Key cross-cutting competences related to Green jobs and stakeholders' perspective

Country analysis – Comparative

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IMPLEMENTED BY:

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Introduction

In Work Package 4, the partners of the INTERCEPT project aimed to identify key cross-cutting competences that the Labour Market stakeholders expect to be on demand in the near future in the area of green jobs ,as well as to understand the stakeholders' expectations and needs related to the green economy in selected sectors such as agri-food, transport, services, energy and resource management, construction and building extractive industries manufacturing tourism and hospitality.

The research was built about around six guiding questions that are summarised in Table 1A:

Table 1A – Guiding questions WP4 – Stakeholders' needs and expectations

Guiding questions
1) What are the expectations of the stakeholders related to the green economy, particularly in different sectors such as Agrifood, Transport, Services , Energy, Resource management, Construction and building, Other sectors
2) How/To what extent do the stakeholders expect that the transition to the green economy will influence their sector/job/business? What changes do they foresee?
3) In the stakeholders' opinion, what are the needs in the Green Economy, with reference to the Green Jobs? Which Green Jobs will be mostly needed in sectors such as Agrifood, Transport, Services , Energy, Resource management, Construction and building, Other sectors
4) What competences do you expect to be on demand in the near future with reference to the Green jobs and the transition to the Green Economy?
5) Which of these soft skills do you consider most important for Green Jobs? 1) Problem Solving 2) Flexibility 3) Working in a group 4) Motivation 5) Creativity 6) Time management 7) Communication 8) Other
6) What green or greening job(s) would you think will be needed in your company/work environment in the future?

The partners decided to produce a common survey in order to collect the information coming from the relevant stakeholders. The survey was sent to the contacts identified by the partners then the results were analysed individually in order to answer to the guiding questions. The analysis were summarised into Country reports, that were collected and compared in order to identify similarities and diversities in the different countries towards the Green transition. This exercise resulted in qualitative analysis that gave the partners information on the perspectives and needs of the stakeholders on Green Jobs.

Data collection

The identification of the appropriate stakeholders to be contacted was left to the partners in order to adopt the most suitable approach to the specific regional situations of the six Countries where the analysis was carried out, namely Malta, Lithuania, Slovakia, Italy/Tuscany, Luxembourg and Poland. Some partners decided to develop a mapping exercise to identify local actors that were relevant to the research, while other had the chance to use databases that were already available. In one case an interview was conducted with a national expert that had just concluded a study on the topics covered by the INTERCEPT questionnaire with the sectoral stakeholders.

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Recalls were made in order to increase the involvement of the stakeholders and adjustment to the databases were also conducted for the same purpose.
In general, the stakeholders contacted were training agencies, job placement agencies, experts, representation of economic categories and private entities.

The profile of the respondents varied within the different countries, however the overall results were satisfactory as they allow to identify the main trends in a qualitative analysis exercise. Overall, the partners succeeded to involve different categories of stakeholders. Some partners such as Poland and Slovakia were able to receive responses mainly from the public services or ministries, other partners such as Lithuania, Malta and Luxembourg involve mostly the private sector and Tuscany received responses from the different categories identified, in particular from representatives of the economic sectors.

Main findings

The following paragraphs present the responses of the surveys and converge them into the Guiding questions. The results of the different country reports were analysed and compared. In particular, the top three answers for each Country were selected. The y-axis of the histograms refers to the number of countries where the related topic was considered a priority, i.e. one of the top three. In case of open questions the answers were abridged in specific Tables.

1/ What are the expectations of the stakeholders related to the green economy?

Guiding Question n.1 was focused on the expectations of the stakeholders related to the green economy on a number of sectors identified at project application stage, namely renewable energy, agriculture, forestry and agrifood, transportation, resource management and services or suggested by the partners for specific interests of their economies, including manufacturing, extracting industries, tourism and hospitality, construction and building. We decided to select the top three answers and the lowest rated responses for each country as their cross-analysis were seen to provide interesting results. Graph 1A shows the expected contribution of the different sector to the green transition from the perspective of the different countries' stakeholders:

Graph 1A – Expected contribution of the different sectors to the Green Transition

