The TVET-Industry Roadmap

A Methodology for TVET Colleges to Map Actual and Potential Connections to Industry and Work

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Table of Abbreviations

ASQA	Australian Skills Quality Authority
CFTs	Technical Training Centres
ESG	Environmental, Social, and Governance
ESM	Ecosystem Mapping Methodology
IPs	Professional Institutes
MOU	Memorandum of Understanding
NCI	Network Coaction Initiative
PESTLE	Political, Economic, Social, Technological, Legal, and Environmental
PLM	Programme Logic Model
SDG	Sustainable Development Goal
TAFE	Technical and Further Education
TVET	Technical and Vocational Education and Training
UAE	United Arab Emirates
UK	United Kingdom

Executive Summary

This report presents the outcomes of a UNESCO-UNEVOC Network Coaction Initiative (NCI) aimed at addressing the persistent gap between Technical and Vocational Education and Training (TVET) provision and industry needs. The initiative developed the **TVET-Industry Roadmap**, a practical tool designed to help TVET colleges map current and potential connections to industry and work. Grounded in the Sustainable Development Goals (SDGs) and Environmental, Social, and Governance (ESG) principles, the Roadmap supports TVET institutions in aligning skills development with the demands of a rapidly changing labour market, while promoting inclusive, sustainable practices. It responds to global challenges such as climate change, technological disruption, and socio-economic inequality by fostering partnerships that enable a just and green transition.

The TVET-Industry Roadmap consists of a four-step methodology: **Industry-Skills Gap Mapping, Creating New Data, Relationship-Building Forums, and Re-imagining Partnerships.** The Roadmap methodology guides TVET colleges in systematically identifying gaps, engaging stakeholders, and co-designing innovative solutions. It emphasizes ecosystem thinking, multi-level collaboration, and iterative planning, offering colleges a clear methodology to strengthen their responsiveness to local and global trends. This first draft of the Roadmap was tested through feasibility workshops across five UNEVOC Centres in Chile, Jamaica, South Africa, Australia, and the UK, the tool was widely endorsed for its strategic and diagnostic value. Stakeholders highlighted its potential to move beyond compliance-driven processes, enabling colleges to think creatively about future work and fostering innovation partnerships.

Looking ahead, the report recommends further development of the Roadmap, including digital transformation, integration of AI and emerging technologies, and opportunities to explore global standards for workforce mobility within TVET. It also calls for capacity-building measures to overcome structural barriers within the TVET sector and ensure equitable access to industry partnerships. By institutionalising the Roadmap, TVET providers, working together with key TVET stakeholders can enhance employability, strengthen regional innovation capacity, and contribute to inclusive economic growth and climate resilience. This initiative marks a significant step toward re-imagining TVET-Industry collaboration as a driver of sustainable development and social equity.

The report begins with the presentation of the TVET-Industry Roadmap. Following that, in Part 1 we provide an overview of this UNEVOC NCI and the objective and rationale for producing a TVET-Industry mapping tool. In Part 2, we report on how our UNEVOC NCI worked together to produce and review the TVET-Industry mapping tool, entitled the 'TVET-Industry Roadmap'. The report concludes in Part 3 with an evaluation of this UNEVOC NCI and a discussion of next steps for developing and disseminating the TVET-Industry Roadmap.

The TVET-Industry Roadmap

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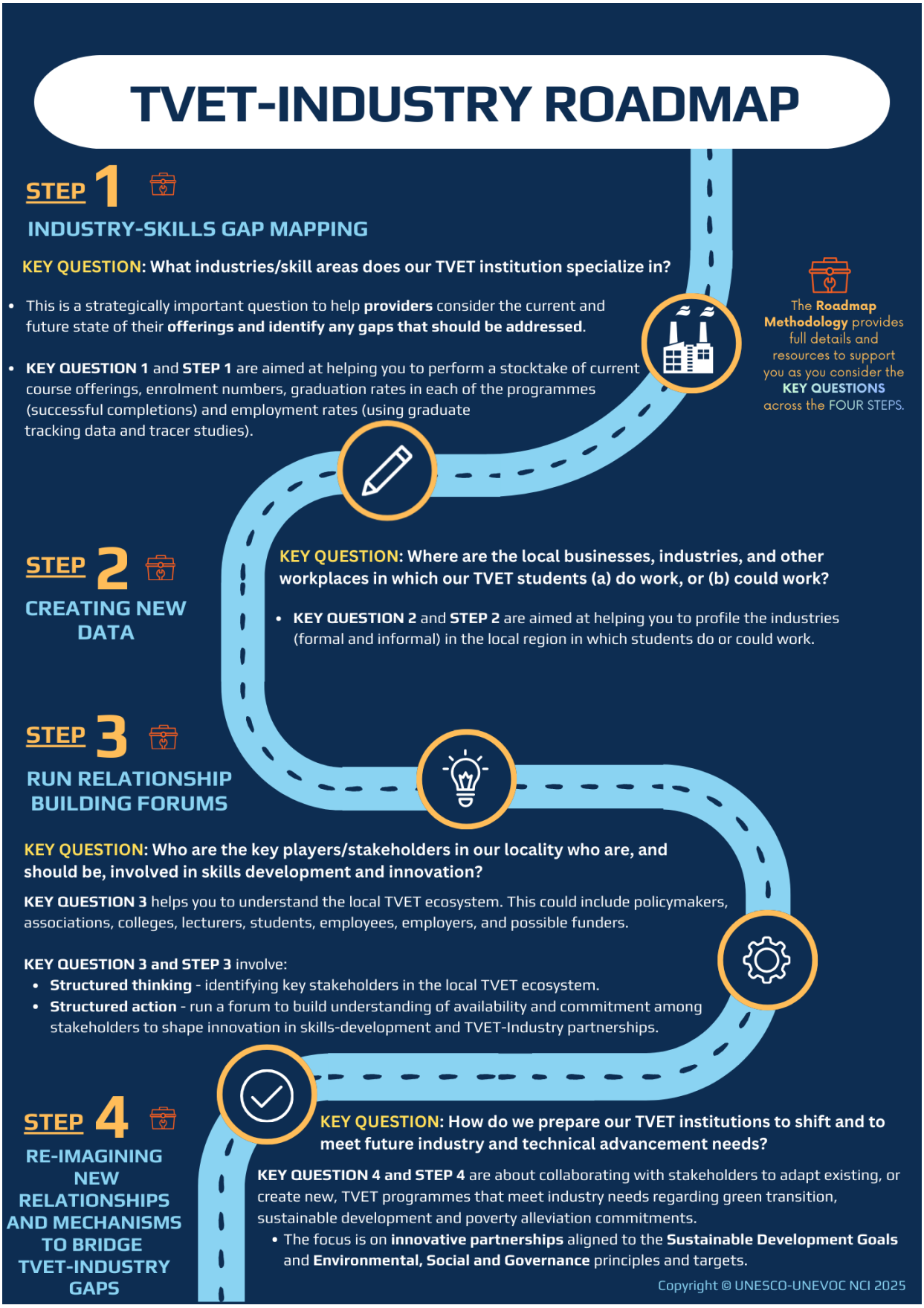
The Roadmap - A Four-Step Process



Preamble: Shaping future jobs and work for the green transition and ending poverty

The United Nations officially adopted the Sustainable Development Goals (SDGs) in September 2015 as a global framework to achieve integrated sustainable development by 2030 among its Member States. Achieving several SDG targets, such as SDG 1 (no poverty), SDG 8 (decent work and economic growth) and SDG 13 (climate action), hinges on quality education (SDG 4). Technical and Vocational Education and Training (TVET) plays a crucial role in addressing the knowledge and skills needed to meet the SDGs.

UNESCO-UNEVOC identifies several education related challenges to achieving the SDGs and climate action plans:

- Insufficient awareness of sustainability
- Limited capacity in decision-making, teaching, and practical implementation
- Skill shortages leading to unmet labour-market demands
- Unsustainable consumption and production patterns
- Outdated competencies and qualifications
- Lack of recognition and assessment for skills gained through non-formal and informal learning
- Inadequate engagement of key actors, such as youth, communities, and enterprises (UNESCO-UNEVOC, 2025).

UNESCO-UNEVOC emphasizes the vital role of TVET systems in the transition to a circular economy, identifying barriers and enablers for integrating the SDGs. Important factors include policy frameworks, industry partnerships, curriculum updates, and collaboration between TVET authorities and industry stakeholders. Consequently, there is a need for capacity building and investment to fully harness TVET's potential in supporting a circular economy (UNESCO-UNEVOC, 2025).

A problem that recent research highlights is the gap between what TVET colleges provide and what industry players (employers and workers alike) actually need to work in more sustainable and inclusive ways (see Ramsarup & Russon, 2023; Russon & Wedekind, 2023; Wedekind et al., 2021). This TVET-Industry Roadmap is aimed at helping to close that gap through a step-by-step process of data gathering and strategic engagements that supports the development of innovative partnerships that align with the SDGs and industry Environmental, Social and Governance (ESG) principles. UNESCO-UNEVOC (2025) envisions that TVET partnerships between provider institutions and employers as well as students and other interested parties can re-shape the mindset and attitudes needed in the future workforce. It is our belief that the TVET-Industry Roadmap can be a useful tool for TVET colleges to develop such partnerships.

Problem: the TVET-Industry gap

TVET providers are aware of the challenges of connecting to industry in a way that meets the current and future needs of students and enterprises to create employment, products, and services in ways that serve more than economic interests. But they do not have a ready means to help them. **The TVET-Industry Roadmap provided here aims to help TVET colleges understand the nature of this challenge in their locality and build bridges with industry and other stakeholders to respond to these challenges.** For example, TVET providers need to develop skills to address a global “polycrisis” characterised by chaotic, unstable and interlinked emergencies that defy reduction to a single cause. As some observers have remarked: ‘Great power conflict, declining multilateralism, rising energy and food prices, forced displacement, and sovereign

debt are accelerating – and being accelerated by – the current and longer-term risk trends of climate, biodiversity loss and rising inequality' (Norton & Greenfield, 2023, p. 2).

Vision

UNESCO has articulated a vision for addressing these challenges. It involves several key strategies. First, building capacity through targeted training programmes and resources to enhance decision-making, teaching, and implementation skills. Second, aligning education and training with current and future labour-market demands so that skill shortages are addressed. Third, promoting sustainable consumption and production practices through incentives and supporting green initiatives. Fourth, regularly updating curricula and qualifications to ensure they remain relevant in a rapidly changing world. Fifth, developing mechanisms to recognize and assess skills gained through non-formal and informal learning. Sixth, actively engaging young people, communities, and enterprises in developing and implementing solutions through partnerships and collaborative opportunities (UNESCO-UNEVOC, 2025).

To these we would add two more strategies to ensure that poverty is ended and that people work in decent, inclusive workplaces. So, a seventh strategy is to develop partnerships between TVET providers and employers as well as workers and students to mutually shape the nature and conditions of work, remuneration and protections so that no-one lives in poverty and precarious work arrangements. Eighth, and finally, support TVET providers and industry stakeholders to collaborate to shape skills development programmes that help people work in ways that are not only economically efficient but also culturally safe, environmentally sustainable/regenerative and socially inclusive of people from all backgrounds and sexual orientations. Our simple Roadmap is meant to help TVET colleges to identify possibilities for how they might play a role in addressing these challenges and opportunities.

To realise this vision, TVET colleges would ideally have the financial means and the institutional support structures to perform a number of practical tasks. UNESCO-UNEVOC (2025) sets out the key tasks that would support such a vision:

Create dynamic, responsive learning environments that equip students with the skills needed for a sustainable future. This will involve integrating cutting-edge technologies and green practices into curricula to prepare learners for emerging industries

Foster strong partnerships with industry and community stakeholders to ensure training aligns with market needs and supports economic growth but also adds social and cultural value to the communities in which they reside

Focus on inclusivity, ensuring access to education for all segments of society, and recognizing diverse learning pathways, including non-formal and informal education.

Working in these sorts of ways, TVET providers and industry partners will be better able to see skills development innovation as an opportunity to prepare TVET students for 'work' in a broader sense - something that is aligned as much with economic imperatives of earning a living as it is with wider sustainable development imperatives, principles and targets, including Net Zero Emissions and poverty reduction.

Intervention

As a network of UNEVOC Centres funded through the UNEVOC NCI, we produced a TVET-Industry Roadmap for TVET colleges to map current and future work opportunities. It is a simple tool that helps people take

account of the reality of local TVET-Industry contexts, through a mutual knowledge exchange that draws on local expertise and capacity to help produce skills for the just and green transition envisioned in the SDGs.

The TVET-Industry Roadmap recognises the ecosystem context of TVET colleges and the need and possibilities for innovation in TVET. This TVET-Industry Roadmap is focused on understanding the TVET college-industry connection and prioritising relationship building with stakeholders who have a greater commitment to innovation in TVET (see the ecosystem mapping methodology (ESM) in UNESCO-UNEVOC, 2020, pp. 26-27). This ecosystem understanding is incorporated throughout the four-step process described below.

Method: A Four-step Process

This simple TVET-Industry Roadmap is based on four key questions (What, Where, Who and How) along with steps to follow for TVET leaders, students, and staff to map and navigate the skills agenda in their local TVET-Industry context. It is envisaged that the Roadmap would be followed as a cyclical process, possibly over three years, with a hub model involving two-three institutional partners to ensure that the process is not dependent on one or two key individuals. However, there is also scope for the TVET-Industry Roadmap to be a guide for individual TVET lecturers or college managers who wish to 'do something' no matter how small, to build stronger connections to industry for the benefit of their students and community. The hub model is discussed further after Step 4.

Step 1: Industry-Skills Gap Mapping

In Step 1 TVET providers answer KEY QUESTION 1: **What** industries/skills areas does our TVET college specialise in?

This is a strategically important question to help **providers** consider the current and future state of their **offerings and identify any gaps that should be addressed**.

KEY QUESTION 1 and STEP 1 are aimed at helping you to perform a stocktake of current course offerings, enrolment numbers, graduation rates in each of the programmes (successful completions) and employment rates (using graduate tracking data and tracer studies).

The OUTPUT will be a Stocktake Report on the current state of your TVET provider programmes and student outcomes in terms of their work destinations (short-term and long-term).

The strategic significance of this step is for TVET colleges to consider the current and the future state of their skill training offerings and the extent to which they prepare students for the full range of work (skills and values) that they could do in your region and beyond.

Using **existing tools and data** such as **Google Maps** and existing government, industry, college data sets on labour markets, employment trends and critical skills lists. The aim is for you to produce a **stocktake report** that highlights critical data around jobs in your region and which shows the location of **businesses and enterprises** in which your TVET college's students currently work (current state). Step 2 will expand on this by generating data on the business and enterprises in which your students could work in the future (future state). Other data may include demographic data, and data on graduate destinations. A possible methodology for mapping this data is the **Kumu Map** (see Glossary).

Possible guiding questions:

Lecturer/teacher level:

- What industries/sectors are you connected to?
- What industries/sectors employ your students?
- What formal sectors are your students employed in?
- What informal sectors are your students employed in?
- What information/data does the college collect about graduate enrolment and employment?
- How are you facilitating the social, cultural, environmental and economic work-related values in your students?
- What are the names of employers where your students go for integrated learning, internships and/or employment?

Institutional level (for example, programme managers):

- What industries/sectors are you connected to?
- What industries/sectors employ your students?
- What other industries/sectors in your regional context are you not connected to?
- What formal sectors are your students employed in?
- What informal sectors are your students employed in?
- What information/data does the college collect about graduate enrolment and employment?
- What are the policies that are shaping the values-based nature of work/jobs in your area (for example, gender equity policies, fair work policies, environmental regulations and so on)?
- How are you facilitating social, cultural, environmental and economic work-related values in your students?

Step 2: Creating new data.

In Step 2 TVET colleges answer KEY QUESTION 2: **Where** are the local businesses, industries, and other workplaces in which our TVET students (a) do work, or (b) could work?

KEY QUESTION 2 and STEP 2 are aimed at helping you to profile the industries (formal and informal) in the local region in which students do or could work. The meaning of 'work' is understood broadly to include self-employment and work in the informal sector.

The OUTPUT will be a report on existing and emerging industries in the local setting, to identify where students do or could work after completing skills training programmes. This complements the mapping process conducted in Step 1.

As with Step 1, existing tools and data such as Google Maps and existing government, industry, college data sets on labour markets, employment trends and critical skills lists can help you identify and collate critical data around future jobs and industries in your region and the location of businesses and enterprises in which your TVET college's students could work in the future.

In Step 2, it is also important to identify and draw on data sources regarding the changing role of AI and technological change in the TVET-Industry relationships that are most relevant to your college.

In Step 2 TVET providers might also conduct **in-depth interviews and questionnaires** with local and distant labour-market players, career guidance counsellors and alumni and current students. A menu of possible

interview questions and techniques (e.g., **Delphi Method** and/or a **PESTLE analysis** of the context and a map for collaborative partnerships) is discussed further below, with additional links in the Glossary. The expected output from these in-depth interviews and engagements will be stories, accounts and descriptions about current and future key issues and needs in the world of 'work' as broadly understood (see Glossary). Such insights complement the data collated in Steps 1 and 2, building an in-depth understanding of the current and future state of work and TVET-Industry connections for the TVET college and your students.

