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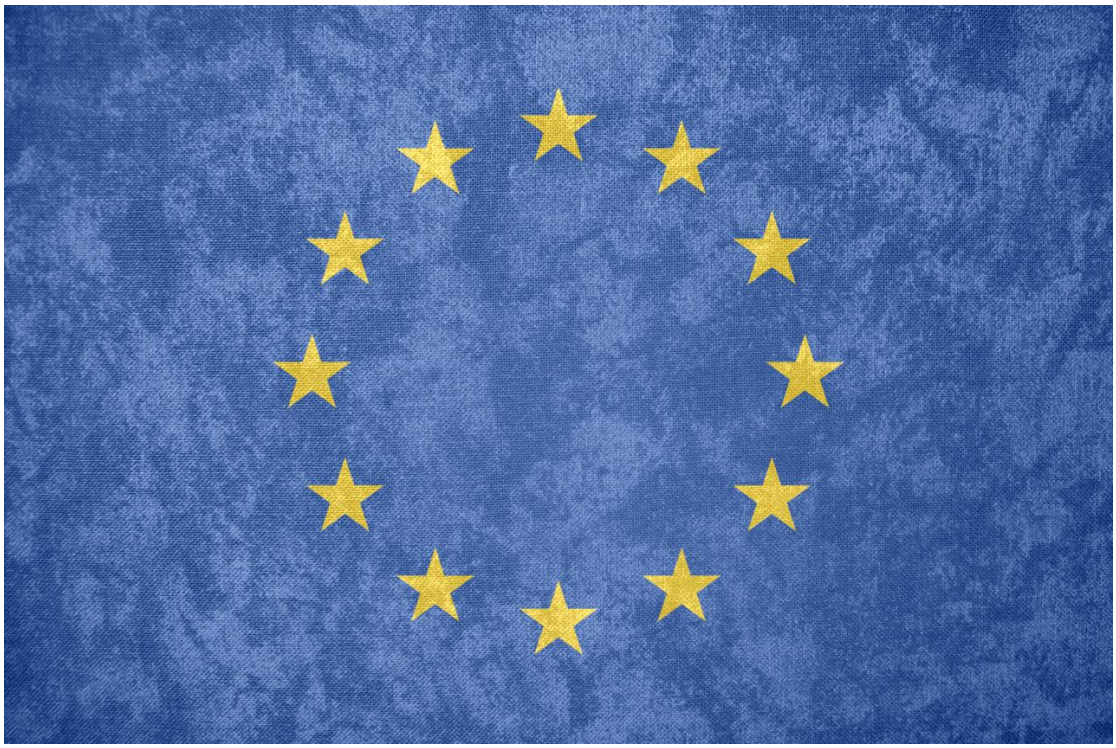

EUropa.S. 2022
European Parliament,
Industry, Research and Energy
(ITRE) Committee

Study Guide

Topic: *"Towards a Sustainable European Future: Accelerating the Digital Transformation"*

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Greeting of the Board

Dear Members of the European Parliament,

We would like to welcome you to EUropa.S 2022 and the notable ITRE Committee of the European Parliament. A Committee with great significance for stirring the future transition of the European Union. We are honoured to serve as Chairs of the Committee on Industry, Research and Energy (ITRE) of the European Parliament and share this experience with you. We are certain that you will contribute to the fullest of your abilities in this year's EUropa.S.

Our Committee will be responsible for discussing demanding yet current issues which need to be addressed efficiently. The shift to a Sustainable European future has become a top priority of the Union as the repercussions of the environmental crisis have become blatant. We are responsible for the adoption of a new ambitious industrial policy that is going to have a direct impact on our citizens' lives.

This study guide will be your axis during your research, as it is focused only upon general information about the topic. It will present you the main topics that will be discussed and will be the starting point of your research. Your main positions should be focused around your party's policy on the EU Green Deal. This particular strategy is descanted on the long-term effects and therefore is still under influence by the latest developments. We would strongly suggest that your study is up to date with the newest developments. To conclude, this process will be very exciting for us all. We are looking forward to hearing your ideas and admiring your debating skills. Do not hesitate to contact us should you have any inquiries regarding the topic or the Rules of procedure. We are looking forward to meeting you in person during the conference!

