UNESCO-UNEVOC Skills for Innovation Hubs

Innovation toolbox

Skills for Innovation Hubs Launch Meeting
28 - 29 March 2019

Room 2705, UN Building
Bonn, Germany
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Introduction

The UNESCO-UNEVOC Skills for Innovation Hubs (i-hubs) initiative derives from major ongoing global disruptions, especially the combined effects of climate change, digitalization and new forms of entrepreneurship. The interconnected nature of these sectors is on the one hand disrupting every aspect of work and life, including the ability to anticipate future skills needs, but on the other hand is creating a critical mass of opportunities for innovation and new employment. Increasingly, the capacity for innovation is the key for economic and social development. The TVET system can no longer just operate according to a business-as-usual approach based on gradual and progressive evolution driven top-down by policy makers. The speed and scale of change calls for a new and radical shift, with TVET institutions increasingly being empowered to take more bottom-up initiative to adapt skills and services provision to local needs as national policies struggle to anticipate changes.

Drawing on the recommendations from the UNESCO-UNEVOC Global Learning Forum 2018, TVET institutions are encouraged to develop a systematic, institution-wide approach that maximizes their potential as drivers of innovation in their local skills and innovation ecosystem. This local skills and innovation ecosystem comprises the framework of public and private institutions engaged in skill development, community, small- and medium-enterprise, infrastructure and assets that combine to sustain ongoing business in the local and regional areas as well as provide opportunities for innovation and development. Under this paradigm, TVET institutions through their leadership, strategy and culture should take on the role of drivers or hubs for innovation. This role would empower the TVET institutions to provide the transversal and technical skills needed for innovation in their local environment, and in parallel innovate the learning processes, products and services offered to youth, adults, entrepreneurs and companies. A vibrant learning and sharing dimension would enable schools to maximise the added value from their own innovation achievements, as well as share, advocate, engage and learn from innovation in their ecosystem as well as across the broad community of TVET institution.

An international Expert Meeting in November 2018 helped confirm the specific dimensions of TVET innovation as the sector anticipates disruptive societies and labour markets. Building on the work of the European Training Foundation (ETF) and European Centre for the Development of Vocational Training (Cedefop), as well as the needs of the UNESCO-UNEVOC network it adopted the notion that innovation is a systematic process of changing the way we provide TVET through new methods of teaching and learning and student support. It implies new forms of cooperation and changes in curricula, learning and technology; and it implies a systematic approach based on actions top down-bottom up and networking and peer learning.

Based on this concept the Expert Meeting identified a broad structured Innovation Framework that could inspire and support TVET institutions to develop, systematise and sustain their innovation capacity. This innovation Framework is based
on six interlocking dimensions:

The Expert Meeting also led to the identification of a set of indicative tools that could help put into action the Innovation Framework within the institutional setting. These indicative tools should be further co-developed, tested and adapted during the preliminary phase of the i-hubs project 2018-2020. During this initial period, the i-hubs project would also be gathering, analysing and comparing all relevant tools that the pilot institutions have already developed with the view of creating and sharing a dynamic Innovation Toolbox that the i-hubs could further offer to the global community of TVET institutions.

The initial Toolbox encapsulates values and principles that are relevant for innovation and have been tested through UNESCO-UNEVOC experience in advocating for greening on TVET, guided by practical tools such as the UNESCO-UNEVOC Greening Technical and Vocational Education and Training: a practical guide for institutions and other international initiatives such as the SMALL Business Act Assessment toolbox, jointly developed by OECD, EBRD, European Commission and the ETF. These include:

- Adaptability to specific operational contexts;
- Participatory approach engaging actively relevant stakeholders in the institution (leadership; TVET teaching and non-teaching staff and learners), local authorities and private sector;
- An evidence-based approach that gathers and analyses hard/quantitative and soft/qualitative data to reach reliable findings on performance; measure progress and inform recommendations for future actions;
- Comprehensiveness covering the main key dimensions of the Innovation Framework;
- Practicality including both tools and processes for deployment;
- Capacity and learning focused to celebrate and communicate strengths and achievement and to identify and address failures and challenges;
- Complementarity across the i-hubs community, which facilitates mutual learning and capacity building.

The Innovation Toolbox is comprised of the following set of tools:

- **Balanced Scorecard** to analyse performance and progress across the Innovation Framework
- **Skills and Innovation Ecosystem Matrix** to support stakeholder mapping and analysis
- **Innovative Practice Learning and Sharing Template** to promote institutional learning and advocacy

The Innovation Toolbox is supported by an overlying process and by a digital environment. Both of them combined will allow for greater cohesion among the proposed set of tools to be co-developed with the i-hubs and will facilitate the sharing and learning activities that will take place during the project cycle. Besides that, all the knowledge generated during the Innovation Self-Assessment will feed in the creation of the Global Knowledge Platform.

