackling the challenges of</b>  <i><b>Greening TVET (Breakout group 1), 1916</b></i> Louis Aquilina, Director, Partnerships Office, MCAST Ken Barrientos, Programme Officer, UNESCO-UNEVOC  <i><b>Industry 4.0/Digitalization (Breakout group 2), 2516</b></i> Ronny Sannerud, Professor, OsloMet Harry Stolte, Head of Division, GIZ Magdeburg Max Ehlers, Associate IT Officer, UNESCO-UNEVOC
15:15-15:45	<b>Coffee/tea break</b>
15:45-17:15	<b>Discussing the BILT actions on Greening TVET and Industry 4.0/Digitalization</b> Focal points of the Greening TVET and Industry 4.0/Digitalization breakout groups Moderation: Ken Barrientos, Programme Officer, UNESCO-UNEVOC
17:15-18:15	<b>Bilateral meetings with Greening TVET and Industry 4.0/Digitalization work stream focal points</b>
19:30	<b>Dinner</b>

11 July	Thursday
09:00-11:00	<p><b>Tackling the challenges of</b></p> <p><i><b>Entrepreneurship in TVET (Breakout group 1), 1916</b></i>            Iñigo Araiztegui, International Management, Tknika            Susana Espilla, Manager of Internationalization, Tknika            Miki Nozawa, Programme Specialist, UNESCO-UNEVOC</p> <p><i><b>Migration and TVET (Breakout group 2), 2516</b></i>            Annelie Dahlin-Jones, Teacher, CFL            Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC</p>
11:00-11:30	<b>Coffee/tea break</b>
11:30-12:30	<p><b>Discussing the BILT actions on Entrepreneurship in TVET and Migration and TVET</b>            Focal points of the Entrepreneurship in TVET and Migration and TVET breakout groups            Moderation: Michael Wiechert, Head of Division, International Advisory Services, BIBB</p>
12:30-13:30	<b>Lunch break</b> (VIP area, 29th floor)
13:30-15:45	<p><b>Tackling the challenge of new qualifications and competencies for competitive TVET careers</b>            Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC            Michael Schwarz, Deputy Head of Division, International Advisory Services, BIBB            Helene Arz, Responsibility Strategy and Standards Expert, Deutsche Post DHL</p> <p>Shaping the BILT work on new qualifications and competencies in two dimensions, with inputs from UNEVOC Centres:</p> <ul style="list-style-type: none"> <li>• Which new qualifications and competencies become relevant in Europe and how are they introduced in curricula?</li> <li>• What are practical examples of implementation, e.g. modules for new crosscutting and sectoral qualifications?</li> </ul>
15:45-16:00	<p><b>Next BILT actions and closing</b>            Shyamal Majumdar, Head of Office, UNESCO-UNEVOC            Jens Liebe, Senior Programme Expert, UNESCO-UNEVOC</p>
16:00-17:00	<b>Networking coffee</b>
16:00-17:00	<b>Bilateral meetings with Entrepreneurship, Migration and TVET and New qualifications and competencies work stream focal points</b>
17:00	<b>End of conference</b>

# Participant list

Title	Last name	First name	Institution	Email	Country
Mr	Aquilina	Louis	Malta College of Arts, Science and Technology	louis.aquilina@mcast.edu.mt	Malta
Mr	Araiztegui	Iñigo	Tknika	iaraztegui@tknika.eus	Spain
Ms	Arz	Helene	Deutsche Post DHL	helene.arz2@dpdhl.com	Germany
Mr	Colakoglu	Mustafa	Ministry of National Education	mustafacolakoglu@meb.gov.tr	Turkey
Ms	Dahlin-Jones	Annelie	Centre for Flexible Learning	annelie.dahlin-jones@hufb.se	Sweden
Mr	Diehl	Oliver	Federal Ministry of Education and Research	oliver.diehl@bmbf.bund.de	Germany
Mr	Dunkel	Torsten	Federal Institute for Vocational Education and Training	dunkel@bibb.de	Germany
Mr	Ertl	Hubert	Federal Institute for Vocational Education and Training	ertl@bibb.de	Germany
Ms	Espilla	Susana	Tknika	sespilla@tknika.eus	Spain
Ms	Halouzková	Tereza	National Institute for Education	tereza.halouzkova@nuv.cz	Czech Republic
Ms	Hanau	Eva	Federal Institute for Vocational Education and Training	hanau@bibb.de	Germany
Ms	Hark	Vera	Federal Institute for Vocational Education and Training	vera-hark@posteo.de	Germany
Ms	Haugg	Kornelia	Federal Ministry of Education and Research		Germany
Mr	Hübers	Berthold	Federal Institute for Vocational Education and Training	huebers@bibb.de	Germany
Mr	Igel	Burkhard	University of Applied Sciences and Arts, Dortmund	igel@fh-dortmund.de	Germany
Mr	Klandt	Peter	Federal Ministry of Education and Research	peter.klandt@dlr.de	Germany
Ms	Korhonen	Päivi	Omnia	paivi.korhonen@omnia.fi	Finland
Ms	Le Mouillour	Isabelle	Federal Institute for Vocational Education and Training	lemouillour@bibb.de	Germany
Ms	Maduna	Karolina	Agency for Vocational Education and Training and Adult Education	karolina.maduna@asoo.hr	Croatia
Mr	Mann	Anthony	Organisation for Economic Cooperation and Development	anthony.mann@oecd.org	
Ms	Meyer	Janina	Federal Institute for Vocational Education and Training	meyer@bibb.de	Germany
Ms	Moosel	Anu	Foundation Innove	anu.moosel@innove.ee	Estonia