Kind regards,

The Board of the ITRE Committee

Introduction to the ITRE Committee

The European Parliament's political and legislative work is carried out by 20 standing committees and two subcommittees, one of which is the ITRE Committee. At the start of a new legislature, Parliament decides which Members will sit in which committees based on the preferences expressed by them. It is highly crucial for the MEPs but also for the procedure that will follow because their focus will be set on these subjects. Committees play a crucial role in policymaking as they are responsible for preparing Parliament's positions, notably on new legislative proposals.[1]

The Committee on Industry, Research and Energy (ITRE) of the European Parliament is responsible for the adoption of legislation upon several of the main policy areas of the European Union. Subject to the Committee's mandate are the following areas of interest:

1. the Union's industrial policy, and the application of new technologies, including measures related to SMEs.
2. the Union's research and innovation policy, including science and technology
3. European space policy.
4. the activities of the Joint Research Centre, the European Research Council, the European Institute of Innovation and Technology and other projects in the same area.
5. Union measures relating to energy policy
6. the Euratom Treaty and Euratom Supply Agency.
7. the information technology and communications networks and services as well as the activities of the European Union Agency for Network and Information Security (ENISA)[2]

[1]European Parliament. 2016. *A quick look at Parliamentary Committees*. [online] Available at: <https://www.europarl.europa.eu/cmsdata/committees/booklet/Committees-quick-look-EN-web.pdf> [Accessed 26 November 2021]

[2] European Parliament. 2021. *Rules of Procedure of the European Parliament*. [online] Available at: <https://www.europarl.europa.eu/doceo/document/RULES-9-2021-09-13_EN.pdf> [Accessed 26 November 2021]

Key Words and Definitions

5G/6G: 5G and 6G are short for 5th and 6th generation wireless networks. They are used for highest frequencies and provide substantially higher capacity and much lower latency.

AI: Artificial Intelligence is the simulation of human intelligence processes by machines, especially computer systems.

Big Data: Large data sets that may be analysed computationally to reveal patterns, trends, and associations, especially relating to human behaviour and interactions.

Blockchain: A system in which a record of transactions made in bitcoin, or another cryptocurrency are maintained across several computers that are linked in a peer-to-peer network.

Circular Economy: A model of production and consumption which involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products as long as possible.

Crypto assets: They are digital assets which use cryptographic techniques to generate a medium of exchange of financial transactions.

Cybersecurity: Stands for the state of being protected against the criminal or unauthorised use of electronic data or the measures taken to achieve this.

Digital Single Market: A DSM is one in which the free movement of persons, services and capital is ensured and where the individuals and businesses can seamlessly access and engage in online activities under conditions of fair competition.

Digital Transformation: The process of using digital technologies to create new business processes, culture, and customer experiences to meet changing business and market requirements.

Fintech: Computer programs and other technology used to support or enable banking and financial services.

IoT: The internet of things describes the network of physical objects that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet.

ICT: Information and communication technologies.

Net Neutrality: The concept that all data on the internet should be treated equally by corporations, such as internet service providers (ISPs) and governments regardless of content, user, platform, application, or device.

Smart Cities: A Place where traditional networks and services are made more efficient with the use of digital solutions for the benefit of its inhabitants and businesses.

Smart Grids: An electricity network allowing devices to communicate between suppliers to consumers, allowing them to manage demand, protect the distribution network, save energy, and reduce costs.

SMEs: Small and medium sized enterprises are non-subsidiary, independent firms which employ less than a given number of employees.

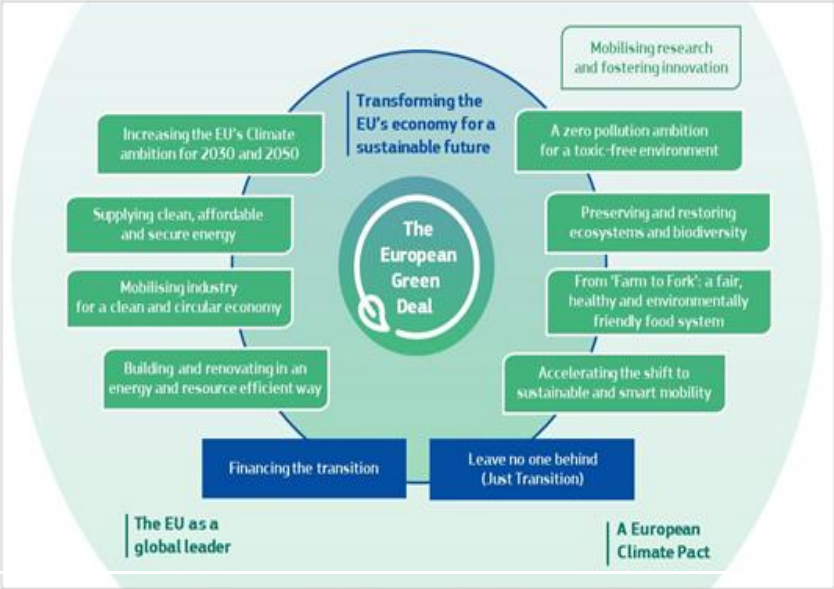
Super Computers: Extremely powerful computers

