



PILLARS – Pathways to Inclusive Labour Markets: Methodological note on the development of the PILLARS self-assessment tool

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1 Introduction

The current document represents a methodological note on the development of the **PILLARS self-assessment tool**. The tool aims to measure preparedness of a region/country towards an inclusive labour market, thereby supporting the policymakers in reaching the following **policy goals**:

- **Prevent and mitigate job displacement**, following adoption of automation technologies,
- **Stimulate creation of innovative and inclusive jobs**, powered by automation technologies,
- **Support employers and employees during job transformation**, following adoption of automation technologies.

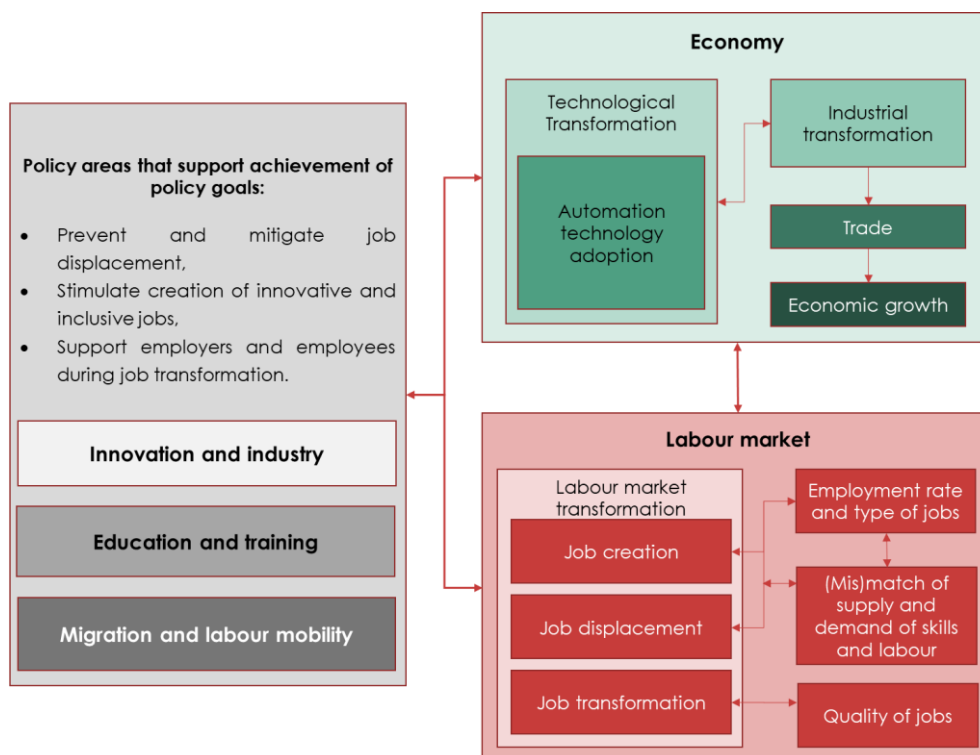
The self-assessment tool highlights key policy/intervention areas that should be in focus of policymakers to ensure inclusive labour markets. Thus, the results of the self-assessment should support policymakers in the **design, implementation, monitoring and evaluation of a coherent and comprehensive set of employment-related policy interventions** that account for inclusion, stimulate resilience, and support technological and industrial transformations.

2 Conceptual and analytical framework to assess preparedness for inclusive labour markets

The Pillars project, including WP7, has a broad thematic and technical scope, summarised in the **analytical framework** displayed in Figure 1. Specifically, the project discusses the labour market from an **industrial transformation** perspective, driven by **technological transformation/innovation** (i.e., by automation technologies). While automation technologies incur transitions on the labour markets, the industrial and technological transformations strongly depend on availability of labour resources and skills, as they enable economic and innovation processes. This highlights complexity and interconnectedness between the economy and the labour market.

This chapter presents a discussion of the individual elements of this framework.

Figure 1 Framework of analysis



Source: Pillars (2022)

2.1 Automation technologies and types of effects on the labour market

Automation technologies comprise all processes and work equipment that enable plants and systems to run automatically. These technologies include machines, apparatus, equipment, and other devices that require minimal human intervention (Harmonic Drive SE n.d.). Thus, they affect **the demand for labour and the nature of work**. Automation technologies represent a very heterogeneous group of technologies. Their adoption produces various effects on workers, organisations/industries that integrate them, and on labour markets. The impacts of automation technologies on the labour market may be manifested in (mis)matches on the labour markets in terms of demand and supply of labour and skills, changes in the employment rate (overall and across different population groups), and in the quality of employment.

EPRS (2021) classifies impacts in terms of the **amount/rate of employment**, which can be measured in quantitative terms (e.g., number of jobs available, number of individuals employed) and in terms of **quality of employment** (e.g., a change in characteristics of a job or of working/employment conditions).

The level/amount of employment is associated with **job displacement** or **job creation effects**, while the quality of employment is related to **job transformation**. The Pillars project focuses on the impact of automation technologies on the labour market and on inclusion.

Therefore, the focus is on **innovative and inclusive job creation** – creation of jobs that is associated with adoption of automation technologies and that stimulates inclusion, particularly of the unemployed or inactive population on the labour market. The above-mentioned terms are defined in Box 1.