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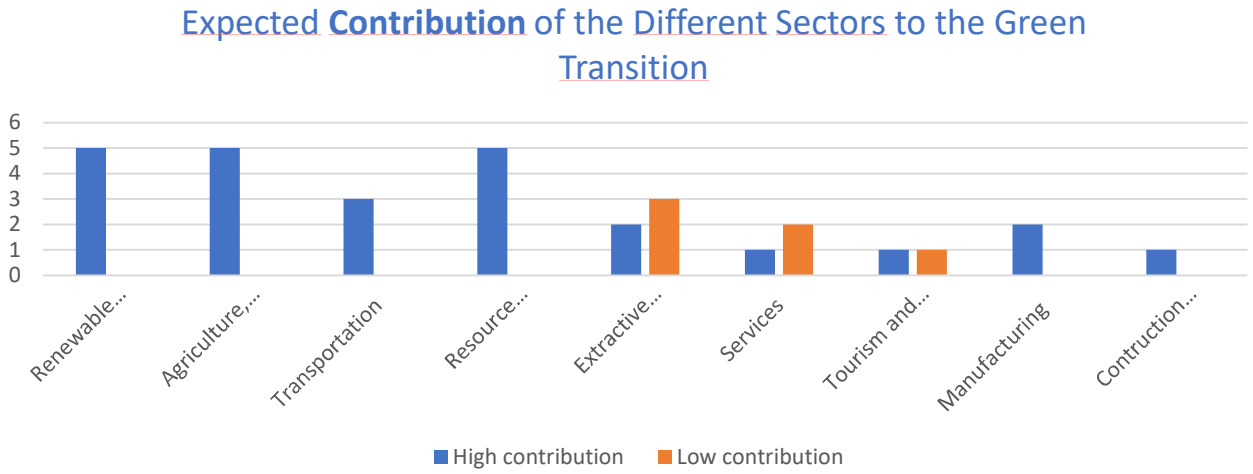

Renewable energy, resource management, agriculture, forestry and agrifood are the sectors that the majority of the respondents in the partner countries believe would provide the higher **contribution** to the green transition, followed by transportation. Interestingly, sectors such as extractive industries, services and tourism and hospitality are considered to bring a high contribution to the green transition for the stakeholders of some countries, while for other partners' these sectors would bring a low contribution.

Graph 1B shows the results of the responses of the stakeholders with respect to the expected **effects** of the transition to the green economy on the different sectors identified. Renewable energy, agriculture, forestry and agrifood are the sectors that were indicated by the stakeholders to be mostly affected by the transition to the green economy. Transportation, resource management, extractive industries and construction and building follow. However some sectors such as extractive industries and, surprisingly, resource management would be less affected by the transition to the green economy for some of the respondents. Sectors such as tourism and hospitality and services in general are seen by all respondents as the ones that will be least affected.

Graph 1B – Expected effect of the Green Transition on the different sectors

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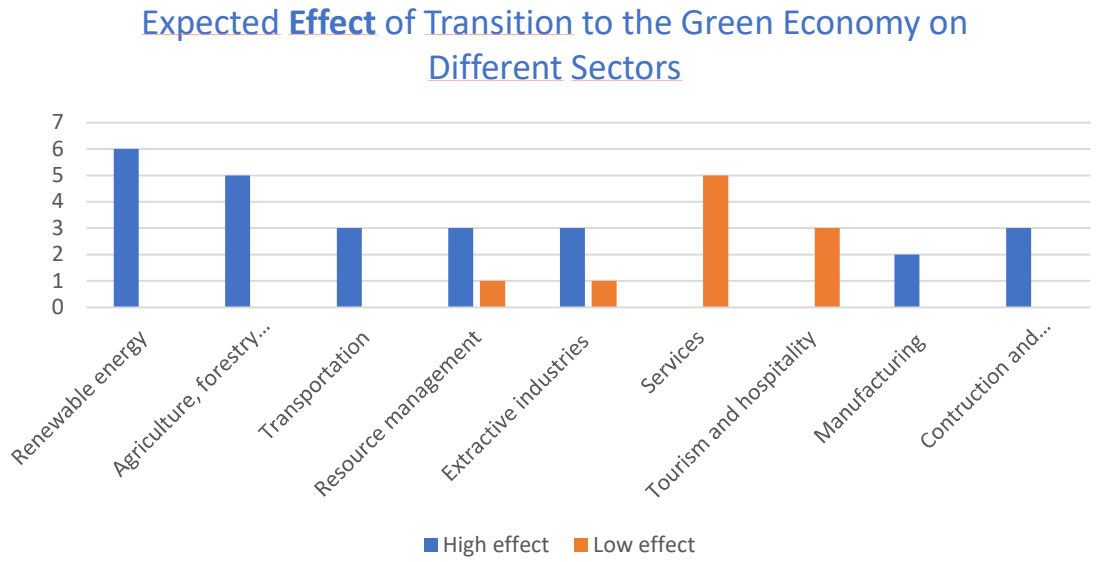

