

# WorldSkills as a catalyst for system-level change

*Report on the analysis of the  
Impact Statement Survey 2021*

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# 1 Overview

Since its inception in 1950, WorldSkills has been committed to improving and advancing vocational education and training. WorldSkills and its Members collaborate around the central asset of its biennial skills competitions. Together, WorldSkills and its Members work to raise the profile of skills among young people, develop global skills standards, conduct shared research, exchange best practices, and promote the value of skills for economic growth and personal success. WorldSkills has identified three broad strategic goals as part of WorldSkills Vision 2025, specifically to:

1. Raise ambition and opportunity in VET for young people, employers, and societies;
2. Enhance the quality of VET provision through stronger connections to labour markets, employers, and economies; and
3. Help build the organizational capability of WorldSkills and the global competitiveness of its Members through skills.

Given the WorldSkills Vision and its strategic goals for 2025, it is vital to understand and identify the potential indicators and gaps in how WorldSkills enables Members to make system-level changes. In 2021 WorldSkills Member countries and regions participated in the *Impact Statement Development Survey 2021*. This summary presents findings from the survey responses on how WorldSkills, as a leading organization driving skills excellence, utilizes WorldSkills to affect changes at the individual, institutional, and systemic levels.

The analysis of survey responses shows that micro-level changes and impacts have occurred among Member countries and regions, with significant potential to extend these impacts to drive changes at the meso- and macro-levels. Two follow-up interviews helped us to elaborate understanding of the higher-level impacts of WorldSkills, and the potential for WorldSkills to create a skills-led ecosystem to achieve more comprehensive and systemic changes.

This report is divided into five sections. The first section details the methods used to conduct the analysis. The second section presents findings generated from data analysis from the *Impact Statement Development Survey 2021*. The third section identifies and highlights the current gaps in our understanding of where and how potential impacts of WorldSkills could occur to foster system-level changes. Section four presents two country cases to illustrate some of the potential mechanisms for system-level change within Member countries and regions. Building on the findings and insights from the survey and interviews, the final section proposes a research agenda to evaluate and understand the impacts of WorldSkills systematically.

## 2 Methods

This report aims to address how WorldSkills can most effectively improve TVET policymaking and delivery, and drive system-level changes. Using data from the *Impact Statement Development Survey 2021* and two brief country cases, we adopted an analytical framework that examines effects at the macro-, meso-, and micro-levels. This framework facilitates a comprehensive understanding of WorldSkills impacts on stakeholders and sectors at various levels. It also helps to identify what we know and the knowledge we need to develop regarding how these different levels of impact interact to bring about system-level changes.

The survey was sent to Members of WorldSkills to complete between August to September 2021. The questions included generic information about the vision, mission, and strategic goals of the Member organization. Fifty Members participated in the survey. There was a section focused on understanding the impact WorldSkills had on Technical and Vocational Education and Training, promoting and developing skills in each Member's context, and impact stories at the individual (for example, Competitors, Experts/trainers), education stakeholder, and industry levels in open-ended qualitative questions. The completion rate for questions in the section on WorldSkills impact varied between 58% and 92%, with an average of 78.5%. This report mainly focuses on the analysis of these eleven questions.

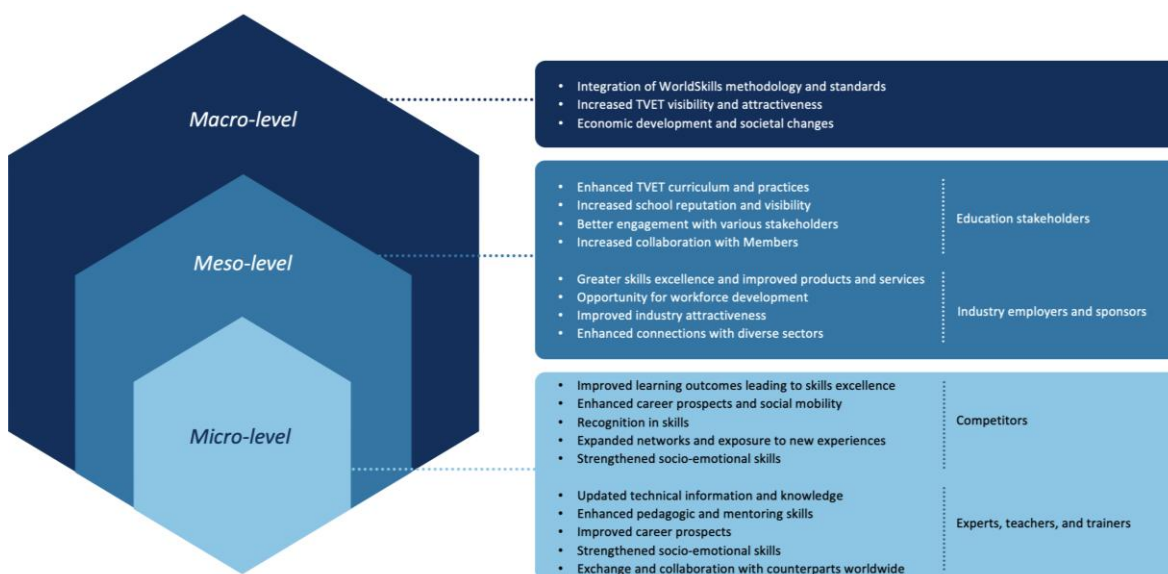
The granularity and level of detail provided in each response varied considerably across questions and respondents. While some of the brief answers consisted of a single sentence, offering limited scope for analysis, other more comprehensive responses spanned several hundred words, allowing for in-depth examination. This disparity in response length and depth poses some challenges in terms of making sense of the detailed processes and mechanisms in relation to when, where, and how changes and impacts can potentially take place. Minor edits were made to the quotes presented in further sections to highlight key messages and ensure anonymity, consistency in punctuation, and grammatical accuracy.

The original design and purpose of the impact survey were not aimed at addressing our current research question: how can WorldSkills most effectively drive system-level changes? Consequently, to build upon the survey, the research team purposefully selected two Member countries – Skills Finland and WorldSkills UK – to conduct interviews in July 2024. These Members were selected due to the research team's familiarity with their work within their respective countries. The interviews helped to provide a more dynamic and holistic picture of how engaging in WorldSkills has the potential to contribute to system-level changes. It should be noted that there is a significant gap between the time of survey data collection and the interviews. Consequently, the respondents for the same Member country/region in the survey and interviews may not be the same person, which could introduce potential bias and differences in their responses to similar questions.

### 3 Survey findings

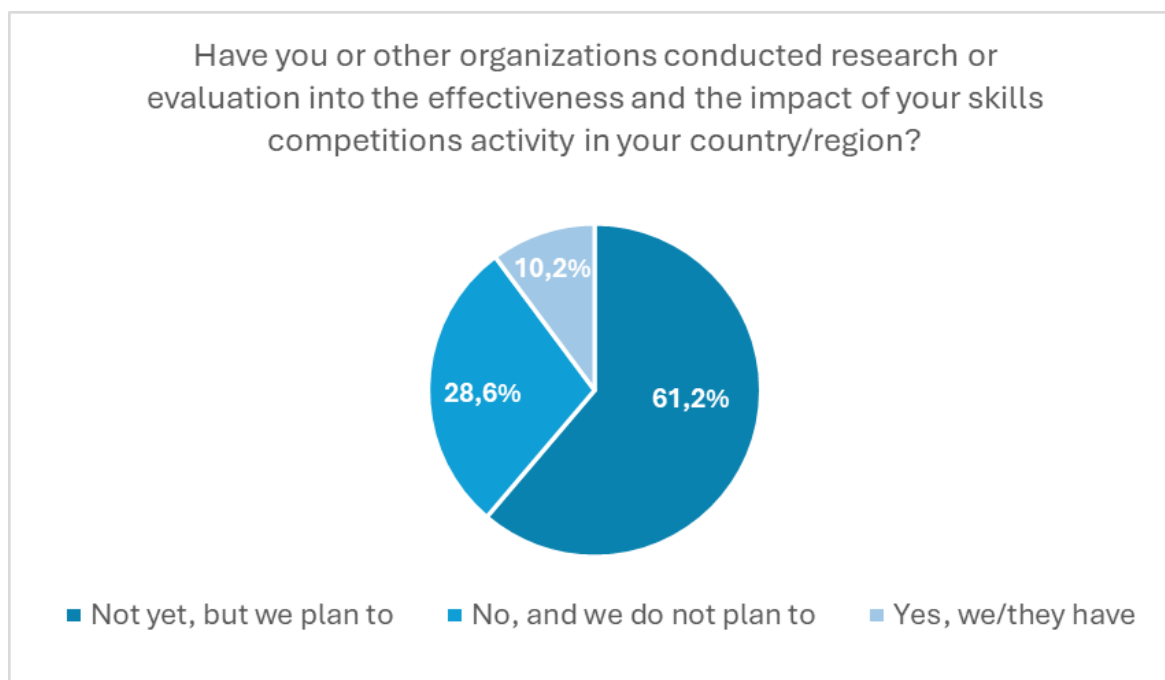
Using a macro-, meso-, and micro-levels framework reveals the impacts that help us understand how WorldSkills can most effectively drive system-level changes (see Figure 1). It begins with the impacts at the macro-level, illustrating the overall system-level changes identified by Members. It then examines changes at the meso-level, focusing on TVET schools and industry. Finally, it narrows its focus to the micro-level, looking at the individual impacts on Competitors and Experts/teachers/trainers who participate in WorldSkills activities and skills competitions.

Figure 1 WorldSkills impacts at the macro-, meso-, and micro-levels



Out of the 49 responses to the question of whether Members or other organizations have conducted research or evaluation into the effectiveness and the impact of their skills competition activity in their country/region (see Figure 2), thirty (61.2%) of them responded “Not yet, but we plan to” and five (10.2%) responded “No, and we do not plan to”. Only fourteen out of 49 (28.6%) responded “Yes we/they have”. The analysis serves to identify the instances or opportunities where impact is likely to take place with different stakeholders and sectors at various levels.

Figure 2 Responses regarding Members' evaluation research into the impacts of skills competitions



### 3.1 Macro-level: TVET, economies, and beyond

Potential impacts at the macro-level refer to those instances or opportunities where impacts are likely to take place at the TVET system level, and the economic and societal changes within the Member countries and regions. We can discern from responses to the question about “the three biggest benefits of being a WorldSkills Member” and other related survey questions. These responses can help us gauge the potential systemic changes that Members may undergo. These are:

1. the improvement of the TVET system;
2. increased TVET attractiveness; and
3. economic and societal changes.

#### 3.1.1 Integration of WorldSkills methodology and standards into the national system and improved TVET systems

Most Members reported that their involvement in WorldSkills had a positive impact on their TVET systems through various mechanisms. Notably, although not explicitly stated, data from a few Members (e.g., Costa Rica, UK, etc.) point to an unarticulated concept: the application of WorldSkills methodologies. These Members use WorldSkills as a strategic tool to enhance their TVET systems, building on participating in skills competitions. From the existing data, it can be inferred that elements of the methodology include incorporating international standards and benchmarks, introducing skills competitions, adopting best practices, and integrating these practices at different levels within their TVET systems. Although the definition or perception of WorldSkills methodologies cannot be thoroughly explored or understood, and gauging the potential impact of such integration is challenging, it would be worthwhile to research further into Members' perceptions and applications of the WorldSkills methodologies. For other Members who did not explicitly mention systemic changes, many briefly noted improvements in various aspects of their TVET systems, such as TVET quality, teaching and learning, and curriculum enhancement:

Latvia: **It gives an opportunity to develop and raise the prestige of VET in Latvia; We gain access to plans, ideas, and experiences that we can implement for our competitions.** Accordingly, our competitions can improve the skills of young professionals; It is a tool that we use to show people how VET has changed over the years and therefore we can change the perspective and image of VET.

UK: [...] **Benchmark education systems and training methodologies to raise standards of education, teaching, and training in the UK.**

Russia<sup>i</sup> (suspended Member): [...] methodology of how to translate real industry demands into standards and training practices.