Box 1 Definitions of job displacement, job creation and job transformation effects

- **Job displacement** refers to involuntary job loss and redundancies for employees, following eliminations of tasks or of types of jobs.
- **Job transformation** implies a change in the nature of work and of the workplace itself.
- **Innovation job creation** refers to the process of creation of new jobs due to adoption of automation technologies.
- **Inclusive job creation** refers to the process of creation of new jobs that stimulate inclusion, especially for people who were previously unemployed or inactive on the labour market.

Source: Pillars (2022)

The Pillars project **explores all three effects** (i.e., job displacement, job creation and job transformation effects) to identify impacts/challenges on the labour market and to determine whether policymakers have developed appropriate approaches/policies to deal with these impacts. This will determine preparedness to inclusive labour markets.

2.2 Inclusion on the labour market

According to the OECD (2018b), inclusion is a multidimensional concept depending on various aspects of people’s lives, ranging from income and access to education to health and social networks, and it is largely determined by employment. In the Pillars project, **inclusion is considered from a labour market perspective**. Therefore, we adopt the OECD (2019) definition of an **inclusive labour market**, which is “*a labour market that allows and encourages all people of working age to participate in paid work and provides a framework for their development* (Making labour markets inclusive n.d.)”. This definition implies that an inclusive labour market provides sufficient **quantity of employment** to allow participation in paid work and ensures good **quality of employment**, connected to a framework for development of employees at the workplace (i.e., decent working/employment conditions). Besides this, it is important to stress that inclusion is the result of a process of (re)distribution of benefits and losses (Tommaso et al. 2021), therefore it should also ensure accessibility to **opportunities/benefits created by technological innovations for all**. In this context, OECD (2018b) mentions inclusive growth policies, social economy, social innovation, and social entrepreneurship that supports excluded/vulnerable groups.

The concept of inclusive labour markets is associated with above-described effects on the labour market – job displacement, job creation and job transformation. Hence, **the perspective of inclusion should feature in the analysis of all types of effects** to ensure that everyone can participate in innovative job creation, powered by automation technologies, to

avoid discriminatory or disproportionate negative effects emanating from job transformation or job displacement effects.

In general, groups such as women, young people, older workers, and low-skilled workers remain underemployed in many sectors and economies. Therefore, inclusive labour market policies typically focus on effective mobilisation of the talents and resources of these underutilised groups so that they can participate in labour market and benefit from technology-enabled growth of productivity/economy.

While assessing the impact of automation technology on the labour market, there is evidence that **several population groups might be negatively affected**, including women, migrants, social/ethnic minorities, older workers, workers in rural areas, workers with disabilities, etc. However, it is **not possible to distinguish one or several vulnerable groups that should always be targeted by policymakers**, as technological innovation induces structural changes in economies and societies and its impacts will vary depending on multiple factors, such as characteristics of a specific technology or the organisation/industry that adopts it, the type of business/work processes affected by adoption, or the characteristics of the stakeholders affected by technology adoption (Ciarli et al. 2021b). Moreover, given the fast pace of technological progress, **the composition of impacts and of vulnerable groups may be rapidly changing**.

Within the above context, policy responses should focus on both current and future employment-related challenges, provide targeted support to the unemployed individuals or those at high risk of (long-term) unemployment, and ensure support to all population groups, as anyone could be at risk of exclusion from the labour market.

2.3 Levels of impacts of automation technologies on the labour market

Depending on contextual factors, automation technologies may affect labour markets at different levels or to various scales/degrees. The scale of the impacts should determine the urgency of policy response, an approach to deal with these impacts, and the resources required. Table 1 presents the **three levels of impact** that will be explored in this report.

Table 1 Levels of impact and types of impacts

Levels of analysis	Macro	Meso	Micro
	Community/ Region/ Country	Industry/ Organisation/ Group of individuals	Individuals (active or inactive on the labour market)
Types of employment impacts	Quantity of Employment <i>(On the labour market in general and for specific population groups)</i>		
	Quality of Employment <i>(On the labour market in general and for specific population groups)</i>		

Source: Pillars (2022)

At the **macro level**, the adoption of automation technology impacts the entire local community, region or even a country. In such cases, policymakers should take an active role in managing these impacts. In case the quantity and quality of employment and inclusion are positively impacted, policymakers should capitalise on them and encourage similar practices regarding technology adoption in regions/communities with same contextual factors (e.g., resource endowments, state of the economy and of the labour market).

At the **meso level**, the impact of technological transformation is experienced by specific industries, organisations or groups of individuals that possess uniting personal characteristics (e.g., migrant workers from a specific country). Depending on a situation, the scale of the impact can be significant. Thus, it calls for attention and tailored support of policymakers towards employers and employees affected by adoption of automation technologies.

At the **micro level**, automation technology adoption impacts only specific individuals, either active or inactive on the labour market. In such cases, policy support could be provided on a case-by-case basis and is likely to involve less resources than at the macro- or meso-levels.

The current report considers all levels of impact to ensure that the self-assessment tool can serve multiple purposes, be useful in a variety of contexts and situations. Nevertheless, the design of policy objectives and policy options/interventions, discussed in the following chapters, will focus mostly on meso- and macro-levels, ensuring that they capture entire communities or industries.

