

# FRAME: SKILLS FOR THE FUTURE

SUPPORTING A STRATEGIC VISION FOR  
HUMAN RESOURCES DEVELOPMENT

## THE FUTURE FRAME FORESIGHT GUIDE FOR SKILLS 2020

MAY 2014



This project is funded by  
the European Union



This guide was elaborated by the ETF with the support of Jennifer Cassingena Harper and contributions from Susanne Møller Nielsen and Patrick Crehan. The ETF staff member responsible for the guide was Lizzi Feiler with major contributions from Francesca Rosso.

May 2014

© European Training Foundation, 2014. Reproduction is authorized provided the source is acknowledged.

The contents of this report are the responsibility of the authors and do not necessarily reflect the views of the EU institutions.

### ***Pre-note***

This guide was developed between Q4/2012 and Q2/2013 by the ETF (with the support of external foresight experts), after discussions and debates involving national HRD experts. Thanks go to the ETF country managers for their valuable comments (credits to Evelyn Viertel and Lida Kita), and to Francesca Rosso, Manuela Prina and Simona Rinaldi for their contributions, and last but not least, to Anastasia Fetsi for her advice and guidance.

The guide must not be used as blueprint: practical implementation must be tailored to specific national conditions.

Initial lessons learnt from pilot implementation of Future Frame in Montenegro and Serbia have been taken into account in drafting this document. It should guide and inspire the rollout in remaining candidate countries.

Lizzi Feiler, 23 July 2013

# Contents

LIST OF TABLES AND FIGURES.....	5
INTRODUCTION: BACKGROUND AND OBJECTIVES OF THE FUTURE FRAME INITIATIVE .....	6
PART 1 INTRODUCTION TO FORESIGHT .....	11
1.1 OVERVIEW .....	11
1.2 DEFINITIONS .....	11
1.3 RATIONALE .....	12
1.4 TYPES OF FORESIGHT .....	12
1.5 THE METHODOLOGICAL FRAMEWORK.....	13
1.6 TEAMWORK.....	15
1.7 RISK ASSESSMENT AND RISK MITIGATION .....	16
1.8 COMMUNICATION STRATEGY.....	17
1.9 PHASES OF IMPLEMENTING FORESIGHT.....	18
PART 2 PRACTICAL SUPPORT FOR IMPLEMENTING SKILLS FORESIGHT .....	20
2.1 THE FRAME FORESIGHT INITIATIVE: APPROACH AND START-UP .....	20
2.1.1 PREPARING FOR FORESIGHT: DECIDING ON THE APPROACH .....	20
2.1.2 PRE-FORESIGHT (PHASE A).....	24
2.1.3 ENGAGEMENT OF STAKEHOLDERS (PHASE B).....	26
2.1.4 FORESIGHT PROPER (PHASE C) .....	27
2.1.5 FOLLOW-UP (PHASE D).....	35
2.2 METHODS AND TOOLS IN THE FORESIGHT PROPER PHASE .....	35
2.2.1 TRENDS AND DRIVERS ANALYSIS .....	36
2.2.2 SCENARIO DEVELOPMENT .....	39
2.2.3 SWOT ANALYSIS .....	40
2.2.4 GAP ANALYSIS .....	40
2.2.5 VISIONING.....	41
2.2.6 PRIORITY SETTING .....	41
2.2.7 ROADMAPING .....	42
2.3 RESULTS TO BE ACHIEVED: OUTPUT AND DOCUMENTATION .....	43
ANNEXES .....	44
ANNEX 1: DETAILED DESCRIPTION OF A SUCCESS SCENARIO WORKSHOP.....	44
ANNEX 2: STEEPV GUIDANCE NOTE FOR FACILITATORS .....	53
LIST OF ABBREVIATIONS .....	55
GLOSSARY OF TERMS.....	56
REFERENCES .....	60

## ***List of Tables and Figures***

TABLE 1: TYPES OF FORESIGHT .....	13
TABLE 2: RISK FACTORS .....	16
TABLE 3: OVERVIEW OF PHASES, TASKS AND ROLES .....	18
TABLE 4: STEP-BY-STEP PLAN .....	22
TABLE 5: TASKS AND STEPS IN THE PREPARATION PHASE .....	27
TABLE 6: TRENDS AND DRIVERS ANALYSIS AND SCENARIO DEVELOPMENT .....	29
TABLE 7: VISION, PRIORITIES AND ROADMAP.....	33
TABLE 8: KEY METHODS.....	35
TABLE 9: PROPOSAL FOR THE STRUCTURE OF THE ROADMAP IN FUTURE FRAME .....	43
TABLE 10: BACKGROUND INFORMATION – EVIDENCE AND FORWARD VIEWING .....	45
FIGURE 1: THE FORESIGHT QUESTION AND RELATED ISSUES .....	9
FIGURE 2: POPPER’S DIAMOND .....	14
FIGURE 3: FUTURE FRAME COMBINATION OF METHODS .....	15
FIGURE 4: OVERVIEW OF THE PROCESS AND EXPECTED RESULTS .....	19
FIGURE 5: SWOT MATRIX.....	40
FIGURE 6: SUCCESS SCENARIO WORKSHOP.....	48
FIGURE 7: PRIORITISING DRIVERS.....	50

# Introduction: background and objectives of the Future Frame initiative

## The purpose of this guide

This guide provides practical and detailed guidance and support for adapting and implementing foresight methodology to develop a mid-term vision for human resource development (HRD) with a focus on skills. It is envisaged that the results will contribute significantly to the development of the reform strategies of EU enlargement countries, in particular for HRD and skills.

Foresight is a future-oriented, participatory, systematic process. In relation to HRD, it draws on knowledge from different policy areas to make sense of the interconnectedness of the economy, the education system, the labour market, the social dimension, and regional and territorial aspects. This enables stakeholders to work together to define a shared medium- to long-term vision for their country or sector, as the basis for designing more coherent and evidence-based policies and measures that all stakeholders can sign up to and implement.

The guide has three broad functions:

- to provide policy makers, stakeholders and foresight participants in EU enlargement countries with a general overview of the role of foresight for developing and implementing HRD policy;
- to serve as a toolkit for foresight teams (national experts, country managers and those responsible for running the foresight exercise) responsible for implementing foresight activities;
- to promote a wider awareness of foresight approaches, processes and results among educators, students, young people, employers, industry players, careers advisers and academics.

The guide is in two main parts with annexes:

- [Part 1](#) provides an overview of the phases of foresight and gives recommendations for choosing specific methods and tools considered useful for HRD and skills.
- [Part 2](#) provides more details and guidelines on how to use the methods with relevant HRD stakeholders.

A separate toolbox will comprise standards, templates and practical examples to share with stakeholders, together with workshop designs, issue papers and results. The toolbox will be a separate annex and will be available following completion of the pilot projects in Serbia and Montenegro.

## **Specific background – Instrument for Pre-Accession Assistance (IPA) and HRD**

The current IPA programme (2007–2013) will make way for IPA II, which covers the period 2014–2020, with a budget of around EUR 14 billion for the accession countries. IPA II will cover the same five policy areas as the first programme:

- the transition process towards EU membership and capacity building;
- regional development;
- employment, social policies and HRD;
- agriculture and rural development;
- regional and territorial cooperation.

IPA II will support accession countries in implementing the reforms required to bring the countries closer to EU values, rules, standards, policies and practices with a view to their joining the EU. Pre-accession assistance will be more strategic, more efficient and better targeted towards achieving more sustainable results in improving the readiness of candidate countries for membership.

In preparation for IPA II, enlargement countries and the European Commission prepare country strategy papers. HRD, including employment and social policies, is a core element. HRD strategies will be developed in line with the introduction of a sector approach in these countries, as required by IPA II.

HRD covers different aspects and is included in many national strategies, roadmaps and action plans already developed by stakeholders dealing with:

- higher education;
- vocational education;
- lifelong learning;
- social inclusion;
- job creation;
- industrial competitiveness;
- poverty reduction;
- entrepreneurship;
- accession to the EU.

Strategies to develop these and related areas often refer to HRD as a contributing factor for meeting national goals and objectives. There is a need to integrate these elements so that it is easier for the relevant actors to plan responses, identify needs and acquire the resources necessary to function over time. This may help to identify other actors who have a key role to play in the process.

### **The ETF Future Frame initiative**

The Future Frame initiative launched by the ETF supports EU enlargement countries in developing more coherent and evidence-based HRD policies in line with the Europe 2020 strategy, using foresight methodologies.

Foresight is one of a number of policy support tools that can be used to better align education and training policies with the needs of the economy and the labour market. It can help to strengthen institutional capacities and inter-institutional cooperation in order to ensure joined-up policy approaches across government.

The Future Frame initiative promotes awareness in the region on the relevance and usefulness of foresight approaches in implementing more effectively the HRD aspects of the IPA II and national strategies, by bringing together relevant stakeholders and engaging them in common goals and joined-up policies.

The Future Frame initiative consists of a coherent approach with four interrelated components.

**Component 1: FORESIGHT**

Develop and adapt foresight methodology for building coherent national HRD strategies in EU enlargement countries.

**Component 2: ASSESSMENT**

Produce a methodology and tool to assess the capacity and needs of national institutions in charge of HRD, and develop capacity-building responses.

**Component 3: MONITORING**

Develop a performance-monitoring and indicators-based system to monitor progress and strengthen accountability in implementing the sector-wide approach in HRD, in line with national strategic objectives and with reference to Europe 2020.

**Component 4: REGIONAL**

Facilitate mutual learning processes among enlargement countries in the region, and the organisation of a regional foresight exercise on skills scenarios for South Eastern Europe.

These four components are being implemented in two phases: Phase I to develop and road-test the methodological framework (foresight component only) in Serbia and Montenegro, and Phase II to implement the methodologies in all enlargement countries, sequentially. The development of methodological tools, in both Components 1 and 2, was under way in 2012 and 2013. The implementation of pilot cases for Component 1 and in all countries for Components 1 and 2 was under way in 2013. Results will be validated in the second quarter of 2014.

***Guiding principle: participatory approach and ownership of national stakeholders***

A participatory approach for the strategic development of human resources is needed in order to ensure policy coherence and relevance to national socioeconomic challenges. Active involvement and close cooperation with EU delegations and European Commission country desks is essential to ensure success. Effective and efficient implementation of a sector approach, as foreseen under IPA II, requires a future-oriented strategy for HRD, with appropriate institutional settings, capacities and monitoring systems.

***Thematic scope and core definitions***

Skills are at the centre of the Future Frame initiative (see Figure 1). The starting point is to develop a vision for skills towards 2020 and a roadmap on how to deliver it. 'Skills' refers to knowledge, skills and competencies, and the vision and roadmap will be developed within the broader context of HRD. The term 'HRD' covers the system of skills formation by the education and training system and the private sector within a lifelong learning perspective in the context of employment policy and social inclusion<sup>1</sup>. The elements of the education and training system

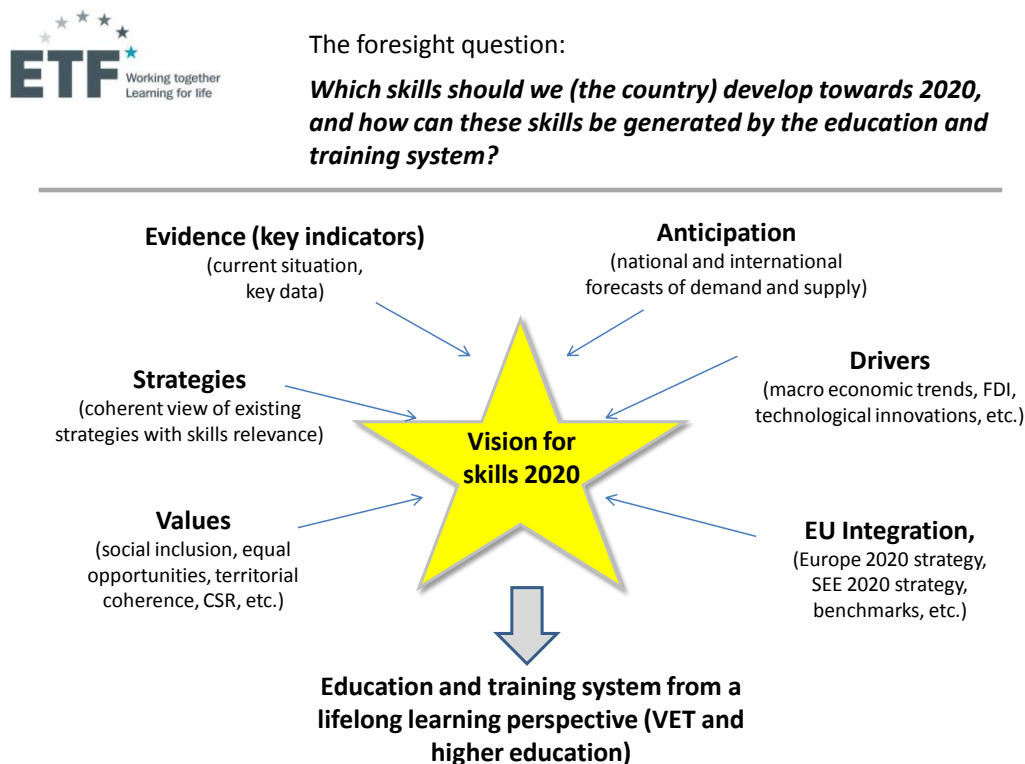
---

<sup>1</sup> There are two terms in use: 'human resource development', and 'human capital development'. The former is widely used by the European Commission, the latter more by global institutions, such as the World Bank. In this policy context, their meanings are approximately the same. According to an academic definition, human resource development is the



concerned are vocational education and training (VET) and higher education, within a lifelong learning perspective, as well as company-based training and training for unemployed and underemployed individuals.

**Figure 1: The foresight question and related issues**



Notes: CSR, corporate social responsibility; FDI, foreign direct investment.

The term 'skills system' in foresight is more or less synonymous with HRD. This is a wide definition, and the scope of the foresight process at country level needs to be clarified with the participating stakeholders. Although a formal 'skills system' may not exist in every country, it is still useful and pragmatic to talk of one. Most have an intuitive idea of what the skills system might be, though there will be different views. Discussions could cover what a skills system might look like, what it might deliver and how this could be achieved. It is a feature of foresight that participants discuss things that either do not yet exist, or are only partly conceptualised. This requires creativity and open-mindedness on the part of the organisers and participants. It underlines the fact that the exercise is not purely formal or administrative.

As a starting point, we can think of the skills system as the set of public and private organisations, along with the norms and regulations, mechanisms, principles and practices, involved in developing skills to meet the social and economic needs of the country. There is usually no need to be too rigorous about definitions, and it is important not to become side-tracked by discussions about such matters. It is in everyone's interest to be open and flexible

---

integrated use of training, organisation, and career development efforts to improve individual, group and organisational effectiveness. Human capital is the stock of competencies, knowledge, social and personality attributes, including creativity, embodied in the ability to perform labour so as to produce economic value. It is an aggregate economic view of the human being acting within economies. It becomes clear that there is a micro-economic level (HRD as a function within organisations (public and private)), and a macro-economic or policy level.

about ideas. The organisers should aim to agree on general ideas that permit a useful dialogue among the actors involved.

The proposed supplementary questions for foresight are as follows.

- What do policy leaders want to achieve and what can the country achieve?
- What options are possible, taking into account existing and future resources and capacities?
- What is the vision for skills, in terms of levels and the mix of technical/ generic skills, and for which sectors?

Demand and supply issues, as well as anticipating and matching both, should cover the different policy levels as well as systemic (institutional) issues, taking into account core national macro-economic strategies.

### **Objectives and results to be achieved**

Within the Future Frame initiative, the scope can be further defined in conjunction with the stakeholders in the country. The initiative has a medium-term timescale, up to 2020.

The key rationales of the exercise are:

- to break down barriers between ministries and to develop more joined-up policy approaches for HRD and skills; this requires bringing together key players in the sector, and drawing together the HRD aspects for different strategies and identifying the links between them;
- to promote a more future-oriented approach to HRD policies, paying attention to key stakeholders (private sector and unions) who may not have been sufficiently engaged in earlier policy development;
- to highlight key concerns about skills, in particular the mismatch between demand and supply;
- to promote capacity building in skills, including strategy development and foresight skills, and implementation of IPA II;
- to identify gaps in governance structures in addressing particular functions; this issue will be linked with Component 2 (Assessment).