- **Innovation Self-Assessment** that ensures a participatory and evidence-based assessment
- **Global Knowledge Platform** for networking and sharing innovative practice

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Innovation leadership and strategy

» The Innovation Self-Assessment
» The Balanced Scorecard

Innovative advocacy

» The Balanced Scorecard
» Innovative Practices Learning and Sharing Template

Innovative engagement with skills and innovation ecosystem

» The Eco-system Matrix
» The Balanced Scorecard

Innovative products

» The Balanced Scorecard
» Innovative Practices Learning and Sharing Template

Innovative processes

» The Balanced Scorecard
» Innovative Practices Learning and Sharing Template
» Institutional Learning

Sharing and learning

» The Balanced Scorecard
» Innovative Practices Learning and Sharing Template
» Global Knowledge Platform
Innovation Self-Assessment

The overlying tool to support and inform systematic innovation in the i-hubs is through structured and participatory Innovation Self-Assessment. This will also be the basis for the pilot institution engagement with the project.

The first stage of the Innovation Self-Assessment will be based on a questionnaire developed by UNESCO-UNEVOC experts. The result of the initial Self-Assessment intention will inform UNESCO-UNEVOC and the other pilot institutions about the relevant innovative practices taking place at the institution level. This dissemination of innovative practices will take place during the i-hubs launch meeting, when the pilot institutions will present the results of the exercise to their peers. The questionnaire will also provide the basis for the Guided Self-Assessment exercise, due to occur between June and September 2019.

The second stage of the Innovation Self-Assessment will consist of a Guided Self-Assessment. The purpose of this exercise will be to raise awareness among the institutional stakeholders about the i-hubs project, support capacity building and improve guidelines and tools, also drawing on the learning and practices of other i-hubs. This will help provide feedback on the tools and inform their future improvement. However, the Guided Self-Assessment has a long-term purpose that is to either develop or strengthen the i-hubs culture of systematization and documentation of the innovation, with all its dimensions.

Specific objectives

» Familiarize, actively engage and build capacity of internal institutional stakeholders and external key stakeholders on the innovation process
» Provide an institution-wide and systematic evidence basis to inform institutional strategy and innovation actions for engagement with stakeholders, processes, actions, learning and networking
» Provide opportunities for peer review/learning from other i-hubs

Participation on the Guided Self-Assessment

There will be specific sessions for the following stakeholder groups:

» i-hubs’ focal person;
» i-hubs’ senior management;
» Representatives of teacher/trainer/instructor;
» Representatives of the skills and innovation ecosystem - public/territorial/private authorities. These may be individual meetings off the institution site;
» Representatives of learners (youth/adults);
» Representatives of companies or enterprises in the formal and informal sectors.

The opening and wrap-up sessions will also involve senior management. There could be a final session with representatives from all stakeholder groups.

The i-hubs project will assist the i-hub by guiding the sessions. At least one other participating i-hub will be invited to attend the Guided Self-Assessment process in order to provide opportunities for mutual learning.
Documentation, evidence and tools

The guided self-assessment will draw on the following inputs and tools:

» i-hubs concept;
» Balanced Scorecard;
» Skills and Innovation Ecosystem Matrix;
» Relevant institutional evidence and documentation (innovation strategy; innovation partners; innovation practices (processes, products);
» Records of specific meetings/discussions.

Outline programme/duration

The guided self-assessment programme indicatively lasts some five working days roughly broken down into ten half-day sessions. This indicative programme focuses on the likely format for the Guided Self-Assessment during the i-hubs testing phase 2019-2020. In this initial phase, the Guided Self-Assessment will be conducted by the i-hubs team, and where possible will also include participation by an expert from another i-hub to share approaches and learning on innovation.

