This report captures the key conclusions and action points from the Skills for Innovation Hubs (i-hubs) initiative Launch Meeting, held at UNESCO-UNEVOC in Bonn, Germany, 28-29 March 2019. The agenda, presentations and the participant contact details can be found through links in the annex and on the ‘i-hubs Virtual Platform’.

The meeting was attended by representatives from the ten selected i-hubs, together with participants from UNESCO HQ and field offices, as well as UNEVOC staff and experts and the European Training Foundation.

Group picture of the representatives from the ten selected i-hubs, together with participants from UNESCO HQ and field offices, as well as UNEVOC staff and experts and the European Training Foundation.
**Session 1 - Setting the context**

**Shyamal Majumdar, Head of UNESCO-UNEVOC,** opened the meeting stressing that technical and vocational education and training (TVET) must be proactive to meet the challenges of the 21st century. Our time is characterized by disruption, innovation and transformation, which are reshaping how we live and work. While change has been a constant, the current scale and speed of change calls for a new level of response. Policy-makers can no longer keep up with the pace of change and schools need to lead the change from bottom-up. Many schools are already successfully transforming TVET to meet the needs of individuals, society and business. The purpose of the i-hubs initiative is to work together with these successful schools and draw on their experience to co-develop the vision, create and test the enabling framework and tools for innovative TVET institutions that can be scaled up from 2020.

The strategic context was set by **Borhene Chakroun, Director of the Division for Policies and Lifelong Learning, UNESCO.** He stressed the contribution of TVET to the individual, social, economic and environmental challenges in the Sustainable Development Agenda. To maximize its potential, TVET must be of high quality and provide integrated approaches covering all the challenges, ensuring that no individuals or disadvantaged groups are left behind. He stressed the importance of global cooperation to understand the transformational role of TVET and its contribution to innovation. A whole government approach is needed, fully integrating the transformational role of TVET across the policy spectrum. Teachers and trainers need to be actively engaged in the process, and increasingly TVET should be delivered through public/private partnership based on (1) demand more than supply of skills and (2) mainstreaming entrepreneurial, green and digital skills across the curricula.

The i-hubs initiative represents an important opportunity for TVET institutions to seize the opportunity and take a lead in shaping change.

**Session 2 - Towards a common understanding of the i-hubs concept, milestones and phases**

**Shyamal Majumdar, Head of UNESCO-UNEVOC,** provided an overview and insights into the i-hubs concept. He explained the design of the project encapsulated into the ‘why,’ ‘what’ and ‘how.’ On the ‘why’ he presented the fast evolving pace that the world is changing and how it affects the way people work and live. He stressed that this disruption would have a positive outcome if TVET institutions were willing to embrace the ongoing changes. That could be done by means of a new institution-wide approach to innovation covering four dimensions:

» An institutional culture that integrates innovation within the school vision, mission, strategy and action planning for continuous improvement;

» Engagement with the local ecosystem including industry, community, research and institutions of higher learning;

» Innovative processes that improve pedagogies and outcomes through innovative teaching and learning processes;

» Innovative products which apply innovation through new curricula that are relevant for the innovation skills needed in the labour market as well as tangible products such as new ideas, designs, start-ups etc.

At the end of his presentation, Shyamal invited the i-hubs for a collective reflection on how to better develop a framework that would enable innovation, social inclusion and entrepreneurship to occur and to actively take part in the i-hubs initiative.

**Wilson Lima Junior, i-hubs Project Officer,** presented the i-hubs project and started by addressing the criteria that was used by UNESCO-UNEVOC to select the i-hubs. He highlighted that the most important feature they have in

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1 Further information and background documents on the i-hubs project are available in annex
common is that they are ‘pathfinders’ of innovation in TVET, doing so even though they are sometimes ill-equipped, with no support from their respective leadership, and with inadequate or inexistent policies with reference to the role TVET institutions should play regarding innovation. Besides that, he explained the other criteria that were utilized in the selection process; for example, being a member of the UNEVOC Network, having a stable team, being located in Asia-Pacific, Africa or Europe. In the sequence, he explained the expected impact of the i-hubs project and its desired outcomes. He highlighted that a solid innovation framework and a compilation of innovative practices would serve as both a beacon to TVET institutions that have not yet started to trail the innovation path, and as a source of inspiration for these institutions. He ended his presentation explaining the project’s flow, phases and milestones, explaining what is expected from the i-hubs and from UNESCO-UNEVOC in each of the milestones.