Possible guiding questions for TVET college leaders include:

- With which industries, companies, individual entrepreneurs, key institutions, municipalities, regions and networks/forums (such as chambers) could your TVET institute establish or strengthen a mutually beneficial partnership that is aligned with your geographic coverage, equipment and staff expertise. (See also the ESM tool, Step 1, in Innovating in vocational education and training, UNEVOC 2020, p.26).
- Who are the stakeholders (companies, entrepreneurs, and municipalities) that are helping to transform their environment through innovation or who are actively engaged in offering new products or services to society? And how are they helping to develop the skills people will need to work in their companies/enterprises. (See also ESM tool, Step 2 in Innovating in vocational education and training, UNEVOC 2020, p.26).
- How do we facilitate partnerships that include and reflect indigenous/unheard perspectives on being included and respected in work settings?
- How do we include AI/new technologies when preparing people for future jobs and work?
- What types of work in the informal sector are likely to be most relevant to our students? How might the Roadmap help create pathways for informal businesses to transition into formal partnerships?
- How do we think about 'work' to include social, environmental, cultural and economic dimensions?

Step 3: Run relationship-building forums

In Step 3 TVET providers answer KEY QUESTION 3: **Who** are the key players / stakeholders (micro-meso-macro) in our locality who are, or should be, involved in skills development and innovation?

KEY QUESTION 3 is about understanding the local TVET ecosystem and the different actors and their positionality and agency. This includes policymakers, associations, colleges, lecturers, students, employees, employers, and possible funders who exist at different levels within the TVET ecosystem.

KEY QUESTION 3 and STEP 3 involve some *structured thinking* and some *structured action*:

Structured Thinking = identifying who the key stakeholders are at different levels:

- **Micro** = students, workers, employers
- **Meso** = TVET provider institutions, informal training providers, work platforms
- **Macro** = government departments, funding bodies, professional associations

Structured Action = running a forum to ask:

- how much agency do stakeholders have at each level to inform and shape skills development innovation?
- how much commitment do people have at each level to the SDG and ESG frameworks, principles and targets?

The aim of these forums will be to reframe the relationships that currently exist between TVET providers and industry partners in their region - including informal enterprises. They should facilitate collective understandings of the TVET-Industry gap and of shared values and responsibilities in delivering training for work that encompasses economic, social, cultural and environmental considerations.

When planning to run these forums, consider what resources and rewards staff might need to:

- use the TVET-Industry Roadmap to run the four-step process on a cyclical process to support sustainable programme/curriculum review and innovation in collaboration with key stakeholders; and
- think about the social, cultural and environmental dimensions of work (for which new skills development programmes are needed).

Possible tools (see Glossary) to help these forums do this work include:

- World Café or online conversation platforms like Zoom, Teams.
- The Capitals Approach - a framework that helps organizations understand and manage their impacts and dependencies on various forms of capital, including natural, social, and human capital, to enhance their planning, decision-making and sustainability.

The expected outputs from Step 3 will be:

1. Fresh understandings and perspectives about shared roles and responsibilities
2. Strengthening and maintaining relationships between TVET providers and industry partners
3. The identification of priorities for reviewing/resetting TVET programmes through the lens of economic, social, cultural and environmental values.

Step 4: Re-imagining new relationships and mechanisms to bridge TVET-Industry gaps.

In Step 4 TVET providers answer KEY QUESTION 4: **How** do we prepare our TVET colleges to shift and to meet future industry and technical advancement needs?

This question sharpens TVET providers' responsiveness to local and global trends. It also focuses providers in a balanced way on meeting identified:

- *technical skills* fit for current and future work platforms
- *transversal skills* that facilitate agility in labour markets, community relationships and environmental and cultural management.

KEY QUESTION 4 and STEP 4 are about collaborating with stakeholders through a mechanism like an **MOU/Framework/Charter for Innovation** by either adapting existing, or creating new, programmes of skills development (technical and transversal) so they:

- are focused on meeting both TVET college and industry needs in relation to green transition, sustainable development and poverty alleviation commitments
- have the short-term impact of generating new learning and understandings of SDG aspects of work, and

- have a medium-term impact on changing the behaviours and operations of workers and employers in line with SDG and ESG values and obligations.

This process of implementing the **MOU/Framework/Charter for Innovation** can be promoted to stakeholders as a way of improving local skill development programmes and infusing them innovatively so they satisfy the global SDG goals. It's a practical method for "thinking global, acting local".

OUTPUT: Using an MOU/Framework/Charter for Innovation mechanism, TVET colleges will either revise existing programmes to infuse emerging technologies and to ensure compliance with SDG values, or co-create new skills development programmes that serve these purposes. An MOU/Framework/Charter for Innovation can be signed as a concrete social contract between the partners to clarify shared roles and responsibilities.

Implementing the TVET-Industry Roadmap

A possible way to carry this work forward could be to utilise a **hub model** over a three-year period. This could look like:

- A larger TVET college in the region could link with smaller institutions and serve as a hub in that local industry ecosystem
- A recommended method could be for a larger college to partner with a local UNEVOC Centre / University partner in the locality
- A hub might also include a TVET college partnering with a key industry stakeholder and other key stakeholders

The 'hub' might adapt or use a Collective Impact model (see Glossary) to run the process. In essence this means:

- The larger college/UNEVOC Centre hub serves as a backbone organisation
- Hub coordinates a common agenda among participating institutions
- Hub uses continuous communication with stakeholders and partners
- Hub runs mutually reinforcing activities
- Hub uses common progress measures for monitoring and evaluation

Tools and Links

Glossary

Collective Impact: This is a network of community members, organizations, and institutions who advance equity, the SDGs, by learning together, aligning, and integrating their actions to achieve cultural and systemic level change (Collective Impact Forum, 2025). **Source link:** https://collectiveimpactforum.org/what-is-collective-impact/#:~:text=Collective%20impact%20is%20a%20network,population%20and%20systems%20level%20change

Capitals Approach: This approach helps organisations recognise how their success is directly or indirectly supported by natural, social, and human capital, empowering them to make decisions that maximise value across all these areas. **Source link:** Capitals Approach – Capitals Coalition, 2025.

Delphi Method: Delphi is a questionnaire technique involving multiple iterations aimed at reaching a consensus on a specific topic, such as curriculum (Chuenjitwongsa, 2017). **Source link:** https://www.cardiff.ac.uk/__data/assets/pdf_file/0010/1164961/how_to_conduct_a_delphistudy.pdf

Hub Model: The hub and spoke model is a distribution network that resembles a bicycle wheel. The hub is at the centre and allows each spoke to move toward a central location for delivery (Phillips, 2025). **Source link:** https://www.transvirtual.com/blog/what-is-the-hub-and-spoke-model/#:~:text=The%20hub%20and%20spoke%20model%20is%20a%20distribution%20network%20that,meet%20at%20a%20central%20location

Industry: In our Roadmap, we use the term 'Industry' to refer to large commercial enterprises or branches of manufacturing or trade (for instance, mining industry, finance industry or health industry), whereas we use 'work' broadly understood to include formal employment, self-employment and work in the informal sector.

Kumu Map: This map comprises elements, connections, and loops, with each map storing a complete list of these components. Additionally, a map can retain the specific positions of all its elements and the positions of any labels that represent loops (Kumu, 2025). **Source link:** https://docs.kumu.io/overview/kumus-architecture

PESTLE Analysis: The PESTLE acronym represents Political, Economic, Social, Technological, Legal, and Environmental factors. The PESTLE framework is a tool used to analyse and monitor the macro-environmental factors affecting a company and its industry environment. **Source link:** https://subjectguides.library.unsw.edu.au/business/pestle

TVET College: In our Roadmap, we use the term 'TVET college' to refer to public and private institutions that provide Technical and Vocational Education and Training (TVET), often linked to national qualification frameworks and accredited vocational programmes. These might also include community colleges and polytechnics. A critical feature is that, unlike other parts of the education system, a TVET college has a mandate to be connected to industry.

TVET-Industry gap: In this Roadmap, we refer to the TVET-Industry gap as the extent to which there is a mismatch between the skills industry needs and the skills that existing and potential workers have.

World Café: This is a method for gathering people to engage in simultaneous rounds of conversation about important questions. Participants begin by discussing with those at their initial table and then move to different tables to continue the conversation with new people (Department of Premier and Cabinet, 2025). **Source Link:** https://www.dpc.sa.gov.au/responsibilities/community-engagement/engagement-tools/world-cafe#:~:text=World%20Cafe%20is%20a%20way,the%20conversation%20with%20different%20people

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UNEVOC Network Coaction Initiative

Project title:

Mapping the TVET-Industry ecosystem: a methodology for identifying innovative partnerships between TVET institutions and workplaces

PART 1:The UNEVOC NCI Project

1.1 The TVET-Industry challenge

What sets technical and vocational education (TVET) apart from all other forms of education is TVET's direct relationship with work. UNESCO-UNEVOC has long been a leading voice on the need to foster partnerships between TVET colleges and industry/workplaces. See, for example, UNESCO-UNEVOC's contribution to the Inter-Agency Working Group on Work-based Learning (2022), the Global Alliance for Decent Jobs for Youth in response to the global challenge of youth unemployment, and the International Commission on the Futures of Education (2021). Such initiatives aim to address the TVET-work related aspects of the 2030 Agenda for Sustainable Development. However, TVET providers consistently face challenges in connecting to and partnering with local industry, whether in the form of work-based learning for students, professional development for TVET lecturers, curriculum reform or employment opportunities for TVET graduates, often because TVET is under-funded and, in many contexts, much 'work' resides in the informal sector.

1.2 Cross-regional UNEVOC TVET-Industry expertise

The challenge of connecting TVET to industry is cross-regional, albeit one which manifests in different ways in different geographic and socio-economic contexts. We proposed a UNEVOC Networking Coaction Initiative (UNEVOC NCI) that drew on the cross-regional TVET-Industry expertise of UNEVOC Centres in the United Kingdom, South Africa, Australia, Jamaica and Chile to develop a practical tool, shareable through the UNESCO-UNEVOC Network, for TVET colleges to map the actual and potential connections to industry and work that is adaptable to different TVET-Industry contexts.

1.3 Project objective: a TVET-Industry mapping tool

The project sought to produce a practical tool for TVET colleges to map the actual and potential connections to industry and work. As a network of UNEVOC Centres funded through the UNEVOC NCI, we aimed to produce a TVET-Industry mapping tool for TVET providers to map current and future work opportunities. The objective was that the mapping tool would take account of the reality of local TVET-Industry contexts through a mutual knowledge exchange and draw on local expertise. We also wanted to ensure that our tool would complement the ecosystem mapping methodology (ESM) set out in the UNEVOC Innovation Framework (2020) by focusing specifically on TVET-Industry work-related connections in the ecosystem.

The UNEVOC NCI provided an opportunity to take a more expanded view of work by drawing on context-specific expertise relating to TVET-Industry challenges among the UNEVOC Centre collaborators. For example, in South Africa, it is necessary to adopt an expanded view of employment that includes self-employment and entrepreneurial opportunities, which−on a needs basis−will manifest across the formal and informal economies in urban and peri-urban/rural areas. In Australia, stronger partnerships, increased industry engagement and flexible, responsible training programmes are needed to bridge the TVET-Industry gap, whilst in Chile, a proactive approach to identifying formal mechanisms for TVET-Industry

collaboration during students' vocational training could significantly improve workforce readiness and address the skills gap in the Chilean labour market. Thus, based on our expertise that spans TVET in different contexts, with different types of economies and different levels of informality and formality, we brought a cross-comparative lens to the Stages and Steps of the ESM (Figure 1) in the UNEVOC Innovation Framework.

Figure 1: Stages and Steps of the ESM (Source: UNESCO-UNEVOC, 2020, p. 26).

The narrow focus on work that we proposed in our simple TVET-Industry mapping tool would facilitate TVET providers to think innovatively about 1) the different types of formal and informal work and industry in their current context; and 2) the future world of work and what that might look like for them as a TVET college. This includes:

- mapping aspects of the green economy to identify TVET-Industry gaps and opportunities in green/sustainable construction or agriculture, for example;
- adopting a targeted focus on TVET-Industry mapping that highlights opportunities for innovation partnerships that help confront challenges of resourcing, incentivisation and resistance to change in financially constrained policy environments;
- identifying opportunities to strengthen mutually beneficial TVET-Industry institutional governance mechanisms or skills development advocacy that might be pursued collaboratively to (re)shape current and future skills for economic development and active citizenship.

In Part 2, we report on how our UNEVOC NCI worked together to produce our TVET-Industry mapping tool, entitled the '**TVET-Industry Roadmap**, a simple tool for TVET colleges to map actual and potential connections to industry and work'.

PART 2: Report on our UNEVOC NCI

2.1 Co-design of the TVET-Industry Roadmap

Our first activity as a UNEVOC NCI project team was an inception meeting held on 1st August 2025 to plan the joint collation of an interim project report for UNESCO-UNEVOC. The purpose of this report[1] was to set out our ideas to date on what we meant by a mapping tool and consider how such a tool might take account of the reality of local TVET-Industry contexts through an expanded view of work and the context-specific expertise of the UNEVOC Centre collaborators in this UNEVOC NCI. We collated an overview of the key concepts and contextual factors that we felt were most relevant for developing the TVET-Industry mapping tool. This scoping exercise helped us to identify key themes that were necessary to consider as we began work developing the tool. These key themes included:

- Ecosystem thinking and contextualisation
- Multi-level understanding of TVET systems
- Data integration and evaluation
- Curriculum and skills relevance
- Just transition and sustainability

We also drew upon this scoping work for the interim report to finalise the Programme Logic Model (PLM) that would serve as the guide for our UNEVOC NCI project and inform our thinking on the TVET-Industry mapping tool. We drew here on work we have done elsewhere on logic modelling and its use in action research (Phillips, Brown, Kelly 2024). This allowed us to gain a consensus on how we would frame the objective and context for the UNEVOC NCI and the TVET-Industry mapping tool that we were seeking to design. Building on the work produced in Deliverable 2, we agreed upon the following UNEVOC NCI **Project Objective**:

> *As a network of UNEVOC Centres funded through the UNEVOC NCI, we will produce a TVET-Industry mapping tool for TVET colleges to map current and future work opportunities. The tool will take account of the reality of local TVET-Industry contexts, through a mutual knowledge exchange that draws on the local expertise and capacity to help produce skills for a just and green transition to a clean energy society and economy.*

The rationale for this UNEVOC NCI was the joint recognition of the need for a tool for TVET colleges to understand current and future potential connections to industry, thinking in innovative ways to bridge the TVET-Industry gap. Thus, the context statement in our PLM encapsulated this as follows:

> *We need to develop skills to address a global "polycrisis," characterised by chaotic, unstable and interlinked emergencies that defy reduction to a single cause. 'Great power conflict, declining multilateralism, rising energy and food prices, forced*

[1] This report was our 2nd Deliverable, upon which funds for flights and the Nottingham Coaction Workshop were released.

displacement, and sovereign debt are accelerating – and being accelerated by – the current and longer-term risk trends of climate, biodiversity loss and rising inequality.' (Norton and Greenfield 2023, p 2).

The preparation of Deliverable 2 and PLM helped us to frame our UNEVOC NCI objectives and key concepts, before turning to the task of designing what became the ***TVET-Industry Roadmap:*** *a methodology for TVET colleges to map actual and potential connections to industry and work*.

In the remainder of this report, we describe the process of designing and reviewing the Roadmap, and conclude with an evaluation of this UNEVOC NCI.

2.1.1 Nottingham Coaction Event - designing the tool

The first challenge for us as a team was to find a way to use our time wisely in preparing for the Nottingham Coaction Workshop, so that we would have a first draft of the TVET-Industry tool by the end of the 3-day workshop. We achieved this by holding three online preparatory meetings.

Once again, it is important to note the commitment of the team. Due to the geographic locations of the UNEVOC Partners there was no single hour available where everyone could join during normal work hours. Consequently, all of our online UNEVOC NCI meetings involved the Jamaican team joining at 6.30am in the morning, the Chilean team at 7.30am in the morning and the Australian team at 10.30pm at night. Through the lifetime of the UNEVOC NCI project we held nine online meetings and all UNEVOC Partners joined and participated fully throughout. We provide an overview of Meetings 1-3 here.

ONLINE MEETING 1: What Do We Mean By a TVET-Industry Mapping Tool?

In Meeting 1, on Thursday 21st August we met clarified the ultimate goals of the mapping tool, and considered other issues as follows:

1: Clarification of Tool Goals and Practical Orientation
The ultimate goal of the mapping tool was discussed as follows:

- its practical utility for TVET college lecturers and managers to anticipate future job opportunities for students, including those not immediately visible,
- to support practical decision-making in diverse college environments, and the need for explicit objectives to guide its design and implementation, e.g. degree of specificity of tool - national vs. college level
- Integration with UNEVOC (2020) ESM innovation framework

2: Decision – A Single Tool is the Preference
At the end of the meeting we discussed whether to develop a single standardised mapping tool or multiple tools, with consensus leaning towards one adaptable tool supported by appendices or context-specific guidelines. In this report, we reflect on the TVET contexts among the UNEVOC Partners, but we did not develop context-specific guidelines. This might be important for future iterations of the tool

3: Addressing Absences and Power Dynamics in Mapping:

We discussed the importance of the mapping tool in identifying absences—such as missing industry partners, indigenous voices, and technological access—and addressing power dynamics within the ecosystem. This is featured in Roadmap in Step 2, but the issue of power dynamics might also be an important feature of subsequent work.

4: Scenario Planning and Methodological Approaches:
Possible use of scenario planning and the PLM as methodologies to guide tool development, implementation, and adaptation to various college contexts.