Costa Rica: [...] To be part of WorldSkills is to be part of the most important global TVET network for knowledge exchange, cooperation among member countries, learning from the best, and anticipating changes for decision-making. **WorldSkills enables the appropriation of good practices, the transfer of knowledge, obtaining inputs for the implementation of methodologies, the application of tools for the diagnosis and integral quality control, the continuous improvement of TVET and its development under principles of flexibility, adaptability, and relevance.**

Belarus<sup>ii</sup> (suspended Member): 1. Firstly, **the introduction of new specialties and programs on the basis of WorldSkills standards.** Thus, in 2016 in collaboration with the national partner Knauf “Plastering and Drywall Systems” competition was held, as well as training of teachers from all regions of Belarus. Subsequently, it caused several amendments to the national jobs and professions reference and introduction of a new profession “Assembler of frame-sheathing structures of dry construction” and training program “Finishing construction work”. 2. Secondly, RIPO being the WorldSkills operator is responsible **for developing a network of centers of excellence in VET. The centers are equipped based on the analysis of WorldSkills International documents (technical description and infrastructure lists).** There are 51 centers of excellence focusing on 9 economic sectors that operate on the basis of colleges. The centers do not have a permanent staff of students, since students of different levels of education from all over the country can get trained according to the principle of network learning.

India: [...] **Gain knowledge on training systems and practices around the world, to develop new and innovative ways of teaching in-demand skills. Benchmarking of skills.**

Another question indirectly helps gauge how *WorldSkills methodologies* have been perceived and applied. Out of the 50 respondents, thirty-one (62%) reported that skills competitions are integrated into their country’s national TVET strategies or policies. Meanwhile, some Members reported skills competitions were not integrated at the national level, but this is something that might be or is in future plans, for example:

Ghana: **Not Yet. However, awareness has been created.**

Colombia: As mentioned before, SENA is the only institution that represents Colombia in WorldSkills. Currently, **the strategy is not institutionalized but is something we want to achieve soon.**

Germany: Not officially yet. **Work in progress.**

New Zealand: **Not yet, although we are working on it! With the current reform to NZ VET, we see this as a real opportunity to integrate skill [competitions] in the system.**

Among those thirty-one Members who reported that skills competitions have been integrated into their national education system or TVET agendas, not every country explicitly detailed what, where, and how this integration has occurred. This highlights the need for further research to understand the specifics of the integration. For those who did report integration, it is likely the result of collaboration with various stakeholders, including policymakers. While some disparity in the breadth and depth of implementation is evident, there is a clear commitment to utilize the methodologies by some Member countries and regions. The response provided by Costa Rica below implies a deeper level of integration – how they intended to build a new model by integrating the know-how and methodologies learned from WorldSkills to reform the national TVET system – although there is significant integration within other Members’ TVET systems too:

Principality of Liechtenstein: **Yes, the latest education strategy 2025plus of Liechtenstein integrates skills competition.**

Thailand: **Skills Competitions are included in the policy and annual program of the Department of Skill Development. It is also being promoted by the Skill Development Promotion Act B.E.2545.**

Uganda: **Yes, Skills Competitions have been included in the Education and Sports Sector Strategic Plan (2020-2021).**

Costa Rica: At the National Learning Institute, **we are building a new WorldSkills Costa Rica model**, which will allow that in addition to other key areas, competitions will be part of the regular work of the institution for the continuous improvement of services, curricular, and teaching updating. This new model is designed to have a **permanent and sustainable impact on TVET**. On the other hand, and parallel to the construction of this model, we have taken advantage of opportunities to position the **WorldSkills Costa Rica model in national initiatives, such as the implementation of the National Qualifications Framework**. In this same line of thought, Costa Rica is **in the process of creating the National System of Technical Vocational Education and Training (SINEFOTEP), and the WorldSkills Costa Rica team participated in the development of this proposal, so the technical competitions model was incorporated as a pillar of the system. In addition, there is a proposal to include the WorldSkills Costa Rica model in the National Science, Technology and Innovation Policy of the Ministry of Science, Technology and Telecommunications (MICITT)**. WorldSkills Costa Rica will be supporting the transformation of the MICITT's Intelligent Community Centers into Innovation Labs. This was the core project developed as part of the E&T Program with WorldSkills Russia<sup>1</sup> (suspended Member).

### 3.1.2 Increased TVET visibility and attractiveness

The pride individuals take in and the recognition they receive for their skills have been highlighted from the perspectives of Competitors, Experts, teachers, and trainers. Both educational stakeholders and industries have reported increased attractiveness and visibility of skills. At least twenty-four out of 50 Members (48%) have reported positive changes in society's perception of Technical and Vocational Education and Training (TVET), with exposure to WorldSkills inspiring the younger generation to pursue a life trajectory centred around skills. The case provided by China below helps us understand how such systemic change can take place. Belgium reported an increase in visitors and Competitors participating in skills competitions over the years, which may reflect an increase in TVET's attractiveness and visibility:

Uganda: **Motivating our learners and the public to appreciate the role of TVET.**

Switzerland: **Skills competitions lead to more media awareness and increase the image of TVET.**

Thailand: **The number of views and likes of the WorldSkills Thailand page has increased. The number of students enrolled to join the competition has increased.**

Belgium: [...] 80% of our media impact is done during the national and international competitions. **Number of visitors: 7000 in 2019, 3000 in 2018, and 200 visitors in 2009. Number of Competitors: approx. 200 in 2009 and 800 in 2019, [and] estimated number of visitors in 2020 (event cancelled twice) and 10000** since 2021.

China: 1. **Improve the social attention of the skilled people, by using the WorldSkills Competition as a platform to increase publicity.** Governments at all levels and all sectors of society pay more attention to and support the work of skilled personnel and promote the creation of a good atmosphere for a skilled society. [...] 3. **Inspire the majority of workers, especially the young generation to take the road of skills and use skills to serve the country,** through the implementation of awards for the champions and medal winners, increase publicity, and cultivate skilled stars, so that more workers ignite the interest in learning skills and inspire their enthusiasm to improve skills.

### 3.1.3 Economic development and societal changes

The WorldSkills Vision 2025 is to drive economic growth. Two Members, Costa Rica and the United Kingdom (and Norway very briefly), mentioned the direct link between its TVET development and economic growth when responding to the three biggest benefits of being a WorldSkills Member. Norway mentioned the economic contributions as well as some other societal impacts but did not specify the specific types of impacts that may exist when answering the question about benefits for industries:

United Kingdom: As countries emerge from the economic and social consequences of the COVID-19 pandemic, attention is focused on strategies to accelerate economic recovery on a global scale. In the UK, the government has **pledged to deliver a skills-led recovery with significant investment in technical and vocational education and training (TVET)**. [...] Our main benefits of membership are: **1. Contributing to the UK's skills-led economic recovery** [...]

Costa Rica: [...] One of the greatest resources of WorldSkills is its human capital, connecting national experts with an expanding network of global experts and mentors from industry and academia allows them to obtain resources for continuous improvement and **seek excellence for the benefit of TVET and national economic dynamics**.

Norway: [...] Conveys VET competencies and their **important role in work life, national and local economy, and value for the society at large**.



For other Members to move to this point may require more proactivity and awareness of how the WorldSkills vision aligns with integrating TVET development with macro-level economic planning and societal changes. Making such an integration is not without its challenges including collecting such data and tracking and measuring such changes.

In summary, the analysis and responses suggest that WorldSkills can indeed have a direct impact on TVET systems. There seems to be a great variation of what countries understand by *WorldSkills methodologies* and how the different elements are used at the national level. The spectrum ranges from running national competitions based on WorldSkills and using national and international skills competitions to promote and raise the image of TVET, to various degrees of benchmarking and policy learning, up to the direct adoption of WorldSkills standards into national qualification standards and curricula. This range of impacts shows the progress and the potential of the WorldSkills movement. This analysis also highlights the lack of data generated from this survey and the challenges in tracking and measuring macro-level impacts, which obscures the potential positive outcomes that may have occurred within Members. The following sub-sections help to illustrate how macro-level impacts can be reflected at the meso- and micro-levels.

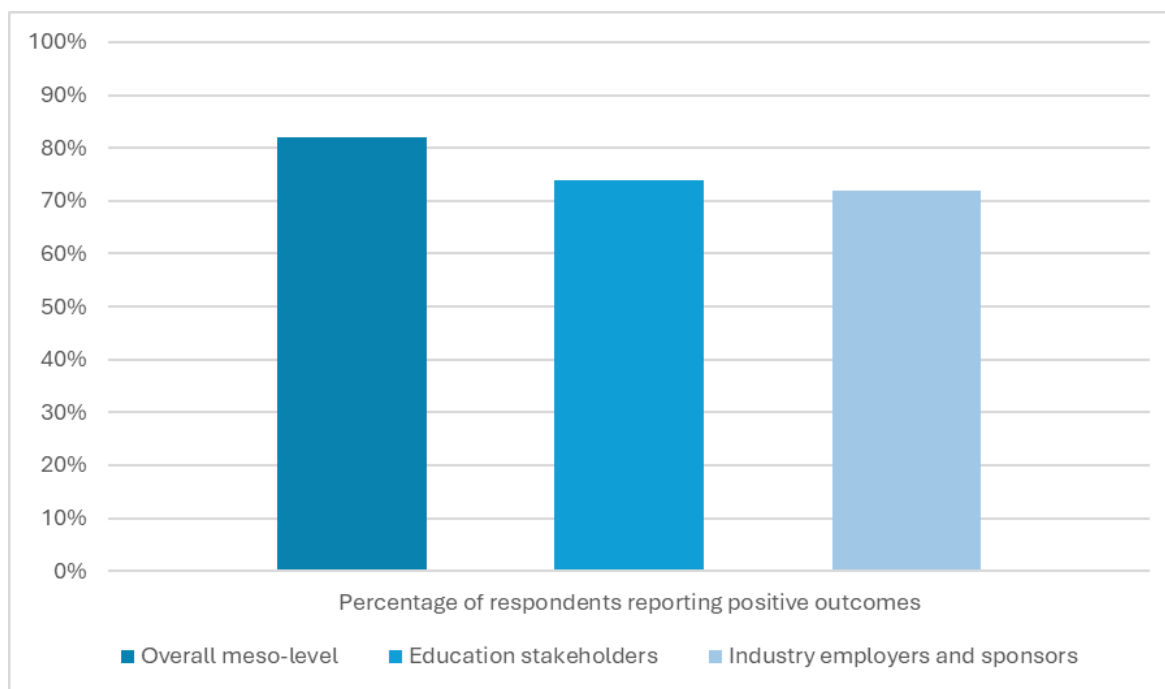
### 3.2 Meso-level: education stakeholders, employers, and industry sponsors

Potential impacts at the meso-level can involve a variety of stakeholders and outcomes. For clarity in this report and in alignment with the survey's design, meso-level impacts are defined specifically as the benefits or positive outcomes experienced by key stakeholders, such as schools, colleges, and employers or industry sponsors, resulting from their involvement in skills competitions and WorldSkills. While this analysis focuses on these primary stakeholders, it is recognized that meso-level impacts may also affect other stakeholders and aspects beyond the scope of this report.

Most respondents (82%, N=41) reported positive outcomes at the meso-level (see Figure 3). While most responses to these questions were limited to brief and abstract bullet points, most Members agreed that their schools/colleges and employers/industry sponsors gained favourable outcomes from their involvement in skills competitions and WorldSkills. Hints can also be drawn suggesting that meso-level impacts have significant potential to foster changes at both macro- and micro-levels.

This sub-section divides the analysis into two parts: impacts on education stakeholders and industry employers and sponsors.