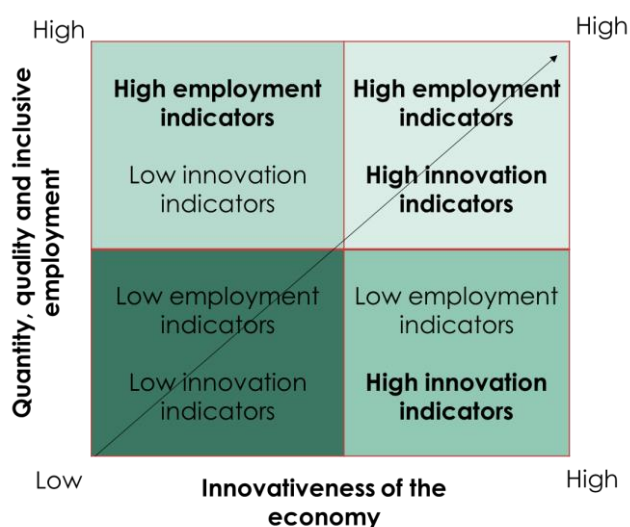
2.4 Policy areas in focus of the analysis

Given interdependencies between the economy and the labour market, the policymakers need to develop a coherent set of policies that both:

- Stimulate industrial transformation through **technological innovation** while ensuring **high quantity (full), high quality and inclusive employment**; and
- Ensure availability of **labour resources and skills** necessary for industrial transformation and technological innovation.

Figure 2 presents a simplified model that illustrates the two-fold ambitions of policymakers, striving to achieve high innovativeness of the economy and high performance on employment-related indicators (top-right quadrant). This highlights interconnectedness of **three policy goals**, listed in Chapter 1, associated with support in creation of innovative and inclusive jobs, prevention and mitigation of job displacement, and support during the job transformation process to both employers and employees.

Figure 2 A simplified model of the two-fold ambitions of policymakers



Source: Pillars (2022)

To address the impacts of automation technologies on labour markets, the Pillars project focuses on the **three broad policy areas**:

1. **Innovation and industry** policies are supporting technological transformation, as well as innovative and inclusive job creation.
2. **Education and training** are considered essential for stimulating innovation and for dealing with various impacts on the labour market, given their supportive and corrective function (e.g., they support occupation labour mobility following from job displacement).
3. **Migration and labour mobility**, examining **migration** in the context of attracting and integrating labour resources to address labour market mismatches and to support innovative and inclusive job creation, while **labour mobility** is discussed in the context of transitions between occupations, mostly following from job displacement.

3 Methodology for the design of the self-assessment tool

There is a large variety of online, automated self-assessment tools available to policymakers. If properly designed, these tools can have many advantages. For instance, they can generate fast and easy output/results, provide practical guidance, can be scalable and comparable, completed at preferred pace and time, ensure anonymity, etc. Based on the experience of the Pillars consortium and feedback gathered from key stakeholders, such self-assessment tools need to be **user-friendly**, it should not be time-consuming to complete the assessment, and the **outputs** of the assessment should be relevant and **useful**. The methodology for the design of the Pillars self-assessment tool strongly considers these criteria.

The standard methodology for the development of any (self-)assessment highlights the need for inclusion of **indicators** to measure performance. The current tool adopts the same approach, although it is important to highlight its limitations. Given a broad scope, it will **not be possible** to conduct an **in-depth assessment** of preparedness to inclusive labour markets in each location/area via a quick self-assessment tool.

The reasons include the following: first, each region/country faces different impacts of automation technology adoption on the labour market, due to adoption of specific technologies and due to a combination of various contextual factors that concern economic, demographic, technological, political and other spheres; second, an in-depth assessment would require not only an assessment of all relevant factors, but also an evaluation of all existing policy instruments in place that aim to ensure inclusive labour markets. In case such assessments are desirable, a more qualitative, independent, and comprehensive analysis may be required.

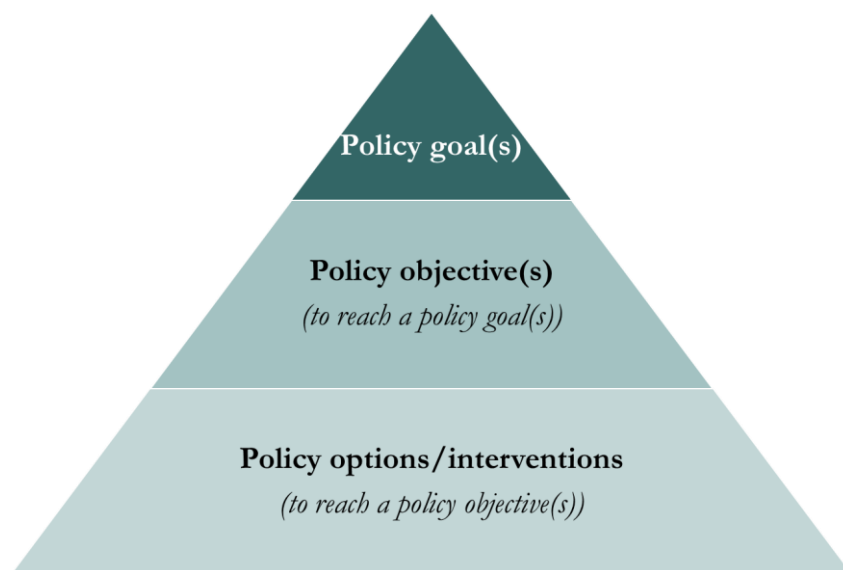
The current tool provides policymakers an opportunity to measure performance based on their **own judgement**. Thus, it is a self-assessment tool. This implies that the tool does not aim to determine what measures, policies have (not) been effective and what factors have been contributing or preventing success. Instead, the tool **measures performance based on desirable/expected results** – achievement of specific targets/goals.

