Chatbot based Career Guidance

CareerBOT

Blended CareerBot training for
Career Guidance Practitioner

Module 1 – Digital Transformation & Green Jobs

Self-directed learning

[Finalised after Peer Review November 2023]

Content

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Training plan – You are here

Blended CareerBOT Training for Practitioners

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Final Assessment
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Feedback from
Expert
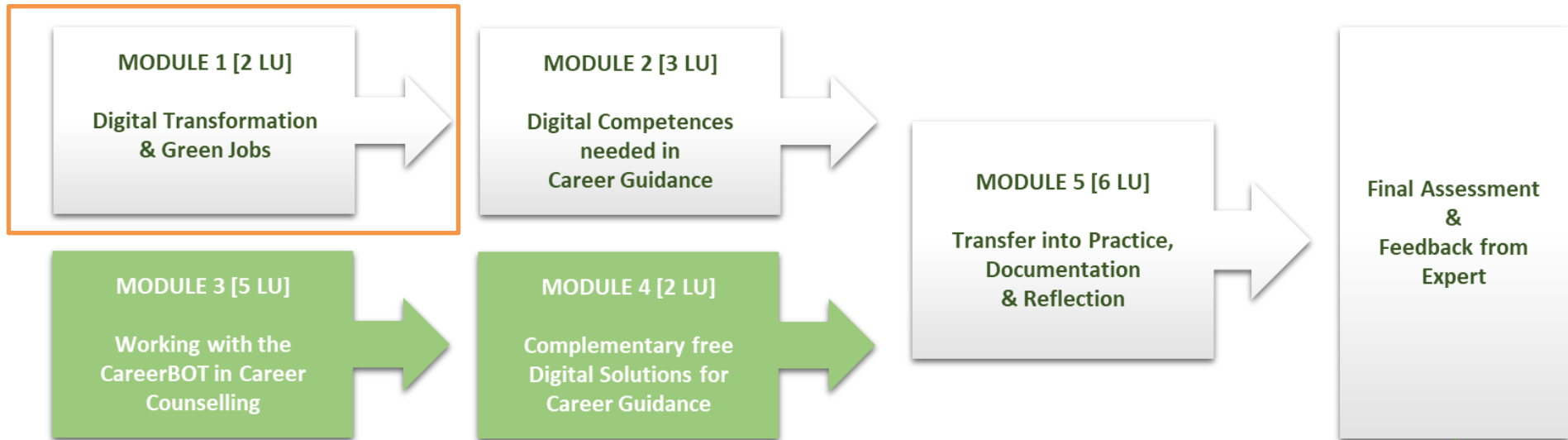
The CareerBOT training process at a glance:

| Learning Agreement | Self-directed Learning [5 LU] | Face-to-Face Training / Webinar 1 full training day or 2 webinars [7 LU] | Transfer into Practice [5 LU] | Documentation & Reflection [1 LU] |
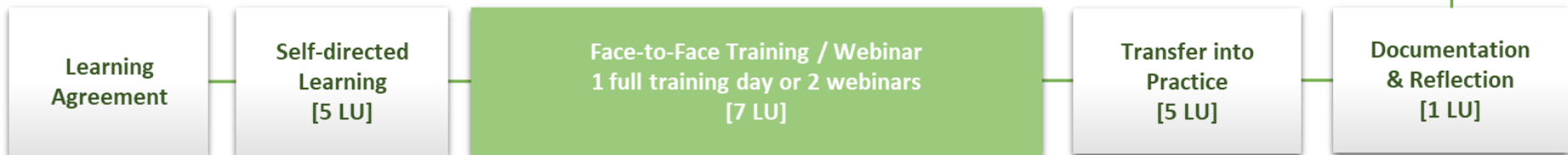
MODULE:	A Module covers a thematic area and is divided into several Learning Units.
LEARNING UNIT [LU]:	One Learning Unit [1 LU] corresponds to a period of approx. 45 min.
GREY ELEMENTS:	Grey Modules are designed for Self-directed Learning and Transfer into practice.
GREEN ELEMENTS:	Green Modules are designed for Face-to-Face Training (or Webinar).

Aim of Module 1 – Digital Transformation & Green Jobs

CareerBot partnership seeks to improve Digital Readiness of the Career Guidance sector by implementing CareerBot methodology and tool, facilitating blended guidance sessions and to use customized Labour Market Information (LMI) to empower marginalized job seekers. We want to put Career Guidance Practitioners at the centre and assist them – and their organisations - on the path of digitalisation so that they can advise their clients in the best possible way.

Module 1 is designed for self-learning to provide Career Guidance Practitioners with a collection of information on the topics of digital transformation and green jobs from an European perspective and is supplemented by an extensive collection of links and a bibliography, which serves as a kind of "reference book" that accompanies the practitioners through the entire CareerBot training. Our aim is to offer the practitioners as much background information as possible in order to prepare them optimally for the training with the CareerBot tool in the next modules.

Modul 1 offers also exercises to help practitioners to apply what they have learned. Finally, practitioners will discover a checklist on learning outcomes, which they may use to evaluate what they have learnt for themselves.

Although the issues of digitalisation and green jobs frequently overlap, we shall discuss them separately here to provide a clearer picture.

Learning Unit 1 - Digitalisation in Europe: Opportunities, Challenges, and Impacts

Digitalisation has become a significant driving force in Europe, reshaping various aspects of society, economy, and governance. In this chapter we want to explore the opportunities, challenges, and impacts of digitalisation in Europe. It examines the advancements made in digital technologies, the benefits they bring, and the potential challenges faced by individuals, industries, and governments. We want to provide insights into the current state of digitalisation in Europe and collaborative efforts to maximize the benefits of digital transformation for our societies.

Europe's Digital Revolution?