Figure 3 Percentage of respondents reporting positive changes at meso-level



### 3.2.1 Education stakeholders

#### Overall improvements in teaching and learning at schools and colleges, serving as catalysts for TVET improvement

Thirty-seven (74%) Members reported that involvement in WorldSkills provided schools and colleges with invaluable opportunities to improve their teaching and learning (see Figure 3). Among the positive outcomes, the most salient are enhanced TVET curriculum and practices, increased school reputation and visibility, more opportunities to engage with various stakeholders, and increased collaboration with Members. Such positive outcomes have the potential to empower schools and colleges to catalyse improvements in the overall TVET system, thereby driving systemic changes.

#### Enhanced TVET curriculum and practices

The learning, exchange, and inspiration derived from participating in WorldSkills provided invaluable methodological and practical guidance for enhancing TVET schools and colleges. One of the most frequently mentioned areas is the enhanced curriculum and practices, which have been used to update their skills standards and competency norms, optimize new modes of skills training, develop teachers and trainers, upgrade training equipment and materials within schools and colleges. Other benefits included acquiring knowledge regarding WorldSkills pedagogical practices, infrastructure development, and programme design. These outcomes were reported to have contributed substantially to the improvement of schools/colleges and potentially the TVET systems within Member countries and regions:

Colombia: SENA is the only institution that represents Colombia in WorldSkills. SENA benefits greatly since the primary objective of the strategy is to **improve the quality of our training processes**. Thanks to our participation in the skills competitions, **we bring know-how to update labor competency norms, update and create training programs, improve our training rooms, generate strategic alliances with other partners, and strengthen technical and soft skills**. [...]

Estonia: **Some benchmarking with other countries and learning experiences**. It is for sure a motivational element. [...]

Belarus<sup>1</sup> (suspended Member): There are major benefits of educational stakeholders participating in WorldSkills: **development of teachers' and trainers' proficiency; launch of new training programs, which are in great demand among applicants; updating the equipment of many colleges within the framework of the**

**republican program for the development of a network of centres of excellence; launch of new laboratories and workshops that correspond to WorldSkills standards [...]**

Malaysia: **1. Update the curriculum standard according to the international standard** that is applied in WorldSkills Competitions. **2. Upgrade the institution with training equipment and materials that comply with international industry standards.** [...]

## Increased school reputation and visibility

Increased school reputation and visibility were also perceived at the meso-levels. Participating in WorldSkills brought recognition, fame, and status to the schools and/or colleges that have participated in skills competitions and potentially increased the attractiveness of TVET. Moreover, a few Members like Armenia, Malaysia, and Spain, reported that schools'/colleges' participation in WorldSkills has attracted more students:

Armenia: [...] **The number of applicants for VET schools has increased.**

Malaysia: [...] **3. Uplift the image of the schools or colleges, as marketing to attract more students to register. 4. Improve the institution's reputation and employer confidence with their graduates. Therefore, the marketability of graduates increased.**

Spain: [...] **Help them gain prestige, promote their VET studies, and attract more students.**

## Better engagement with various stakeholders

Participation in the WorldSkills movement presents a significant opportunity to engage with various stakeholders, fostering profound impacts beyond schools and colleges. This can catalyze the development of a dynamic and effective TVET ecosystem, potentially driving systemic changes. First, such engagement helps to facilitate the collaboration between schools and colleges, industries, and policymakers, potentially addressing issues such as benchmarks, standards, agendas, budgets, and curriculum design. Second, such engagement with different stakeholders could be a motivational catalyst for individuals within the TVET system. Moreover, international skill showcases can motivate students, update teachers with industry standards, and guide experts in talent development.

In addition, data suggests that there could be opportunities for change when educational stakeholders actively engage with industries and policymakers to improve benchmarks, standards, and TVET agendas strategically. More detailed stories like the ones provided by Costa Rica and the United Kingdom (see below) are needed to validate such processes:

Colombia: SENA is the only institution that represents Colombia in WorldSkills. SENA benefits greatly since the primary objective of the strategy is to improve the quality of our training processes. Thanks to our participation in the skills competitions, **we bring know-how to update labour competency norms, update and create training programs, improve our training rooms, generate strategic alliances with other partners, and strengthen technical and soft skills.** [...]

Armenia: **1. Reviewed standards. 2. Trained teachers. 3. Reviewed VET policy** [...]

Australia: **Connectivity and Interaction with industry.**

Costa Rica: [...] **we have involved other stakeholders in the national ecosystem as part of the new model: Ministry of Science, Technology and Telecommunications (MICITT), through the E&T Program project developed by WorldSkills Russia<sup>1</sup> (suspended Member) [which] proposes to consolidate the Learning and Collaborative Workspaces with Intelligent Community Centers (CECI) and transform them into innovation laboratories where collaborative work methodologies and project-based training are implemented. Costa Rica is in the process of implementing a National Qualifications Framework for the first time in its history.** As part of the impact work towards TVET, Skills Costa Rica has begun **working with the National Qualifications Framework team to provide input related to international standards**, to be considered in the development of national standards. We have been able to share training and knowledge exchange opportunities offered through **WorldSkills International with national institutions such as** National Technical University (UTN), Costa Rican Ministry of Public Education (MEP), and Sedes Don Bosco College. [...]

United Kingdom: **During the year 2020/21, we increased the number of organizations we work with to over 3,000.** [...] This means **we now engage with over 95% of General Further Education colleges and that our school engagement is higher and more distributed across the UK than before** [...]. Both figures are the highest WorldSkills UK has ever reached. **We engaged with over 4,500 educators in 2020-21 and key results from evaluating their response to that engagement included 85% saying they were better able to advise young**

**people about technical skills routes after engaging with WorldSkills UK.** Our new Centre of Excellence is a core program for engagement in the sector - **20 institutions and 100 teaching staff became part of the new Centre, in partnership with NCFE**, benefitting from a total of 1,800 hours of CPD between January and March 2021.

## Increased collaboration between Members

Members reported that their schools and colleges benefited from expanding their international networks, and enabling ongoing learning and advancement of skills and best practices alongside institutions from different countries and regions. Likewise, there remains a lack of data describing the extent of this progress and the tangible impacts or changes such collaborations have brought about. More detailed stories are needed to better grasp the potential impact of such opportunities:

Belarus<sup>ii</sup> (suspended Member): [...] **expanding international partnerships. For example, the College of Advanced Technologies in Mechanical Engineering and Automotive Services entered the network of resource centers as part of the ETF Network for Excellence initiative.**

China: [...] 3. Leading by the WorldSkills Competitions standards to better promote school-enterprise cooperation and **international cooperation through transforming WorldSkills Competitions skills** into training contents, developing technical standards for industry enterprises, and **promoting international cooperation and training.**

France: [...] **Exchanges of good practices with stakeholders in foreign education [...]**

Costa Rica: At the National Learning Institute, we are building a new WorldSkills Costa Rica model, which will allow that in addition to other key areas, competitions will be part of the regular work of the institution for the continuous improvement of services, curricular and teaching updating. This new model is designed to have a permanent and sustainable impact on TVET. On the other hand, and parallel to the construction of this model, we have taken advantage of opportunities to position the WorldSkills Costa Rica model in national initiatives, such as the implementation of the National Qualifications Framework. In this same line of thought, Costa Rica is in the process of creating the National System of Technical Vocational Education and Training (SINEFOTEP), and the WorldSkills Costa Rica team participated in the development of this proposal, so the technical competitions model was incorporated as a pillar of the system. In addition, there is a proposal to include the WorldSkills Costa Rica model in the National Science, Technology and Innovation Policy of the Ministry of Science, Technology and Telecommunications (MICITT).

**WorldSkills Costa Rica will be supporting the transformation of the MICITT's Intelligent Community Centres into Innovation Labs. This was the core project developed as part of the E&T Program** with WorldSkills Russia<sup>i</sup> (suspended Member).

In summary, the above analysis and stories demonstrate that schools and colleges can act as catalysts for positive changes in TVET systems. Frequently mentioned positive outcomes include enhanced TVET curriculum and practices, increased school reputation and visibility, more opportunities to engage with various stakeholders, and increased collaboration with Members. The opportunity to collect more detailed data to better measure these outcomes, as well as to track, understand, and validate how these mechanisms for change unfold at the meso-level is imperative.

### 3.2.2 Industry employers and sponsors

#### **The potential to improve industry products and services, innovation, and skills excellence, fostering better and sustainable economies**

Thirty-six (72%) Members reported that involvement in WorldSkills has provided employers and industry sponsors with positive outcomes (see Figure 3). Among the positive outcomes are greater skills excellence and improved products and services, opportunity for workforce development, increased attractiveness and visibility of skills and industries, and collaborations and partnerships with different sectors. Such positive outcomes catalyse improvements to the TVET system, industries, economies, and societal changes.

#### **Greater skills excellence and improved products and services**

Involvement in skills competitions has created a unique space for low-stakes opportunities to train staff and enhance organizational skills development. Exposure to cutting-edge skills, techniques, tools, and knowledge also enables employers to update their products and services. Members reported that WorldSkills helped advance excellence in skills and standards in the workforce. More extensive examples, such as the case of Costa Rica, would enhance our understanding of how improved

products and services in industries correlates with enhanced skills excellence through participation in WorldSkills:

Australia: **Assist In promoting skills development and raising the level of training within all trades.**

Malaysia: 1. **The number of skilled/best-performance workforce increased in the job market.** Skills competition is one of the potential ways to recruit competent technical personnel. **It will benefit the industry by increasing their productivity and quality.**

UK: [...] **Improved business productivity and competitiveness [...]**

Colombia: SENA has many important industry sponsors for WorldSkills. To mention some, we have SEISA for Information Network Cabling (5 years +); Lincoln Electric for Welding (11 years +), FESTO for Mechatronics (11 years +); SIKA for Construction (3 years +), and more. Some of the positive outcomes sponsors often mention are the opportunity to promote their products and tools in different competition environments; supporting a world-renowned strategy is also great for their brands. **In addition, the know-how and input they can potentially gain from the competition and their different environments is fundamental to improving their products and services to stay on top of the latest market trends.**

Costa Rica: WorldSkills International includes important points in their skills criteria of quality, efficiency, and productivity, which have a direct impact on the **employer sector since they have personnel that develop their functions based on these principles.** One of the strategies that have been implemented in Costa Rica and that we are going to promote more strongly within the new model is the transfer of knowledge for SMEs and companies related to the sectors or skills through technical update workshops. As an example of this, **we have experience in the Cabinetmaking sector, in which [a national expert] conducted a cycle of technical update workshops under WorldSkills standards in the regions of the country with the largest industry in this skill. As a result of this process, there are experiences of technical and technological growth and good practices.** Similar experiences have been developed in the areas of Metal Construction, Cooking, and Automobile Technology. [...]

## Opportunity for workforce development

Skills competitions bring together top skills professionals from around the world. Participating in skills competitions provides employers with good opportunities for marketing, branding to attract apprentices, and the opportunity for workforce development initiatives. This includes talent recruitment strategies to attract skilled individuals, upskilling programmes aimed at enhancing the capabilities of existing employees, fostering greater employee loyalty through engagement in prestigious competitions, and overall improvement of workforce skills. Although these initiatives may not be explicitly recognized, they contribute to enhancing the competitiveness of employers and support long-term growth by ensuring the workforce remains adept and adaptable to evolving industry demands:

Spain: **Provides HR departments with a unique opportunity to recruit the best young technicians in each region.**

Korea: **Benefits for selecting and hiring skilled technicians and improving their performance.**

France: Companies that support young people in the competition, seek behind the performance of a Competitor, a reputation for the performance and excellence of their own entity. **Some also benefit from the involvement of a young Competitor and a team around them to build a mobilizing and internal HR project/employee engagement.**

Russia<sup>1</sup> (suspended Member): **Professional development of employees when performing tasks at the world standards level [...] Increased loyalty to the company [...]**

Germany: **Additional training for apprentices. [...] Skilled employees.**

## Increased attractiveness and visibility of skills and industries

Members reported that their industry employers and sponsors believed that involvement in skills competitions and WorldSkills has helped to enhance the attractiveness and visibility of skills and industries, including improving the image of traditional industries through marketing strategies. This plays a crucial role in attracting young people and highlighting the importance and appeal of pursuing careers in their companies or industries:

Belgium: **Increasing the reputation and strengthening the dynamic image of the institution or company. Highlighting and attracting people to professions that are often in short supply. Inspiring testimonials from young talents, and ambassadors of their profession.**

Hong Kong, China: [...] **raise the image of traditional industries.**

Norway: **Raising the esteem of VET and Skills Workers [...] Conveys VET competencies and their important role in work life**, national and local economy, and value for the society at large.