ONLINE MEETING 2: Understanding the Local TVET Ecosystem

On Thursday 4th September we explored different insights and perspectives on the TVET ecosystem and the extent to which this might feature in the TVET-Industry mapping tool. There was a consensus that the tool needed to be simple and adaptable and complement the UNESCO-UNEVOC (2020) ESM framework. We also discussed the value of integrating posthumanist perspectives and addressing contextual absences, and a methodology for mapping the TVET ecosystem as follows:

- **Advisory Committees and Industry Links in TVET:** Scott Phillips and Shermaine Barrett described the structure and function of advisory committees in Jamaican colleges, highlighting their multi-stakeholder composition, integration of international trends, and ongoing links with industry, and the team then reflected on how these practices might inform the development of the TVET ecosystem and the mapping tool
- **Dimensionality and Contextual Variation in TVET Ecosystems:** Andrew Paterson, Seth Brown, Victoria Traverso, and Richard Samuels discussed the diverse dimensions and contextual variations in TVET systems across regions, focusing on the roles of government, regional policies, and the scope of TVET in different countries. Jo-Anna Russon and the team noted the value of the UNESCO-UNEVOC Innovation Framework in understanding complex ecosystems.
- **Complementarity and Knowledge Exchange in Mapping Tool Development:** Zaahedah Vally and the team discussed the need for complementarity between their mapping tool and the UNEVOC (2020) ESM framework, focusing on mutual knowledge exchange, capacity building, and the adaptability of the tool to various contexts.
- **Skills and TVET Ecosystem Mapping Tool Methodology and Posthumanist Integration:** Seth Brown and Scott Phillips presented a draft methodology for a TVET and skills ecosystem mapping tool, detailing a cyclical process that includes needs assessment, stakeholder mapping, integration of posthumanist perspectives, and continuous feedback.

ONLINE MEETING 3: Workplan and Objectives for the Nottingham NCI Event

In Meeting 3, on the 10th September we worked together on the 3-day Nottingham programme, setting out session titles and objectives, building on a draft programme put together by Victoria Traverso. We also reviewed key points of clarification building upon Meetings 1 and 2, and reviewed travel plans for the trip to Nottingham.

NOTTINGHAM IN-PERSON WORKSHOP: 16-18 September 2025

The in-person workshop was held in Nottingham UK, between Tuesday 16th and Thursday 18th of September 2025. UNEVOC NCI team members travelled from Australia, Chile, Jamaica and South Africa,

arriving at the University of Nottingham's Jubilee Hotel and Conference Centre on Monday 15th September. The Jubilee Conference Centre is on the University of Nottingham Jubilee Campus, and this was our base for the week, with the School of Education providing a workshop room for the three days. The UNEVOC NCI funding covered the cost of our lunches and dinners. We used the cafes on Jubilee Campus for our lunches, and we took the opportunity on Tuesday, Wednesday and Thursday to eat in different restaurants in Nottingham City Centre to allow for a break from the campus and to see different parts of the city.

As discussed above, we used our time prior to the Nottingham UNEVOC NCI workshop to ensure that we had a 3-day workshop agenda that we hoped would lead to us having a first draft of the tool by the end of the third day. We split our time across the three days as follows:

Day 1: DRAFT MOCK-UP TVET-INDUSTRY MAPPING TOOL
Setting the foundations and aligning goals, work on first mock-up, review and plan work for Day 2.

Day 2: REFINE TVET-INDUSTRY MAPPING TOOL
Review of rough mock-up, guest lecture on mapping TVET ecosystems, group work to finalise the tool

DAY 3: UNEVOC COUNTRY WORKSHOP PLAN AND NEXT STEPS
Review work to date and agree outstanding tasks for the tool.

Draft and finalise plans for the UNEVOC Partner in-country TVET college workshops, including facilitators guide and a plan for comparable data.

Finalise work plan for completing the UNEVOC NCI, including the Final Report and all agreed deliverables.

The full Nottingham Coaction Workshop Agenda can be found in Appendix C.

The 3-day UNEVOC NCI Workshop was a success. By the end of Thursday 18th September, we had a first draft of the TVET-Industry tool, and a plan for the TVET college workshops in which we would share the draft of the tool and gain feedback. To some degree we were surprised at how much we achieved in the three days, however, it was also clear that the preparatory work enabled this. Most importantly, the central factor was the fantastic attitude and work ethic of all the UNEVOC Partners and the collegial nature of the whole team.

On Friday 19th September, we said our farewells after what was an enjoyable and productive three days together, and all UNEVOC NCI members embarked on their long journeys home. Following the Nottingham NCI Workshop, the remaining task was to take the first draft of the TVET-Industry mapping tool, and share this with key TVET college stakeholders in our various UNEVOC country contexts and use this to review the feasibility of the tool, culminating in the TVET-Industry Roadmap presented at the beginning of this report. We report on this process below.

2.2 International UNEVOC Centre feasibility workshops

The five UNEVOC Centres - Nottingham (UK), UTech (Jamaica), DuocUC (Chile), RMIT (Australia), and JET (South Africa) - conducted workshops and interviews in diverse contexts to test adaptability and gather feedback for refinement of the draft, which at that stage was called the TVET-Industry mapping tool. After

the international workshops, we revised the name of the tool to the TVET-Industry Roadmap, this is explained further below.

We engaged with 57 TVET stakeholders as follows:

- **Australia:** We developed a video PowerPoint presentation outlining the four steps of the Roadmap methodology, and shared it (along with supporting resources) with 2 x participants—a senior educator/programme manager and a teacher trainer. We conducted one-hour interviews with each participant following their review.
- **Chile:** 13 x workshop participants from 7 TVET HIEs, representing key institutional areas—including employability, curriculum innovation, community engagement, academic leadership, teaching staff, and data analysis units—offering a broad and interdisciplinary perspective on current challenges linked to TVET-Industry alignment.
- **Jamaica:** 2 x Academic Vice Principals, 2 x Heads of Department, 1 x Head of School, 2 x Lecturers from 2 TVET Institutions, 5 x Senior Education Officers of the Ministry of Education, Youth, and Information TVET.
- **South Africa:** Workshops with 12 TVET lecturers currently taking the Advanced Diploma in TVET; Engagement meeting with 12 TVET college managers (Policy leads were invited and agreed to attend but did not arrive on the day); and interviews with two experienced TVET development practitioners.
- **United Arab Emirates:** Interview with Dr Sriya Chakravarti and Dr Khwaja Khan, UNEVOC Centre, Faculty of Business, Higher Colleges of Technology, UAE.
- **England, UK:** Interview and follow-up discussion with 2 x college managers, responsible for Strategic Development and Curriculum and Skills.

Full details can be found in the Workshop reports (see Appendix B). As regards to gender, we broadly had a 50/50 split; however, we did not collect data on gender, as this would have required a longer ethics approval process for the international workshops, which would not have been viable in the timeframe for this project. For most UNEVOC Partners, it was only possible to engage with TVET colleges, and not industry stakeholders. This was a reflection of the objective of the project, which was to draft a TVET-Industry mapping tool for TVET colleges from the perspective of the TVET college. As discussed below, a key consideration for future iterations of the Roadmap is the question of when and how best to involve industry stakeholders.

The purpose of the workshops was to test the feasibility and usability of the TVET-Industry mapping tool in a real college context. Participants explored each step, identified barriers and enablers, and discussed alignment with college functions. We designed a workshop programme facilitators' guide, with a basic structure adaptable to each workshop/interview and the time available:

2.2.1 Tool evaluation and feasibility workshops programme:

- Introduction to UNESCO-UNEVOC and the NCI
- Rationale for the project
- Overview and introduction of the mapping tool (Roadmap)
- Group discussion of the Roadmap and the four steps, guided by these **key questions**:

1. In what ways might the TVET-Industry mapping tool be useful to you in your role and to your TVET college?
2. How does your institution currently engage with industry and job markets?
3. How might the TVET-Industry mapping tool assist in identifying opportunities with work and industry?
4. How might the TVET-Industry mapping tool support the development of innovative partnerships or address challenges?
5. What factors would influence your institution's decision to use the tool?
6. Do you have any other comments or feedback on the TVET-Industry mapping tool?

- Plenary
- Workshop wrap-up and next steps

The six key questions formed the basis of the individual UNEVOC Partner Workshop reports, and this allowed us to maintain consistency across the interviews and workshops as well as in our collation and analysis of the workshop feedback.

In what follows, we synthesise the workshop findings on the tool's usefulness, key considerations for revision including the conceptual framing of the tool and processes for implementation. This section of the report is supplemented by Workshop reports from each UNEVOC Partner, submitted as Appendix B to this Final Report.

2.2.2 Usefulness of the tool

We received positive feedback across the workshop contexts on the **strategic and diagnostic value** of the tool, which provided a clear roadmap for thinking about the TVET colleges connections to industry and work. Participants emphasized that the tool moves beyond compliance-driven processes, offering a **structured approach** to identify systemic gaps and opportunities for innovation. The four-step process was praised for providing **clarity and practical guidance** for colleges entering or strengthening partnership development. Stakeholders confirmed that the tool had relevance across varied contexts, including urban and rural, formal and informal sectors.

We also heard that there was an **immediate demand for the tool, specifically,**

- In Jamaica, stakeholders expressed "overwhelming eagerness" to use the tool immediately, with one manager describing "desperation" for access.
- In Australia, participants saw the tool as a "breath of fresh air" in a compliance-heavy environment.
- In the UK and Chile, participants valued its potential to complement existing strategies and foster creative thinking.

The tool was also seen as supporting the day-to-day functioning of the TVET college by encouraging systemic thinking beyond micro-level teaching and course delivery, complementing statutory requirements for employer engagement, and helping colleges to clarify their offerings and improve their alignment with community needs.

2.2.3 Key Considerations for Revising the Tool

Through the workshops and interviews with TVET colleges we also explored what might need to be considered in revising the tool. Following the workshops we collated the overall feedback and made minor edits to the first draft, and set out considerations for future development of the tool.

A key consideration was the title of the TVET-Industry mapping tool, specifically whether it is a **Tool or a Process**. As a team, we reached a consensus that the initiative represents a process, not just a tool. We discussed a range of terminology options including "roadmap" or "process" to reflect its iterative and systemic nature. We settled on the term "TVET-Industry Roadmap".

Minor considerations/edits made to the Roadmap

In addition, the key suggestions for **minor edits to the first draft** were as follows:

- Clarify ambiguous terms (e.g., "locality," "industry"). Specifically to clarify that the term 'industry' is used to encapsulate all forms of work where TVET students could work currently and in the future. This might include NGOs, public sector, digital economy actors and also the informal sector (depending on local context).
- Include career guidance and informal sector engagement.
- Add prompts related to the changing role of AI and technological change in the TVET-Industry relationship.
- Provide clearer guidance on governance roles and stakeholder engagement.

We incorporated this feedback into the version of the TVET-Industry Roadmap presented at the beginning of this report.

Major considerations for future iterations

In addition to the minor areas of feedback described above, we also engaged with TVET stakeholders through our workshops to identify wider considerations for the future development of the tool. To do this we sought to understand how TVET colleges currently engage with industry and the types of resources involved, and the challenges faced in building and maintaining partnerships, and the types of factors that might help or hinder the application and value of the tool.

- **The Timing and Nature of Industry Engagement:** In future iterations it will be necessary to consider whether industry should be engaged from Step 1 or in Steps 3 and 4 as currently envisaged in the Roadmap. This includes a consideration of the extent to which industry perspectives should be integrated into the tool alongside or instead of the institutional concerns of the TVET college. For this first iteration of the tool, the original intent was to develop a tool that would capacitate TVET colleges to think more broadly about industry engagement from their perspective, beyond the short-term perspective and demands of industry.
- **Digital Transformation:** Develop a web-based or app version. This would support stakeholders expectations for a "hands-on" toolkit or set of resources. In version 1 of the tool, these are included as resources and guidance for each Step on the Roadmap, but a digital tool, would be an important development.

- **Global Standards and Mobility:** Explore how the tool can align with wider UNESCO-UNEVOC and partner country efforts to address recognition of international qualifications and workforce portability linked to TVET.
- **TVET Sector Challenges and Capacity Building:** Offer strategies for overcoming resistance and fostering innovation within the TVET sector. This might include the provision of templates, scripts, and training for institutions with limited resources. Structural challenges exist in various forms. In South Africa, TVET lecturers and managers spoke of systemic challenges in aligning TVET colleges with industry needs, including lecturer retention, industry engagement barriers, systemic misalignment, and resource constraints. In contexts like Australia and the UK, neoliberal constraints on the TVET sector have led to severe limitations on staff time and structural processes that incentivise compliance over innovation.
- **Data Integration:** Future projects might also explore the potential value of standardised reporting and the creation of unified digital platforms for sectoral data for TVET colleges within a particular TVET sector or geographic country/region.

2.3 Country contextualisation

2.3.1 Australia

TVET in **Australia** is closely linked to industry through various mechanisms, though some gaps remain. A key feature of TVET programmes is that they involve collaborating closely with industries to align curricula with current skills demands. This involves input into course design and the provision of practical training opportunities. Work-based learning, including apprenticeships and traineeships, provides students with essential hands-on experience in industry settings. Additionally, many TVET colleges have industry advisory committees to ensure that training remains relevant.

Despite the strengths of the TVET sector, gaps still remain. These are primarily in the form of skill mismatches, where the skills taught may not fully align with employer needs due to rapid industry changes. There are also regional disparities in access to industry-aligned programmes, varying between urban and rural areas. The fast pace of technological advancements poses another challenge, as not all programmes can swiftly adapt to new industry standards. To bridge these gaps, stronger partnerships, increased industry engagement, and flexible, responsive training programmes are necessary. There is a need for a practical Roadmap methodology such as that proposed here, to help TVET institutes to map the actual and potential connections between industry and work.

Our consultation with TVET stakeholders in Australia provided further contextual understanding of how a tool like the TVET-Industry Roadmap can help advance TVET-Industry partnerships. Participants we consulted saw potential in the TVET Roadmap methodology to bridge gaps between programme aims and industry needs, offering richer data for curriculum design and strengthening industry partnerships. However, they saw that internal biases, limited resources, and organisational resistance to change impede genuine engagement and innovation. A further enabling aspect of the Roadmap methodology participants noted was how it could help Technical and Further Education (TAFE) institutions meet updated Australian Skills Quality Authority (ASQA) requirements, foster more meaningful industry consultations, and support green economy initiatives and global qualification recognition. Participants were enthusiastic about

collaborating with networks like UNEVOC Centres and saw value in piloting the Roadmap methodology with smaller registered training organisations to demonstrate its benefits.

On the other hand, participants identified several challenges in aligning TAFE programmes with rapid changes in regulations, emerging techniques, and the integration of Industry 4.0, noting that Australia lags behind Europe in this field. These are part of the context in which the Roadmap methodology would be utilised. Barriers include compliance-driven industry consultations, limited stakeholder involvement, and the challenge of tailoring curriculum for students, many of whom are new migrants facing literacy and numeracy issues. Further ongoing challenges involve overcoming structural barriers, ensuring genuine stakeholder input, providing feedback mechanisms within the Roadmap methodology, and addressing the risk-averse nature of the system, particularly in navigating neoliberal and privatisation trends.

Overall, while the Roadmap methodology presents opportunities for improvement to match skills with industry needs, success in building partnerships depends on cultural change, resource allocation, and sector-wide buy-in.

2.3.2 Chile

In **Chile**, TVET offered by Technical Training Centres (CFTs) and Professional Institutes (IPs) has been increasingly aligned with industry needs, supported by reforms aimed at strengthening collaboration between education providers, employers, and government agencies. Recent initiatives have encouraged the integration of TVET into national innovation and productivity strategies, particularly in high-demand sectors such as information technology, industrial maintenance, logistics, renewable energy, and construction. Studies also highlight that many institutions now incorporate industry advisory councils and practical training opportunities to improve labour-market relevance (UNESCO, 2020; Peralta et al., 2020). These mechanisms aim to reduce skill shortages and improve the employability of Chilean technicians.

Despite these advances, significant gaps persist between TVET provision and industry requirements. Rapid technological change continues to outpace curriculum updates, creating skill mismatches—especially in digital and advanced technical fields. Regional disparities also remain, as students in urban centres have greater access to modern, industry-aligned programmes compared to those in rural areas. Additionally, inequitable funding across institutions affects the quality and consistency of training, limiting TVET's broader contribution to productivity and social mobility (CNEP, 2023; Paideia, 2024). Addressing the TVET-Industry divide therefore requires stronger and more agile partnerships with employers, along with practical tools that help institutions systematically map their existing and potential industry connections.

The Roadmap proposed by this project could allow TVET providers to identify gaps, monitor collaboration effectiveness, anticipate emerging skill demands, and respond more flexibly to labour-market dynamics—ultimately strengthening the alignment between training and real-world workforce needs. This would be of the utmost importance, especially for smaller TVET providers with scarce resources or in remote areas, since Chile has a highly centralised governmental system and services. This Roadmap is anticipated to be used by a myriad of TVET HEIs and, according to what was discussed in the workshop, many of them are willing to work as a network to gather data, discuss important matters with the productive sector representatives in an efficient manner (not one by one) and, eventually, work on collaborative databases that would benefit the TVET sector.

2.3.3 England, United Kingdom

In **England**, UK, the target beneficiaries of the Roadmap would be Further Education colleges providing vocational education who cater to a wide range of students through diverse pathways with various industry links. The TVET sector has been the subject of various reforms aimed at improving the quality and relevance of vocational qualifications. Further Education colleges also have a statutory duty to be responsive to the labour market, consequently partnerships to overcome the TVET-Industry gap are important. However, Further Education colleges face challenges building strong industry collaborations, in part due to resource constraints such as limited funding to develop and maintain industry partnerships, the costs associated with setting up and managing work placements and internships, lack of industry coordination, and employers' reluctance to invest time and resources. This challenge is compounded by the reality that not all students have equal access to work placements or internships.

