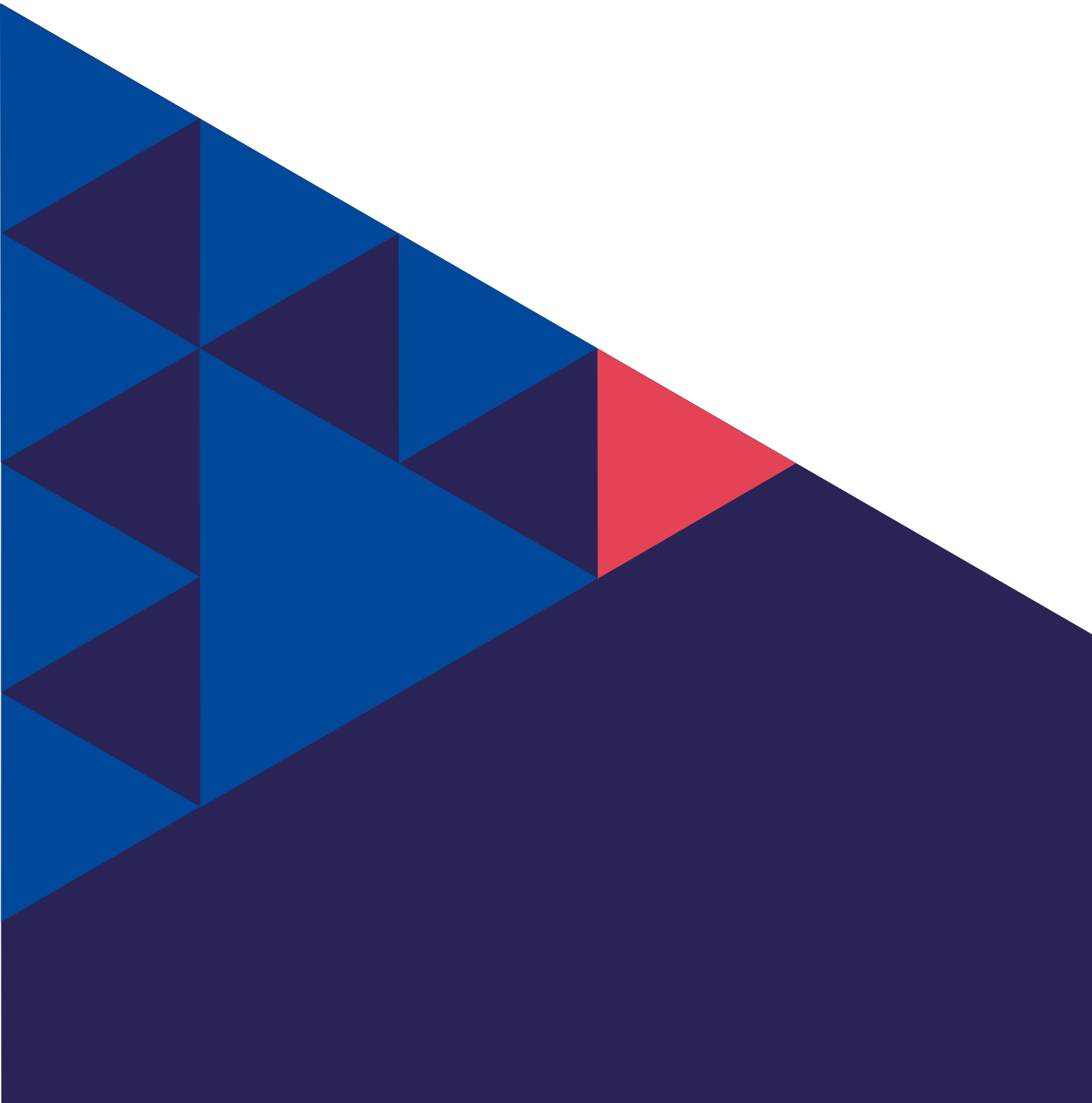
International Labour Organization

Skills for Trade and Economic Diversification STED

# Rapid STED: A Practical Guide



# Rapid STED: A Practical Guide

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# Foreword

Over the last 10 years, the ILO has assisted member states in diagnosing the skills they need to develop to participate effectively in international trade and to diversify their economies through its Skills for Trade and Economic Diversification (STED) programme. From the start, we have aimed for a participative process involving industry, ILO constituents, providers of education and training, and other government and civil society organizations. This new guide provides advice on implementing an updated approach to STED that has been piloted in a number of countries over the last two years in collaboration with national partners. It aims to speed the process, to deepen collaboration, to build capacity among national and sector partners, to improve their skills strategies, and to help move more effectively from diagnosis of skills needs to implementation of the skills development responses required. It differs from full STED in that it does not rely on primary survey research, and in that the process centres on a substantial Technical and Policy Foresight workshop involving industry, national and sector partners, and providers of education and training. Its focus on collaboration and consultation with partners throughout the process is more comprehensive than that set out for full STED in the original STED Practical Guide.

Since STED was first piloted in 2010, skills have increasingly been recognized as having a key role in enabling developing economies to participate in trade and to implement private sector-led development strategies. It is widely recognized that national-level initiatives to strengthen skills development systems have an important part to play in this, but that much of the detailed work on diagnosing skills needs and on creating and implementing practical strategies to address them can most effectively be done at sector level. STED provides the ILO's constituents and their collaborating national partners with a tool to help them in undertaking this detailed work. STED-based development cooperation initiatives provide them with practical support in applying the tool.

Over decades, trade-led and private sector-led development has substantially raised the national incomes of many countries and lifted hundreds of millions of people out of poverty. In recent years, many countries that were still lagging started to make good progress, improving their infrastructure and business enabling environment, developing more sophisticated businesses, growing and diversifying exports, connecting to global and regional value chains, and strengthening their domestic economies. However, the COVID-19 crisis, underway at the time of publication, is causing a huge negative shock to trade, putting many millions employed in traded sectors and their suppliers out of work, or hitting their incomes hard. Loss of income from traded activities is also cutting consumer spending, contributing to loss of employment and often to steeply reduced incomes among employees of domestically traded businesses and informal workers.

In some sectors, jobs and incomes are likely to recover as economic activity resumes globally, although it is uncertain how long this will take. In others, the impact will be longer lasting, whether because recovery is slower, or because some activities lost do not return. Even so, there will be opportunities to grow employment in other sectors, tradable and domestic.

Before this crisis, countries already identified the availability of the right skills and human capital as one of the key challenges they face in building on their successes, and as a key source of opportunity for the future of they can get it right. Now, there is an urgent policy need for countries to look at where their people can be employed productively in future, at what different skills are needed to make this a reality, and at what this means for retaining existing workers and for educating and training future entrants to the workforce.

The Rapid STED guide aims to help countries in carrying out this strategic skills anticipation, including selection of priority sectors for policy attention, analysis of a sector's position and prospects, what it must strengthen to achieve that vision for the future, how skills can contribute to this, and what the choice of strategy and plan of action should be.

Even before COVID-19, the environment for trade was becoming more challenging, with a rise in protectionist sentiment, and with a playing field for trade relationships that was often tilted against less developed countries. Initial indications are that supply chain vulnerabilities highlighted by the pandemic will lead to some tradable activities being moved closer to their end customers. Despite this, and even with the burdens of COVID-19, there is great potential for developing and emerging economies to gain from integrating more deeply into global and regional trade, both through south-south trade and through trade with industrialized countries. Skills have a key role to play, contributing to raising productivity, to adoption of new technologies and business practices, and to innovation in products, services and processes. Crucially, skills are essential to a level playing field in trade, contributing to the ability of firms in less developed countries to diversify into more sophisticated activities, create intellectual capital, apply and develop technologies, and establish balanced business relationships in supply networks and value chains. The ILO's STED programme aims to enhance the ability of countries and their tradable sectors be benefit from the opportunities that this presents.

This guide is the result of work carried out by the SKILLS Branch of the Employment Policy Department of the ILO. It has benefitted from collaboration and consultations with many ILO colleagues, and from experience of STED-based development cooperation work in collaboration with a number of ILO member states, including Ethiopia, Ghana, Jordan, Morocco and Senegal where the Rapid STED approach has been piloted. I look forward to supporting the use of this guide as part of the wider work of the ILO to assist countries in analysing, anticipating and providing for the skills needed to participate effectively in international trade, to recover from the COVID-19 pandemic, and to grow and diversify their private sector economic activity

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# Glossary

**skill mismatch** - Skill mismatch is an encompassing term referring to different types of skill gaps and imbalances such as over-education, under-education, over-qualification, under-qualification, over-skilling, skill shortages and surpluses, skills obsolescence and so forth. Hence, skill mismatch can be both qualitative and quantitative thus referring to both situations where a person does not meet the job requirements and when there is a shortage or surplus of persons with a specific skill. Skill mismatch can be identified at various levels from the individual, the employer, the sector or the economy. Several types of skill mismatch can coincide. (DTI/ÖSB/IER, 2010)

**skill needs anticipation** – there is not uniform definition. It usually stands for any forward looking diagnostics of skill needs expected on future labour markets performed by means of any type of method, be it quantitative or qualitative, including interaction, exchange and signalling between labour market actors.

**skill needs forecasting** – There is no uniform definition of skill needs forecasting. It is often used in a common sense of 'predicting' skill needs. In technocratic circles, however, the term usually stands for mid-to/long-term employment projections based on econometric models which quantify employment outlook by industry and occupation.

**skill obsolescence** – Skill obsolescence refers to the situation in which skills are no longer demanded or useful in the labour market (economic skill obsolescence) or decay of skills resulting from atrophy (technical skill obsolescence) (DTI/ÖSB/IER, 2010)

**skill shortage** – Skill shortage is an overarching term which stands for both skill gaps and labour shortage. 'Skill shortage' is a genuine lack of adequately skilled individuals available in the accessible labour market with the type of skill being sought and which leads to a difficulty in recruitment (NSTF, 1998). A skill shortage characterises the situation where employers are unable to recruit staff with the skills they are looking for at the going rate of pay (EEO, 2001b). This could result from basic lack of people (when unemployment levels are very low), significant geographical imbalances in supply (sufficient skilled people in the labour market but not easily accessible to available jobs), or a genuine shortfall in the number of appropriately skilled individuals – either at new entrant level, or for higher level skilled occupations (NSTF, 1998).

**skill surplus** – Skill surplus occurs when the supply of a particular type of skill exceeds the demand of people with that skill. (DTI/ÖSB/IER, 2010)

**skill** – Ability to carry out a manual or mental activity, acquired through learning and practice. The term "skills" is used as an overarching term for the knowledge, competence and experience needed to perform a specific task or job. (Adapted from ILO: Glossary of key terms on learning and training for work, 2006)

**skills development** – Understood in broad terms to mean basic education, initial training and lifelong learning. (ILO: Conclusions concerning human resources training and development, adopted by the ILC, 88th Session, 2000)

**skills foresight studies** – Foresight studies are typically multi-disciplinary qualitative and quantitative analyses which assume that alternative futures are possible. Foresight studies may include alternative scenarios. Foresight activities may also consider the actions that should be taken to shape the future. (DTI/ÖSB/IER, 2010)

**skills gaps** – Skills gaps are used to describe the qualitative mismatch between the supply or availability of human resources and the requirements of the labour market. 'Skills gaps' exist where employers feel that their existing workforce have inadequate skill types/levels to meet their business objectives; or where new entrants to the labour market are apparently trained and qualified for occupations but still lack a variety of the skills required (NSTF, 1998). (Strietska-Ilina, O. Skills Shortages. In: 'Modernising vocational education and training in Europe: background report. Fourth report on vocational training research' Cedefop, Vol.1 2008)

**taxonomy:** The practice and science of classification. For instance, the International Standard Classification of Occupations is an example of a hierarchical scheme or taxonomy of occupations (Wikipedia)

**technical and vocational education and training (TVET)** - Initial and continuing education and training provided by schools, training providers or enterprises that imparts the skills, knowledge and attitudes required for employment in a particular occupation, or group of related occupations, in any field of economic activity.

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# 1. Introduction

### 1.1 Why Rapid STED

Skills for Trade and Economic Diversification (STED) is the ILO's development cooperation methodology to assist partner countries in meeting the skills needs of the tradable sectors that they expect to play an important role in leading economic and social development.

Experience with STED-based development cooperation work has shown that the STED process should be adaptable to the circumstances in each country and sector, and to the needs of project partners. The existing STED diagnostic process that has been in use for a number of years places a strong emphasis on primary research, including an enterprise survey, a study on the supply of skills, and extensive consultation with experts as well as background desk research based on available statistics and on a review of publications and other documents. This has been shown to be well suited to many contexts, but evaluations and feedback from partners have demonstrated that there is also a need for a lighter, faster approach to STED analysis.

The **Rapid STED approach** has been developed to respond to this need. It draws both on the full version of STED, and on experience from collaborating with Moscow School of Management SKOLKOVO on a rapid foresight approach.

### 2.1 This Document

This document focuses on the Rapid STED process, on its objectives and expected impact, and on the overall process itself from start to implementation.

It describes the start-up phase, during which relationships and working arrangements are established with national partners, and during which economic sectors are prioritized for application of the Rapid STED approach in collaboration with national partners. It also describes how a skills anticipation technical team can be established to undertake technical aspects of the work in support of collaboration and dialogue among national and sector partners.

It provides guidance on undertaking initial desk research and consultations in one or more targeted sectors.

A main focus of the document is to provide guidance to the skills anticipation technical team on conducting a Rapid STED workshop. The technical team presents the outputs of the desk research and initial consultations to a sector group representative of industry, government, representatives of employers and workers, and providers of education and training, and facilitates the group through a process of analysis, visioning, development of conclusions and recommendations, and preparation of an outline sector skills strategy.

The document describes the post-workshop iterative process of finalizing and committing to the strategy, planning for implementation and finally moving from planning to implementation.

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# 2. STED Objectives and Expected Impact

### 2.1 STED Development Logic

The development logic (Theory of Change) for STED is as follows. If tradable sectors in developing and emerging economies have access to the skills they need, then the business capabilities of those sectors will be strengthened, raising productivity and improving competitiveness of their firms, and they are likely thereby to be more successful in traded markets. They are then likely to offer more employment in decent jobs both directly in the tradable sector and indirectly in sectors that supply the exporting sector. An initiative to anticipate and identify the skills needed for future success in tradable sectors, and to respond to those needs in close collaboration with national and sector partners can be effective in bridging skills gaps if undertaken in collaboration with national and sector partners.

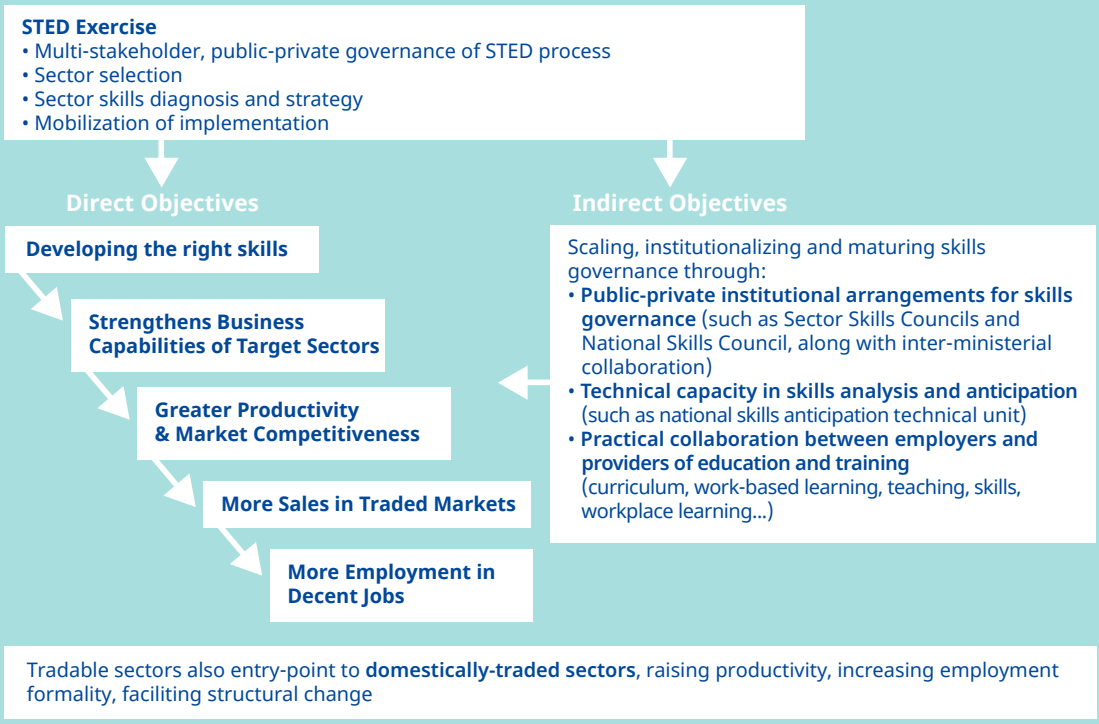
The impact of a STED-based initiative is expected through direct and indirect channels. The direct channel is that project partners **implement the skills strategies developed under the initiative** as a direct outcome of the STED exercise, at least in part through better utilizing their own budget. Where resources are available, a STED initiative also contributes to implementing these strategies.

STED-based initiatives also aim to achieve impact indirectly through channels based on institutional improvement and capacity building, so that a broader range of tradable sectors will have better access to the skills they need, enhancing access to decent jobs more widely.