The "digital revolution" stands as a pivotal and overarching theme that significantly influences the growth and prosperity of European society[1]. To maximise the benefits of digital transformation, the European Union must position itself effectively in the global context and enhance its internal capabilities[2]. While there has been progress in the adoption of digital technologies by firms in the European Union, it has not yet closed the gap with the United States[3].

However, Europe possesses untapped potential; by doubling their digital intensity, even the least advanced European nations could contribute €2.5 trillion to GDP by 2025, thus augmenting GDP growth by 1 percent annually over the coming decade[4].

Although most European countries are progressing in their digital transformation efforts, there exists considerable variation in the adoption of key digital technologies by businesses among different nations[5].

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[1] European Economic and Social Committee. (2019). Quality of life in the digital age. Retrieved from https://www.eesc.europa.eu/sites/default/files/files/qe-01-19-295-en-n.pdf

[2] European Investment Bank. (2023). Digitalisation in Europe 2022-2023. Retrieved from https://www.eib.org/attachments/lucalli/20230112_digitalisation_in_europe_2022_2023_en.pdf

[3] European Investment Bank. (2021). Digitalisation in Europe 2020-2021. Retrieved from https://www.eib.org/en/publications/digitalisation-in-europe-2020-2021

[4] McKinsey & Company. (2016). Digital Europe: Realising the continent's potential. Retrieved from https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/digital-europe-realising-the-continents-potential

[5] Smart Energy International. (2021). Digitalisation in Europe: Here's how your country ranks. Retrieved from https://www.smart-energy.com/digitalisation/digitalisation-in-europe-heres-how-your-country-ranks/amp/

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The EU's Digital Strategy

The EU's digital strategy is focused on harnessing the potential of digital transformation for the benefit of individuals and businesses while also working towards its objective of a carbon-neutral Europe by 2050[6].

This strategy revolves around enhancing Europe's digital sovereignty, setting standards independently rather than following the lead of others, with a particular emphasis on data, technology, and infrastructure. The EU has initiated several measures to achieve these objectives, encompassing the assurance of a secure online environment, promotion of fair and open digital markets, strengthening of Europe's competitiveness in semiconductor technologies, and empowering individuals with control over their data sharing.

Furthermore, the strategy aims to utilise artificial intelligence (AI) to enhance healthcare, transport, manufacturing, and sustainable energy, while establishing a secure European data space.

Digitalisation and Economic Growth

Digitalisation exerts a significant impact on economic growth within the European Union. The adoption of digital technologies has the potential to enhance productivity, reduce costs, and stimulate innovative business models, thereby contributing to economic expansion. Multiple studies have explored the relationship between digitalisation and economic growth, employing various approaches such as econometric models, analyses of digitalisation levels among EU enterprises, and surveys of large companies. These studies consistently highlight the positive correlation between digitalisation and improved economic performance[7].

Digitalisation for a Sustainable Europe

Digitalisation plays a pivotal role in promoting sustainability in Europe by reshaping business models and creating new sources of revenue and value[8]. Digital technologies can contribute to the reduction of greenhouse gas emissions, the enhancement of energy efficiency, and the promotion of circular economy practices. The EU has launched various initiatives to advance digitalisation for a sustainable Europe, including the European Green Deal, which

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[6] European Investment Bank. (2023). Digitalisation in Europe 2022-2023. Retrieved from https://www.eib.org/attachments/lucalli/20230112_digitalisation_in_europe_2022_2023_en.pdf
[7] McKinsey & Company. (2016). Digital Europe: Realising the continent's potential. Retrieved from https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/digital-europe-realising-the-continents-potential
[8] European Investment Bank. (2023). Digitalisation in Europe 2022-2023. Retrieved from https://www.eib.org/attachments/lucalli/20230112_digitalisation_in_europe_2022_2023_en.pdf

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aims to make Europe the first climate-neutral continent by 2050. Additionally, the Circular Economy Action Plan and Sustainable Finance Action Plan aim to foster a circular economy and direct investments towards sustainability, respectively.

In conclusion, digitalisation serves as a driving force behind both economic growth and sustainability in Europe. The EU's proactive approach, through numerous initiatives, underscores its commitment to harnessing digitalisation for the benefit of its citizens and the environment. As the digital transformation continues to evolve, it is poised to play an increasingly pivotal role in shaping Europe's future.

Digitalisation – The European Way

Following the European Commission and related European Agencies, the European way to a digitalised economy and society is about solidarity, prosperity and sustainability, anchored in empowerment of its citizens and businesses, ensuring the security and resilience of its digital ecosystem and supply chains. Policymakers need to gain knowledge that will help to address questions about effective regulation, skills needs, how to ensure social protection in its broadest sense and balancing the demands of companies, societies and individuals in exploiting the great potential of digitalisation.

Responding to the way digital technology is changing the lives of EU citizens, one of the European Commission's priorities for the period 2019–2024 is to create a Europe fit for the digital age, leading the transition to a healthy planet and a new digital world through its **European Digital Strategy 2020–2025**. Launched in February 2020, the Strategy aims to empower people with a new generation of technologies, helping to support the 'just transition' to a climate-neutral Europe via the European Green Deal.

As part of its **Digital Services Act package**, published on 15 December 2020, the Commission proposed two legislative initiatives to upgrade rules governing digital services in the EU: the Digital Services Act (DSA) and the Digital Markets Act (DMA). These initiatives will change the way companies offer and use digital services. In response to the rapid development of platform work in the EU, the Commission launched a first-stage consultation of the social partners on 24 February 2021 on how to **protect people working through digital platforms**, followed by a second-stage consultation on 15 June 2021.

On 9 March 2021, the Commission issued its Communication setting out the vision for **Europe's digital decade**, outlining a clear compass towards a successful digital transformation by 2030 in areas such as connectivity, skills and digital public services.