The Future Frame initiative will assist candidate countries to formulate and produce tangible interrelated products for the Vision for Skills 2020 Priorities and Roadmap. Foresight will be carried out at national level and will include the private sector and civil society. The objective of the ETF exercise is not to develop a new layer of strategies but rather to build on current relevant national strategies, taking account of their skills-related analyses, outlooks and targets. The immediate result will be a commonly agreed national vision with defined priorities, and a roadmap to take forward the preferred scenario for skills development.

# Part 1

## INTRODUCTION TO FORESIGHT

This part of the guide introduces readers to the foresight concept and approach. It targets policy makers and stakeholders who want to learn more about how foresight can be used to inform and shape policy, particularly in order to develop skills and human resources. It is important to note that foresight is only one of a number of approaches to support the more effective design and formulation of policies.

### 1.1 Overview

Foresight is an open, systematic, participatory process that supports the design and formulation of policies with a medium- to long-term perspective. Foresight provides a methodology and a mix of qualitative and quantitative tools that are adapted to address a range of goals and objectives, including:

- undertaking an overall strategic review of a national, regional or sectoral system;
- identifying priorities for innovative actions, again at multiple levels;
- building common visions among actors and stakeholders who may not be used to working together;
- making decisions more robust through the exploration of scenarios or by drawing in wider expertise;
- increasing the likelihood of consensus by engaging a wider range of stakeholders through participatory elements.

Foresight both shapes and is shaped by the context to which it is applied and can be adapted to needs, competencies and conditions. Careful attention must be given in the design phase to the inclusion of the context and framework conditions. Tailoring foresight to the particular context of accession countries requires a sound understanding of strategy development processes, experiences and competencies in the country concerned. Foresight can highlight barriers to forward-looking approaches, helping to address them and encourage new thinking and methods. Under the Future Frame initiative, foresight can support effective implementation of skills-related strategies and ensure coherent, evidence-based and forward-looking approaches.

### 1.2 Definitions

Explaining foresight in simple terms is a challenge, as it is a concept that has evolved over time, and in different contexts. At the European level, a common definition of foresight is the 'systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building process aimed at present-day decisions and mobilising joint actions' (FOREN Guide, 2001).

This highlights the features of foresight that distinguish it from other strategic planning processes, namely:

- **systematic:** it involves a well-designed approach based on several phases using appropriate tools;
- **participatory:** it brings together a wide range of stakeholders and encourages interactions, networking and learning;

- **future-intelligence-gathering:** it studies trends and drivers, their interactions and possible disruptions, allowing the use of more evidence-based policy approaches and improving the anticipation of future needs;
- **vision-building:** it explores alternative scenarios, leading to a common vision based on consensus;
- **shaping decision making:** it empowers participants to move beyond exploring the future to actually shaping it through more proactive thinking;
- **mobilising action:** it engages stakeholders in order to support effective policy implementation through joined-up approaches.

Foresight is distinct from forecasting and other tools in several respects. Foresight has a participatory and networking dimension involving a wide range of stakeholders. In addition, it explores long-term futures through holistic analysis that goes beyond typical forecasting. Foresight combines qualitative and quantitative approaches and provides the link between reflection and action.

### **1.3 Rationale**

Foresight requires significant resources in terms of time, organisation, funding and effort. The decision to invest in foresight must be based on well-defined rationales and on anticipation of a clear set of benefits that offset its potential risks and disadvantages. Foresight is not a universal solution, and in some cases it may not prove to be appropriate. It is advisable to manage expectations to ensure that the expected deliverables match what can be realistically achieved.

Rationales for foresight can range from priority-setting and key technologies exercises to guide national investments, to efforts to improve interactions between key players and the launch of visions for national, regional or city development. At the European level, foresight is supporting the development of strategic research agendas for major initiatives such as joint programming, research infrastructures and joint technology initiatives.

Examples of the specific use of foresight to support countries in the pre-accession phase include the eFORESEE Project (Malta, Cyprus and Estonia) and the ForeTech Project (Bulgaria and Romania). Foresight has led to the design and implementation of more coherent, evidence-based, future-oriented research and innovation policies through the development of a shared vision and roadmap.

### **1.4 Types of foresight**

Foresight can take different forms depending on the nature, scale and ambition of the exercise, the sectoral focus, the resources available, the timeframe, and the level of maturity of the context. Table 1 outlines a number of broad types, but in reality foresight combines several features, thus increasing its complexity and diversity.

**Table 1: Types of foresight**

<b>Nature</b>	Exploratory, bottom-up Foresight as an end in itself	Normative, top-down Embedded in policy activity
<b>Scale</b>	Multiple phases Programme-based	Single initiative Project based
<b>End result</b>	Process	Product
<b>Core function</b>	Capacity building	Policy shaping and implementation
<b>Activity</b>	Ongoing, continuous	Discrete, one-off

Selecting the appropriate type of foresight depends on several factors, including the following.

- a. The **purpose** of the exercise.
  - Where the emphasis is more on developing a foresight culture and reflecting on alternative future pathways, the exercise can be exploratory, engaging stakeholders in developing alternative scenarios.
  - Where the purpose of the exercise is to produce a [vision](#) and [roadmap](#), a more normative type of foresight is needed in which efforts focus on defining a success scenario or preferred vision. This entails a more top-down approach in defining the process.
- b. The **context** in which the activity is being applied.
  - Where stakeholders are familiar with the issues and are able to immediately engage in developing a [success scenario](#), it is possible to opt for a more normative, top-down and streamlined exercise, particularly where the end-products are a roadmap and tangible policy recommendations and actions.
  - Where stakeholders have to familiarise themselves with the issues and with forward-looking approaches, time is needed for participants to engage in more exploratory approaches before moving on to the vision.
- c. The **resource** constraints (stakeholder availability, duration, effort).

These will determine the scale of the exercise, with shorter exercises moving more directly into vision and strategy development.

The Future Frame initiative aims to produce, within a set timeframe, a vision and roadmap for skills in 2020. To this end, it is advisable to opt for a normative approach, directly embedded in policy activity. The emphasis is on the product, and the core function is policy shaping and implementation, although some foresight capacity building should also result from the process.

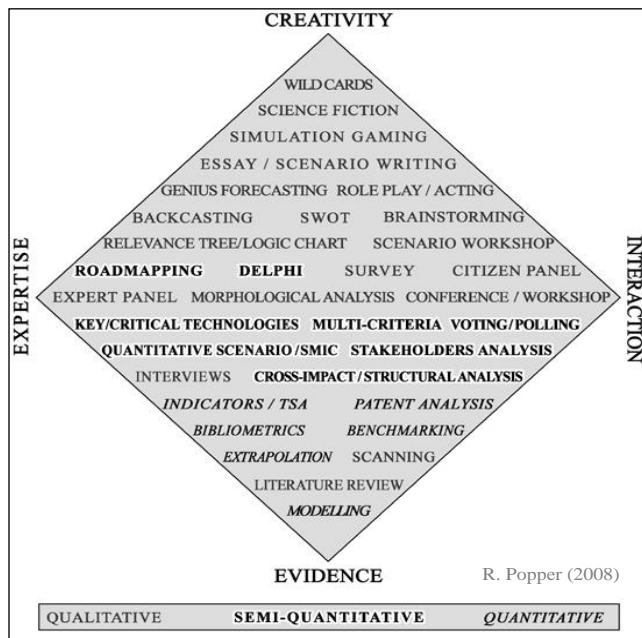
## **1.5 The methodological framework**

Selecting an appropriate methodology is a key decision, and Figure 2 outlines a range of [methods](#) that can be considered. The method must fit the specific country context and the purpose, scale and context of the exercise. The combination and sequence of methods or tools also needs careful consideration, since the outputs of one method provide an input to the next.

The overall methodological framework needs to combine methods that are relatively simple to implement but that yield policy impacts within a defined timeframe. It is advisable to opt for an

approach that tests the evidence base through analysis of trends and drivers, combined with a more normative approach using the success scenario method, and visioning and roadmapping tools.

**Figure 2: Popper's diamond**



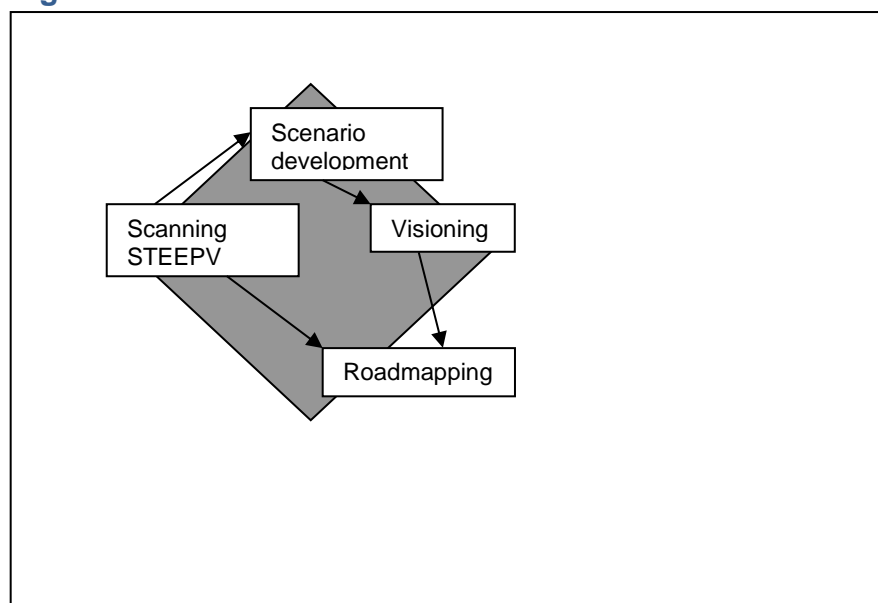
The choice of methods depends on the extent to which the exercise needs to give priority to:

- creativity, evidence, interaction and expertise
- qualitative and quantitative approaches

For this exercise, the emphasis is on selecting tools that are simple to use, qualitative, and fit for purpose. The selection and sequence of foresight methods for this exercise, outlined in Figure 3, prioritise:

- [trends and drivers analysis](#), [horizon scanning](#) and the brainstorming tool [STEEP](#) (social, technological, economic, environmental, political and values);
- [scenario development](#);
- [visioning](#);
- [roadmapping](#).

**Figure 3: Future Frame combination of methods**



Regardless of time and resource constraints, there are a number of basic steps that need to be followed. Desk-based research provides a critical input to the start of the exercise and contextualises the approach and methods for the country concerned, taking into account previous and ongoing strategy development efforts. Mapping and [engagement of stakeholders](#) is a second key step for identifying key players and understanding their roles in the HRD sector and related policies. Trends and drivers analysis provides the basis for developing the scenarios and vision. This may need to be supplemented by surveys and interviews to elicit wider stakeholder opinion.

Other methods can be considered, and the sequence in which the tools are deployed is, to a certain extent, flexible and open for discussion. The DELPHI exercise (a structured communication technique based on a panel of experts) requires substantial resources (time and effort). A wildcard exercise (anticipatory decision-making activities to increase an organisation's ability to adapt to low-probability, high-impact events) can prove effective in considering more disruptive scenarios.

## **1.6 Teamwork**

Before embarking on a foresight exercise, it is important to invest substantial effort into designing and [scoping](#) the exercise. This is a critical phase during which key decisions are taken on orientation, scope and approach.

At the start of the foresight activity, the structure and modus operandi of the core implementing team need to be in place. Although the team will grow and be adapted over time, it typically comprises:

- the organisation mandating and assigning the exercise (European Commission, Directorate-General for Enlargement);
- the organisation in charge of the exercise (ETF);
- international experts (mentoring the process);
- national experts (supporting the process);
- the national organisation (championing the process locally).

The roles of the various players and the decision-making process must be clear and understood by all engaged in the exercise.

The effectiveness and quality of a foresight exercise depends on the preparation and planning undertaken in advance.

## 1.7 Risk assessment and risk mitigation

Foresight exercises necessarily entail some risk, although this depends on the complexity of the exercise (scale, timeframe), the maturity of the context (first-time exercise), the skill of the team and the engagement of the participants. The steps described below provide the basis for a preliminary assessment of feasibility and risks in undertaking the foresight exercise. Common risks include:

- poor management of expectations of what foresight can deliver;
- inadequate representation of key players;
- low level of participation;
- key policy makers not engaging in the exercise and/or not accepting the results;
- vagueness and/or lack of novelty or detail in the visions generated;
- ineffective transfer of foresight approaches to the local context;
- poor uptake of results;
- insufficient background material to inform the process;
- poor level of communication between the team, the sponsors and the policy makers;
- weak dissemination of results.

Risk assessment and mitigation is addressed in the preparation and implementation of the foresight activity, as described in Table 2.

**Table 2: Risk factors**

<b><i>Risk assessment</i></b>	<b><i>Risk mitigation</i></b>
Lack of political buy-in and proper coordination	Ensure high-level commitment at policy level Ensure technical-level commitment of relevant stakeholders
Lack of coordination between different government departments/sectors	National IPA coordinator (NIPAC) and EU integration ministry to lead
Lack of ownership on the part of national stakeholders	National coordinator, collaborative approach
Lack of coherence with approaches developed by and cooperation with World Bank, European Investment Bank (EIB), Organisation for Economic Co-operation and Development (OECD)	Technical meeting involving ETF, World Bank, EIB, OECD and EU Delegation representatives Coordination between donors at country level Aim: synergies between different initiatives, and not just cooperation
Limited added value and marginal impact	Strong effort to identify, through consultation with policy makers, strategic actions that have a substantial impact
Limited foresight competency available locally to run the exercise	New management practice, and some form of training for policy makers and managers



<b>Risk assessment</b>	<b>Risk mitigation</b>
Use of an approach developed for advanced economies where there is a considerable amount of personal capacity and a better linkage between skills developed and the usage of skill	Bring in key people who give legitimacy to the exercise; define profiles of both facilitators and participants, emphasising that it is a team exercise
No democratic decision making in countries; no willingness/capacity for joined-up policies or joint financial envelope (foresight builds on truly democratic, constructivist, collaborative approaches)	External force of EU coming in with its budget
Foresight exercise exceeds the resources available (time, budget)	Select tools and approaches tailored to the resources available
High-flying visions/dreams and strategies do not take account of existing resources	Bring visions and strategies down to realistic levels in terms of implementation capacity (both human and financial resources) Take account of national budgets (donors cover only small percentage of required funding)
Lack of access to data and reliability of data	Undertake efforts to engage in the exercise those who have access to data
HRD strategy identifies politically risky or unpopular solutions	Proper consultation of policy makers and use of consensus-building approaches

## **1.8 Communication strategy**

The success of a foresight exercise depends on the existence of a proactive, well-designed communication strategy to disseminate results and raise the profile of the sectors. The strategy needs to consider:

- information for and basic agreement with local decision makers;
- marketing the exercise locally to recruit participants;
- interacting with the media to promote local awareness throughout the exercise (if applicable);
- facilitating communications during the exercise – keeping the implementing team, participants and key players updated on developments;
- outreach to those who are interested in and following the exercise;
- publishing and consulting on the results and consultation.

This entails a sufficient investment of resources in different communication tools, including publicity materials, a website, social media and a launch event.

Presentation of the results to high-level policy makers is critical. Securing this level of interest will unlock the political will and resources necessary to implement the results. Production of briefs that summarise key findings and recommendations for policy makers will help the process. It should be made clear who is responsible for leading the implementation of each action. This is important, as if there is no take-up of results, the opportunities to repeat the exercise will be limited. However, it is important to note that certain recommendations

(particularly those involving major changes) are often kept in reserve, to be implemented at an appropriate time.

## 1.9 Phases of implementing foresight

Foresight typically follows several phases, from pre-foresight to implementation and follow-up. Each phase involves different tools related to the tasks and roles of the implementing team and participants.