- Through its operation, the STED initiative aims to develop and strengthen **public-private and inter-ministerial institutional arrangements** among national and sector partners in applying skills anticipation to governance of skills development systems. To the extent that these are institutionalized, they make the national and sector skills development system more forward looking and more responsive to the emerging skills needs of industry.
- Participating in the STED process **promotes the technical capacity of project partners to effectively analyse and anticipate skills needs** in any tradable sector, and to leverage these opportunities to increase the sector's competitiveness through skills development. The improvement in technical capacity may come through strengthening the capacity of existing bodies, but could be enhanced if the experience is embedded in a national skills anticipation unit.
- Participating in STED can provide an entry point to **enhancing practical collaboration between employers and providers of education and training** beyond skills anticipation and governance, in areas including: developing and updating curricula; strengthening systems for work-based learning (such as the work-based component of quality apprenticeships); developing the skills of trainers; or providing workplace training for employees.

Building capacity on skills anticipation and enhancing skills governance for tradable sectors can provide an entry point for similar improvements in domestically-traded sectors, aiming to increase decent employment through raising productivity, increasing employment formality and facilitating structural change (such as, for example, shifting employment from agriculture to services).

**Figure 1: Theory of change for ILO Development Cooperation in skills and trade**




See *Investing in Skills for Inclusive Trade*, ILO/WTO (2017) for a more comprehensive perspective on the interaction between skills and trade.

### 2.2 Objectives of a STED initiative in a sector

The direct outputs from undertaking a Rapid STED initiative in a sector are a **STED Background Study** and a **Sector Skills Strategic Document** for the sector. The Sector Background Study is based on a combination of background research and consultations with sector organizations, leading sector enterprises, relevant providers of education and training, and national stakeholders, and can include focus group discussions and in-depth interviews with a limited number of key stakeholders. The background research includes both statistical and qualitative aspects. It uses whatever statistical sources are available, and usually either partners with, or at least consults, the national statistical service.

The Sector Skills Strategic Document is prepared based on analysis, visioning, conclusions and recommendations from a major 2-day or 3-day workshop representative of the sector and its institutions, with substantive follow-up consultations with all key partners and stakeholders to improve and firm up the analysis, recommendations and commitments of the initial drafts.

The Sector Skills Strategic Document should be validated with the participants of the workshop and other national and sector stakeholders. A half day validation workshop can be held with this purpose. Alternatively, the document can be shared with the participants of the workshop to acknowledge their agreement. This process aims to promote and facilitate implementation of the Sector Skills Strategic Document's recommendations over the period that follows.

The Sector Skills Strategic Document is written in the form of a skills strategy, and may be termed a Sector Skills Strategy if this is the wish of the national and sector stakeholders, expressed through the Lead Partner and the national and sector steering mechanisms for the STED process.

The objectives of a Rapid STED initiative go beyond producing a Sector Skills Strategic Document. They involve the development of the "right skills", i.e. skills that target the sector's development needs. This contributes to achieving the intermediate objectives of the STED process: to strengthen the sector's businesses capabilities; to improve its productivity, competitiveness and innovation; and to increase outputs, value added and exports. These facilitate the achievement of the ultimate objective: more employment in decent jobs.

The overall initiative focuses on enabling the sector to better meet its skills needs, and on improving the governance of the sector's skills development system while aiming at sustainability and expansion of the initiative at country level. Capacity building in skills analysis, anticipation and planning establishes the technical capacity at country level and increases the potential to apply the initiative to additional sectors.

Where arrangements for skills governance at sector level are already in place, such as a sector skills council, the initiative aims to work in concert with them, through collaboration at the institutional level. This ensures an in-depth involvement of the institutions involved in skills governance in the initiative, and promotes their ownership of the sector skills strategic document, while enhancing their capacity to integrate the strategy into their work programme and to undertakse similar skills anticipation and strategic planning work by themselves in the future.

Where sector level arrangements for skills governance are non-existent, the initiative aims to build foundations from which such institutional arrangements for skills anticipation and governance with a sectoral focus could be built, whether these operate at sector level or through a centralized hub that works in multiple sectors. This is facilitated through engaging sector and national partners in collaborative multi-partner policy research, strategy-building, planning and implementation activities. Where feasible, a sector skills steering committee is established to guide and shape the initiative's processes. The committee can function as a prototype for a sector skills council, which can potentially be formalized later.

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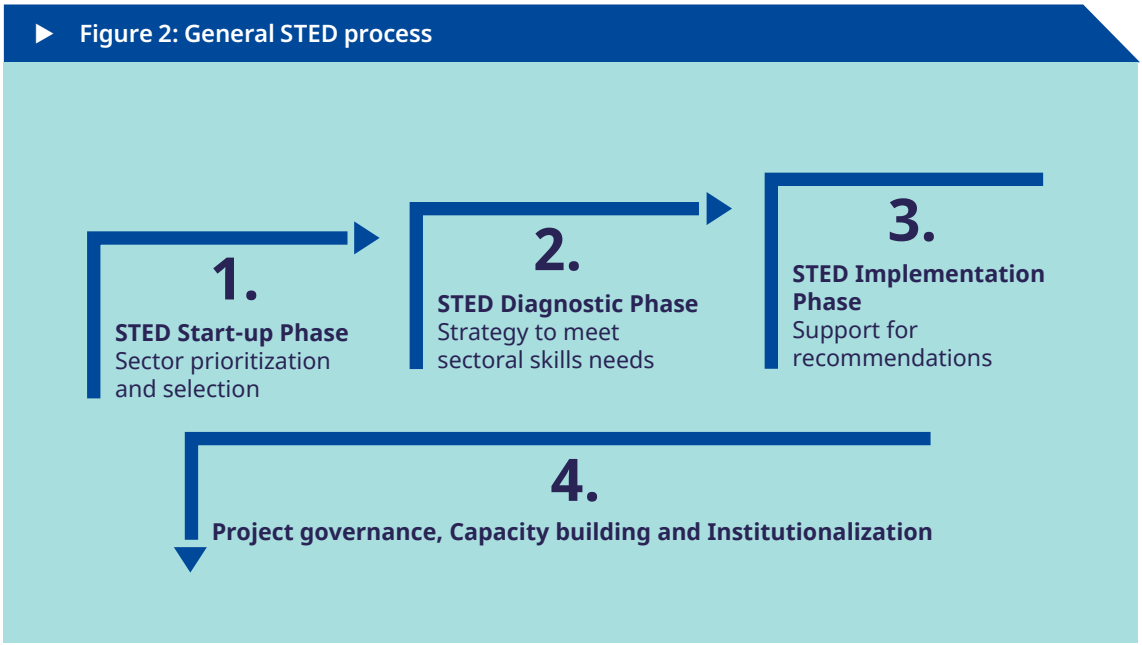
# 3. Rapid STED Process

A full STED-based ILO project has four main components.

- 1. The **Start-up Phase** involves consulting with national partners on the contribution that a STED-based process can make, on the priority sector or sectors to target, on the partners that should be involved in the project, on the project process, and on the governance and management arrangements for the project. It is necessary to address these matters in all STED-based projects. The Start-up Phase includes a technical assessment of the priority sectors in which the STED approach could be applied, presented in the form of a note on sector selection for consideration and used as an input to stakeholders' discussions on sector selection. Sector selection aims to balance partner preferences and considerations of technical suitability. The start-up phase can also include an assessment of skills anticipation approaches and mechanisms available within the country, where this is justified by diversity in existing approaches.
- 2. The **Diagnostic Phase** involves a combination of research, technical analysis, collaborative work with and among partners, synthesis, development of conclusions and recommendations, validation of results and planning for implementation. In Rapid STED, this phase places central reliance on a Technical and Policy Workshop with senior representation from firms in the sector, from sector experts and from ministries agencies and other bodies concerned with the sector's development and skills needs. The workshop is preceded by desk research and consultations with experts that inform the workshop and contribute to the eventual sector skills strategic document. The workshop produces an analysis and draft recommendations. Follow-up consultations with project partners and other stakeholders refine and validate the workshop's analysis and recommendations, aiming for an agreed strategy for skills in the sector. The workshop also aims to identify a number of key skills initiatives for follow up implementation in the next phase.
- 3. The **Implementation Phase** involves working directly with national and sector partners on implementing a subset of the recommendations in the skills strategic document. It also involves mobilizing support action from national and sector partners for implementation of the strategy as a whole, including recommendations implemented without direct support from the project.
- 4. There is a cross-cutting **Project Governance, Capacity-Building and Institutionalization** component that is implemented across all three phases which aims to ensure that each phase is owned and governed by national and sector partners. It aims to ensure that each is implemented by these partners to the extent that is feasible, and that the country's technical capacity to do this sort of policy work for itself is built and enhanced. It also aims to assist the partner country and targeted sectors in institutionalizing skills anticipation as a building block for effective skills governance responsive to economic needs through cross-ministerial mechanisms with a strong industry voice, where possible building on project governance arrangements.

**Figure 2: General STED process**




### 3.1 Start-up Phase

Key elements of the start-up phase include the following. These elements will overlap to a significant extent.

- **Agreement with the ILO constituents** (usually the Ministry of Labour, the national Employers' representative organization and the national Workers' representative organization) that the project contributes to meeting the country's development objectives, that they wish to collaborate actively with the ILO and with each other in delivery, and that they wish to collaborate with other relevant partners (see below) for the effective delivery of agreed objectives.

- **Identification of other important national partners** in project delivery, and confirmation that they wish to collaborate. As STED is focused on strengthening tradable sectors, the Ministry of Trade and Industry is usually a key partner. Depending on institutional arrangements within the country, the national TVET agency may already be included through the Ministry of Labour but is included even if it has a different parent ministry. Depending on the distribution of responsibilities between ministries, on other aspects of the institutional framework, and on preliminary discussions about possible target sectors, other ministries likely to be invited to participate include those responsible for Industry, Planning and International Cooperation, Education and line ministries for important tradable sectors such as those responsible for Agriculture, Food, Tourism or Transport. It is important both to include ministries with responsibilities and policy interests in developing target sectors and those responsible for initial and continuing education and training relevant to tradable sector (beyond initial general education), both at TVET and university levels.

- **Establishment of national steering mechanism** and agreement on the sector level steering arrangements to be implemented. Different arrangements are possible depending on the context. One possible model is to establish a national Project Advisory Committee, and to plan to establish a separate sector committee for each sector in which Rapid STED is implemented. Another is to initially establish a national committee to bring the process as far as sector selection, and then to change its composition to include key sector partners as well as those national stakeholders whose participation is still relevant. Another model is that sector selection takes place through consultations under a lead partner – such as a ministry or agency – and one or more sector level steering groups are established under the authority of this lead partner. Options for sector level steering arrangements are outlined below.

- **Agreement on which ministry or other institution should have lead responsibility** for progressing the STED process, from sector selection through analysis to implementation, on behalf of the national government, and in partnership with collaborating ministries. Depending on the national context, an employers' organization or workers' organization might take the lead rather than a government ministry.
- **Making arrangements for a secretariat and establishment of the technical team** Arrangements for a secretariat to the process are agreed between national counterparts and the ILO. See the Skills Anticipation Technical Team box for details and options on the composition on the technical team and on roles within the team. The technical team undertakes diagnostic work, leads delivery of the Technical and Policy Foresight Workshop, and prepares presentations, documents, strategy statements and reports. The secretariat organizes meetings, circulates documents, and tracks delivery of the initiative.
- **Initial consultation on possible sectors to be targeted** with a STED-based intervention, including review of national policy priorities for development of tradable sectors, consultations with national partners, mapping of existing sector level skills interventions, and confirming that there are suitable industry partners in candidate sectors likely to be interested in collaborating actively. Box 1 sets out criteria for sector selection.
- **Preparation of a sector selection note** based on a combination of secondary research and the consultation on sectors. The note outlines the possible candidate sectors and assesses their suitability. It proposes a shortlist of sectors. It sets out a brief assessment indicating why each has been shortlisted and how it compares with other shortlisted sectors. The shortlist forms the basis for the decision over which sectors should be addressed on the first iteration of STED analysis.
- **Final selection consultation with national partners** based on the sector selection note leading to a choice of sector(s) satisfactory to national constituents that is consistent with the selection criteria.
- **Sign-off on choice of sectors by the Project Advisory Committee** (or other national project governance mechanism) and by the relevant government ministries.
- **Establishment of sector level steering arrangements**, which could, for example, be in the form of an employer-led multi-stakeholder sector steering group, an established institution such as a Sector Skills Council, or of a subcommittee of the PAC with sector leaders and experts co-opted.

### Box 1: Criteria for sector selection

The main criteria to be applied in prioritizing between sectors are as follows.

- The sector should be tradable or have substantial potential for economic diversification. While STED can be adapted for use in domestically-focused sectors not exposed directly to international competition, it is designed for sectors for which a stronger position in trade is important to development.
- The sector should be a priority in the country's development strategies, including trade strategy, industry strategy and employment strategy.
- The sector should be one in which the initial assessment shows that getting skills right can make a substantial contribution to economic success.
- The sector should be one in which improved performance is likely to have a significant positive impact on decent employment. This may be through an increase in direct employment in the sector, or it may be through indirect employment in other sectors that supply the tradable sector with inputs. For example, an increase in exports of processed foods may result both in an increase in food processing employment and an increase in employment in commercial agriculture supplying raw materials.
- As well as considering potential to increase numbers employed, the assessment should consider if better business performance in the sector might impact positively on pay or on other aspects of job quality.
- The sector should be one in which there are partners interested in participating actively, including employers and any line ministry with direct responsibility for the sector.
- The sector chosen should be one in which STED has a good fit with any existing development activities. It should not duplicate existing work.
- The sector should preferably be one in which skills can have a positive impact on greening jobs, whether in through resource efficiency, greening products/services and the production process, use of sustainable materials, use of renewable resources or ther mechanisms, and on gender inclusion

| | | No | Yes, with Reservations | Yes | Strong Yes |
|---|---|---|---|---|---|
| 1 | Sector is tradable or is important to economic diversification | ☐ | ☐ | ☐ | ☐ |
| 2 | Sector is a priority in the country's development strategies | ☐ | ☐ | ☐ | ☐ |
| 3 | Skills can make a big difference to sector's competitiveness and growth | ☐ | ☐ | ☐ | ☐ |
| 4 | Potential for improved business performance to increase employment – direct and indirect – including employment for both women and men | ☐ | ☐ | ☐ | ☐ |
| 5 | Potential for improved business practices and business performance to improve the quality of employment for women and men | ☐ | ☐ | ☐ | ☐ |
| 6 | Availability of committed partners from business, government, workers and education/training providers to participate actively and partner in implementation | ☐ | ☐ | ☐ | ☐ |
| 7 | STED process has a good fit with existing development activities, and does not duplicate existing work | ☐ | ☐ | ☐ | ☐ |
| 8 | Potential for skills to impact positively on greening jobs and on gender inclusion | ☐ | ☐ | ☐ | ☐ |

### Box 2: Preparation of the sector selection note

The sector selection note is based on a review of policy documents and existing analysis by the ILO and other development partners. It also includes an analysis of available statistics for likely candidate sectors including trade statistics, enterprise statistics and labour force survey statistics. The statistical analysis focuses particularly on trends in: numbers employed in the sector; exports of the sector's goods or services; imports of the sector's goods or services; and the sector's output. The analysis of trade statistics includes a review of the main products exported by the sector. Depending on the sector, a review of sources may highlight other data as being relevant; examples include statistics on trends in visitor numbers from the UN World Tourism Organization for the tourism sector, or statistics on the size of the pig herd from the General Statistics Office of Viet Nam for the livestock sector analysis.

As described earlier, the note outlines the possible candidate sectors and assesses their suitability. It proposes a shortlist of sectors, based on the factual information assembled and on the criteria for sector selection. It sets out a brief assessment indicating why each has been shortlisted and how it compares with other shortlisted sectors. The shortlist forms a main input into consultations over which sector or sectors should be selected.

### Box 3: Skills Anticipation Technical Team

A STED process requires a technical team to undertake research and diagnostic work, lead delivery of the Technical and Policy Foresight Workshop, prepare presentations and reports, and provide support and advice to the national and sector level steering mechanisms, and to the ILO project and field office teams.

The process requires national expert(s) and a research team that ideally come from a national partner institution involved in the work, or alternatively a skills anticipation technical unit within a partner institution such as the ministry with lead responsibility for the STED process or the national TVET agency. The national expert(s) may be consultants, although this provides less potential to build sustainable institutional capacity and arrangements for skills anticipation.

The technical team usually includes the following.

- **A national expert** leads research and diagnostic work, contributes to the Technical and Policy Foresight Session, leads the preparation of presentations and draft reports, and contributes to the finalization of reports. Depending on the context, a single national expert might take the lead for all sectors covered or a separate national expert can take the lead for each sector. An international expert should not displace this role because consultations and interviews require a strong national presence, and sustainability requires that capacity be developed at national level.
- **A research team** undertakes research and other technical work in collaboration with, and with guidance from, the national expert. The research team is ideally made up of technically capable people from partner organizations, committed to working on the initiative part-time by undertaking parts of the background research and analysis, by participating in interviews, by participating in consultations, and by advising upon and reviewing drafts of the Sector Background Study and the Sector Strategic Skills Document.