- ▪ European Commission: The European Digital Strategy

- ▪ European Commission: Revised Skills Agenda for Europe

- European Commission: [The Digital Services Act package](#)

- European Commission: [Protecting people working through platforms: Commission launches second-stage consultation of social partners](#)

- EUR-Lex: [2030 Digital Compass: the European way for the Digital Decade](#)

In 2020, the European social partners approved an autonomous framework agreement on digitalisation.

- ETUC: [European Social Partners' Framework Agreement on Digitalisation (PDF)](#)

Eurofound's work on digitalisation links in with the Commission's 2019–2024 priority on a Europe fit for the digital age.

- About Eurofound: [EU priorities: Working for a strong social Europe](#)

- European Commission: [A Europe fit for the digital age](#)

Digitalisation in Europe presents both opportunities and challenges. Here are the sources we want to present to Practitioners, working with the CareerBot to get an understanding of ongoing and planned activities on European level focussing on the opportunities:

1. A Europe fit for the digital age

Empowering people with a new generation of technologies: Digital technology is revolutionizing the way people lead their lives. The European Union's digital strategy is committed to harnessing this transformation for the benefit of individuals and enterprises, all while contributing to the ambitious goal of achieving a carbon-neutral Europe by 2050.

Website: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en
YouTube link: https://www.youtube.com/watch?v=wU6PQL3lZxs

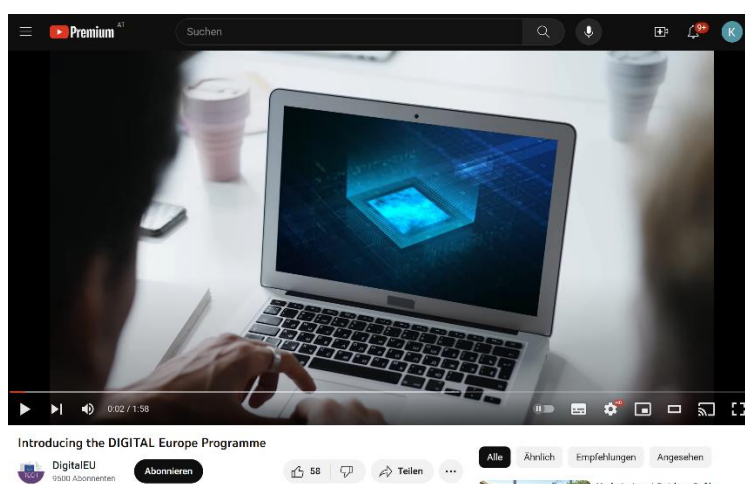Module 1 – Digital Transformation & Green Jobs
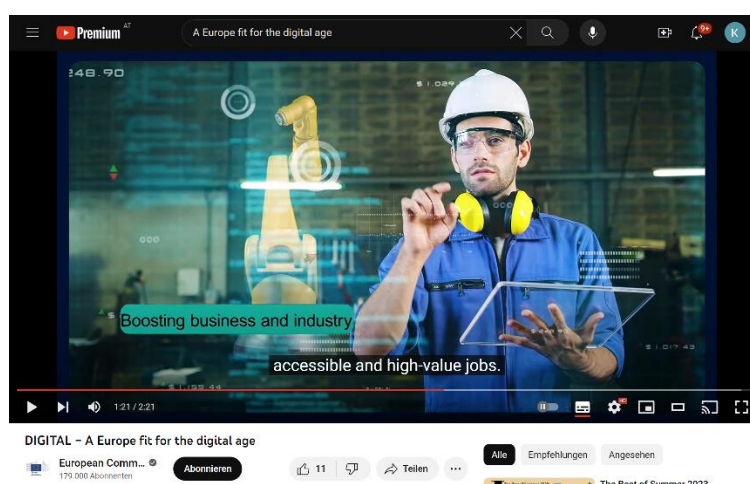
2. The Digital Europe Programme (DIGITAL)

is an EU funding programme that aims to bring digital technology to businesses, citizens, and public administrations. It supports projects in five key capacity areas: supercomputing, artificial intelligence, cybersecurity, advanced digital skills, and ensuring a wide use of digital technologies across the economy and society.

Website: https://digital-strategy.ec.europa.eu/en/activities/digital-programme
YouTube link: https://www.youtube.com/watch?v=_VkzyMgjD4E

3. DIGITALEUROPE - a stronger Digital Europe

DIGITALEUROPE is a trade association that represents the digital technology industry in Europe. They have published a call to action towards 2025 that outlines their vision for a stronger digital Europe. Their resources cover topics such as digital skills, innovation, and sustainability.

Website: https://www.digitaleurope.org/policies/strongerdigitaleurope/
YouTube link: https://www.youtube.com/watch?v=im1zIyqxBGg&t=25s

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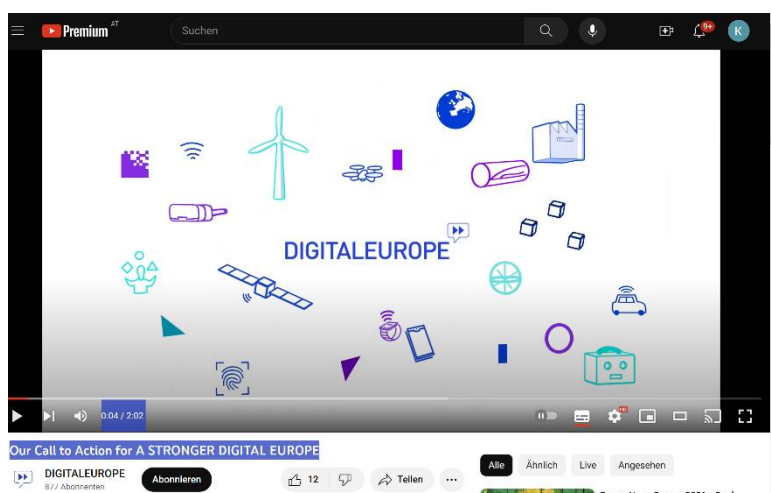
4. Eurofound: Digitalisation