The methodology for the design of the self-assessment tool consists of three steps:

1. **Identification and analysis of impacts** of automation technologies on the labour market,
2. Formulation of **policy objectives to address these impacts**,
3. Discussion of **policy options/interventions to reach the formulated policy objectives**.

These steps will help to connect policy goals to policy objectives (step 2) and to policy interventions (step 3), that will constitute the self-assessment tool (Figure 3).

Figure 3 Illustration of relations between policy goals, policy objectives and policy options/interventions in a hierarchical way



Source: Pillars (2022)

Step 1 is an essential starting point, as it informs the potential impacts of automation technologies on the labour market, namely **who and how** has been/is/will be **affected**. This approach corresponds to the Three Pillars Framework (Figure 4) and ensures that the analysis considers all possible past, current, and future impacts on the labour market. The identification of impacts allows to determine the **challenges that different stakeholders/population groups** face and the **success factors** that should be stimulated to reach the **policy goals** (i.e., stimulate creation of innovation and inclusive jobs).

To facilitate the analysis of these impacts, the discussion has been structured along **three types of effects: job displacement, job creation, job transformation**. This digression ensures focused examination of each effect and of any associated impacts on the labour market.

The **identification and analysis of impacts** of automation technologies on the labour markets is based on a desk study (i.e., analysis of the Pillars consortium research publications), as well as on a review of external literature on the topic. The impacts have been discussed together with the [Pillars ESG](#).

Figure 4 The Three Pillars Framework of the Pillars project

PILLAR 1	PILLAR 2	PILLAR 3
Past	Future	Present
<p>The first pillar quantifies the impact of technological change and structural transformations on labour market outcomes (employment, wages and mobility), mediated by the mismatch between demand and supply of skills. This pillar will look more closely at past waves of automation technologies, recent trends of international fragmentation of production in Global Value Chains (GVCs) and industrial transformation of European regions on EU labour markets, in terms of employment reconfiguration, skill mismatch and migration.</p>	<p>The second pillar studies future trends in emerging automation technologies, functional specialisation along GVCs, industrial transformations, and skill requirements. We build on the impact assessment of Pillar 1 and provide a comprehensive set of forecasting scenarios and projections for the direction of change of the three main factors that influence labour markets – technological change, international trade and industrial transformation – and how they will change the demand for skills and jobs in the near future.</p>	<p>The third pillar takes stock of current labour market policies, smart specialization strategies and training policies to identify areas of success and directions to be mitigated. By including the projections of change from Pillar 2, this pillar will provide a coherent and cohesive policy roadmap that includes a battery of action in different policy areas (innovation, trade, education and training) to achieve Pathways to Inclusive Labour Markets.</p>

Source: Pillars (2022)

Based on the analysis of impacts, the **policy objectives** have been formulated in **Step 2**. These objectives represent a **second/lower level of aims following the policy goals**. In essence, the policy objectives clarify what needs to be achieved to reach one or several policy goals. Therefore, the policy objectives become aims themselves. To illustrate, one of the policy goals is to support employers and employees during job transformation, following adoption of automation technologies. One of the possible impacts associated with adoption of automation technologies is the transformation of the composition of tasks at work. Hence, workers need to develop or acquire skills to perform new tasks, or for performing the same tasks but in a new manner (i.e., using new technologies). Hence, one of the policy objectives should be to encourage and support employers to invest in upskilling/reskilling of workers. This example shows that to address one impact/challenge, policymakers need to set several policy objectives (e.g., improve accessibility of lifelong learning, ensure better quality of education).

The challenge with the formulation of policy objectives is to **find the right balance between formulating the objective too generically/broadly** (e.g., provide upskilling opportunities) **or formulating the objective as too specific** (e.g., launch a digital platform for lifelong learning). There are two guiding principles to formulate them correctly. The first one is mentioned above, namely it should represent a second/level of aims following policy goals, while the second principle is to ensure that reaching these policy objectives is critical for achieving the policy goals. The selection and formulation of the policy objectives has been informed by the **desk study, analysis of data from Step 1** and discussions with the **ESG**.

In the self-assessment tool, the policy objectives have been formulated as **statements in a present tense**. In essence, they represent **targets/indicators against which a policymaker**

assesses preparedness of a region/country for an inclusive labour market. Namely, to what extent a specific policy objective has been achieved/reached. This highlights another condition for the development of the self-assessment tool. The self-assessment tool should not include more than 25 formulated policy objectives. Reading each statement and reflecting/assessing performance of a region/country will take between 30 seconds to 1 minute. To ensure that the self-assessment tool can be completed in about 10-15 minutes it is therefore essential to limit the number of policy objectives.