Title	Last name	First name	Institution	email	Country
Mr	Nardi	Paolo	Cometa Formazione	paolo.nardi@puntocometa.org	Italy
Mr	Noebauer	Reinhard	Federal Ministry for Education, Science and Research	reinhard.noebauer@bmbwf.gv.at	Austria
Mr	Olbrich	Sebastian	Federal Ministry of Education and Research	sebastian.olbrich@bmbf.bund.de	Germany
Mr	Sannerud	Ronny	OsloMet	ronny.sannerud@oslomet.no	Norway
Mr	Santos	João	European Commission	joao.santos@ec.europa.eu	
Mr	Schmid	Kurt	Institute for Research on Qualifications and Training	schmid@ibw.at	Austria
Mr	Schwarz	Michael	Federal Institute for Vocational Education and Training	michael.schwarz@bibb.de	Germany
Mr	Sgarzi	Matteo	French Centre for Research on Education, Training and Employment	matteo.sgarzi@cereq.fr	France
Mr	Stolte	Harry	German Corporation for International Cooperation GmbH	harry.stolte@giz.de	Germany
Ms	Stroie	Dana	Institute of Education Sciences	dana.stroie@yahoo.com	Romania
Mr	Studthoff	Alexander	Federal Institute for Vocational Education and Training	studthoff@bibb.de	Germany
Mr	Swars	Erik	Swiss Federal Institute for Vocational Education and Training	erik.swars@iffp.swiss	Switzerland
Ms	Verbakel	Doreen	CINOP	dverbakel@cinop.nl	Netherlands
Mr	Wiechert	Michael	Federal Institute for Vocational Education and Training	wiechert@bibb.de	Germany
Mr	Wolff	Carsten	University of Applied Sciences and Arts, Dortmund	carsten.wolff@fh-dortmund.de	Germany

## UNESCO-UNEVOC staff

Title	Last name	First name
Mr	Armanious	Kamal
Ms	Takeh	Asheh
Ms	Barrientos	Ken
Ms	Browne	Nickola
Mr	Cole	Tristan
Mr	de Regt	Wouter
Mr	Ehlers	Max
Ms	Filippova	Alexandra
Ms	Gianchandani	Pooja
Mr	Hautier	Jean
Ms	Hornberger	Annika
Ms	Lebichot	Louise
Mr	Liebe	Jens
Mr	Majumdar	Shyamal
Ms	Nozawa	Miki
Ms	Schaulandt	Carolin
Mr	Shahid	Zubair
Ms	Skidmore	Morgan
Mr	Weitz	Stefan



## Annex: BILT Action Frameworks

The following slides are a record of the thematic discussions held during the BILT Kick-off conference. Originally, the participants populated *BILT Action Frameworks* interactively, which were later transposed into digital format and presented to the plenary.

These records do not intend to cover a complete picture of the work streams and their expected outcomes, but present a record of the brainstorming and discussion process carried out during the BILT Kick-off conference.