From our engagements on the feasibility of the TVET-Industry Roadmap, we heard that such industry partnership arrangements are managed through managers at a directorial/leadership level through various employer engagement activities and programmes. The Roadmap would need to stand alongside statutory and policy driven processes as an intervention that facilitates space for creative thinking and identifying opportunities for innovation. If applied, it could be a means for supporting innovation in curriculum design or industry engagement, particularly as the Roadmap methodology points to system wide college connections.

2.3.4 Jamaica

In **Jamaica**, the target beneficiaries would be tertiary institutions such as the University of Technology, Jamaica, community colleges, and other post-secondary TVET institutions, including the HEART-Trust National Service and Training Agency. Industry partnership is vital to TVET institutions in the Jamaican context. TVET is seen as a major player in providing knowledge, skills and competencies to empower individuals and support economic growth. Increasingly, government and non-government organizations as well as public and private education and training providers are viewing TVET as essential in improving economic competitiveness and sustainability which in turn will reduce poverty, crime and violence and promote social inclusion for the benefit of all citizens. Within this context, partnership with industry is highly valued. Industry relationships are seen as critical as a means of providing work-based learning, work experience opportunities, industry facility tours, TVET infrastructure development and funding. Additionally, institutions engage industry stakeholders on advisory boards and programme design workgroups to ensure relevance of training to the needs of industry.

However, participants in our workshop reported that they are sometimes challenged to forge strong collaborations with industry partners that support a sustainable training infrastructure and the necessary materials to develop 21st Century work ready graduates. TVET colleges consistently face challenges in connecting to and partnering with local industry, whether in the form of work-based learning for students, professional development for TVET lecturers, curriculum reform or employment opportunities for TVET graduates. As a response, the TVET-Industry Roadmap methodology is designed to help TVET institutions understand the nature of the challenges they face in their environment and to build bridges with industry and other key stakeholders. This practical mapping tool is geared to enable TVET institutions to identify

real and potential connections with industry. It also seeks to be flexible and adaptable to different TVET-Industry contexts, facilitating its application in diverse local realities.

2.3.5 South Africa

In South Africa, the target beneficiaries of the Roadmap will be public TVET colleges serving diverse urban, township and rural communities, where labour-market conditions and employer access vary substantially. The TVET system operates within a well-defined qualifications and quality assurance framework. Colleges offer programmes intended to prepare youth mainly for both formal employment and work in the formal economy. Industry partnerships are widely recognised as essential for strengthening relevance, expanding availability of work-based learning, and improving graduate employability. Achieving meaningful and sustained collaboration remains uneven across colleges, localities, occupations and sectors.

Stakeholders have observed persistent challenges in establishing and maintaining industry relationships that approach the scale of youth unemployment and also of employer demand. Many colleges struggle to secure sufficient work-based learning opportunities. At the same time, employers seem to have limited capacity or incentive to accommodate students or participate in curriculum improvements for relevance. Spatial inequalities also shape opportunities, where colleges in remote or areas or with limited economic growth face daunting constraints. Additionally, the labour market is characterised increasingly rapid shifts in digital and technical occupational roles, and unclear employer signalling of their skills expectations. These factors highlight the need to utilise more systematic institutional mechanisms to identify work opportunities and concomitant skills requirements.

In consultation, participants were optimistic that the Roadmap methodology would support colleges: to understand their operating environment better, to map existing and potential links with employers, and to identify barriers to collaboration. They emphasised the importance of such a structured approach for supporting colleges to move towards more evidence based and intentional strategies. Participants recognised that the Roadmap had potential for strengthening college capacity to target occupation and sector-specific opportunities, and to mobilise better aligned partnerships.

Overall, this developmental Roadmap process consists of a practical and adaptable toolset for South African TVET colleges to inform curriculum responsiveness, build stronger connections with workplaces, and fashion workable pathways for young people into employment in varied labour-market environments.

PART 3: Evaluation, Next Steps and Dissemination

In this final section of the report we present an evaluation of our UNEVOC NCI, outlining successes and challenges, before concluding with a discussion of insights emerging from our project on possible next steps for developing and disseminating the tool.

3.1 Evaluation framework: utilising the programme logic model (PLM)

In Section 2.1, we introduced the PLM as the framework that we would use to guide our UNEVOC NCI project and inform the objectives and key concepts of the envisaged TVET-Industry mapping tool. Our PLM provided a 1-page visualisation (see Appendix A) of the inputs, activities, outputs and outcomes of the UNEVOC NCI. This provided a means to articulate and track the objectives, vision and desired outcomes for the proposed mapping tool and the UNEVOC NCI.

The **inputs** column of our PLM provides the basis for asking the evaluative question "***to what extent did we secure the necessary inputs for implementing our project?***" In brief, we were successful in securing UNESCO-UNEVOC financial resources to co-design a first draft of a simple mapping tool. More generally, we were able to identify the various human resources we envisaged as partners most critical for developing and testing the mapping tool:

- TVET provider staff (management, educators)
- Employers focused on green transition
- Workers focused on upskilling/reskilling for green transition
- Organisations bridging the gap between education and employment (e.g. local learning and employment network – Australia; youth employment network – Jamaica)
- Government agencies (policy and funding bodies)
- Political activists and
- Stakeholder groups linking TVET and work (business councils, trade unions, environmental groups or organisations)

Through this process, we utilised data and tools that integrate social, environmental, and technological factors, and drew upon posthumanist theories to move mapping beyond a strictly human-centred perspective.

The **activities** column of our PLM helps us to answer the evaluative question "***to what extent did we undertake the activities required to produce our project's outputs?***" The most fundamental activity in this regard was to bring our expert team together in Nottingham to co-design the simple mapping tool. As reported above, preparatory work was undertaken in the lead up to the three-day workshop and this was fed into our activity in Nottingham. The Nottingham activity was successful in producing the simple mapping tool, a methodology for its use, and a plan for testing it through workshops in our respective countries.

Having developed the simple mapping tool, our aim was to facilitate TVET college workshops (one in each of the five participating countries) to:

- Trial the TVET-Industry mapping tool
- Mobilise the mapping process to connect TVET with broader popular democratic projects—e.g., sustainable development, cooperativism, rights-based work – and indigenous histories and epistemologies
- Gather data on current/emerging skill needs and how these are being addressed [could already be part of a curriculum review process]

- Multi-stakeholder mapping exercises (using co-design mapping tool) which involve participation by employers, workers, TAFE providers, bridge organisations and relevant unions (where possible/relevant).

Doing this proved more difficult than the PLM would suggest. In some countries it was easier to secure the involvement of TVET providers than others. There were various reasons for this:

- Some institutions suggested they needed long lead times if they were to be able to involve staff in a non-teaching activity.
- Sometimes the need for teachers to respond to student issues overrode their availability for participating in workshops and interviews.
- External factors, for example, natural disasters created difficulties in some countries where staff had to focus on repairing their teaching spaces in readiness for delivering programmes to students.

Nevertheless, in our workshops and interviews we found a uniform enthusiasm among TVET providers for the simple mapping tool and its potential to assist them in developing partnerships with industry and other stakeholders to close skills gaps and open up new work opportunities in their local region.

The **outputs** column of our PLM provides the basis for answering the evaluative question "***to what extent did we produce the outputs for the project?***" The first output was to hold the Nottingham co-design and TVET college workshops. As noted above, these were conducted. A visual/descriptive TVET-Industry mapping tool was produced. The four-step methodology we developed for the simple mapping tool incorporated key questions and mechanisms (for example, data mapping, relationship-building forums and MOUs) to facilitate the development of TVET–labour alliances, worker-led innovation, and collective governance of training institutions and employer involvement in shared planning of innovative skills development and TVET-Industry partnerships. In addition, notwithstanding the challenges noted above, we hosted a wide range of engagements with TVET stakeholders to explore the usefulness and feasibility of the mapping tool, and gather ideas for revising our first draft of a mapping tool. This led to the naming of the output, the mapping tool, as the TVET-Industry Roadmap.

The short-term **outcomes** column in the PLM provides the basis for evaluating the ***extent in which our activities and outputs achieve their intended outcomes in the short-term***. These short-term outcomes will be based on what happens next, following this initial UNEVOC NCI. Primarily, this would involve TVET providers actually using the TVET-Industry Roadmap in their respective countries. We envisage this being done in the next phase of trialling this tool in 2026. But this is beyond the scope of the current project reported here. The main short-term outcome arising from our development work at this stage is that the TVET-Industry Roadmap has been shared with TVET providers on a concept testing basis and has met with enthusiastic acceptance regarding its potential for addressing and closing industry-skills gaps.

3.2 Next steps

The next steps we envisage once TVET providers utilise the TVET-Industry Roadmap is that they will achieve the **short-term outcomes** as outlined below:

- Stakeholders in the ecosystem gain stronger understanding of TVET-Industry relationships for developing skills to facilitate green transitions and generating/seizing innovative partnership and curriculum development opportunities
- Stakeholders redesign TVET curricula to incorporate local narratives, practices, and pedagogies which support skills for green transitions, with pedagogical practices that can be adjusted to the local environmental context
- Stakeholders prioritise green skills pathways integrated into courses and work-based learning
- Stakeholders co-design pilot innovation partnerships (e.g., shared labs, co-funded apprenticeships)
- Stakeholders use data to analyse emerging skill needs and how to address them.

It is our plan to seek funding to work with TVET providers in 2026 to evaluate the extent to which they will be enabled to achieve these outcomes using the TVET-Industry Roadmap.

If these short-term outcomes are achieved in line with the PLM rationale, then we envisage achievement of the **medium-term outcomes** is likely to follow. These are:

- Steps 1 and 2 involve the collation of data to build an in-depth understanding of the current and future state of work and TVET-Industry connections for the TVET college and its students. It is possible that comparable data could be gathered by UNEVOC Centres and be registered in a repository for public consultation.
- Stakeholders' skills needs are aligned through using the mapping process.
- A strengthened sense of agency and collective responsibility among TVET participants is expressed through mutually beneficial alliance mechanisms
- More responsive curricula are developed
- Green skills pathways are established in ways that involve all stakeholders in design and governance
- Data is gathered to assess the process and impact of innovation partnerships to address skills needs.

Finally, we recognise that any project (including one such as ours) can only contribute to a relatively small degree in achieving **long-term outcomes**. Nevertheless, we envisage that use of the TVET-Industry Roadmap and its associated methodology should help TVET providers and broader stakeholders in the TVET ecosystem to achieve the following:

- More sustainable employment and production practices
- TVET provision aligned with labour-market demand
- Strengthened regional innovation capacity
- Graduates with higher employability and adaptability
- Inclusive economic growth
- Accelerated transition to a sustainable, low carbon economy through skilled talent pipelines

- Institutionalised TVET-Industry collaboration that supports resilient economic development and active citizenship
- Graduates embody relational knowledge and are equipped to participate in complex, adaptive socio-ecological economies

We look forward to working with UNEVOC in 2026 to take this work forward.

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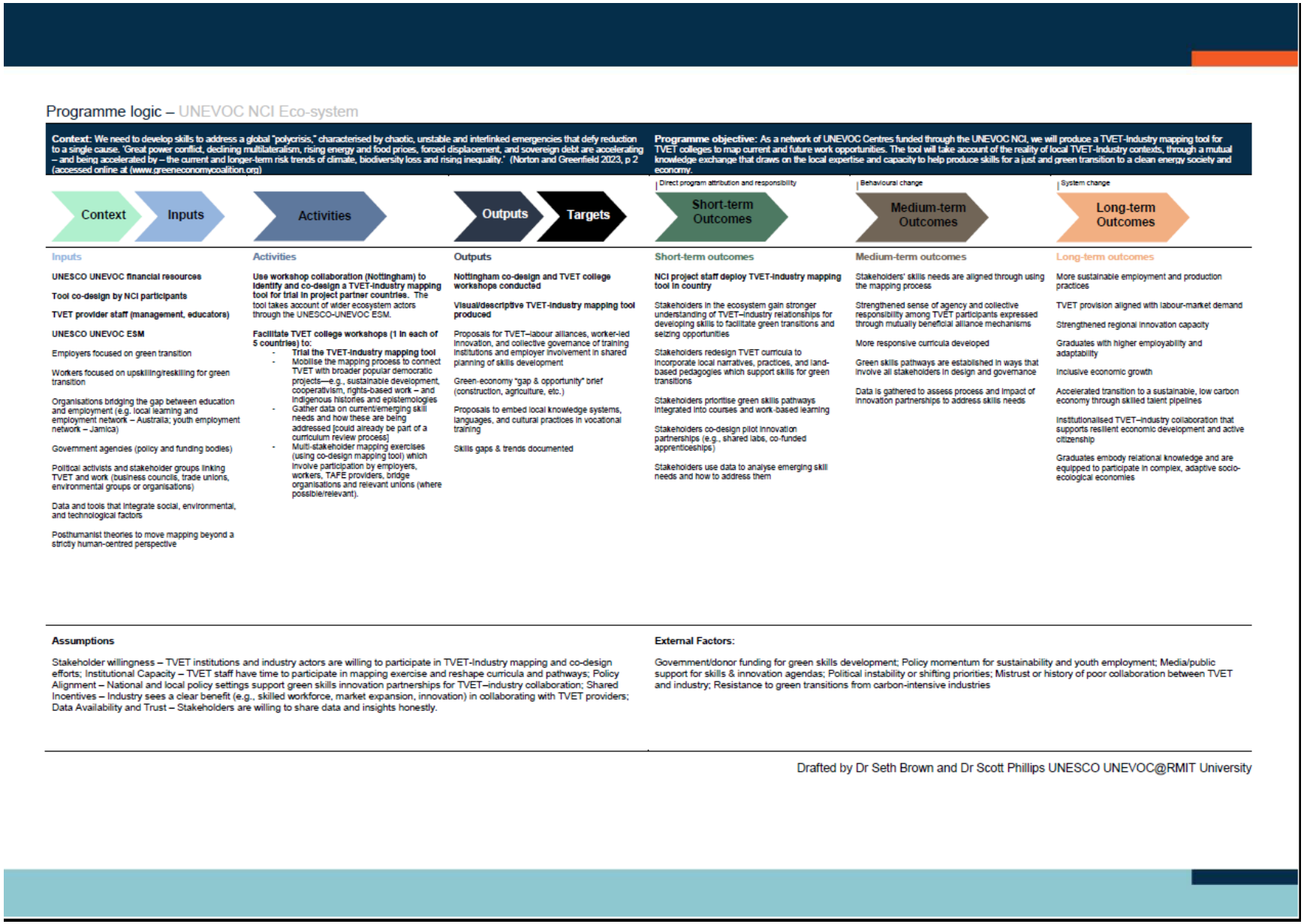
Appendices

Appendix A: Programme Logic Model



Programme logic – UNEVOC NCI Eco-system

Context: We need to develop skills to address a global "polycrisis," characterised by chaotic, unstable and interlinked emergencies that defy reduction to a single cause. 'Great power conflict, declining multilateralism, rising energy and food prices, forced displacement, and sovereign debt are accelerating – and being accelerated by – the current and longer-term risk trends of climate, biodiversity loss and rising inequality.' (Norton and Greenfield 2023, p 2 (accessed online at (www.greeneconomycoalition.org)

Programme objective: As a network of UNEVOC Centres funded through the UNEVOC NCI, we will produce a TVET-Industry mapping tool for TVET colleges to map current and future work opportunities. The tool will take account of the reality of local TVET-Industry contexts, through a mutual knowledge exchange that draws on the local expertise and capacity to help produce skills for a just and green transition to a clean energy society and economy.

Context | Inputs | Activities | Outputs | Targets | Short-term Outcomes | Medium-term Outcomes | Long-term Outcomes

Direct program attribution and responsibility | Behavioural change | System change

Inputs

UNESCO UNEVOC financial resources

Tool co-design by NCI participants

TVET provider staff (management, educators)

UNESCO UNEVOC ESM

Employers focused on green transition

Workers focused on upskilling/reskilling for green transition

Organisations bridging the gap between education and employment (e.g. local learning and employment network – Australia; youth employment network – Jamica)

Government agencies (policy and funding bodies)

Political activists and stakeholder groups linking TVET and work (business councils, trade unions, environmental groups or organisations)

Data and tools that integrate social, environmental, and technological factors

Posthumanist theories to move mapping beyond a strictly human-centred perspective

Activities

Use workshop collaboration (Nottingham) to identify and co-design a TVET-Industry mapping tool for trial in project partner countries. The tool takes account of wider ecosystem actors through the UNESCO-UNEVOC ESM.

Facilitate TVET college workshops (1 in each of 5 countries) to:

- **Trial the TVET-Industry mapping tool**
- Mobilise the mapping process to connect TVET with broader popular democratic projects—e.g., sustainable development, cooperativism, rights-based work – and Indigenous histories and epistemologies
- Gather data on current/emerging skill needs and how these are being addressed [could already be part of a curriculum review process]
- Multi-stakeholder mapping exercises (using co-design mapping tool) which involve participation by employers, workers, TAFE providers, bridge organisations and relevant unions (where possible/relevant).

Outputs

Nottingham co-design and TVET college workshops conducted

Visual/descriptive TVET-Industry mapping tool produced

Proposals for TVET–labour alliances, worker-led innovation, and collective governance of training institutions and employer involvement in shared planning of skills development

Green-economy "gap & opportunity" brief (construction, agriculture, etc.)