Discussion of the topic

Towards a Sustainable European Future: Accelerating the Digital Transformation: Introduction to the Topic

Climate change along with the Coronavirus (Covid-19) pandemic has made abundantly clear that there needs to be a shift in our mindset, policies, and everyday life, in order for a green friendly future to be achieved. Greta Thunberg, an environmental activist, stated in the Austrian World Summit in Vienna "This is the biggest crisis humanity has ever faced". That statement is being substantiated by the EU, more specifically with the agenda of the new EU Green Deal.

The EU Green Deal sums up the strategy the EU member-states will have to commit in order to tackle the climate and environmental related challenges. These challenges include the creation of a competitive economy with resource efficiency and the well-being of its citizens. The ambition of this policy is to coordinate consumer protection, worker's rights while avoiding unsustainable practices.



The Committee on Industry, Research and Energy has to rethink policies for clean energy supply for the delivery of the EU Green Deal. So as to rethink policies for clean energy supply across the economy, industry, production and consumption, large-scale infrastructure, transport, food and agriculture, construction, taxation, and social benefits, it's essential to extend the worth given to protecting and restoring natural ecosystems, to the sustainable use of resources and to improving human health.

This is where transformational change will be potentially most beneficial for the EU economy, the society, and the natural environment. The EU should also promote and invest within the mandatory digital transformation, the tools that are essential for enabling the aforementioned changes. Renewable energy sources and the reduction of greenhouse emissions must be prioritized.

Another factor that makes the Green Deal necessary is the energy poverty and the rise of the power costs. The renewables will combine low costs for all the citizens along with a sustainable solution compared to the energy sources given at the present time.[3]

Moreover, the introduction of smart cities in the EU digital and ecological agenda as the Smart Cities Market place makes room for further integration of infrastructure and processes in energy, information, communication, and transportation.[4] Through smart cities the realisation of cutting emissions, creating more green spaces within cities, making public transport more digital and eco-friendlier are plausible. The strategy adopted by the EU focuses on sustainable practises such as upgraded water supply and waste disposal facilities and efficient ways to light and heat buildings with the introduction of new technologies and better building techniques. In addition, smart cities cut administrative related costs via the implementation of e-governance and thus improving the competitiveness and the quality of living of the citizens.

Historic Background

The concept of the EU Green deal was presented in December 2019 and its aim has been to create the first climate - neutral continent by 2050[5].

The Climate action includes clean energy, sustainable industry, buildings and renovations, sustainable mobility, eliminating pollution, farm to fork and research and development. This agenda is a very recent concept, so here is the timeframe of the New Green Deal as stated in the official site of the European Commission:

[3] Eur-lex. 2019. *The European Green Deal*. [online] Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN> [Accessed 25 November 2021]

[4] European Commission. 2020. *Energy and smart cities*. [online] Available at: <https://ec.europa.eu/energy/topics/technology-and-innovation/energy-and-smart-cities_en?redir=1> [Accessed 16 December 2021].

[5] Karlo Hainsch Konstantin Löffler Thorsten Burandt Hans Auer Pedro Crespo del Granado Paolo Pisciella Sebastian Zwickl-Bernhard, *Energy Transition scenarios: What policies, societal attitudes, and technology developments will realize the EU Green Deal?* Science Direct, Energy, 2022, [online] Available at < https://www.sciencedirect.com/science/article/pii/S036054422102315X> [Accessed 11 January]

11 December 2019	Presentation of the European Green Deal.
14 January 2020	Presentation of the European Green Deal Investment Plan and the Just Transition Mechanism.
4 March 2020	Proposal for a European climate law to ensure a climate neutral European Union by 2050. Public consultation (open until 17 June 2020) on the European Climate Pact bringing together regions, local communities, civil society, businesses and schools.
10 March 2020	Adoption of the European Industrial Strategy, a plan for a future-ready economy
11 March 2020	Proposal of a Circular Economy Action Plan focusing on sustainable resource use.
20 May 2020	Presentation of the EU Biodiversity Strategy for 2030 to protect the fragile natural resources on our planet. Presentation of the 'Farm to fork strategy' to make food systems more sustainable.
08 July 2020	Adoption of the EU strategies for energy system integration and hydrogen to pave the way towards a fully decarbonised, more efficient and interconnected energy sector.
17 September 2020	Presentation of the 2030 Climate Target Plan.