In Future Frame the exercise has four main phases:

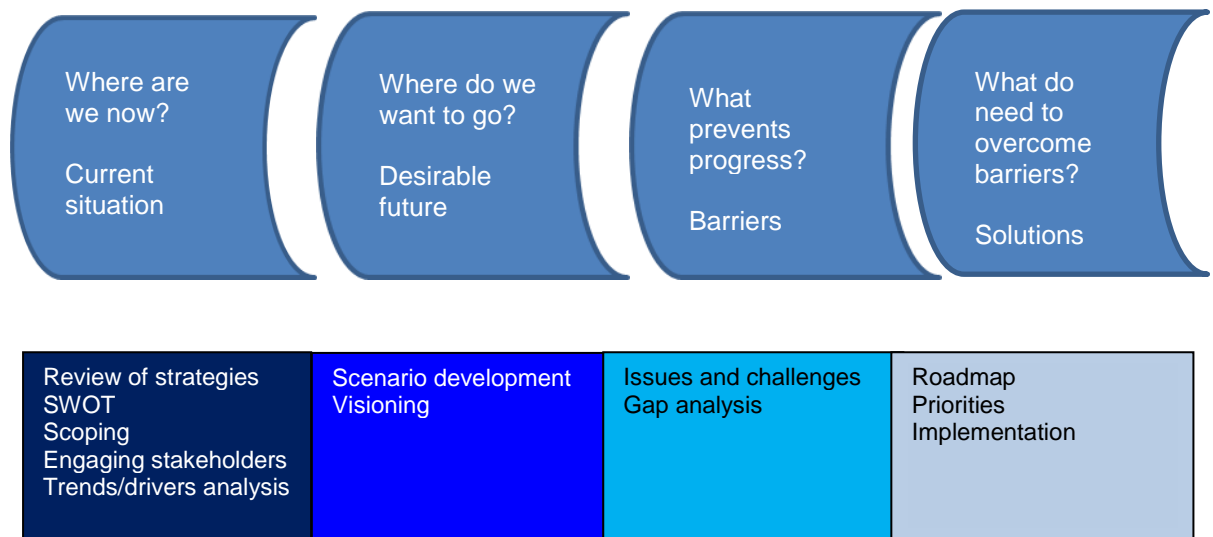
- [A. Pre-foresight](#)
- [B. Engagement](#)
- [C. Foresight proper](#)
- [D. Follow-up](#)

A provisional common framework of phases and tools has been developed for this foresight exercise (Table 3), and can be adapted for country-specific designs and implementation.

**Table 3: Overview of phases, tasks and roles**

<i>Phases</i>	<i>Tasks/steps</i>
<b>A. Pre-foresight</b>	<ul style="list-style-type: none"> <li>• Scoping phase with basic preparation for the exercise</li> <li>• Preliminary analysis of reference documents on HRD</li> </ul>
<b>B. Engagement</b>	<ul style="list-style-type: none"> <li>• Securing political and technical support and resources</li> <li>• Recruiting stakeholders (involving relevant stakeholders in the exercise)</li> </ul>
<b>C. Foresight proper</b>	<ul style="list-style-type: none"> <li>• Teaming (bringing together different actors)</li> <li>• Group focus on future skills demand and supply (analysis of trends, drivers, trend breaks and disruptors, and eventually including scenario building)</li> <li>• Group focus on sector capabilities (main needs in terms of strategic capacity building)</li> <li>• Shared vision and roadmap</li> </ul>
<b>D. Follow-up</b>	<ul style="list-style-type: none"> <li>• Formal debriefing of results for policy makers</li> <li>• Lock-in and commitment after the exercise</li> <li>• Implementing the high-level plan</li> <li>• Communicating results to a wider audience</li> <li>• Building on this foresight</li> </ul>

Figure 4: Overview of the process and expected results<sup>2</sup>



<sup>2</sup> Adapted from Cagnin and Scapolo, 2007.

## Part 2

# PRACTICAL SUPPORT FOR IMPLEMENTING SKILLS FORESIGHT

This section serves as a manual for those designing and implementing the Future Frame initiative, namely international and national experts and country managers. It provides a detailed description of how to apply selected foresight tools and approaches effectively in order to achieve targeted results. It also includes insights and lessons from pilots undertaken to date. This part of the guide will be revised when all country exercises have been completed.

The Future Frame initiative focuses on using specific tools that have been selected to produce a vision and roadmap. Use of these tools and this approach is flexible and indicative. Flexibility is envisaged, particularly with regard to sequencing the use of tools. The combination of tools may be adapted in each country's case to cater for specific context and focus.

## 2.1 The FRAME foresight initiative: approach and start-up

### 2.1.1 Preparing for foresight: deciding on the approach

The starting point for the ETF when launching a new national foresight exercise is to decide on the approach. The approach used in pilot countries provides a basis for this, but it needs to be tailored and fine-tuned to the specific country context. To date, the approach used has been as follows:

- analysis of existing strategies
- [trends and drivers analysis](#)
- [scenario development](#)
- [visioning](#)
- [priority-setting](#) and [roadmapping](#)

#### **Openness to alternative process designs**

A key insight from the pilots is that it may be worth considering alternative process designs. Vision building could involve much wider groups, including larger parts of civil society and the business sector. When setting priorities and drafting a roadmap, it may be more effective to have small groups of decision makers and experts.

It is advisable to start with a larger stakeholder group (60 people) that includes a range of societal players as well as business and government representatives. More focused drafting work on the roadmap can be carried out in smaller groups led by experts and decision makers.

It has also proved useful to organise a Panel of Business Players in Workshop 2 as a means of bringing in the employers' perspective.

#### **Setting up the team**

The ETF sets up the team that will be jointly responsible for running the foresight activity. This will comprise ETF staff including the country manager, an international expert and a local expert. In addition, a local organiser is engaged to organise the logistics (venue, etc.) for the events. The roles and tasks of these players need to be clear, and should be written into a

planning document that provides a timeline showing when certain tasks have to be completed and when the foresight activities will be organised.

In the design and scoping phase, the team's tasks are as follows.

- The **ETF representatives** provide the background to the exercise and establish the framework for the activity, outlining the rationale and key objectives, the broader context (in this case the Europe 2020 and SEE (South Eastern Europe) 2020 targets), the expected results and impacts, the team building and resources available, the time horizon (2020) and the timeline for producing the deliverables.
- The **international expert** provides advice on the appropriate orientation of the exercise, the phasing of the work in relation to the framework defined by the contractor, the resource requirements, the foresight skills needed, and the timeframe.
- The **local expert** provides key information on the local context, including the framework conditions in the sector, facilitating contacts with key local players and identifying key issues. The expert provides key support in organising the foresight activities, and advises on what works well in the local context in terms of the foresight approach.

Based on the experience of the pilots, it is recommended that the ETF team, in particular the country manager, focus their efforts on securing, as early as possible, the support and resources of a national coordinating entity to help drive the process locally.

- The **national coordinating entity** is responsible for championing foresight activity locally, facilitating high-level contacts throughout government, securing engagement of key stakeholders, and validating and ensuring the take-up of the foresight process and its results. The **stakeholders** play the key role; they are the owners of the process. A key result of the preparation phase is identification and nomination of participants in the process, and clarification of the coordinating body among the government institutions.

## The foresight team

The ETF foresight team typically includes: the ETF country manager, an ETF specialist (on foresight, HRD), an external expert on foresight and HRD, and a local expert; at key events, an ETF management representative is also included.

In each country there should be a strong Frame team, providing continuity, and well supported by infrastructure (meeting and communication logistics, back-office resources, etc.).

The role of the ETF country manager is of utmost importance, and a responsible leader for the foresight process is needed. Given that different people have different talents and strengths, each country team needs to work out the details for their cooperation.

A national coordinating entity (typically the office of the prime minister or ministry) and person identified by the government, in line with the responsibilities for IPA, takes on the role of local lead entity. Participating government institutions, government agencies, social partner representatives and non-governmental organisations (NGOs) are invited by the national coordinator. A contact person is nominated by each partner, to facilitate communication and participate in the entire process.

The pilots highlighted the need to give appropriate attention to communications.

A well-structured and updated website and communication platform ('Connections') are important for ensuring transparent, fast and efficient communication with stakeholders.

Language and the use of technical terms are issues of quality. It is important to check the need for interpretation and translation and to appoint high-quality staff for these tasks. Foresight is full of new technical terms that are difficult to understand and sometimes impossible to translate without misunderstandings.

### Launching the foresight exercise

The core task of the foresight team is to define a step-by-step plan for implementing the activity. Table 4 builds on Table 3 in Part 1, and provides indicative steps for the process, which can vary in each country to cater for the specific context and focus.

**Table 4: Step-by-step plan**

<b>Step</b>	<b>Name</b>	<b>Description</b>
<b>Phase A: Pre-foresight</b>		
1	<b>Basic preparation</b>	1.1 Obtain key reference documents, in particular existing visions, strategies, roadmaps and action plans relevant for HRD; set up a shared folder with all relevant documents. Prepare a brief summary of main documents. 1.2 Create basic project documentation: <ul style="list-style-type: none"> <li>• brochure and fact sheets;</li> <li>• initial brief and slide presentation on foresight for HRD.</li> </ul> 1.3 Establish mailing lists. These may include key people from the European Commission and EU delegation. 1.4 Set up intranet, website or other support.
2	<b>Preliminary analysis of HRD in the country</b>	2.1 Based on a reading of the most important reference documents, identify: <ul style="list-style-type: none"> <li>• <b>key stakeholders</b> to be involved;</li> <li>• <b>economic sectors</b> of national priority;</li> <li>• <b>future skill need</b> projections;</li> <li>• <b>key issues and challenges</b> to discuss with stakeholders.</li> </ul>
<b>Phase B. Engagement</b>		
3	<b>Securing high-level political support for the exercise</b>	3.1 Convince national governments of the benefit and added value of Frame. 3.2 Link Frame with other national HRD actors, activities and processes such as IPA programme preparation facilities, to enhance relevance and buy-in.
4	<b>Engagement of stakeholders</b>	4.1 Establish contact with stakeholders to bring them on board. 4.2 Deepen knowledge of the problem by interacting with each new stakeholder to: <ul style="list-style-type: none"> <li>• validate the purpose and scope of the foresight exercise;</li> <li>• clarify the relationship between foresight and IPA II;</li> <li>• complete the mapping by checking with each new stakeholder for insights on known stakeholders and their readiness to join the activity, as well as leads on possible missing stakeholders;</li> <li>• check for insights into the value they think that participation in a foresight exercise could provide.</li> </ul> 4.3 Identify the core group and process leader: <ul style="list-style-type: none"> <li>• agree the process with them;</li> <li>• verify important dates with key actors;</li> <li>• agree overall tasks and timing.</li> </ul>

<b>Step</b>	<b>Name</b>	<b>Description</b>
<b>Phase C. Foresight proper</b>		
5	<b>Launch of foresight and teaming</b>	<p>The launch, which can be organised through a dedicated event, marks the start of the exercise for the stakeholders. It brings together independent actors, many with pre-existing action plans, to develop a shared vision, priorities and a roadmap in relation to:</p> <ul style="list-style-type: none"> <li>• future skill needs;</li> <li>• the ability of actors to identify them;</li> <li>• the ability of the education and training system to deliver them.</li> </ul> <p>It also touches upon the integration of this shared vision to prepare for IPA II.</p>
6	<b>Trends and drivers analysis</b>	<p>In this phase the aim is to go beyond what has been addressed in existing strategy documents by undertaking the following.</p> <p>6.1 <b>Trends analysis</b> for the anticipation of future skill needs, with particular attention on the exploration of <b>trend breaks</b>.</p> <p>6.2 <b>Drivers analysis</b>, which supports the exploration of trends by helping the stakeholders understand how new trends come into existence, as well as how existing trends are amplified or attenuated.</p> <p>Trends and drivers analysis is generally undertaken either in conjunction with the launch event or in the workshop following the launch. This activity is organised in break-out groups.</p> <p>6.3 <b>Alternative scenarios</b> for future skill needs of the economy and economic actors (optional).</p> <p>Scenario development and defining the success scenario is generally undertaken either at the same event, following the trends and drivers analysis, or in a follow-up workshop. The activity is organised in break-out groups.</p>
7	<b>Deeper analysis of the HRD sector</b>	<p>7.1 Undertake a SWOT (strengths, weaknesses, opportunities, threats) analysis of the skills system to identify challenges and opportunities. This is generally addressed in the lead-up to defining the priorities and the roadmapping, and allows us to map out the needs of the institutional actors in HRD in terms of strategic capacity building.</p> <p>7.2 The next step is to develop a success scenario for HRD strategic capability (optional).</p>
8	<b>Developing a shared vision and roadmap (workshop)</b>	<p>8.1 This step is essentially the consolidation of insights and learning from steps 6 and 7.</p> <p>The formal vision is developed and priority actions identified as a preface to developing the roadmap.</p> <p>From the outset it is useful to raise the question of who the vision will serve and to what purpose.</p> <p>Visioning and roadmapping is generally undertaken in the final workshop in break-out groups.</p>
<b>Phase D. Follow-up</b>		
9	<b>Follow-up</b>	<p>9.1 Ensure effective delivery and formal briefing of results for policy makers. This will entail giving careful attention to the content, format, timing and presentation of the final report. It is particularly important to ensure that the insights of the exercise are provided in a timely fashion for those who want to integrate them into their IPA II submission.</p> <p>9.2 Secure lock-in and commitment after the exercise.</p> <p>9.3 Ensure that there is effective implementation of the high-level plan and that the exercise provides a reference for other HRD-related initiatives and not just IPA II. It is important to develop an inventory of these so that progress on this front</p>

Step	Name	Description
		<p>can be tracked over time.</p> <p>9.4 Communicate results to a wider audience.</p> <p>9.5 Build on the foresight exercise and secure sustainable impact by investing in efforts to ensure that foresight is systematically integrated into the management and programming practices of actors in the HRD field. This comes down to successful implementation of the roadmap.</p>

## 2.1.2 Pre-foresight (Phase A)

Pre-foresight activities include basic preparation for the exercise and preliminary analysis.

### Step 1. Basic preparation

Given the time limitations, the exercise will not include dedicated studies to develop statistics, forecasting or horizon scanning. The exercise builds on previous surveys, analyses and strategies. The national expert identifies and obtains key reference documents, in particular existing statistical data and analyses, visions, strategies, roadmaps, action plans, forecasts and scans relevant to the exercise.

The main inputs to be considered when developing a coherent skills vision are as follows.

- **Baseline:** Collecting evidence on the current situation in the country in conjunction with the ETF country manager. The ETF will propose a list of key indicators with baseline data for monitoring (Frame Component 3).
- **Strategies:** Mapping existing strategies and providing a coherent view of the skills dimension of the strategy. Mapping results will be discussed with stakeholders in the foresight proper phase. The information should be prepared by the national and international experts, in conjunction with the ETF country manager.
- **Anticipation:** Quantitative analysis of existing demand for and supply of skills; current anticipation and forecasting practices. What anticipation data are currently available? How robust are they? Are there gaps in the data? Information may need to be gathered from various stakeholders. In some countries, specific reports already exist.
- **Drivers of change:** Identifying the main national and international macro-economic and social trends (gross domestic product (GDP) growth, sector composition, FDI, technical innovation, industrial restructuring, demography). National economies are embedded in the global economy and the international division of labour. This step should ideally involve additional input from international and national experts, plus discussion<sup>3</sup>.
- **EU Integration and regional cooperation:** Consideration of indicators and targets in the Europe 2020 and SEE 2020 strategies, but looking beyond these at national targets.
- **Values:** Exploring social dimensions, such as social inclusion, equal opportunities, territorial (im)balances, CSR, etc.

<sup>3</sup> A national economist from the country concerned may be the best person to present this kind of issue in terms of identifying how global trends affect a country. Close involvement from national stakeholders is recommended.



The review of reference documents is used to extract key content to prepare for the workshops in the [foresight proper \(Phase C\)](#). Preliminary analysis of key reference documents can typically include:

- formulating a coherent view of the documents, their hierarchy and timing; it is also important to record which organisation is responsible for formulating and implementing the strategy and its role in the sector;
- developing, in conjunction with national stakeholders, an inventory of key stakeholders, methods used and a gap analysis; this should include existing skills anticipation approaches;
- undertaking a synthesis of these documents to extract common factors and linkages between the documents.

## **Step 2. Preliminary analysis of HRD issues in the country**

Analysis of key reference documents allows for the development of an inventory, on the basis of which a preliminary gap analysis can be made on methods, projections, national priorities and solutions. This should then be completed and complemented by national stakeholders.