Proposals to embed local knowledge systems, languages, and cultural practices in vocational training

Skills gaps & trends documented

Short-term outcomes

NCI project staff deploy TVET-Industry mapping tool in country

Stakeholders in the ecosystem gain stronger understanding of TVET–Industry relationships for developing skills to facilitate green transitions and seizing opportunities

Stakeholders redesign TVET curricula to incorporate local narratives, practices, and land-based pedagogies which support skills for green transitions

Stakeholders prioritise green skills pathways integrated into courses and work-based learning

Stakeholders co-design pilot innovation partnerships (e.g., shared labs, co-funded apprenticeships)

Stakeholders use data to analyse emerging skill needs and how to address them

Medium-term outcomes

Stakeholders' skills needs are aligned through using the mapping process

Strengthened sense of agency and collective responsibility among TVET participants expressed through mutually beneficial alliance mechanisms

More responsive curricula developed

Green skills pathways are established in ways that involve all stakeholders in design and governance

Data is gathered to assess process and impact of innovation partnerships to address skills needs

Long-term outcomes

More sustainable employment and production practices

TVET provision aligned with labour-market demand

Strengthened regional innovation capacity

Graduates with higher employability and adaptability

Inclusive economic growth

Accelerated transition to a sustainable, low carbon economy through skilled talent pipelines

Institutionalised TVET–Industry collaboration that supports resilient economic development and active citizenship

Graduates embody relational knowledge and are equipped to participate in complex, adaptive socio-ecological economies

Assumptions

Stakeholder willingness – TVET institutions and industry actors are willing to participate in TVET-Industry mapping and co-design efforts; Institutional Capacity – TVET staff have time to participate in mapping exercise and reshape curricula and pathways; Policy Alignment – National and local policy settings support green skills innovation partnerships for TVET–industry collaboration; Shared Incentives – Industry sees a clear benefit (e.g., skilled workforce, market expansion, innovation) in collaborating with TVET providers; Data Availability and Trust – Stakeholders are willing to share data and insights honestly.

External Factors:

Government/donor funding for green skills development; Policy momentum for sustainability and youth employment; Media/public support for skills & innovation agendas; Political instability or shifting priorities; Mistrust or history of poor collaboration between TVET and industry; Resistance to green transitions from carbon-intensive industries

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Appendix B: Summary Workshop Reports TVET–Industry Mapping Tool Evaluation

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1. Introduction

This report consolidates and critically analyses the results of the TVET–Industry Mapping Tool workshop developed by Duoc UC on the 28th of October of 2025. It integrates evidence from participant surveys, collective reflections and documents generated during group exercises.

The purpose of this document is to provide with a strategic, coherent framework to inform decision making for the design of the tool being developed by the partnership that seeks to develop a tool that will allow for a strengthened relationship with the productive sector, enhancing the relevance of its training offer, and advance towards evidence-based institutional decision-making mechanisms for Vocational Education and Training (VET) Higher Education Institutions.

2. Workshop Context

The workshop was conducted with participants that represented key institutional areas—including employability, curriculum innovation, community engagement, academic leadership, teaching staff, and data analysis units—offering a broad and interdisciplinary perspective on current challenges linked to TVET–industry alignment.

Participants came to the workshop from 7 TVET HIEs (Instituto Profesional Duoc UC, Centro de Formación Técnica ENAC, Instituto Bancario Guillermo Subercaseaux , Instituto Profesional INACAP, Instituto Profesional IPChile, Instituto Profesional IPLACEX, Instituto Profesional y Centro de Formación Técnica Santo Tomás). These participants are active participants of one of the following areas: curriculum development, Interships Coordination, Alumni Engagement, Academic Management, Community Engagement, Industry Engagement or International Cooperation.

3. Methodology and Sources

This report draws upon the following inputs:

- The presentation *Results Evaluation Workshop – Coaction Initiative*.

- Participant profile survey results.
- MENTI-based assessment of the four stages of the model.
- Two qualitative documents generated through group work.
- Institutional information related to curricular processes, employability, and community engagement.

4. Integrated Results Analysis

Findings reflect a consistent understanding of the existing gap between TVET provision and industry needs, as well as a shared recognition that current processes require greater coordination, formalization, and institutional backing to sustain relevance and responsiveness.

4.1 Knowledge and perceptions

Participants report having strong awareness of the competencies demanded by employers and access to sectoral studies. However, this information is not consistently translated into systematic curricular decisions or ongoing institutional practices, revealing a disconnect between data availability and effective use.

4.2 Identified challenges in the Chilean context

The most recurrent challenges include:

- Training programs not fully aligned with evolving industry requirements.
- Infrastructure and equipment that do not reflect current industrial standards.
- Limited communication channels between TVET institutions and companies.
- Insufficient internship opportunities for students and limited industry placements for faculty.

These issues directly affect graduate employability, the quality of technical learning, and the competitiveness of TVET programs.

4.3 Strategic vision

There is strong consensus regarding the importance of strengthening institutional engagement with industry. Companies are viewed as essential partners in curriculum design, competency validation, and occupational profile assessment. Participants also highlight the need for teaching staff to maintain up-to-date technical expertise informed by recent industry experience.

4.4 Tools and needs

Participants identified the need for:

- An institutional toolkit for TVET–industry engagement.
- Shared digital platforms for data exchange and collaboration.
- National or sectoral qualification frameworks.
- Standardized internal procedures.
- Enhanced technical assistance and faculty development mechanisms.

5. Assessment of the TVET–Industry Mapping Tool

The Identification and Data Creation stages were considered the most feasible, given existing diagnostic processes.

The Construction and Reimagination stages require more advanced institutional maturity, stronger governance frameworks, and the establishment of sustained engagement strategies with industry partners.

6. Gaps Identified in the Chilean context to consider for the Tool

Key gaps identified include:

- Limited coordination across units.
- Fragmented and unintegrated sectoral information.
- Insufficient faculty engagement in TVET–industry linkage processes.
- Lack of data-driven curricular review mechanisms.
- Fragmented and inconsistent relations with companies.
- Constraints in resources, infrastructure, and governance structures.

7. Strategic Opportunities

Among the strategic opportunities identified are:

- Establishing a unified system for sectoral data collection and analysis.
- Developing permanent sectoral committees to formalize industry engagement.
- Integrating the TVET–Industry Mapping Tool into curricular processes.
- Strengthening labour market intelligence and gap analysis (e.g., through Power BI).
- Leveraging UNEVOC's support for capacity-building and methodological guidance.

8. Priority Recommendations

It is recommended that:

- Institutions develop a formal governance model for TVET–industry engagement.
- Integrate sectoral data collection into curricular and institutional processes.
- Establish a formal plan for faculty technical upskilling.
- Institutionalize sectoral committees with key industry stakeholders.
- Consolidate internal data sources into a single institutional platform.
- Implement cyclical, evidence-based curricular review processes.

9. Brief Summary of previous knowledge

Category	Description	Gaps	Opportunities	Recommendations
Institutional Coordination	Limited coordination across units.	Duplication, unclear roles.	Centralized governance.	Create a unified functional structure.
Industry Linkage	Fragmented relationships.	Weak feedback mechanisms.	Sectoral committees.	Formalize engagement mechanisms.
Curricular Updating	Misalignment with industry needs.	Outdated infrastructure.	Model that identifies gaps.	Integrate into annual review cycles.
Faculty	Limited recent industry experience.	Technical and pedagogical gaps.	Faculty industry internships.	Formal institutional upskilling plan.

10. Conclusions on the needs of connecting with the productive sector for TVET in Chile

The analysis highlights the urgent need to modernize, align, and institutionalize processes that articulate Chilean TVET with the productive sector. The TVET–Industry Mapping Tool may provide a clear and structured framework to advance this agenda; however, its effective implementation requires strong institutional leadership, robust governance mechanisms, and sustained commitment to relevance, quality, and continuous improvement.

11. Recommendations for Improving the TVET–Industry Mapping Tool (by Stage)

1. Stage 1 — IDENTIFICATION

Purpose: Understand the sector context, key actors, and labor market needs.

Key Recommendations

Strengthening clarity and scope of the diagnostic phase

Participants noted that the tool provides a strong starting point, but it requires clearer guidance on *how to prioritize* sectors, occupations, and data sources.

Recommendation: Include a standardized checklist for sector prioritization, such as growth indicators, regional relevance, and employer demand.

Provide more detailed examples of data sources

Institutions vary widely in their data availability. Some lack systematic labor market information.

Recommendation: Add a curated library of recommended sources—public reports, employer surveys, qualification frameworks, and national statistics—to guide institutions regardless of data maturity.

Include gender, inclusion, and ethics considerations

Several participants recommended expanding equity-related indicators beyond only Indigenous groups.

Recommendation: Integrate structured prompts on minority groups, migration, gender gaps, and ethical considerations in the diagnostic tools.

2. Stage 2 — CREATION (New Data Creation)

Purpose: Gather new information from employers and stakeholders.

Key Recommendations

Improve clarity of the employer survey instruments

The questions proposed were helpful but require refinement to ensure they apply across industries.

Recommendation: Offer sector-specific versions or optional modules to tailor questions to different industries.

Expand the guidance for conducting interviews and focus groups

Participants expressed uncertainty about how to conduct conversations effectively with employers or industry associations.

Recommendation: Add interview scripts, templates, and practical examples of effective engagement with industry representatives.

Strengthen support for institutions with limited research capacity

Smaller or less mature institutions may lack the personnel to collect new data.

Recommendation: Provide simplified workflows, step-by-step guides, and sample data collection schedules that can be implemented with minimal resources.

3. Stage 3 — CONSTRUCTION (Relationship Building)

Purpose: Build and formalize partnerships with employers, associations, sectoral bodies, and other stakeholders.

Key Recommendations

Provide clearer guidance on governance and institutional ownership

A major challenge identified was the lack of clarity on who "owns" the relationship with industry—schools, community engagement, employability, or leadership.

Recommendation: Add a governance model with roles, responsibilities, and decision-making workflows to reduce duplication and fragmentation.

Include tools for sustaining relationships — not just initiating them

The current tool focuses heavily on starting employer engagement but less on maintaining it over time.

Recommendation: Provide templates for partnership agreements, communication plans, meeting schedules, and follow-up processes.

Support cross-campus coordination

Institutions with multiple campuses reported that partnerships are often fragmented.

Recommendation: Add a mechanism to help institutions consolidate and track engagement efforts across departments and regions.

Clarity on how to build relationships

The information given does not shed light on why building relationships is being done at this stage.

Recommendation: Identifying key stakeholders and how to build a strong partnership with each of them should be done from the very beginning of a given relationship.

4. Stage 4 — REIMAGINATION (Strategic Redesign / Future Alignment)

Purpose: Use insights to rethink programs, partnerships, and institutional strategy.

Key Recommendations

Strengthen conceptual clarity

Participants noted that this stage was the least understood and required more practical explanation.

Recommendation: Add concrete examples of what "reimagination" looks like—e.g., redesigning full programs, adopting new delivery models, creating dual training, building microcredentials, etc.

Provide decision-making tools for curricular and institutional change

Institutions struggle with translating insights into actionable reforms.

Recommendation: Include prioritization matrices, feasibility assessments, and guidelines on how to integrate evidence into curricular review cycles.

Address resistance to change as a structural challenge

Participants emphasized that innovation requires cultural and managerial transformation.

Recommendation: Provide guidance on change management strategies, communication plans, and stakeholder alignment approaches to support institutional adoption.

Cross-cutting recommendations (across all stages)

- Standardize data storage and reporting
    - Participants want a unified digital platform or template to consolidate findings across all stages.
- Provide capacity-building resources
    - Training, toolkits, mentorship, and technical assistance were consistently requested.
- Offer examples from other countries or institutions
    - Case studies and success stories would help illustrate practical implementation pathways.
- Clarify the expected cycle and timeline
    - Institutions need guidance on how often to repeat each stage and how to integrate the tool with their existing planning and curricular processes.

In Summary

Participants viewed the TVET–Industry Mapping Tool as **highly valuable**, but they emphasized the need for:

- greater clarity,
- stronger methodology,
- more structured guidance, and
- better institutional governance mechanisms
- all of the above to ensure consistent and sustainable implementation.

12. Additional Recommendations for Improving the Tool (Based on Participant Feedback)

In addition to the recommendations already presented, participants highlighted several areas where the conceptual framing and operational guidance of the tool could be strengthened:

1. Broaden the concept beyond "industry"

Participants emphasized that the tool should avoid referring exclusively to "industry" and instead adopt a more inclusive term that also covers **public-sector institutions, NGOs, civil society organizations, and other non-productive sectors**.

The term *"productive sector"* was suggested as a more comprehensive and representative alternative, ensuring that the mapping process reflects the full ecosystem in which TVET graduates are actually employed.

2. Redefine the concept of "minorities"

The current wording in the tool appears to focus primarily on Indigenous groups, which may inadvertently exclude other minority populations.

Participants recommended **broadening and redefining the category of "minorities"** to explicitly include groups such as migrants, ethnic minorities, women in non-traditional fields, and other historically underrepresented communities. It is understood that these are probably included but participants deemed it important to make it explicit because Latin American reality could be facing challenges that are more or less resolved in other areas of the world.

3. Reconsider the objective of engaging "companies that transform the environment"

The tool currently places emphasis on engaging enterprises that "transform the environment." However, most employers do not explicitly frame their operations in transformative terms.

Participants suggested revising this objective to ensure that **the majority of employers — those who directly hire interns and graduates — are not unintentionally excluded**, recognizing that these organizations play a critical and immediate role in TVET relevance and graduate employability.

4. Provide differentiated methodologies for each type of key actor (micro–meso–macro)

When identifying stakeholders, participants noted that the tool would benefit from **more specific engagement methodologies tailored to the different types of actors**:

- *Micro-level*: individual companies, SMEs, local employers
- *Meso-level*: sector associations, chambers, intermediary bodies
- *Macro-level*: ministries, public agencies, national councils

A tailored approach would strengthen the effectiveness of each stage and support institutions in adapting the tool to diverse governance and labor market contexts.

2 JET Education Services (South Africa) 2025

Date: 18, 20 and 22 November 2025
Location: South Africa
Facilitator(s): Ms Zaahedah Vally and Dr Andrew Paterson
Participants: Ms Kedibone Boka (South Africa), Mr Kelvin Enumah (Nigeria)

1. Workshop Overview

This report provides a summary of the TVET-Industry Roadmap project interviews conducted by UNEVOC JET Education Services in November 2025. These were arranged to introduce the first version of the TVET-Industry Mapping Tool, to present the aims of the project, and to conduct facilitated discussions with the participants, as guided by a set of key questions (below) that had been workshopped and developed by the UNEVOC NCI team.

The team experienced some challenges in setting up meeting arrangements with TVET Colleges. The team was able to secure interviews with two highly experienced consultants in the TVET institutional development field, one from South Africa and one from Nigeria, which presented an opportunity to obtain an additional national input from the African continent into this process.

Two participants met with the South African team in this exercise: one a Nigerian and the other a South African who were met independently. The discussion with each participant and their inputs are captured in this summary. At this stage the focus was on capturing the views of the experts on how they envisaged the Roadmap might be received and implemented by TVET institutions in each country rather than to compare country responses.

2. Key Discussion Points & Feedback

Consideration 1: Usefulness of the Tool

The participants foresaw that once successfully implemented, the 'Mapping Tool' would be potentially useful for TVET institutions along a number of dimensions including: curriculum improvement, through supporting identification of channels for facilitating industry feedback, improving capability for graduate tracking, and through eliciting updates to instructional content through engagement with workplaces. The Tool is seen to provide a framework for TVET lecturers and institutions to move beyond episodic review processes towards understanding labour market needs more dynamically.

Participants noted that there are current processes in Colleges including: offices committed to coordinating TVET-industry interactions, internship placements, and curriculum upgrading. There are differences between Colleges in how consistently these initiatives are being applied. The participants expect that the Tool would complement existing practices, and help to secure regularity and quality of data collection and mapping activities/processes.

They anticipated that improvements would be secured in: accessing labour market data, better curriculum responsiveness (reviews), stronger partnerships leading to better feedback loops in adaptive processes, and embedded lecturer-industry engagement. Put differently, that the Tool has the potential to embed complementary activities leading to better focused and effective interactions between TVET and industry.

Consideration 2: Current Industry Engagement

On existing engagement mechanisms between TVET and industry, activities seem to be quite varied: some TVET institutions have a functioning office dedicated to industry coordination and internship placements, some TVETs are approached by employers with requests for customised training leading to collaboration, nevertheless a high proportion of industry-TVET collaborations are prompted by individual lecturers.More of these relationships need to be institutionalised in host Departments.

According to the participants, in these conditions, the Tool has the potential to "unlock" internal collaboration across faculties and functions. At the institutional level a 'partnerships - coordination office' is seen as a natural institutional owner.

Consideration 3: Identifying Opportunities

Participants felt that the value of an 'ecosystem mapping' emerges from Steps 1 and 2 that can help lecturers develop better awareness and appreciation of for example: the broader employment context, applicable, transferable skills, and new or emerging work contexts in their fields of expertise

The sense of participants was that currently, many TVET institutions rely on feedback from interactions with industry most commonly through: the cycle of internship placements, student feedback, and employer consultations which generates a limited base of information from which to develop a systematic appreciation of current developments and opportunities.

Participants acknowledged that future preparedness would likely require TVET institutions to work towards developing more structured interactions with industry partners linked to improvements in data and information gathering that could support tracking of local trends. They noted that facets of the Tool can support this direction especially through application of relevant tools such as: PESTLE analyses and stakeholder mapping, to achieve better continuity and granularity of information gathering. This kind of initiative might give relative priority to the immediate needs for unpacking intelligence on the Green Economy and potential growth sectors.