is a European Union agency that provides research and analysis on social and work-related issues. Their website has a section on digitalisation that covers topics such as the impact of digitalisation on employment, skills, and working conditions.
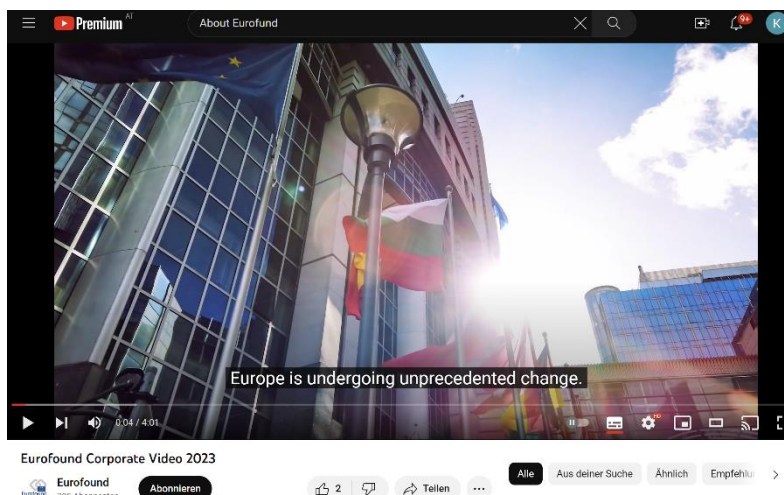
> "Eurofound research on anticipating and managing the impact of change will explore the impact of digitalisation on working life, as well as the links with the transition to a climate-neutral economy. This will cover employment levels, working conditions, social protection and employment relations. In the context of restructuring and digitalisation, analysing the role of industrial relations and social dialogue in implementing such change is also important, as is the impact on society and citizens."

Website: https://www.eurofound.europa.eu/topic/digitalisation
YouTube link: https://www.youtube.com/watch?v=lEB9mMm74Fs

See the Eurofund Corporate Video 2023

Eurofound Corporate Video 2023

5. The Organisation for Economic Co-operation and Development (OECD)

has a section on digital trade that covers topics such as the opportunities and challenges of digital trade, barriers to digital trade, and policy considerations.

Website: https://www.oecd.org/trade/topics/digital-trade/

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OECD published the Digital Trade Inventory, which you can access here:
https://www.oecd.org/trade/topics/digital-trade/documents/oecd-digital-trade-inventory-policy-brief.pdf
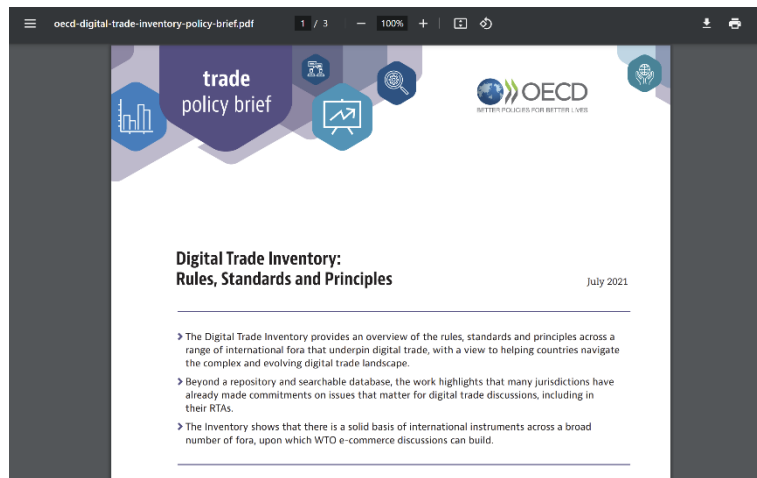
Challenges in Digitalisation for Europe

Digitalisation, the process of integrating digital technologies into various aspects of society and economy, has brought about significant advancements but also poses notable challenges for European countries. In this chapter, we will explore the key challenges that European nations face in digitalisation:

1. **Disparities in Digital Infrastructure:** Despite considerable progress, Europe continues to grapple with substantial disparities in digital infrastructure across its regions. A significant 14% of businesses still encounter limited access to essential digital infrastructure[9].

2. **Uneven Digitisation:** Europe exhibits varying degrees of digitisation, with stark gaps between digital leaders and laggards. This uneven digitisation extends to different sectors and firms, resulting in a fragmented digital landscape.[10]

3. **Shortage of Specialists:** A critical challenge in digitalisation is the scarcity of skilled specialists in the labour market. The demand for digital expertise far exceeds the available workforce, hindering the smooth transition towards a digital economy[11].

4. **Conservative Business Attitudes**: Many companies, particularly smaller ones, adopt a conservative approach towards digitalisation. This reluctance to embrace new technologies and digital strategies impedes progress in this transformative journey[12].

5. **Fear of New Technologies:** A notable apprehension towards adopting new technologies is prevalent among the German public, exemplifying the challenges of overcoming societal reservations about digitalisation[13].

6. **Diverse Perceptions:** There exists considerable variation in how EU citizens perceive digitalisation. These divergent perceptions can significantly impact the adoption of digital technologies and the pace of digitisation in different regions[14].

Digitalisation is rapidly transforming Europe's economic and social landscape. While significant progress has been made, the region still faces formidable challenges, including digital infrastructure disparities, uneven digitisation, and workforce shortages. Nevertheless,

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[9] European Investment Bank. (2023). Digitalisation in the European Union: Progress, challenges and future opportunities. Retrieved from https://www.eib.org/en/press/all/2023-203-digitalisation-in-the-european-union-progress-challenges-and-future-opportunities.

[10] (ibid.)

[11] Kostakis, V., & Giotitsas, C. (2020). Digital divide, skills and perceptions on digitalisation in the European Union—Towards a smart labour market. PloS one, 15(4), e0231062. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7179921/

[12] (ibid.)