Wilson explained that the i-hubs initiative will support the co-development of a framework, making use of the ten pilot institutions’ experiences during the testing process and re-visiting their innovation drive. The project will progress through a contextualized application of the different tools developed for the purpose of the initiative, and focusing on innovation analysis and assessments around the four key dimensions (culture/advocacy; ecosystem; processes; and products) known to enable innovation in TVET. The role of TVET institutions in engaging with their local ecosystem, as well as actively participating in peer and mutual learning, are also expected to be made latent through the project approaches. The adopted approach is expected to demonstrate how TVET institutions can proactively take the role of driving innovation, and consequently transforming its contributions to the promotion of competitiveness, employability and social cohesion. The project also aims to refine and confirm a global working model for TVET institutional innovation, drawn from the experiences of this process.

In general, the pilot institutions welcomed the proposed initiative concept and outline. They stressed that innovation is a context driven process. There are different levels and approaches to innovation according to the specific environment of each pilot institution. The project should maintain an open and adaptable implementation methodology, in particular during the pilot phase. However, building on the diversity of context, it should be possible to develop a common global framework and toolbox that can be applied in different situations and help scale up the approach in the future.

A fundamental principle of the i-hubs project was to base innovation on not only anticipating the skills needs of industry (in particular regarding skills deriving from technological change), but also of society and individuals. The ten i-hubs confirmed that there is substantial innovative potential from technological and organizational change, such as Artificial Intelligence, robotics and digital age entrepreneurship. However, many countries have top-down regulations that limit the scope for bottom-up change\(^2\).

Pilot institutions recommended UNESCO-UNEVOC to develop open project management information and tools that can be shared among all the i-hubs. A clear timeframe and milestones would be essential to support the implementation of the defined activities over the project duration. Some institutions expressed concerns about the scale of human and financial inputs that will be required of their team in engaging in such project. Finally, the i-hubs called for ongoing facilitation from UNESCO-UNEVOC on developing and applying the ‘Innovation Toolbox’.

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2 Examples cited were the new data protection law in the EU and the regulatory environment in China
Session 3 - Results of the Initial Self-Assessment

The purpose of this session was to share and learn from current approaches regarding innovation among the i-hubs and international community, in order to build a common understanding of what innovation in TVET means. Each i-hub presented how innovation is applied in its institution, together with examples of practice. The i-hubs outlined key challenges and solutions found in addressing innovation, as well as the next steps in their innovation processes. All the presentations can be found on the ‘i-hubs Platform’.

Key themes raised during the i-hubs presentations were:

» the important role of the teachers, trainers and instructors in developing innovative curricula, teaching processes, and inspiring learners to be innovative. It is essential to get teachers and learners engaged in innovation;

» innovation is fundamental for delivering 21st century skills;

» the potential of Artificial Intelligence to make teaching and learning engaging and rewarding, as well as to develop innovative methods for institutional management. However, TVET institutions should be careful to adapt AI to specific needs and not just adopt commercially available products;

» strengthening cooperation and partnership with industry through processes such as learning agreements aimed at developing long term platforms for work based learning;

» innovation initiatives are often met with skepticism and negative attitudes, in particular in areas such as sustainable development. It is important to build awareness and participation in innovation processes, test its feasibility, and build up a systematic approach. This cooperative approach implies that teachers, learners and TVET managers see sustainable development in everyday life, curricula, social engagement of the school and in its communication;

» learning and sharing programmes, in particular among learners, teachers and trainers and management staff, can be instrumental in enriching understanding of what works.

Georgios Zisimos, Senior Specialist of the ETF, shared the Agency’s work on centres of excellence in eastern Europe. He argued that there were many common features between the concept of ‘excellence’ and ‘innovation’. However, while excellence and innovation have much in common, TVET institutions that took part in a ETF survey did not consider that acting as an innovation hub was a significant component of being a centre of excellence.