Japan: **To attract youth to their industry.**

### Improved connections and collaborations with diverse sectors

A consistent message was that WorldSkills facilitated connections between industries and various sectors, particularly students, TVET institutions, and policymakers. This has enabled industry employers and sponsors to establish partnerships and collaborate with stakeholders. Similar to the benefits observed when educational stakeholders better engage with various stakeholders, this has the potential to catalyse the development of a more dynamic industry and, more profoundly, economic development:

Canada: **Employers share with us that the competition format is one of the few opportunities they have to connect with educational institutions and students.**

United Kingdom: **Chance to align with government's priorities.**

Croatia: [...] **more direct links with VET providers**, etc.

Belarus<sup>ii</sup> (suspended Member): Over the past 5 years, in Belarus, the activity has been launched to strengthen the interaction of the **VET system, Ministry of Labor and Social Security, as well as employers. Employers report the possibility of closer cooperation with the education sector, including educational stakeholders in matters of the required number of specialists in the future, as well as the content of training programs.**

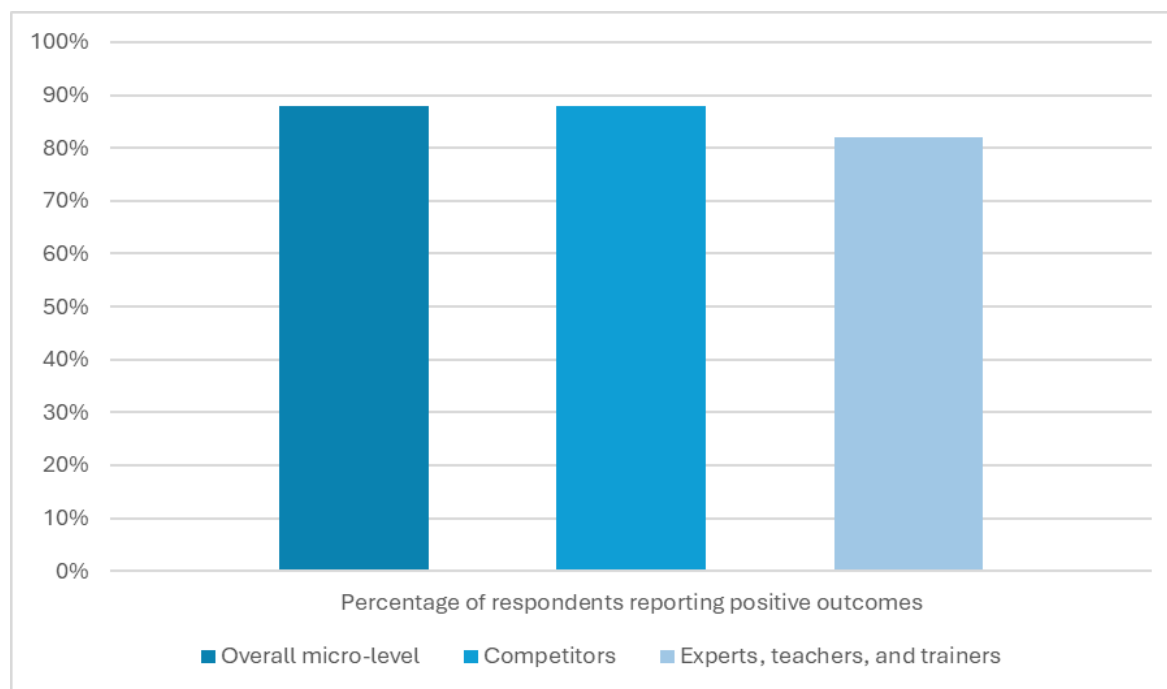
Spain: [...] **Offers an opportunity to cooperate with the Ministry identifying education needs or training gaps.**

In summary, the analysis and responses have demonstrated that meso-level changes and impacts have occurred within Member countries and regions, with the potential to extend these impacts to drive more profound changes at the systemic level. Both education stakeholders and industry employers and sponsors can act as meso-level catalysts, bridging macro-level changes with micro-level individual impacts. This sub-section also highlights the need for more comprehensive data to measure meso-level stakeholder involvement.

## 3.3 Micro-level: Competitors and Experts, teachers, and trainers

The richest availability of data clusters at the micro-level focuses on Competitors and Experts, teachers, and trainers. The survey asked about the benefits or positive outcomes that Competitors, Experts, teachers, and trainers most frequently experienced. A significant majority of respondents (88%, N=44) (see Figure 4), excluding those who did not complete the survey, reported positive changes in individuals, Competitors, Experts, teachers, and trainers. The micro-level changes also made impacts more accessible to track, measure, and report, supported by the abundance of data, stories, and reflections shared by Members.

Figure 4 Percentage of respondents reporting positive changes at micro-level



Individuals involved in skills competitions often report gaining confidence, motivation, improved well-being, and enhanced prospects in life through their preparation, participation, learning, and competition experiences. This sub-section divides the analysis into two parts: impacts on Competitors, and then Experts, teachers, and trainers.

### 3.3.1 Competitors

#### Excellence in skills, self-transformation, and a better life prospect

Forty-four (88%) respondents reported that participating in WorldSkills has proven to be a beneficial journey for their Competitors (see Figure 4). Stories of Competitors highlighted the mechanisms through which involvement in WorldSkills – this unique and life-changing international experience – brought about self-transformation and improved life prospects. The following examples show the frequently mentioned mechanisms in the Competitors' stories: improved learning outcomes, enhanced career prospects, recognition and pride in skills, expansion of networks, exposure to new and unique experiences, strengthened socio-emotional skills, and upward social mobility. These mechanisms illustrate the profound impact of WorldSkills participation on Competitors' personal and professional development.

#### Improved learning outcomes leading to skills excellence

Foremost, these benefits are the improved learning outcomes derived from preparing for and participating in WorldSkills Competitions. Nearly every Competitor's story highlighted the substantial learning they gained through this process. This journey equipped them with a profound understanding of their craft and skills, facilitated ongoing learning, and propelled them towards achieving and surpassing international standards of excellence:

Ghana: 1. **Understanding of how to carry on the skills they competed in.** 2. **Surprised about the level of competency needed to carry out tasks during competition and wish similar tasks were taught in schools [...]**

Poland: [...] **they improved technical skills [...]**

The following story details a Competitor from Belgium illustrating the insights he gained into the excellence of his skills and how participating in WorldSkills was a trigger for his success:

Belgium: [...] **The competition taught me at least one essential thing: excellence.** At school, I studied just the minimum. In my preparation for WorldSkills São Paulo 2015, I didn't push myself beyond my capacities; I thought I knew everything. My poor ranking in the WorldSkills Competition made me think. The silver medal in the following Startech's days made me think even more. These results gave me a kick in the butt! **I understood that I had to put my heart and soul into everything I did. I did things I had never done before,** like not going to soccer practice to study or retaking the same test project five times. This allowed me not only to be selected for the Belgian team for EuroSkills 2016 and to succeed with very good results at school, **but above all to win the gold medal at the EuroSkills in Gothenburg!** WorldSkills was a trigger, my trigger. [...] **Enhanced career prospects**

One commonly highlighted aspect is how participation in WorldSkills Competitions has significantly enhanced Competitors' career prospects. Thirty-two out of 50 Members (64%) reported that their Competitors swiftly secured desirable job opportunities with leading employers in their respective industries following WorldSkills:

Namibia: Most of our former Competitors **managed to secure employment immediately and very easily in reputable companies.** NamPower, our National Electrical Generation and Supplier, for example, has taken on both the 2016 and 2017 Electrical Installations Competitors. **A number of our NSC Competitors have also managed to get good jobs, while many have confidently managed to open their own businesses** (in hairdressing, joinery, and related areas, etc.).

Jamaica: **They share career progression [...]**

Additionally, the impact of participation sometimes extends beyond mere pragmatic employment considerations to how individuals re-think and re-evaluate the potential of their lives. For example, the story of another Belgium Competitor vividly illustrates how his involvement has unlocked better career opportunities and new realms of possibility in his life, enabling him to carve out pathways to success and improve their life prospects. Participating in WorldSkills has instilled in participants a profound belief that their skills, which they are passionate about and excel in, can pave the way for a dignified and fulfilling livelihood:

Belgium: There's no better training than the "WorldSkills spirit". [...] WorldSkills made me grow up! I didn't know myself or my limits: what was my skill level in relation to the job market? But the WorldSkills adventure does not stop at technical skills. Thanks to the preparation, the competitions, and the moments lived with the Belgian Team, I benefited from an accelerated learning process: team spirit, teamwork, living together, development of leadership qualities, stress, and emotion management. I acquired 95 percent of my soft skills. I never thought I would experience such an upheaval and erase my doubts and questions. **Despite a 20th place at WorldSkills Leipzig 2013, a recruiter from Fat Duck** [a 3 Michelin stars restaurant and Best Restaurant in the World in 2005] **directly offered me a job.** That year in London was my most formative: technique, and English... I learned an essential thing: "Either I win, or I learn" (Nelson Mandela). We grow much more from a "failure" than from a victory. A failure remains a failure only if you dwell on it. [...] **I went back to school to study hotel management. I was contacted for prestigious positions: butler of a prime minister or in the service of King Albert II.** I have never been turned down for an internship: **one year in a large hotel in Barcelona, the second year in a private club for millionaires in Scotland, and for my third internship, I had the luxury of choosing the Ritz in Paris. Today, I am proud to work for one of the best hotels in the world.** [...] **I went from being a "technical student" to being a successful person who travels and works all over the world in a field he loves.** I could see the pride in the eyes of my father, my sisters, and my family. I also saw that my journey inspired some young people. **And the starting point of this journey that I am proud of? WorldSkills!**

## Recognition and pride in their skills

Another important aspect of human development is how well Competitors thrive in an environment where they feel respected, valued, and able to demonstrate their skills. Many Members reported their Competitors gained recognition, confidence, and pride. Competing on the international stage enables young people to receive authoritative validation of their skills and expertise that carries professional significance. This further enables them to become respected and valued by their peers, communities, and environment, fostering confidence and well-being, and become role models:

Belgium: **Development of confidence, pride, and self-esteem.**

Korea: Personal competency improvement, having high self-esteem, and pride in the skills.

Malaysia: [...] **Role model/best performance among peers.**



Russia<sup>1</sup> (suspended Member): [...] An environment of interesting people. In WorldSkills, you will **meet people deeply interested in what you are**. Immersion in the adult world. [...] You are not treated as a schoolboy, **but as a professional who is being tested for compliance with the next higher level of professionalism**.

Belgium: [the story of a Competitor in Fashion Technology] The WorldSkills experience, both at WorldSkills in Brazil and at the European Championship in Sweden, had a positive impact on me. I gained confidence in my way of working that I certainly would not have had for many years. **As a gold medallist at EuroSkills Gothenburg 2016, I am proud to have made it this far. My employer and colleagues were impressed, and I felt more respect for my skills.** I feel much more comfortable when people watch me work. It has proven to me at least one important thing: that anything is possible if you believe in it. I now know that I produce good work and that I can be proud of it, that I don't have to settle for the minimum. I want to say to all those young people who are afraid to embark on the WorldSkills adventure: try, you have nothing to lose! It's an experience. There will be successes and failures – that's inevitable – but in the end, you'll only come out of it better.