To simplify the assessment, the user will be suggested to indicate performance on a 5-point scale, from very low (1) to very high (5). Such simple grading is considered user-friendly, and it highlights that the self-assessment tool does not aim to measure performance of a region/country with high precision, but that it rather **assists policymakers to reflect on targets/indicators**, drawing attention to **specific areas** and **suggesting solutions** if performance is considered sub-optimal (below 5 on a 5-point scale).

To help the user assess performance in the self-assessment tool, each policy objective is accompanied by a **list of five good policy options/interventions (Step 3)**. They serve a dual function, i.e., as **indicators of performance** and as **possible solutions/steps to reach a policy objective(s)**. The arbitrary decision to provide only five good policy options/interventions is considered fitting for three reasons, namely, to avoid long texts that would slow down the process of assessment, to provide sufficient variation that allows policymakers to identify a practice/measure that they apply to reach a policy objective, and to suggest several solutions that could help improving performance on a specific policy objective.

In view of a large number of possible good policy options/interventions, it was critical to select five most relevant options. The pre-selection has been based on a **desk study**, namely most frequently mentioned good policy options/interventions have been listed. The list of options/interventions considered **different stages of the policy cycle** (i.e., from design to evaluation), **resources, stakeholders** and other **success factors that should be mobilised** to perform policy options/interventions in an effective and efficient manner. Then, the pre-selected options/interventions have been discussed in **meetings/workshops with the ESG** and during a **Pillars policy workshop in Riga** (i.e., the workshop focused on the Impact of Automation Technologies on the Labour Markets in the Baltic States, more details can be found [here](#)).

4 Formulation of policy objectives to address the impacts of automation technologies on the labour market

Based on analysis of possible impacts of caused by automation technologies, the **policy objectives have been formulated to address these impacts.**

Specifically, in view of the job displacement effect, policymakers should support **successful integration of new labour force on the labour market**, create measures that **prevent job displacement**, and **support reintegration of displaced workers** on the labour market. Given the job transformation effect, policymakers should **support both employers and employees** to ensure a smooth process of job transformation. Lastly, policymakers should stimulate **both innovative and inclusive job creation**. In addition to this, it has become apparent that policymakers lack awareness/understanding to address current and future impacts of automation technologies on the labour market. This results in a lack of a coherent set of policies/strategies.

Table 2 presents a list of **policy objectives to reach the policy goals**, and a short **justification of policy objectives**. In total, **20 policy objectives have been formulated**. For the self-assessment tool these objectives will be transformed into statements in a present tense, allowing policymakers to indicate the extent to which their region/country has met these objectives.

Table 3 Policy goals and corresponding policy objectives

Type of effect in focus	Policy goal	Policy objectives to reach the goal	Short justification of policy objectives
Job displacement, job transformation, job creation	Stimulate formulation of effective evidence-based employment-related policies/strategies	<ul style="list-style-type: none"> • Ensure awareness of policymakers of the current and future impacts of automation technologies on the labour market • Ensure effectiveness of employment-related policies/strategies to prepare the labour market for the future of work 	Policymakers lack understanding and a strategy(ies) to address current and future impacts of automation technologies on the labour market.
Job displacement	Support integration on the labour market	<ul style="list-style-type: none"> • Ensure high-quality and inclusiveness of the education/training system that provides labour market-relevant knowledge and skills • Facilitate transition from education/training to the labour market • Inform the public about labour market trends and provide education/career advice 	Automation technologies create a higher barrier for entering the labour market, as youth/new labour force typically perform low or middle-skilled tasks or jobs when they start their career. Hence, there is a need to ensure excellent and inclusive/accessible education, to support lifelong learning, to facilitate transition from education/training to the labour market, and to inform the public about the impacts of automation

		<ul style="list-style-type: none"> Promote, support and ensure accessibility of lifelong learning 	technologies on the labour market to inform their education and career choices.
	Prevent job displacement	<ul style="list-style-type: none"> Inform the public about labour market trends and provide education/career advice Promote, support and ensure accessibility of lifelong learning Encourage and support employers to invest in upskilling/reskilling of workers Ensure high-quality and inclusiveness of the education/training system that provides labour market-relevant knowledge and skills Incentivise employers to retain workers if they are at risk of long-term unemployment and/or it disturbs local economy Facilitate occupational labour mobility 	Automation technologies put some tasks and occupations at risk of job displacement. The risk is particularly high for routine/repetitive cognitive and manual tasks. This affects individuals in low or middle-skill occupations. Following dismissals, some groups might struggle to reintegrate on the labour market, therefore measures to prevent job displacement are needed. The general public should be aware about the labour market trends, the employers and employees should invest in education/training to ensure relevance of knowledge/skills for the labour market. In case of a risk of long-term unemployment or a significant impact on a local economy, layoffs should be prevented, and occupational labour mobility should be facilitated.
	Support reintegration of displaced workers on the labour market	<ul style="list-style-type: none"> Ensure social protection of the labour force, including of workers engaged in non-standard forms of employment Facilitate occupational labour mobility Promote, support and ensure accessibility of lifelong learning Provide work schemes for individuals at high risk of long-term unemployment Support self-employment/entrepreneurship of the unemployed in occupations at low risk of automation 	Automation technologies create a higher barrier for reintegration on the labour market for unemployed, given the need for (significant) upskilling and reskilling. Due to personal circumstances, some population groups, such as women, persons with disabilities, older and rural workers, struggle to develop skills. In view of this, policymakers should ensure social protection for all workers, particularly those engaged in non-standard forms of work, to facilitate occupational labour mobility, support lifelong learning. For individuals that struggle to enter the labour market, the alternatives could be self-employment or (public) work schemes.
Job creation	Stimulate creation of innovative jobs	<ul style="list-style-type: none"> Stimulate science, technology and innovation Create favourable conditions for the launch and development of innovative industries/organisations, particularly in disadvantaged/peripheral areas Stimulate growth of innovative SMEs and start-ups Attract and retain highly skilled labour and innovative companies 	Innovative organisations – those that adopt automation technologies, on average, generate a higher job creation effect. To support development and adoption of automation technologies, there is a need to stimulate science, technology and innovation (STI), high quality education/training, to provide favourable conditions for doing business, particularly in disadvantaged/peripheral areas. On average, the innovative job creation effect is strongest among (technology-