Consideration 4: Partnerships & Challenges

Between the two participants the following opportunities were mentioned in discussion of mechanisms/modalities to support collaborative partnerships:

- Engaging and working with sector associations such as manufacturers' or cluster associations as entry points to local industry.
- Local government, municipal or industry forums are seen as relevant for engaging with local business networks especially with SMME firms.
- Approaching national UNEVOC Centres to contribute as national convenors. Some country centres may already have regulatory or training roles such as the NBTE in Nigeria.
- Working towards locally accessible SME-focused partnerships with appetite programs with mentorship, internships, and lecturer exposure to close the graduate-employment gap.
- Reference was also made exploring possibilities for multi-stakeholder partnerships that might include: a TVET College(s), private training providers, funders and occupation specific employer groups.

In response to the presence of challenges, participants referred to structural challenges including: a need to incentivise lecturers to engage in industry work and lecturers experiencing heavy workloads, leaving little time to implement positive curriculum feedback loops with employers.

Practically, the participants noted that TVET-industry mapping would make demands on financial resources related fieldwork and travel, and time resources related to coordination, management, research and analysis involved in the mapping process. Another factor relates to TVET-industry partnerships depending on individual staff. Partnership maintenance by the TVET College would be required to ensure continuity of programs. The participants expressed concerns relating to fragmented TVET data systems and a need for institutions to improve functionality of their digital platforms for information/knowledge sharing. Lastly, based on their experience the participants observed that M&E and impact study activities are at risk of underfunding.

One participant, referred to 'silo mindsets' among TVET staff characterised by a limited appreciation of the value of cross-institutional collaboration viewing their institution as independent rather than as a 'networked' agent within a broader eco-system. Likewise, industry actors may have low awareness of the value in engaging with TVET training institutions as partners.

Consideration 5: Adoption Factors

The participants made the following suggestions for improving adoption and to support positive responses to and engagement with the Roadmap process.

Positive enablers mentioned included:

- Generating clear incentives for lecturers and/or their partner units.
- Identification of a dedicated "owner" of the Tool within the TVET institution.
- Use of high quality guidance materials (e.g. checklists, videos, walkthroughs).
- Alignment of the Mapping Tool process with TVET institution's strategic planning cycles
- Funding support (e.g. stipends, travel costs, meeting costs, time allocations of lecturers).

Consideration 6: Additional Feedback

Further ideas and suggestions from the participants for incorporation in the mapping process were:

- To install program elements that recognise and address skills needs in the informal economy as well as critical livelihood skills needs in local communities making these explicitly part of the Roadmap program.
- The participants argued that it is important for the program to recognise sometimes wide institutional differentiation between colleges in their historical evolution and to take these into account through promoting cross-college collaboration.
- More specific suggestions for improving the tool included: a need to clarify the positioning on each TVET institution with respect to their national vs local skills development mandates and specialisations; to integrate questions related to digitalisation and AI processes; incorporate global supply-chain scanning; and bring in livelihood-oriented short programs
- Topics not covered but noted as worth following up included: the lecturer pipeline and opening pathways for industry professionals to teach part-time.

3. Summary of Insights

Discussion with the participants brought out the following insights:

- Approval of the strong potential of the Tool as a strategic and operational mechanism for linking curriculum, partnerships, and labour market intelligence.

- The need to emphasise the importance of recognising that TVET institutions exist in different contexts so that the tool will have to allow flexibility for implementation in different circumstances. For example, TVET colleges in a system will likely be at different levels of readiness.
- Participants emphasised the critical importance of the quality of internal collaboration and for the TVET institution to take ownership of this process.
- The involvement of SMME enterprises is seen as highly important to expand the reach of the program and its benefits to employers and students/graduates beyond large corporations.
- That data generation and engagement with industry is foundational to build confidence in and commitment to future-oriented training, or enterprises will be inclined to focus too insistently on immediate skills needs.
- Through drawing in real feedback from working enterprises the Roadmap has potential to support a shift from 'role-based' towards a competency-based training modality.

Additional aspects that surfaced in discussion with the participants but because of time constraints could not be discussed more fully are:

- National/sector-level coordination and supply nationally generated data through the national statistical agency (e.g. Labour Force Surveys, Census data, etc.) describing each TVET institution's local economic, household income and employment conditions as basic layers for institutional level ecosystem mapping, if available.
- For future reference to consider incorporating the Tool within TVET performance appraisal systems.

4. Recommendations

The participants touched on the following options as recommendations.

- Support implementation by creating accessible multi-media guidance materials such as videos, short examples, and templates.
- Develop an institution-level structured self-assessment checklist for each step of the Roadmap process (e.g. readiness, existing practices, data availability).
- Provide clear time guidance for each step with minimum/maximum time windows for example.
- Identify and support institutional "owners" of the Tool—possibly partnerships offices.
- Emphasise SME-focused engagement strategies (e.g. mentorships, internships) and facilitate partnership interactions at local level.
- Encourage country ecosystem-level mapping to supplement individual college mapping.
- Integrate incentives into HR systems (performance management, recognition).
- Pilot with one or two colleges to validate sequencing, timeframes, and capacity requirements.
- Facilitate cross-college collaboration sessions to reduce isolation of the planning process.
- Define adoption metrics (for example: MoUs with employers, placements, mentors activated, green-skills courses launched) to make the process measurable.

3 UNEVOC Nottingham (UK) UNEVOC School of Education University of Nottingham 2025

1. Workshops Overview – UNEVOC Nottingham

This report provides an overview and summary of the TVET-Industry Mapping Tool workshops and interviews conducted by UNEVOC Nottingham in October-November 2025. These were arranged to present the aims of the project, to introduce the first version of the TVET-Industry Mapping Tool, and to conduct facilitated discussions with the participants, guided by key questions developed by the broader UNEVOC NCI team.

The Nottingham team led the following workshops and interviews:

- **Interview with Projects and Partnerships Manager, Further Education College, Midlands UK:** Face-to-face meeting to share the tool, and gain initial feedback, and explore potential relevance to the college.
- **Workshop with TVET lecturers in South Africa:** Participants were all TVET lecturers currently taking the Advanced Diploma in TVET, at the University of Kwazulu-Natal (This was co-led with NCI Partner, UNEVOC JET). We initially presented the tool and the rationale for the project, and facilitated a group discussion to gain initial feedback and explore the potential relevance to their individual colleges and the TVET sector in South Africa.
- **Workshop with TVET college managers in South Africa:** This meeting consisted of a group discussion: we initially presented the tool and the rationale for the project, and facilitated a group discussion to gain initial feedback and explore the potential relevance to their individual colleges and the TVET sector in South Africa.
- **Interview with course curriculum managers at Higher Colleges of Technology (HCT), United Arab Emirates:** Dr. Sriya Chakravarti and Dr Khwaja Khan from the UNEVOC Centre at the Faculty of Business, HCT expressed an interest in connecting with our UNEVOC NCI TVET-Industry Mapping Tool project and kindly agreed to be part of the formal review of the first draft of the tool. This was an online meeting, where the tool was shared, the ideas behind it explained, and initial feedback was gathered about the tool and its potential relevance to the HCTs and the UAE more broadly.

2. Overview of Review & Feedback

This section provides a synthesis and overview of the feedback received across the four workshops/interviews. More detailed reports from the workshops and interviews can be found in Section 3.

Overview

The TVET-Industry Mapping Tool is designed as a **process** rather than a standalone instrument. It aims to **facilitate creative thinking, systemic innovation, and structured partnership development** within the constraints of existing TVET governance frameworks. This briefing synthesizes stakeholder feedback on its **usefulness, current practices, challenges, adoption principles, and additional considerations**.

1. Usefulness of the Tool

- **Facilitates Innovation**: Creates space for colleges to think beyond compliance and explore new partnership models.
- **Diagnostic and Strategic**: Identifies gaps and opportunities across the system, not just at programme level.

- **Clear Roadmap**: Four-step process offers structured guidance for colleges and lecturers.
- **Supports Multiple Roles**:
    - **Leadership**: Strategic relationship building.
    - **Lecturers**: Identifying gaps and supporting Work-Integrated Learning (WIL).
- **Contextual Relevance**:
    - **UK**: Aligns with statutory duty for labour market responsiveness.
    - **South Africa**: Addresses systemic barriers and resource constraints.
    - **UAE**: Complements strong government-led vision for employability and innovation.

2. Current Practice in TVET-Industry Engagement

UK

- Employer engagement led by directors; lecturers rarely involved.
- Industry Advisory Boards common.
- Limited capacity for tracking graduate employment outcomes.

South Africa

- System-level mechanisms failing; engagement mostly at leadership level.
- Alternative work experience used where industry is lacking.

UAE

- Strong government support; unified vision for employability.
- National platforms track internships and job placement.
- Programmes benchmarked to ILO codes.

3. Challenges and Barriers

General:

- Policy complexity and accreditation constraints limit flexibility.
- Funding shortages for partnership implementation.
- Market demand issues (e.g., green skills without employer uptake).
- Structural disincentives to innovation.
- Lecturer awareness gaps; student subsistence barriers (transport, food).

South Africa-Specific:

- Private sector reluctance; lack of incentives.
- Misalignment between Sector Education and Training Authority's and colleges; outdated equipment.
- Cultural resistance to change; entitlement attitudes.
- Policy gaps on WIL and compliance; union-driven conditions complicate reforms.

4. Adoption Principles and Adaptations

- **Integration with Policy:**
    - Tool must complement formal partnership strategies and audit requirements.
    - Leadership and Structure:
    - College leaders should drive adoption, supported by a working committee (HR, partnerships, academics).

- **Adaptations by Step:**
    - Step 3: Add practical ideas for relationship building (e.g., industry awards evenings, lecturer inclusion, communication strategies).
    - Step 4: Clarify employer and student expectations upfront.
- **Operational Adjustments:**
    - Reduce lecturer workload for partnership monitoring.
    - Use tool to share resources across colleges and leverage sector-specific innovation.

- **Contextual Flexibility:**
    - Adapt for rural realities (South Africa) and sectoral mismatches (UAE).
    - Encourage creative thinking beyond traditional placements and exams.

5. Additional Considerations

- **Broader Definition of Industry:**
    - Include state departments, universities, NGOs, and public sector entities.
- **Alternative Pathways:**
    - Recognize digital work placements and entrepreneurship as legitimate WIL options.
    - Link TVET programmes to incubator spaces for (rural) entrepreneurship.
- **Student-Centred Approach:**
    - Address subsistence needs (transport, food) for off-campus exposure.
    - Engage students as active representatives in partnerships.
- **Policy and Recognition:**
    - Advocate for official recognition of remote/digital work as valid WIL.
    - Align with global trend toward applied learning across all qualification levels.
- **Global Applicability:**
    - UAE interviewees felt that the four-step roadmap was relevant across diverse contexts such as India, United States and UAE.
- **Sustainability:**
    - Emphasize ongoing relationship maintenance and quality graduate outcomes.

3. Workshops Discussion Points & Feedback

This section provides a summary of responses arising from the UNEVOC Nottingham workshops for each of the Consideration topics.

Consideration 1: Usefulness of the Tool

Overall Value of the Tool

- **Creates space for innovation**: Stands alongside statutory and policy-driven processes, enabling creative thinking and identifying opportunities for innovation despite structural barriers.
- **Diagnostic and strategic**: Not just a checklist—offers insight into gaps, needs, and system-wide connections within TVET colleges.
- **Roadmap clarity**: The four-step process provides a clear, structured approach for those entering the TVET-industry partnership space.

Key Functional Benefits

1. **Industry Mapping & Data Gathering (Step 1)**

- Helps colleges understand local industries, what they do, and how to connect.
- Useful for identifying gaps and targeting specific sectors.
- Supports colleges in clarifying their offerings and aligning with community needs.

2. **Innovation & Lecturer Engagement**

- Encourages TVET lecturers to think beyond compliance, bridging the TVET-industry gap.
- Supports workload planning, WIL development, and student support strategies.

3. **Strategic Partnerships (Step 3)**

- Most critical at management level: identifying strategies to build relationships.
- Promotes collaborative forums rather than isolated outreach.
- Enables colleges to move from unstructured to formalized partnership development.

4. **System-Wide Connectivity**

- Highlights communication gaps within colleges (e.g., lecturers not receiving feedback from boards).
- Positions colleges to think beyond micro-level teaching toward systemic innovation.

Country-Specific Insights

UK

- Tool aligns with policy emphasis on employer engagement and innovation in TVET.
- Supports colleges in moving beyond compliance toward strategic partnerships and curriculum relevance.

South Africa

- Addresses structural barriers and resource constraints in TVET.
- Complements existing initiatives and tools to support TVET lecturers, reinforcing lecturer roles in partnership development.
- Useful for campus managers and HR practitioners to identify needs and build industry relationships.

UAE

- Particularly valuable in contexts with uneven industry distribution (e.g., rural campuses vs. industrial hubs in Abu Dhabi/Dubai).
- Relevant where state and business support is strong, supports unified vision by offering clarity and standard operating procedures for partnership building.

Additional Highlights

- Helps colleges assess strengths and weaknesses.
- Encourages thinking about the "product" offered to students—content, process, and support.
- Illuminates opportunities for breakthrough by grounding mapping in local realities.

Consideration 2: Current Industry Engagement

Country-specific insights:

UK

- **Statutory Duty**: FE colleges are legally required to be responsive to labour market needs.
- **Employer Engagement Leadership**: Managed primarily at directorial/leadership level through structured programmes and activities.
- **Industry Advisory Boards**: Common mechanism for maintaining employer input.
- **Lecturer Role**: Limited due to time constraints; lecturers rarely engage directly in partnership development.
- **Student Tracking Challenges**: Success measured mainly by grades; limited capacity and tools for tracking transitions to meaningful employment.

South Africa

- **System-Level Support Gaps**: Existing structures intended to align curriculum and workplace needs are failing.
- **College-Level Engagement**: External stakeholder engagement is mostly handled by college leadership, not lecturers.
- **Alternative Work Experience**: Where traditional industry is lacking, colleges explore options like road maintenance or shadowing administrators.
- **Lecturer Involvement**: Minimal in partnership development, despite policy emphasis on workplace alignment.

UAE

- **Government-Led Approach**: Colleges operate under strong government support and unified national vision for employability and innovation.
- **Position of Power**: Ability to influence partnerships and ensure graduates are employment-ready.
- **Curriculum Expectations**: Must be innovative and industry-relevant; strong emphasis on graduate readiness.
- **Unified Vision**: Multiple ministries collaborate to provide pathways (certificate → diploma → bachelor's) and employment opportunities.
- **Business Engagement**: Framed as a win-win but driven by national priorities; businesses align with government objectives.
- **Global Talent Strategy**: Includes initiatives like golden visas to attract skilled expatriates.

Consideration 3: Identifying Opportunities

Existing Practices

SA/UK: Partnership Strategy and Governance

- All colleges are expected to have a **partnership strategy**, which is seen as essential for mobilizing the college toward student development.
- Internal audits check for partnership policies and strategies, so governance aspects are covered at a macro level.

UAE: Co-Designing Curriculum with Industry

- Colleges are engaging in **curriculum co-design** with industry partners to ensure content is both innovative and socially valuable.
- This aligns with **Step 3 of the tool** (building forums and strategic collaboration).

- Audits by external bodies help in the process of reviewing and identifying course offerings and relevance to the labour market.
- Colleges are supported by government to formalise processes for identifying college strengths, available jobs, and work-integrated placements.
- UAE example: A government-run portal registers students, allows them to express industry preferences, upload portfolios, and track internships. The platform also facilitates job applications post-graduation and links programmes to various international and national bodies.

Innovation in TVET

- Innovation is embedded in curriculum design and programme updates, but practices vary by context.
- Benchmarking against international standards (e.g., ILO codes) is used in UAE to ensure global relevance.
- There is recognition that innovation must be systematic, not ad hoc.

Consideration 4: Partnerships & Challenges

UK-Specific Challenges

- Challenging to keep TVET lecturer knowledge up to date, especially regarding policy, due to time constraints.
- Funding - colleges need to allocate budget and resources for partnership implementation.
- There are elements to the system that structurally disincentives innovation.
    - Difficult for colleges to innovate within established accredited and quality assured programmes and without risking courses with high achievement/pass rates.
    - Market need and demand - it is difficult for TVET colleges to innovate e.g. in green skills if the demand is not there from employers.
    - Market share among colleges in terms of students and courses and viable connections to industry.

South Africa-Specific Challenges

- **Private Sector Reluctance**
    - Perceived student attitudes and compliance burdens deter engagement.
    - Lack of incentives for businesses to partner with TVET colleges.
- **Difficulty Securing MOUs**
    - Industry cites time constraints and insufficient benefits.
- **Systemic Misalignment**
    - Disconnect between SETAs and colleges in managing placements and stipends.
    - No clear national policy mandating industry placements or addressing student support (travel, stipends).
- **Resource and Infrastructure Gaps**
    - Outdated equipment; colleges described as “museums of old machinery.”
    - Limited autonomy for colleges to fundraise or innovate.
- **Cultural and Attitudinal Issues**
    - Resistance to change among lecturers and students; entitlement culture.
    - Curriculum needs to address workplace attitudes and work culture.

- **Policy and Governance Gaps**
    - Lack of clear directives on WIL, incentives, and compliance.

- Union-driven conditions may undermine holistic approaches envisioned in the tool.