The inventory and gap analysis help to clarify elements of the sector-wide approach, for example by understanding the sector's size and scope. Identification of systemic gaps results in a leadership issue, as it raises the question of who will take charge of missing elements that may be essential for the overall success of the sector-wide approach to HRD. The inventory and preliminary gap analysis can be the main input to the launch event, at which the need for a sector-wide approach is validated and the role of foresight explained<sup>4</sup>.

## **Step 3. Main Papers Generated<sup>5</sup>**

Preliminary inputs:

- introduction to the initiative (1–2 pages to introduce the overall initiative);
- timeline (to be revised as the initiative progresses);
- available strategy papers that relate to the HRD system;
- reference model (e.g. a strategic framework to guide the discussions) for the skills system (useful for the gap analysis);
- coherent synthetic overview of relevant existing strategies (preliminary version);
- analysis of key relevant trends and trend breaks (preliminary version).

Outputs:

- strategic overview of existing strategies (final version);
- analysis of trends and trend breaks (final version);
- report on scenarios, actions and priorities;
- vision and roadmap.

---

<sup>4</sup> It should be noted that a wide policy area such as HRD does not function under a single leadership. A coordinating or leadership role exists in the context of IPA management, and may be defined if a specific economic sector is to be addressed.

<sup>5</sup> Some papers will only result of a later phase (foresight proper – Phase C) of implementation.

## 2.1.3 Engagement of stakeholders (Phase B)

This phase consists of three important steps:

- securing high-level support for the exercise;
- engaging stakeholders.

### Step 3. Securing high-level support for the exercise

Since Frame is implemented by the ETF on behalf of the European Commission (Directorate-General for Enlargement), it is essential to convince national governments of the initiative's benefit and added value. An official letter should be sent to the government (prime minister) of the country concerned, but the country manager should play a key role in providing information on the exercise through personal contact with key partners in the country. It is realistic to anticipate that the ETF will encounter different levels of buy-in, ranging from strong commitment to pragmatic and minimal cooperation.

It is important to link Frame with other national HRD actors, activities and processes, such as IPA programme preparation facilities, as this enhances relevance and buy-in.

### Step 4. Engaging stakeholders

A core ingredient in the implementation of a foresight exercise is a high level of political commitment. This ensures appropriate input at the start and throughout the exercise to inform the orientation of the exercise and keep it on track. Most importantly, it ensures that the results are given appropriate consideration and not left unused. This buy-in extends from policy makers at the highest level to mid-level officers responsible for implementation, and may entail organising individual meetings to explain and promote the exercise, in particular its benefits and added value. At the time of accession, a good case needs to be made to avoid any misunderstandings over what is being undertaken and the expected results. Organisers may have to accept a change in orientation of the foresight exercise in response to signals from high-level policy makers to address a specific issue.

In this phase the implementing team (ETF representatives, international and national experts) maps key stakeholders, primarily in the sector under review (HRD). This is extended to identify other players who are relevant to the exercise, who either need more attention or have been unable to participate in sectoral planning. Stakeholders may be organised into different groups based on their role in the sector. Different strategies for recruiting stakeholders can be discussed and developed, including incentives to participate in the exercise. Mapping the interactions between key stakeholder organisations is useful for determining the extent of dynamism in the sector.

Based on experience from the pilots, the following actions are recommended:

- enhance the **extent and range of national expertise** by including national and local experts and researchers, as far as possible, to enrich and inform the process with high-quality input to debates and papers; not all participants need to attend all phases; individuals can be contacted (in an open way) outside and between the workshops, if necessary;
- **include employers:** their views bring additional insights when considering skills; involving employers' representatives might not be sufficient; instead, it is suggested that human resource managers of companies from key industrial sectors should be invited to participate;

- bring in representatives of all **relevant interest groups**, e.g. young people, researchers; ensure that **foresight is embedded in the wider economic context**, through consultation with and participation from the ministries of finance and the economy, and economic councils.

## 2.1.4 Foresight proper (Phase C)

### Step 5. Launch of foresight

The launch can be organised through a dedicated event, which could be a one-day workshop that brings together all the major stakeholders. The goal is to:

- present the challenge (drawing on the inventory and gap analysis and the need for a sector-wide approach);
- confirm the need to address the challenge and describe how foresight can help in developing this approach;
- show alternative/viable ways forward;
- confirm the approach for the foresight process.

The success and effectiveness of the event depends on preparation. This entails ensuring that the tasks and steps described in Table 5 are properly designed and planned.

**Table 5: Tasks and steps in the launch phase**

<b>Task</b>	<b>Steps and details</b>
Selecting the appropriate profile and balance of participants	This entails the careful selection of participants in order to ensure a broad representation of public and private agencies responsible for skills and HRD, public/private sector and gender balance, expertise and disciplinary coverage and policy profile. This includes universities, business associations and trade unions, among others.
Briefing material on the project to be sent to participants in advance of the launch event	To attract participants and ensure their effective engagement with the project, it is important to prepare concise and clear briefing material that gives an accurate understanding of the project and its objectives. This needs to be provided at least a week before the launch of the teaming event to allow participants time to read the material and prepare.
Issues Paper for grounding the workshop discussions to be prepared	Although the launch event is primarily an interactive session during which participants network with and get to know each other, it is important that it provides an opportunity for a preliminary discussion of key issues relating to skills identified by the inventory and preliminary gap analysis. Local experts, supported by the international experts, will prepare an Issues Paper that gives a short review of the relevant strategies. The Issues Paper can be presented and discussed during the launch event to allow participants an opportunity for deeper reflection on the key issues relating to skills to confirm whether they are the correct ones, or whether others need to be added or given priority.

<b>Task</b>	<b>Steps and details</b>
Designing the launch event	<p>The launch event aims to bring all key players on board and engage them in the foresight exercise. The event needs to balance briefing with interaction and networking. The first keynote address could focus on framing the skills challenge from an EU perspective and the sector-wide approach. This would emphasise that much work has been done to develop strategies but that it is now important to identify gaps and overlaps in the strategies to take them forward effectively. It is also important to discuss which elements of the strategies have been implemented and which still need to be put in place (and why). A second presentation on the Issues Paper could be followed by a roundtable discussion on this, and identification of the priorities.</p> <p>The afternoon session could be launched with a keynote address by an inspirational speaker on innovation and good practice in relation to skills. This could be followed by roundtable discussion involving all participants. The foresight approach and work programme would then be presented for discussion.</p> <p>The facilitators should ensure that each participant has a say in these discussions and actively encourage those who remain quiet. At the end of the event participants should understand the need to organise and work together.</p> <p>Finally, the event enables participants to interact with each other and with the organisers, and to provide feedback on their insights and expectations on the exercise as a whole. A proposed outline is provided below.</p>
Expected results	<p>The event should generate the following results:</p> <ul style="list-style-type: none"> <li>• structured feedback from participants on the overall approach;</li> <li>• engagement of participants in the process and their participation in Phase C (foresight proper);</li> <li>• identification of participants who can drive the process;</li> <li>• revision of the mapping and analysis document;</li> <li>• stocktaking on anticipation approaches: identify people who have participated in the exercise and who could eventually present the results.</li> </ul>

### **Outline of the launch event<sup>6</sup> (1 day)**

#### Opening

- Welcome participants.
- As an ice breaker, invite participants to stand up in the middle of the room in a circle. Give them five minutes to introduce themselves to their neighbours on each side.
- After this, go around the table for participants to introduce themselves and explain their interest in this event.

<sup>6</sup> The outline of the event is a proposal that should be adapted and tailored to the specific conditions in the country concerned.

- The facilitator explains the goals of the workshop, sets out what is expected of the participants and introduces the keynote speakers.

#### Morning session

- Keynote address on the skills challenge from an EU perspective and the sector-wide approach.
- Presentation on the Issues Paper, with roundtable discussion and summary of the main issues. Key points emerging from the roundtable discussions are posted on the wall and can be used to continue the discussion over the lunch break.

#### Afternoon session

- Presentation on innovation and good practice in relation to skills.
- Roundtable discussion.
- Presentation of the foresight approach.
- Presentation of the programme of work: the facilitator provides a synthesis of the discussions and explains the way forward.
- Networking event.

The key points from the day's discussions are forwarded to participants with details of forthcoming events.

### **Step 6. Trends and drivers analysis**

This task provides a model for anticipating future skill needs using a foresight approach. This is a significant departure from methods based on the simple extrapolation of statistics because it provides an opportunity for serious discussion on discontinuities, paradigm shifts or game-changers, as well as the demands that these will place on existing institutional arrangements. This may be best achieved using an economic-, job- or employment-sector approach. The specific sets of stakeholders required to develop scenarios for different sectors will generally be very different.

This activity can be undertaken either as part of the launch event or in a follow-up one- or two-day workshop, where trends, drivers and trend breaks are explored and ranked, and a success scenario and roadmap elaborated. Such an event will require careful preparations to ensure that all the elements are in place to deliver the end result. These elements include:

- the preparation of briefing materials;
- the venue, workshop layout and related logistics;
- the selection of participants;
- the facilitators;
- the workshop design and foresight tools.

**Table 6: Trends and drivers analysis and scenario development**

<b>Tasks</b>	<b>Steps and details</b>
Briefing materials to be sent to participants in advance of the trends and drivers event	Apart from the Issues Paper, the main briefing material for this workshop will be the Trends and Drivers Papers, based on <a href="#">STEEPV</a> (i.e. analysis of micro and macro shaping forces that influence HRD) prepared by the international and local experts. These will also identify key trend breaks. This material should ideally be provided at least a week before the event in order to allow participants time to read it in preparation for the workshop.

<b>Tasks</b>	<b>Steps and details</b>
Venue, workshop layout and logistics	<p>The venue selected for the workshop should be easy for participants to reach. It should have good natural lighting and, ideally, white walls for putting up sticky notes. The room should be set up in cabaret style with 5–6 small round tables on the outer edge of the room, leaving space in the middle for participants to gather. Each table should have a laptop, paper, flipchart, large sticky notes in different colours, and a range of coloured pens for the flipchart.</p> <p>At the beginning of the event the participants may either choose or be assigned to a particular table in preparation for the parallel sessions. An appropriate mix of participants should be ensured on each table to allow for a balance of expertise, and of sectoral and organisational representation. An attendance sheet indicating name, organisation and e-mail address should be used to record who is present.</p>
Selection of participants	<p>The main aim is to ensure balanced and broad representation of the stakeholders who are active in the skills area. In cases where the representative of a particular group is not present, or is insufficiently engaged in the launch event, the local experts need to take action to ensure effective representation. The involvement of policy makers and those in a position to influence them is vital for ensuring buy-in and uptake of the recommended actions.</p>
Workshop design and foresight tools	<p>The workshop will be take place over 1.5–2 days and will focus on trends and drivers analysis relating to skills up to 2020.</p> <p>The event will start with a warm-up session, followed by a keynote address on macro trends and trend breaks for Skills 2020. The participants will discuss the trends, drivers and trend breaks using STEEPV. A ranking system can be used to prioritise the trends and drivers, the aim being to identify a shortlist.</p> <p>Participants will then split into working groups and use the macro trends, drivers and trend breaks to develop scenarios. Those considered include the ‘business as usual’, ‘likely response’ and the ‘preferred’ scenarios. The working groups report back in plenary.</p> <p>The facilitator will then develop a synthesis of the material from the working group sessions and present it in the afternoon session. A roundtable discussion on the main challenges and the implications for the sector-wide approach follows. The facilitator sums up the discussion and explains the next steps.</p>
Expected results	<p>The event is structured to generate the following results:</p> <ul style="list-style-type: none"> <li>• shared understanding of macro trends, drivers and trend breaks impacting on skills up to 2020;</li> <li>• development of parallel scenarios as inputs into the vision-development process;</li> <li>• agreement on the aspects of the system that require change.</li> </ul>

The trends and drivers analysis and the scenario development can also be organised in two workshops, depending on timeframes.

### **Workshop outline<sup>7</sup> (at least 1.5 days)**

The proposed overall structure is to:

- introduce aspects of the system that require change;
- use scenarios to explore how the system is, and how we would like it to be;
- ask whether the system of institutions (organisations, agencies and mechanisms) is capable of delivering, and compare with what is feasible under ideal circumstances;
- use this discussion to understand the challenges of a systemic nature that need to be addressed and propose patches, solutions, fixes, etc.

#### Day 1

##### Morning session

- Welcome participants and recall the overall process and the purpose of the meeting.
- Present the results of mapping the strategies (for example with gap and overlap analysis).
- Open up to a plenary discussion on the system and its capabilities.
- Introduce the session, its purpose and methodology.
- Brainstorm on trends and trend breaks (using STEEPV, with an input paper prepared as backup).
- Categorise trends and trend breaks (for example, internal/external, foreseeable/unforeseeable) with a view to setting up 2–4 parallel scenario sessions.

##### Afternoon session

- Break-out scenario sessions (current versus ideal state, parallel sessions, brainstorming on actions), organised in 3–4 parallel working groups.
- Presentation and discussion of the working group results.
- Networking cocktail.

#### Day 2

##### Morning session

- List the main challenges.
- Prioritise these, for example, based on importance using voting, or using a four-square approach based on impact versus difficulty and cost of implementation, or a more complex multi-criteria approach.
- Discuss the implications of this for the sector-wide approach.
- Recapitulate the results of the day.
- Deliver presentation on the next steps.

### **Step 7. Deeper analysis of the HRD sector**

This step entails developing a vision/success scenario, a roadmap and an action plan for skills.

By this stage we should have started to converge on:

- a shared view of what the skills system looks like;
- an awareness of how rapidly future skill needs change;

---

<sup>7</sup> The outline of the event is a proposal that should be adapted and tailored to the specific conditions in the country concerned.

- an understanding of the impact this will have on the actors in the system and their need to evolve not in response to change, but in anticipation of it;
- a shared view of the strategic capacities needed to anticipate change and evolve accordingly.

It is possible in principle to combine Step 6 (Trends and drivers analysis and scenario development) and Step 7 (Deeper analysis of the HRD sector). This may be necessary because of the timeframe, but it would be preferable to keep them separate. Strategic capacity is essentially an internal issue that is more pressing for some actors than for others. It is separate from developing visions for future skill needs, and should ideally draw upon experience in dealing with this problem.

### **Step 8. Developing a shared vision and roadmap (workshop)**

Using inputs from the previous workshops, this phase will focus on the development of a shared vision and roadmap. The issues and conclusions previously identified are presented in a more polished form to the participants, who are invited to envision the kind of skills system that will be needed in 2020. This is followed by a roadmapping exercise that shows the major steps/actions required to move from the current situation to the desired position for 2020.

#### ***Vision and roadmap event***

The purpose of this meeting is to:

- develop a vision of what the skills system should be like in 2020;
- outline the intermediate steps required to achieve this (functional roadmap);
- outline the means to achieve this (programming roadmap).

The 'programming roadmap' refers to national funds, development plans of organisations, national development plan and donor opportunities that will support implementation of the roadmap.

One way of summarising the vision for the future of the skills system is to describe the kind of system that one would like to put in place for 2020.

In terms of input documents for this event, it is important to prepare the structure for a roadmap in advance as a backup in case participants have difficulty in developing their roadmap. However, participants are encouraged and supported to develop the roadmap during the workshop. After the event, the outputs from the workshops are used to develop and finalise the vision document and roadmap with the list of priority actions.

#### ***Workshop outline (2 days)***

##### Day 1

##### Morning session

- Welcome participants and recall the overall process and the purpose of the meeting.
- Present the strategic frame for the discussion of the skills system and the original problem.
- Present the results of the previous workshop: the priority list of development challenges.
- Categorise the development challenges (using, for example, three categories – governance, capacity-building and international opportunities).



### Afternoon session

- Break-out sessions to develop alternative visions (three groups).
- Group session to discuss the merits of each, and to develop consensus.
- Elaborate and formulate a shared vision.

### Day 2

#### Morning session

- Presentation of the roadmapping activity.
- Break out into parallel interactive sessions based on segmentation of the task into the challenge categories.
- Plenary session to present results and discuss priorities.