		<ul style="list-style-type: none"> • Support managers of organisations in selection and adoption of automation technologies • Ensure high-quality and inclusiveness of the education/training system that provides labour market-relevant knowledge and skills • Promote, support and ensure accessibility of lifelong learning 	oriented) start-ups, young firms, (women-owned) SMEs. However, they face many challenges (e.g., lack of skills, access to finance) and therefore should be supported by policymakers.
	Stimulate creation of innovative and inclusive jobs	<ul style="list-style-type: none"> • Support self-employment/entrepreneurship of unemployed in occupations at low risk of automation • Stimulate social innovation and social entrepreneurship that assist individuals at high risk of long-term unemployment 	Self-employment/entrepreneurship and social innovation/entrepreneurship can be effective instruments to support inclusion of the unemployed or those at high risk of unemployment. In case of self-employment of the unemployed individuals, it is advisable to support it in occupations at low risk of automation to prevent future displacements.
Job transformation	Support employers during job transformation	<ul style="list-style-type: none"> • Support managers of organisations in selection and adoption of automation technologies • Encourage and support employers to invest in upskilling/reskilling of workers • Promote, support and ensure accessibility of lifelong learning 	Management of innovative organisations lack knowledge and skills on what automation technologies to adopt and how to ensure effective and efficient process of job transformation following technology adoption. In addition, some organisations, particularly small and medium-sized enterprises, underinvest in skills development of employees. This affects performance of employees at work and their future employability.
	Support employees during job transformation	<ul style="list-style-type: none"> • Ensure effectiveness of labour-related regulations and institutions for all workers • Stimulate stronger industrial relations and social dialogue between employers and employees • Ensure social protection of the labour force, including for workers engaged in non-standard forms of employment 	Automation technologies lead to transformation of working and employment conditions, work organization, industrial relations and social dialogue. Thus, labour-related regulations, institutions and social dialogue should ensure protection and support. Particular attention is needed for workers engaged in new/non-standard forms of employment, enabled by automation technologies.

Source: Pillars (2022)

Box 2 List of policy objectives

- Ensure awareness of policymakers of the current and future impacts of automation technologies on the labour market
- Ensure effectiveness of employment-related policies/strategies to prepare the labour market for the future of work

- Ensure high-quality and inclusiveness of the education/training system that provides labour market-relevant knowledge and skills
- Facilitate transition from education/training to the labour market
- Inform the public about labour market trends and provide education/career advice
- Promote, support and ensure accessibility of lifelong learning
- Support managers of organisations in selection and adoption of automation technologies
- Encourage and support employers to invest in upskilling/reskilling of workers
- Ensure effectiveness of labour-related regulations and institutions for all workers
- Stimulate stronger industrial relations and social dialogue
- Ensure social protection of the labour force, including of workers engaged in non-standard forms of employment
- Incentivise employers to retain workers if they are at risk of long-term unemployment and/or it disturbs local economy
- Facilitate occupational labour mobility
- Provide work schemes for individuals at high risk of long-term unemployment
- Support self-employment/entrepreneurship of the unemployed in occupations at low risk of automation
- Stimulate social innovation and social entrepreneurship that assist individuals at high risk of long-term unemployment
- Create favourable conditions for the launch and development of innovative industries/organisations, particularly in disadvantaged/peripheral areas
- Attract and retain highly skilled labour and innovative companies
- Stimulate science, technology and innovation
- Stimulate growth of innovative SMEs and start-ups

Source: Pillars (2022)