2/ How/To what extent do the stakeholders expect that the transition to the green economy will influence their sector/job/business?

The second guiding question was an insight into the stakeholders' own sector or business, to investigate to what extent the stakeholders expect that the transition to the green economy will influence their job. In order to answer it, three questions were included in the survey.

The first one was related to the **expected impact** of the transition to the Green economy on the respondents' sector or business. Graph 1A compares the three higher ranked answers for all partner countries. The majority of the respondents expect an impact in the form of the creation of new types of jobs, in the update and adaptation of existing jobs. Secondly they see an impact on structural changes.

*Graph 2A – **Expected Impact of Green Economy Transition on Respondents' Sector/Job/Business***

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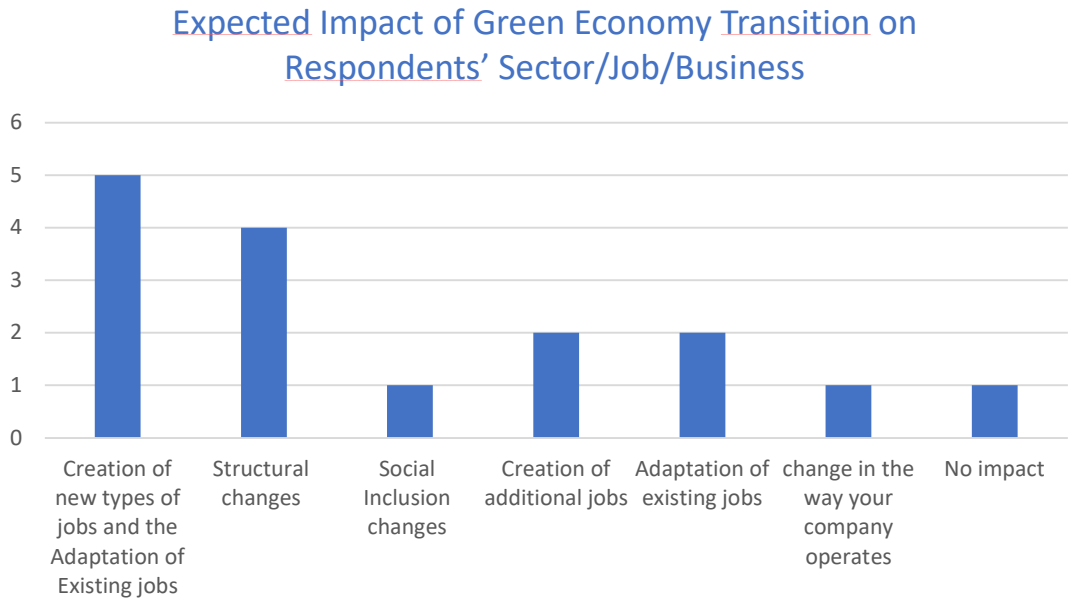
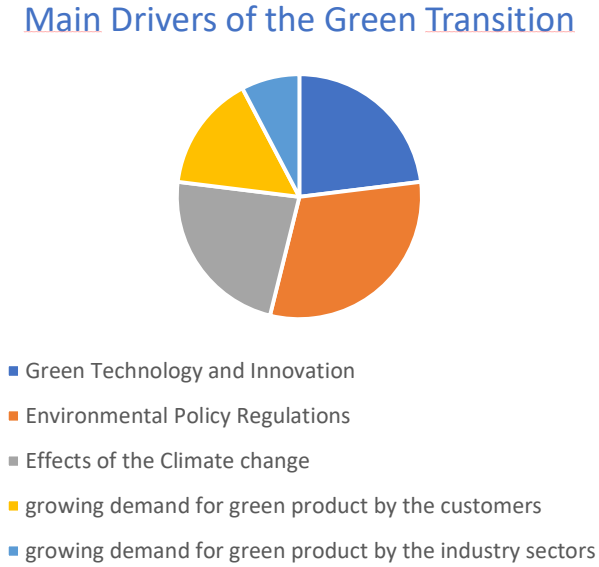