**4.0**  
**Work stream: Digitalization/Industry 4.0**  
**Topic: Teacher & Trainer Training**  
**Focal point: UNEVOC Centre TVET for SD, Magdeburg**



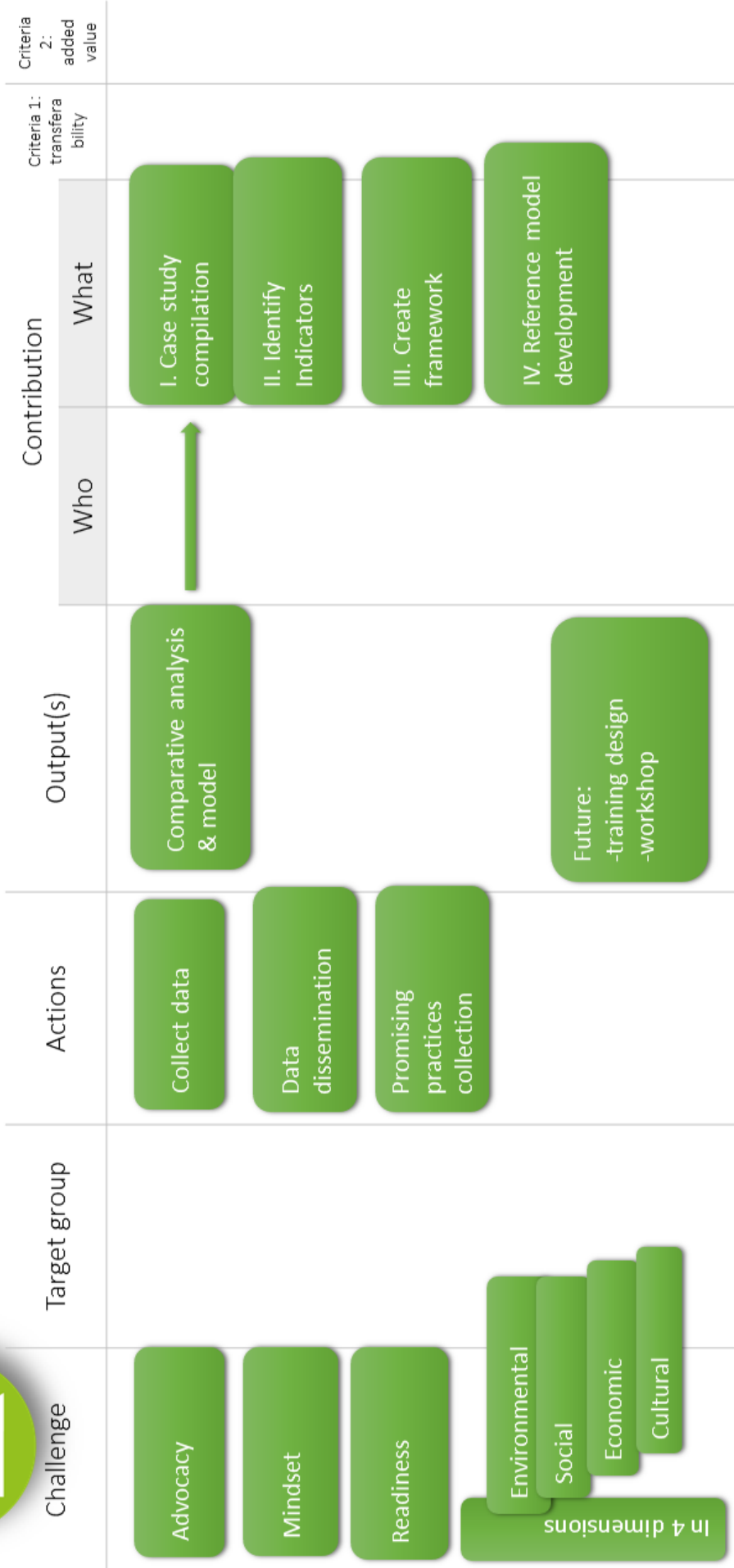
Challenge	Target group	Actions	Output(s)	Contribution		Criteria 2: added value
				Who	What	
Continuous training of teachers	Companies Schools	Definition of required competencies (research project)	Methodology for teachers-competence model	AVETAE	We can offer partnership on projects in terms of joint applications for funding (external) + knowledge transfer	Criteria 1: transferability
	Teachers, trainers, instructors	Part-time teaching school-company Cooperation of learning venues		Nat. Inst. For Education Czech Republic	TVET (training of trainers network), analysis, studies, good practice, <i>Green Wheels</i> project, outputs (methodologies, etc.) maybe partnership	
Full-time or part-time teacher/trainer?		“Send teachers in companies, send professionals to schools”	Professional qualification standards, tools (methodologies, qualification, professional)	OsloMet	Norwegian model (learning factory)	
Need for 21 <sup>st</sup> century skills & transversal skills => demand & supply		Q4.0 – Qualification 4.0 initiative => teacher learning platforms on a regional level in Germany	Escape 21, teacher awareness concept	CINOP	21st cen. Trajectories (awareness, design, execution, eval. Creative methods, consulting, etc.	
Formulation of the T&L training system by the Government to induce industry to open up to knowledge transfer towards teachers		Teacher needs to make 21 <sup>st</sup> century skills explicit	Behavioral, description of competencies (per occupation and per level)	SFIVET	Digi-check, training programs (e.g. CAS Digital Learning), New Media (virtual reality, iVideo)	
Teachers are too old, too few, not flexible enough...		Implementation Guidelines (company)	Circularsharing of production/teaching platforms among school and companies	IBW	Occupation specific design of competencies: concept, process (involvement of companies)	
Challenge Estonia: linkages w/ industry are not strong and teachers are not exposed to workforce, do not come from industry		Make schools a kind of avant-garde territory where to imagine/discuss new technology applications not yet fully implemented in the industry				
Industry/ academia/VET schools must collaborate to create curriculum (should not be only market driven)		Circularsharing of production/teaching platforms among school and companies				
Changing requirements didactics/methods						
- Sectorial						
- Collaboration teachers/trainers						