5 Structure of the self-assessment tool

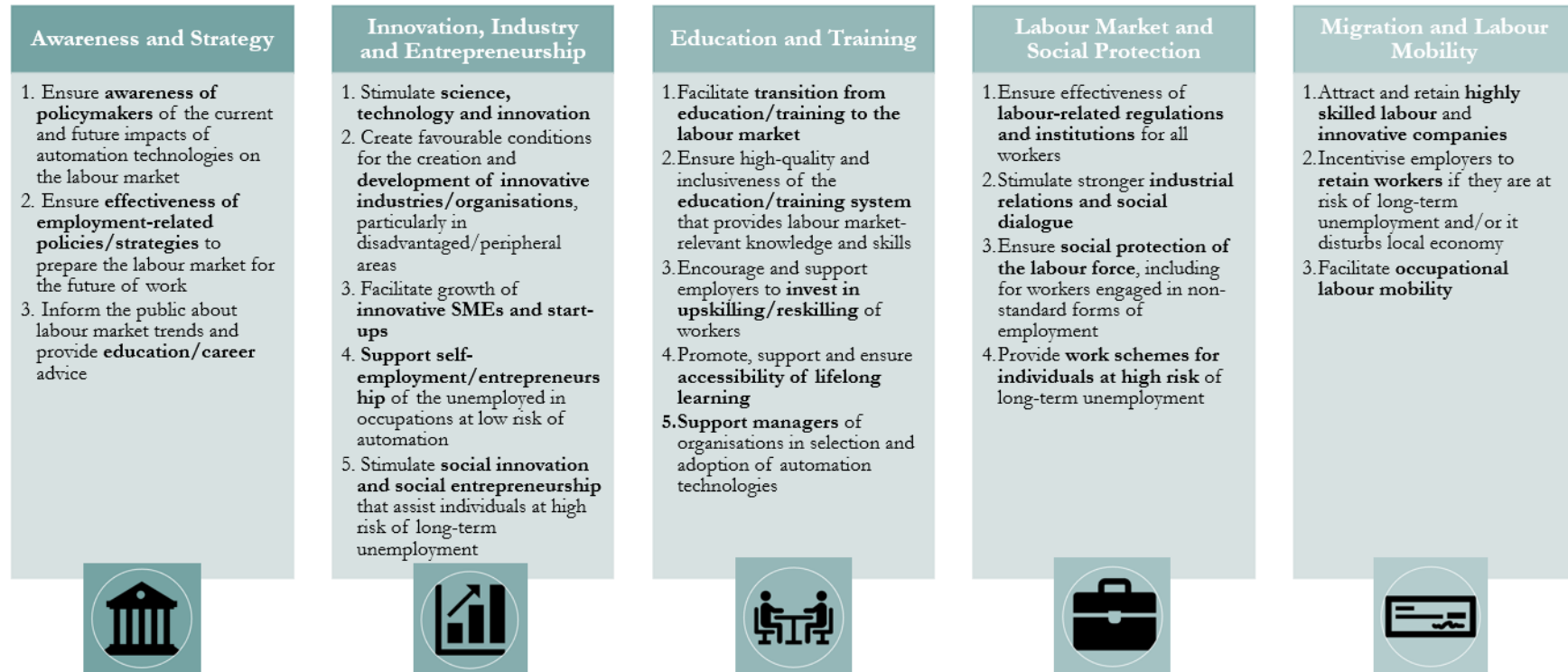
The assessment consists of 20 statements/ policy objectives developed in Chapter 4, structured into **five policy/priority areas**:

1. Awareness and Strategy,
2. Innovation, Industry and Entrepreneurship,
3. Education and Training,
4. Labour Market and Social Protection,
5. Migration and Labour Mobility.

These areas are in line with the overall focus of the Pillars project (i.e., innovation, industry, education, migration). In some cases, the policy objectives are related to several policy/priority areas, but for a more balanced, user-friendly display in the self-assessment tool the policy objectives were grouped in these areas (please see Figure 5).

All policy objectives and supporting policy options/interventions are phrased in a present tense to facilitate understanding of the topics and to emphasise that this is an assessment of the status quo. Assessment is provided on a 5-scale.

Figure 5 Five priority/policy areas to group the policy objectives



Source: Pillars (2022)

5.1 Awareness and strategy

Awareness of policymakers of the current and future impacts of automation technologies on the labour market is ensured

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Research on impacts of automation technologies on the labour market is stimulated
- Accessibility of relevant labour market data is facilitated
- Information flow between public organisations is effective
- Regular consultations between policymakers and the stakeholders are organised
- Mechanisms of continuous monitoring and assessment of the impacts of automation technologies on the labour market are set up

The effectiveness of employment-related policies/strategies to prepare the labour market for the future of work is ensured

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Evidence-based approach to the policy/strategy design is developed
- Coherence across policy areas and alignment with existing policy priorities are ensured
- Policy instruments that effectively support implementation of policies/strategies are launched
- Sufficient allocation of resources for implementation of policies/strategies is ensured
- Monitoring and evaluation frameworks on the implementation of policies/strategies are set up

The public is informed about labour market trends and provided education/career advice

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Collection and accessibility of data on labour market trends is ensured
- Communication channels to raise awareness of data sources on labour market trends are carefully selected
- Data on labour market trends in a user-friendly, tailored format is provided
- The general public to learn about labour market trends is encouraged
- Education/career advice is provided

5.2 Innovation, Industry and Entrepreneurship

Science, technology and innovation (STI) are stimulated

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Integration of STI policies into a broader policy agenda is ensured
- Investment in research and development is stimulated
- Effective collaboration between research and industry organisations is fostered
- Availability of human capital is ensured
- STI networks and (inter)national partnerships are strengthened

Favourable conditions for the launch and development of innovative industries/organisations, particularly in disadvantaged/peripheral areas, are created

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Business-friendly, stable legal and regulatory frameworks are set
- Synergies between existing industrial structures and innovative industries are fostered
- Availability of high-quality hard and soft infrastructure is ensured
- A multi-fund approach is adopted
- Effective functioning of business support organisations is ensured