#### Afternoon session

- Facilitated consolidation of three action plans (from the 3 parallel groups) and discussion.
- Wrap up the session and present the next steps.
- Networking event.

**Table 7: Vision, priorities and roadmap**

<b>Task</b>	<b>Description</b>
<b>Vision</b> ↓	<p>The vision expresses a desired state of affairs in the future, showing where the country wishes to be concerning its human capital ('Which skills should the country have by 2020?'). This vision should be ambitious and shared by the main stakeholders.</p> <p><u>Format:</u> The vision should be brief, well formulated, and qualitative, with 5–10 lines of text. It should be attractive and easy to understand, and should inspire stakeholders to take action towards the desired state.</p>
<b>Priorities</b> ↓	<p>A limited number of priorities that are relevant for achieving the vision should be negotiated among and identified by stakeholders. No more than five broad priorities for policy making should be set.</p> <p>An example of such a set of priorities would be:</p> <ul style="list-style-type: none"><li>• demand for skills by the economy;</li><li>• supply of skills by the education and training system;</li><li>• inclusive education and labour market;</li><li>• analysis and anticipation of skills;</li><li>• matching (intermediation) services.</li></ul> <p>Another example would be:</p> <ul style="list-style-type: none"><li>• VET;</li><li>• higher education (excellence and quality);</li><li>• school-to-work transition;</li><li>• continuous training of the workforce;</li><li>• increasing human resource management capacities of employers;</li><li>• improving the employability of those who are unemployed and/or inactive.</li></ul> <p>What should be achieved by 2020? Priority setting includes goals: indicators and targets (quantitative and qualitative) are to be set for each priority. In addition, the baseline (current position) needs to be described. The targets must be ambitious, but feasible.</p>

	<p>Questions should also be raised:</p> <ul style="list-style-type: none"> <li>• How are these priorities (and targets) linked?</li> <li>• Is there a trade-off, are they mutually reinforcing, or are they neutral in relation to each other?</li> </ul> <p><u>Format</u>: Open, probably about one page per priority.</p>
<p><b>Roadmap</b></p>	<p>The roadmap describes how to reach the desired state of affairs. A phased approach could be used, making it easier to monitor progress step by step, annually or biennially (2014 – 2016 – 2018 – 2020).</p> <p>The roadmap will make clear who is in charge of what, and in cooperation with whom.</p> <p>Questions to be debated and answered:</p> <ul style="list-style-type: none"> <li>• Is it enough to continue or reinforce what we do now?</li> <li>• Are new measures, new policies and new approaches needed? Or can existing measures and policies be reoriented?</li> <li>• If new approaches are required, what are the pre-conditions in terms of institutional capacities, legal frameworks, and budget requirements?</li> <li>• What are the budget estimates?</li> <li>• What are the possible barriers and risks?</li> </ul> <p>The roadmap should be structured as follows:</p> <ul style="list-style-type: none"> <li>• <b>current situation</b> (baseline, key features of the situation with key data);</li> <li>• <b>objectives and goals for 2020</b> (e.g. key features or specifications of the vision, with (results) indicators and qualitative and quantitative goals);</li> <li>• <b>steps to be taken</b> (actions and measures, specifying who is responsible, and in cooperation with whom).</li> </ul> <p>Baseline data (evidence) and quantitative goals should be defined with the support of Frame Component 3 on monitoring. If possible, interim steps with interim targets should be specified, since a phased approach makes monitoring easier.</p>

The pilots identified the following recommendations for improving the process.

The **foresight process is more than a series of workshops**. There are tasks that need to be fulfilled in between, including drafting (and translating) interim results and disseminating them as input to the next meeting, and preparation meetings with the coordinator.

**Three workshops are a minimum**. Even in the case of a small country such as Montenegro, two additional half-day workshops were needed to finalise the roadmap.

**It is essential to document the foresight process** and the resulting vision, priorities and roadmap. It needs to be clarified at the very start of the process who is responsible for drafting the foresight report, and who will formulate the vision, priorities and roadmap. The experience in Montenegro was that the ETF should draft the report. This was partly due to issues of language. The Serbian team included a drafting session with parallel small working groups (a half-day as part of the final workshop), to ensure that the results were formulated by the stakeholders and that ownership was enhanced.

## 2.1.5 Follow-up (Phase D)

Once the foresight exercise is under way, the priority for those leading it is to record, compile and synthesise key results. This will provide the basis for preparing the final deliverable(s), which typically comprise a final report with a set of key findings and recommended actions.

Effective delivery of the final report depends on several factors that need careful attention.

- **Content:** Decide on whether the emphasis is on describing the recommended actions and/or the process, and on any supplementary material that needs to be included, e.g. trends and drivers analysis.
- **Format:** The aim is to ensure that the report meets the needs of policy makers by being clear, concise and easy to read. Alternatively, a brief could summarise the results.
- **Timing:** Ideally, publication of the report should be linked to the policy cycle.
- **Presentation:** This can take the form of an event with key players and participants, at which the results are presented and the policy makers provide feedback on the follow-up. It is important that the vision document is adopted in a formal way, as part of the vision and role of the stakeholders involved.

The knowledge and learning generated through foresight activity can be captured and shared in different ways depending on the interest and the resources available. The insights and know-how developed can be codified by publishing journal articles and handbooks. Participation in relevant international and regional foresight events and networks can be a way of communicating results and know-how more widely and of sustaining foresight learning processes and new activity.

With regard to effective follow-up, the pilot experiences have demonstrated that Frame can be the starting point for further foresight exercises. The Frame experience may serve as a springboard for more focused foresight processes, e.g. for smart specialisation, addressing specific industrial sectors or for particular organisations.

## 2.2 Methods and tools in the foresight proper phase

The phases of the Future Frame initiative described in Section 2.1 are shown in more detail in Table 8, which provides a step-by-step guide to implementing the foresight phases. It is important to note that these are indicative steps and that the process may be implemented differently in each country to cater for the specific context and focus. The table is followed by an explanation of the foresight tools and insights for implementing them effectively.

**Table 8: Key methods**

1. <a href="#">Trends and drivers analysis</a> <ul style="list-style-type: none"><li>• <a href="#">Horizon scanning</a></li><li>• <a href="#">STEEPV</a></li></ul>
2. <a href="#">Scenario development</a>
3. <a href="#">SWOT analysis</a>
4. <a href="#">Gap analysis</a>
5. <a href="#">Visioning</a>
6. <a href="#">Priority setting</a>
7. <a href="#">Roadmapping</a>

The main tools that are likely to be used in implementing foresight pilots are described in the following sections.

### **2.2.1 Trends and drivers analysis**

When preparing scenarios, it is useful to study the trends and drivers to identify those that are missing. It is possible to distinguish between external (more macro) and internal (micro) drivers. In analysing trends and drivers, it is useful to identify trend breaks and, where possible, the factors causing them. A driver is a factor that significantly influences the object of interest in a foresight activity.

Trends and drivers can be analysed during a foresight workshop in a participatory, interactive way as a key step towards building a vision or success scenario. Preparatory work before the workshop should identify and categorise an initial list of key trends and drivers based on horizon scanning and interviews. The workshop typically starts with a presentation of key trends and drivers affecting HRD and skills. During the first break-out exercise, participants, in groups of 5–6, should study the trends and drivers with a view to:

- assessing the extent to which the list is complete;
- adding or removing trends and drivers;
- changing the wording where necessary;
- clustering trends and drivers (based on STEEPV or an alternative classification): this can be carried out using sticky notes to organise the trends and drivers under social and economic clusters, and can be done by either participants or facilitators, depending on the time available;
- ranking the trends and drivers in order of importance: participants are given dots and invited to mark the sticky notes, assigning more dots to those trends and drivers that they consider more important;
- ranking the trends and drivers on the basis of degree of uncertainty.

It is possible to use an impact/uncertainty matrix with a simple ‘high–medium–low’ scoring system, to identify two or three factors or trends that are the most important and the most uncertain. This is an important step in building the scenarios.

#### **Horizon scanning**

Horizon scanning, often referred to as environmental or technology scanning, or simply scanning, supports policy-design work and strategy development in the public and private sectors for the medium to long term. Horizon scanning is the systematic examination of potential threats, opportunities and likely future developments that are at the margins of current thinking and planning. Horizon scanning may explore novel and unexpected issues, as well as persistent problems or trends.

Horizon scanning:

- focuses on current trends and challenges, while flagging emerging issues and new approaches;
- helps to identify and define existing good practice in policy approaches, while exploring and suggesting creative and novel policy design and actions.

Key elements of horizon scanning are focus, timeliness, accuracy, communication and presentation. Horizon scanning must be linked to practical user needs if it is to be of real value.

Horizon scanning involves systematic gathering, analysis and use of external HRD and skills-related information for scenario development, visioning and roadmapping. The extent and depth of a horizon-scanning activity depends on the context, including the funding available, the requirements of the exercise, and who is implementing the activity. It should be used to identify issues that have the potential to create significantly new or changed skill needs over the medium to long term.

Horizon scanning tracks developments that impact on HRD and skills, such as changes in market sectors and related employment; changes in the workplace; socioeconomic trends affecting the labour market; trends in public attitudes towards work; and the EU skills-related agenda.

The aim of horizon scanning is to:

- detect scientific, technical, economic, social and political trends and events that are important to the institution;
- define potential threats, opportunities and changes for HRD and skills implied by those trends and events;
- promote a future orientation for HRD and skills policies by flagging trends that are converging, diverging, speeding up, slowing down or interacting.

Horizon scanning identifies trends and drivers of HRD and skills in the country, which may include many of the following:

- demographic change (ageing);
- migration;
- changing gender balance;
- social change (e.g. religion, work and employment);
- impact of crisis and recession on jobs and unemployment;
- underemployment and overqualification;
- emergence of new economic sectors;
- economic change (e.g. service economy, open innovation);
- rise of the internet and its impact on the economy;
- local smart specialisation;
- sustainability (e.g. carbon, energy and natural resources, water);
- science and technology (e.g. nanotechnology, genomics);
- infrastructures (e.g. support for innovation, ICT (information and communication technologies) networks);
- information society (e.g. the pervasive role of the internet in successive generations);
- globalisation (e.g. rise of a new wave of emerging economies in South East Asia, North Africa and the Middle East).

In scanning for key trends and drivers, sources include:

- horizon scanning sites, e.g. UK Horizon Scanning Centre (<https://www.gov.uk/government/collections/foresight-projects#horizon-scanning-reports>)
- skills foresight reports, e.g. European Foresight Platform (EFP);

The review of strategy documents helps to identify key trends in skills and HRD that are relevant for the exercise. These can be supplemented by a broader set of trends that impact on skills.

Insights on trends and drivers can also be obtained by interviewing (face to face or by telephone) key stakeholders, including those on the list of individuals to be invited. It is particularly useful to gain inputs from stakeholders who cannot attend.

## **STEEPV**

STEEPV is a brainstorming tool. Its initials refer to general headings (social, technological, economic, environmental, political and values) that provide starting points for strategic discussions. In this case we are interested in the skills system and its ability to anticipate future skill needs and to adjust accordingly to ensure they are available in the local economy. In the context of the Frame initiative an extra 'E' could be added (STEEPVE instead of STEEPV), the final initial being for employment.

It is a tool that can be used for discussions about drivers, trends and trend breaks that are relevant for anticipating future skill needs or the future capabilities of organisations and individuals working in the skills system. The main idea is to make sure that as much ground as possible is initially covered so that no stone is left unturned in the early stages of the exploration. Other brainstorming techniques can be used with STEEPV to dig deeper into the issues raised, or to exhaust what a group of people might actually know.

STEEPV can be used by a person working alone, or by a group. As for most brainstorming activities or events, preparation is important for success. If participants are not prepared, it is very hard to go beyond the most banal observations. In particular, if the facilitator is not prepared, it will be very hard for them to lead a group towards a useful outcome.

It is always possible to improve on STEEPV. For example, one can distinguish between international, European and local trends and drivers. The discussion can then focus on how quickly these trends and drivers will become local, or how quickly the impact of such trends will be felt locally. A useful way to talk about the future of 'here' is to look at what is happening elsewhere, and to ask how such a trend would impact the situation should it come 'here'. It is not useful to ask *whether* it will come, as this is to fall back into habits of conservative thinking that cut off new thinking and useful conversations about the future.

Another way to improve on STEEPV is to discuss taboo subjects.

Skills systems can be conservative and resistant to change. For example, the use of ICT (first PCs, then the internet and now mobile technology) was resisted fiercely for many years, and has yet to be fully embraced.

There are many taboos in education, especially relating to careers, the training of educators and evaluation of their performance, new methods and new paradigms for teaching, and ways of working. The social context, culture, religion and ethnic priorities may also prove sensitive topics for discussion.

Heroes of education tend to be classical figures from an idealised past. Experience shows that taboos are often broken over time. Trend breaks based on broken taboos can be used as starting points for discussions. It is important to start by acknowledging and listing them.

## 2.2.2 Scenario development

This entails elaborating stories that portray plausible futures. It aims to develop capacity to consider alternative scenarios.

There are various types of scenario.

- **Exploratory:** These focus on alternative futures based on different circumstances. Exploratory scenarios are outward bound, starting from now and looking at alternative pathways into the future. It is useful to consider how changes in trends and variables can influence the outlooks.
- **Normative and aspirational (success scenarios):** These focus on how a desired future can be achieved. Normative scenarios are inward bound, starting from a desired point in the future and working back to the present. Here it is useful to ask how the desired future was achieved.

Various scenarios are possible:

- **Business as usual:** This is a narrative based on a continuation (best-guess extrapolation) of current trends and driving forces. It focuses on current frameworks and conditions relating to the influences that are expected to remain more or less unchanged, or changes that are already planned or are expected to be introduced, more or less successfully.
- **Worst case (worse than expected):** This relates to negative outcomes, deteriorating circumstances and hard times. What would be the circumstances under which frameworks might break down without viable replacement, or projects and plans might go amiss? The intention here is to assess counter-trends, reasons why optimism might be unfounded, and assumptions that need to be confronted.
- **Best case (better than expected):** This relates to positive outcomes and a preferred set of circumstances. Here the success or aspirational scenario comes into play.
- **Paradigm shift (different than expected):** This considers potential changes in direction and disruptions that could be either negative or positive. The aim is to go beyond analysis in terms of simple success or failure of plans and programmes, for instance, new goals might emerge, or new frameworks or rules may be established. Of particular interest are those possibilities that involve more visionary outcomes, especially if these contribute to the solution of major social problems.

The development of scenarios entails the following steps:

- Step 1: Identify the focal issue or question.
- Step 2: Identify the key drivers in the local environment (micro environment).
- Step 3: Identify the key drivers in the macro environment.
- Step 4: Rank the drivers by level of importance and uncertainty.
- Step 5: Based on drivers ranked highest, develop a 2x2 matrix
- Step 6: Develop and flesh out the narratives.
- Step 7: Define the implications of each scenario.
- Step 8: Select leading indicators and signposts.
- Step 9: Feed the scenarios back to those consulted.

Step 10: Discuss the strategic options.

Step 11: Agree the implementation plan.

Scenarios are constructed from judgments about the trends and drivers. No more than 10 should be selected; if there is a larger number, some can be clustered or combined.