## Expanded networks

Networking opportunities with peers, experts, and employers on an international stage is another direct positive effect of participating in WorldSkills Competitions; an experience which could not be easily obtained beyond their immediate and local learning environment. The expanded network facilitates learning from peers and experts, as well as establishing meaningful friendships. For example, a story from a Competitor from Sweden emphasized the benefits of meeting new people at WorldSkills and how that opened up new horizons:

Sweden: Once-in-a-lifetime experience! **It's great to meet people from all over the world who are fantastic in the skills we share. One moment we are Competitors, and the next, we are colleagues from around the world in a profession we love. [...] The WorldSkills Competitions opens the doors to the world! Meeting people who share the same profession and interests is so exciting. We can share so much and make friends and contacts for life.**

Russia<sup>1</sup> (suspended Member): **Communication with professionals, and useful acquaintances. [...] An environment of interesting people.** In WorldSkills, you will meet people deeply interested in what you are. [...]

## Exposure to new and unique experiences

Participating in WorldSkills Competitions exposes Competitors to new and unique experiences. While this aspect has been less frequently mentioned by Members, these experiences are not typically attained through traditional schooling, where conventional methods of teaching may not always incentivize or inspire students to strive for excellence such as in WorldSkills Competitions. Without this unique experience, the aforementioned benefits may not have been possible within their immediate and local learning environment:

Germany: Once-in-a-lifetime experience.

Russia<sup>1</sup> (suspended Member): [...] An environment of interesting people. In WorldSkills, you will **meet people deeply interested in what you are**. Immersion in the adult world. [...] You are not treated as a schoolboy, **but as a professional who is being tested for compliance with the next higher level of professionalism**.

Moreover, competing at the international level, with exposure to individuals from around the globe and interaction with experts is a unique opportunity. A former Competitor from Belgium described it as "an incredible experience on technical, emotional, and relational levels":

Belgium: [...] **WorldSkills was a trigger, my trigger.** [...] To a young person who is hesitating to participate, **I would say go for it without hesitation!** Even if the results don't always follow, **it's still an incredible experience on a technical, emotional, and relational level.** There are so many examples of perseverance among former Belgian Competitors: [A Competitor] registered four years in a row before being selected for WorldSkills São Paulo 2015 and EuroSkills Gothenburg 2016; [another Competitor] did the same. Both of them ended up winning medallions of excellence at the international level!

## Strengthened socio-emotional skills

Throughout this transformative journey, Competitors have cultivated heightened levels of confidence, motivation, well-being, aspiration, and ambition. This process is intrinsically linked with their personal growth, encompassing the development of socio-emotional skills. As they prepare and acclimate to competing in novel environments, confronting and overcoming challenges along the way, Competitors

undergo significant growth in resilience, adaptability, and perseverance. Nineteen Members reported their Competitors developed socio-emotional skills in this process. The following stories from Competitors illustrate how their enhanced mental strength, endurance, teamwork, problem-solving, and determination saw them through the WorldSkills Competition:

Costa Rica: [A Competitor] is a native of the area of Perez Zeledon [...] During his participation, [he] had to face external challenges that directly affected his performance in the competition. All his preparation, all his training, his effort, and that of his family, went through his mind when he discovered that a malfunction in the air conditioning of the competition area had damaged the excellent work he had done during the first day of the competition. The second day of competition was meant to confirm and continue his good planning, but destiny had defined that it would be the moment in which he had to find the greatest inner strength and not let himself be defeated by pain, anger, disappointment, uncertainty, and injustice. **[He] recalls that what could have been his moment of greatest defeat turned into a decisive moment that changed the way he faced challenges.** It was when he found his best version, the strongest one, the one he knew that his preparation and talent could make him succeed. Even though all the skill Experts were clear that there was no way [he] could finish his project, and despite the advice to “get as many points as possible”, [his] new goal was to overcome what seemed impossible and not be defeated. **The last second of the competition clock witnessed the mental strength and conviction that can drive a person to succeed. At the end of the competition, [the Competitor] received recognition, congratulations, and tokens of support from Experts and international Competitors as he finished his test in the allotted time. [He] brought pride to our delegation and was awarded the Best of the Nation Medal.**

South Tyrol, Italy: [...] [A Competitor] won the gold medal in electrical installations at the WorldSkills Competition 2005 in Helsinki, competing against 24 other Competitors. The family-owned company uses this world-class achievement as advertising on its website. **The competition showed that it is not only skill that matters but also mental strength, endurance, and teamwork – qualities that are indispensable, especially in a business environment. Curiosity and determination are the hallmarks of [the Competitor],** world champion in plumbing and heating at WorldSkills 2013 in Leipzig. He embodies the Olympic spirit every day in the company of his parents. For him, **high-quality craftsmanship means constant learning, quality improvement, and motivation.**

Russia<sup>1</sup> (suspended Member): “We learn to find a way out of any situation,” says [a Competitor], [a] gold medallist at the Final of the VI National Competition WorldSkills Russia.

## Upward social mobility

Participating in the WorldSkills Competition can improve life prospects by improving Competitors’ social mobility. The improved technical learning outcomes and excellence in skills potentially enhance the skills and profession the Competitors are passionate about. The following stories of Competitors, who were born in rural communities, illustrate how participating in the WorldSkills Competition could bring upward social mobility:

China: [a gold medallist in car painting] came from **a poor family** and learned skills [...] **He not only changed his family’s situation but also became a teacher** at [a prestigious technical institute in China], embarking on the career path of training skilled talents.

Costa Rica: [A Competitor], is a young Costa Rican, born in a **rural area** known as Perez Zeledon, located in the southern part of the country. This area is not characterized by many opportunities for development in ICT fields, so [the Competitor] decided to move to the central valley in search of growing and training in the skills that had always been his passion. In the beginning, [he] did not see TVET as an alternative to develop. However, he found an opportunity to enter the National Learning Institute, where he focused on Structured Cabling before moving on to ICT. **Leaving his home and moving to another region to study was a great challenge in his life,** and he did not anticipate the many opportunities it would present. While studying at the National Learning Institute, he learned about WorldSkills and the possibility of participating in the national competition in 2018. At first, he saw it merely as an experience, however, **this process would change his life completely.** [He] won a silver medal in the national competition in 2018, and since the Competitor who won the gold medal did not meet the age requirements for WorldSkills International, [he] became the national Competitor. Thanks to the K-Star program with HRD Korea, **[the Competitor] had the opportunity to prepare in South Korea which meant for him the first opportunity to leave Costa Rica.** After this preparation and with the training he received at INA, [he] managed to substantially improve his skills and traveled to Russia to WorldSkills Kazan 2019 **with the determination to compete, not just to participate.** [The Competitor] earned Costa Rica’s first Medal of Excellence in history and became a source of great pride for the entire organization. Thanks to his WorldSkills preparation, [he] managed to improve himself and now is part of the staff of an important multinational company, recognized for his technical and personal skills, which have contributed to the company’s global competitiveness.

In summary, the analysis and stories presented above demonstrate that WorldSkills Competitions have significantly impacted many Competitors’ lives. These competitions have helped participants excel in

their skills, transform themselves, and achieve better life prospects. The changes experienced by these individuals have been profound and tangible. It is important to note that the benefits reported by Competitors were the most extensively documented compared to those reported by other stakeholders (e.g., Experts, teachers, trainers, institutional stakeholders, and employers).

### 3.3.2 Experts, teachers, and trainers

#### Overall personal and professional development and act as the catalyst for TVET improvement

Echoing the opportunities for impact seen among individual Competitors, forty-one out of 50 (82%) Members reported that involvement in WorldSkills has provided Experts, teachers, and trainers with positive outcomes (see Figure 4). These include invaluable opportunities for skills mastery, and personal and professional growth. The following elaborates on the updated technical information and knowledge, enhanced pedagogic and mentoring skills, improved career prospects, development of socio-emotional skills, and the exchange and collaboration with counterparts worldwide. Such positive outcomes can potentially enable Experts, teachers, and trainers to catalyze changes at the institutional and systemic levels of TVET.

#### Updated technical information and knowledge

Throughout this process, Members reported that their Experts, teachers, and trainers seized the chance to immerse themselves in diverse TVET systems across various countries, thereby refining their skills, staying abreast of industry advancements, and acquiring new technologies, machinery, tools, and educational methodologies. Such updated knowledge and information can be useful for understanding skills advancement and requirements as well as updating their local TVET systems. Members like Chinese Taipei reported applying the best practices learned from the WorldSkills Competition to identify gaps in their local systems and how to bridge them:

Chinese Taipei: **Experts, teachers, and trainers bring home the best practices of WorldSkills Competitions into VET education, bridging the gap of VET at the global level.**

Malaysia: **1. Exposure to the new technology implemented in industries worldwide. 2. New techniques/methods for performing tasks in certain skill areas.**

Costa Rica: From the technical perspective: **Updating knowledge with international standards** to stay at the forefront, belonging to a network, having access to a network of Experts where they can consult with their partners worldwide, building knowledge together, and engaging in knowledge exchange through mentoring processes. From a labor perspective: **Increased competitiveness, upgrading of equipment and educational environments to enhance efficiency, access to updated information, and knowing the requirements and needs of the labor market.** Learning how to learn.

Ghana: **Proper method in generating infrastructure list; material list; and toolbox/inventory [...]**

Jamaica: **The teachers refer to improved technical skills leading to improved teaching and tutoring skills** and greater job satisfaction.

South Tyrol, Italy: The most common points mentioned in conversations with experts are the following: Many experts believe that contact and exchange with other cultures and countries during the competition is a great experience. **Furthermore, the Experts during the competitions often learn a lot of new tools, things, and know-how from others, which afterward can be passed on to the local environments.**

#### Enhanced pedagogic and mentoring skills

Twenty-seven out of the 50 (54%) respondents emphasized that the enhanced technical skills and newly acquired knowledge and information could translate into improved pedagogic, tutoring, and mentoring capabilities. These refined skills and practices are integral to advancing TVET, innovating methodologies, designing new programmes, integrating novel pedagogical approaches, and fostering greater productivity, innovation, and creativity. This could ultimately become one of the main mechanisms through which TVET institutions and TVET systems as a whole could be affected positively:

United Kingdom: [...] Teachers and trainers gain enhanced teaching practice and play an influential role in developing young people's skills with exposure to **world-class insights, access to techniques in skills development, and new approaches to standard setting and assessment.**

Canada: **Experts and teachers share that they learn so much about teaching and training techniques from other countries. They find that in some instances, students who were [previously] unmotivated in school become motivated when the competition element is introduced. They integrate these learnings from another country into their curriculum.**

Costa Rica: [...] A metal construction skill Expert has adjusted training **workshops at the National Learning Institute following international standard guidelines for efficiency, efficacy, and productivity.** WorldSkills implemented a new methodology of teamwork into my life, with the objective of progressively increasing quality, competitiveness, and productivity, thus achieving value for the global industry and improving efficiency in the use of resources, within a changing environment.

## Improved career prospects

In addition to Competitors, Experts, teachers, and trainers have also derived significant benefits from their participation in the WorldSkills Competition, advancing their career trajectories and unlocking future opportunities. Many have achieved upward career mobility, secured more prominent positions, and continued to play pivotal roles within their respective industries. Although the extent to which their career progression directly correlates with participation in the WorldSkills Competition may require further validation, there are several positive stories:

Finland: **Many of the Finnish experts have advanced in their careers and/or in their WorldSkills competition career after participating in competitions.**

Australia: **Increased career opportunities.**

Portugal: Learning enrichment, growth as a trainer, improved management and technical skills, curriculum improvement, and **[increased] employability**

## Improvement of socio-emotional skills

Members also reported that involvement in the WorldSkills Competition profoundly impacts the socio-emotional perspectives of Experts, teachers, and trainers. Through their participation, they experience a heightened sense of respect, value, and the opportunity to positively influence younger professionals through teaching and mentoring. This unique experience cultivates heightened levels of confidence, motivation, job satisfaction, and overall well-being, as illustrated in the following response from Costa Rica. Such development and enhanced skills are likely to positively influence the skills development and well-being of young trainers:

Costa Rica: From the socioemotional perspective: **To find themselves in safe environments, to have self-confidence. To feel recognized, more motivated, to be recognized as international Experts. Acquire the feeling of belonging to a group or work team. To face challenges. Grow, improve, and progress from a personal perspective, self-development.** Impact positively on the well-being of people, help change lives, being an example for their students and peers.