[13] (ibid.)

[14] (ibid.)

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the potential benefits of digitalisation, such as economic growth and sustainability, are substantial.

- **Economic Growth:** Digitalisation can serve as a catalyst for economic growth by enhancing productivity, reducing operational costs, and introducing innovative business models. These developments can foster economic expansion and bolster competitiveness[15].

- **Sustainability:** Digital technologies have the potential to make Europe more sustainable by transforming existing business models and generating new sources of revenue and value. This includes reducing greenhouse gas emissions, increasing energy efficiency, and promoting circular economy practices[16].

Addressing these challenges is crucial for Europe to fully harness the potential of digitalisation and achieve its digital transformation goals. By embracing digitalisation strategically and proactively, European countries can chart a path towards a prosperous and sustainable digital future.

Policies and Frameworks – a selection:

- **The Digital Services Act:** ensuring a safe and accountable online environment https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-services-act-ensuring-safe-and-accountable-online-environment_en

- **The Digital Markets Act:** ensuring fair and open digital markets https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en

- **European Digital Identity:** ensuring a personal digital wallet for EU residents https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-digital-identity_en

- **European data strategy:** making the EU a role model for a society empowered by data: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en

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[15] European Economic and Social Committee. (2019). Digitalisation – Challenges for Europe. Retrieved from https://www.eesc.europa.eu/sites/default/files/files/qe-01-19-295-en-n.pdf.
[16] (ibid.)

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▪ **Excellence and trust in artificial intelligence:** Trustworthy AI can bring many benefits, such as better healthcare, safer and cleaner transport, more efficient manufacturing, and cheaper and more sustainable energy. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/excellence-and-trust-artificial-intelligence_en

Exercise: Collect your reflections

Objective: You should collect your thoughts in your Training Reflection Diary (Annex of Modul 6) to encourage critical thinking about the opportunities and challenges of digitalisation in Europe.

Questions you might find useful:

▪ "What are the key opportunities presented by digitalisation in Europe, and how might they apply to your role?"
▪ "What challenges do European countries face in digitalisation, and how might these challenges be overcome?"
▪ "How can digitalisation contribute to economic growth and sustainability, and what role can the EU play in this?"
▪ "What policies and frameworks discussed in the content resonate with your understanding of digitalisation in Europe?"

These prompts can serve as starting points for your reflections.

Checklist: What I know about "Digitalisation"

What I know on the subject of "Digitalisation"		
#	**Theme/Question**	**YES / NO**
1	**Impact of Digitalisation:** Can you describe the key ways in which digitalisation is impacting European society, economy, and governance?	
2	**Global Positioning:** How important is it for Europe to position itself effectively in the global digital landscape, and why?	
3	**Challenges and Opportunities:** What are the main challenges and opportunities associated with digitalisation in Europe, particularly in terms of disparities, economic growth, and sustainability?	
4	**EU's Digital Strategy:** Could you outline the key elements of the EU's digital strategy, and how does it contribute to the region's digital transformation and sustainability goals?	
5	**Digitalisation and Economic Growth:** Explain the relationship between digitalisation and economic growth, including the ways in which digital technologies can drive productivity and innovation.	
6	**Digitalisation for Sustainability:** How does digitalisation play a role in promoting sustainability in Europe, and what specific benefits can it bring to the environment and the economy?	

NOTE: These questions can help you and other learners assess their grasp of the key concepts and insights presented in the training content about digitalisation in Europe.

Find the answers here:

1. Impact of Digitalisation: Digitalisation is significantly impacting European society, economy, and governance. It has transformed the way people live, work, and interact. In society, it has influenced how individuals access information, communicate, and participate in various aspects of life. In the economy, digitalisation has led to the emergence of new business models, increased automation, and improved productivity. In governance, it has enhanced data-driven decision-making and the delivery of public services.

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2. Global Positioning: Europe's effective positioning in the global digital landscape is crucial for maximising the benefits of digital transformation. It ensures that European businesses remain competitive in the global market, fosters innovation, and strengthens digital sovereignty, allowing Europe to set its standards and policies rather than relying on external frameworks.

3. Challenges and Opportunities: Challenges in digitalisation in Europe include: Disparities in digital infrastructure access; Uneven digitisation, with variations among sectors and firms; Shortage of specialists in the labour market; Conservative attitudes of some companies, especially smaller ones; Fear of new technologies among certain populations; Diverse perceptions about digitalisation among EU citizens. Opportunities include economic growth potential, increased productivity, cost reduction, and sustainability through the reduction of greenhouse gas emissions and promotion of circular economy practices.

4. EU's Digital Strategy: The EU's digital strategy focuses on: Enhancing digital sovereignty; Setting independent standards in areas like data, technology, and infrastructure; Achieving a carbon-neutral Europe by 2050; Ensuring a safe online environment; Promoting fair and open digital markets; Strengthening competitiveness in semiconductor technologies; Empowering individuals with control over their data sharing; Utilising artificial intelligence (AI) for healthcare, transport, manufacturing, and sustainable energy; Establishing a secure European data space.

5. Digitalisation and Economic Growth: Digitalisation and economic growth are closely linked. Digital technologies enhance economic growth by increasing productivity through automation and data analytics, reducing operational costs, and introducing innovative business models that create new opportunities in various industries. Studies consistently show a positive correlation between digitalisation and improved economic performance.

6. Digitalisation for Sustainability: Digitalisation plays a pivotal role in promoting sustainability in Europe by: Transforming business models and promoting circular economy practices. Reducing greenhouse gas emissions through energy-efficient technologies. Fostering clean and sustainable energy sources. Enhancing environmental monitoring and resource management. Supporting the goals of the European Green Deal and Sustainable Finance Action Plan to achieve a climate-neutral continent by 2050.

Note: These answers provide a comprehensive understanding of the key concepts and insights related to digitalisation in Europe as presented in the training content.