<table>
<thead>
<tr>
<th>Session</th>
<th>Objective</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction of visit; confirm objectives and agenda</td>
<td>Institution senior management; institution i-hubs coordinator with support of the i-hubs team</td>
</tr>
<tr>
<td>2</td>
<td>Familiarize with the i-hubs model and Innovation Toolbox</td>
<td>Institution senior management; institution i-hubs coordinator; representatives of key institution staff relevant for innovation, learning/sharing pilot institution and i-hubs team</td>
</tr>
<tr>
<td>3</td>
<td>Mutual learning/sharing activities and collective analysis of local ecosystem and institution engagement using the Skills and Innovation Ecosystem Matrix</td>
<td>Institution management; institution i-hubs coordinator; representatives of key institution staff relevant for innovation, learning/sharing pilot institution and i-hubs team</td>
</tr>
<tr>
<td>4</td>
<td>Capacity development and collective analysis of local eco-system and institution engagement using the Skills and Innovation Ecosystem Matrix</td>
<td>Institution management; institution i-hubs coordinator; representatives of key institution staff relevant for innovation; learning/sharing pilot institution and i-hubs team</td>
</tr>
<tr>
<td>5</td>
<td>Mutual learning/sharing activities and collective analysis of Balanced Scorecard</td>
<td>Institution management; institution i-hubs coordinator; representatives of key institution staff relevant for innovation; learning/sharing pilot institution and i-hubs team</td>
</tr>
<tr>
<td>6</td>
<td>Mutual learning/sharing activities and collective analysis of Balanced Scorecard identification/ agreement of current examples of innovative practices</td>
<td>Institution management; institution i-hubs coordinator; representatives of key institution staff relevant for innovation; learning/sharing pilot institution and i-hubs team</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Participants</td>
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<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Site visit(s) to familiarise key ecosystem partners with the initiative and confirm outcomes of ecosystem map and Balanced Scorecard</td>
<td>Institution management; institution i-hubs coordinator; Learning/Sharing Pilot Institution and i-hubs team</td>
</tr>
<tr>
<td>8</td>
<td>Site visit(s) to familiarise key Skills and Innovation partners with the initiative and confirm outcomes of the Skills and Innovation Ecosystem Matrix and of the Balanced Scorecard</td>
<td>Institution management; institution i-hubs coordinator; Learning/Sharing Pilot Institution and i-hubs team</td>
</tr>
<tr>
<td>9</td>
<td>Discussion and agreement on priority for the Innovation Action Plan to be implemented</td>
<td>Institution management; institution i-hubs coordinator; representatives of key institution staff relevant for innovation; learning/sharing pilot institution and i-hubs team</td>
</tr>
<tr>
<td>10</td>
<td>Conclusion, agreement on next steps</td>
<td>Institution management; institution i-hubs coordinator; Learning/Sharing Pilot Institution and i-hubs team</td>
</tr>
</tbody>
</table>

### Output(s)

The main outputs from the Guided Self-Assessment to be developed by the host institution with the support of the i-hubs project are expected to comprise:

- **Completed Balanced Scorecard** to identify institutional strengths that can inform best practices and advocacy initiatives and be shared as inspiration to other i-hubs;
- **Skills and innovation Ecosystem** mapping and analysis;
- **Identification/implementation of innovation practices**;
- **Innovation Action Plan** (revised strategy, new processes, new curricula; new teacher training initiatives; new advocacy initiatives, for example) according to the findings of the Balanced Scorecard;
- **Guided Self-Assessment Report**.

The learning/sharing pilot institution involved in the Guided Self-Assessment is expected to prepare a **Learning/Sharing Report**.

### Outcomes

The following outcomes are expected from the Guided Self-Assessment:

- Awareness, capacity and engagement raised among internal institutional stakeholders and external key stakeholders in the innovation process;
- Enhanced common understanding and alignment of internal and external stakeholders to the institutional strategy and action plan for innovation;
- Increased sustainability and dynamic for innovation in the institution through improved common understanding and engagement in innovation;
- Enhanced sharing, learning and networking among i-hubs to improve the overall approach of TVET institutions to innovation;
- Provide opportunities for peer review/learning from other i-hubs.
The Balanced Scorecard

The Balanced Scorecard aims at establishing the baseline and following progress for the i-hubs. In order to achieve this goal, a wide range of descriptors are proposed as example of changes that the pilot institution may find relevant to track. The Balanced Scorecard is completed through providing evidence for the performance of the i-hubs according to the structured change process – from an initial commitment to change through to a systematic change process. The Balanced Scorecard may be filled in through self-assessment and/or through guided or external assessment. Its results can be converted into management instruments such as spider charts to assist internal self-improvement processes as well as for international comparison and peer learning.