14 October 2020	Renovation wave, Methane Strategy, Chemicals strategy for sustainability.
19 November 2020	Offshore renewable energy.
9 December 2020	European Climate Pact.
10 December 2020	European Battery Alliance.
18 January 2021	New European Bauhaus.
24 February 2021	New EU strategy on adaptation to climate change.
25 March 2021	Organic Action Plan.
12 May 2021	Zero pollution Action Plan.
17 May 2021	Sustainable blue economy.
14 July 2021	Delivering the European Green Deal.
15 September 2021	New European Bauhaus: new actions and funding.
17 November 2021	Proposals to stop deforestation, innovate sustainable waste management and make soils healthy.

Future Challenges

Digital transformation will be in the forefront of the European discussion in the following years and decades. From deciding the quantitative goals that need to be reached to planning out the strategic path that the Union will enforce in order not to lag behind the other global players and for its member to reach an adequate level to cope with the new digital era, the challenges that need to be addressed are numerous, but the most important ones are summarised below.

Economic Functionality Issues

The future of a digital European Union depends on a functional economy and society. Taking into consideration the directions which the Union may or may not take, the results for the future differ on a high level. First and foremost, the EU 's goals are closing the gap between the urban centres and rural communities, providing the needed tools and educational programmes to prepare the people to manage in an ever-digital world and in a demanding labour market by formulating an economic environment that fosters innovation and entrepreneurship. An unhealthy economy, characterized by no sustainable growth, not able to cope with digital transformation across the Union, high levels of unemployment due to high automatization and not enough skilled workers to fill the jobs created by the transformation are some of the possible outcomes if the EU doesn't take the necessary actions to deal with this likely scenario. This situation creates fertile ground for the creation of big conglomerates that monopolize the market and establish innovation hubs in certain regions in Europe that drive digital growth and creating further inequalities amongst the member-states and the regions in countries, thus decreasing European cohesion and increasing dissatisfaction within the Union while increasing widescale government corruption. This situation will give footing to criminals to exploit this turbulent economic environment and turning the digital world into a haven for them, expanding the dark web across the Union, while the EU is struggling to counteract this problem.[6]

[6] Deloitte. 2019. *Digital Transformations of the EU 2035*. [online] Available at: <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/strategy/deloitte-future-of-digital-transformation-eu-2035.pdf> [Accessed 6 December 2021]

According to the European Commission, the EU needs to create a framework where the single market works without excess burdens so that companies of any size, in every sector across the continent can compete on equal terms, and grow in a sustainable way that capitalizes from economies of scale and the use of digital technologies, products and services, hence increasing productivity and global competitiveness, and benefiting the consumers with quality products, high-paying wages and higher standard of living, with confidence that their rights are not compromised. Although, the fact remains that many European companies, especially the SMEs, have shown little to no adaptation and usage of digital solutions, thus not accelerating in the categories mentioned above. The creation of an EU Industrial Strategy that addresses these concerns and furthermore, sets an action plan to adopt a ray of reforms for a more digital, circular, green, and competitive industrial sector. The inclusion of a plan for SMEs is of great importance, because the SMEs are the backbone of the European economy, moreover, helping them with educating the workforce and upskilling them in a context of life-long learning, accessing the financial markets and lessening the administrative costs that result from redundant national and European regulations. Fostering a transparent and open environment where the businesses can launch themselves into the EU economy and grow into global players becoming leaders in the digital transition effort, should be included in the European strategic plan.[7] In this setting, it is vital that the rules relevant to digital services across the EU are reinforced and modernized, defining the roles and responsibilities of online platforms as well as the traditional channels of commercial activity.[8]

Freedom and Security Issues

One of the greatest challenges that the EU will face is the dilemma between protecting the freedom of its citizens and addressing the security threats of the future. Finding the perfect balance among those two will be an interesting occurrence where the politicians and the public