The second question was related to the **main drivers** that the stakeholders believe are driving the green transition. The majority of the respondents imagine that environmental policy regulations are the main drivers of the green transition, followed by the effects of the climate change, then by green technology and innovation. The growing demand for green products by the customers is also mentioned as a possible driver, while the last one is the growing demand for green products by the industry sectors. Graph 2B shows the different contribution of the main answers.

*Graph 2B – **Main Drivers of the Green Transition***



The third question investigated on the main changes that the stakeholders think could be caused by the Green Transition in their own sector or business, in terms of new or significantly changed

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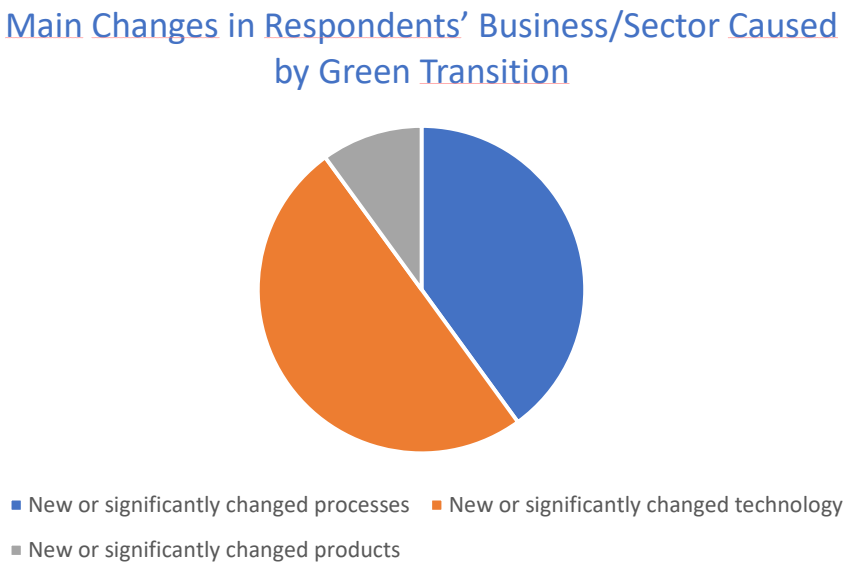
technology, processes or products. Half of the respondents believe that the main change would be related to new or significantly improved technology, followed by changes that would innovate or improve current processes (Graph 2C).

Graph 2C – ***Main Changes in Respondents' Business/Sector Caused by Green Transition***



3/ In the stakeholders' opinion, what are the needs in the Green Economy, with reference to the Green Jobs?

The objective of Guiding question n. 3 was to investigate on the perceived needs in the Green Economy with reference to the Green Jobs.

The main impacts on Training and Employment needs identified are the need for New Skills and for Upgrading existing skills, followed by the upgrading across the board, surely for high-skilled and medium skilled, while some partners pointed out the need for new skills for low-skilled occupations. In general, stakeholders do not foresee the erosion of existing jobs, if so, only for low-skilled positions (SK).

4/ What competences do you expect to be on demand in the near future with reference to the Green Jobs and the transition to the Green Economy?

The competences identified by the stakeholders in the different member states and from different backgrounds might be categorized in three main levels: management, technical and operational roles.
Table 4/A shows the most common profiles within these three levels and for every sector investigated in the survey. Interestingly, the stakeholders were very prolific especially for specific Management roles, profiles that might give professional guidance to the Green transition. Another note worth mentioning gives more credit to this interpretation and is related to the way stakeholders identified

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new competences. As a common trend, in all partner countries different stakeholders tried to describe profiles that do not exist but whose competences they think are needed, especially for managerial roles. The same feedback was found in the responses to Question n.6 about the green or greening job(s) that stakeholders would think will be needed in their company/work environment in the future and the main answers can be summarised in Table 4/A below:

Table 4/A

SECTORS	Management Roles	Technical Roles	Operational Roles
Renewable Energy	Engineers, Researchers, Policy, Governance, Strategy	Installers, repair and maintenance	Installers, repair and maintenance
Agriculture	Organic farmer, breeder Green Manager Engineer	Agroinformatician Agronomist with Green/Digital focus	Organic farm workers
Resources Management	Energy, environment, sustainability, circular economy	Water resource	
Manufacturing	Automation, Circular Economy, New Materials, Green Manager, Designers recycled material	Automation	Automation
Transport	Electrical mobility Hydrogen,	Electrical mobility	Electrical mobility and repair/maintenance (drivers, mechanics)
Tourism and Hospitality	Ecotourism designers, Green managers Maths & Computer scientists	Green Chef, Hiking and environmental guides,	
Services	Accountant, Lawyer, Auditor specialised in Green economy Green manager	Technical support to RES Educators	H&S operator Cleaning Garden designers

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Extractive industries	**Recycling manger, Engineers, Geologists, Green manager, Geothermal experts**	**Surveyors**	**Recycling**
Construction and Building	**Green designers, architects, engineers, Energy efficiency, Green manager**	**Installers**	**Installers, craftsmen, bricklayers**

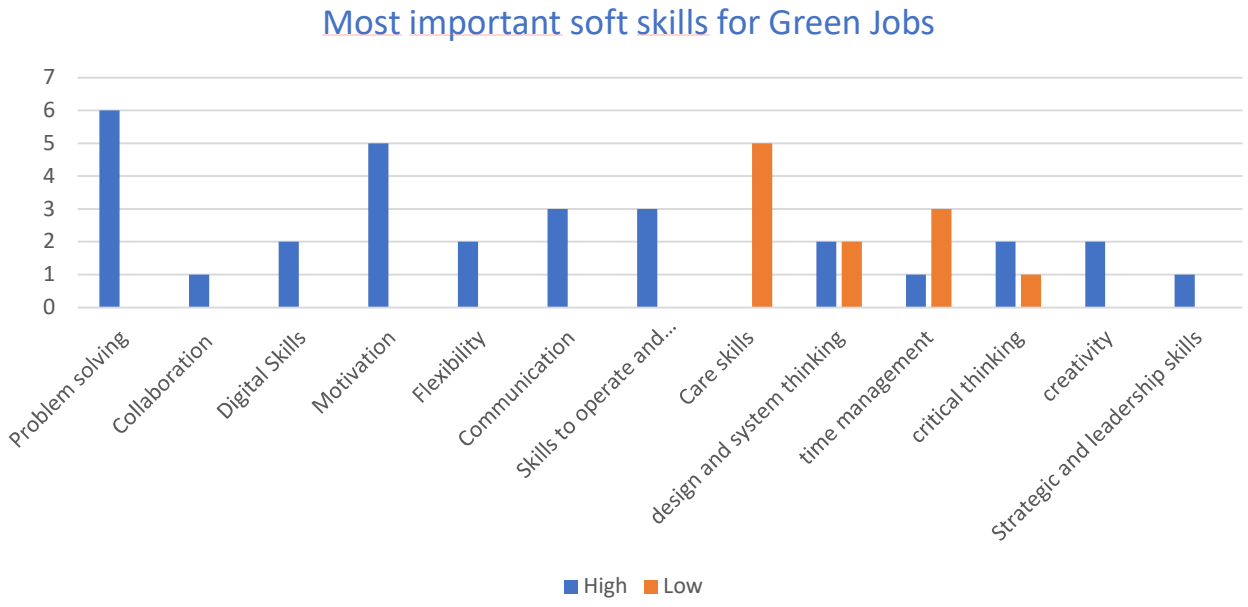
5/ Which of these soft skills do you consider most important for Green Jobs?

Stakeholders were then asked about the soft skills they consider most important for Green Jobs. The Top 4 soft skills identified by the stakeholders in the different Countries analized are:

1. Problem solving,
2. Motivation,
3. Skills to operate and maintain technology,
4. Communication

Care skills are considered the least important skill by all respondents. Time management is not considered important for the majority of respondents, while for some this skill is a priority. Similarly, in the case of design and system thinking and critical thinking, not all respondents agree, as for some of them those are very important, while others do not consider them important for Green Jobs.