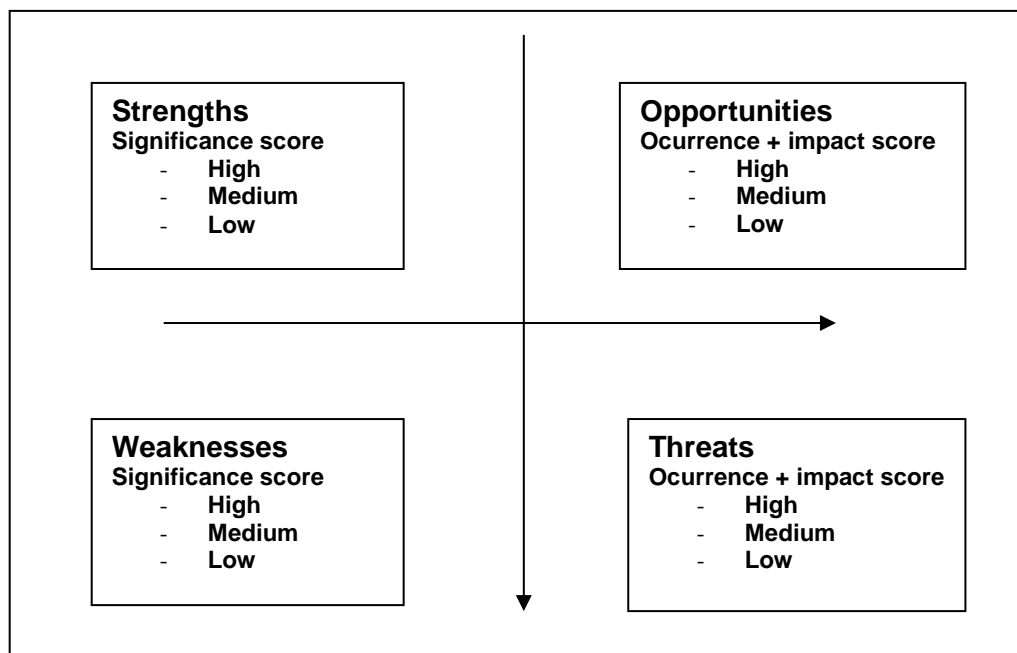
### 2.2.3 SWOT analysis

SWOT analysis is used in a foresight exercise to encourage stakeholders to discuss, map and cluster in a matrix the current strengths, weakness, opportunities and threats (see Figure 5). Under each heading, political, institutional, cultural, social, economic, financial, environmental, technological, infrastructure, resources and capabilities (human and other), geographical, spatial and other factors can be taken into consideration.

SWOT analysis maps internal and external factors. Strengths and weaknesses can be scored on the basis of their significance (high–medium–low). Opportunities and threats can be scored on the basis of the probability that they will occur and their likely impact.

In building the roadmap and strategy, the results of SWOT are used to design actions that match strengths with opportunities, and find effective means to address threats and weaknesses.

**Figure 5: SWOT matrix**



### 2.2.4 Gap analysis

This allows experts and stakeholders to assess a shortfall that impacts on the foresight exercise. The gap/shortfall can relate to:

- the evidence base: lack of knowledge (quantitative and qualitative), missing statistics;
- the shortfall between the current and desired level of skills and competencies;
- the current set of policies and strategies: issues and challenges that are not sufficiently or effectively addressed;



- policy measures and funding instruments: no financial resources are available to address particular concerns.

In general, in defining a forward-looking strategy for skills, gap analysis relates to the shortfall between the current situation and the desired state, identifying the missing elements. Gap analysis can be undertaken at different stages of a foresight exercise to inform the process, and involves experts and stakeholders following these steps:

- identify the factors that define the current state (skills);
- list the factors needed to reach the target (desired) state (Skills 2020).

The next step is to discuss and plan how to fill the gap between the two states. This is important because it helps to identify whether the HRD sector is performing to its full potential, and if it is not, why that is the case. This helps to identify flaws in resource allocation, planning and implementation.

## 2.2.5 Visioning

Visioning is an open, participatory process through which stakeholders develop a shared picture of a preferred future for HRD and skills in 2020. A shared vision is the amalgam of the ultimate aims and optimal goals of the long-term direction that guides the common strategy of the decision makers and stakeholders.

Visioning provides the vital link for advancing through the following:

- **diagnosis:** understanding where we are;
- **prognosis:** anticipating what could happen;
- **prescription:** deciding what should be done.

Visioning typically entails the following steps:

Step 1: Share the diagnosis for HRD and skills by identifying common concerns and interests among stakeholders.

Step 2: Identify the shared long-term issues and challenges for building a skills vision, by analysing internal and external trends and drivers in HRD and skills, including possible trend breaks and their impact.

Step 3: Identify the roles and interests of the stakeholders in this respect.

Step 4: Rank the issues and challenges according to their level of importance.

Step 5: Build the ultimate aims and goals of the common vision for skills by focusing on the priority challenges and the preferred way forward.

The vision is developed on the basis of consensus among the stakeholders and is a **shared vision**. It must be feasible and have a sufficiently long-term perspective to give direction to actions and to support the strategy to achieve it. The vision should be very brief, with one or two phrases, and the message ambitious, motivating and easy to understand.

## 2.2.6 Priority setting

A key purpose of a foresight exercise is to support policy making where a choice has to be made and priority assigned to:

- a particular policy approach;
- the mix of policy measures/actions;
- investments in particular sectors or niche areas.

Priority setting is particularly significant when the budget is reduced and choices have to be made in terms of how to allocate limited resources.

Typical steps in priority setting include:

Step 1: Identify relevant stakeholders for consultation.

Step 2: Develop an initial list of options relating to priority skills sectors, measures and actions (drawing on inputs from previous foresight exercises, literature review and brainstorming).

Step 3: Cluster and prioritise the options based on discussions and voting using commonly agreed criteria.

Step 4: Develop a final list of options.

Priority setting can also be part of roadmapping.

## 2.2.7 Roadmapping

This is designed to provide a shared understanding among stakeholders of direction, proximity and a degree of certainty in long-term planning. The roadmap is a normative tool representing the steps towards achieving a desired or preferred end state. As distinct from strategies, roadmaps are developed in interactive, consensus-building mode (for example during workshops), and provide alternative routes to a particular destination, identifying uncertainties, trend breaks and challenges. Roadmaps are a tool for making sense of the outputs of a foresight exercise. They provide an effective communication tool for agreeing with stakeholders the starting point (current situation), the destination and the various different routes and barriers in relation to skills.

Roadmaps guide policy makers in developing more long-term policies for skills development. Having formulated the vision, the roadmap marks out the path to achieving the desired end point. The roadmap draws on gap analysis (see Section 2.2.4), and in particular the gap between the current situation and the shared vision, to identify where policy action is needed. Roadmaps are mechanisms for stakeholders to visualise critical assets at national level and the skills and competencies required to meet future demands. Roadmapping connects visions, values and objectives with strategic actions for achieving those objectives. The success of roadmaps depends on the extent to which they represent a clear overview of the core issues for policy makers and enable them to take strategic decisions.

Roadmapping builds on the evidence base, SWOT, success scenario and vision developed for skills in 2020. Experts and participants follow this sequence of steps:

Step 1: Identify barriers to achieving objectives and the desired end state.

Step 2: Define the challenges deriving from those barriers.

Step 3: Identify possible solutions by considering different alternative actions to overcome the barriers.

Step 4: Rank alternative actions based on their potential for resolving the challenges.

Step 5: Decide on a list of prioritised actions for achieving objectives.

Step 6: Determine the time horizon for implementing the strategic actions in the roadmap.

For the purpose of Frame, the roadmap should be presented in a coherent, brief and visual form. Table 9 shows the recommended format.

**Table 9: Proposal for the structure of the roadmap in Future Frame**

Priority objectives	Measures	Actors		What should be achieved by 2020		
		Main responsible, coordinating	Together with	Indicator	Baseline 2012	Target
1. ....	1.1...					
	1.2...					

### **2.3 Results to be achieved: output and documentation**

The core parts of the documented output are the building blocks of the foresight exercise: the vision, the priorities and the roadmap.

In order to document the foresight process, together with these core parts, in a transparent way, a concise form of reporting is recommended. To this end, the following indicative structure is proposed.

<p><b>Vision for Skills 2020 – Country X Foresight report</b></p> <p><b>Part I – Introduction</b></p> <p>Acknowledgement, foreword, endorsement by the national authorities, executive summary</p> <p><b>Part II – The foresight process</b></p> <p>About foresight: rationale and context</p> <p>The foresight process in country X: partners and participants</p> <p><b>Part III – Background, context, insights gained</b></p> <p>Overview of skills-related strategies in country X, current priorities and initiatives of major actors, references to sources used in the process.</p> <p>Issues raised in the course of the foresight process (e.g. papers presented, documentation of workshop results, etc.)</p> <p><b>Part IV – Vision, priorities and roadmap</b></p> <p>Shared vision statement</p> <p>Priorities and objectives</p> <p>Roadmap with measures and result indicators</p>
--

## Annexes

### ***Annex 1: Detailed description of a success scenario workshop***

The success scenario workshop could be used to launch the foresight proper. It can be organised as a one-day event, where trends, trend breaks and drivers are explored and ranked and a success scenario for Skills 2020 elaborated.

This event will require careful preparation to ensure that all the elements are in place to deliver the end result. These elements include:

- the preparation of briefing materials;
- the venue, workshop layout and related logistics;
- the selection of participants;
- the facilitators;
- the workshop design and foresight tools.

These elements are considered in more detail in the following sections.

#### **Briefing materials for the workshop**

In preparing the workshop participants for the foresight activity, it is important to brief them on the process, the work carried out to date and preliminary insights on trends and drivers. The success scenario workshop will function far more effectively if participants are well-briefed and share to some extent a common knowledge base. For this reason it is necessary to have a background brief on the issues being addressed.

The background brief will typically include the following information:

- synthesis from teaming workshop:
  - policy context for skills;
  - map of key players and stakeholders;
  - evidence base:
    - key statistics;
    - trend analysis;
    - set targets;
- forward look
  - draw on horizon scanning;
- overview of key trends and drivers (including potential wildcards);
- workshop goals and process.

The background brief should be concise and clear (4–10 pages), and will be circulated to participants before the workshop. This will give them time to familiarise themselves with the goals of the workshop and what is expected of them. This document introduces the participants to the state of play in the areas of skills and HRD, by earmarking any key skills targets that have been set for 2020, any sectors that have been prioritised, EU commitments in this area, and relevant national, European and international trends and drivers (see Table 10). The aim is to prepare the participants for a deeper discussion of trends and drivers during the workshop. This can be reinforced by inviting an expert in the field to give an initial orienting presentation.

**Table 10: Background information – evidence and forward look**

	<b>Source</b>	<b>Type</b>	<b>Current</b>	<b>Future</b>
<b>Evidence base</b>	National statistics	Quantitative	Statistics Indicators	Trend analysis
	National strategies	Qualitative Quantitative	Selection of statistics Interpretation of statistics	Trends Set targets
	EU strategies	Qualitative Quantitative	Selection of indicators Interpretation of indicators	Trends Set targets
<b>Forward view</b>	STEEPV Horizon scanning	Qualitative Quantitative		Drivers Weak signals Wildcards
	Forecasts	Quantitative		Projecting trends

Preparation is also necessary to identify the key trends and drivers that will be used to build the success scenario. The review of strategy documents helps to identify key trends in skills and HRD relevant for the exercise. These can be supplemented by broader set of trends that impact on skills. Insights on the drivers can also be obtained by interviewing (face to face or by telephone) the key stakeholders in the area. This includes the target list of those invited, but can also be wider. It is particularly useful to gain inputs from stakeholders who cannot attend.

### **Venue, workshop layout and logistics**

While the preparations for the workshop content are going on, a number of necessary practicalities need to be addressed.

- Select a workshop venue in a location that is easy for participants to reach. The venue should have good natural lighting and, ideally, white walls for putting up the sticky notes.
- In terms of furniture and equipment, it is important to choose lightweight chairs and tables that can be moved around. The technical equipment required includes a laptop/computer and screen, a laptop and a flipchart for each parallel working group. Other materials required include large sticky notes in different colours, and pens in different colours for the flipchart.
- The venue should be set up in a cabaret style, with 5–6 small round tables seating 5–6 people per table. Participants may be allowed a free choice of where to sit, or may be assigned to a particular table in preparation for the parallel sessions. An appropriate mix of participants should be ensured on each table, allowing for a balance in terms of disciplines, and of sectoral and organisational representation. An attendance sheet indicating name, organisation and e-mail address should be used to record who is actually present.
- Each laptop should be set up with a slide template for recording the feedback from the working group sessions. This facilitates the process of reporting back at the end of each discussion and allows easier capture of information for the final report.

Arranging a dinner for participants the evening before the event would be a good way to begin building group spirit, as well as an opportunity for some initial briefing to be done. The dinner may also be an event to which some higher-level stakeholders, for example, a minister, can be invited, or at which such a stakeholder can be asked to give a keynote speech.

## Selection of participants

The limited time commitment required from workshop participants means that this method is especially suitable if the aim is to engage senior people who have busy diaries. This aspect is particularly important. Participants are selected not only for the quality of the inputs and knowledge that they bring to the workshop, but also because they are senior stakeholders who are able to act on the output – the vision produced. By taking part in the development of the vision, they tend to feel ownership of the results. The success scenario methodology can be particularly valuable in cases where stakeholders are not used to debating the issues among themselves. For example, members of the business community can be brought into contact with researchers or policy makers. It is a useful way to build new cross-sectoral networks of this kind.

A success scenario works best with 15–30 participants. Below this number it is difficult to set up working groups and it may be necessary to work entirely in plenary. Higher numbers may limit the opportunities for participants to contribute to the discussion.

The quality and commitment of the participants is the most important factor in achieving the goals of a success scenario workshop. They must collectively:

- bring the required knowledge of the workshop theme;
- represent the key stakeholder groups – for example, businesses in the relevant sectors/supply chain, public research, national and/or regional government;
- be sufficiently senior to be able to act on the workshop results and begin the implementation process;
- be creative, forward-looking thinkers.

Identifying participants can be a challenge for the organisers. It is important that the identification/selection methodology does not lead to people from an existing closed network attending, while others with potentially important contributions are excluded. Two approaches that help in this respect are:

- **stakeholder mapping:** planning techniques that take into account the different interests and strengths of stakeholders;
- **co-nomination:** asking an initial list of people to identify further names and building up a database or network through this ‘snowball-sampling’ technique.

## Facilitators

The facilitators play a key role in kick-starting the process and in energising the participants and keeping them engaged. Facilitators need to combine both domain expertise and foresight skills. They need to be knowledgeable about the topic and able to keep the discussion on track, extracting key insights from the discussion and providing regular short syntheses that highlight how the discussion is progressing.

They need to make participants feel at their ease, and to help them to switch into more creative and proactive mode. The participants are encouraged to share their opinions and insights by

engaging in teamwork, to record their individual and group work, and to present their insights to the plenary.

The facilitators also have to ensure timeliness in taking the process forward, from the trends and drivers analysis to the scenario development and roadmapping. They need to maintain a fine balance between allowing participants the opportunity to voice a range of ideas and opinions on the one hand and ensuring that the discussion remains on track on the other. They should ensure that the wide-ranging and open discussion at the beginning moves to a gradual narrowing down of discussion to the success scenario.