**Box 3: Skills Anticipation Technical Team (continued)**

- **A technical expert on STED** provides technical advice on all aspects of the work, leads facilitation of the Technical and Policy Foresight Session, contributes to diagnostic work, reviews and provides advice on the draft reports, and provides capacity development on STED and skills anticipation to members of the technical team and to project partners. If there is an international expert involved, it will usually be in this role.
- **Staff from the ILO field office(s)** (and, where appropriate, ILO Headquarters) participate in the technical team and provide technical backstopping as part of their development cooperation work. They work with the sector and national steering mechanisms to:
  - strengthen the capacity of the technical team through capacity building training
  - ensure that the technical work is coherent with and responsive to the needs of national and sector counterparts;
  - ensure that the conclusions and recommendations are as needed and are owned by national and sector counterparts;
  - collaborate with counterparts on translating the analysis into action; and
  - support counterparts in building institutional capacity to mainstream skills anticipation, involvement by industry and inter-ministerial policy coherence into governance of the skills development system.

Where the steering mechanism for the Rapid STED initiative is high level, it may appoint a **Technical Reference Group** to advise on technical matters on its behalf, and to take on some of the functions of the research team.

The Skills Anticipation Technical Team works in collaboration with the secretariat.

### 3.2 STED Diagnostic Phase

Under the Rapid STED process, the Diagnostic Phase has four parts.

- 1. **Background research and initial consultations on the sector and its skills needs (see section 4)** produces a report on the sector based on available statistics, on existing published sources, on initial consultations with sector partners, and on existing ILO research, experience and knowledge of the country, the sector, its skills needs and skills development system. It produces a presentation on this material for use in the next part. The Background research phase also includes interviews with industry leaders and sector experts in the sector steering mechanism, and additional consultations with industry and with experts.

- 2. **The STED Technical and Policy Foresight Session (see section 5)** is the centrepiece of the Diagnostic Phase, which brings together senior representatives from firms in the sector and from ministries, agencies and other bodies concerned with the sector's development and skills needs, as well as sector experts. The workshop goes through all stages of a STED analysis for the sector over a period of two to three days, including developing draft conclusions and recommendations. The workshop relies on the knowledge and expertise of participants, on the desk research presented, and on the capacity of the workshop facilitator(s) for analysis and conclusions that are both technically strong and reflect a balanced perspective on the sector's development and skills needs owned by the main stakeholders. It relies on the participants, with support from the facilitator, to identify the priority skills issues for the sector, and to propose options for addressing the issues that are realistic and feasible for potential implementation. The output of the workshop

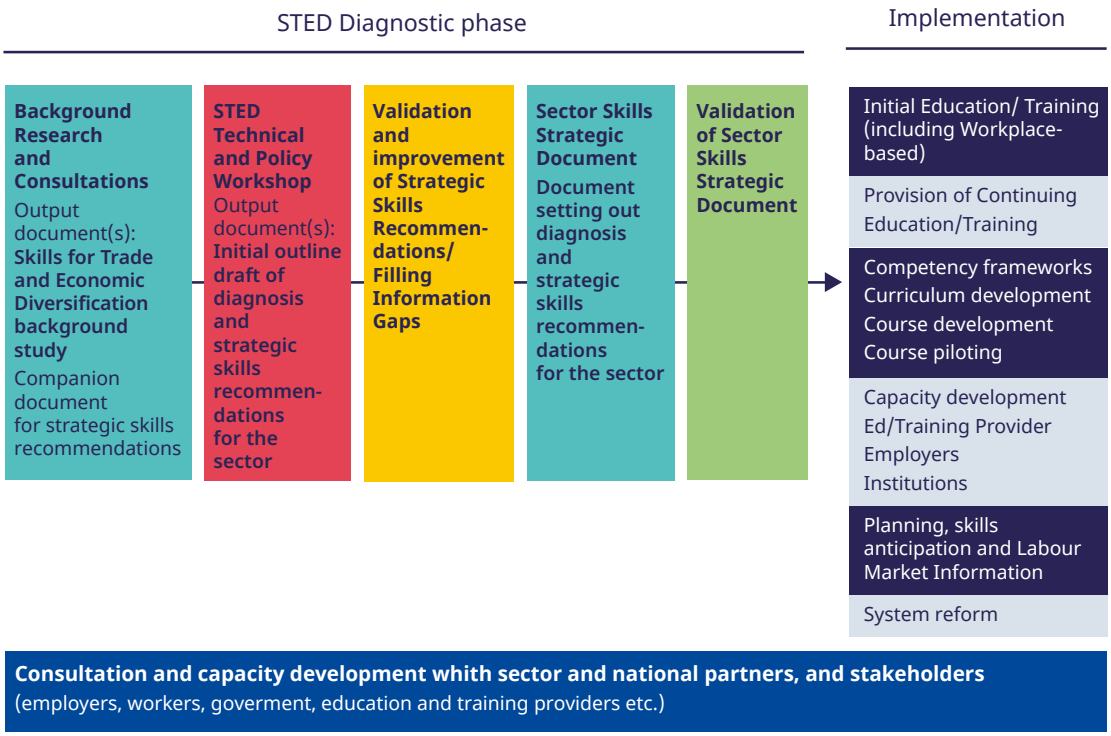
is the initial outline of a skills strategy report for the sector recording the analysis conducted in the workshop and fitting it with the secondary research.

- 3. **Sector skills strategic document drafting and consultation:** Following the workshop, the technical team, the secretariat, and ILO staff go through an iterative process of drafting and consultation with sector level and national level partners. This process refines and agrees the conclusions and recommendations. It drafts and finalizes a skills strategic document for the sector incorporating the agreed conclusions and recommendations. The resulting strategy and its supporting analysis are approved by the project steering mechanism.

- 4. **Skills strategic document validation:** Under the final part of the Diagnostic Phase, the sector skills strategic document is validated through wider consultations with sector stakeholders. This can, for example, be undertaken through initially validating with the sector steering mechanism, and then implementing a validation workshop involving a wider cross-section from industry and other stakeholders. An implementation plan for the strategy is developed with consultation between the project steering mechanism, the secretariat and ILO staff, taking advice from the technical team.

An ILO project team involved in delivery of a Rapid STED initiative has responsibility for ensuring that plans for those areas of implementation that will use ILO project resources have a good fit with project objectives, and are likely to be effective and have an impact that is sustainable past the end of the project. They should focus on improving skills development provision and on improving the skills development system. While they may go as far as piloting new or improved curricula, they should not usually finance one-off provision or the continuation of provision after the completion of piloting.

**Figure 3: Rapid STED Process**



### 3.3 STED Implementation Phase

STED-based ILO projects normally include an implementation phase, during which the project contributes to implementing a subset of the recommendations, and works with partners to mobilise decision-making, resources and activity to implement the skills strategy as a whole. Experience shows that a STED-based initiative that stops after conducting analysis and developing a strategy, is less likely to result in practical mainstream implementation by partners than one that includes some implementation supported directly by the ILO. Even during the Diagnostic Phase, most national and sector level partners expect to see a commitment from the ILO or other development partners to support for implementation of at least some of the recommended actions, and the credibility of the process relies on this. Direct support for implementation has positive effects beyond the scope of the activities implemented with support from the project; it also gives credibility and momentum to the wider sector skills strategic document, and means that dedicated ILO staff are available to mobilize activity on the strategy among national and sector partners, among other ILO projects and with other development partners and donors.

Where a country adopts the STED approach without an ongoing ILO development cooperation involvement, implementation phases will continue to be an important part of the overall process.

The Implementation Phase can start while the Diagnostic Phase is still in progress, subject to adequate validation. It may be possible to identity a small set of priority actions, such as for example developing and piloting skills standards and a new curriculum for a priority occupation, with high certainty, during or shortly after the Technical and Policy Foresight Session. Implementation of these actions can start in parallel with drafting the sector skills strategic document and consulting with national and sector partners.

The Implementation Phase should be delivered in line with the ILO approach to Results-Based Management. For detailed guidance on Results-Based Management and on Monitoring and Evaluation of STED-based projects, refer to the STED Results-Based Management and M&E Manual (ILO, 2016).

# 4

# 4. Pre-Workshop Background Research and Consultations

Background research undertaken pre-workshop has two main purposes: to provide information on the sector and its skills needs so as to inform the facilitators and participants at the workshop; and to provide contextual and supporting material for inclusion in the skills strategic document for the sector developed through the STED process.

While it is possible to provide guidelines about what material will be most useful for these purposes, the actual content of what is collated will depend on what is available from accessible sources. The objective for desk research in Rapid STED is to collect and present information that is available relatively easily and, if necessary, to supplement with additional focus group discussions or in-depth interviews, not to undertake substantial original research or to place substantial demands on partners for statistics that may take significant resources to assemble.

The principal difference between Rapid STED and a full STED exercise is that the extent of background research in Rapid STED is limited so as to speed the process, lighten the research resources and organizational load, and limit the time commitment required from partners. The Background Research phase of a full STED exercise adds a substantial enterprise survey and a skills supply study (which are not covered in this Rapid STED Guide), along with additional analysis based on these.

### 4.1 Sector definition

The first step in conducting desk research on a sector is to establish the sector's scope. In most cases, the national statistical office is the main source of credible data. This can be accessed directly from the statistical office, or for some data it may be more convenient to access from collections of data held by international organizations or by partner organizations within the country. For some sectors, a line ministry responsible for the sector may also be a source of data, although in many cases it will be published by the national statistical office.

Most national statistical offices classify data analysed by sector according to the International Standard Industrial Classification (ISIC), or by a national or regional ISIC variant that is similar in most respects. In order to make use of national sector level data on employment, output, value added and investment, it is usually necessary to choose one or more industry classifications that best match the sector definition. In most cases, the highest level of ISIC aggregation (A, B, … U) is not sufficiently detailed, and it is necessary to define the sector in terms of 2-digit ISIC codes or sometimes codes at 3-digit or even 4-digit level. Manufacturing sectors, often addressed under STED, are subsets of top-level classification C – Manufacturing (e.g. Division 14: Manufacture of Wearing Apparel, or Division 21: Manufacture of pharmaceuticals, medicinal chemical and botanical products). Matching the sector definitions applied within a country by policymakers and industry sector bodies can require aggregating ISIC codes together. For example, an agro-processing sector might be represented as the aggregation of ISIC 0163: Post-harvest crop activities, Division 10: Manufacture of Food Products, and Division 11: Manufacture of Beverages.

When considering the sector definition, it is important to consider whether to only include the exporting sector itself, or to also consider the domestic parts of its supply chain. However, if the domestic supply chain is included it usually represents just parts of other sectors (e.g. of agriculture for a food processing value chain). It may not be possible to define these part-sectors meaningfully using ISIC-based data on the supply chain part of the sector.

The usual sources of data on international trade are not based on sectors, but on products. The classification system usually used is the Harmonised System (HS) system[1] . To identify exports of a sector's products, it is necessary to identify a set of HS codes that are equivalent to the products of the sector. WITS concordance tables[2] published by the World Bank for past versions of ISIC provide useful formal guidance on this. A simpler, faster and more transparent solution may be to identify a set of 2-digit (or sometimes 4-digit) HS codes that are approximately equivalent to the sector's products, while reporting on the approach taken when the results are included in presentations or reports.

### 4.2 Sector statistics

The exact choice of statistics to assemble will depend on what is available and considered by the technical team to be relevant. The objective is not to provide a standardized sector profile, but to analyse the available statistics in ways that provide meaningful insights into the sector, into its skills and employment, and into its position in international trade. Differences between statistical systems mean that it is not possible to be exactly prescriptive about which data should be analysed. Differences in the issues that sectors and countries face mean that data analysis should be tailored to the country and sector under investigation, even where underlaying availability of statistics is similar.

It is preferable to obtain a continuous time series of up to 10 years where data are available, so as to provide a clear sense of trends. Doing this has the supplementary advantage that outlier datapoints (which are not uncommon in practice) can be understood and presented in a wider context or discounted. The data can be shown in chart form in a presentation for the STED Technical and Policy Foresight Workshop and also when included in the sector skills strategic document.

Trade data is likely to be available denominated in local currency from national sources or denominated in USD from international sources such as ITC Trade Map.

For manufacturing sectors in a developing country with a relatively well-developed system of statistics, the following data can be sought to inform the assessment on the demand for skills. Where other data on the sector are available, they can also be included if they provide insights considered by the technical team to be useful. There may also be existing analyses available, such as occupational forecasts, results of establishment skills surveys, or results of job vacancies surveys.

The following are examples of data to support the development of a sector profile:

- Employment in the sector (from enterprise surveys or from labour force or household surveys)
- Sector employment disaggregated by sex of employees
- Percentage share of employment in the sector by occupation at 1-digit ISCO level and employment data on key occupations at more disaggregated levels if available (sometimes using published cross-tabulations between sector and occupation published by the national statistical office, but more often based on an extraction from unpublished Labour Force Survey data undertaken by the national statistical office, or by the technical team using LFS data files held by ILO STATISTICS)[3]
- Percentage share of employment by occupation at 1-digit ISCO level disaggregated by sex

1 The Harmonized Commodity Description and Coding Systems, generally referred to as "Harmonized System" or simply "HS", is a multipurpose international nomenclature developed by the World Customs Organization (WCO) for the classification of products. The system is used by more than 200 countries and economies as a basis for their Customs tariffs and for the collection of international trade statistics.

2 https://wits.worldbank.org/product_concordance.html

3 The technical team should evaluate the usefulness of whatever occupational data can be extracted from the LFS. How well does the definition of the sector addressed by the STED process match with industry sector classifications used in the LFS? How plausible do the employment data appear to be at 1-digit ISCO level, taking account of the possibility that there could be sampling errors, and that LFS occupational coding is sometimes idiosyncratic? Are occupations coded at a level more detailed than 1-digit ISCO, and if so for which occupations are the numbers sufficiently large that they are unlikely to be distorted greatly by sampling error?

- Trend in employment change by 1-digit ISCO occupation
- Age composition of employment by 1-digit ISCO and sex
- List of principal occupations at detailed level (2, 3 or 4-digit ISCO) with percentage share of employment
- Wage/earnings data and its change compared to the national average
- Data on nature of employment relationship, such as full time versus part time, and permanent versus temporary or seasonal
- Gross output
- Gross value added
- Investment as share of output
- Exports disaggregated by principal product category
- Exports disaggregated by destination markets
- More detailed disaggregations of export data where these would be informative, for example for key regions or for key products
- Imports disaggregated by country of origin (to illustrate import competition)
- Imports disaggregated by principal product category
- Imports into countries that are important export markets for the sector disaggregated by the competing countries that supply those exports

For non-manufacturing sectors, other types of data for assessing current and future demand for skills may also or alternatively be relevant. In tourism, for example, most countries publish statistics on arrivals into the country by nationality, hotel rooms by quality of hotel, bed-nights[4], tourism earnings and other measures of the sector and its performance. These measures are useful where output statistics and trade statistics would be used for a manufacturing sector. The UN World Tourism Organization publishes international compilations of national statistics.

In agriculture, aquaculture and forestry, statistics may be available on topics like number of head of each type of animal, use of land area by type of agriculture/aquaculture/forestry output, output in tonnes of each type of commodity, number of farms by type of farm or size of farm. These statistics may be the main source of quantitative information where the sector focus is narrowly on primary production, but can also be valuable supplementary information when the focus is on a food processing sector and its supply chain.

Lack of data is often a challenge in developing countries. It is sometimes possible to bridge data gaps by drawing on data at a level that is more aggregated than would be ideal. For example, in some countries, data on employment is not available for detailed occupations, but may be available for ISCO level 1 occupational classifications. Alternatively, qualitative data or informed estimates on data can be used, or small sample surveys can be undertaken as part of focus groups or through consultation interviews. For example, firms interviewed can be asked about the occupational and gender composition of employment in their workforce, about how their numbers employed have changed over the previous year or two, or about how their sales are split between domestic and export markets.

4 Bed night is a hospitality sector unit of occupancy based on one person for one night.

Firms and experts can also be asked about their perspective on future quantitative change, for example about anticipated change in the occupational composition of employment in their firm, or about anticipated change in output and numbers employed. When doing this, it is preferable to start with qualitative questions (such as "high, medium or low?") about inter-related indicators such as output, export sales, domestic sales, labour productivity and employment, then to put a range on what the qualitative answers might mean in quantitative terms, and finally to check that the answers are consistent across the indicators. When companies in a sector are asked direct questions about future employment levels aggregated answers are usually unreliable and often implausible. It is important to guard against this by making sure projections for the future sought from firms are well thought-through and well explained.

Where it has not been possible to collect data through pre-workshop background research and consultations, it may be possible to bridge the gap later, whether through obtaining qualitative inputs at the Technical and Policy workshop itself, or by identifying and filling key information gaps after the Workshop.

### 4.3 Consultations

The technical team should undertake consultations and interviews with industry leaders and sector experts involved in the sector steering committee, with other sector experts, and with providers of education and training. The consultations ideally include a number of focus groups with groups of employers.

The main objective is to gather preliminary information on the following:

- The sector's strengths, weaknesses, opportunities and threats.
- Technologies, working practices and human resource management in the sector.
- Key occupations and job types in the sector.
- Skills shortages and gaps, and qualitative strengths and weaknesses in skills in the sector, both among new entrants and among existing employees.
- Underlying reasons for any skills shortages and for any deficiencies in the quality of skills of new entrants and existing workers. (Sometimes, apparent labour or skill shortages may arise from uncompetitive wages, poor working conditions or inappropriate recruitment practices, so the first step is to find out whether a skill shortage is real.)
- Business impact of skills shortages and deficiencies.
- Providers of education and training that are important for the sector for the supply of graduates and for training existing workers, and the qualifications that they provide that are valued by employers.
- Supply of new skills into the sector, from graduates of TVET (including apprenticeships) and universities, and from other sources.
- Connections and collaborations between employers and providers of education and training in areas including skills governance and anticipation, work-based learning (including internship, work placements, work-based component of apprenticeships, workplace visits, training for existing workers, curriculum development, skills of teachers, and skills of workplace trainers and mentors.
- Other sources that the sector uses to recruit workers, which might for example include job advertisements, Public Employment Service, private employment services, investment agency or commission, or personal social networks of workers.