*Graph 5A – **Most important soft skills for Green Jobs***



7/ Barriers for the employment of the disadvantaged groups in Green Jobs

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As far as the barriers for the employment of the disadvantaged groups in Green jobs are concerned, we analysed those related to women, youth and people with disabilities. For the three groups, respondents were asked to indicate the barriers they see and possible solutions that might help overcome them.

As a general note, in all cases barriers were identified as common to different fields and sectors, not necessarily related to Green Jobs.

Barriers for the employment of women:

Table 7/A includes the barriers and possible solutions related to women' employment for every partner country.

Apart from Luxembourg, where the employment of women is not an issue, for the other partners' countries there are common obstacles, such as cultural, work-life balance, lack of specific skills or knowledge. The possible solutions include the introduction of more work-life balance measures and support tools, further training and work exposure experiences to increase competences and measures to ensure equality in career opportunities and remuneration.

Table 7/A

Country	Barriers	Solutions
IT	**Cultural (meritocracy, stereotypes, prejudice)** **No managerial roles, Lack of specific skills on Green Jobs, Work-Life Balance measures limited or absent** **No Barriers**	**Increase awareness, Training and work exposure** **Tax incentives** **More Work-Life Balance measures and related support tools** **Increase remuneration**
LT	**Work-Life Balance measures, Low motivation** **Technology gap, Cultural (meritocracy, stereotypes, prejudice), Lower demand for Women, Lack of specific skills on Green Jobs, Skills and knowledge gaps**	**More Work-Life Balance measures and related public support Employee Education and Training;** **Increasing competencies, More Work-Life Balance measures Increase awareness To create equal conditions for both women and men; More info and skills on Green Transition**

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PL	**Financial disincentives, Lack of experience** **Mismatched or insufficient skills**	**Flexible, special trainings and courses, flexible working hours, remote work, reintegration programs for people who were outside employment**
SK	**No Barriers (1/3), motherhood, qualification and/or knowledge, low wages/pay, hard manual work/physical abilities, prejudice**	**Training on green jobs, flexibility of working hours and more part-time jobs, More Work-Life Balance measures Increase awareness** **fighting prejudice and ensure equality, Increase remuneration**
MT	**Cultural (Stereotypes, gender), Motherhood, Lack of technical skills**	**Work Life Balance, Opportunities for upskilling, Career development and training, Reduced Gender Pay Gap**
LUX	**N/A**	**N/A**

Barriers for the employment of youth in Green Jobs

Table 7/B includes the barriers and possible solutions related to youths' employment for every partner country.

Youth unemployment is an issue that affects all Countries that have been analysed and it emerged that poor links between education and labour market, lack of specific skills and experience coupled with a low motivation are cross cutting elements. In addition most of the interviewees in the different countries highlighted a scarce interest for manual work.

Work-life balance measures are deemed to be the most appropriate solutions to tackle the issue, especially when it comes to female employment, together with increasing the efficiency and the effectiveness of traineeships, training on the job and other forms of active learning.

Table 7/B

Country	Barriers	Solutions
IT	**Poor link between education and labour market, Low motivation of young people in their studies, Lack of guidance support services, Employers' culture, Labour Costs, Lack of experience, Youth Attitude to manual work, Pension system,**	**Increase awareness on youth challenges, effective employment measures, strengthen the link between education and labour market, Promote STEM**

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	Contract/Regulatory issues, low pay, Insufficient Skills No Barriers	Reduce the retirement age, Promote additional tax and financial incentives, Improve the Contracts legislation, Improve working conditions
LT	Youth Attitude to manual work insufficient understanding ck of experience and work culture, Low motivation of young Skills not adequate Lack of key skills Not informed about the green transition Poor link between education and labour market Limited choice of green jobs	Strengthen the link between education and labour market under tripartite agreements with the employment service; Adaptation of the specialty, self-expression, professional evaluation; Involvement in production processes; Training, traineeships and work exposure motivation; Short teaching programs, update study programs in colleges; Test yourself in a variety of professions; Increase awareness on Green Transition Foster youth Entrepreneurship, Language's proficiency;
PL	Lack of work experience, insufficient work-related skills, financial disincentives, high salary expectations, scarce employment opportunities	Special trainings and courses, internships
SK	No Barriers, Lack of experience, low wages, motivation, low level or lack of knowledge, lack of education, unwillingness to work in general	Improving of educational (more practical, increased specialization, improve soft skills), environmental awareness, availability of information on green jobs, pay/financial motivation or motivation in general, need to create more green jobs
MT	Lack of experience, Work Experience, Skills Gap, Lack of technical skills	Training Opportunities, Strengthening life skills, Flexible Working Arrangements,
LUX	Lack of experience, always higher expectation on education level	Put focus on soft skills (environmental activism, critical thinking, creativity…) that young

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		workers can contribute to the green transition

Barriers for the employment of people with disabilities in Green Jobs

Table 7/C includes the barriers and possible solutions related to people with disabilities' employment for every partner country.