Jan Otero, UNESCO-UNEVOC innovation consultant, referred to the virtual conference on innovation in TVET that had just been carried out on UNESCO-UNEVOC’s TVeT Forum in the context of a trends mapping exercise. He drew on the above to propose a revised understanding of innovation for the project based on the self-assessments by the i-hubs:

TVET innovation comprises substantial change in the way that TVET is practiced to make it more relevant to the needs of the economy, society and the environment.

He went on to argue that the majority of successful cases of innovation presented by the i-hubs related to innovative products and processes. The main challenges outlined by the i-hubs related to weaknesses in the organizational culture and to partnerships with the ecosystem. He therefore proposed that in order to ensure a systematic and sustainable approach to innovation, the project...
should above all focus on developing institutional capacity for innovative culture and innovative partnerships. In this understanding, the adjective ‘substantial’ in the proposed innovation definition may also be understood in the sense of emerging systematic change across the four dimensions (culture/advocacy, ecosystem, process and product). ‘Relevant’ could also encapsulate the common thematic focus across i-hubs on greening, digitalization and entrepreneurship, while ‘society’ should also take into account the needs of individual citizens. i-hubs were encouraged to use their experience to sharpen and enrich the understanding of innovation during the project.

### Session 4 – Self-assessment and tools for co-development

Peter Greenwood, **UNESCO-UNEVOC I-hubs project team**, presented the value of co-developing a series of tools as a resource for the i-hubs that can be used in the scaling up process. He outlined the current thinking on the tools and stressed that while UNESCO-UNEVOC can propose general approaches to tools based on international experience, it was essential that the tools were co-developed according to the real needs and practices of TVET institutions in the field. The i-hubs were encouraged to take ownership and leadership in refining the tools during the piloting phase. The tools were discussed in four working groups, with the key messages reporte as follows:

#### Working Group 1: Balanced Scorecard

The group discussed a working tool for assessing and evidencing institutional innovation actions across the different dimensions proposed (culture/advocacy, ecosystem; process; and product). The exchange enabled a very rich discussion on additional indicators and strategies for developing the scorecard further, to represent situations on the ground:

**Methodology:** The tool is effective in collecting information for evidence-based assessment and compare progress in different institutions. Robust baseline/progress indicators should be contained in this tool, some of which can be developed further. To make it more adaptable and flexible to reflect different contexts, the tool can be opened to possibilities of choosing the most relevant dimension for the institutional context to bring about the evidences and record progress. One of the indicators that may be difficult to evidence and address is the development of own qualifications/curricula, given different educational policies and regulatory arrangements.

**Stakeholders:** In its current form, the Balanced Scorecard provides flexibilities in engaging other stakeholders in the process. The idea of using the tool under the guidance of UNESCO-UNEVOC – rather than directly by UNESCO-UNEVOC – gives more opportunity to create empowerment and capacitate internal stakeholders, recognizing that the project does not limit processes to top-down approaches, but values bottom-up interventions.

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3 Participants: Louis Acquolina (MCAST), Ifeoma Akeredolu (YTC); Mikel Leunda (TKNIKA); Manoj Genepola (UNIVOTEC); Rory Robertshaw UNESCO Iraq; Jan Otero (UNESCO UNEVOC) with facilitation by led by Ken Barrientos and Wouter de Regt, UNESCO-UNEVOC
Content of the Balanced Scorecard: the group agreed that:

» the scorecard can be used at different stages of the i-hubs project (i.e., guided self-assessment; autonomous self-assessment); its utility could benefit from having clearer objectives at each of these stages, to ensure that there is a conscious effort to reach bolder objectives after each assessment process and define improved purpose at each step of the way;

» i-hubs can attach higher weightage on certain indicators that reflect core TVET institutional functions (i.e., curriculum development, thematic); this is an effort that can be made to nuance the indicators according to their level of importance and flexibility;

» additional indicators/criteria were suggested to be developed further including strengthening elements that can bring about progress in the issues of inclusive innovation for vulnerable groups, evidencing outcomes and articulating the metrics/formulating the indicators using more neutral terms.