Interviewees are also asked about what they and their organization or business would like to get out of the process, and about the scope that might exist for them to get involved in developing and/or piloting new skills development initiatives that may be pursued during the implementation phase.

Another main objective is to inform each interviewee on the objectives and process, of the initiative on what it is envisaged that they will contribute during the Diagnostic phase, and on the parameters within which they may be asked to collaborate in the implementation phase.

### 4.4 Key Occupations

A list of key occupations in the sector is required to provide a framework to collect data, for discussion and analysis, to prepare a description of skills in the sector and how they are evolving, and to structure conclusions and recommendations.

Developing a practical list can take significant effort, because it has to make compromises between priorities. For STED purposes, we need a list of (usually) 10 to 20 occupations that covers most of the key skills required in the sector now and in the future. The list should cover each occupation employing relatively large numbers. It should also cover all levels of skill, from low skilled to high level managerial and professional occupations, making explicit distinctions such as for example (in a manufacturing context) between low-skilled manual work, skilled operator or assembler work, technician level work, and high-level professional work. It should also aim to highlight emerging occupations that are key to operating or seem likely to be important to creating the future of firms in the sector, even if workers in the occupation are not very numerous. Such emerging occupations may appear or increase in significance because of changes in technology or work organization, or in support of the need for greening of businesses.

The key sources of ideas for the list of occupations should be:

- employers and other industry experts;
- the International Standards Classification of Occupations (ISCO), along with whatever occupational employment data are available for the sector from sources such as Labour Force Surveys that can be used to help highlight which occupations are most significant in terms of employment;
- listings of existing occupational standards relevant to the sector; and
- existing skills studies for the same sector, including those undertaken by other countries.

The structure of the list of key occupations is likely to be a compromise between the structure of ISCO and the understanding that employers and other sector experts have of occupations in the sector. It may also need to take account of existing frameworks such as existing sets of occupational standards

- Sector experts are an excellent source of information on the occupations in a sector, and on how they are understood by employers, workers and providers of education and training. Their input is necessary to develop a list of occupations well suited to the STED process. The lists of occupations that different experts will propose are likely to differ, grouping jobs into occupations in different ways, and often omitting occupations that they do not consider immediate priorities or for reasons that may not be well thought-through. For this reason, it is important to reconcile lists of occupations proposed by different experts with each other, and also to reconcile them with other frameworks such as ISCO, existing sets of occupational standards, and existing skills studies.
- Referring to ISCO makes it possible to use Labour Force Survey data (if available) for high level (1-digit) occupational groups, and sometimes for the more detailed occupations (ISCO 2-digit, 3-digit or 4-digit) that employ the greatest number of workers. Referring to ISCO helps ensure that the list of occupations covers the full range of occupational levels, including low-skilled occupations requiring limited initial training, TVET-level occupations requiring significant technical

and vocational skills, and high- level occupations some of which require university education. However, there are too many detailed occupations in ISCO to use them all in a practical list of occupations for a sector. Also, occupational statistics from Labour Force Surveys in countries where STED is deployed can be unreliable at detailed level, because of size of survey samples and also because the quality of detailed level coding of occupations in Labour Force Surveys is sometimes not prioritized since it has no impact on the results usually published.

- If there is an existing set of occupational standards for the sector, it is important to take it into account when developing the list of occupations. The structure will usually already be well thought-through in terms of occupations and levels, but it may be out of date, it may exclude or deprecate occupations considered by sector experts to be important, or the experts my consider that there are better solutions to choices made in the framework's design. It is important to think consider at this point that the STED process may make recommendations about occupational standards, and about curricula based upon them, so any major contradictions with an existing occupational standards framework should be considered carefully.

The list of occupations should include residual occupational categories at a range of levels to cover occupations not otherwise covered.

Data on the occupational composition of employment in the sector should be obtained, matched if feasible to the list of key occupations. It may be possible to do this adequately based on Labour Force Survey data, as outlined under Sector Statistics. Otherwise, the process of consultations and focus groups can include a survey question for enterprises on the number and sex of employees in each occupation.

### 4.5 Education and Training Statistics and Other Supply Side Information

The technical team should endeavour to gather statistics and other information on TVET and university courses (including apprenticeship training) linked to the sector's main occupations – especially those main occupations for which the sector is one of the country's main employers.

In addition to statistics, a range of qualitative information is also important, covering topics including the following:

- Structure of qualifications, course duration and progression between courses and between qualifications;
- Sources of skills supply that industry actually uses;
- Training by industry as a source of skills supply;
- Other sources of supply used by the sector – e.g. Migration, Return to Workforce;
- Collaboration between industry and education & training on skills supply; and
- Other systemic supply constraints such as funding models, suitability of curricula, teacher training, availability of equipment for practical training; and assessment systems, among others.

For statistics, where possible, it is preferable to rely on data from government bodies responsible for these education and training sectors, such as a Ministry of Education, a TVET agency or a qualifications authority. Where this is not possible, it may be feasible to identify the main education and training institutions providing these specific courses and carry out a small survey. Quickly identifying all the relevant courses and getting survey responses for all of them can be challenging for outside researchers, and having representatives of education and training providers on the steering committee or the technical team who can provide insights, and leverage their professional connections to encourage responses, may help.

The single most important quantitative indicator is a time series on the number of graduates in each relevant discipline at each level per year. Interpreting what this means for the supply of skills requires a knowledge of how students move between qualifications. If students mostly enter the labour market after graduating with a qualification, then they all contribute to the skills supply, but if, for example, a third of them proceed to a higher qualification then only two thirds are available directly for recruitment and the other one third will eventually be available qualified to a higher level.

Statistics on student/trainee numbers and on numbers of students/trainees entering courses can also be useful, but it is important to set these alongside information about the duration of the type of course, and ideally the proportion likely to graduate. As an illustrative example, under steady state conditions, a type of course with 1,000 students/trainees that lasts 3 years would produce about 270 graduates each year if it loses 10 per cent of its students each year.

**Table 1: Illustrative example of relationship between student/trainee numbers and graduate numbers**

| Student Numbers | Year 1 | Year 2 | Year 3 | Graduates |
|---|---|---|---|---|
| 1,000 | 369 | 332 | 299 | 269 |

Where statistics on student/trainee numbers are for courses that are less than an a academic year in duration, it is important to be clear whether the statistics represent the number at some specific point in time, or on a full-time-equivalent basis, or actually represent the full student throughput for the year.

Table 2 highlights potential sources of information on skills supply. References to education and training should be taken to include TVET, university, Work-Based Learning (including apprenticeship and other), training by Public Employment Services, training by professional associations, and training by NGOs. Initial and continuing training at enterprises are covered under “Training by Industry as a sources of skills supply”.

**Table 2: Potential sources of information on skills supply**

| Quantitative Supply – Education and Training | Qualitative Supply – Education and Training | Structure of Qualifications, Course Duration and Progression | Sources of Supply that Industry Actually Uses | Training by Industry as a Source of Skills Supply | Other Sources of Supply – e.g. Migration, Return to Workforce … | Collaboration between Industry and Education & Training on Supply (and other systemic supply constraints) |
|---|---|---|---|---|---|---|
| Official published statistics by course type – admissions, stock of students, graduate numbers, tracer data<br><br>Statistics from Education Ministry, TVET Agency, Higher Education Agency etc.<br><br>Survey of all relevant education institutions | Consultations with ministries and agencies<br><br>Interviews with TVET institutions and universities<br><br>Interviews with DC projects training workers | Consultations with ministries and agencies<br><br>Interviews with TVET institutions and universities | Tracer survey data<br><br>Interviews with TVET institutions and universities<br><br>Interviews with DC projects that train prospective workers | Information from interviews with TVET institutions and universities on their supply of training services to industry<br><br>Interviews with DC projects that train current workers | Labour Force Survey data on nationality of workers by occupation | Consultations with ministries and agencies<br><br>Interviews with TVET institutions and universities |
| Views of industry on sufficiency of graduate numbers (interviews, survey and/ or workshop inputs) | Views of industry on quality and relevance of graduate skills (core and technical) (interviews, survey and/ or workshop inputs) | Industry perspective on role in work placements, apprenticeships and other work-based learning | Information from industry (interviews, survey and/ or workshop inputs) | Information from industry (interviews, survey and/ or workshop inputs) | Information from industry (interviews, survey and/ or workshop inputs) | Information from industry (interviews, survey and/or workshop inputs) |

### 4.6 Skills Demand Projections

Ideally, the Background Report should include projections of demand for new workers by occupation. However, in some country contexts, it may be difficult to do this to an acceptable standard, given gaps in availability of reliable sector level data in many of the countries in which STED is applied. The technical team should assess the feasibility. It should advise the steering committee on whether it is feasible, and, if so, what the detailed methodology should be.

Detailed methodologies use projections of sector employment, which may come from a variety of sources including existing national and sector strategies, macroeconomic models, or sector-based scenarios for exports, domestic sales and labour productivity. Decisions on the form of sector employment projection to use are based both on technical factors and on the level of comfort that policymakers and other stakeholders have with each option.

Detailed methodologies disaggregate employment projections by occupation. This may be done on the basis of the key occupations framework, typically taking occupational employment data from sample enterprise surveys as the starting point, or on the basis of 1-digit ISCO occupational codes, typically using Labour Force Survey data. In principle, it can be implemented using more detailed ISCO codes, but in practice Labour Force Survey sample sizes (and often also the quality of detailed occupational coding) usually make this impractical in countries where STED is implemented.

In most sectors, the occupational composition of employment will change over time. The technical team has to assess whether it can estimate this change for the projection model, ideally based on trends from regular Labour Force Surveys corroborated by expert opinion from the sector. If it does not have quantitative information on trends, it may in some cases be possible to substitute expert opinion corroborated or calibrated against trends in the equivalent sectors of other countries.

Demand for new workers in an occupation in a sector has two components: 1) expansion demand arising from projected growth in employment in the occupation; and 2) replacement demand arising from the need to replace workers who leave employment in the sector.

Estimating replacement demand accurately is difficult because it is hard to measure even existing replacement demand accurately, and the rate at which employees leave the sector can vary over time. As much of the worker mobility for a sector is usually between firms within the sector, the sector's annual replacement rate for an occupation is frequently very much lower than the average employee turnover rate for the occupation stated by individual firms. Reasonable estimates of the replacement rate should take account of qualitative information, and any available quantitative information, about what workers who leave firms do next. Data on the age profile of employees, which may be available from the Labour Force Survey, also provides useful insights in conjunction with qualitative information about how old employees are when they leave employment in the sector; for example, typical ages at which workers retire or are no longer physically suited to the work, or typical ages at which workers may leave waged employment to establish their own business or take on family duties.

Sometimes, skills demand projections for a sector are already available, perhaps from a national occupational forecasting model, or from an earlier forecasting exercise carried out for the sector. The ideal situation is if there is already a national occupational demand forecasting system in place capable of producing forecasts at sector level, and if the custodians of the model are in a position to collaborate with the STED technical team to produce forecasts for the sector, validate them qualitatively with sector experts, and make any adjustments required following validation. Sector level outputs of national occupational forecasting models are based on historical data, and often have no mechanism to take account of information about current developments that may be common knowledge in the industry.

It is also fine to use other existing occupational demand forecasts if the technical team feels that they are credible. The technical team should take care to attribute them properly and include a description of the methodology – sector level skills demand methodologies are not always well thought-through, so transparency is necessary and it is important to be cautious about taking responsibility for the quality of projections made by others.

The graph and table below provide illustrative examples of how occupational demand projections might be presented to the technical and policy workshop however they are developed. While it would be ideal in principle to use the list of key occupations for the sector that has been prepared, data availability may make it necessary or preferable to use ISCO classifications for quantitative projections, and to link these descriptively to the key occupations framework.

**Figure 3: Illustrative example of how to present total employment projections of a skills demand sector model**

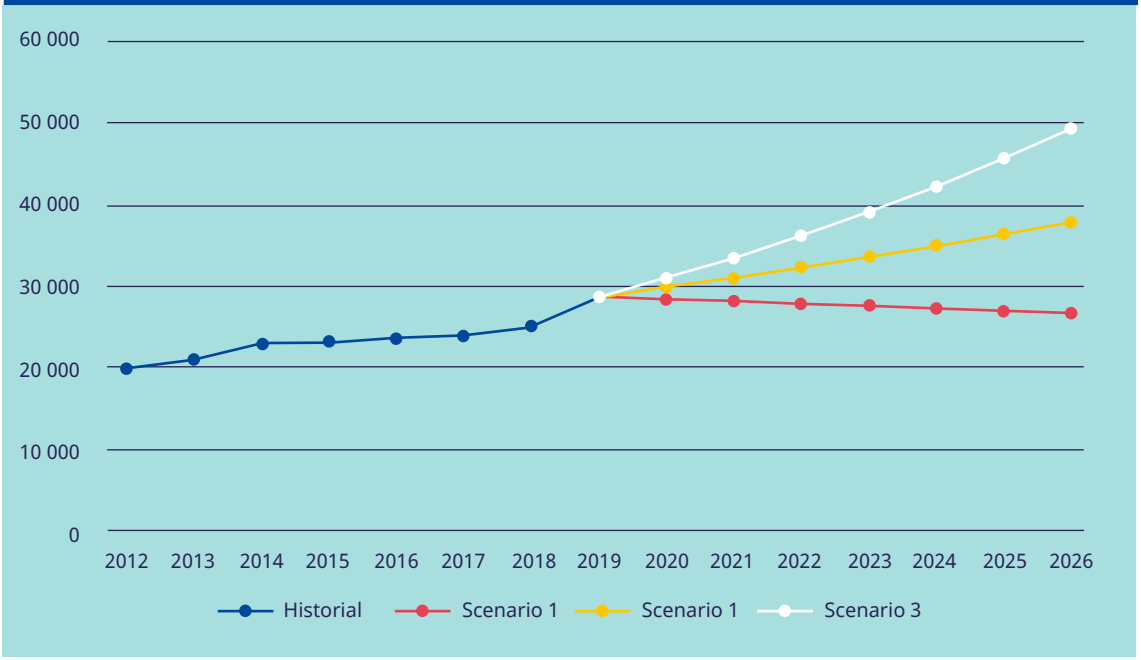



Table 3 shows an illustration of how the occupation-level outputs of a skills demand model can be presented. It is based Scenario 3 above, along with illustrative numbers for employment by occupation. The underlying model includes a change in the occupational composition of employment over the five years, with the share of employment in Professional, Technician and Plant/Machine Operator occupations increasing, and the share in elementary occupations decreasing.

The actual numbers for the different columns illustrated in Table 3 should normally be available from any model projecting demand for skills by occupation in a sector.

- The first column shows current employment in each occupational category.
- The second shows the percentage growth per annum in each occupation over the next five years. If this is not directly a feature of the model, it can be reverse calculated as the Compound Annual Growth Rate (CAGR) required to produce the growth in employment projected for the occupation.
- The third column shows the average annual absolute growth in employment projected for the occupation over a five-year period, or in other words the occupation's projected expansion demand.
- The fourth column shows the average annual replacement demand for each occupational category over the five-year period.
- The fifth column shows total projected annual demand per year for each occupation, and is the sum of the third and fourth columns.

**Table 3: Illustrative example of how to present skills demand projections by occupation from a skills demand sector model (of a preferred option)***

| ISCO | ISCO description | Current Employment by Occupation | % Growth in Employment in Occupation per year over 5 Years | Average absolute increase inemployment in occupation each year over 5 years | Demand for Replacements per year over 5 years | Overall Demand for Occupation each year |
|---|---|---|---|---|---|---|
| 1 | ISCO description | 863 | 8.0% | 81 | 21 | 102 |
| 2 | Professionals | 1,151 | 12.9% | 192 | 49 | 241 |
| 3 | Technicians | 3,454 | 11.4% | 492 | 141 | 633 |
| | Other Associate Professionals | 576 | 8.0% | 54 | 7 | 61 |
| 4 | Clerical Support Workers | 4,317 | 8.0% | 404 | 160 | 564 |
| 5 | Services and Sales Workers | 2,015 | 8.0% | 188 | 75 | 263 |
| 6 | Skilled Agricultural, Forestry, Fisheries Workers | 0 | | 0 | 0 | 0 |
| 7 | Craft and Related Trades Workers | 3,454 | 8.0% | 323 | 128 | 451 |
| 8 | Plant and Machine Operators and Assemblers | 10,073 | 8.6% | 1,027 | 632 | 1,659 |
| 9 | Elementary Occupations | 2,878 | -2.5% | -69 | 217 | 148 |
| **Total** | | 28,780 | | 2,693 | 1,429 | 4,121 |

* An alternative is to use the list of occupations for the sector that has also been prepared.

### 4.7 Information to Prepare for Technical and Policy Foresight Workshop

A number of outputs from this phase are required to be added in the Technical and Policy Foresight Workshop materials. Each of these is designed to be used in a specific part of the workshop. References in parentheses to Agenda Items link to the agenda for a STED Technical and Policy Foresight Workshop shown in Table 4 the next Chapter.