[7] European Commission. 2020. *Shaping Europe's digital future*. [online] Available at: <https://ec.europa.eu/info/sites/default/files/communication-shaping-europes-digital-future-feb2020_en_4.pdf> [Accessed 2 December 2021]

[8] European Commission. 2020. *Shaping Europe's digital future*. [online] Available at: <https://ec.europa.eu/info/sites/default/files/communication-shaping-europes-digital-future-feb2020_en_3.pdf> [Accessed 28 November 2021]

must cooperate in order for social balance to be achieved. Data and privacy protection, predictive policing and censoring of fake news or hate speech and extreme political views not tolerated by the values and principles of the European Union will be the main focuses of the policy actions in the Parliament. Securing the EU from external threats and educating the people on security matters may come at the cost of their freedoms, such as freedom of expression. Therefore, ensuring the development of digital skills of the people and the proper legal framework for the companies to grow with respect to citizens' rights to their digital life is crucial. This will ensure that the European socioeconomic area will be a safe space for constructive cross-national political, economic, social, and cultural exchange. As a result, democracy will become more direct and the institutions more established than ever, and citizens will use technology to participate in the democratic process and put pressure on their governments.

The EU is subject to frequent attempted cyber-attacks on the system. European society has to become resilient through the active management of digital transformation and each individual citizen should constitute a bulwark against digital threats, thereby ensuring their security through digital maturity, provided by the educational programmes provided by the EU and the national governments. Strong public-private partnerships have brought together the expertise of the private and public sector, also the necessary funding and investment to build a cohesive and strong digital firewall against all external threats. The PPP schemes protect from the uncontrollable limitation of freedoms and ensuring the essential level of security due to the high level of expertise among the public and private executives, giving the opportunity for the private sector to thrive in an open democratic society, steered by the needs and the rights of the people.[9]

Sustainability Issues

[9] Deloitte. 2019. *Digital Transformations of the EU 2035*. [online] Available at: <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/strategy/deloitte-future-of-digital-transformation-eu-2035.pdf> [Accessed 6 December 2021]

Sustainability in the European Union refers not only to the environmental aspect of it, but also the survival of the Union. A European Union only held together by the reliance of those members unable to manage the digital transformation on those that are excelling at it, is a possible event that the Union needs to address in the process of transition. EU-wide digital initiatives need to foster a vibrant exchange between European member states, strengthening European identity and values. Through the combination of the functional economy and high levels of security, the EU will be able to stand together in unison and avoid the risk of collapse. All member-states need to cooperate to have a uniform digital level across the Union, fostering a European identity on the path to the new digital age. European unity and the security enjoyed by member states will allow the EU to establish cohesive policies on political issues such as the fight against climate change.[10]

A climate conscious Europe must be prepared for climate disruptions and accelerate the transformation to a climate resilient continent. This will be feasible by creating a healthy and prosperous future within safe planetary boundaries and scaling up digital solutions for resilience that will trigger transformations in society. Smart use of clean digital technologies can serve as a key enabler for climate action and environmental sustainability. The digital transition and a smarter and greener use of technologies will help make Europe the first climate-neutral continent by 2050. Decarbonising the blue economy in order to sustainably harness the essential goods and services they provide, with the use of new technologically advanced solutions. Supporting, promoting and showcasing 100 European cities in their systemic transformation towards climate neutrality and turning these cities into smart cities of the future, thus creating an example for all cities, benefiting quality of life and sustainability in Europe.[11] A European way to digital transformation which enhances our democratic values, respects our fundamental rights, and contributes to a sustainable, climate-neutral and resource-efficient economy.[12] Technology can improve energy and resource efficiency, facilitate the

[10] Deloitte. 2019. *Digital Transformations of the EU 2035*. [online] Available at: <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/strategy/deloitte-future-of-digital-transformation-eu-2035.pdf> [Accessed 6 December 2021]

[11] European Commission. 2021. *The EU Research and Innovation Programme 2021-2027*. [online] Available at: <https://ec.europa.eu/info/sites/default/files/research_and_innovation/strategy_on_research_and_innovation/presentations/horizon_europe/ec_rtd_he-investing-to-shape-our-future.pdf> [Accessed 8 December 2021]