In the next Learning Unit we will find out more about Green Jobs in Europe:

> *"Digitalisation is the ongoing integration of digital technologies and digitised data across the economy and society. The twin green and digital transitions accelerate the pace of change affecting all aspects of our lives and will have many consequences for the future of work. Innovations and developments in advanced technologies are having significant effects in almost all areas of the economy. Work, its content, its organisation and design, its regulation and protection, are all undergoing change. This also often brings a blurring of boundaries between different dimensions of work and between work and non-work activity."*

> *Eurofound: https://www.eurofound.europa.eu/topic/digitalisation*

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Learning Unit 2 - Green Jobs in Europe: New Demands and Opportunities

The Green Economy in Europe

The green economy is an economic system that aims to reduce environmental risks and ecological scarcities while promoting sustainable development. Europe has been at the forefront of the green economy, with several initiatives aimed at promoting a successful transition.

The EU has launched several initiatives to promote the green economy, including the European Green Deal, the Circular Economy Action Plan, and the Sustainable Finance Action Plan.

The expansion of the green economy in Europe requires new skills and competencies, and the EU has launched several initiatives to address this need, including the European Skills Agenda for sustainable competitiveness, social fairness, and resilience, and the European Green Deal Skills Initiative. Assessing policy choices, strategies, and transitional pathways is crucial for the expansion of the green economy in Europe.

The promotion of the green economy in Europe involves a variety of measures ranging from economic instruments, such as taxes, incentives, and subsidies, to regulatory measures, such as standards and regulations[17].

In this chapter, we present the most central one: The European Green Deal, which pursues ambitious goals, but is also much discussed and criticised.

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[17] Interreg Europe. (2020). Green economy policies. See: https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1582275673.pdf

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A European Green Deal

This ambitious initiative strives to make Europe the world's first climate-neutral continent by 2050. Digitalisation plays a pivotal role in achieving this goal by enabling sustainable practices across various sectors.

Website: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

YouTube: https://www.youtube.com/watch?v=mfjiOX3TtC8
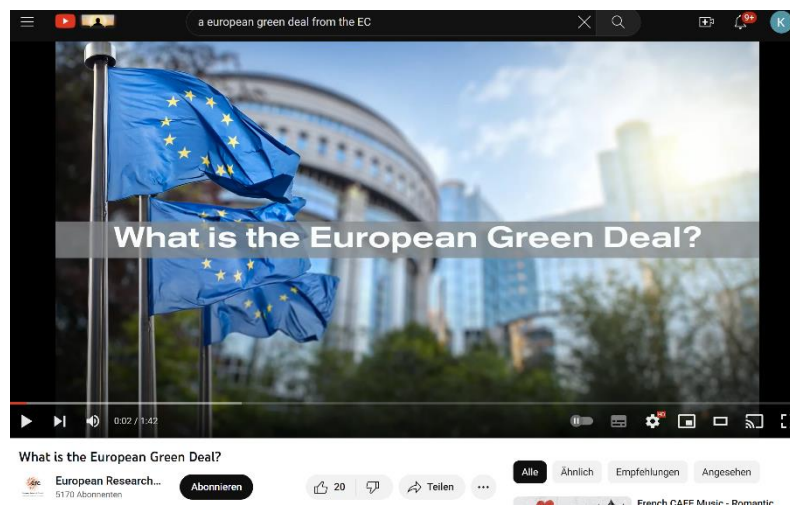
The Main Elements of the European Green Deal

The European Green Deal covers all sectors of the economy, notably transport, energy, agriculture, buildings, and industries such as steel, cement, ICT, textiles, and chemicals[18]. The main elements of the European Green Deal are:

- Climate neutrality by 2050: The EU aims to achieve climate neutrality by 2050, which means that greenhouse gas emissions will be reduced to net-zero levels.
- A 55% reduction in greenhouse gas emissions by 2030: The EU has set a target of reducing greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels[19].
- A circular economy: The EU aims to boost the efficient use of resources by moving to a clean, circular economy and stop climate change, revert biodiversity loss, and cut pollution.

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[18] Switchtogreen.eu. (2023). The EU Green Deal – a roadmap to sustainable economies. https://www.switchtogreen.eu/the-eu-green-deal-promoting-a-green-notable-circular-economy/

[19] European Commission. (2023). A European Green Deal. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

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- Investments in sustainable technologies: The EU will invest in sustainable technologies, such as renewable energy, energy-efficient buildings, and sustainable transport[20].
- A just transition: The EU aims to ensure that the transition to a sustainable economy is just and inclusive for all, leaving no person and no place behind.

The Benefits of the European Green Deal

are summarised by the European Commission[21] as follows:

- Fresh air, clean water, healthy soil, and biodiversity
- Renovated, energy-efficient buildings
- Healthy and affordable food
- Sustainable transport
- New jobs and economic growth

In this Learning Unit we will focus on the last point.

New Jobs in the Green Economy in Europe

The green economy is an economic system that aims to reduce environmental risks and ecological scarcities while promoting sustainable development. The expansion of the green economy in Europe is being accelerated by concerns relating to energy generation, resource efficiency, and environmental protection[22]. The green economy requires new skills and competencies, and the EU has launched several initiatives to address this need (see chapter above).

The Potential of Green Jobs

The transition to a green economy has the potential to provide opportunities for job creation and sustainable economic growth[23]. According to the International Labour Organization (ILO), a shift to a greener economy could create 24 million new jobs globally by 2030 if the right policies are put in place.

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[20] Consilium.europa.eu. (n.d.). European Green Deal. https://www.consilium.europa.eu/en/policies/green-deal/

[21] European Commission. (2023). A European Green Deal. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

[22] Cedefop. (2015). Future skill needs for the green economy.
https://www.cedefop.europa.eu/files/5501_en.pdf

[23] International Labour Organization. (2023). Green jobs, green economy, just transition and related concepts. https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_883704.pdf

The new jobs will be created by

- adopting sustainable practices in the energy sector, using electric vehicles, and increasing energy efficiency in existing and future buildings[24].
- The circular economy, which involves reusing, repairing or recycling, increasing sustainable manufacturing and consumption, will also create green jobs[25].