Background

The Balanced Scorecard is based on the following assumptions:

» The key dimensions of innovation adapted from the OECD Oslo Process innovation paradigm, namely the organizational vision, culture in close connection with the advocacy dimension; relations with the eco-system, process and learning dimension; product dimension. These are considered as different, and equally important dimensions of innovation – and not necessarily as sequential steps;

» The progressive methodology assessment Innovation framework adapted from the UNEVOC TVET Greening Guide and the SBA Assessments of OECD, EBRD, European Commission and ETF from beginning of change to stable and embedded change. This can facilitate the definition of a self-assessment, baseline, and to help track progress within each dimension;

» A broad approach that can be applied to i-hubs in different operational contexts, varying engagement in entrepreneurship, digitalization and greening, yet can allow for a degree of comparability and potential for learning among the TVET institutions;

» The principles of performance measurement in terms of efficiency, effectiveness/outcomes and legitimacy/recognition of the contribution of the i-hubs (see Kaplan, World Bank 2020);

» An understanding that a guideline towards performance measurement of innovation potential is essential for documenting baselines and progress. However, this may be deeply challenging to measure through clear causality chains and through hard quantifiable/qualitative indicators.

Specific objectives

The specific objectives of the Balanced Scorecard are to:

» Establish an evidence-based assessment of the innovation performance of the institution against the i-hubs Innovation Framework through a participatory process;

» Create a baseline against which performance and progress can be measured along a continuum of innovation encompassing four steps from initial development to sustained innovation (see below);

» Actively engage stakeholders in the innovation process and develop their capacity for innovation stakeholders;

» Inform the institution’s innovation strategy;

» Identify future actions to enhance innovation potential;

» Identify and document good practice for institutional learning and international networking.
A key challenge for the i-hubs project will be to build trust and support from institutional leadership so they are also accountable for the results. Secondly, it will be essential to build capacity among the innovation teams in the pilot institutions to deploy the tool to underpin and enhance the innovation process. Finally, it will be important to build capacity/familiarise/trust among the stakeholder groups to engage in the institutional process and see benefits.

A fundamental condition, in particular for the initial i-hubs phase, will be to identify and build capacity for an innovation team (team, unit, and department) who would be responsible for organizing the process and following up by driving future change.

**Timing**

The Balanced Scorecard is a valuable tool for launching a new strategic exercise, such as at the beginning of the i-hubs initiative to guide the establishment of a baseline and formulation of goals. It could also be useful for periodic monitoring and evaluation of progress for example on an annual or biennial basis.

**Deployment process**

The Balanced Scorecard is essentially deployed through participatory consultation as outlined in the Guided Self-Assessment process (see preceding section). This is expected to include:

» Stakeholders within the institution – for example bringing together institutional strategic leadership; sectoral departments and teaching/training faculty;
» Representatives of learners - initial or adult students/learners/parents;
» Key current/potential external partners as identified through the skills and innovation ecosystem exercise (see following section).

Each stakeholder group will be consulted on their assessment of where the institution lies in the continuum from initial development to systemic and sustained innovation. They will be challenged to support their assessment by quantitative/hard evidence. This consultation process represents not only an opportunity to assess the performance of the institution, but is also an opportunity for the institution to engage and develop capacity among stakeholders.

Each consultation session would begin with a presentation of the objectives of the i-hubs and the i-hubs Innovation Framework. The stakeholder(s) would then be invited to score the performance of the institution against the continuum, based on evidence. In particular, they would be invited to identify good

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Stakeholder group</th>
<th>Score</th>
<th>Weighted result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational strategy</td>
<td>Leadership</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Faculty</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learners</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>External stakeholders</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>7</strong></td>
<td><strong>1.75</strong></td>
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</table>
practices in the institution as well as opportunities/actions for improvement. The score and the evidence would then be documented and recorded.

The results of each consultation would be included in a final report to the institution leadership at the end of the Guided Self-Assessment process. This would not only include the scoring from each of the stakeholder groups, but would also include material evidence especially on good practice as well as any recommendation for future action from the stakeholder group as well as any further insights from the consultation process. In a final consultation with the institutional leadership, there would be the opportunity to identify and agree on future actions to enhance innovation as well as opportunities for further institutional learning and development. This may include a follow up self-assessment process according to the innovation cycle (for example in time to support a review of an innovation strategy).

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weighted scores</th>
<th>Evidenced cited</th>
<th>Good practice cited</th>
<th>Recommended actions cited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational strategy</td>
<td>1.75</td>
<td></td>
<td></td>
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<tr>
<td>Advocacy</td>
<td>1.5</td>
<td></td>
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<tr>
<td>Products</td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Processes</td>
<td>2.25</td>
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<tr>
<td><strong>Overall weighted score</strong></td>
<td><strong>2</strong></td>
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</table>