Working Group 2: Learning and sharing through innovation practices and global platform

Innovative practices vs best practice: innovative practice differ from best practices in the following points:

» innovative practices are less mature than best practices according to the balanced scorecard maturity model;

» innovative practices are experimental to know what would work and what wouldn’t (preliminary best practices);

» innovative practices are part of a structured process from problem identification to prioritizing issues leading to forming, implementing and systematizing solutions (see Balanced Scorecard). This may also include learning from failures and challenges such as discontinuity, conservative environment, and lack of data;

» innovative practices may no longer be considered innovative in a certain context after they have become established/routine/self-perpetuating practices (according to the balanced scorecard maturity levels);

» some practices can be seen as innovative in some countries/institutions’ context while others are not. Thus, innovative practices are defined based on the local context;

» ideas can be developed into best practices through the following steps: ideas lead to initiatives, initiatives will be implemented to become practices, practices can be labelled innovative if they fulfil the innovation criteria, innovative practices (experimental) become best practices by solid successful implementation.

Role of leadership: it is necessary to motivate the leadership team of the institution to pursue innovative practices within their institutions. This may be attained by ensuring their involvement from the beginning and during the process. Nevertheless, teachers and learners are the key actors/drivers of innovation.

4 Participants: Abdi Tiony (RVTTI) Maria Clara Ignacio (TESDA), Hubert Barbie (SIT) Taru Kekkonen (OMNIA)/Georgios Zisimos (ETF) Miki Nozawa and Max Ehlers (UNESCO-UNEVOC) and facilitation by Wilson Lima Junior and Kamal Armanious UNESCO UNEVOC
Innovation labs to create ideas: the need of establishing a system to collect ideas (innovation labs). In the case of Seychelles, they have an innovation committee to collect ideas for example through research and engaging NGOs. The i-hub in the Philippines highlighted the importance of establishing indicators to identify and measure innovation. The participant from Finland underscored the importance of not excluding ideas.

Template: the need to have an indicative template to help document practices. Internal peer review of the complied innovative practices will help institutions build their confidence about their innovative practices before sharing externally.

Tool sharing: i-hub institutions and the ETF proposed to share tools and build up a common resource of practice.

i-hubs virtual platform: the platform will be the main channel to disseminate practices in different formats, such as videos, interviews, infographic, and reports with pictures based on individual practices.

Working Group 3: The ecosystem matrix

What is an ecosystem?: the ecosystem should be understood in a broad sense as a balanced market for collaboration, in which small and big actors can both work and compete together and according to their specific niches.

Why mapping?: mapping helps to know your stakeholders, identifying the mutual benefits and synergies (‘The tool does not produce the plan, but it may guide you in your work’).

Key principles for mapping:

» should be dynamic and ongoing (not a one day job);
» if possible, have at least one person dedicated to the mapping and who will be able to mobilize his/her colleagues around this process;
» identify the low hanging fruits;
» involve policy-makers (perhaps through the common interest in recognition of qualifications);
» ensure institutional readiness, in particular that staff are willing have the right skills to engage;
» ensure institutional structure. Are staff explicitly tasked to identify and engage with their ecosystem? Ideally, there should be a dedicated person or a unit;
» once stakeholders are identified, concrete steps should be developed in order to engage them.

How to approach the stakeholders:

» reach out to the stakeholders. Start the dialogue. Somebody has to take the first step;
» develop a tool for assessing the needs of the stakeholders (survey etc.). It is important to show how you can help with their challenges. Identify the fields for innovation and outline how the institution can contribute. For example, some companies don’t have the capacities for innovation – schools can help;
» adapt the plan of action. If the challenge is to convince the stakeholders, factor this in to plan, invest the time;
» work on the relationship with industry on a daily basis.

Participants: Obafemi Omokungbe (YTC), Ander Loyarte (*TKNIKA), Etienne Constance (SIT), Aruna Warahena (UNIVOTEC, Rokhaya Diawara (UNESCO Nigeria) and Giovanni Novera (BKAI) with facilitation by Jens Liebe and Jean Hautier, UNESCO UNEVOC

Group 3 tackles the ecosystem matrix to map and identify synergies for the stakeholders
**Purpose:** The Guided Self-Assessment aims to gather structured evidence on innovation which leads to a clear plan of action. The aim is to achieve consensus on actions which deliver tangible impact. The i-hubs should use a consultative exercise to document progress in comparison to the baseline or starting point. A second purpose of these pilot self-assessments is to test and co-develop the tools.