- 1. A presentation on the STED Sector Background Study is required for a session early in the workshop. (This is the material for Agenda Item 2)
- 2. A draft value chain diagram for the sector is required to be shared with participants at the workshop for feedback and possible improvement. Where different subsectors have significantly different value chains, more than one value chain diagram may be required. The draft value chain should normally be included in the Background Study. (This is to be added to Agenda Item 3.)
- 3. Time series charts on sector Employment, Output and Exports for the sector are also required. These should already form part of the Background Study, and may already be included in the presentation on the Background Study. (These are, again, to be added to Agenda Item 3.)
- 4. The "Scaling Game for Visioning" described later should be adapted so that the questions fit the circumstances of the sector. (This is to be included in Agenda Item 3.)
- 5. A "key occupations" slide should be prepared, including data on the occupational composition of employment (This is to be included in Agenda Item 5.)
- 6. A draft Skills Demand Projections slides, or slides, should be prepared. (This is to be added to Agenda Item 6.)
- 7. A skills supply slide should be prepared based on the skills supply data collected (This is to be added to Agenda Item 8.)
- 8. An "Evidence on Skills Gaps in Occupations" slide, or slides, should be prepared. (This is for Agenda Item 8)

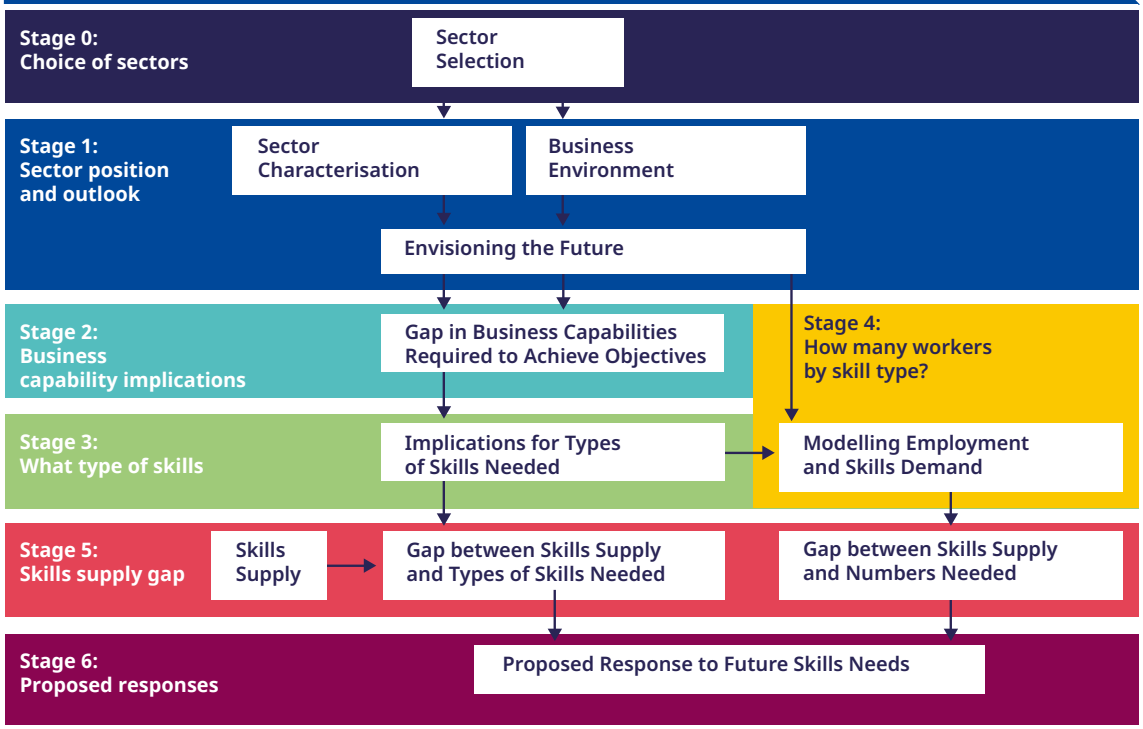
5

# 5. Technical and Policy Foresight Workshop

The Rapid STED Technical and Policy Foresight Session aims to get insights from participants by going through the following stages of diagnostics the target sector over a period of two to three days. Any prospective facilitator seeking more detail on the framework than is provided here can refer to the STED Practical Guide (ILO, 2012).

The diagram below summarizes the diagnostic framework. Stage 0 takes place well before the Technical and Policy Foresight workshop. Substantial information contributing to a number of stages is gathered before the workshop through preparing the Background Study. As set out in the previous chapter, the Background Study is used in the preparation of workshop materials tailored to the workshop. The draft Background Study itself may be provided to workshop participants in advance of the workshop if this is considered by the technical team and secretariat to be likely to improve the process.

Figure 4: STED Diagnostic Framework

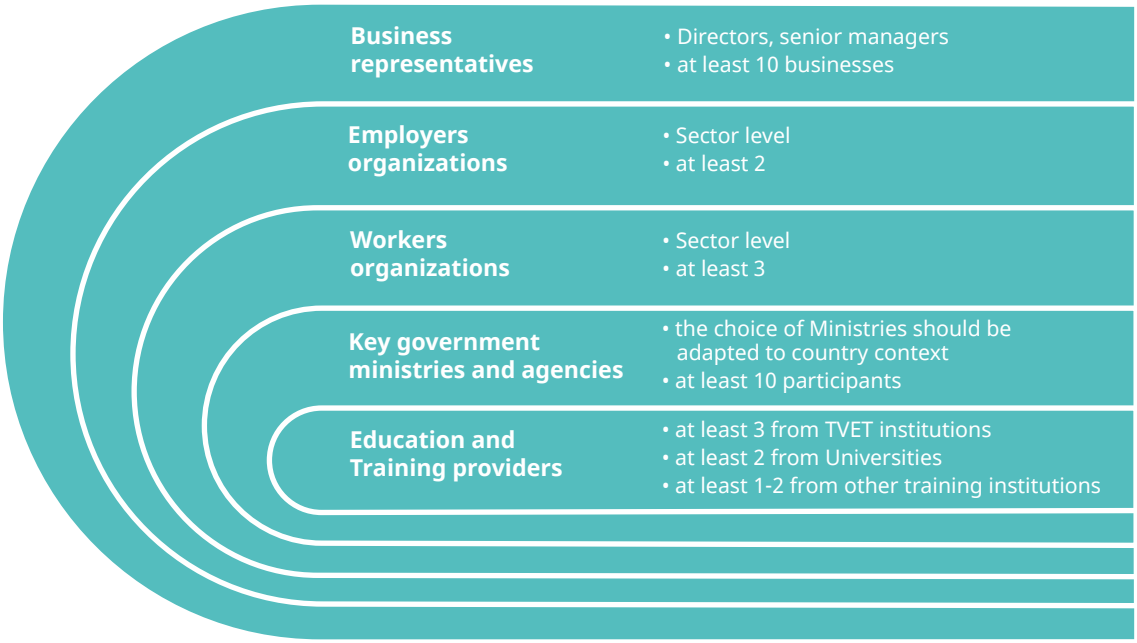



The Technical and Policy Workshop is designed to be implemented with a group of 20 to 30 participants per sector covered. There is normally a separate workshop for each sector covered, but in exceptional cases it may be possible to cover two or three sectors in the same workshop, with about a quarter of the workshop conducted in plenary sessions and three quarters conducted in parallel sector-specific streams.

### 5.1 Profile of participants

The target composition of the participant group for each sector will vary contingent on institutional arrangements and circumstances, but it should be approximately in line with the following guidance.

**Figure 5: Workshop participants per sector**




- Senior and mid-to-senior representatives of businesses in the sector from areas including general management, HR management and operations management, covering leading companies, large companies and SMEs, and a cross-section of subsectors. It is ideal if up to **60 per cent of participants can be from industry**. The workshop's effectiveness and success relies on having a substantial employer presence.
- Two or more sector level representatives of employers' organizations and/or other sector business organizations
- Three or more representatives of workers organizations.
- Representation from key ministries and agencies concerned with the sector, that should include at least one senior person and (where applicable) at least one person expert in the sector's issues. The choice of ministries and agencies should be adapted to circumstances, but the following list can be used for guidance: trade ministry, industry ministry, labour ministry, education ministry, planning ministry, line ministry (such as agriculture and food ministry, or tourism ministry), TVET agency, HRD Council, Skills Development Council, export promotion agency, FDI or investment promotion agency, industrial development agency, qualifications authority, agencies for enhancing productivity or innovation, Public Employment Service, sector skills council, and other agencies responsible for supporting the specific sector (such as food safety agency or tourism promotion agency).
- Senior representatives of education and training providers that supply graduates and continuing education and training to the sector, including at least three from TVET institutions, and at least two from universities, as well as representation from any training centres or "centres of excellence" that provide specialist training for the sector. Optionally, around two students could be added.

Other national level and sub-national regional organizations can also participate, including national representatives of employers and workers and ministry representatives whose responsibilities are wider than the sector(s) that are the subject of the workshop.

There can be scope for representatives of other development partners with an interest in skills for the sector to participate or observe, subject to ensuring that their contributions focus mainly on information and technical clarification, that the direction of analysis, conclusions and recommendations is still set by sector and national partners, and that they follow guidance on the process from the workshop facilitators.

### 5.2 Workshop structure and sessions

The Rapid STED workshop is structured into ten sessions based on the STED diagnostic framework, as follows.

**Table 4: Workshop Sessions in Rapid STED Technical and Policy Foresight Workshop and their Relationship to STED Diagnostic Framework**

| Session Topic | | Relationship to Framework |
|---|---|---|
| Session 1 | Introduction to workshop: purpose, targeted impact, process and STED diagnostic framework | Introduces STED framework |
| Session 2 | Presentation and discussion on background research and consultations | Pre-prepared analysis of statistics and other information from secondary sources that informs Stage 1 of STED Diagnostic Framework and parts of other stages |
| Session 3 | Sector characterization; business environment; and envisioning the future of the sector | Stage 1: Sector position and outlook |
| Session 4 | Business capability gaps | Stage 2: Business capability implications |
| Session 5 | Implications of business capabilities for types of skills needed | Stage 3: What type of skills? |
| Session 6 | Outlook for quantity of skills needed | Stage 4: Modelling employment and skills demand |
| Session 7 | Systemic constraints in skills supply and provision of skills development for sector | Stage 5: Skills supply gap |
| Session 8 | Supply of skills available; and gaps between supply and outlook for skills needed | Stage 5: Skills supply gap (continued) |
| Session 9 | Developing proposals to respond to future skills needs | Stage 6: Proposed responses |
| Session 10 | Conclusions and steps forward | Summarizing outcomes and next steps |

The table below shows a sample STED Rapid Foresight agenda. In principle, the workshop can be either 2 days or 3 days in duration. The principal trade-off is between depth of analysis and dialogue and convenience for participants. In practice, it is usually 2 days in duration because for many participants – especially industry people – it is difficult to commit for longer than that.

The sample agenda below is based on the 2-day option.

**Table 5: Sample Rapid STED Technical and Policy Workshop agenda based on 2-day duration**

| DAY 1 | FORMAT |
|---|---|
| **REGISTRATION** | |
| Welcoming remarks and icebreakers | Speeches, Introduction of participants and Icebreaker Exercise |
| **Session 1**<br>Introduction to workshop: purpose, targeted impact, process and STED diagnostic framework | Presentations, Q&A |
| **Session 2**<br>Presentation and discussion on background research and consultations | Presentation and plenary discussion |
| **Coffee Break** | |
| **Session 3**<br>Sector characterization; business environment; and envisioning the future of sector | Group work and presentations |
| **Lunch** | |
| **Session 4**<br>Business capability gaps | Group work and presentations |
| **Session 5**<br>Implications of business capabilities for types of skills needed | Group work and presentations |
| **Coffee Break** | |
| **Session 5 (continued)**<br>Implications of business capabilities for types of skills needed | Gathering of inputs, analysis and facilitated discussion |
| **Session 6**<br>Outlook for quantity of skills needed | Presentations by sector groups, with brief discussion |
| **Dinner** | |

| DAY 2 | FORMAT |
|---|---|
| Welcome back and feedback on first day | |
| **Session 7**<br>Systemic constraints in skills supply and provision of skills development for sector | Facilitated group work |
| **Session 8**<br>Supply of skills available; and gaps between supply and outlook for skills needed | Group work and facilitated plenary discussion |
| **Coffee Break** | |
| **Session 9**<br>Developing proposals to respond to future skills needs | Facilitated group work |
| **Lunch** | |
| **Session 9 (continued)**<br>Developing proposals to respond to future skills needs | Facilitated group work |
| **Session 10**<br>Conclusions and steps forward | Plenary session |

## 5.3 Guidance on Conducting the Rapid STED Technical and Policy Foresight Workshop

### 5.3.1 Scope of Guidance

This section provides guidance on the approach to each Session, and on the facilitated discussions and exercises to be undertaken in the course of the workshop. Facilitators preparing to lead a Rapid STED Workshop should also refer to the documents referred to under Workshop Materials below.

### 5.3.2 Workshop Materials

The team of facilitators should prepare a set of workshop materials in advance of the workshop with support from the technical team. A sample set of workshop materials for the workshop is available in PowerPoint format that can be adapted as needed. This document is structured in line with the ten-session format used in the workshop.

The main elements to be tailored are highlighted under "Section 4.7 Information to Prepare for Technical and Policy Workshop" in the previous chapter. The STED Practical Guide (ILO,2012) provides detailed background on the STED approach.

### 5.3.3 Workshop Location

The workshop should be in a spacious room that can accommodate the expected number of participants and staff comfortably, with space and flexibility to accommodate switching between plenary and group work formats, and to accommodate exercises in which participants move around. It will need a projector and screen, and a minimum of one white board or flip chart for each of 3 to 5 split-out groups, along with stationary. Some groups may prefer to produce group-work outputs on laptops, and present them on screen.

It is strongly preferable if the workshop can be at an attractive out of town, attractive location, to encourage participation and so that participants are less likely to be drawn away to deal with day-to-day work issues. It is important to budget for this from the start of the Rapid STED process.

### 5.3.4 Workshop Staffing

The workshop requires a lead facilitator to take the overall lead in preparation and delivery. This will most often be the lead STED Technical Expert involved in the initiative. Selection of the lead facilitator is key to the success of the workshop. The lead facilitator should be familiar with this Rapid STED Manual, and should be ready to provide facilitation based on the workshop materials. Facilitators should have participated in a STED training course and should be familiar with the content of the STED Practical Guide. To underpin their application of the STED approach, they should also have knowledge in the areas of skills policies, business strategies, human resource management, as well as in employment, trade and enterprise policies. It is helpful if one or more ILO specialists who are expert in skills, employment, enterprise or the specific sector are available to co-facilitate.

It is good practice, also, to have one or more assistants for the facilitator(s) who are fluent in the local language(s), to facilitate good communication, to support the facilitator(s) in understanding discussions between participants, to take detailed notes, and to provide rough drafts of content on analysis, conclusions and recommendations for inclusion in the report on the sector, drawn from the notes. The assistant(s) will usually be drawn from the skills anticipation technical team or from ILO project staff.

As a significant contribution to dialogue and collaboration involving multiple areas of ministerial responsibility, constituents and the ILO on policy matters, the workshop will benefit from involvement by high level constituents, at least at the opening and conclusion, and from participation by ILO Decent Work Team and project staff.

### 5.4 Workshop Content

The paragraphs that follow provide an overview on how the Technical and Policy workshop should be run, when implemented as a collaboration between national and sector level partners and the ILO. They do not go into full detail on content. The facilitation team should be prepared to adapt to circumstances where necessary.

Appendix 2 provides presentation material in PowerPoint format to be used in the Technical and Policy Workshop with adaptations and additions appropriate to the country and sector context.

#### 5.4.1 Workshop Introduction

The Technical and Policy workshop commences with short welcoming speeches from the ILO and from the partner organization or organizations hosting the workshop.

There should be a brief tour-de-table, with a few words from each participant on their name and affiliation and what they hope to get from the skills strategy process.

A short icebreaker exercise provides a good start to active collaborative participation in the proceedings. This should be designed at the discretion of the facilitator and technical team.

**Box 4: Icebreaker**

An option for the icebreaker is the scaling game. Under the scaling game, two signs are placed several metres apart on a wall or on flip charts saying “Agree” and “Disagree”. The facilitator poses a series of questions to participants, who are asked to move to the Agree sign if they agree, to the Disagree sign if they disagree, or to stand in between if they agree partially. After each question, two or three participants at different positions on the scale are asked to explain their response.

Scaling game questions should be tailored to the workshop taking the following as possible examples:

- In this country, is Labour Market Information (LMI) is available and is well utilized/ exploited?
- Do we have a good system for anticipation of skills needs?
- At the sector level, do we have mechanisms in place that allow regular exchange of views on skills between stakeholders?
- Is there a will in the country for closer collaboration in the area of skills development?
- Do we have an effective mechanism for monitoring and evaluating training courses?
- Do we have analytical capabilities in the country to anticipate skills needs?

#### 5.4.2 Session 1 - Introduction to workshop: purpose, process and STED diagnostic framework

The purpose of this session is to provide an introduction to the workshop. It takes the form of a presentation, with opportunities for questions and discussion among participants. Where the workshop covers more than one sector, the session is conducted in plenary format, so that participants from all sectors to be covered will be together.

The main topics covered are:

- Brief introduction to STED
- Overview of the countries and sectors in which STED-based development cooperation work has been implemented
- Key partners in STED-based work
- The STED approach
- The STED process
- STED development logic
- The STED diagnostic framework
- Major cross-sector developments and issues in trade, skills, employment, industry and development policy for the country

### 5.4.3 Session 2 - Presentation and discussion on background research and consultations

The purpose of this session is to provide relevant and available statistical and factual information on the sector to participants in the workshop, to outline the information and perspectives from consultations, to work on reconciling the statistical and consultation information with the experience and perceptions of participants on the sector, and to ground subsequent discussion and analysis throughout the workshop on the background research and consultations. What is presented by the facilitators depends on what the desk research has delivered, but in terms of statistics it should include trends in employment in the sector, the occupational composition of employment, the gender composition of employment, trends in sector output, and analysis on the sector's exports and on competing imports. It should also outline the assessment of the supply of skills available to the sector from TVET, universities, existing participants in the labour market and other sources such as groups under-represented in the labour market or migrants.