In mature innovation organizations, a final meeting and/or report, including reference to any future action agreed with the institutional leadership, should also be shared with the stakeholders.
<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Documented evidence of efficiency, effectiveness and outcome in key areas (see indicative examples below)</th>
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</thead>
<tbody>
<tr>
<td>Culture, organizational, strategy</td>
<td>» Adoption of an institutional vision or strategy for innovation;</td>
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<td></td>
<td>» Adoption of an institution action plan for innovation;</td>
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<td></td>
<td>» Implementation of the i-hubs action plan;</td>
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<td>» Monitoring of local innovation skills needs/shortages.</td>
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<td>Advocacy</td>
<td>» Tracing graduate employability/employment;</td>
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<td></td>
<td>» Adoption of a joint advocacy strategy for innovation;</td>
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<td></td>
<td>» Implementation of the action plan;</td>
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<td></td>
<td>» Awareness among local skills and innovation ecosystem and citizens of the role of TVET/TVET school as</td>
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<td>agent of innovation (for example through Champions, skills competition, projects).</td>
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<tr>
<td>Ecosystem/partnership</td>
<td>» Comprehensive mapping and systematic monitoring of the skills and innovation ecosystem;</td>
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<td>» Adoption of a partnership structure with active participation by all key counterparts (industry;</td>
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<td>territorial actors; education actors; research actors; community actors);</td>
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<td></td>
<td>» Active/open engagement of partners in institutional innovation strategy and action plan (for example in</td>
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<td>skills needs analysis);</td>
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<td></td>
<td>» Increasing knowledge of current and future demands of services by the private sector, both formal and</td>
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<td>informal, civil society and government;</td>
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<td></td>
<td>» Developing mechanisms to foster innovation within the skills and innovation ecosystem, such as calls</td>
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<td>and open labs/workshops;</td>
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<td></td>
<td>» Active engagement of partners with specific focus on entrepreneurship and/or digitalisation and/or</td>
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<td></td>
<td>greening.</td>
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<tr>
<td>Process/institutional learning</td>
<td>» Increasead incidence of capacity development opportunities for innovation for institution leaders and key</td>
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<td></td>
<td>staff;</td>
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<tr>
<td></td>
<td>» Increasead opportunities for in-service teacher and trainer training ot competency needs assessment;</td>
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<tr>
<td></td>
<td>» Increasead innovative pedagogical methodologies or /services (incubators, OER, experiential learning;</td>
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<td></td>
<td>challenge based learning etc.);</td>
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<tr>
<td></td>
<td>» Increasead incidence of teaching and learning delivered in i-hubs' partners' facilities;</td>
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<tr>
<td></td>
<td>» Increasead incidence of i-hubs' partners' personnel active engagement in teaching and learning process</td>
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<tr>
<td></td>
<td>(i.e. as instructors);</td>
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<td></td>
<td>» Increasead specific teacher and training support for teaching innovation skills;</td>
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<td></td>
<td>» Increasead reference to innovation as an objective for school processes;</td>
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<tr>
<td></td>
<td>» Increasead innovation (change) in school processes.</td>
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<tr>
<td>Products</td>
<td>» Inclusion of core skill modules/core curricula for innovation across all learning programmes for youth</td>
</tr>
<tr>
<td></td>
<td>and adults;</td>
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<tr>
<td></td>
<td>» Development of new curricula and/or qualifications in fields of innovation, greening and/or</td>
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<td></td>
<td>entrepreneurship and/or digitalization;</td>
</tr>
<tr>
<td></td>
<td>» Guidance on learning pathways;</td>
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<td>» Provide for career guidance;</td>
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<td></td>
<td>» Development of new products (ideas, projects, start ups, school design products).</td>
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<tr>
<td>Initial commitment/beginning of change</td>
<td>Some (sporadic) progress</td>
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Skills and Innovation Ecosystem Matrix

The following tool is intended as a resource to support i-hubs in the strategic management of cooperation with key actors, networks and assets from the skills and innovation ecosystem (Figure 1). The skills and innovation ecosystem is composed of a variety of actors and influenced by different ‘activity drivers’. In spaces where activity drivers overlap, opportunities for synergies present themselves and can lead to symbiotic situations with a high innovation potential. Such areas of overlap can be developed and increased through smart orchestration, contributing to the competitive advantage of regions and companies, in partnership with innovative skills development institutions.

*Figure 1: Education and skills at the heart of the innovation eco-system*

The tool is based on the assumption that the ultimate aim of the i-hubs is to enhance employability, competitiveness and social cohesion through providing innovation skills or through practical application of innovation in their working environment. In this respect, it is essential for the TVET institution to be able to engage strategically and systematically with the key stakeholders and assets in its skills and innovation ecosystem so the innovation skills help realise the full innovation potential of businesses, citizens and communities. It is assumed that i-hubs already have a certain thematic strength or thematic interest and a good understanding to the economic landscape in their region, both of established and evolving sectors.