**Tools need to be flexible:** i-hubs able to adapt them according to the context and priorities. The i-hubs are expected to experiment and test different tools during the pilot phase to make sure they are fit for purpose. However, some institutions may in addition propose to focus the self-assessment on a theme such as greening, or on a specific innovation dimension such as the ecosystem.

**Preparatory work to the self-assessment process:** preparatory work will be needed take place before self-assessment. This includes identifying the consultation partners, both internal and external. The conditions for engagement by the stakeholders should be defined. Some initial capacity development for the participants may be necessary.

**Length of the self-assessment:** the length needs to be flexible, adaptable, with enough time to find external stakeholders. Five days would be optimal.

**Calendar:** a clear schedule for the self-assessments and peer review should be developed in consultation between i-hubs and UNESCO-UNEVOC as soon as possible after the Launch Meeting. The calendar should take into account particular events in each institution and summer/local holidays.

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6 For example in Germany, collaboration between industry and school is the standard and formal process. Listing stakeholders will be very easy, however, TVET schools are not expected to reach out to industry/companies in a proactive manner to seek collaboration. However, they may can gain a good reputation as an innovation hub by acquiring formal certificates and participating in projects. Here, being perceived as innovative is different than in most other places where schools actively seek to reach out to other stakeholders

7 Participants: Wenming Yang (SZPT), Agnes Panem (TESDA), Kati Valtonen (OMNIA), Edwin Tarno (RVTTI), Yoojeong Seo (UNESCO Thailand) with facilitation by Peter Greenwood and Katarina Ormuz (UNEVOC)
Language issues: occasionally interpretation/translation will be needed. However, i-hubs were confident that this issue can be overcome.

Peer learning: participation by peer institutions in the Guided Self-Assessment represented an important opportunity for sharing and learning about innovation. This peer exchange was considered one of the most valuable aspects of the i-hub initiative. Each i-hub would be given the opportunity to take part as a peer in a Guided Self-Assessment to share experiences and what works. Based on analysis of the initial self-assessment and bilateral discussions, UNESCO-UNEVOC would make a suggestion of the possible calendar for the peer reviews.

Innovation Action Plan: the plan is the main follow-up for each i-hub institution. It should include an assessment of the evidence and recommendations collected through the consultation process and lead to the identification of priority actions to take forward the innovation process in the i-hub. Where possible, it should include clear, practical and concrete actions formulated as a project. A template for the Innovation Action Plan should be proposed by UNESCO-UNEVOC.

Project management: the group suggested that UNESCO-UNEVOC determine team leaders, who will monitor/be responsible for two to three institutions that will work together. The roles of UNESCO-UNEVOC’s project team should be clearly defined. It is also desirable to identify and involve experts who could give guidance to institutions - those can be selected from UNESCO-UNEVOC’s pool of experts, international TVET experts, but also from i-hubs. Considering the short project timeframe, a clear project timeline is needed, and possibly a flowchart. Templates for project reporting should be kept simple, showing where institutions see added value.

Project communication: the group suggested that UNESCO-UNEVOC send a cover letter announcing i-hubs' participation in the project. The cover letter can be used to inform and facilitate engagement of internal and partners in the initiative. This could also be used to inform UNESCO National Committees for the support, with UNESCO local offices.

Session 5 – Administrative arrangements and closing remarks

Ken Barrientos, UNESCO-UNEVOC Programme Officer, Katarina Ormuz, i-hubs Project Assistant and Caroline Bajer, UNESCO-UNEVOC Administrative Officer, outlined the administrative procedures. Key issues were:

» project timeframe: though the administrative aspects of the project will end in February 2020, each i-hub is encouraged to design an Innovation Action Plan over two years to ensure that long term goals and outcomes are met;
» administrative procedures: i-hubs are encouraged to plan early as the administrative procedures can be lengthy;
» support from UNESCO-UNEVOC: the UNESCO-UNEVOC team can offer advice on the administrative procedures and budget plans for the i-hubs. The participating institutions were encouraged to contact the project team at any time with questions on the administrative procedures.