**4.0**  
**Work stream: Digitalization/Industry 4.0**  
**Topic: SME and engaging them in VET training cycle**  
**Focal point: OsloMet**



Challenge	Target group	Actions	Output(s)	Contribution		Criteria 1: transferability	Criteria 2: added value
				Who	What		
Integrate SMEs in the qualification design process at systemic level Cooperation of learning venues Help SMEs to develop c. training strategies Design of curricula	Companies Schools/TVET centres Government	Equip sector skill councils, branches organization to provide efficient training strategies oriented to SMEs Identify existing clusters and develop them	Implementation Manuals Identify the degree of digitalization development needed for occupation	OsloMet	Catapult Centers		
				Nat. Center for TVET Dev. Romania	Locally developed curricula to address local needs of companies (SME included)		
				SHVET			
SMEs are often not willing to invest in training, they rather hire workers (cheaper) from abroad Different culture of learning between school and company Clusters are needed				UNEVOC	Dual-T Digital platform to bring learning locations together Define, Differentiate the scope better: industry 4.0, digitalization, automation, robotification, software/hardware, data/networks, etc. (These things are not the same)		

**Work stream: Greening TVET**  
**Topic: Research on circular economy**  
**Focal point: Tknika**



**Work stream: Greening TVET**  
**Topic: Greening the campus**  
**Focal point: MCAST**



Challenge	Target group	Actions	Output(s)	Contribution		Criteria 1: transferability	Criteria 2: added value
				Who	What		
<p>Advocacy</p> <p>Mindset</p> <p>Readiness</p> <p>In 4 dimensions</p> <ul style="list-style-type: none"> <li>Environmental</li> <li>Social</li> <li>Economic</li> <li>Cultural</li> </ul>		<p>Collect data</p> <p>Data dissemination</p> <p>Promising practices collection</p>	<p>Operational management (buy-in) at institution</p>	<p>MCAST</p>	<p>Report to demonstrate benefits to greening the campus and implement activities</p>		

**Work stream: Greening TVET**  
**Topic: Greening the community and cities**  
**Focal point: Omnia**



Challenge	Target group	Actions	Output(s)	Contribution		Criteria 1: transferability	Criteria 2: added value
				Who	What		
Advocacy Mindset Readiness In 4 dimensions Environmental Social Economic Cultural		Collect data	Training programme for management	Omnia	Create strategic training programme		
		Data dissemination					
		Promising practices collection	Needs analysis				



**Work stream: Entrepreneurship and TVET**  
**Topic: Use of new technology in/for entrepreneurship**  
**Focal point: OsloMet**



Challenge	Target group	Actions	Output(s)	Contribution		Criteria 1: transferability	Criteria 2: added value
				Who	What		
<ul style="list-style-type: none"> <li>Make self-employment attractive again</li> <li>No need to invest in technology</li> </ul>	<ul style="list-style-type: none"> <li>Vocational teachers</li> </ul>	<ul style="list-style-type: none"> <li>Encouraging VET students to become entrepreneur</li> <li>Financial incentives</li> <li>Innovative "Entrepreneurs Conference" to show positive role models about setting up a business</li> <li>"Practical training for teachers"</li> </ul>	<ul style="list-style-type: none"> <li>Work package for skills in new technology</li> <li>Collection of Europe-wide success stories of entrepreneurs and role models.</li> <li>Digitalization of business processes</li> </ul>	OsloMet FAB-LABS			
<ul style="list-style-type: none"> <li>Limited use of new technology (e.g. 3D printers, digital design tools)</li> </ul>							