UAE-Specific Challenges

- Inconsistency in diploma programme provision (programmes offered for one or two years and then dropped). Need to be able to update and innovate within established programmes.
- Lack of industry in the area where campuses located. While HCTs cover the whole country, industries mostly concentrated in Abu Dhabi, Dubai and Ras al Khaimah (major port city), with far fewer opportunities outside these areas.
- Difficulties finding suitable industries for students to move into. Need to match provision to the local context before stabilizing the programmes.
- Need to encourage and promote self-employment, entrepreneurship, remote working and digital/online businesses, including through provision of incubators.
- Wider recognition needed that digital business and remote working are 'real work', including from government agencies.

Consideration 5: Adoption Factors

Nature of the Tool

- It is **not just a tool but a process** that must fit within existing TVET systems, policies, and institutional mechanisms.
- Designed to **facilitate creative and innovative thinking** at college and lecturer levels, complementing formal partnership strategies.

Adoption Considerations

- Alignment with Policy and Governance
  - Colleges must first have a formal partnership strategy (as required by national policy and audits).
  - The tool can then be used as an informal mobilizing approach within that broader strategy.
- Leadership and Structure
  - Lead responsibility should rest with college leadership, supported by a working committee (partnership, HR, academic staff).
- Lecturer Role
  - Lecturers act as subject matter experts, identifying gaps and opportunities for student placements and feeding this into campus and central processes.
- Student-Centred Approach
  - Keep students at the centre—personalized support and clear expectations are critical.

Adaptations Suggested

- Step 3 (Building and Maintaining Relationships)
  - Include practical ideas for engagement:
    - Replace ineffective events (e.g., breakfast meetings) with successful ones like industry awards evenings (cost-effective, student involvement in catering/admin).
    - Involve lecturers in industry engagement events.
    - Develop communication strategies for sustaining partnerships.
    - Address challenges when student quality is questioned—requires multi-level commitment.

- Step 4 (Setting Expectations)
    - Clarify roles and responsibilities for employers and students upfront.
    - Manage expectations: students may need to do tasks outside their training level; industry should not misuse students.
- Monitoring and Sustainability
    - Assign staff to monitor workplace processes; reduce lecturer workload to enable participation.
- Contextual Flexibility
    - Adapt for diverse contexts:
        - Rural colleges and informal sector realities (South Africa).
        - Industry mismatch issues in UAE (e.g., Ras Al Khaimah vs. Dubai sectors).
- Innovation Leverage
    - Use the tool to:
        - Encourage creative thinking beyond exams and placements.
        - Share expertise and resources across colleges.
        - Drive sector-specific innovation through national/regional groups.

Consideration 6: Additional Feedback

Conceptual and Strategic Considerations

- Broader Definition of 'Industry'
    - Should include state departments, universities, NGOs, community groups, and public sector entities (e.g., hospitals, clinics), not just private companies.
    - Informal sector engagement is limited due to regulatory and health/safety constraints for student placements.
- Alternative Pathways
    - Explore partnerships beyond traditional employers: NGOs, public sector, and digital platforms.
    - Recognize digital work placements and entrepreneurship as legitimate options (e.g., freelancing, influencer roles, remote work).

Student-Centred Issues

- Role of Students
    - Students can act as college representatives in partnerships.
    - Students need clarity on responsibilities and expectations to sustain industry trust.
- Subsistence Needs
    - Address practical barriers: food, transportation, and costs for off-campus industry exposure.
- Self-Employment and Digital Economy
    - Include pathways for students to monetize skills via platforms like Fiverr or YouTube.
    - Encourage entrepreneurial thinking and link to incubator spaces for rural areas.

Relationship Building and Maintenance

- Starting Point
    - Guidance needed on how to initiate relationships with companies.
- Sustainability
    - Maintaining partnerships is critical; requires ongoing engagement and quality graduates who meet industry needs.

- Win-Win Framing
    - Industry must see clear benefits; dialogue and marketing strategies are essential.

Policy and Recognition

- Legitimacy of Digital Work
    - Need official recognition of remote/digital work as valid WIL.
    - Suggest UNESCO-UNEVOC and national ministries redefine parameters for "real work" to include digital spaces.
- Applied Learning Trend
    - Global shift toward applied programmes across all qualification levels (diploma to PhD).

Tool Adaptability

- Global Relevance
    - Four-step roadmap seen as adaptable across contexts (India, US, UAE, etc.).
- Local Context Matching
    - Tool should accommodate mismatched industry presence (e.g., UAE's sectoral differences, rural South Africa).
- Innovation Leverage
    - Use roadmap to help informal businesses transition into formal partnerships.
    - Encourage sector-specific innovation through shared resources and incubators.

4: Key Recommendations

In this final section we summarise the key recommendations arising from the UNEVOC Nottingham workshops and interviews.

- **Position the tool as a process within governance frameworks**, not a standalone mechanism.
- **Enhance Step 3 and Step 4** with practical strategies for relationship building and expectation setting.
- **Develop guidance for contextual adaptation**, including rural innovation and digital economy pathways.
- **Advocate for policy updates** to recognize non-traditional work placements and incentivize industry engagement.
- **Invest in capacity building** for lecturers and partnership committees to operationalize the tool effectively.

4 RMIT University (Australia) 2025

Location: Teams
Facilitator(s): Seth Brown and Scott Phillips
Participants: One a senior educator and program manager, and the other a teacher trainer

1. Workshop Overview

Purpose of Workshop: Brief summary of the workshop's aim, referencing the TVET-Industry Mapping Tool and its relevance.

We created a video explaining the TVET-Industry Mapping Tool and its relevance to participants which included a detailed discussion of the four steps of the Tool and its methodology. Participants also received the TVET-Industry Mapping Tool infographic, the resource and a participant information sheet (PIS) explaining that the tool was designed to assist institutions in identifying, mapping, and strengthening existing and potential connections with industry and the world of work. The video aimed to present and discuss this draft tool, and later in an interview gather informed feedback, and collaboratively explore its applicability and relevance within different institutional contexts. In the PIS, participants were informed that the data collected in the interview would be used for research purposes and that the insights gained from this would contribute to the refinement of the tool and to a subsequent report for UNESCO-UNEVOC. Additionally, we sought to identify opportunities for ongoing collaboration between our TVET institution and the University of Nottingham. The participants included:

- Participant 1: a senior educator for three construction TVET programs (for example, Diploma of Building and Construction, the Advanced Diploma of Building Design, and the Advanced Diploma of Building Surveying) at a university which is a dual sector institution that runs both TAFE and higher education courses.
- Participant 2: a teacher trainer at metropolitan TAFE.

2. Key Discussion Points & Feedback

Please use this section to compile a summary of responses arising from your workshop for each of the Consideration topics below.

Consideration 1: Usefulness of the Tool

- Existing mapping processes mentioned
- Challenges identified
- Potential for complementing current practices

There are existing mapping processes mentioned, for example, every TAFE will have their own version of their industry engagement processes such as an Excel spreadsheet on SharePoint or the mapping tends to be done on the training packages themselves on training.gov.au for each subject.

Participant 1 identified challenges with the changing building regulations and keeping up with the new techniques and how they can integrate industry 4.0, as Australia is really lagging in the field of construction compared to other jurisdictions, especially Europe. Europe is at industry 4.0 and Australia is still sitting at industry 2.0. There is a working group led by a polytechnic that is looking at industry consultation and industry challenges addressing this. There are also curriculum challenges in localising the national curriculum as most

of their students will not get jobs in “big massive companies” and “new migrants with challenges with literacy and numeracy”.

There are barriers in that mapping tends to be about compliance, a tick-the-box exercise where stakeholders are chosen based on the perception that they will tell TAFEs what they want to hear. Participant 2 stated that “the tool helps to interpret and understand direct links between program objectives and industry expectations because often there's a practical misalignment between them. In Participant 2’s experience, training providers tend to focus on compliance for the sake of compliance. The paperwork tends to say it's been done, but the reality of the extent of it being done is limited in cases that this participant has experienced. Further there are other barriers such as not having funding or time. “To me it comes across as excuse making. We don't have the time and we don't have the funds to do these things. It's like, well, that's actually the sector that you operate in”.

There is the potential for complementing current practices. For example, participant 1 mentioned that the Tool helps their institution track what’s happening with their validation in meeting the Australian Skills Quality Authority (ASQA) industry consultation requirements especially since they have been updated (latest 2025 standards). They also have an industry obligation and have to be aligned with and help to achieve several high profile TAFE policies For example, they have a TVET industry engagement procedure in their policy library that has requirements which are straight from ASQA that regulates what teachers are expected to deliver. They also have three formal industry consultations a year and round tables every two months that involve multiple stakeholders including clients in construction and industry. Further, they have industry meetings six times a year with Victorian building and construction educators and industry through a network group which they created.

For Participant 2 there is scope for the Tool to complement existing processes. “I'd like to say yes, it's a bit of an idealistic point of view. I think prior to that actually taking place, there would need to be a cognitive shift within management decision makers to actually use it for the good that it could do to step outside the compliance for the sake of the compliance box. Why do we do it? Because we need to be compliant. But what's the goal? I think if that shift occurs, then the tool would be advantageous because it gives a lot more detailed data to make those connections and not only between the organisations and the industries that they're serving with various qualifications and skill sets and training and all those things, but between different TVET organisations as well. And gosh, wouldn ‘t it be lovely to see some sort of international connection as well, particularly when it comes to recognising qualifications across international borders instead of saying ‘I've got somebody I mentor and they were quite surprised that they're a qualified carpenter in the UK and they've come over here and oh, your qualification's not worth anything. You have to re-qualify even though it's 80% the same. You know, the codes are worded slightly differently as far as the construction industry is concerned, but effectively they do much the same thing. So she went through a couple of years process of re-qualifying to still be able to do the job she was already skilled and experienced at. And while that's only sort of one anecdote, I imagine there's probably many examples of needing an improved recognition much more immediately”.

Consideration 2: Current Industry Engagement

- Description of current engagement strategies
- Resources or teams involved
- Suggestions for who might benefit from the tool

The participants have engagement strategies and resources and teams involved. For example,Participant 1 is involved with regulators, builders and others and they have three round tables within our department that

look at the job market. There are also outreach to industry conferences, they have a table at job fairs where students can come and get information regarding their courses, and a mixture of formal and ad hoc processes. For instance, they might meet someone at a conference or bring someone in from industry who will help them write their industry forms. "Industry forms" can refer to a variety of standardised documents used within specific sectors, such as standard contract forms, regulatory forms, or information-gathering forms. These forms standardise data collection and help manage operations, compliance, and agreements by creating a consistent format for information like client details, incident reports, or contract terms.

There are several stakeholders who would benefit from the tool including members of their TAFE networks, TAFE Directors Australia (TDA), the Victorian TAFE Association, the state government office of TAFE coordination and delivery (the Office of TAFE Coordination and Delivery OTCD).

Consideration 3: Identifying Opportunities

- Current methods for understanding work and industry
- Anticipated future changes
- Relevance to green economy or growth sectors

The current methods of public TAFE providers for understanding work and industry involve industry consultations to develop closer relationships between industry and TAFE. According to participant 1 there is a need for closer relationships between TAFE and industry because “there's extremely low rates of people finishing courses who actually get employed in them…because students always say to us, what do I do? I want a job. I'm doing this to get a job. And then we're like, well, off you go. See you later. Uh, good luck.” The TAFEs give two years after students graduate from TAFE in which they receive “job ready help”. This involves providing them with support in preparing their resumes and doing job interviews. This is different to the trades because students in apprenticeship programs already have the job. There are, however, cadetships for all of the roles in building design. In these programs there are more graduates who get jobs because of the skill shortages. “It's hard, especially because a lot of our students have English as a second language and that's why a lot of them end up just still working in the West. We have forums with past students, and in these they tell us that a huge amount of them are working in culturally sensitive organisations in the West where their proficiency in languages other than English is valued. We can link our building surveying students to opportunities in that sector, because the region where we are located has one of Melbourne's largest building surveying companies”.

Participant 2 noted that there are problems with internal bias and how industry is defined. “How does the institution engage with industry and job markets? Well, paperwork generated says it does. However, the organisation often assumes that it is actually representative of industry and this is particularly so with TAFE, because you know, particularly with the political landscape coming out of Canberra and the like, TAFE is at the heart…strangely enough, not students or the industries that it's supposed to serve”.

For participant 2, there was an internal bias in the application of industry consultation to genuinely connect with businesses and organizations within the industries. “So because of that bias that somehow TAFE represents industry. Despite that the majority of students go to all the various private ones, although I see that shifting with the free TAFE imperative at the moment. But I think that problem is pronounced by the various government agencies, they seem to have very cleverly defined who industry is and who represents industry. And looking at the list of names, there was a distinct lack of actual organizations in those industries. It tended to be ministers and, various people who had opportunities to gain from government contracts that pay money to basically say, ‘hey, we actually agree with the perspective coming out of the government, please pay us more money’. You know, the very short version of the story. But yeah, it was very interesting

to see a definition of industry that actually limits genuine consultation to say who they are and who's invited to the table, and which surprised me. The table doesn't seem to have people from organizations that are actually in industry, which seems to be avoiding the point of what industry consultation is and to get to the point I'm making. I think that structure federally in the government side trickles down into the various organisations who happen to be very agreeable with those perspectives because uh, being agreeable tends to result in funding being made available".

TAFE's do anticipate future changes in work in industry over the next 5 to 10 years with more regulations and changes in technology with artificial intelligence (AI). Participant 1 stated "The fact that you could do more consultations and get different perspectives is going to be invaluable because it would save us a lot of time and it would go to someone like me and my manager who's responsible for all of the construction at the university/TAFE". This way TAFEs could prioritise limited funds.

The mapping tool can help with the green economy. Participant 2 stated "So definitely, you know, we talk about sustainability in classes, in classrooms every day with students, but having some sort of explanation of what that really means tends to be internalised within the institution without actually going out and saying, 'well, what does that mean to your organization? What does that mean to the many households that are out there? What are the options available?' You know, it's solar and wind but it's more than just solar panels and wind turbines. It's only a very small portion of what green initiatives are".

Consideration 4: Partnerships & Challenges

- Challenges faced (e.g., resources, policy)
- Current partnership strategies
- Interest in collaboration with UNEVOC Centres

The TVET industry mapping tool can support the development of innovative partnerships or address challenges. For example, for participant 1, TAFEs could "cherry pick and pick and choose" what elements of that they want to put into the training package when we design assessments".

Participant 2 reported how this would break off the internal bias. "Oh gosh, it really would push that agenda, wouldn't it? This whole, uh, again, extending from that, breaking that internal bias of, you know, our stuff is the best because we are the best. It's like, well, according to what measures? Oh, we just think we are'. Uh, having this data would be really telling and haven't established that knowing for at least 20 years that we're in a global market and these TVET sectors are supposed to be serving those kinds of industries that are heavily globalised in many cases and yet fail to globalise their own data collection and design of training materials and provide that service to students. It astounds me. I think the tool can help qualifications in various programs transcend international borders which means nations can then share a broader workforce based on the needs of the now and the projected needs of the future as to, 'hey, you know, we need more roof carpenters over here, but we've got too many mechanics. We'll send you mechanics because you need them and we'll take your roof carpenters. We'll make opportunities known to graduates and facilitate these kinds of transfer opportunities in employment as well'".

Participant 2 was interested in collaborating with UNEVOC Centres. "Yes, yes. Sorry, that was a very rapid yes. But yes, look, from my perspective broadly in TVET. I sort of run from my own code of ethics if I notice problems in the sector and I'm not doing anything about it, that makes me part of the problem because I'm allowing it to perpetuate so I want to be involved in advancing it for the good in whatever way I can. So yes, for that reason".

Consideration 5: Adoption Factors

- Influencing factors for adoption
- Potential barriers and challenges

TAFEs currently explore partnership opportunities, including those for mutually beneficial collaborations, and local regional advocacy. TAFE partners would be interested in exploring possibilities to work with UNEVOC at RMIT. For Participant 1: “To use the TVET industry mapping tool. Yeah, yeah, 100%. No, I'm all on board. It's great. I like the idea behind it, I know a lot of TAFE teachers I've worked with who'd be interested in using it as well”.

For participant 2: “What factors would influence my institution's decision? There's kind of two things that come to mind. Personally, yes, bring it on, because let's actually use some real data to make effective decisions, sometimes revealing data. Bring it on. Let's look at that institutionally. I think I've really alluded to that before, that government organisations tend to be internally self-protective. The system likes the system to stay the way the system is. I think it's a matter of trying to find a way to break part of that chain to inject such a tool into use. I think it would be a case of trying to find key people in organisations like that who are actually willing to go there which of course risks reputation for them and you know, all those sorts of things. So, I think politically it's a huge challenge to have the tool injected. I think it would be beneficial in the long run, but it would certainly cause some waves, some uncomfortable ones in some positions.

Participants elaborated on potential barriers. For example, for participant 1, “You are going to come up against some walls where people are going to say, ‘I just don't. Why would I want more time to do more admin?’” For participant 2, the internal bias and fears of cuts to funding if the data shows that TVET institutions are underperforming. “Therefore, the organisations that are receiving the funding based on that agreement also agree so they can continue to get the funding. And look, I'm a fan of data-driven decisions. Sometimes if that data is uncomfortable, that's OK. I'd like to see it happen, but how to influence the TVET institution to use that tool? I can't really answer that. I don't know. I'd like to see it happen, but I think that question is exactly the challenge”.

Participant 1 mentioned other barriers such as neoliberalism and privatisation. “I've always been an advocate for the idea that it would be great if you actually had formal release to industry. Like, I've done a lot of research recently on TAFE in between 1985 and 1990 and there were people who would go for six months to industry and still get paid their teacher's salary. It all goes back to neoliberalism and privatisation. That's a massive barrier to, um, to all of our industry engagement”.