The tool has been adapted from the RAPID Outcome Mapping Approach (ROMA) and the Alignment, Interest and Influence Matrix (AIIM) used in development contexts. In this respect the tool is dynamic, in that it not only maps the key stakeholders in the skills and innovation ecosystem, but also suggests possible courses of action towards them. In the long term, the tool is designed to help the TVET institutions systematically engage with stakeholders to drive innovation and provide the innovative skills needed in the skills and innovation ecosystem. It is a tool that can be further developed and adapted for use by i-hubs according to their context.
The tool follows three stages in six steps:

Figure 2: Analysis stages and steps

1. Identify and list key stakeholders and assets
2. Map stakeholders’ innovation leverage potential and commitment to skills development
3. Consider steps to enhance the contribution of innovation skills to the ecosystem
4. Prioritise among the stakeholders
5. Define steps to change/influence the position of priority stakeholders
6. Monitor and adapt

The tool can be applied using the skills and innovation ecosystem model proposed for the i-hubs, which maps the range of different actors in the environment. These include established individual businesses, either in the formal or in the informal sector or collective interest groups such as business forums, chamber that need skills that keep pace with constant changes in the market place. It also includes growth companies, especially SMEs, which need skills for new occupations and emerging goods and services. It covers anticipating skills needs for the companies of the future that are starting up, or being shaped within incubation environments. Finally, it includes the contribution of public policy institutions, such as schools and universities to build up the stock of skills for long-term innovation capacity in the ecosystem.

The tool is designed for use in a workshop setting with a diverse group of participants. These could be from across the TVET institution, and even together with the stakeholders. The output should be a TVET institutional strategy for engagement with the skills and innovation ecosystem.
1) **the key stakeholders** in the skills and innovation ecosystem to which the pilot institution belong. That is to say that the pilot institution may want to focus on the industries, companies, individual entrepreneurs, key institutions, municipalities, regions and networks/forums (such as chambers) to which it can make a meaningful contribution, considering its geographic coverage, its equipment, its staff’s expertise and know how

2) **assets in the skills and innovation ecosystem** (regulations, policies, sector priorities etc.). While the tool also maps the assets, the real added value of the tool is on improving engagement with stakeholders and networks in the field of innovation skills. The assets can play an important enabling role in improving engagement with the actors. Similarly, the lack of specific assets in the skills and innovation ecosystem may suggest lobbying for changes to the regulatory system or in incentives.

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Sector</th>
<th>Innovation challenge</th>
<th>Relationship w/ stakeholder</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder A</td>
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<td></td>
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<tr>
<td>Stakeholder B</td>
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<tr>
<td>Stakeholder C</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Assets</th>
<th>Type/Sector</th>
<th>Innovation challenge</th>
<th>Relationship w/ asset</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset A</td>
<td></td>
<td></td>
<td>Current:</td>
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<td>Ideal:</td>
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<tr>
<td>Asset B</td>
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<td>Current:</td>
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<td>Ideal:</td>
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</tbody>
</table>

**Step 2**

Map the stakeholders according to their innovation leverage potential and their commitment to skills development. This should be based on evidence about stakeholders’ behaviour, economic and social influence that may come from studies, interviews, or direct knowledge, for example through existing cooperation with the pilot institution.

Innovation leverage potential: the innovation potential for businesses at incubation and start-up phase tends to be greater than for the anchor or established business sectors. Are new business products and processes under development? Are the established sectors going through a major greening or digital transformation? Are entrepreneurial practices changing in the business/sector? Is the stakeholder advocating/championing the importance of innovation? Does the stakeholder work closely with R&D sectors? Is the sector considered a priority for the regional or national innovation policy (for example, greening, digitalization or entrepreneurship)?

Commitment to skills development: for companies, the primary interest is likely related to innovation and problem solving rather than skills development, however, skills development may be a key element for companies to innovate and solve their problems.
Key questions are:

» To what extent is the stakeholder or sector reliant on new skills?
» How big an employer is the stakeholder/sector?
» How engaged is the stakeholder in skills development (i.e. work based learning (WBL) – is it a sector for apprenticeship; are their internal instructors)?
» How much does the stakeholder engage with education and training providers?
» Does the stakeholder openly advocate the importance of skills?
» Does the stakeholder have a skills development strategy?
» Is the stakeholder aware of skills needs and shortages?