[12] European Commission. 2021. *Europe's Digital Decade*. [online] Available at: <https://digital-strategy.ec.europa.eu/en/policies/europes-digital-decade> [Accessed 29 November 2021]

circular economy, lead to a better allocation of resources; reduce emissions, pollution, biodiversity loss and environmental degradation. At the same time, the ICT sector must ensure the environmentally sound design and deployment of digital technologies.[13]

"As powerful enablers for the sustainability transition, digital solutions can advance the circular economy, support the decarbonisation of all sectors and reduce the environmental and social footprint of products placed on the EU market. For example, key sectors such as precision agriculture, transport and energy can benefit immensely from digital solutions in pursuing the ambitious sustainability objectives of the European Green Deal. Yet it is also clear that the ICT sector also needs to undergo its own green transformation. The environmental footprint of the sector is significant, estimated at 5-9% of the world's total electricity use and more than 2% of all emissions. Data centres and telecommunications will need to become more energy efficient, reuse waste energy, and use more renewable energy sources. How ICT equipment is designed, bought, consumed, and recycled also matters. Beyond the energy efficiency requirements of Eco-design, ICT equipment must become fully circular - designed to last longer, to be properly maintained, to contain recycled material and to be easily dismantled and recycled." (Publication Office of the European Union, 2020)

Foreign Competition

The European Union acts as a leader in the digital transformation globally, although it faces strong competition from other global powers such as the USA, China, and Japan, who also play a significant role in the international arena. Europe needs a cohesive strategy concerning its member states. For Europe to really influence the way in which digital solutions are advanced and used on an international scale, it needs to be a strong, self-reliant, and determined digital player in its own right. This will render the EU an attractive destination for highly skilled migrants. Strong and clear regulation on migration, and digital and physical integration measures and a sustainable Europe-wide migration policy will have to be effectively applied

[13]European Commission. 2020. *Shaping Europe's digital future*. [online] Available at: <https://ec.europa.eu/info/sites/default/files/communication-shaping-europes-digital-future-feb2020_en_3.pdf> [Accessed 28 November 2021]

to counterbalance demographic change. In order to attain this, a clear framework that fosters reliable, digitally enabled interactions across society, for people as well as for enterprises, is needed. Without this focus on trust reliability, the vital process of digital transformation cannot be achieved.[14]

In geopolitical terms, the EU should leverage its regulatory power, reinforced industrial and technological capabilities, diplomatic strengths, and external financial instruments to advance the European approach and shape global interactions. This includes the work done under association and trade agreements, as well as agreements reached in international bodies such the United Nations, the OECD, ISO and the G20, with the support of EU Member States. A strong digital presence in the EU's enlargement, neighbourhood and development policy will enable growth and drive sustainable development, including the uptake of green ICT in partner countries and regions, in accordance with Europe's commitment to the 2030 Agenda for Sustainable Development. Many countries around the world have aligned their own legislation with the EU's strong data protection regime. Mirroring this success, the EU should actively promote its model of a safe and open global Internet. In terms of standards, our trading partners have joined the EU-led process that successfully set global standards for 5G and the Internet of Things. Europe must now lead in the adoption and standardisation process of the new generation of technology: blockchain, supercomputing, quantum technologies, algorithms, and tools to allow data sharing and data usage. The ongoing discussions about building a trustworthy data alliance with like-minded partners who share our values and high standards could enhance data flows and the pool of available high-quality data. The European Union is and will remain the most open region for trade and investment in the world, provided that anyone who comes to do business here accepts and respects our rules. The Commission will use all instruments at its disposal to ensure that everyone respects EU legislation and international rules to maintain a level playing field in the digital sector. A Global Digital Cooperation Strategy will put forward a European approach to the digital transformation that builds on our long and successful history of technology, innovation, and ingenuity, vested in European values, including openness, and will project them onto the international stage and

[14]Deloitte. 2019. *Digital Transformations of the EU 2035*. [online] Available at: <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/strategy/deloitte-future-of-digital-transformation-eu-2035.pdf> [Accessed 6 December 2021]

engage with our partners. It will continue to work closely with its international partners, such as the G7, to find common approaches with a view to developing international norms and standards.[15]