Future Skill Needs for Green Jobs

The expansion of the green economy in Europe requires new skills and competencies. The EU has launched several initiatives to address this need, including the European Skills Agenda for sustainable competitiveness, social fairness, and resilience, and the European Green Deal Skills Initiative[26].

The European Skills Agenda

aims to ensure that people develop the skills and competencies needed for the green and digital transitions. The European Skills Agenda is a five-year plan to help individuals and businesses develop more and better skills and to put them to use, by:

- strengthening **sustainable competitiveness**, as set out in the European Green Deal
- ensuring **social fairness**, putting into practice the first principle of the European Pillar of Social Rights: access to education, training and lifelong learning for everybody, everywhere in the EU
- building **resilience** to react to crises, based on the lessons learnt during the COVID-19 pandemic

Website: https://ec.europa.eu/social/main.jsp?catId=1223&langId=en

> *„The rapid shift towards a climate neutral Europe and digital transformation is changing the way we work, learn, take part in society and lead our everyday lives. Europe can only grasp these opportunities if its people develop the right skills."*

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[24] United Nations Sustainable Development. (2019). Green economy could create 24 million new jobs. https://www.un.org/sustainabledevelopment/blog/2019/04/green-economy-could-create-24-million-new-jobs/
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Have a look on the adopted **Upskilling Pathways Evaluation Package** provided by by the EC: https://ec.europa.eu/social/main.jsp?langId=en&catId=1223&furtherNews=yes&newsId=10637

The European Green Deal Skills Initiative

is an initiative launched by the EU to provide upskilling and reskilling opportunities for workers in sectors affected by the green transition. The initiative aims to ensure that people develop the skills and competencies needed for the green and digital transitions and is part of the European Skills Agenda for sustainable competitiveness, social fairness, and resilience[27]. The initiative is designed to help workers acquire the skills and competencies needed to take advantage of the opportunities created by the green transition, such as new jobs in renewable energy, energy efficiency, and circular economy practices.

CEDEFOP launched a website with the title: **Get your skills together for Europe's green deal**

Website: https://www.cedefop.europa.eu/en/news/get-your-skills-together-europes-green-deal

They address the difficulty of building green talents. The European Green Deal (EGD) will surely pose a massive challenge to EU Member States' skills systems, which will be tasked with altering the population's abilities to meet the needs of the transition to a carbon-neutral economy. The question is whether countries with better-functioning skill development processes are more likely to be environmentally friendly.

Solid skill development guarantees higher-quality education, which has the ability to nurture environmentally conscious young persons. It also encourages creativity and R&D investment, which can lead to cutting-edge green technology developments.[28]

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Skills required for green jobs – chances for young people

vary depending on the specific job and sector. However, the following are some of the skills that are commonly required for green jobs in Europe, according to various sources. Following our research the following skills seem to be of central importance:

Skills required for green jobs in Europe are largely technical, supporting medium and highly-skilled jobs[29]. The transition to a green economy requires new skills and competencies that are not currently widely available in the workforce. The European Commission and the European Centre for the Development of Vocational Training (Cedefop) have identified the skills required for green jobs in Europe, including[30]:

- Technical skills: These include skills related to renewable energy, energy efficiency, and circular economy practices
- Soft skills: These include skills related to communication, teamwork, and problem-solving
- Digital skills: These include skills related to data analysis, programming, and digital marketing

In the research paper "Green jobs, definitional issues, and the employment of young people: An analysis of three European Union countries" Sulich (et al.) states that Green jobs can be a solution for young, unemployed people, not only offering them employment but also allowing them to become part of the solution to climate change[31]:

- An increasing emphasis on building the green economy provides excellent employment opportunities for young people seeking their first job.
- However, young people with low education may face challenges in accessing green jobs.
- Efforts to identify skill needs for jobs in a low-carbon economy have been taken most prominently by the regions

The European Green Deal Skills Initiative aims to promote social fairness and inclusion by ensuring that all workers have access to the training and education they need to participate in the green economy.

The practical responsibility for implementation now rests with the governments of the EU member states. In any case, it would be preferable if young people with limited education were not overlooked during the implementation process.

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How are European countries addressing the skills gap for green jobs among young people with low education?

European countries are addressing the skills gap for green jobs among young people with low education in various ways. Here are some examples:

- Launching initiatives to address the skills gap: The **Green Jobs for Youth Pact**, launched at COP27, aims to address the skills gap for green jobs among young people[32].

- The **European Green Deal Skills Initiative** is another initiative launched by the EU to provide upskilling and reskilling opportunities for workers in sectors affected by the green transition[33].

- **Providing education and training**: Despite wanting jobs to combat climate change, young people do not understand enough about green skills[34].

- **Increasing awareness**: Lack of awareness is another barrier to accessing green jobs among young people with low education. A global survey by Plan International found that only one in three young people feel competent in the skills they believe are needed to do jobs that tackle climate change[35].

- **Emphasizing the potential of green jobs**: Green jobs can be a solution for young, unemployed people, not only offering them employment but also allowing them to become part of the solution to climate change[36].

- An increasing **emphasis on building the green economy** provides excellent employment opportunities for young people seeking their first job[37].

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[32] Climate Action for Jobs. (2022). Launching the Green Jobs for Youth Pact at COP27. https://www.climateaction4jobs.org/launching-the-green-jobs-for-youth-pact-at-cop27/

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[36] ScienceDirect. (2020). Green jobs, definitional issues, and the employment of young people: An analysis of three European Union countries. https://www.sciencedirect.com/science/article/abs/pii/S0301479720302498

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Supporting Jobseekers

Jobseekers interested in pursuing green jobs can access various resources and support services to help them make informed career decisions. Here are some key avenues for support:

Websites:

- Explore specialised job boards and websites dedicated to green jobs. Examples include GreenJobs[38], Eco Careers[39] and Euro Climate Jobs[40]. These platforms list job opportunities in environmentally friendly sectors.