Another objective of this session is to draw the technical team's attention to any additional and alternative sources of data known to the participants, and to test the sector definition, the official data sources and preliminary analysis by the ILO technical team against the perceptions of industry and other participants. Sources of data and information should be stated clearly, so that it is transparent to participants that what is presented is not an "ILO view" or a "technical team view" to be argued over, but a set of evidence to be reconciled, synthesised with the perspectives of workshop participants, or perhaps even rejected if it is misleading or inappropriately focused. Some participants may respond critically to statistics or other information that do not fit with their experience, or about the absence of information that they expect to see, and it is important to manage this in a constructive way that enhances understanding.

It is important to make it clear to participants that this is the only substantial presentation in the workshop by the facilitating team, so as to alleviate possible concerns that they may be "talked at" for much of the workshop.

The format of the session is as follows:

- One or more representatives of the technical team – usually including the national expert who has led the background research and consultations and led drafting of the report - present the material from desk research.
- There is a facilitated plenary discussion to review how the data presented fits with participants' experience; to highlight any additional sources of data and information and identify how these can be accessed; and to highlight any important remaining gaps in data and information required to understand the sector; to interpret the data and information; and to project forward from historical data to reflect the current position and possible future developments.

### 5.4.4 Session 3 - Sector characterization, business environment and vision for future of sector

The session aims to do the following:

- Draw a consensus description of the sector's characteristics from the participants, while taking account of desk research undertaken;
- Identify major factors in the business environment in which the sector operates;
- Summarise and deepen the analysis of sector characteristics and business environment, using the SWOT (Strengths, Weaknesses, Opportunities, Threats) framework; and
- Formulate a draft vision for the sector's future development owned by the participants and suited to ownership by the wider industry and policy community.

The outputs of all parts of this session are important inputs for the Sector Skills Strategic Document, so it is important that they are recorded well.

The format of the session is as follows:

- The facilitator makes a short interactive presentation covering the following:
  - One slide covers **questions on sector definition and characterization** on which the technical team may need clarification.
  - The draft **value chain** prepared in advance is presented. The facilitator seeks feedback participants on the value chain in plenary format. The facilitator may ask additional questions about the sector with reference to the value chain.
  - The facilitator asks questions about **technology** and **work organization** in the sector, and facilitates discussion between participants towards a shared understanding.
- The facilitator introduces Group Works on the Business Environment (PESTEL), Market Trends and the sector's Strengths, Weaknesses, Opportunities and Threats (SWOT).
- Participants are divided into three or more groups. Each group should include participants from a range of different backgrounds, and if there is more than one participant from an organization they should usually split between different groups. It is important to have employers in all groups. If the sector has clear subsectors, each group may have a specific subsector focus. The groupings will be continued over the period of the workshop.

- The groups can cover the three Group Work topics for this session in parallel.
  - One group identifies the **key business environment issues** that they think are facing the sector.
  - A second group considers what it thinks the **main trends are in relevant markets**, in terms of growth, competition, attainable margins, change in products and services and routes to market (such as for example selling to intermediaries, or directly to end customers).
  - The third group aims to produce an overview analysis for the sector covering its **strengths, weaknesses, opportunities and threats (SWOT)**[5] .
- Each group makes a presentation to the full workshop, and takes questions and comments.
- The session concludes with a process of exploring participant aspirations for the future of the sector, and formulation of a draft vision for the future. The session aims to develop a shared understanding of the future of the sector that is ambitious, practical and achievable. In descriptive terms the vision looks at least five years into the future, and ideally 10 or more years. It starts with a scaling game (see Box 5) that obtains initial input from participants on the future of the sector that they think is possible, and to which they aspire. Charts on sector output, exports and employment are shown again briefly, and if employment projections for the sector have been prepared as part of the background research, they are presented at this point. The session then looks in more detail at what the vision should be in terms of high-level indicators including output, exports and employment.

5 Note that it is important that the facilitators and their assistants understand this framework well. Many groups get confused between strengths and opportunities, and between weaknesses and threats, so workshop staff have to be able to provide accurate guidance.

### Box 5: Scaling game for visioning

Under this version of the scaling game, three signs are placed at intervals on a wall or on flip charts saying "Higher/Strengthen/Increase/Yes", "Close-to-Benchmark/No-Change/Maybe" and "Lower/Weaken/Decrease/No". The facilitator poses a series of questions to participants. They are asked to move to the "Higher/Strengthen/Increase" sign if they agree that some outcome should be higher than a benchmark, that some characteristic of the sector should be strengthened, or that they envisage some sort of increase. Conversely, they should move to Lower/Weaken/Decrease if they envisage the opposite. They should go to the "No Change" sign if they envisage an outcome around the benchmark. or envisage little change or growth. After each question, participants at different positions on the scale are asked to expand on what they envisage for this aspect of the future, explaining the outcomes they would like to see, and also what they expect is likely to happen. This usually stimulates a vigorous and productive debate, especially on the earlier questions.

Scaling game questions should be tailored to the workshop, and should be adjusted based on the background research and on the Session 1 discussion, taking the following as possible examples:

- We aspire to deliver the vision for development of the sector set out in <named development strategy document>
- We hope to grow domestic market sales by xx% in the next 5 years.
- We aspire to increase our sector's exports from USD xx million in 20XX to USD xx million in 20YY (5 years from now) and USD xx in 20ZZ (10 years from now).
- We aim to improve quality and compliance, so that our products/services are internationally competitive on quality and meet the standards and regulations of leading markets.
- We aim to modernize work organization and human resource management practices so as to improve productivity and flexibility.
- We envisage investing in production technology and information technology to bring it to a level comparable with international competitors.
- We think that improving skills in the sector can make an important contribution to the sector's growth, value added and competitiveness.
- We envisage updating and strengthening initial TVET education and training for the sector.
- We envisage updating and strengthening initial university education and training for the sector.
- We envisage substantially strengthening workforce education and training.
- We envisage strengthening collaboration between employers and providers of education and training in areas like apprenticeships, internships and providing training for existing workers.

Sample materials for this session are available in Appendix 2. More detailed conceptual guidance on Sector Characterization and the Business Environment is available in the STED Practical Guide under Stage 1.

The amount of time available for this session will be tight. It will be necessary for the facilitator to plan the timing for each part of the session carefully, and to move the session forward in accordance with the timetable. If this means cutting short discussion on topics, there will be opportunities to bring them to the surface again later in the workshop, and indeed to discuss them less formally over coffee and lunch breaks.

### 5.4.5 Session 4 - Business capability gaps

A business capability is something significant that businesses can do that contributes to their ability to achieve their objectives. A sector's business capabilities chiefly lie in the capabilities of its own firms, but the capabilities of local suppliers, service providers, regulators, research institutions and other complementary types of organization often also contribute business capabilities, either by themselves or in combination with the sector's firms. Business capabilities are characteristics of organizations. All sectors have existing business capabilities, built up from the technologies they use, the manufacturing and business process they apply, the skills of their workers, their forms of work organization, and the infrastructure to which they have access, among other factors.

STED uses the business capability concept to bridge between a vision of the future (from Stage 1 in the STED Diagnostic Framework) and the skills needs that follow from this (part of Stage 3 in the Diagnostic Framework. STED focuses on gaps in business capabilities, rather than on trying to enumerate all business capabilities, because where there is no competitively significant gap the sector can already do what is required for success with its existing base of skills. Enumerating all of the sector's business capabilities would greatly increase the work involved, without significantly improving the analysis.

Even where an existing business capability is broadly adequate for the future, there may still be some existing skills shortages or deficiencies to be tackled. These are picked up in a later session.

The table below illustrates the logic. It shows a set of business capability gaps that emerge from consultation with industry and other sector stakeholders.

The format of the session is as follows.

- 1. Explain to participants what is meant by Business Capability Gaps, and that they will go through an exercise identifying the sector's main gaps.
- 2. Briefly present the checklist of possible business capability gaps. This is similar to the checklist in the STED Practical Guide. State clearly that the business capability gaps identified by the process should not normally follow the structure of the checklist.
- 3. Re-establish the groups formed earlier.
- 4. Each group brainstorms and uses the checklist to identify a long list what each of its members think are candidates as main business capability gaps that will potentially limit the sector's development over the next five years or more.
- 5. Each group consolidates similar gaps to reduce the list to between 5 or 6 total gaps.
- 6. Each subgroup makes a short presentation on its list to the wider sector group, and takes questions and comments.

The list of six gaps shown below is typical of what emerges from this process. Each one has been identified in multiple STED diagnostic exercises for different countries. In some cases, additional gaps are identified, or not all of these six are identified, but it provides a starting point for thinking about the business capability gaps that may be present in the sector or sectors addressed by the workshop.

**Table 6: Common business capability gaps**

| COMMON BUSINESS CAPABILITY GAPS |
|---|
| Efficiency and effectiveness of operations |
| Compliance with standards and regulations |
| Marketing, sales and channel management |
| Innovation, design and product development |
| Supply-chain management and logistics |
| Value-chain development* |

* In several sectors in which STED has been applied, gaps in the capabilities of the wider value chain of which the sector forms a part have been identified as constraining the sector's success. For a number of food processing sectors, for example, weaknesses in agronomy, food safety and logistics in the value chain outside the direct control of firms have been identified as making it more difficult for the sector to access attractive markets, and to compete effectively in the markets that it can access. For a range of sectors that are composed mainly of small, medium and micro-enterprises, sector partners identified a need to strengthen downstream aggregator businesses or processing and marketing cooperatives, so as to compete more effectively with imports and achieve sufficient coordinated scale to access export markets.

It is important that members of the technical team check in which each group periodically to ensure that they understand the exercise and expected outputs properly, and to help them stay on track. It is important to make sure that groups do not get distracted by wider deficiencies in the business enabling environment, which will not have major skills implications for the sector.

### 5.4.6 Session 5 – Implications of business capabilities for types of skills needed

Usually, most of the business capability gaps identified are partly about gaps between the skills that the sector has available now, and the skills that will be needed for future success in trade.

This session has two main objectives.

- 1. It aims to anticipate and identify the key areas where action is needed on skills in order to implement effective strategies to address the main business capability gaps identified. This objective represents a **forward-looking strategic view on skills need**. This is the main part of session, and in the sequence for the session it is addressed second.
- 2. It also aims to identify any **existing skills gaps** affecting the sector's performance that will not resolve themselves, even if they do not fit the main business capability gaps identified. This objective represents a backstop in the process to highlight existing skills so as to consider the present as well as the future. While this is a back-up part of the session, in the sequence it is addressed first.

The session starts with a plenary review of the list of key occupations developed by the technical team (often in consultation with the steering committee) through the background research and consultations. This review has three purposes:

- 1. Provide an occupational framework that can be used by participants when considering what the skills gaps are, and in what occupations they mainly exist.
- 2. Provide an opportunity for participants to validate, and if necessary provide improvements to, the list of occupations in terms of its content or structure.
- 3. Provide an opportunity for participants to validate, and if necessary provide additional enterprise level data on, the how employment is split between occupations in the sector.

The session moves on to a group work session in which each group of participants addresses the following questions:

- What new or improved skills do you think are needed to enable businesses in the sector to develop each business capability identified earlier to the level required for future success?
- What impact will technological change have on skills needs?

The table below shows the framework to be used in the group work session, and it provides an example of how it might be completed for a food processing sector. The content is an illustrative example, and it should not be copied by workshop participants.

**Table 7: Framework for Session 5 group work looking at skills implications of business capability gaps, with an illustrative example of how it might be applied in a food processing sector**

| Key Business Capability Gaps | Skills Implications | Main Occupations Affected |
|---|---|---|
| Manufacturing efficiency | ▶ Level up technical and core work skills of production workers<br>▶ Improve skills of production managers, supervisors<br>▶ Process improvement skills | ▶ Machine operators<br>▶ Manufacturing technicians, food technicians<br>▶ Production managers, supervisors/team leaders, general managers<br>▶ Industrial engineers |
| Manufacturing quality, and regulatory management | ▶ Skills for compliance with standards and regulations<br>▶ Develop skills in quality and compliance systems<br>▶ Skills for staff in testing laboratories | ▶ Production managers, supervisors, production planners, general managers<br>▶ Quality managers, QC inspectors<br>▶ Laboratory technicians and scientists<br>▶ Regulatory managers |
| Sourcing inputs | ▶ Skills in sourcing inputs<br>▶ Skills in the domestic supply chain | ▶ Procurement / sourcing skills for managers and professionals<br>▶ Skills of farmers, extension services, logistics workers |
| Domestic and international marketing | ▶ Skills in sales and marketing<br>▶ Skills in marketing and channel management | ▶ Marketing professionals and managers<br>▶ Sales workers, merchandisers, sales managers<br>▶ General managers |
| Product development | ▶ Skills in food business<br>▶ Technician level skills in food science<br>▶ Skills in food engineering | ▶ Food scientists and technicians<br>▶ Marketing professionals and managers<br>▶ Food engineers |
| **Main Skills Implications of Technological Change** | **More automation means more skills in automated machinery and fewer low skilled workers** | ▶ **More mechatronic engineers**<br>▶ **More manufacturing / automation technicians**<br>▶ **Machine operator skills for automated machinery**<br>▶ **Fewer low skilled workers** |

The format of the session is as follows.

- 1. Conduct a short presentation and plenary review on the list of key occupations developed through background research and consultations.
- 2. Explain the group work exercise to participants.
- 3. Re-establish the groups formed earlier.
- 4. Each group starts from the list of Business Capability gaps it identified in Session 4. Each group brainstorms what skills are most important to bridging each business capability gap over the next five plus years. It lists the main occupations in which these skills are required, referring to the table on the occupational composition of the sector to help ensure that all relevant occupations are covered.
- 5. Each group also discusses and proposes what it thinks are the main skills implications of technological change for the sector over the next five plus years. Again, it lists the main occupations in which these skills are required, referring to the table on the occupational composition of the sector.
- 6. Each group makes a short presentation on its list to the wider sector group, and it takes questions and comments. It is not necessary to reconcile and consolidate the findings of the different groups during the workshop. This can be done after the workshop.

### 5.4.7 Session 6 - Outlook for quantity of skills needed

This will be a relatively short session, which provides some scope for flexibility if earlier sessions run longer than planned, or alternatively to start early on Session 7.

The session's format depends on what has been done on occupational forecasting during the background research and consultations phase. There are three possibilities.

- 1. If an occupational forecasting exercise has been undertaken during background research and consultations, there is a brief presentation on the methodology, and summary outputs are presented in the form of an employment projection graph and occupational demand table as outlined earlier. The outputs are discussed in plenary so as to validate them with participants. This is an opportunity to obtain suggestions for improvements in the model, and to consider possible alternative scenarios for future employment and occupational composition.
- 2. If no occupational forecasting exercise has been undertaken, and none is planned, then the facilitators make a short presentation on how skills demand projections are constructed, what format the outputs can take, and the constraints that have made it difficult to produce them on this occasion.
- 3. If an occupational forecasting exercise has been attempted but is running into problems with information gaps or decisions about the parameters of scenarios, the technical team may decide to present what they have achieved so far, with a view to informing participants and obtaining new perspectives. Doing this may also provide a good opportunity to obtain informed industry and expert estimates on parameters that may be difficult to estimate from historical data, such as growth prospects or occupational replacement demand rates.

The facilitators should also work with participants to review how the assumptions and outputs of the forecasting model match up with the vision for the future of the sector agreed earlier.

Adjustments to the model based on input from participants should be undertaken after the workshop, with a view to validating them through the subsequent consultation and validation processes.

### 5.4.8 Session 7 – Systemic constraints in skills supply and provision of skills development

The objective of this session is to understand two broad issues that affect the ability of education and training systems to supply the skills needed by employers and workers in the sector.

- 1. What are the broad constraints on the supply of skills for the sector from the education and training system, and what can be done about them?
- 2. What is the existing character of collaboration between employers and providers of education and training, and what can be done to improve it?

The format of this session is:

- 1. Provide a short presentation and plenary discussion on: common constraints on the supply of skills, and on common types of beneficial relationship between industry and providers of education and training; and on evidence on skills supply from the background study.
- 2. Explain the group work exercise to participants. There are two exercises – one on constraints on the supply of skills and one on relationships between industry and providers of education and training. Usually, half of the groups will undertake each exercise.
- 3. Re-establish the groups.
- 4. Each group starts by completing the first four columns of its framework, by evaluating how well TVET colleges, apprenticeship off-the-job provision universities and other providers of education and training perform currently. It then discusses and identifies what the essence of the problems and barriers is behind the shortcomings identified, and how these issues might be resolved.
- 5. Each group makes a short presentation on its list to the wider sector group, and it takes questions and comments.
- 6. The group work outputs and the subsequent discussion will be explored further in the follow-up consultations, and this will form a key input into the sector skills strategic document.

**Table 8: Framework 1 for Session 7 group work**

To what extent do the following constrain the supply of the right skills from the following sources? (0 ticks = very little or it is not important; 1 tick = some; 2 ticks = a significant constraint; 3 ticks = a key constraint) Where there are 2 or 3 ticks, what is the essence of the problem? How might these problems be resolved?