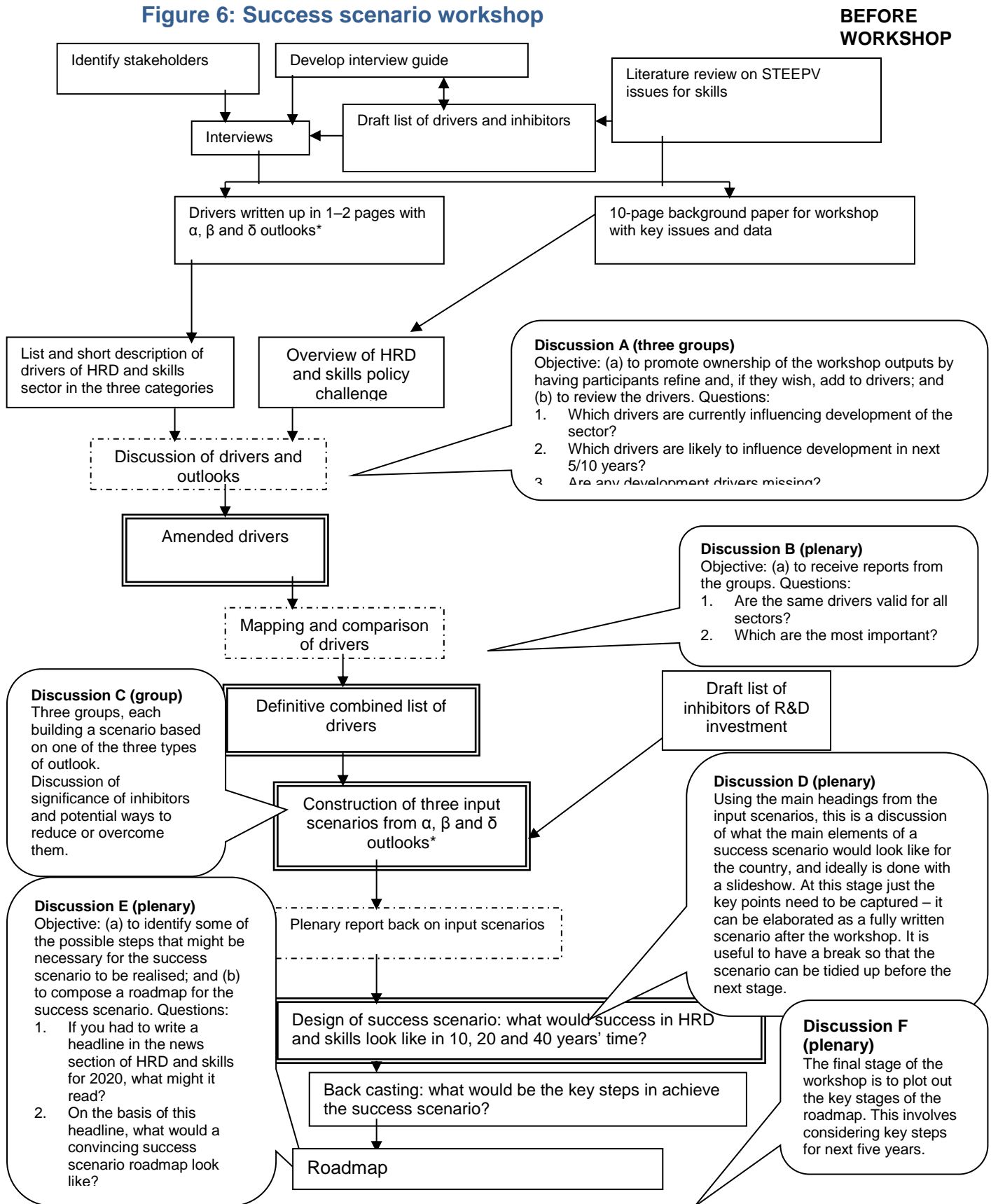
### **Success scenario workshop design and foresight tools**

The success scenario approach, generally known as the normative scenario approach, can be described in terms of two elements:

- **desirability:** capturing a vision of what could be achieved or aspired to by the sponsoring organisation or the wider community that it represents;
- **credibility:** the scenario is developed with the assistance of, and validated by a sample of, experts in the area who are chosen to reflect a broad range of interests and usually include both practitioners and researchers.

It is an action-based approach, with the shared vision among senior stakeholders of what success in the area would look like being specified in terms of goals and indicators that begin the process of developing a roadmap to get there. The purpose of having such a vision of success is to set a 'stretch target' for all the stakeholders. The discussion and debate involved develops mutual understanding and a common platform of knowledge that helps to align the actors for action.

**Figure 6: Success scenario workshop**



Note: \*α, β and δ outlooks are described below ('Exploring drivers through the construction of outlooks').



The success scenario workshop consists of a number of stages, with the outputs of one stage often forming the input to the next. It is vital that those running the workshop are clear in advance what each stage is intended to achieve. A good way to ensure clarity is to prepare a flowchart of the workshop dynamics. The basic sequence of a workshop is as follows.

1. Identify drivers.
2. Explore drivers through the construction of outlooks.
3. Use outlooks to prepare input scenarios.
4. Develop the success scenario.
5. Identify a roadmap to achieve the success scenario.

The detailed agenda should be constructed to fit in the available timescale. It is essential that the facilitators keep the event on time if the vital final stages are not to be curtailed. Participants' concentration is facilitated by regular breaks and by alternating group and plenary sessions. Interactive sessions allow participants' creativity to be tapped.

### **Running the workshop**

As previously indicated, the responsibility for running the workshop falls to the facilitators. At least one of these should have previous experience of foresight methodology and running workshops. Assistance can be provided by less-experienced people who have knowledge of the subject area of the workshop, so long as they are properly briefed. This may be useful if the group sessions are to be carried out in another language from the main sessions, as interpretation can inhibit group discussions. One facilitator should have responsibility for chairing the workshop to ensure that all sessions and speakers are properly introduced and that the schedule is adhered to.

### **Introductory presentations**

It is useful to have one or more (if time allows) expert presentations to orient the workshop. In addition, the facilitators need to begin with a clear explanation of the workshop's aims and background. This should cover:

- reasons the workshop has been organised;
- aims and objectives for the day;
- simplified outline of the day's proceedings;
- examples of past achievements with foresight and the specific methodology.

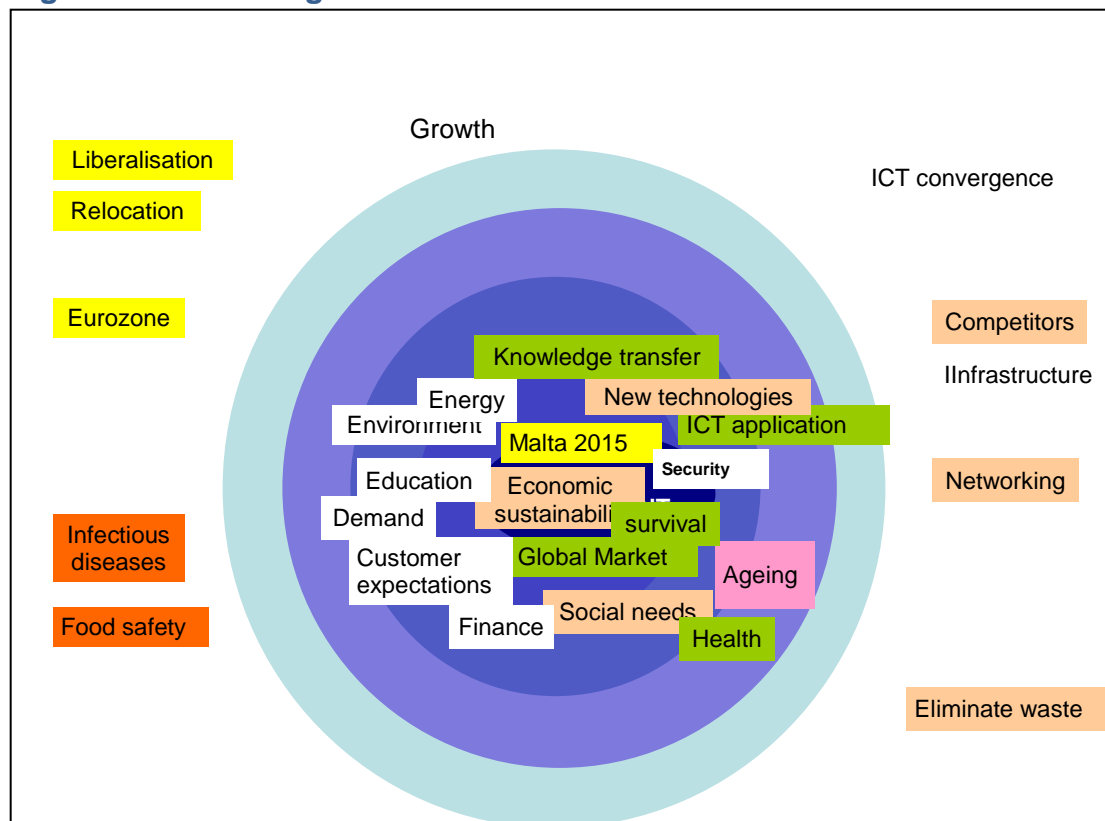
It can also be useful to introduce some broader trends and drivers to open up the thinking of participants beyond the day-to-day concerns of their sector or area of interest. This is essential if the STEEPV approach to the construction of drivers is adopted.

### **Prioritising the drivers**

Once the drivers have been identified it is useful to reduce the list to a manageable number (around 10). There are various ways to prioritise them. One approach is simply to work in a plenary session and ask the participants to agree collectively on which are the most important drivers. This process can be facilitated either by using prioritisation software or by a simple slideshow (see Figure 7) in which the group attempts to reach a consensus on the ranking of various drivers. The drivers can also be coded by type. The facilitators use 'drag and drop' to place the boxes, with the most important closest to the centre.

Another consideration is a reasonable spread of drivers so that STEEPV factors are broadly covered. Hence, for example, not all drivers should be technological.

**Figure 7: Prioritising drivers**



### Exploring drivers through the construction of outlooks

A useful technique for exploring drivers is to construct outlooks for each one. These are mini-scenarios that explore possible futures for the drivers. Clearly they can only select a very limited subset from the huge range of possibilities, but a structured approach is helpful.

The recommended approach is to use the alpha–beta–delta set of outlooks. These are derived as follows:

- Alpha ( $\alpha$ ) outlooks represent a ‘business as usual’ future, in effect an extrapolation of current forces and processes (if not always an extrapolation of trends). Here, current frameworks and conditions relating to the set of influences are expected to remain more or less unchanged, or changes that are already planned or in hand are expected to be introduced as scheduled, more or less successfully.
- Beta ( $\beta$ ) outlooks consider, in particular, some of the many things that could go wrong. What would be the circumstances under which frameworks might break down without viable replacement, where projects and plans might go amiss? The intention here is to gain an understanding of counter-trends, reasons why optimism might be unfounded, and challenges that might need to be confronted if the routes mapped out by the alpha outlook are followed.

- Delta ( $\delta$ ) outlooks consider potential changes in direction. Here, the aim is to go beyond analysis simply in terms of success or failure of the plans and programmes, for example, new goals might emerge, or new frameworks or rules of the game may be established. Of particular interest are those possibilities that involve more visionary outcomes, especially if these contribute to solutions of major social problems.

An outlook typically has one or two paragraphs of introduction followed by a paragraph on each mini-scenario. It presents a plausible view of how the driver could develop under these assumptions. The delta scenario is so named (rather than the sequential gamma) to emphasise that it is a transformative leap in thinking. It is not necessarily the same as the eventual success scenario, but it helps along the way.

### **Using outlooks to prepare input scenarios**

It is a relatively simple task to take from the 10 key drivers all of the alpha, beta and delta outlooks respectively. These then provide the raw material for three scenarios, the first built from all of the alpha outlooks, the second from beta outlooks and the third from delta outlooks. A scenario is more effective if it is given a title that captures its essence. It is also good practice to have an opening paragraph that encapsulates the vision that is to follow. After that it is a matter of ordering the remaining drivers and ensuring that a thread runs through the story.

As an input scenario is something prepared rather quickly during a workshop, it is not expected to be particularly long or well-polished.

### **Developing the success scenario**

The workshop can now move towards its main output, the success scenario. This will have a similar structure to the input scenarios, but does not draw directly on the outlooks. Instead, each driver should be presented as part of the aspirational vision of where the group, organisation or country will be at the end of the foresight period – say in 10 or 15 years.

This exercise is best carried out in plenary, with all participants looking at a slideshow of the key points. Some advance preparation can be carried out during a break before this session. It is important to capture key points at this time: more elegant scenario writing can be done after the workshop and circulated to participants for final comment.

### **Tools used during the workshop**

Most stages of foresight involve some form of brainstorming, a process that starts with a group of people in a room, and ends in the creation of disordered lists of ideas. This is a facilitated process, but the work does not stop there. Brainstorming is not an end in itself. It is a means to an end. Achieving that end requires further work in addition to the basic work of brainstorming.

The overall process will be along the following lines.

1. Provoke ideas using interactive dialogue and brainstorming or creativity techniques.
2. Capture these ideas as lists.
3. Categorise or group them.
4. Map the ideas (for example using a two-axis approach, with four boxes).
5. Sequence the ideas (i.e. a plan of what must be done first using a timeline).
6. Prioritise the ideas (i.e. what is urgent, important or essential) so as to agree on what needs to be done or what should be left out, given the various resources constraints.

There are many techniques and even technologies that can help in each of these steps. Most are based on the use of a white board, screen or flipchart, as well as plenty of sticky notes and markers.

Ideally this work should involve an experienced facilitator who can involve everyone in the room and maintain a level of discipline in the discussion so that:

- time is not wasted;
- the discussion is kept open and people's ideas are respected;
- the need to address specific topics is kept in sight.

The facilitator needs an assistant to help in making lists. These lists should then be 'processed', that is, analysed and discussed, edited or revised until a final list emerges.

### **Following up the workshop**

At the end of the workshop it is hoped that participants will have absorbed the main messages and feel committed to the vision that they have jointly produced. However, the large amount of information produced and the relatively sketchy materials used along the way are not sufficient to ensure that this is the case.

The conclusions of the workshop need to be captured in a report based on the written up success scenario. This can be circulated in draft to participants before it is finalised. At this point much more attention can be given to the quality of presentation. A website may be used to stimulate further debate. Ideally a further workshop of key stakeholders should then be organised at which the results can be presented and debated.

Success scenarios have a good track record of changing thinking. They are not a substitute for planning and management, but they do provide a transformative instrument to allow those processes to deal more effectively with the future.

## ***Annex 2: STEEPV guidance note for facilitators***

**Social** drivers include unemployment and ageing. Unemployment is arguably a symptom of a failure of the system in the past to anticipate changes and adapt accordingly to them, taking into account the needs of the economy. The ageing of the population creates new economic needs, such as the provision of goods and services adapted to older people. Ageing coupled with the economic crisis has additional implications for the skills systems, particularly if retirement ages are extended. This will have an impact on young people who are denied traditional jobs because older people retire later. Who is thinking about ageing, its consequence for skills and its impact on skill needs?

**Technology** is a strong driver of new skill needs, but it changes so quickly that engineers entering college emerge after five years into an entirely different technological world. It is a serious challenge for them to plan their careers, and individuals need to learn-to-learn if they are to ensure that their skills remain relevant. Technology has, or should have, a profound effect on education of all kinds. We have already lived through the PC revolution, the internet revolution and the mobile revolution. Now we have the era of e-books, video, online streaming, and self-publishing. This has spawned radical reinventions of the university and training academies such as Udacity, the Khan Academy and the University Innovation. Some third-level educators are advocating a massive change that will result in up to 30% of graduates starting their own businesses. Harvard Law School has created at least one online education high performing organisation (superstar). Stanford University and Massachusetts Institute of Technology now put most of their course materials online. South Korea uses humanoid robotic teaching assistants in 4 000 primary and maternal schools across the country and has created a whole new discipline, 'r-learning', which is the use of robotics in learning environments. Who is thinking about these developments and their impact on teachers, students and the whole education, training and learning (ETL) system in the country?

**Environmental** issues are of major concern for most countries in the 21st century. They affect the ability of industrial actors to produce goods and provide employment. They have an impact on the willingness of companies to set up in a new location or engage with new suppliers, because these decisions depend at least in part on the overall impact of the decision by a company on its green credentials: its image, its sense of global corporate citizenship, and its ranking in terms of environmental impact. They affect the ability of a country to attract tourists, and to provide food to a global market interested in quality and environmental impact. How do these trends and drivers affect the ETL system? Who is thinking about these issues and translating that thought into action at the level of the ETL system?

**Economic** drivers are arguably the main motors of the ETL system. What are the major economic trends that are changing the skill needs in, for example, the dairy sector? Are the dairies driving change throughout the supply chains? Are the other food processors, supermarkets or distributors driving change? Is there a need for a milk sector to be more entrepreneurial? Are there institutions thinking about these things and taking care of them? What do they have to say about the ETL system as it relates to dairy? In the case of tourism, how is the sector expected to evolve in the coming years? Is someone asking these questions and feeding them into a discussion on future skills? The opening up of the economy to Europe and to all the countries with which it has a free trade agreement, the countries of the Neighbourhood Policy, and countries in Asia such as South Korea, Singapore, has a potential impact on the economy of the country. What is that impact likely to be? Where do the opportunities lie? What impact will this have on the economy and eventually on the ETL system?

**Politics and policy** have a major role to play. They are often a source of trend breaks, in the sense that legislation changes the rules and forces everyone in the nation, and even across Europe, to change what they do or the way they do it. These changes have an impact on public sector employment in general, and on healthcare, policing and security, transport and the environment. One of the most powerful political drivers of change is the EU accession process. It is a powerful force that will provoke a large number of trend breaks in terms of new norms, new legislation, new practices, and access to learning networks for ETL professionals and their clients. The thinking behind all of the major processes of European integration – the Lisbon process, the Barcelona process and the Bologna process – is the idea of breaking trends and creating new trends that are more virtuous and more conducive to change.