Apart from Luxembourg, where the employment of people with disabilities is not an issue, for the other partners' countries there are common obstacles, such as physical accessibility, stereotypes and cultural obstacles, poor incentives and low use of enabling technologies. The possible solutions include the re-design of incentive measures, the removal of physical barriers, the provision of training based on the actual needs of the employee and the employer.

Table 7/C

	Barriers	Solutions
IT	**Physical Accessibility to workplaces, Cultural (meritocracy, stereotypes, prejudice), Lack of Awareness, Types of jobs available, Labour Costs, Insufficient incentives, No Barriers,**	**More effective incentives for employment support (apprenticeships, traineeships, work exposure), Raise awareness on disabled challenges and cultural barriers, Promote additional tax and financial incentives, Improve working conditions (Work-life balance measures, adequate remuneration, flexible working hours), Support training especially in digital skills, Increase workplace accessibility, Increase the use of Industry 4.0, Increase the adaptability of training**
LT	**Regulatory barriers and low incentives for employers** **Scarce access to innovation Physical Accessibility to workplaces, Integration, job preparation. Health/Physical limitations Insufficient use of adapted technologies Cultural (meritocracy, stereotypes, prejudice) There is no custom technique**	**More effective public incentives, Support training and on the job training,** **Employment opportunities; Adaptation of technologies, increase of state support for employers; competence development, an adaptation of the environment according to needs; Improve working conditions (Work-life balance measures, adequate remuneration, flexible working hours) Adaptation of workplaces for the disabled;**

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PL	**Health limitations, scarce employment opportunities, insufficient work-related skills, financial disincentives**	**Special trainings and courses, adaptation of workplaces, integrated system supporting workers with disabilities**
SK	**Health/Physical limitations, Lack of adaptation of working conditions, Prejudice and distrust and a fear of employers, bureaucracy, government regulations, insufficient inclusion programmes, work restrictions and safety regulations, motivation, education, no barriers**	**Adaptation of the work conditions or a workplace/job, removal of the physical barriers, more flexible working hours, remote work, financial support for employers education and training, wages and benefits**
MT	**Employer bias, Environmental Barriers, Welfare System, Lack of experience, Lack of technical skills**	**Inclusive Working Environment, Assistive Technology, Work life balance**
LUX	**N/A**	**N/A**

Conclusions

The main finding of the surveys are listed below:

Renewable energy, resource management, agriculture, forestry and agrifood are the sectors that would provide the higher contribution to the green transition, followed by transportation.

In terms of the expected effects of the transition to the green economy on the different sectors identified, renewable energy, agriculture, forestry and agrifood would be those affected most by the transition to the green economy. Transportation, resource management, extractive industries and construction and building follow.

When it comes to their own sector of business, interviewees expect an impact in the form of the creation of new types of jobs, in the update and adaptation of existing jobs. Secondly they see an impact on structural changes. The drive of the changes linked to the Green Transition would be mainly policy and new technologies.

Stakeholders agreed that the Green Transition at this stage requires a further specialization of their human resources, especially at managerial levels, especially for new competences.

According to employers, the Top 4 soft skills to be found in an employee are:

1. Problem solving,
2. Motivation,
3. Skills to operate and maintain technology,
4. Communication

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Finally, in terms of barriers to the accessibility to labour market for disadvantaged groups, all stakeholders agree that there are a number of interconnected factors that should be considered, when tackling the integration of disadvantaged groups in the labour market. At the same time, effective solutions should be based on holistic interventions addressing: cultural misconceptions of the existing workforce; upskilling and improving technical skills of the disadvantaged groups; the adequacy of current incentives; the provision of work-life balance measures and a stronger link between education and industry.

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