Consideration 6: Additional Feedback

- Other relevant comments
- Suggestions for improving the tool
- Topics not covered but deemed important

Another challenge concerns the implementation of the tool and how TAFEs can feed information back into the tool. For example, participant 1 stated “how you could comment back into the tool because at the moment I guess it's designed for us to receive the information in, but then how could the people who are engaging with the tool then feed back into it. In the past, when we've had shared curriculum across different institutes, you'll look at it and you'll say, oh, there was a mistake here, a mistake there. But then there's not been any function to go back that way, you know, to say, oh, hold on, I've learned something here. How do I give you what I learned down the track?”

For participant 2, “I would love to see how the trial of this tool actually works and what impacts it may have on student experiences and industry views. On the quality of qualifications, it seems like it's something that would take a significant amount of time to actually manifest region by region”. Participant 2 suggested testing the Tool in a number of small registered training organisations (RTOs). “It would be easier to test the tool using a number of smaller private RTOs who are, from a marketing perspective, even desperate to demonstrate that somehow they're different to whatever else is in the market. TAFE does this, but we do this and we've got this new thing and perhaps that's a way to influence sectors broadly is take the little fish, connect them together through the tool, generate some benefits out of that until the bigger fish and the government organisations actually start to take notice and go, ‘oh, hang on, there's something thing going on over here, maybe, maybe we should actually have a look’. I know that's my immediate thought on how to approach and platform the Tool throughout the sector. It's making case studies available for consumption based on what’s happening and really putting it out there, selling the story, marketing it really”.

3. Summary of Insights

- Key themes and patterns from the discussion
- There were four key themes including: the Tool complementing existing mapping processes; challenges and barriers to implementing the Tool; relevance to green economy; and ways to implement the Tool.
- Opportunities for further engagement or piloting the tool

There are opportunities for further engagement and for piloting the tool in the state of Victoria and Western Australia.

4. Recommendations

Suggested next steps for UNEVOC partners

- Apply for funding to leverage this project (Phase 1) for going forward with the implementation of the Tool in Phase 2.
- Follow-up actions based on findings

Contact other UNEVOC centres in Australia such as National Centre for Vocational Education Research (NCVER) and TAFE Directors Australia to become partners in Phase 2. The National Centre for Vocational Education Research (NCVER) is an independent, not-for-profit body owned by the Australian government, and state and territory ministers responsible for training. Established in 1981, it is Australia’s authoritative source of vocational education and training (VET) research and data. TAFE Directors Australia (TDA) is the peak national body incorporated to represent Australia’s 58 government owned Technical and Further Education (TAFE) institutes and university TAFE divisions, and the Australia-Pacific Technical College (APTC).

Contact other UNEVOC centres in our region, for example, The Education University of Hong Kong (EdUHK) and Fiji National University (FNU) to be involved with Phase 2:

The Education University of Hong Kong (EdUHK) is a higher education institution focused on teacher education and the professional development of educators and trainers. It undertakes research and development activities and offers teacher education and professional development programmes for other educational roles at subdegree, bachelor, postgraduate, diploma, masters and doctoral levels. The University is developing its profile to include Professional and Vocational Education - focusing on TVET teacher and trainer education and research into TVET. In that and its other fields of professional educational practice, it is recognised internationally as a leading regional university. The UNEVOC Centre specialises in technical and

vocational education, education for sustainability and a just green transition, and teacher education, research and development collaboration on the above areas in the region and beyond.

Fiji National University (FNU) FNU has campuses and centres at 40 locations throughout the country, running a total of approximately 300 different courses and programs with a staff complement of 2000 and a student enrolment of around 26,000.

5 University of Technology (Jamaica) 2025

Date: November 14, 2025
Facilitators: Professor Shermaine Barrett, Richard Samuels
Participants: 2 x Academic Vice Principals, 2 x Heads of Department, 1 x Head of School, 2 x Lecturers from 2 TVET Institutions, 5 x Senior Education Officers of the Ministry of Education, Youth, and Information TVET.

1. Workshop Overview

Purpose of Workshop: To evaluate the TVET Industry Mapping Tool (Roadmap)

Summary of the workshop.

TVET colleges consistently face challenges in connecting to and partnering with local industry, whether in the form of work-based learning for students, professional development for TVET lecturers, curriculum reform, or employment opportunities for TVET graduates. The TVET-Industry Mapping Tool is designed to help TVET institutions understand the nature of the challenges they face in their environment and to build bridges with industry and other key stakeholders. This practical mapping tool is geared to enable TVET institutions to identify real and potential connections with industry. It also seeks to be flexible and adaptable to different TVET–industry contexts, facilitating its application in diverse local realities.

The objective of the workshop was to evaluate the feasibility and usability of the TVET–Industry Mapping Tool. Participants were engaged to explore each of the 4 Steps of the mapping tool, identify barriers and enablers, discuss alignment with college functions, and co-create this tool.

2. Key Discussion Points & Feedback

Consideration 1: Usefulness of the Tool

Summary of participant responses

The TVET mapping tool is a strategic way to connect training programs with real industry needs. It would:

- Reveal current and future industry skill gaps, show where existing programs work or need upgrading, and highlight opportunities for innovative programs.
- Support curriculum alignment to industry standards, giving a structured, systematic way to design, evaluate, and report on programs.
- Strengthen collaboration with industry—through partnerships, internships, advisory groups, and tailored interventions—so training stays relevant to the labour market and national economic goals.
- Help institutions plan for change, benchmark performance, and ensure programs reflect best practices and broader economic agendas.
- Provide a foundation for developing industry profiles, customized courses, and more informed program development and offerings.

Overall, the tool is framed as a practical bridge between what institutions teach and what the labour market needs, improving planning, partnerships, and program effectiveness. This aligns with

UNESCO'S broader emphasis on making TVET more responsive to evolving industries, as noted in recent discussions on enhancing the relevance of TVET and skills development. Source: https://www.unesco.org/en/articles/tvet-infuses-much-needed-dose-relevance-education

Existing mapping processes mentioned

The Labour Market Information System (LMIS) scopes the skill needs of the industry and acts as a job matching facility as well as a database of qualitative and quantitative information.

Since 2011, the HEART/NSTA Trust has been using Geographic Information Systems (GIS) to map training needs, identify underserved communities, and bring skills training closer to those who need it most.

Consideration 2: Current Industry Engagement

Description of current engagement strategies

The participants informed that their institution engage with industry through a wide network of partnerships, practical training pathways, data-driven research, and collaborative program development. Key approaches include:

1. **Direct Industry Partnerships**
   - Advisory Boards and stakeholder consultations
   - Collaboration through conferences, panel forums, and consultancy activities
   - Funding and sponsorship partnerships
   - Industry facility tours to understand operations and needs
2. **Work-Based Learning Opportunities**
   - Co-operative education
   - Industrial attachments/internships
   - Work experience programs (including in high schools)
   - Overseas work-and-study and earn-and-study programs
   - Teaching practicums
3. **Joint Curriculum and Training Development**
   - Discussing industry context and training needs with employers
   - Co-developing courses and delivering targeted training interventions
   - Using competency-based assessments aligned to industry standards
   - Involving industry stakeholders directly in program development and assessment
4. **Labour-Market Research and Monitoring**
   - Tracer studies to track graduate outcomes
   - Labour Market Surveys
   - Economic and Social Survey of Jamaica (ESSJ) reviews
   - Analysis of job-market trends, subject reports, and other survey data
5. **Ensuring TVET Relevance and Responsiveness**
   - Aligning school and institutional programs with real workforce demands
   - Using research insights for data-driven curriculum decisions
   - Supporting continuous improvement to keep programs current and in demand
6. **Suggestions for who might benefit from the tool**
   - The tool was seen to be beneficial to institutions, ministries of education and industry stakeholders

Consideration 3: Identifying Opportunities

Current methods for understanding work and industry

The TVET–Industry Mapping Tool helps identify opportunities by providing clear, data-driven insights into industry needs, skills gaps, and emerging job trends. It highlights key stakeholders and potential partners, maps relevant industries and workplaces for student engagement, and supports the design of work-based learning opportunities such as internships and job placements. The tool serves as a central database of labour-market information, enabling institutions to align training with real workforce demands, guide policy decisions, and recognize opportunities in both formal and informal sectors. Overall, it strengthens connections between TVET programs and industry by revealing where collaboration, training, and employment opportunities exist.

Furthermore, the mapping tool supports stronger TVET–industry alignment by providing structured, data-driven insights that reveal where opportunities exist for students, institutions, and employers. Specifically, it can:

1. **Identify Workforce Needs and Opportunities**
   - Pinpoint current and emerging training needs across sectors.
   - Forecast future job opportunities and guide program adjustments.
   - Reveal skills gaps that TVET institutions can address through updated or innovative programs.
   - Audit the range of employment opportunities, both formal and informal.

2. **Identify and Connect with Key Industry Stakeholders**
   - Highlight which industries, employers, and workplaces are most relevant for student placement and employment.
   - Identify key players by geographic location, making partnership outreach more targeted.
   - Reveal opportunities for stakeholders (employers, employees, training providers) to capitalize on market trends.

3. **Strengthen Work-Based Learning Pathways**
   - Support the development of:
     - Internships
     - Work experience programs
     - Industrial attachments
     - Site visits
     - Job placement partnerships
   - Provide a data base that helps institutions design work exposure opportunities based on verified industry needs.

4. **Improve Program Relevance and Responsiveness**
   - Align TVET programs with labour market demands and career pathways.
   - Ensure training remains culturally relevant and responsive to local and regional needs.
   - Show shared themes and multiple perspectives across different industries.

5. **Support Institutional Decision-Making & Policy**
   - Provide empirical data to support:
     - Policy adjustments where needed
     - Planning and resource allocation

    - Curriculum reform
- Enable data cross-pollination between training and labour market information systems.

6. **Provide Readily Accessible Industry Information**

- Serve as a centralized, updated database of industry intelligence.
- Provide consistent access to relevant market, workforce, and stakeholder information.
- Help institutions stay agile and responsive to changing economic conditions.

Overall Impact

The TVET–Industry Mapping Tool becomes a comprehensive mechanism that integrates labour market data, stakeholder insights, and industry needs to clearly show where opportunities exist for student engagement, partnerships, employment, curriculum development, and strategic growth.

Consideration 4: Partnerships & Challenges

Current partnership strategies

The TVET–Industry Mapping Tool supports innovative partnerships by creating a shared platform where multiple stakeholders can collaborate, discuss challenges, and exchange ideas. By identifying key actors within the TVET ecosystem and highlighting industry needs, the tool helps institutions and employers form strategic, mutually beneficial partnerships—such as sharing resources, offering relevant training, and ensuring programs remain current.

It also provides accessible, evidence-based information that guides strategic planning, supports policy decisions, and encourages collaboration around best practices. By revealing gaps in the market, the tool enables stakeholders to design creative solutions, modernize outdated programs or equipment, and focus on high-priority industry areas. It strengthens engagement across the ecosystem and helps organizations leverage direct benefits from improved coordination and collaboration.

Consideration 5: Adoption Factors

Influencing factors for adoption

An institution's decision to use the tool would depend on its alignment with the organization's strategic vision, philosophy, and goals, as well as the support of leadership. Key considerations include the tool's cost, user-friendliness, and ease of integration with existing systems, along with the availability of resources, equipment, and technical support. Institutions would also assess the cultural relevance and reliability of the data, the clarity of how the tool works, and the training required to use it effectively. Additional factors include institutional policies, industry relationships, capacity to act on insights, alignment with national priorities and economic conditions, and stakeholders' willingness to adapt practices or mindsets.

Consideration 6: Additional Feedback

Other relevant comments

Stakeholders note the importance of bringing all relevant partners together and recommend incorporating a sustainable partnership model within the tool. Additional feedback highlights the need for continuous training, demonstrations, and clear mapping categories to guide users. Further there was a suggestion to amend the name of the tool for greater clarity in its function. Accessibility of the tool was also emphasized.

Suggestions for improving the tool

Overall, respondents see the tool as timely and valuable, particularly for informing TVET programme development and strengthening alignment with industry needs. However, the participants suggested the following ideas for improving the tool:

- Clarifying terminology (e.g., “local”)
- Capturing informal sector data
- Creating clear mapping categories
- Ensuring tool universality

3. Summary of Insights

Key themes and patterns from the discussion

1. Strong recognition of tool relevance
2. Need for structured engagement
3. The tool providing opportunity to align programmes to real workforce needs
4. Importance of sustainable partnerships
5. Capacity-building essentials
6. Need for clarity and inclusiveness

Opportunities for further engagement or piloting the tool

Participants pointed to the need to provide opportunity for further training in the use of the tool and to engage a pilot of the Tool.

4. Recommendations

Suggested next steps and follow-up actions for UNEVOC partners

1. Finalize and refine the Tool (Pre-Pilot Preparation)
2. Select 3–5 institutions that represent diverse contexts (urban, rural, different programme types) to conduct pilot.
3. Build capacity through training and demonstration using the resources in the tool kit
4. Conduct pilot

Appendix C: Nottingham Coaction Workshop Agenda

In-person Workshop Agenda (first draft)

3-day Workshop @ Nottingham
Location: University of Nottingham, UK
Dates: 16, 17 & 18 of September 2025
Participants: Project partners (~10 people)
Format: In-person working sessions

Arrival Day

Time	Session	Description
12:00-16:00	**Lunch**	Spokes, Jubilee Conference Center / *Covered by NCI*
16:00-20:00	**Dinner**	Jubilee Bar Menu (a smaller 24-hour bar menu is also available) / *Covered by NCI*

Day 1: Setting the Foundation & Aligning Goals

OBJECTIVE: DRAFT MOCK-UP TVET-INDUSTRY MAPPING TOOL

Time	Session	Description
09:00 – 10:15	**Icebreaker & CORE agreement**	Light activities to build rapport and get to know each other, agree on CORE values for the work we are going to develop
10:15 – 10:45	**Project Overview & Group Division**	Jo-Anna and Volker will present a brief summary of the project's rationale and divide all participants into 2 groups.
10:45 – 11:00	Break	

Time	Session	Description
11:00 – 12:30	**Work on first mock-up for the tool**	Discuss on each group a first version of the tool using the materials provided for it. [*See Google Folder "2.MAPPING TOOL co-design"*]
12:30 – 13:30	Lunch	At Cafe Aspire, Jubilee Campus / *covered by NCI*
13:30 – 14:30	**Continue work on first mock-up**	Refine the work done before lunch and prepare a short presentation
14:30 – 15:00	Break	
15:00 – 16:00	**Presentations, feedback and unification of mock-up**	Each group presents their mock-up and both groups discuss them in order to come up with **one** mock-up that integrates the strongest points of both models
16:00 – 16:30	**Review work of Day 1 and define work for Day 2**	Based on the work done during day 1, define the
16:30	***Optional* Walk**	
18.30	*Welcome Dinner*	**Victoria Hotel** https://vichotelbeeston.co.uk/ https://vichotelbeeston.co.uk/menu-1 / *Covered by NCI*

Day 2: Refining the mock-up

OBJECTIVE: REFINE TVET-INDUSTRY MAPPING TOOL

Time	Session	Description
09:00 – 09:15	Morning Energizer	Light warm-up activity
09:15 – 10.45	**Review of rough mock-up**	This review will also help the group divide further work into a maximum of three tasks that will be worked on in order to finish the tool with all its annexes
10:45 – 11:15	Break	

Time	Session	Description
11:15 – 12:30	**Presha Ramsarup** Staff - Wits University	**Mapping the local work ecosystem**, Director at the Centre for Researching Education and Labour, University of Witwatersrand, Johannesburg Presentation of practical examples of mapping work and demand in the local economy ***Objective:*** discuss implications for the TVET-Industry mapping tool
12:30 – 13:30	Lunch	Spokes, Jubilee Hotel
13:30 – 15:00	**Division of tasks and small groups work**	Divide the group in a maximum of three smaller groups for fine-tuning the mock-up and toolkit. Each group works on their assigned task
15:00	**Leisure Activities**	
18.30	*Dinner*	Crowne Plaza Hotel https://www.ihg.com/crowneplaza/hotels/gb/en/nottingham/notws/hoteldetail https://digital.ihg.com/is/content/ihg/crowne-plaza-nottingham-10112693989-original?fmt=pdf / *Covered by NCI*

Day 3: Fine tuning toolkit & procedures

OBJECTIVE: WORKSHOP PLAN AND AGREE NEXT STEPS

Time	Session	Description
09:00 – 09:15	Morning Energizer	Light warm-up activity
09:15 – 10:30	**Revision of tasks & feedback**	Each group revises the work done the day before and agree final areas of consensus and outstanding tasks for finalising the TVET-Industry tool
10:30 – 10:45	Break	
10:45 – 11:45	**TVET college workshop planning**	First draft ideas - objectives and plan for the international TVET college verification workshops
11:45 – 12:30	**Group work**	Work in groups to design a plan for the TVET college workshops and a facilitation guide

Time	Session	Description
12:30 – 13:30	Lunch	Cafe Aspire, Jubilee Campus
13:30 – 14:30	**Working on the procedure for trialling the toolkit**	Finalise plans for trialling the tool in our respective countries, ensuring that we have a process that will work everywhere and that will provide us with useful and comparable data
14:30 – 15:00	Break	
15:00 – 17:00	**Wrap-Up & Next Steps**	Finalise work plan and allocation of tasks for the remainder of the project, including consideration of how this collaboration may continue after the project is completed considering different options and the budgets of each institution. **Take official group photo.**
18.30	*Farewell Dinner*	**Mem-Saab Restaurant** https://www.mem-saab.co.uk/ / *Covered by NCI*