Costa Rica: [...] WorldSkills has meant a radical change in the before and now, since it opens our minds to everything, **making us more human, critical, and evaluative without losing the essence of who we are as a person. It sets us apart because we are more competitive, dynamic, creative, orderly, critical, and perhaps more structured, since among the WorldSkills group, we always seek to go beyond the established norms for excellence and to differentiate ourselves from others.**

Russia<sup>1</sup> (suspended Member): [...] **The ability to listen to, understand, and negotiate with colleagues from other countries.** Correctly communicating mistakes to participants and jointly adjusting performance plans. Ability to find an individual approach to [each participant]. **Ability to unite young people into a professional team.** Build relationships with organizers and professional communities within the WorldSkills movement during and between competitions. **Improving not only hard skills but also: coaching, facilitation, moderation, and community management; negotiation techniques and conflict management; understanding the essence and strategic importance of its performed functionality** at the event itself in order to make informed decisions in the stressful conditions of the competition.

Belgium: [...] **Transmit their passion and knowledge to the youngest generation.**

Kenya: **Our skill Expert for mechatronics [...] has inspired many trainers when he involved them in carrying out our very first-time skills competition in Kenya.** With this kind of first impression, we expect a lot more trainers

to follow footsteps. **Institutional managers have a great interest in supporting trainees to participate in skills competitions.**

## Exchange and collaboration with counterparts worldwide

Members also reported that the participation of teachers, Experts, and trainers in WorldSkills fostered regional and international collaboration, such as exchanges of best practices and cooperation with institutions and neighbouring countries. This could potentially become a key mechanism through which TVET at the local, regional, and international levels can be positively influenced:

Spain: [...] **Enhance education internationalization through innovative and practical collaboration with worldwide experts. Promotes the exchange of good practices and cooperation with other institutions and enterprises.**

South Tyrol, Italy: [...] The network that is built up between the different experts from different countries is a great added value for everyone. **Another benefit for our Experts is the constant exchange with neighboring countries.**

There is limited detailed data elaborating on how these exchanges or collaborations have occurred among teachers, Experts, and trainers, as well as the tangible impacts they may bring.

The above analysis and stories have shown that Experts, teachers, and trainers could catalyse positive changes to TVET institutions and systems. The updated technical information and knowledge gained through WorldSkills can be disseminated to local TVET systems to enhance standards. Enhanced pedagogic and mentoring skills can be utilized to upgrade methodologies and pedagogies in local TVET institutions, thereby improving teaching and learning outcomes. Improved socio-emotional skills among educators can positively impact students' learning and well-being, supporting the development of the younger generation of professionals. Furthermore, the exchange and collaboration with counterparts worldwide can facilitate the acquisition of updated knowledge and skills that can be applied locally.

In summary, the analysis has demonstrated that micro-level changes and impacts have occurred among Member countries and regions, with significant potential to extend these impacts to drive changes at the meso- and macro-levels. Both Competitors, and Experts, teachers, and trainers play crucial roles within this potential ecosystem. This sub-section also emphasizes that while tracking and measuring micro-level impacts may be the most accessible method for evaluating impact, which is what most Members have done, it is insufficient for fully understanding the potential broader impacts of WorldSkills.

## 4 Gaps in understanding WorldSkills impacts

The instances and opportunities where Member countries and regions have identified potential impacts with various stakeholders and sectors at different levels have been detailed. This section addresses the gaps in the survey data that hinder a comprehensive understanding of how WorldSkills can most effectively drive system-level changes. It aims to highlight the key misalignments between WorldSkills International's vision to foster a skills movement and drive system-level changes, and the survey responses from its Member countries and regions.

### 4.1 WorldSkills vision and alignment with systems-level impacts

First, WorldSkills vision is to work with Member countries and regions to drive system-level changes. However, the analysis of the survey responses suggests a potential misalignment, as WorldSkills International's ambition for a global skills movement may not be fully embraced by its Members due to limitations in capacity, resources, and differing national priorities. Because the survey was not designed to systematically evaluate WorldSkills impacts, the data reveals significant gaps and challenges regarding the measurement and tracking of impacts at the meso- and macro-levels. Still, the analysis has provided a detailed and rich overview of the significant impacts that skills competitions and WorldSkills have on Members at the individual level, including Competitors, Experts, teachers, and trainers. This level offered the most detailed, story-based data, helping to understand the mechanisms of change.

The limited data availability at the meso- and macro-levels indicates that Members may lack the capacity or resources to assess the systemic impacts of their participation in WorldSkills comprehensively. For example, relatively little is known about how engagement in WorldSkills helps to drive productivity, innovation, economic development, and societal changes. The limited data provided on higher-level impacts makes it difficult to grasp the broader system-level impacts. Furthermore, the survey may not have been targeted at the most appropriate person in a Member country; some respondents may not have possessed the appropriate roles or leadership positions within their organizations to provide insights into impacts at the institutional, industrial, TVET systemic, national, and international levels. This underscores the necessity for further exploration into outcomes and impacts at these broader levels.

### 4.2 Lack of integration and systems-level understanding

Second, to drive system-level changes, it is critical to establish a sustainable and mutually reinforcing ecosystem that includes skilled individuals, high-quality TVET institutions, thriving industries, and robust economies. Building on the previous point, the analysis reveals a lack of data regarding how impacts with different stakeholders at various levels interact, mutually enhance one another, and work together, which could be crucial for driving system-level changes. The survey aimed to address different stakeholders and sectors at various levels separately, but this design has unintentionally created a disconnect and isolation between the impacts observed at the micro-, meso-, and macro-levels. The data generated from this approach seems to have downplayed and obscured the chain reactions or systemic impacts brought about by participating in skills competitions and WorldSkills. Consequently, the dynamic and complex interactions, interdependencies, and mutual enhancements that could exist between these levels remain unclear. Benefits and positive outcomes for Competitors, experts, education stakeholders, and employers need to be studied as integral parts of a broader impact picture. To truly acknowledge and do justice to WorldSkills impact, it is essential to connect the dots from these diverse responses and provide more contextualized data. This will allow for a more vivid

and holistic picture of how the cumulative opportunities at different levels will catalyse more profound systemic changes over the long term.

### 4.3 Variability in progress among Members

Third, the analysis suggests that different Member countries and regions are progressing at varying paces in integrating WorldSkills methodologies into their national systems and driving system-level changes, influenced by various contextual and local factors. There appears to be a disparity in the breadth and depth of this integration among Member countries and regions, which may affect the level of impact that has been discussed above. Such heterogeneity between Members necessitates further investigation to understand the current status of each Member and the factors that facilitate or constrain the meaningful integration of *WorldSkills methodologies* into their TVET systems.

## 5 Two Member cases

Having identified what was missing in the survey data and the key misalignment, the research team conducted follow-up interviews with two Member countries – Skills Finland and WorldSkills UK. These Members were selected due to the research team’s familiarity with their work within their respective countries and to demonstrate their strategic intent of how Members use membership to contribute to broader impacts. These follow-up interviews helped us elaborate on the identified gaps in terms of the potential participation in WorldSkills could have regarding positive impacts at the meso- and macro-level. It also elaborates on the interconnected benefits of participating in WorldSkills at the micro-, meso-, and macro-levels, demonstrating how these positive outcomes reinforce one another. It also underscores the importance for WorldSkills International to strengthen and emphasize the collective ambition and vision shared among its Members to drive system-level changes nationally and internationally.

The following uses insights and stories drawn from Skills Finland and WorldSkills UK to specifically understand better the gaps in data collection and knowledge while also recognizing and showcasing the significant contributions, potential, and impacts of WorldSkills.

### 5.1 Promising impacts at the meso-and macro-levels

Recognizing that the survey was not designed to systematically evaluate WorldSkills impacts, such scarcity of data did not necessarily indicate the lack of such impacts. In the follow-up interviews, the research team aimed to fill in this knowledge gap by specifically asking questions regarding impacts that have taken place and observed within industries, the Member country’s economy, and society. The following highlights of meso- and macro-level impacts include advancements in TVET systems, increased productivity, enhanced innovation, economic development, and societal changes.

#### 5.1.1 Improved and updated VET systems

Interviews with Member countries helped to gain a better understanding of the mechanisms of higher-level impacts happening within the TVET systems as well as recognizing the potential of such system-level impacts. For example, WorldSkills UK established its Centre of Excellence, leveraging insights and knowledge gained from engagement with WorldSkills International to “provide free world-class teacher training built on WorldSkills UK’s international insights.” This initiative has equipped educators with the tools, knowledge, and skills to deliver better education, which then enhanced the capacity of institutions, serving as a catalyst to drive excellence in the TVET system. On the WorldSkills UK website it states, “over the past three years the Centre of Excellence has benefitted almost 2,000 educators and 37,500 learners scoring a massive 97 per cent quality rating.”

Through close collaboration with various stakeholders, such as employers’ associations and policymakers like the Institute for Apprenticeships and Technical Education (IfATE), the Department for Education, and the Office for Standards in Education (Ofsted), WorldSkills UK has played a crucial role in advising, informing, and updating TVET quality assurance, assessment standards, qualifications, and frameworks. This collaboration has ultimately enhanced TVET quality at a systemic level:

WorldSkills UK: But what we can do is inform policy through partnerships and collaborations that we have with the broader range of sector-based organizations, [such as] the Institute for Apprenticeships and Technical Education, WorldSkills UK play roles on their quality assurance and assessment panels where we are informing the quality of standards and assessment which inform technical and vocation qualification design. [...] We were able to inform the update of the education inspection framework, the EIF, and we are able to integrate an aspect of criteria within those recognized skills competitions as a mechanism to improve the quality of learning for students and apprentices. There’s a reference in there and that was informed by WorldSkills UK as a means of raising the quality of education.



### 5.1.2 Productivity, innovation, return on investment, and driving future-oriented economies

Interviews with WorldSkills UK and Skills Finland provide detailed insights into how engagement with WorldSkills can contribute to productivity, innovation, and economic growth. Through participation in skills competitions, Competitors enhance their skills, creativity, innovation, and problem-solving abilities. These competencies can benefit their companies by enhancing productivity and fostering innovation:

Finland: Many former competitors have explained how the skills learned in the competitions have helped them stand out in the workplace; **they are the ones asked to help in challenging situations or when innovation is required.** In their work communities, they are the ones who remain calm even in stressful situations and under high time pressure. They are able to creatively solve even the most challenging problems. The competition and coaching activities have helped them develop skills that are extremely useful to companies who aim to improve their products or services. This way, **former Competitors reform their field, and the expertise gained will spread to the benefit of companies and society at large.**

In addition to enhancing productivity and innovation at the industry level, the work undertaken by WorldSkills UK demonstrates a successful return on investment, driving growth and further investment. For example, the 2021 report conducted by Frontier Economics indicated a significant and successful return on investment considering the size of the organization:

WorldSkills UK: We conservatively estimate a return on investment (ROI) for the taxpayer (from established WorldSkills UK activities) of **at least £2.40 and as much as £4.50 for every pound invested in WorldSkills UK, suggesting high value for money.** This is based on an analysis of the 2017-2019 period to align with the two-year cycle of international competitions.

**An even higher return is likely to be achieved by the investment in the Centre of Excellence,** a relatively new initiative that builds on and is made possible by other WorldSkills UK activities such as skills competitions, which were valued separately.