This could be achieved through a checklist as in the below table to ensure a consistent scaling system and use of evidence across stakeholders/stakeholder groups:

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Innovation leverage potential</th>
<th>Commitment to skills development</th>
<th>Remarks</th>
</tr>
</thead>
</table>
| Stakeholder A | » Advocates the importance of innovation?  
» Works closely with R&D  
» Sector represented considered a priority for regional or innovation policy | » Engaged in WBL  
» Not engaged in WBL  
» Engaged with education and training providers  
» Advocates the importance of skills | |
| Stakeholder B | » Advocates the importance of innovation?  
» Works closely with R&D  
» Sector represented considered a priority for regional or innovation policy | » Engaged in WBL  
» Not engaged in WBL  
» Engaged with education and training providers  
» Advocates the importance of skills | |
| Stakeholder C | » Advocates the importance of innovation?  
» Works closely with R&D  
» Sector represented considered a priority for regional or innovation policy | » Engaged in WBL  
» Not engaged in WBL  
» Engaged with education and training providers  
» Advocates the importance of skills | |

Based on the responses, the level of engagement and commitment to skills for each of the stakeholder can be mapped.
In terms of analysis:

- **High commitment/High potential** – most valuable group for sustained long term cooperation and steering for the institution; opportunities for joint curricula development; teacher and trainer training; opportunities for cooperation in applied innovation;

- **High commitment/Low potential** – maintain skills provision as anchor partner; opportunities for teacher and trainer training and work based learning; opportunities for transversal innovation skills to raise innovation potential;

- **High potential/Low commitment** – consider advocacy measures for innovation skills development; consider applied innovation services;

- **Low commitment/Low potential** – probably not priority target for cooperation; consider strategies to change position in the matrix.

### Step 3

Consider what steps to take with different actors to enhance the contribution of innovation skills to the ecosystem. Which symbiotic relationship can stakeholder and school develop? This may come through the analytical process in step 2 and may constitute quick wins or more substantial actions to improve the contribution of skills to the innovation potential in the ecosystem.

### Step 4

Prioritise among the stakeholders. In many cases, there will be a large number of different stakeholders, so it may be useful to prioritise and identify the stakeholders/stakeholder groups that which represent the greatest potential and can be most easily engaged by the pilot institution. An important feature will be the existence of ongoing cooperation agreements with the stakeholder as an indicator of willingness for cooperation.
Step 5

Define steps to change/influence the position of priority stakeholders in the map and their engagement in the innovation and/or skills processes based on institutional strategy. What steps could be taken by the pilot institution to change/influence the position of the stakeholder in the matrix. This could be done by direct approach by the pilot institution for engagement in teaching and learning; offering to help develop new products or by joining sectoral bodies or through the indirect services of chambers of commerce. For example, these could be:

- to engage a stakeholder with high level of technical/digital innovation in initiatives for relevant skills development, through for example: advice on skills anticipation; technical innovation skills within curricula; work based learning and apprenticeship opportunities; in-service teacher training; or supporting the stakeholder in product/idea development (case D);
- to engage a stakeholder with clear commitment to skills development on opportunities for innovation through joint new product development;
- to engage more systematically with stakeholders with high commitment to skills and innovation through. For example, setting up a steering committee or advisory structure for the Pilot institution on innovation skills anticipation; advisory input on transversal innovation skills within curricula; joint advocacy through innovation and skills fairs or innovation champions; collective lobbying for innovation and skills (cases A, B, C, E).

Step 6

Monitor and adapt the tool. Periodically (annually) revisit the tool and consider options for improvement/adaptation of the prioritization and steps to change.
Innovative Practice Learning and Sharing Template

The paper outlines the proposed objectives, criteria, structure, process, format and style for the report of the innovative practices deriving from the i-hubs initiative.

Objectives

The sharing of concrete and verifiable examples of innovative practices from the pilot institution represents a key tool for the long-term development of the i-hubs initiative. The main objectives of identifying and documenting the innovative practices are to:

» Empower pilot institutions to learn from strengths and good practice in their institutions. This learning is essential to reflect on good practice; analyse the conditions for success and opportunities for scaling up and systematising good practice;
» Enable institutions to share innovative practice among institutional stakeholders to enhance their profile and reputation and potential for stakeholder engagement;
» Provide examples of innovative practice that can influence policy and decision makers to put in place national, sectoral or local innovation and skills policies/systems based on examples that work.