**Values** are very powerful drivers. In particular, they reflect deep changes in what is doable or feasible. It is well known that one of the most powerful drivers of innovation is culture, a much more powerful enabler than investment in research. The value system is an important aspect of culture. Elements of relevance to the ETL system include the importance given by parents to education, and their willingness to invest, and the importance given by managers to training, and their ability to leverage training into higher performance. These are not simply technical issues but issues of basic belief and attitude towards the future. Is the prevailing attitude one of fatalism or one of personal responsibility and engagement? Do young people see themselves as entrepreneurs or future leaders able to win in a competitive world economy, or as well-off functionaries occupying window-seats in public administration? Do they see themselves as Montenegrin, Serbian, Balkan, European or as citizens of the world? It is possible to change culture in the sense that attitudes are shaped by stories, by the media, by the heroes we project, and ultimately by education. Successes have been achieved in terms of attitudes towards women, other religions and races, and people with other sexual preferences. It is important to ask what the national value systems are, and whether they are well adapted to a competitive post-crisis world, to a post-accession context, and to a world where opportunity lies as much in Europe and in the world as it does at home. What are the values to be proud of that condition a country for success? What can the ETL system do to develop and encourage these, and to condition people not just with skills but also with the attitudes needed to succeed?

### **Drivers, trends and trend breaks**

These terms refer to change and how it happens. Whether a factor is a driver or a trend is a matter of perspective, in the sense that trends can also be drivers. An upward trend in Chinese middle-class wealth has been a driver of growth in the luxury goods industry. This has driven consumption of wealthy Chinese people while abroad; they increasingly forgo buying counterfeit products at home, and instead buy the real item in up-market stores in Europe, showing the copy of the sales ticket to friends as a symbol of their good taste and proof of their worldly wealth. Trends are evidence of change. They can move upwards or downwards, or remain flat. They can increase steadily, accelerate or reverse. One can always ask what is driving a trend, and the answer is often seen as another trend.

Examples of trend breaks include smoking laws, which have transformed public buildings, public spaces and the behaviour of people at work and around towns and cities. Laws concerning seatbelts, food hygiene, screening for cancer, and the compulsory education of children, especially young girls, have all had significant impacts on what were once major trends.

## ***List of abbreviations***

CSR	corporate social responsibility
EIB	European Investment Bank
ETF	European Training Foundation
ETL	education, training and learning
FDI	foreign direct investment
GDP	gross domestic product
HR	human resources
HRD	human resource development
ICT	information and communication technologies
IPA	Instrument for Pre-Accession Assistance
NGO	non-governmental organisation
SEE	South Eastern Europe
STEEPV	social, technological, economic, environmental, political and values
VET	vocational education and training

## Glossary of terms

Note: Where a reference is given, the definition is either directly quoted or adapted from the source mentioned.

<b>Term</b>	<b>Meaning</b>
<b>Foresight</b>	<p>Foresight is a systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building process aimed at enabling present-day decisions and mobilising joint actions.</p> <p>Source: FOR-LEARN Methodological framework</p>
<b>Foresight studies</b>	<p>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.</p> <p>Source: DTI/ÖSB/IER, 2010</p>
<b>Futures dialogue</b>	<p>Futures dialogue brings together a range of stakeholders to reflect and debate on alternative futures. In a structured futures dialogue foresight methods are used to structure the debate on alternative futures.</p>
<b>Genius forecasting</b>	<p>Genius forecasting is the generation of a vision (or several visions) of the future through the insights of a gifted and respected individual or individuals.</p> <p>Source: UNIDO, 2005</p>
<b>Horizon scanning</b>	<p>Horizon scanning is a technique for detecting early signs of potentially important developments through a systematic examination of potential threats and opportunities, with emphasis on new technology and its effects on the issue at hand. The method calls for determining what is constant, what changes, and what constantly changes. It explores novel and unexpected issues as well as persistent problems and trends, including matters at the margins of current thinking that challenge past assumptions.</p> <p>Horizon scanning is often based on desk research, helping to develop the big picture behind the issues to be examined. Desk research involves a wide variety of sources, such as the internet, government ministries and agencies, NGOs, international organisations and companies, research communities, and online and offline databases and journals. Horizon scanning can also be undertaken by small groups of experts who are at the forefront of the area of concern. They share their perspectives and knowledge with each other so as to 'scan' how new phenomena might influence the future.</p> <p>A solid 'scan of the horizon' can provide the background to develop strategies for anticipating future developments and thereby gain lead time. It can also be a way to assess trends to feed into a scenario development process.</p> <p>Source: OECD</p>
<b>Issue</b>	<p>An issue or challenge is the core problem that is being addressed by a foresight exercise; global warming would be an example. Not every foresight exercise primarily focuses on an issue.</p>
<b>Method</b>	<p>The method is a series of defined steps to reach a certain objective. In foresight the term 'formal methods' is used to distinguish methods that are established and described in the literature from 'informal methods' that are used only once on the spot.</p> <p>Source: FOR-LEARN Methodological framework</p>



<b>Term</b>	<b>Meaning</b>
<b>Methodological framework</b>	<p>The application of a single foresight method does not make a foresight exercise. Usually different methods are used to perform specific functions at different stages in the process. Furthermore, methods are combined with each other and tailored to perform these functions in an optimal way. This leads to a specific arrangement of methods within each exercise. 'Methodological framework' means the overall arrangement.</p> <p>Source: FOR-LEARN Methodological framework</p>
<b>Methodology</b>	<p>Methodology is understood as the attitude towards knowledge generation that underlies any research activity. So, for example, 'constructivism', 'empiricism' or 'positivism' are defined methodological orientations. A certain methodological orientation will lead to a preference for certain methods (e.g. quantitative over qualitative ones). In foresight the methodology is rarely spelled out explicitly but often just tacitly assumed. Nevertheless, the question of methodology is important for foresight as it is especially critical to be clear about methodology when attempting to create an understanding of the future. For instance, some methodological considerations might give guidance on why participation is needed to state anything relevant about the future, or what it means to be an 'expert'.</p> <p>Source: FOR-LEARN Methodological framework</p>
<b>Participatory approach</b>	<p>A participatory activity offers and encourages the participation of individuals and groups. Future-oriented activities can be considered participatory if:</p> <ul style="list-style-type: none"> <li>• they involve participants from at least two different stakeholder groups (e.g. researchers and business people; experts and policy makers; experts and lay people);</li> <li>• they disseminate their preliminary results (e.g. analyses, tentative conclusions and policy proposals) among interested non-participants, e.g. face to face at workshops, over the internet with free access for everyone, or in the form of printed documents, leaflets, newsletters;</li> <li>• they seek feedback from this wider circle (again, either face to face or in written form).</li> </ul> <p>Source: FOR-LEARN A–Z</p>
<b>Prognosis</b>	<p>Prognosis is foreseeing and exploring what could happen.</p> <p>Source: European Foresight Platform</p>
<b>Priority</b>	<p>Priority is right of precedence over others, something given specific attention.</p> <p>Source: Jackson (2011), Foresight Glossary</p>
<b>Roadmapping</b>	<p>Roadmapping is a graphic representation showing key components of how the future might evolve. It is usually applied to a new product or process, or to an emerging technology, matching short- and long-term goals with specific solutions.</p> <p>Source: Jackson (2011), Foresight Glossary</p> <p>A roadmap is an extended look at the future for a chosen field of enquiry composed from the collective knowledge and imagination of the brightest drivers of change in that field.</p> <p>Source: European Foresight Platform</p>

<b>Term</b>	<b>Meaning</b>
<b>Scenario workshop</b>	<p>Scenarios display visions of future states and possible development paths. They may be presented, e.g. in a discursive and narrative way, like newspaper stories containing fictive characters and be illustrated with pictures.</p> <p>Scenario workshops are a popular way of building scenarios. Such workshops usually bring together participants with a wide range of knowledge and experience in various fields such as technology, economy, social or political sciences. The objective of scenario workshops is to build internally consistent pictures of future possibilities that are useful for envisaging implications of uncertain developments and examining the scope for action.</p> <p>Foresight exercises may work with 'multiple scenarios' so as to consider various development possibilities or make use of 'aspirational scenario' approaches. In the second case a substantial effort is made to elaborate a vision of a desirable and feasible course of development.</p> <p>Source: Steinbeis-Europa-Zentrum (SEZ)</p>
<b>Scope</b>	<p>The scope is the set of things the exercise will look at (and, therefore, also implicitly defines what will be left out). There are basically two aspects involved in defining the scope of a foresight exercise:</p> <ul style="list-style-type: none"> <li>• choosing the topics to be dealt with;</li> <li>• developing the perspective to be taken regarding the topics under investigation.</li> </ul> <p>Source: FOR-LEARN A-Z</p>
<b>Signal</b>	<p>A signal is a sign of an emerging issue and/or event. It is current information that is indicating changes in the future. The more information that is available on the signal, the stronger it is.</p>
<b>Stakeholder analysis</b>	<p>Stakeholder analysis relates to connecting the dots and ranking the influence and power of stakeholders over each other.</p> <p>Source: Jackson (2011), Foresight Glossary</p>
<b>Strategy</b>	<p>Strategy is a method or plan chosen to bring about a desired future, such as achievement of a longer-term goal or solution to a problem, based on the most efficient and effective use of resources.</p> <p>Source: Business Dictionary</p> <p>Henry Mintzberg from McGill University defined strategy as 'a pattern in a stream of decisions'.</p> <p>Source: Mintzberg, Henry. "Patterns in strategy formation." <i>Management science</i> 24.9 (1978): 934-948.</p>
<b>Structured futures dialogue</b>	<p>A structured debate is a courtroom-style argument that takes alternative views and presents arguments and counter arguments to a decision or hypothesis.</p> <p>Source: Jackson (2011), Foresight Glossary</p>
<b>SWOT analysis</b>	<p>SWOT analysis is an analytical method that is used to identify and categorise significant internal (strengths and weaknesses) and external (opportunities and threats) factors faced either in a particular arena, such as an organisation, or in a territory, such as a region, nation or city.</p>

<b>Term</b>	<b>Meaning</b>
<b>STEEP analysis</b>	STEEP (social, technological, economic, environmental/ecological, political and value-based issues) is an analysis that helps to identify and classify factors that have, or may have, an impact on the evolution of an organisation, enterprise or region.
<b>Scenario</b>	<p>A scenario is a 'story' illustrating visions of possible futures or aspects of possible futures. It is perhaps the most emblematic foresight or future studies method. Scenarios are not predictions about the future, but rather similar to simulations of some possible futures. They are used both as an exploratory method and as a tool for decision making, mainly to highlight the discontinuities from the present and to reveal the choices available and their potential consequences.</p> <p>Source: FOR-LEARN A-Z</p>
<b>Trend</b>	<p>A trend is a general tendency or direction evident from past events increasing or decreasing in strength or frequency of observation; it usually suggests a pattern.</p> <p>Source: Jackson (2011), Foresight Glossary</p>
<b>Trend extrapolation</b>	<p>Trend extrapolation is using the past and present to project likely tomorrows.</p> <p>Source: Jackson (2011), Foresight Glossary</p>
<b>Vision</b>	<p>In the context of future-oriented activities, a vision is an imagined representation or a shared picture of the (usually desired) future.</p> <p>The elaboration of shared strategic visions bringing together the viewpoints of the various actors could be the most important intangible output of a foresight exercise. Developing these visions jointly can contribute to a shared sense of commitment and to the normative processes.</p> <p>Source: FOR-LEARN A-Z</p>
<b>Visioning</b>	<p>Visioning is the process of creating a series of images or visions of the future that are real and compelling enough to motivate and guide people towards focusing their efforts on achieving certain goals.</p> <p>Source: World Future Society</p>
<b>Weak signal</b>	<p>A weak signal is the source of change: the first case; the original idea or invention; the watershed event; the social outliers expressing a new value.</p> <p>Source: Jackson (2011), Foresight Glossary</p>
<b>Wildcard</b>	<p>Wildcards are unpredictable events or situations, events that have a low probability but a high impact. They are often recognised and known, but discounted, even when the event is relatively certain over a period of years.</p> <p>Source: Jackson (2011), Foresight Glossary</p>

## References

Business Dictionary, <http://www.businessdictionary.com/definition/strategy.html>

Cagnin, C. and Scapolo, F. (eds), *Technical Report on a Foresight Training Course*, Joint Research Centre, Institute for Prospective Technological Studies, European Commission, Office for Official Publications of the European Communities, Luxembourg, 2007. Available at: <http://ftp.jrc.es/EURdoc/eur22737en.pdf>

DTI/ÖSB/IER (Danish Technological Institute, ÖSB Consulting and Warwick Institute for Employment Research), 'Anticipating skill needs of the labour force and equipping people for new jobs. Which role for Public Employment Services in early identification of skill needs and labour up-skilling?', DTI/ÖSB/IER for European Commission, Final report, October 2010.

European Foresight Platform <http://www.foresight-platform.eu/>

European Foundation for the Improvement of Living and Working Conditions, *Handbook of Knowledge Society Foresight*, 2003. Available at: <http://www.uni-mannheim.de/edz/pdf/ef/03/ef0350en.pdf>

European Knowledge Society Foresight: The Euforia Project Synthesis, <http://www.eurofound.europa.eu/pubdocs/2004/04/en/1/ef0404en.pdf>

FOREN Guide, Foresight for Regional Development Network – 'A Practical Guide to Regional Foresight', Gavigan, J.P., Scapolo, F., Keenan, M., Miles, I., Farhi, F., Lecoq, D., Capriati, M. and Di Bartolomeo, T. (eds), European Commission Joint Research Centre, December 2001. Available at: [http://forlearn.jrc.ec.europa.eu/guide/7\\_references/foren.htm](http://forlearn.jrc.ec.europa.eu/guide/7_references/foren.htm)

FOR-LEARN, *The FOR-LEARN Online Foresight Guide*, European Commission Joint Research Centre, 2008. Available at: [http://forlearn.jrc.ec.europa.eu/guide/0\\_home/index.htm](http://forlearn.jrc.ec.europa.eu/guide/0_home/index.htm)

FOR-LEARN, 'An A–Z of Foresight', [http://forlearn.jrc.ec.europa.eu/guide/A1\\_key-terms/index.htm](http://forlearn.jrc.ec.europa.eu/guide/A1_key-terms/index.htm)

FOR-LEARN, 'Methodological framework', [http://forlearn.jrc.ec.europa.eu/guide/4\\_methodology/framework.htm](http://forlearn.jrc.ec.europa.eu/guide/4_methodology/framework.htm)

Futurreg, *The Futures Toolkit*, 2007. Available at: <http://www.urenio.org/futurreg/toolkit.html>.

Georghiou, L., Cassingena Harper, J., Keenan, M., Miles, I. and Popper, R., *The Handbook of Technology Foresight*, Prime Series on Research and Innovation Policy, Edward Elgar Publishing Limited, UK, 2008.

Jackson, M., 'Practical Foresight Guide', Shaping Tomorrow, 2011. Available at: <http://www.shapingtomorrow.com/media-centre/pf-ch01.pdf>

Jackson, M., Foresight Glossary, in 'Practical Foresight Guide', Shaping Tomorrow, 2011. Available at: <http://www.shapingtomorrow.com/media-centre/pf-ch11.pdf>

Martin, B. R., and J. Irvine. "Research Foresight: Priority-Setting in Science, 1989." Pinter, London

OECD, Overview of Methodologies, <http://www.oecd.org/site/schoolingfortomorrowknowledgebase/futuresthinking/overviewofmethodologies.htm>

Steinbeis-Europa-Zentrum (SEZ), [http://www.steinbeis-europa.de/scenario\\_workshops.html](http://www.steinbeis-europa.de/scenario_workshops.html)

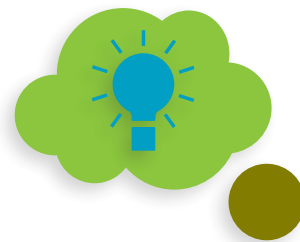
UNIDO, *Technology Foresight Manual, Vol 2: Foresight in Action*, 2005.

World Future Society, *Dictionary of Foresight*, <http://www.wfs.org/dictionary>









 [www.facebook.com/etfeuropa](http://www.facebook.com/etfeuropa)

 [@etfeuropa](https://twitter.com/etfeuropa)