The impact of WorldSkills UK is further evidenced by its ability to leverage private funding – **for every £1 of public money it receives, WorldSkills UK attracts a further 89p of funding from the private** sector, including significant value-in-kind contributions.<sup>1</sup>

Their work also highlights WorldSkills UK's role in progressing towards a skills-led economy with an emphasis on net-zero initiatives, digital skills, and advanced manufacturing. This strategic planning aims to shift the focus of the UK's TVET system towards future skills, preparing the workforce for sustainable economic growth. This approach acknowledges the significant impacts of engaging with WorldSkills International and collaborating with other Member countries and regions:

WorldSkills UK: As a government-funded organization, we are tasked with having a broad view of skills in terms of the representation of different industries and sectors that sit within our portfolios, both nationally and internationally, but most importantly, **having an eye on what those future skills are for UK economic growth. To meet the needs of a world-class skills economy, we have a real focus at the moment on net-zero, digital skills, and advanced manufacturing.** [This] probably isn't dissimilar to any other country or nation out there within the World Skills movement because it is about having your eye on the role that those future technologies and industries have on current occupations or even occupations that don't currently exist.

Despite the potential macro-level impacts on economic transition and growth, as demonstrated by WorldSkills UK, both two country cases indicate that tracking and measuring these benefits can be challenging. The effects are often indirect and long-term, making precise assessment difficult.

### 5.1.3 Societal changes: inclusion, diversity, equity, and social mobility

In addition to the increased visibility and attractiveness of TVET, interviews with Members elaborated on other potential societal changes. One aspect of the mission within WorldSkills UK is championing young people from all backgrounds. Achieving equity, inclusion, and diversity has been a priority on WorldSkills UK's agenda to encourage underrepresented groups to engage in this skills movement:

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<sup>1</sup> Frontier Economics (2021). The economic value of WorldSkills UK: Report prepared for WorldSkills UK

WorldSkills UK: [...] the role that we play in championing young people from all backgrounds, we have a firm commitment in the United Kingdom to our policies around equity, diversity, and inclusion. So it's making sure that all learners of all abilities have an opportunity to see technical and vocational learning programs as a valuable way to enter careers that are going to be important for growth. The UK also conducted research to make sure the programs are accessible to all. [...] back in 2018 or 2019 to conduct some research for us to try to uncover the kind of concepts around unconscious bias. So what we found in our national programs was that **there were small proportions of underrepresented groups engaging in our programs and we wanted to understand why [...] some of the outcomes talked to the fact that there's an element of awareness and understanding of TVET careers, the kind of social, cultural element around how families perceive technical vocational careers and education**, the way through to teachers, even being the barriers because of that unconscious bias. [...] We are deeply committed to making sure that our programs are accessible for all and that we put mechanisms in place that enable access widen participation and remove barriers.

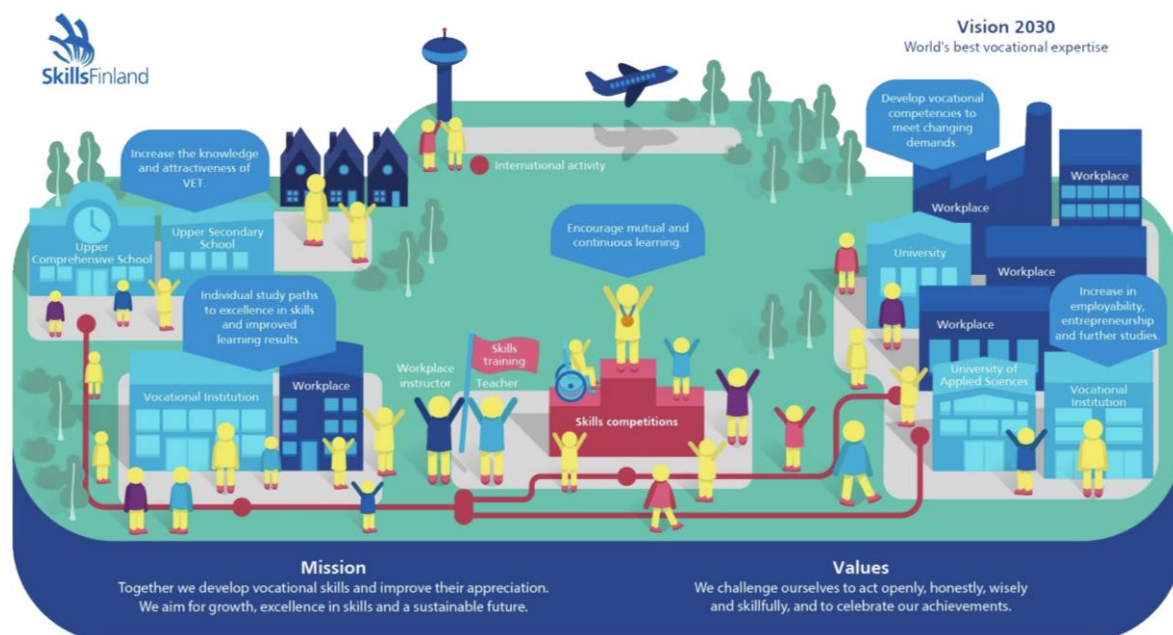
## 5.2 Interactions across impact levels: creating a dynamic and impacting ecosystem

The discussions above detail how participation in WorldSkills contributes to workforce enhancement, teacher empowerment, improved teaching and learning methods, updated curriculum, informing industry trends, and fostering collaborations. These positive outcomes are interconnected, reinforcing each other to create a comprehensive impact. Members emphasize the critical role of engaging diverse stakeholders and sectors and leveraging collaboration to maximize these benefits:

Skills Finland: Finland is a small country with only five million people, so we are working closely together in a network with education providers and industries. Competition activities are carried out in the same way in cooperation with educational operators and business representatives. According to a survey of our competition activities, 87% of the teachers involved felt that the competition activities developed their professional field, 93% felt that they developed teaching and even gave new ideas for teaching work, and, most importantly, 84% had shared what they had learned for the benefit of others. So this is how we improve our education.

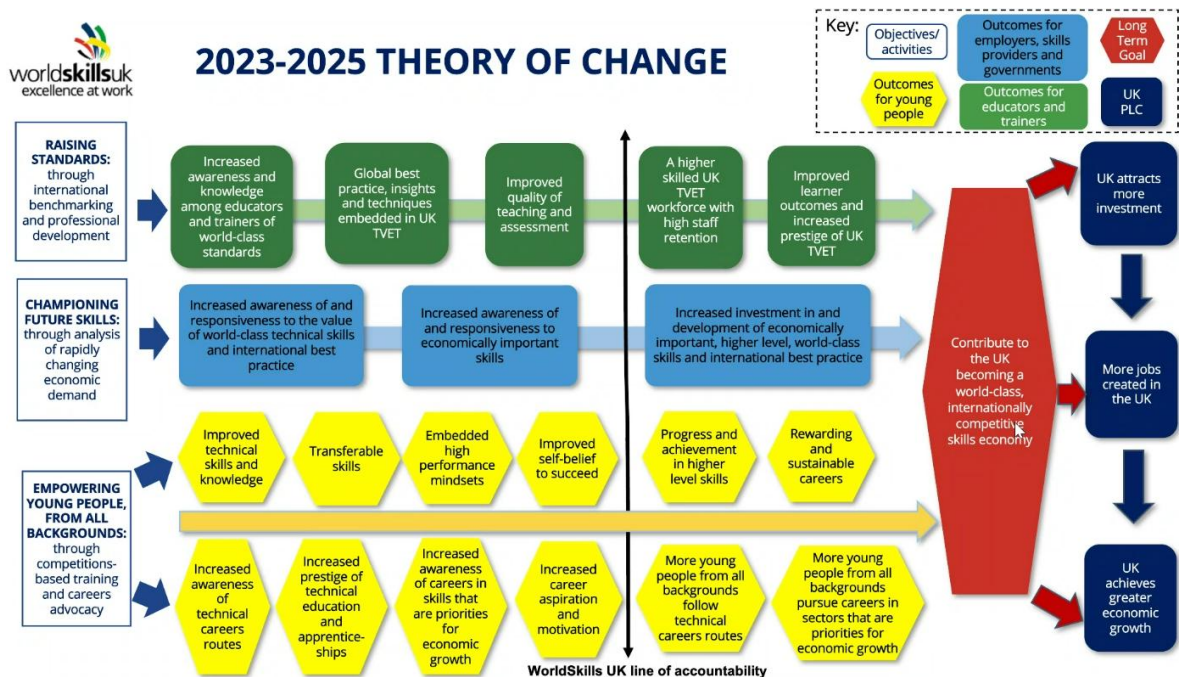
**Good examples of close cooperation between educational institutions and companies are jointly built learning environments and purchased training devices.** If the school does not have funds for the latest technology, the company can pay for it or part of it and plan the learning environment together with the school so that it also meets the needs of business as well as possible. Companies hope that schools will be able to teach the students the latest methods used in the companies, which is why they are ready to cooperate and fund education. An example of this is Sasky Municipal Education and Training Consortium in Finland, where business partners have funded ten such learning environments.

Figure 5 Skills Finland Vision 2030



WorldSkills UK: [...referring to the theory of change in Figure 6] So through the work that we do, there were a number of different routes by which we **help inform education**, whether that's university, college, or training provider, all the way through to how we are supporting teachers and trainers so that they are equipped with the right skills to deliver the training to those young people. And then looking at the yellow segment at the bottom in terms of the work that we do really helps us develop those young people so that they can be more competitive when they do eventually leave education to enter the workplace. **WorldSkills plays a critical role in every single strand of these, from the green, the blue, and the yellow critical [aspects]**. Because if we didn't have WorldSkills, we wouldn't be able to internationally benchmark. [...] However, there are a number of ways that we engage with employers by developing more connected curriculums through the work that we do through our projects like the Centre of Excellence, which is a workforce development program and what that enables us to do is to create an effective third space that enables teaching practitioners to experiment with pedagogic processes. And through that experimentation, **we bring in local employers and also large employees into that space** with a particular focus on digital skills and advanced manufacturing skills. So we focus our efforts within that particular realm to look at building more or stronger collaborations between education and industry. Because we know from our research the most advanced economies globally are doing just that. **So we are trying to foster that collaboration [...]** Again, looking at some of the outputs or the outcomes of our programs and seeing how the young people who are engaging in our work are actually boosting the economy by giving back more to society through higher earning potential. And again, that comes out in our economic review assessment in terms of boosting the economy through to productivity of businesses improving, where young people who are engaging in our programs, helping businesses, be it small or large, attract more business as a result of having someone that is not only far more technically capable, but also is adding that extra level of prestige to those organizations, especially SMEs as well.

Figure 6 WorldSkills UK 2023-2025 Theory of Change



The preceding accounts delve into the myriad benefits at the micro-, meso-, and macro-levels of participating in WorldSkills highlighting how these positive outcomes are interconnected, synergistically reinforcing each other. Both Member countries emphasize the crucial role of engaging diverse stakeholders and leveraging collaboration to amplify these impacts. They underscore the necessity of having a theory of change or a framework to drive systemic changes, as demonstrated by WorldSkills UK and Skills Finland (see Figures 5 and 6).

WorldSkills UK's theory of change, in particular, is notably impactful. It strategically aligns the objectives of skills competitions with broader national goals such as advancing digital skills, promoting net-zero initiatives, and supporting advanced manufacturing. This alignment ensures that the skills developed through WorldSkills competitions are directly relevant to the UK's economic and societal priorities. By fostering collaboration among educational institutions, industries, and government bodies, WorldSkills UK creates a cohesive strategy that addresses current and future skill demands. Finland's Ministry of Education and Culture has set strategic objectives for the development of digitalization, sustainability, and continuous learning. These topics have also been included in the objectives of the competition in Finland, and they are promoted through the competition activities.

These two Members' theory of change not only focuses on immediate skill enhancement but also aims to create a sustainable and adaptable TVET system that can evolve with changing economic and societal landscapes for the future. These frameworks are essential for effectively operationalizing and nurturing such impacts. The experiences from these two country cases underscore the importance of creating a dynamic and impactful ecosystem that continuously evolves to meet the needs of education, industry, economy, and society at large.