**Work stream: Entrepreneurship and TVET**  
**Topic: Teacher & trainer training**  
**Focal point: Tknika**



Challenge	Target group	Actions	Output(s)	Contribution		Criteria 2: added value
				Who	What	
Change teachers mindset Compulsory vs. Optional in curricula Austria Why become entrepreneur? Motivation Austria Funding „Misunderstanding“ entrepreneurial skills only to set up a business Entrepreneurship skills ⇒ Should be part of curricula -new methods (flipped classrooms; inquiry based learning) Lack of systematic support for selfemployment and entrepreneurship of young people Being an entrepreneur Reform of vocational education Practical training in the companies Development of working life	Vocational teachers	Social emotional learning & life skills Promoting partnerships Training for vocational teachers in entrepreneurship	Europe-wide study visits on good practices on E-teaching Austria New didactics (PBL, School-enter) Training campus on “Innovative training” 4 Modelling the challenge-based learning More entrepreneurial regulations for teacher Updated curriculum at education faculties (pre-service)	National Centre for TVET Development Romania + associations of SMEs (Dana Stroie)	Practice firms + business plan competitions + teacher training + curricula Simulating entrepreneurial & practice firms -> “virtual” company -> developing entrepreneurship skills and competencies (VET schools) -> cooperation w/ real companies (selling products, business plan, PR, technical material support) -> part of European network	Criteria 1: transferability Criteria 2: added value
				National institute for education (CEFIF department) Czech Republic (Tereza Halouzкова) Cometa Formazione	Curricula development -> entrepreneurial thinking Training program for teachers in entrepreneurial skills Collaboration w/ universities of teacher training	



**Work stream: Migration and TVET**  
**Topic: The role of TVET & migration**  
**Focal point: University of Nottingham**



Challenge	Target group	Actions	Output(s)	Contribution		Criteria 2: added value	
				Who	What		
Effective TVET response	Policy level	Focus on practice	Discussion paper	University of Nottingham	Workshop Analysis and compilation	Criteria 1: transfer ability	
	Institutions	Prepare non-migrants for integration with migrants	Short blog	CINOP	Development of COZIMA platform for migrants		
Integration of migrants in the workforce and society			Practice examples: Policy level response Institutional arrangements Curriculum innovations Pedagogical practices	Cometa	The Image of TVET	Criteria 2: added value	
				MCAST	Best practice: „Schakel classes“ 1-day workshop learning		
				CFL Soderhamn	RPL method		„Bad practices“ learnings
				BIBB	Language, Skills, Society = Combined „Swedish model“		Strategies for guidance, information, outreach, communication
				IBW	Structured info according to: processes, assessment tools, access/ outreach activities		

**Work stream: New qualifications and competencies**  
**Topic: Curricula development and entrepreneurship**  
**Focal point: Tknika**



Challenge	Target group	Actions	Output(s)	Contribution		Criteria 1: transferability	Criteria 2: added value
				Who	What		
Teachers not prepared for the curriculum	Trainers/ Teachers	Training before the curriculum changes	Examples of curricula development in shared areas	ALL	Examples of experience		
Mismatch between curricula and exams	Companies	Examples of curricula development	Examples of curricula				
Training needed for assessment	Government	New forms of assessment follow new types of curricula	Training assessment of competencies				
Introducing the needs of the labour market in curricula		Learning objectives linked to the work placement					
Competence (not knowledge) based curricula							
Multiplicity of informal certificates							
WBL not specified in the curricula							



**Work stream: New qualifications and competencies**  
**Topic: Digital and Green Curricula**  
**Focal point: BIBB**



United Nations  
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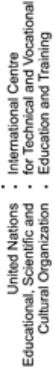
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 Education and Training



Bridging Innovation and  
 Learning in TVET

Challenge	Target group	Actions	Output(s)	Contribution		Criteria 1: transferability	Criteria 2: added value
				Who	What		
Level of integration		Additional qualifications to attract students	Generic approach Core + elective units Focus on elective qualifications	MCAST CINOP BIBB IBW AVETAE SFIVET	Cross-cutting dimension Additional qualification approaches Comparative analysis of 1 Occupational Profile ----- To be chosen from amongst: Metal Construction Wholesale		

**Work stream: New qualifications and competencies**  
**Topic: Practical examples of implementation**  
**Focal point: NUV**



Challenge	Target group	Actions	Output(s)	Contribution		Criteria 1: transferability	Criteria 2: added value
				Who	What		
People are needed for new/emerging professions	Small/medium sized enterprises	Focus on relevant/critical sectors (prioritizing) Professional qualifications	Compendium of good practices Translation of learning modules/good practices	BIBB	BIBB International Roadshow, Digital media in TVET BIBB Learning modules for the logistics sector		
Lack of time to research or implement			Practical training in company	DHL	DHL Go Green		
Scalability			Transfer mechanism for expertise/processes				







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