In his concluding remarks, Shyamal Majumdar, Head of UNESCO-UNEVOC, announced the launch of the i-hubs project to consolidate the contribution of TVET to innovation. He thanked the i-hubs for their active participation in the meeting. He was optimistic about the progress achieved during the event stating ‘Coming together is beginning, planning together is process, and working together is success.’

Emphasizing the diversity of the ten i-hub institutions in terms of the stage of development, the geographic division, the size and the type of governance system, Shyamal stressed that this diversity of experience represented an asset for the project. It would enrich the outputs and outcomes and ensure that they were adaptable to the needs of a broad range of TVET institutions.

He appreciated the efforts of UNESCO-UNEVOC’s team, together with the ten i-hubs to co-develop the framework and reach some common understandings. UNESCO-UNEVOC will continue to facilitate the project and ensure that it reflected international strategic priorities and overall approaches. However, the real success of the project depends on the development of practical concepts and tools that were effective on the ground. This requires the i-hubs to take ownership and co-develop the concept and tools based on their live experience and according to their context. He encouraged all of the i-hubs to work together and co-develop the concepts and tools as their main contribution to scaling up the approach globally from 2020.

He then announced that the initiative was now entering its operational phase over the next six months, when all i-hubs would be holding their self-assessments with the support of UNESCO-UNEVOC’s project team. This was the most important phase when each i-hub would test the framework and tools, and develop its own Innovation Action Plan. This could only be achieved with the active ownership and initiative of the i-hubs under the guidance of UNESCO-UNEVOC’s team. He ended the meeting by inviting each i-hub to take responsibility for the operational phase of the project and wished them every success in the roll out of the project.
1. Administrative Issues
   
   i. UNESCO-UNEVOC: share administrative documentation with i-hubs (forms, work plan template, term of reference, etc.);
   
   ii. UNESCO-UNEVOC: issue cover letter recognizing the participation in the i-hubs project to all i-hubs;
   
   iii. i-hubs: issue Letter of Undertaking;
   
   iv. i-hubs: complete administrative procedures.

2. Information flow
   
   i. UNESCO-UNEVOC: share project management information (flow chart, project management responsibilities and timeframe);
   
   ii. UNESCO-UNEVOC: with inputs from the i-hubs, to develop a glossary for the project, which would help ensure a common understanding across all actors of the content and process terms used in the project;
   
   iii. UNESCO-UNEVOC: with inputs from the i-hubs, to finalize the development of the i-hubs Virtual Platform;
   
   iv. UNESCO-UNEVOC: share the Innovation Trends Mapping expected in July;
   
   v. i-hubs: share relevant examples of practices, tools and cases related to the i-hubs project that are already used in each i-hub;
   
   vi. i-hubs: provide contact details of key experts from the i-hubs in order to build up a pool of experts that could contribute to the project.

3. Guided Self-Assessment and Peer Review preparation
   
   i. UNESCO-UNEVOC: propose individual dates for the i-hubs for the Guided Self-Assessment and Peer Review exercise;
   
   ii. UNESCO-UNEVOC: in interaction with the i-hubs, reviews the Innovation Toolbox based on the inputs from the Launch Meeting working groups;
   
   iii. UNESCO-UNEVOC: provides templates for the Guided Self-Assessment and the Peer Review reports, for the Innovation Action Plan and for the Innovative Practice.

4. Project Partnerships
   
   i. UNESCO-UNEVOC: explores cooperation partnerships with international community, in particular ETF, European Union;
   
   ii. i-hubs: explore partnerships with other i-hubs and with their local skills and innovation ecosystem.

Annex

[Link to i-hubs Virtual Platform](Launch Meeting Agenda, Link to i-hubs list slide deck, project summary, toolbox, profiles and others)
The UNESCO-UNEVOC Skills for Innovation Hubs is part of the initiative ‘Developing TVET institutions for entrepreneurship, innovation and sustainability’ implemented by UNESCO since 2017 and is supported by the International Vocational Education City (IVEC) China, with contributions from the German Federal Ministry of Education and Research (BMBF) and the Federal Ministry for Economic Cooperation and Development (BMZ).

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