### 5.3 Strategic planning and ambition: fostering endless possibilities and system-level changes

For various reasons, Members embrace the WorldSkills mission and ambition to foster a skills movement and drive system-level changes in different ways and to varying degrees. However, in an age of unprecedented uncertainties and challenges for economic growth and transformation, the experiences of these two Member countries demonstrate how engaging with WorldSkills and sharing similar strategies and ambitions can leverage their workforce, industry, and economy towards the future, unlocking new possibilities:

WorldSkills UK: As a government-funded organization, we are tasked with having a broad view of skills in terms of the representation of different industries and sectors that sit within our portfolios, both nationally and internationally, but most importantly, **having an eye on what those future skills are for UK economic growth. To meet the needs of a world-class skills economy**, we have a real focus at the moment on **net-zero, digital skills, and advanced manufacturing**. [This] probably isn't dissimilar to any other country or nation out there within the World Skills movement because **it is about having your eye on the role that those future technologies and industries have on current occupations or even occupations that don't currently exist**.

Skills Finland: Our aim is to **increase the quality and attractiveness of technical vocational education and training (TVET)**. Naturally, we want to win medals, but it is not our only goal. We do not focus solely on that. **We want to increase the quality of education for everyone**.

The above accounts demonstrate how these two Member countries strive to improve their TVET systems and create a future-oriented workforce and economy at the strategic level. Their efforts to unite different stakeholders to achieve these strategic goals have led to system-level changes. This ambition at the strategic level has enabled these countries to become exceptional examples of leveraging the WorldSkills movement to drive changes within their systems, as evidenced by the examples presented earlier. Furthermore, Members also emphasize their eagerness to learn from each other, particularly about higher-level impacts, best practices in TVET systems, and the successes of Member organizations. This knowledge-sharing fosters continuous improvement and innovation across all Members:

WorldSkills UK: What can WorldSkills bring back or what can WorldSkills do differently? For me, having access to **the outcomes of the impact work that's been conducted with Members will be really invaluable for WorldSkills UK and the wider membership**. We're trying to gather information from the various partners that we work with who are part of the WorldSkills Membership. If there was a more consolidated way for other Members to understand, what are the strategic drivers for Portugal, France, Finland, Australia, and the USA for example? What are those understandings? What those strategic drivers are and why those Members engage, I think it's going to be important. Because it helps create that psychological contract when you're meeting with those **respective partners to look at ways where you can foster opportunities for collaboration in exchanges that go outside of the membership**. For WorldSkills UK, it's also understanding or learning about other Members strategic drivers, and this is a role that we need WorldSkills to support and play. **But how other Members are using their learning from WorldSkills to drive the quality of their TVET systems?** Again, unless I went and asked [more than 80] different countries and nations, I can't be sure. So if there's a way that through the work that's being conducted by yourselves, the team through the evaluation [...] if there's a way to draw out case studies or stories or like an infographic that tells that story [...] It doesn't have to be a thesis, but a way just to showcase and help us raise our collective awareness. I think it also **inspires and helps other countries see the endless possibilities of what they can do to strengthen their approaches. It's not just about competition, it's about how the movement of WorldSkills can be used as a vehicle to drive quality and raise the standards in their respective TVET systems**.

Skills Finland: **We are willing to learn from other countries' systems**. We have a very close cooperation with the other Nordic countries, and we have our own meetings where we share best practices. What we hope to learn more from other countries is, for example, how they measure and present the impact of competition activities in an easily understandable form. We would also hope to receive this kind of data from WorldSkills. When we only measure the benefits experienced by the members of our national team, we only receive information from about two dozen Competitors or experts every year. It is a relatively small sample to demonstrate the wider benefits of worldwide competition. **But what if, through WorldSkills, we could obtain global data from dozens of countries and demonstrate the impact of competition activities, measured by thousands of Competitors and coaches? It would have much more weight when want to influence our most important stakeholders**.

The WorldSkills membership network is excellent and very extensive. **The Member organizations have a great deal of different types of expertise, many highly operational practices, and plenty of research data, but there is usually no time to share them at meetings**. The meetings often focus only on dealing with important issues related to WorldSkills, but it would be **very useful for us to also hear about the best practices in other countries and to exchange our expertise**. Now all the countries are doing almost the same thing, but everyone starts from scratch on their own, even though a colleague country could already have a functional system, a method of operation, or a campaign in place that they would allow others to copy. This would allow the entire network to develop faster than at present, and it would certainly also develop WorldSkills competition activities.

These examples underscore the potential for WorldSkills International to strengthen and emphasize the collective ambition shared among its Members to drive system-level changes nationally and internationally. They also highlight the necessity of understanding where and how impacts have occurred among Members, identifying what works and what does not. While the biennial international gathering focuses on skills competitions and excellence, Members like WorldSkills UK and Skills Finland express eagerness to learn from the impacts and best practices of changes in other Member countries and regions. This learning is crucial for equipping Members with the tools and methodologies needed for strategic planning and implementation to drive system-level changes, extending beyond achieving excellence in skills.

Such collective efforts can, as WorldSkills UK acutely summarizes, 'inspire and help other countries see the endless possibilities of what they can do to really strengthen the fact that it's not just about competition; it's about how the WorldSkills movement can be used as a vehicle to drive quality and raise the standards in their respective TVET systems.' There remains significant potential to unlock even more possibilities in the WorldSkills movement.

## 5.4 Summary

Both the analysis of the *Impact Statement Development Survey 2021* and the two follow-up interviews showcase the positive impacts that can result from participating in WorldSkills. The survey analysis indicates that micro-level changes and impacts have occurred among Member countries and regions, with significant potential to extend these impacts to drive changes at the meso- and macro-levels. However, it also highlights that there is insufficient knowledge to fully understand the potential higher-level impacts of WorldSkills.

The two follow-up interviews with Skills Finland and WorldSkills UK helped to elaborate on the identified gaps in understanding higher-level impacts and demonstrate the potential for WorldSkills to create a skills-led ecosystem and achieve more comprehensive and systemic changes. These two countries exhibit a closer alignment between their local TVET systems and the WorldSkills methodologies and mission, fostering a greater possibility of bringing about higher-level positive changes.

These two Members' approaches involve a detailed theory of change or a framework that strategically aligns skills competition objectives with national priorities. This alignment ensures that the skills developed through WorldSkills competitions are directly relevant to the Members' economic and societal goals. By engaging individuals, educational institutions, industries, and government bodies in a cohesive strategy, these Members effectively address current and future skill demands. Their comparatively more structured and cohesive approach, to some extent, facilitates better tracking of outcomes, enabling them to gauge progress and adjust strategies as needed.

Based on insights from the survey analysis and interviews with two Members, a few key takeaways can be summarized:

1. Engaging various stakeholders at different levels to promote higher-level positive impacts is imperative;
2. Enhancing strategic planning and ambition to drive systemic changes is fundamental for change;
3. Developing a Theory of Change that addresses local challenges and needs in TVET development, economic growth, and societal transformation is essential; and
4. Prioritizing impact research to assess effectiveness and inform decisions is crucial for sustainable TVET development.

In conclusion, while there are challenges in tracking and measuring the higher-level impacts of WorldSkills, the experiences of Skills Finland and WorldSkills UK illustrate the significant potential of skills competitions to drive comprehensive and systemic changes. By learning from these examples and applying similar strategies, other Member countries and regions can create dynamic and impactful ecosystems that evolve to meet the needs of education, industry, economy, and society.

## 6 Looking forward to fostering a skills movement

Previous sections highlighted the potential for unlocking more system-level changes nationally and internationally while revealing the lack of impact assessment among Members, and the misalignments between the vision of WorldSkills International and its Members. This section proposes directions for future research that aim to bridge these gaps and facilitate greater system-level changes (see Table 1).

*Table 1 Directions for future research*

Types of research	Rationale and aims	Ideas for implementation
Exemplary cases	<p>This research aims to study several Member countries and regions with comparatively more advanced and successful TVET systems, as well as those with close engagement with WorldSkills International in terms of width and breadth.</p> <ul style="list-style-type: none"> <li>• It aims to showcase the best practices of how these Members integrate WorldSkills methodologies and understand how and why these practices succeed in their national systems, providing inspiration and learning opportunities for other countries.</li> <li>• It aims to derive a more detailed conceptual framework for the WorldSkills Theory of Change, elaborating on the mechanisms, catalysts, and interactions between stakeholders necessary to achieve system-level changes.</li> </ul>	<p>Case study design</p> <ul style="list-style-type: none"> <li>• Conduct desk research to comprehensively understand the TVET system within each Member country/region, identify key stakeholders, and familiarize with local social, cultural, and economic contexts. Develop an understanding of where and how impacts have taken place.</li> <li>• Conduct in-depth interviews with stakeholders at different levels, with a focus on meso- and macro-level stakeholders such as TVET providers, employers, and policymakers related to TVET and economic development.</li> </ul>

Types of research	Rationale and aims	Ideas for implementation
Impact mapping and diagnostic research	<p>Building on the ongoing development of Theory of Change on Members level through WorldSkills Impact Measurement and Management development, this research aims to map out the impacts different Members have achieved.</p> <ul style="list-style-type: none"> <li>• It seeks to provide an overview of where each Member stands in terms of their impact at different levels.</li> <li>• It also aims to help diagnose the gaps and barriers that constrain their potential to achieve higher-level impacts, thereby facilitating the creation of plans for improvement.</li> </ul>	<p>Survey design</p> <ul style="list-style-type: none"> <li>• Building on the Theory of Change framework, identify key indicators of impact and employ quantifiable measures to assess the impacts of Members, e.g. ROI</li> <li>• Use open-ended questions to identify and elaborate on the gaps and challenges that Members face in achieving higher-level impacts.</li> </ul>



## 7 Acknowledgments

This report was prepared by Yushan Xie and James Robson at the Centre for Skills, Knowledge, and Organisational Performance (SKOPE) at the University of Oxford. Yushan Xie is a research assistant at SKOPE and doctoral researcher at the Department of Education, University of Oxford. James Robson is Director of SKOPE and Associate Professor of Tertiary Education Systems at Oxford University.

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- Neil Bentley-Gockmann – WorldSkills Honorary Member, CEO of Whitehall & Industry Group
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- Iván Bornacelly – Policy Analyst, OECD
- Xiaoyan Liang – Lead Education Specialist, World Bank Group
- Grace Lung – Senior Manager of Partnership Programmes, WSI

## 8 End note

It is important to note that WorldSkills International and its partners on the WorldSkills Global Research Council acknowledge that Russia and Belarus are suspended Members since 2022 due to a clear and significant breach of WorldSkills Code of Ethics and Conduct, following the invasion of Ukraine by Russia. WorldSkills is politically and denominationally neutral. It stands in solidarity with the people of Ukraine. The inclusion in this report of references from WorldSkills Russia and WorldSkills Belarus, and any relevant materials, are based solely on historical data from the WorldSkills Impact Statement Development Survey which took place in 2021. The sole purpose of this survey and data was to establish a holistic approach for recognizing the positive progress and potential impact of WorldSkills globally, and this includes the qualitative and quantitative data supplied by WorldSkills Russia and WorldSkills Belarus at the time. To maintain the academic methodological integrity of this research, this data has been included, while being explicit that WorldSkills Russia and WorldSkills Belarus are now suspended Members. For the avoidance of doubt, the inclusion of this data does not in any way or form represent any endorsement of Russia or Belarus today by WorldSkills International.

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<sup>i</sup> Russia is a suspended Member. To ensure adherence to research ethics, integrity, and transparency, we have included responses from Russia's responses collected in 2021 in this report. It is important to note that this historical data does not imply any endorsement of Russia's current position or actions. More information regarding Russia's suspension from WorldSkills can be found in <https://worldskills.org/members/russia/>.

<sup>ii</sup> Belarus is a suspended Member. To ensure adherence to research ethics, integrity, and transparency, we have included responses from Belarus' responses collected in 2021 in this report. It is important to note that this historical data does not imply any endorsement of Belarus' current position or actions. More information regarding Belarus' suspension from WorldSkills can be found in <https://worldskills.org/members/belarus/>.