▶ **Table 8: Framework 1 for Session 7 group work**

| | TVET Colleges | Universities | Apprenticeship | Workplace Training for Employees | **Essence of any Problem** | **How might problems be resolved?** |
|---|---|---|---|---|---|---|
| National skills policy and strategy | | | | | | |
| Governance and stakeholder coordination | | | | | | |
| Funding | | | | | | |
| Relevance of curriculum and qualifications | | | | | | |
| Delivery and assessment practices | | | | | | |
| Access to training | | | | | | |
| Support of industry-institute linkages for workplace learning | | | | | | |
| Support of industry-institute linkages for TVET/ and university provision of training to industry | | | | | | |

**Table 9: Framework 2 for Session 7 group work**

What types of collaboration between industry and providers of education and training operate in the sector? How well are they established? (0 ticks = little or nothing; 1 tick = some; 2 ticks = significant; 3 ticks = well established)

What are the barriers to these relationships functioning well? How can the barriers be resolved?

▶ **Table 9: Framework 2 for Session 7 group work**

| | TVET Colleges (Public and Private) | Apprentice Off-the-Job provision | Universities (Public and Private) | Other Types of Training Provider | **Barriers** | **How can barriers be resolved?** |
|---|---|---|---|---|---|---|
| Internships and other work-based learning | | | | | | |
| Workplace experience for trainers/educators | | | | | | |
| Regular source of employee training | | | | | | |
| Employees participate in mainstream courses away from workplace | | | | | | |
| Train-the-trainer and train-the-mentor courses for workplace trainers, managers etc. | | | | | | |
| Industry on governing or advisory boards of providers | | | | | | |
| Curriculum development – System level | | | | | | |
| Curriculum development – Institution level | | | | | | |
| Careers and recruitment | | | | | | |

### 5.4.9 Session 8 - Supply of skills available; and gaps between supply and outlook for skills needed

The objective of this session is to:

- understand whether formal education and training is an important source of skilled workers for the sector's main occupations;
- highlight the institutions that provide initial and continuing education and training in relevant skills, and how satisfactory the output of these institutions is for the sector; and
- identify the sector's most significant gaps between supply and demand, both those that exist now and those that are emerging for the future.

The format of this session is:

- 1. The technical team presents information on skills supply in the sector collected in the desk research and initial consultations stage of the process in advance of the Rapid STED workshop.
- 2. The facilitator(s) explains the group work exercise to participants. The exercise is in two parts.
    - a.What sources of education and training are used by enterprises to source skills, whether through recruitment of graduates or training existing workers, and also whether the supply of education and training for key occupations is sufficient in terms of numbers, quality and relevance?
    - b. Which are the main occupations for which there are (or will be) gaps between supply and demand, in terms of quantitative shortages or in terms of the quality and relevance of available skills?
- 3. The facilitators lead a short plenary discussion on a core set of key occupations that should be covered by all groups. The discussion refers back to priorities identified in earlier group work exercises, including the list of main occupations impacted by business capability gaps and technological change identified in Session 5.
- 4. Re-establish the groups.
- 5. Each group completes the framework on provision of skills development for the core set of occupations, and may add any additional occupations that its members see as being high priority.
    - a.A point to bear in mind when completing the group work exercises is that in many sector contexts, there is a disconnect between provision in the formal education and training system and the sources of skills supply that employers actually use to recruit or to reskill their existing workers. The first column of the framework is intended to check on this.
- 6. Each group completes the framework on skills shortages and qualitative gaps for the core set of occupations, and again may add any additional occupations that its members see as being high priority. The framework distinguishes between technical skills required for the occupation, and core work skills (or soft skills) that may be needed alongside the technical skills.
- 7. Each group makes a short presentation to the wider sector group, and it takes questions and comments.
- 8. The facilitators summarise the conclusions for each main occupation, and give participants an opportunity to expand on what works well, and what should be done differently.
- 9. The outputs from the group work and from the subsequent discussion will be explored further in the follow-up consultations, and this will form a key input into the sector skills strategic document.

**Table 10: Template on provision of skills development for the sector through initial and continuing education and training**

| Key occupations | Graduate Recruitment and Apprenticeships | | | | | | Continuing Education and Training, including Workplace Training | | |
|---|---|---|---|---|---|---|---|---|---|
| | Is education/training and important source of recruits? (Y / N) | Which TVET courses and main colleges? | Which university courses? | What specific qualification or qualifications? | **Are the numbers sufficient? Will they be sufficient?** | **Is the quality & relevance sufficient? Will it be sufficient?** | Which providers of continuing education and training? | Provision by firm itself? | **Is the quality & relevance sufficient? Will it be sufficient?** |
| Occupation 1 | | | | | | | | | |
| Occupation 2 | | | | | | | | | |
| Occupation X | | | | | | | | | |

**Table 11: Template on skills shortages and qualitative gaps by key occupation**

| | **Key occupations** | **Tick if ...** | | | | |
|---|---|---|---|---|---|---|
| | | **Shortage** | **Quality and Relevance** | | | |
| | | | **Skills of New Entrants** | | **Skills of Existing Workforce** | |
| | | | **Technical Skills** | **Cork Work Skills** | **Technical Skills** | **Cork Work Skills** |
| **1** | **Occupation 1** | | | | | |
| **2** | **Occupation 2** | | | | | |
| **3** | **Occupation X** | | | | | |

**Box 6: Difficulty recruiting or retaining workers is not always a skills supply issue**

Where shortages of workers, or high labour turnover, are identified as problems, the root cause is frequently a vicious circle in which low productivity, weak core skills, deficiencies in technical skills, weak people management, weak operations management, low motivation and poor human resource management practices reinforce each other to the detriment of both firms and workers. If this is the case in the sector that is the subject of the workshop, the solution is never as simple as training more workers. Practical solutions usually involve a strategy of mutually-supporting components including improving the people management skills of line managers and supervisors, improving human resource management skills, making management style and practices more collaborative, strengthening development of core work skills in the education and training systems, and focusing on improving productivity and quality to create the economic space within which firms can simultaneously improve their results and improve working conditions and wages for workers.

### 5.4.10 Session 9 - Developing proposals to respond to future skills needs

The objective of this session is to develop proposals to respond to the future and current skills needs identified. This exercise is the main source of proposals for the sector skills strategic document, but in most cases they will need some further testing and development through the process of further consultation, report-writing and validation that follows.

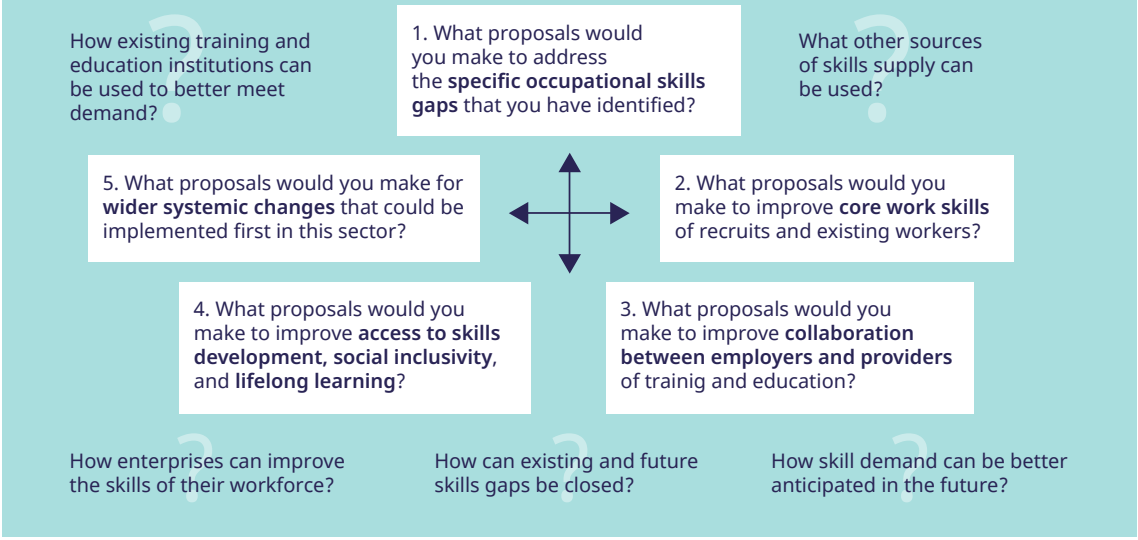
The session poses five main questions to participants:

- 1. What proposals would you make to address the **specific occupational skills gaps** that you have identified?
- 2. What proposals would you make to improve the **core work skills (including digital skills and skills for sustainability**) of recruits and existing workers?
- 3. What proposals would you make to improve collaboration between employers and providers of **education and training**?
- 4. What proposals would you make to improve **access to skills development, social inclusivity** and **lifelong learning**?
- 5. What proposals would you make for wider **systemic changes to skills development** that could be implemented first in this sector?

All workshop groups address question 1. The other questions are divided between groups, with each group addressing either one or two additional questions. See the description of the session format below for details.

This approach takes account of the constraints imposed by what is realistic given the available time. The agenda (see Chapter 5, Table 5) allocates approximately half of the second day to Session 9. However, each of the five questions requires substantial discussion during the group work, and significant additional discussion when the results are presented in plenary to the full workshop group. Experience shows that it is not feasible in this available time to have all groups address all questions. In practice, moreover, it is likely that any group that feels strongly about an issue will be able to tackle it under at least one of the questions that it is allocated.

**Figure 6: Top level framework for proposals to address skills gaps**




The format of this session is:

- 1. The facilitators explain the session and its purpose to participants.
- 2. The STED technical team makes a short presentation on evidence on skills gaps in occupations from the STED background report. This will usually be a repeat of a small part of the material presented earlier.
- 3. Re-establish the groups.
- 4. Assign questions to the groups. Each group will be asked to address question 1 for at least three occupations. Each group will also be asked to address one or two of the other main questions in detail. Apart from question 1, no other question is addressed by more than two groups. In practice, many of the issues concerning skills development in the sector will arise in discussions of more than one question, so a group that addresses two or three of the main questions will have the opportunity to raise most of the issues that its members consider to be important. Each group can also discuss additional main questions if they have time after finishing work on the assigned questions.
- 5.Question 1, to be addressed by all groups is: “What proposals would you make to address the specific occupational skills gaps that you have identified?”.
  - a.The group reviews the conclusions it reached on the skills implications of business capability gaps and technological change in Session 5.
  - b. The group reviews the conclusions it reached in Session 8 on (i) the adequacy of education and training provision for key occupations in terms of numbers, quality and relevance, and (ii) on skills shortages and qualitative gaps.
  - c.The group selects the occupations that it thinks are highest in priority, and for which improvements to skills development provision could make the biggest difference to the sector. It may group related occupations together. It should select at least three occupations or groups of occupations for which it will develop proposals. (With multiple groups working in parallel, if each group covers three important occupations, it is likely that all of the highest priority occupations will be covered by at least one group.)
  - d. Each group may use the following framework to help it think through what should go into each proposal.

**Figure 7: Framework to help develop occupation-specific proposals for skills development, with example of how it can be applied***

| | | | | | | |
|---|---|---|---|---|---|---|
| **Occupation(s)** Targeted by the proposal | Food processing technicians | | **Why needed** | Not enough supply, and skills of graduates are not sufficiently relevant | | |
| What sort of training / education provision? (please tick or write in appropriate boxes) | **Target stage of education/training** | **Employer-provided** | **TVET** | **University** | **Other provider (who?)** | **Qualification (or «short courses»)** |
| | Initial education and training | Increase graduate numbers Improve relevance | | | | Level 3 or 4 TVET in food processing |
| | Pre-employment training course | | | | | |
| | Training for new employees | | | | | |
| | Training or education for existing employees | Sourced from TVET | TVET | | | Short couses |
| | If you are not sure whether the provision should be TVET or university, tick both, or write across the line between them. If the provision is an apprenticeship or other type of trainig that involves both work-based learning and training provision away from the workplace, then write this in both/all appropriate columns. Substantial courses should usually lead to a qualification, so write what you think the qualification should be in the last column. If you recommend short courses, write «short courses» in the last column. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Supporting measures (please tick) | Developing new curriculum(s) | | Training of TVET or university trainers | √ | Work placements | √ |
| | Updating existing curriculum(s) | √ | Training of enterprise trainers/ mentors | | TVET/uni's supply training to films | √ |
| | Creating course content | | Improving HR Management | | improving training quality/relevance | √ |
| | Developing assessment | | New framework of provision (e.g apprenticeship) | | Recognition of Prior Learning (RPL) | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Main partners Please circle | Employer organization(s) | TVET colleges | TVET Agency | Labour ministry | Trade ministry | Workers' organization(s) | Sector line ministry | Other (specify) |
| | Individual employers | Universities | Education ministry | Education agencies | Industry ministry | Industry agencies | Sector regulator | Other (specify) |

* This example includes two proposed interventions: one targeted at initial education and training level, and the other targeted on existing employees.

6. The **second** question for each group to address is: "What proposals would you make to improve the core work skills (including digital skills and skills for sustainability) of recruits and existing workers?"

- a. The group reviews its conclusions on gaps in core work skills from the skills shortages and qualitative gaps exercise in Session 8.
- b. The group considers what types of initiative could make a significant contribution to bridging whatever gaps in core work skills it has identified. It can use the prompts in the table below to help with this.
- c. If the group has identified significant gaps in core skills or digital skills, it develops at least one recommendation to address them.

7. The **third** question for each group to address is: "What proposals would you make to improve collaboration between employers and providers of education and training?" This question should be addressed by at least one group that did the Framework 2 exercise on collaboration between employers and providers of education and training exercise in Session 7.

- a. The group reviews conclusions on collaboration between employers and providers of education and training from the Framework 2 exercise in Session 7.
- b. The group considers what contribution improving collaboration between employers and providers of education and training could make to providing the skills identified as priorities, whether in terms of specific occupational skills gaps, or core work skills and digital skills. It can use the prompts in the table below to help with this.
- c. If the group has identified important gaps in collaboration between employers and providers of education and training, it develops at least one recommendation to address them. This recommendation can either be stand-alone or integrated with one or more of the recommendations it has already developed.

**Table 12: Prompts for thinking about improving core and digital skills**

| **Possible Areas for Action** | **Priorities Identified by Group** (If any priorities are identified, at least one is selected for development of a recommendation) |
|---|---|
| Contribution of **preschool, primary and secondary education** to building **core work skills** | |
| Developing **core work skills** and **digital skills** in initial **TVET and university education and training** provision for the sector | |
| Developing **digital skills** in initial **TVET and university education and training** provision **for the sector**<br>▶ Basic and advanced digital user skills<br>▶ Skills in applying digital technologies<br>▶ Digital developer skills | |
| **Recruitment, pre-employment training** or **induction training** for **core work skills and digital skills** | |
| Training and Life-long Learning for **existing employees** in **core work skills** and **digital skills** | |
| Need **for skills in modern management practices** that use and promote core work skills:<br>▶ Modern HR management skills and practices<br>▶ People management skills and practices for managers<br>▶ Management and professional skills to implement new forms of work organization | |

**Table 13: Prompts for thinking about collaboration between employers and providers of education and training**

| Possible Areas for Action | Priorities Identified by Group (If any priorities are identified, at least one is selected for development of a recommendation) |
|---|---|
| Strengthening collaboration of employers with TVET and universities in areas involving work-based learning, such as:<br>▶ apprenticeships;<br>▶ internships for trainees/students<br>▶ workplace experience for teachers | |
| Strengthening collaboration of employers with TVET and universities on providing training for employees, such as with:<br>▶ Workplace training;<br>▶ Courses at institution<br>▶ Training of industry trainers and mentors | |
| Strengthening other forms of collaboration between employers with TVET and universities such as:<br>▶ Industry membership of boards and advisory groups<br>▶ Curriculum development<br>▶ Careers and recruitment | |

8. The **fourth** question for each group to address is: "What proposals would you make to improve access to skills development, social inclusivity and lifelong learning?"

- a. The group reflects on the questions set out in the table below.
- b. As it did for question 1, the group again reflects on the conclusions it reached on the skills implications of business capability gaps and technological change in Session 5, and the conclusions it reached in Session 8 on (i) the adequacy of education and training provision for key occupations in terms of numbers, quality and relevance, and (ii) on skills shortages and qualitative gaps.
- c. If the group has identified important gaps in collaboration between employers and providers of education and training, it develops at least one recommendation to address them. This recommendation can either be stand-alone or integrated with one or more of the recommendations it has already developed.