Parties

European People's Party

The EPP is the largest party in the European Parliament. Is a centre-right, conservative party with pro-Europeanism views. The party proposes the creation of a Digital Single Market, where intra-European e-commerce can bloom, and SMEs can compete on a fair level without unjustified barriers. They desire for the EU to become an innovation leader through its research and economic power by disseminating the results throughout the member-states and applying them to the real economy and helping the small businesses and by creating a legal framework that is open to investment for research and development, friendly for start-ups and already existing enterprises in the technology sector. Moreover, they are for putting forward ambitious projects such as voice recognition, development of supercomputers, 5G/6G networks, smart cities and villages and AI, with the aim to improve the everyday life of the citizens.[16] Implementing an infrastructure programme that can support the digital transition in remote as well as urban areas, but also educational programmes to provide the students and the citizens in general with the qualifications needed to be a part in this transition, are also in their goals to achieve.[17]

[15]European Commission. 2020. *Shaping Europe's digital future*. [online] Available at: <https://ec.europa.eu/info/sites/default/files/communication-shaping-europes-digital-future-feb2020_en_4.pdf> [Accessed 2 December 2021]
[16]EPP Group. 2021. *People at the heart of the digital economy*. [online] Available at: <https://www.eppgroup.eu/what-we-stand-for/our-priorities/people-at-the-heart-of-the-digital-economy> [Accessed 6 December 2021]
[17]EPP Group. 2021. *EPP Group Position Paper on making Europe fit for the 21st century*. [online] Available at: <https://www.eppgroup.eu/newsroom/publications/epp-group-position-paper-on-making-europe-fit-for-the-21st-century> [Accessed 6 December 2021]

Progressive Alliance of Democrats and Socialists in the European Parliament

The S&D group is the second largest party in the European Parliament. Is a centre-left, progressive party with pro-Europeanism views. The party targets key issues for the digital transformation of the Union. As far as the public sector is concerned, they propose a freely distribution of public sector information and the use of big data technology in order to improve services such as public transport, smart cities and agriculture, more online administration services in order to digitise national administrations to make them more cost-effective and efficient. They promote the creation of a Digital Union, where everyone has equal and open access to digital tools and information, educational programmes are developed so that each and every age group have the essential skills to be included in the digital age. Furthermore, the importance of developing the necessary infrastructure to support this undertaking, such as high-speed connections in rural and remote areas, is in their priorities. Ensuring that the digitisation process adheres to the democratic values of freedom, justice, solidarity, and pluralism, but also that the outcome benefits the citizens of the Union in a sustainable way is the utmost of their priorities.[18]

Renew Europe

The Renew Europe group is the third largest party in the European Parliament. Is the successor to the Alliance of Liberals and Democrats for Europe (ALDE) group and it's a liberal, pro-Europeanism party? The group's stance on digital transformation includes but is not limited to, upskilling the European workforce with the necessary spectrum of digital abilities, investing in AI technology and IoT, cybersecurity and the creation of the European Union's Digital Single Market. They back the notion of eliminating unnecessary bureaucratic barriers that impede the competition and the effectiveness of the EU digital policy concerning the SMEs. In addition,

[18]Socialists and Democrats. 2021. *Digital Union.* [online] Available at: <https://www.socialistsanddemocrats.eu/digitalunion> [Accessed 6 December 2021]

the modernisation of the existing legal framework to include unregulated markets such as crypto assets, fintech and data markets is in their priorities.[19]

European Conservatives and Reformists

The ECR is the fourth largest party in the European Parliament. It is a Eurosceptic, anti-federalist and right-wing party. They align themselves with a more decentralised approach to digital transition by giving incentives to the private sector to invest in research and development, therefore innovating and progressing in the digital development[20]. They also require that these incentives take into consideration the protection of citizens and the environment[21].

Greens/European Free Alliance

The Greens are the fifth largest party in the European Parliament. It's an ecological, left-wing, and progressive party. Its position mainly focuses on the green digital transition, in this regard, they also emphasise the importance of taking into consideration the environmental and biodiversity footprint of the digital sector by introducing strict environmental standards and regulations regarding funding in infrastructure, telecommunications, energy and the development of new technologies. Moreover, they campaign for the fair and inclusive development of the small communities that are mostly excluded by the private sector regarding their internet connection and thus reducing the gap between the rural and urban communities.[22]

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[19] Renew Europe Group. 2019. *Creating a thriving economy and opportunities for all*. [online] Available at: <https://www.reneweuropegroup.eu/what-we-stand-for/a-stronger-economy-and-opportunity-for-all> [Accessed 6 December 2021]