Growth of innovative SMEs and start-ups is stimulated

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- The entrepreneurial culture is popularised
- Entrepreneurial ecosystems and inclusion of SMEs/start-ups in them are strengthened
- Attractiveness and retention of talent are increased
- Access to finance is provided
- Effectiveness of public procurement is ensured

Self-employment/entrepreneurship of the unemployed in occupations at low risk of automation is supported

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Awareness of the benefits and challenges of self-employment among unemployed is raised
- The development of entrepreneurial skills is supported
- Access to finance is facilitated
- Business creation is supported with regulatory tools
- The development and inclusion of the unemployed in entrepreneurial networks is supported

Social innovation and social entrepreneurship that assist individuals at high risk of long-term unemployment are stimulated

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Social innovation and social entrepreneurship are encouraged
- Social innovation and social entrepreneurship influence policy frameworks
- Social innovation and social entrepreneurship are included in smart specialisation strategies
- Accessibility of finance for social innovation and social entrepreneurship is ensured
- Ecosystem support for social innovation and social entrepreneurship is provided

5.3 Education and Training

Transition from education/training to the labour market is facilitated

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Relevant work experience is integrated into the education process
- Education and training courses focus on meta, social and technical skills
- Participation of young people in youth programs is encouraged
- High-quality career counselling are provided
- Networking of students with potential employers is supported

High-quality and inclusiveness of the education/training system that provides labour market-relevant knowledge and skills is ensured

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- High-quality, labour market-relevance of education courses, materials and tools/technologies is ensured
- High-quality of teaching methods and support for teachers is provided
- Collaboration between education institutions and employers is strengthened
- Inclusiveness of education/training to all is ensured
- Continuous assessment of the education/training system is embraced

Employers are encouraged and supported to invest in upskilling/reskilling of workers

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Employers are informed about the importance of employee upskilling and reskilling
- Employers are encouraged to contribute to regional/national socio-economic development

- Employers are supported in the identification of employee skills needs
- Employers are supported in the development of employee skills
- Financial incentives and resources for employee upskilling and reskilling are provided

Accessibility of lifelong learning is promoted, supported, and ensured

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- A culture of lifelong learning is promoted
- Provision of a wide range of education/training courses in various, flexible formats is ensured
- Provision of an infrastructure for lifelong learning is ensured
- Funding to support lifelong learning is provided
- Certification/recognition of non-formal and informal learning is ensured

Managers of organisations are supported in the selection and adoption of automation technologies

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Managers are informed about the benefits and challenges of technology adoption
- Development of managerial skills is supported
- Industrial relations between employers and employees are stimulated
- Intra-organisational knowledge exchange is encouraged
- Accessibility of advice from technology experts to technology adopting organisations is ensured

5.4 Labour Market and Social Protection

Effectiveness of labour-related regulations and institutions for all workers is ensured

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Appropriateness of labour-related regulations on working and employment conditions is ensured
- Compliance with the labour-related regulations is guaranteed
- The quality of labour institutions, their activities and services are evaluated
- Stronger industrial relations and social dialogue is stimulated
- Development of international regulations and collective bargaining mechanisms for workers engaged in non-standard forms of employment are supported

Stronger industrial relations and social dialogue are stimulated

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Social dialogue at national, regional and local levels is fostered
- Effectiveness of the labour administration system is ensured
- Industrial relations are strengthened
- Participation and effective functioning of employers' and employee organisations is ensured
- Transparency and collaborative culture at workplaces are fostered

Social protection of the labour force, including of workers engaged in non-standard forms of employment, is ensured

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- The process of determining employment status is facilitated
- All currently active population is allowed to adhere to social protection system
- Transparency of the social protection system is ensured
- Portability of entitlements between different social protection systems is ensure
- The unemployed have access to adequate unemployment benefits/assistance and work is simultaneously incentivised

Work schemes for individuals at high risk of long-term unemployment are provided

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- The registration of the long-term unemployed is encouraged
- Effective public works programs are provided
- Self-employment/entrepreneurship among individuals at risk of long-term unemployment is encouraged and supported
- Financial incentives for employers to recruit individuals at risk of long-term unemployment are provided
- Tailored support schemes for effective integration of the long-term unemployed in workplaces are offered

5.5 Migration and Labour Mobility

Highly skilled labour and innovative companies are attracted and retained

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Legislative and institutional frameworks that facilitate integration of migrants are provided
- Economic and education/training incentives are offered
- Information on opportunities for highly skilled migrants and innovative companies is disseminated
- Stable political environment and supportive social infrastructure (e.g., medical and education institutions) are ensured
- Migrant-friendly culture is encouraged

Employers are incentivised to retain workers if they are at risk of long-term unemployment and/or it disturbs local economy

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Corporate social responsibility is stimulated
- Financial incentives to retain workers are provided
- Upskilling/reskilling of workers is supported
- The development of innovative management approaches to retain workers is encouraged
- Implementation of collective redundancy and anti-discriminatory regulations is enforced

Occupational labour mobility is facilitated

To determine if "fully achieved" (right side of the slider), please consider the following good policy options:

- Effective job search assistance is provided
- High quality career counselling is ensured
- Effective reintegration counselling is provided
- Availability of up-to-date labour market information for the public is ensured
- Information on education/training activities is provided and enrolment in them is facilitated

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