**Table 14: Questions to consider on improving access to skills development, social inclusivity and lifelong learning**

| Questions about the benefits of skills development, social inclusivity and lifelong learning and about how well systems operate | Answers about the benefits of skills development, social inclusivity and lifelong learning and about how well systems operate |
|---|---|
| What practical benefits can employers and workers in the sector obtain from workers (in employment) and students/ trainees (pre-employment) having more inclusive access to skills development and to lifelong learning?<br>▶ Courses that are more popular attract more good students, improving quality of graduate pool?<br>▶ Reaching more workers with skills development enhances performance, benefitting employers and also making it more feasible to improve pay and working conditions?<br>▶ More diverse workforce is better for problem solving and innovation?<br>▶ Social responsibility objectives – intrinsic benefits; support for public policies; marketing benefits? | |
| How well do systems for lifelong learning work for firms and workers in the sector, taking account of the following?<br>▶ Firm-level training of workers<br>▶ Participation in part-time education and training courses for adults at education and training institutions<br>▶ Distance learning and blended learning<br>▶ Learning that is:<br>  ▶ Directly relevant to the existing job<br>  ▶ Directly relevant to career advancement<br>  ▶ Improves education, core work skills, and/ or digital skills but does not directly improve technical skills for the workplace | |
| **Questions about problems relating to skills development, social inclusivity and lifelong learning** | **Some Possible Areas for Action on skills development, social inclusivity and lifelong learning** |
| Are any groups disadvantaged in getting access to education and training (including apprenticeships) that would enable them to get access to good jobs in the sector?<br>▶ Women?<br>▶ People with disabilities?<br>▶ Young people / older people?<br>▶ Disadvantaged or lower income social groups?<br>▶ Migrants?<br>▶ Minorities? | ▶ Action by colleges, training centres and universities to recruit diverse students into relevant courses.<br>▶ Government strategies to promote interest in, and access to, education and training.<br>▶ Action by employers to attract diverse students into courses and apprenticeships from which they recruit, and to provide workplace learning opportunities to students/ trainees interns from diverse backgrounds. |

**Table 14: Questions to consider on improving access to skills development, social inclusivity and lifelong learning (continued)**

| | |
|---|---|
| Are any groups of workers in the sector disadvantaged in getting access to training and lifelong learning?<br>▶ Low skilled workers?<br>▶ Workers in micro-, small and medium-sized enterprises?<br>▶ Part-time, temporary or seasonal workers?<br>▶ Women?<br>▶ People with disabilities?<br>▶ Young people / older people?<br>▶ Disadvantaged social groups?<br>▶ Migrants?<br>▶ Minorities? | ▶ Pre-employment and early career training and mentoring in core work skills and practical technical skills to facilitate effective school-to-work transition. |
| ▶ Are there problems with the **practical skills of workers** with mid-level or high-level skills?<br>▶ Could **improved access to learning** for existing entry level, lower skilled and high skilled workers provide a supply of reliable and committed mid-level and high-level workers with both the theoretical and practical skills needed?<br>▶ Is there a good case to enable **career advancement equitably to all employees**, including low skilled workers, women, young people, migrants and people with disabilities, whether in terms **of operating, social justice or reputational objectives**? | Systems of **life-long learning, work-based learning** (such as apprenticeship), **career planning, training** and **mentoring** for existing workers from entry level up.<br>▶ Internal to businesses and through business associations<br>▶ Learning provision by TVET institutions, universities or others<br>▶ Collaboration between employers and providers of education and training |
| ▶ Are there problems with **retention, lack of responsibility** and **low productivity** of workers?<br>▶ Could better **access to training for groups that are often disadvantaged** such as low skilled workers, women, young people, migrants or people with disabilities help with this? | Problems with retention, responsibility and productivity perceived by managers can often be addressed effectively by providing better working conditions, improving people management practices, **investing in skills development for workers**, and paying wages competitive with other labour market options. |

9. The **fifth** question for each group to address is: "What proposals would you make for wider systemic changes to skills development that could be implemented first in this sector?"

- a. The group reviews conclusions on systemic issues in skills development from the Framework 1 exercise in Session 7. (Only half of the groups will have done this exercise themselves, but they will have heard and responded to the presentations from the other groups.)
- b. The group considers whether there are systemic reforms needed around skills development that would benefit the sector. It may be difficult to justify systemic reforms that target a single sector, so the group should also consider whether the sector's needs are likely to be similar to those of other sectors. The sector might provide a good test case for a reform that could be deployed more widely if it is seen to be successful, or national capacities developed for the benefit of the sector might be useful in other sectors too. The group can refer to the prompts in the table below for examples of types of reform that it could recommend.
- c. If the group identifies any systemic reforms required to bridge gaps in collaboration between employers and providers of education and training, it develops a recommendation to enable it.

**Table 15: Prompts for thinking about systemic changes to skills development**

| | Systemic reform applied at sector level | Systemic reform applied at multi-sector or national |
|---|---|---|
| Skills council (or other institutional mechanism) | | |
| Skills strategy | | |
| Institutional capacity in skills anticipation | | |
| Careers information / promotion | | |
| Recognition of Prior Learning (RPL) | | |
| Skills certification system (distinct from qualifications) | | |
| Database of individual skills, individual skills records etc. | | |
| Labour Market Information System | | |
| Qualifications and flexibility of career pathways | | |
| Employment services | | |
| Financing | | |
| Incentives to provide training and to invest in learning | | |

### 5.4.11 Session 10 – Conclusions and steps forward

The objectives of this session are to:

The session recapitulates the analysis, visioning, conclusions and recommendations of the earlier workshop sessions. It gives participants an opportunity to revisit, consolidate, integrate and confirm the main points of what they have covered already.

The facilitators revisit the overall Rapid STED process (see Figure 3). They also go quickly through the top level headings of the STED Sector Skills Strategy document (see below) that will be drafted based on the workshop's analysis, conclusions and recommendations, and how it will be further developed and validated. They also go quickly through how each top level heading links to the outputs of the workshop sessions, with each session contributing under one or more headings.

This session then covers next steps including the following.

- Arrangements for continuing consultations to finalize the strategy, including timescale, sector steering arrangements and involvement of national steering mechanism
- Confirmation that the organizations represented are interested in continuing to collaborate
- Identifying additional organizations and institutions that should be involved or consulted
- Highlighting any "quick win" actions that can be taken in parallel with finalizing the strategy

The main headings in the completed STED Sector Skills Strategic Document will be as follows. The full outline is presented in Appendix C.

- 1. Introduction
- 2. Short profile and situation analysis for the sector and subsectors
- 3. Profile of major occupations, key skills and career pathways
- 4. The supply of skills
- 5. Supply side challenges and constraints as they relate to these key issues:
- 6. Vision for the future of the sector, in both qualitative and quantitative terms
- 7. Gaps in the capabilities and skills needed to achieve the vision for the future
- 8. Recommendations on meeting priority skills needs and gaps
- 9. Recommendations on meeting system-level priorities for the sector
- 10. What to do Next: A strategy implementation plan (Who, what, how and when)

**Table 16 Links between strategy outline and Rapid STED Workshop Sessions**

| Heading in sector skills strategy outline | Main links to sessions |
|---|---|
| 1. Introduction: why we need a sector skills strategy | |
| 2. Short profile and situation analysis for the sector and subsectors | ▶ Background study (main points covered In Session 2)<br>▶ Workshop Session 3 on Sector Characterization; Business Environment and Envisioning the Future |
| 3. Profile of major occupations, key skills and career pathways | ▶ Background study (main points covered In Session 2)<br>▶ Workshop Session 5 on Implications of Business Capability Gaps for Types of Skills Needed |
| 4. The supply of skills | ▶ Background study (main points covered In Session 2 and Session7)<br>▶ Workshop Session 8 on Supply of skills available and gap between supply and outlook for demand for skills |
| 5. Supply side challenges and constraints | ▶ Background study (main points covered In Session 2and Session7)<br>▶ Workshop Session 7 on Systemic constraints in skills supply and provision of skills development |
| 6. Vision for the future of the sector, in both qualitative and quantitative terms | ▶ Workshop Session 3 on Sector Characterization Business Environment and Envisioning the Future and Session 6 on Outlook for quantity of skills needed<br>▶ Background study (main points covered In Session 2) |

**Table 16 Links between strategy outline and Rapid STED Workshop Sessions (continued)**

| Heading in sector skills strategy outline | Main links to sessions |
|---|---|
| 7. Gaps in the capabilities and skills needed to achieve the vision for the future | ▶ Workshop Sessions 4 & 5 on Business Capability Gaps and<br>▶ Implications of Business Capability Gaps for Types of Skills Needed |
| 8. Recommendations on meeting priority skills needs and gaps | ▶ Workshop Session 9 on Developing proposals to respond to future skills needs |
| 9. Recommendations on meeting system-level priorities for the sector | ▶ Workshop Session 9 on Developing proposals to respond to future skills needs |
| 10. What to do Next: A strategy implementation plan (Who, what, how and when) | ▶ Workshop Session 10 on Conclusions and steps forward, but mostly subsequent consultations and collaboration with steering committee |

6

# 6. Post-Workshop

There are four main strands of action after the workshop that move forward in an integrated manner.

- 1. Validating and improving the analysis, conclusions and recommendations developed at the workshop, along with filling information gaps.
- 2. Writing, agreeing, validating and publishing the STED Sector Skills Strategic Document for the sector.
- 3. Implementation of the STED Sector Skills Strategic recommendations for the sector.
- 4. Developing, operating and sustaining the institutional arrangements to support development and implementation of the STED sector skills strategic recommendations, and as an entry point for improving institutional arrangements for skills anticipation and skills governance.

These are addressed in the sections that follow.

### 6.1 Validation and Improvement of Strategic Skills Recommendations / Filling information gaps

Post-workshop, the technical team moves to validate and improve the material on which the STED Sector Skills Strategic Document will be based.

- It is likely that information gaps affecting the analysis will be apparent from workshop discussions, and that additional sources of information and data will be identified. The technical team work on filling the information gaps, and on ensuring that the most suitable information sources are available to underpin the STED Sector Skills Strategic Document.
- The outputs from the group work exercises of the workshop provide a first outline of the analysis, conclusions and recommendations that will go into the STED Sector Skills Strategic Document. It will be necessary to refine this further so that there is a clear analytic storyline that supports the recommendations. It is also necessary to flesh out and refine the recommendations so that: they are technically sound and based on a well-founded understanding of the facts and issues; they have a clear logic articulating how each is expected to improve the sector's performance for the benefit of its firms and workers; they take account of the perspectives of all the key stakeholders; they are capable of being implemented effectively; and they have the support of the stakeholders whose contribution is needed for successful implementation.

In this strand of action, the technical team consults with the steering group and its members, and with additional stakeholders, especially any who may not have been consulted adequately earlier and with those important to prioritizing and implementing recommendations. It also explores and consults on additional sources of information, and it may undertake additional interviews to help fill information gaps or improve the quality of information already researched.

### 6.2 Preparation of STED Sector Skills Strategic Document

The technical team translates the research, workshop outputs and consultations into a STED Sector Skills Strategic Document through a process of drafting by the STED technical team in consultation with the steering committee, and with any further consultations considered necessary with national and sector partners and with one-one consultations with ministries, institutions, social partners at national and sector level and participating individual employers. On completion, the STED Sector Skills Strategic Document goes through a final process of validation and launch.

The first draft of the strategy on which consultations are based should be prepared by the technical team within one to two months of the Rapid STED workshop, depending on the extent of information gaps identified and of validation, consultation and improvement required. Consultations on the draft would then ideally take 1 month, with a validation workshop and/or launch ideally taking place 2 months after the Rapid STED workshop.

### 6.3 Implementation of STED Strategic Skills Recommendations

Where possible, Rapid STED projects include resources for implementation, but they will seldom be enough to resource more than a small part of overall Strategic Recommendations. The project will usually have to be selective (in consultation with partners) about where project resources can be applied most effectively. In general, they should be applied to initiatives that improve the system, for example through helping partners to develop and pilot new skills standards and curricula, or new models of provision with potential to be scaled, rather than through supporting one-off or mainstream delivery of skills development.

The STED process aims **to mobilize** wider implementation of the Strategic Recommendations than can be achieved directly through the project principally through project partners applying their own resources. While full implementation of the Strategic Recommendations may involve increased spending, it is more about using existing resources with improved relevance and quality and to greater strategic effect. In countries with a strong development partner and donor community, it may be possible to attract development cooperation resources beyond the ILO project. Indeed, there are cases where donors partnering with the ILO have added to resources already committed (by themselves or by others) in order to support additional implementation work.

The project should preferably identify at least one intervention for which work on implementation can commence soon after the Technical and Policy workshop, as this gives credibility to the process of completing the Strategic Recommendations, helps promote ownership of the project by partners, encourages partners to continue to participate in developing and implementing the Strategic Recommendations, and accelerates both implementation of recommendations and project delivery.

As the project moves to finalizing the Strategic Recommendations, and into implementation, institutional development and capacity development, the process adopted has to be flexible and adaptive. It depends on the capacity of the project team, working in collaboration with the ILO Country Office and Decent Work Team, and with their national and sector partners, rather than a process that is fixed or easily generalized.

### 6.4 Capacity development and institutionalization

A Rapid STED project aims not just to implement the strategies identified through the workshop, but to develop and strengthen the institutional arrangements and institutional capacity at sector and national level so as to institutionalize skills anticipation as an essential element of governance of skills development systems in the sector(s), at national level, and eventually is a wide range of sectors.

Partner organizations develop their capacity in skills anticipation through participating in the STED process. A Rapid STED project aims to build on this through providing training courses to further develop their capacity, and (where resources are available) through supporting national institutions in undertaking STED-based work in additional sectors themselves.

Participation in STED-based projects and their steering arrangements also serves to provide national and sector partners with practical experience in good skills development governance practices including: policy coherence between skills policies and other major policy areas including trade, industry and development; sector level governance of skills development; and involving industry closely in skills governance. This can reinforce existing initiatives strengthening these areas, or can serve as an entry point by functioning as an effective pilot for institutional practices such as sector and national skills councils, or establishment of national units for analysis and anticipation of skills needs.

STED-based projects can be designed to include support for institutionalizing skills councils piloted during the STED process, or to develop the capacity for skills analysis and anticipation under the STED process into a format capable of providing technical skills analysis and advice on a sustained basis.

# Appendix A: Rapid STED Workshop Materials

**Appendix A** A set of PowerPoint presentation material is available that can be used in the workshop, with the addition of the material specific to sector and country listed in Section 4.7 of this Guide

# Appendix B: STED Sector Skills Strategic Document

The strategic document should be approximately than 25-30 pages. The Background Study can be used as a companion document for additional technical information.

**Key sections of the strategic document**

- 1. Introduction:
  - a. The need for a sector skills strategy
  - b. Sector definition and scope
  - c. Sector skills strategy aims and scope
- 2. Short profile and situation analysis for the sector and subsectors
  - a. Economic and workforce profile
  - b. Drivers of change, enablers and key major trends and their likely impact on employment.
- 3. Profile of major occupations, key skills and career pathways in the sector (includes occupational map with major skills areas for each and typical career pathways within the sector)
- 4. The supply of skills:
  - a. Key institutions, formal programs and qualifications relevant to the sector
  - b. Enrolments and completion data for relevant courses by region and providers if available
  - c. The nature and scope of work based learning (WBL) and other informal and non-formal sources of skills for the sector (different line ministries, vendors of equipment and supplies, , private training organisations, civil society etc)
- 5. Supply side challenges and constraints as they relate to these key issues:
  - a. National skills policy and strategy
  - b. Governance and stakeholder coordination
  - c. Funding
  - d. Relevance of curriculum and qualifications
  - e. Delivery and assessment practices
  - f. Access to training
  - g. Industry-institute linkages and support for workplace learning

- 6. Vision for the future of the sector, in both qualitative and quantitative terms
- 7. Gaps in the capabilities and skills needed to achieve the vision for the future
- 8. Recommendations on meeting priority skills needs and gaps
  - a. What skills are needed and where?
  - b. Who should deliver them?
- 9. Recommendations on meeting system-level priorities for the sector:
  - a.national skills policy and strategy
  - b. governance and stakeholder coordination
  - c. funding
  - d. delivery and assessment practices
  - e. access to training
  - f. industry-institute linkages and support for workplace learning
- 10. What to do Next: An Implementation Plan for the Sector:
  - a. Recommended actions to address priority skill needs and gaps
  - b. Recommended actions to address system level priorities for the sector

The plan should detail specific activities, timelines, expected outcome and responsible actors over both short (12 months) and medium term (24 months)

# Appendix C: Budgeting for a Rapid STED process

The full STED process incurs significant costs that will vary depending on how each part of the work is staffed, on factors such as choice of workshop venues, and on the costs prevailing in the target country. When budgeting, it is important to allow sufficient time, resources and effort not just to minimally cover background research, the Rapid STED Technical and Policy Workshop, and a write-up based on the workshop, but to allow for substantial work on consultation, filling unexpected information gaps and working in collaboration with the steering committee(s). It is important to budget not just for preparation of, and basic revisions to, the background study and the sector skills strategic document, but for substantial consultations, and for potentially significant revisions based on these consultations, on new information obtained and on advice from the steering committee and its members. Table C.1 below highlights major areas of resourcing that should be taken into account, but without going into detail on their budget implications.

Work done by partner organizations or by regular budget ILO staff may not incur direct project costs. Work done non-RB ILO staff or by consultants is referred to as "Salary and office costs" or as "Professional fees etc.".

**Table C.1 Areas of cost and resourcing to take into account when budgeting for Rapid STED**

| | Salary and office costs | Professional Fees etc. | International Travel | Domestic Travel | Accommodation / DSA | Conference Facility | Publication |
|---|---|---|---|---|---|---|---|
| Technical backstopping by DWT Skills Specialist | | | x | x | | | |
| Technical backstopping by HQ STED global team | x | x | x | x | x | | |
| National Coordinator & admin staff | x | | x | x | x | | |
| National Expert (or team of experts) | | x | | x | x | | |
| Technical Team Members from Partners | | x | | x | x | | |
| Survey team (Field focus group discussions and in-depth interviews) | | x | | x | x | | |
| Meetings of STED national and sector steering groups | | | | x | x | x | |
| Technical and Policy Workshop (preferably residential, out of city) | | | x | x | x | x | |
| Validation workshop - Facilities, food, accommodation, transport, DSAs ... | | | x | x | x | x | |
| English / international language editing of background study and sector skills strategic document | | x | | | | | |
| Publication costs – Background study and sector skills strategic document, and briefing notes, including launch | | | | x | x | x | x |
| Contingency for additional consultation, rework, revisions | x | x | x | x | x | x | |

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