[20] ECR Group. 2019. *Toolkit*. [online] Available at: <https://ecrgroup.eu/files/191065-ECR-toolkit-A6_4.pdf> [Accessed 6 December 2021]

[21] Douglas Arent, Channing Arndt, Mackay Miller, Finn Tarp, and Owen Zinaman, *The political Economy of Clean Energy Transitions* ,Oxford Scholarship Online, 2017, [online], Available at < https://oxford.universitypressscholarship.com/view/10.1093/oso/9780198802242.001.0001/oso-9780198802242-chapter-15> Accessed 11 January]

[22] Greens/EFA. 2021. *An ecological approach to connectivity*. [online] Available at: <https://www.greens-efa.eu/en/article/document/an-ecological-approach-to-connectivity> [Accessed 6 December 2021]

The Greens hope to render the EU a leader in digital policy based on respecting fundamental rights and freedoms. [23]

The Left in the European Parliament/Nordic Green Left

The GUE/NLG group is the seventh largest party in the European Parliament. It's a left-wing, soft-Eurosceptic, and socialist party. Its position on digital transformation is characterised by social inclusiveness and fairness, their approach to the new digital age is by protecting the consumer against the big businesses and supporting the SMEs in an ever-competitive digital environment. They support the right for every citizen to freely access the internet and the benefits that come from the digital reformation and adaptation of new technologies in the SMEs and the governments. They emphasise the data protection of consumers and net neutrality. [24]

Conclusions

In Conclusion, the European Green Deal will be an area of strategic importance for the European leaders in the next decades. This agenda offers a variety of benefits to the economy, the lifestyle of the citizens of the member states and most importantly the environment we all interact. The EU green deal and the swift to the digital transformation of services and consumerism will definitely face some challenges, but we have to make sure that the European Union will make the most out of this particular agenda.

However, in order for the Green Deal to become efficient we have to ensure that it will be in accordance with all member states, their strengths, and their needs. Specifically, there's an ongoing need for the enhancement of infrastructures and systems to the Union. The conquest of the agenda will require a massive effort as a whole and we hope that it will be the leading

[23] Greens/EFA. 2019. *Our Vision*. [online] Available at: <https://www.greens-efa.eu/en/what-we-stand-for/our-vision> [Accessed 6 December 2021]
[24] GUE/NLG. 2016. *Digital single market*. [online] Available at: <https://left.eu/digital-single-market-proposal-must-benefit-all-not-just-big-companies/> [Accessed 6 December 2021]

example for the rest of the world to pursue. As the ITRE Committee we have to make sure that this agenda must come to fruition expediently.

Questions Raised

1. What actions can the European Union and its member-states undertake so as to promote a Sustainable future?
2. How will the European Union ensure the diminution of the digital gap between its members-states?
3. What life-long learning programs will have to be implemented in order to educate the elder population on digital issues?
4. How will the European Union transform the digital sector into a carbon-neutral one?
5. How will the European Union assist the SMEs cope with the digital transition?
6. What will the European Union have to do in order to stay ahead of its competitors in the digital transformation?
7. How will e-governance aid the democratic embedment in the Union?
8. What legal framework should be created in order to protect the Union and its members from cyber-attacks?
9. How will the smart grids secure the energy supply and create a greener energy mixture?
10. What steps need to be taken in order to form the European Digital Union

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Further Reading

1. European Commission's 2021 Digital Economy and Social Index (DESI) report: https://digital-strategy.ec.europa.eu/en/policies/desi

2. Digital Europe's policy proposal for a stronger digital Europe: https://www.digitaleurope.org/policies/strongerdigitaleurope/

3. European Parliament briefing on EU policies on digital transformation: https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/633171/EPRS_BRI(2019)633171_EN.pdf

4. European Commission web page on the smart grids and meters: https://ec.europa.eu/energy/topics/markets-and-consumers/smart-grids-and-meters_en

5. Directorate-General for Internal Policies paper on Mapping Smart Cities in the EU: https://www.itu.int/en/ITU-T/climatechange/resources/Documents/MappingSmartCitiesinEU-2014.pdf

Useful links

1. European Commission's digital transformation targets for 2030: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en

2. Website for EPP party: https://www.epp.eu/

3. Website for S&D party: https://www.socialistsanddemocrats.eu/

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5. Website for ECR party: https://ecrparty.eu/

6. Website for THE GREENS/EFA party: https://www.greens-efa.eu/en/

7. Website for GUE/NGL party: https://left.eu/