Criteria

Since innovation is generally considered to be the result of a process that brings together various novel ideas in such a way that they affect society it is natural that many a players will have taken part in this process. Therefore, in the setting of the i-hubs project, an innovative practice will be relevant for learning within the host institution as well as being valuable to share with other i-hubs when it captures innovation at the five dimensions outlined in the Balanced Scorecard. Those are: a) the culture level (vision, mission, action plan); b) the advocacy level (communication with the skills and innovation ecosystem); c) the ecosystem level (open lab, tests, prototyping that will result in a new product or service); d) the process level (managerial, pedagogical, relational); and e) at product level (curricula, pedagogical tools, methodology, course).

Complementary criteria for good practice could be:

» Focus on innovation in one or more of the five dimensions from the i-hubs model (organizational leadership/strategy, advocacy, ecosystem/partnership; learning/processes and product);
» Illustrate innovation and skills as a driver for greening, entrepreneurship and/or digitalization;
» Be supported by a verifiable output that exemplifies the applied innovation (for example: a new curriculum; a prototype; a teaching method; a process; an advocacy tool etc.);
» Be innovative in the way the practice is communicated.
Structure

The structure may vary according to the medium chosen. However, the innovative practice is expected to cover the following:

» Outline of the problem/opportunity for innovation addressed (related to the i-hubs model);
» Outline of the steps taken and innovation output delivered;
» Analysis of the outcome – results of the innovative practice. Where possible expected impact for example on employability, on enrolments, on revenues, etc.);
» Analysis of lessons learned, problems overcome and key success or context factors. In particular how to systematize the approach through the i-hubs model.

Process and timeframe

The expected process is the following:

» Identification of the innovative practice and medium by the i-hub in consultation with the project team within the initial self-assessment event at the launch meeting of the project;
» First version of the innovative practice report prepared by the i-hub;
» Peer review/quality assurance by the project team and selected i-hub.

Either at the i-hubs final meeting in 2020 and/or at the Global Learning Forum one i-hub will be awarded for the best innovative practice(s).

Style, language and format

The key focus of the innovative practices is to reach the following:

» The style of the innovative practice is expected to be inspiring stories; evidence based and practical; communicative; capable of being used effectively or adding value ‘standalone’;
» They will be consolidated as a family of practice branded as an output of the project and identifiable using the project logo;
» The language is preferably English for the widest dissemination and impact;
» The format is encouraged to be innovative – this could be a written document; but also a video; webinar; e-forum; etc. or a combination of these media.
Sharing learning and networking across the TVET community

Objectives

A key objective for the i-hubs initiative is to nurture and empower a community of innovative TVET institutions that share, learn and network together to co-develop the approach and create a resource of good practice and expertise that can inspire further generations of TVET institutions.

The key input for the networking will comprise the good practice identified by the individual institutions. In addition, the networking will draw on the shared methodology and learning experiences that the pilot institutions have developed over the project.

More specifically, the objectives of the international networking are to:

» Share the methods, lessons learned and key success factors and outputs deriving from the roll-out of the i-hubs model and provide evidence that can validate (and/or strengthen) the approach;

» Provide opportunities for international structured knowledge and experience sharing and learning across the i-hub community;

» Inspire and leverage innovation in other interested UNEVOC Centres or other relevant institutions as a contribution to scaling up the i-hubs model;

» Provide examples of innovative practices that can influence policy and decision makers to put in place international, national, sectoral or local innovation and skills policies/systems based on examples that work.

The Global Knowledge Platform

The main vehicle to support sharing, learning and networking will be a Global Knowledge Platform developed by UNEVOC based on its current knowledge sharing mechanisms. The platform would have the following functionalities (see sitemap below):

» Database of i-hubs project reference material;

» Database of relevant material (institutional reports; innovation strategies; innovation initiatives; stakeholder maps etc.) from each i-hub;

» Discussion groups to share experience and co-develop the i-hubs model (for example, a discussion group on the Balanced Scorecard; on the Skills and Innovation Ecosystem Matrix, on Innovative Practice Learning and Sharing Template, etc.);

» Linked opportunities for webinars to share and learn from good practice;

» Dynamic compendium of good practice.

As far as possible the Global Knowledge Platform would be integrated with other UNEVOC and international platforms (for example, the UNEVOC Dashboard and the UNEVOC Thematic Sites on greening, entrepreneurship and/or digitalization).
The Global Knowledge Platform is currently being developed under the leadership of the UNEVOC team in Bonn and will be suited for launching in the first semester 2019. The roll out of the Global Knowledge Platform and particularly in sharing and learning activities would be the joint responsibility shared with the i-hubs in the second semester 2019. The final format of the Global Knowledge Platform would be adapted according to the engagement of the i-hubs at the Progress Meeting, due to take place in December 2019 and at the I-hubs Final Meeting, scheduled to Spring 2020.
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