Government Initiatives:

- Check for government programs and initiatives that promote green jobs. Many governments offer resources, training programs, and job placement assistance in sectors such as renewable energy, conservation, and sustainable development.

Training and Education Programs:

- Explore training and education programs that can enhance your client's skills in green technologies and sustainability. Look for courses, workshops, and certifications that align with career interests.

Networking Events:

- Attend conferences, workshops, and networking events in the green sector. Building connections with professionals in the field can open doors to job opportunities and provide insights into the industry.

Online Resources and Webinars:

- Stay informed about trends and developments in green industries by participating in webinars, online forums, and following relevant blogs. Organisations often share valuable insights and job opportunities through these channels.

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[38] https://www.greenjobs.co.uk/
[39] https://jobs.ecocareers.org/
[40] https://www.euroclimatejobs.com/

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Social Media and Online Communities:

- Join social media groups and online communities dedicated to green jobs and sustainability. Engaging with professionals in these spaces can provide valuable insights and networking opportunities.

By combining these resources, jobseekers can access a comprehensive support system to make informed decisions and pursue rewarding careers in green industries.

Exercise: Green Jobs Initiatives in your country

In this Learning Unit you have learned about key initiatives at the European level in this learning unit on the topic of green jobs in Europe. Now, it's your turn:

- Check to see what initiatives are being implemented or have already been implemented in your country.

- Make a note of those that seem most useful to you for working with your clients, and if you can, gather a good practise example.

- Add your notes to your Training Reflection during the training course.

Checklist: QUIZ on "Green Jobs" in Europe

QUIZ: What I know on the subject of "Green Jobs" in Europe

#	Theme/Question	Choose a-d
1	**Question 1:** **What is the primary goal of the green economy in Europe?** a) To maximize profits b) To reduce environmental risks and promote sustainable development c) To minimize regulations d) To exploit natural resources	
2	**Question 2:** **Which initiative strives to make Europe the world's first climate-neutral continent by 2050?** a) European Skills Agenda b) Sustainable Finance Action Plan c) European Green Deal d) Circular Economy Action Plan	
3	**Question 3:** **What are some benefits associated with the European Green Deal?** a) Improved air quality, healthy soil, and affordable food b) Increased greenhouse gas emissions and pollution c) Reduced biodiversity and energy inefficiency d) Fewer job opportunities and economic stagnation	
4	**Question 4:** **What potential does the green economy offer in terms of job creation, according to the International Labour Organization (ILO)?** a) 10 million new jobs globally by 2030 b) 24 million new jobs globally by 2030 c) 50 million new jobs globally by 2050 d) Only few job opportunities in the green economy	
5	**Question 5:** **What types of skills are commonly required for green jobs in Europe?** a) Technical skills, soft skills, and digital skills b) Soft skills and marketing skills c) Technical skills and digital skills d) Technical skills only	

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6	**Question 6:** **How are European countries addressing the skills gap for green jobs among young people with low education?** a) By ignoring the issue as it is not a priority b) Through initiatives like the Green Jobs for Youth Pact and the European Green Deal Skills Initiative c) By reducing investments in education and training d) By discouraging young people from pursuing green careers

Have fun 😊

Here are the answers:

1. **Answer: b** - The primary goal of the green economy in Europe is to reduce environmental risks and promote sustainable development.
2. **Answer: c** - The initiative striving to make Europe the world's first climate-neutral continent by 2050 is the European Green Deal.
3. **Answer: a** - Some benefits associated with the European Green Deal include improved air quality, healthy soil, and affordable food.
4. **Answer: b** - According to the International Labour Organization (ILO), the green economy has the potential to create 24 million new jobs globally by 2030.
5. **Answer: a** - Commonly required skills for green jobs in Europe include technical skills, soft skills, and digital skills.
6. **Answer: b** - European countries are addressing the skills gap for green jobs among young people with low education through initiatives like the Green Jobs for Youth Pact and the European Green Deal Skills Initiative.

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Websites & Videos on Digitalisation & Green Jobs

Digitalisation – European level

A Europe fit for the digital age
Website: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en
YouTube link: https://www.youtube.com/watch?v=wU6PQL3lZxs

The Digital Europe Programme (DIGITAL)
Website: https://digital-strategy.ec.europa.eu/en/activities/digital-programme
YouTube link: https://www.youtube.com/watch?v=_VkzyMgjD4E

DIGITALEUROPE - A STRONGER DIGITAL EUROPE
Website: https://www.digitaleurope.org/policies/strongerdigitaleurope/
YouTube link: https://www.youtube.com/watch?v=im1zIyqxBGg&t=25s

Eurofound: Digitalisation
Website: https://www.eurofound.europa.eu/topic/digitalisation
YouTube link: https://www.youtube.com/watch?v=lEB9mMm74Fs

Organisation for Economic Co-operation and Development (OECD)
Website: https://www.oecd.org/trade/topics/digital-trade/
OECD published the Digital Trade Inventory, which you can access here:
https://www.oecd.org/trade/topics/digital-trade/documents/oecd-digital-trade-inventory-policy-brief.pdf

Green Jobs in Europe

A European Green Deal

Website: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en
YouTube: https://www.youtube.com/watch?v=mfjiOX3TtC8

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The European Skills Agenda
Website: https://ec.europa.eu/social/main.jsp?catId=1223&langId=en

CEDEFOP: Get your skills together for Europe's green deal
Website: https://www.cedefop.europa.eu/en/news/get-your-skills-together-europes-green-deal

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