CHAPTER 0: SUMMARY OF THE MAIN CHALLENGES, OBJECTIVES AND OPTIONS – VIEWS OF THE DIRECTOR-GENERAL

Making the most of digital opportunities: the European way

"This is the European way: we are ambitious. We leave nobody behind. And we offer prospects. The European way is also about using all of our potential: our people, our talent, our diversity."

Ursula von der Leyen, President-elect of the European Commission

Mission letter to the Executive Vice-President-designate for a Europe fit for the Digital Age

I would like to entrust you with the role of Executive Vice-President for a Europe fit for the Digital Age.

Over the next five years, Europe must focus on maintaining our digital leadership where we have it, catching up where we lag behind and moving first on new-generation technologies. This must cut across all of our work, from industry to innovation. At the same time, we must ensure that the European way is characterised by our human and ethical approach. New technologies can never mean new values.

In striving for digital leadership, we must focus on making markets work better for consumers, business and society, and must support industry to adapt to globalisation and the twin climate and digital transitions. We need companies that compete on equal terms and consumers that can benefit from lower prices, greater choice and better quality.

As Executive Vice-President, you will have a dual function. You will chair the Commissioners' Group on a Europe fit for the Digital Age. In addition, you will be responsible for the competition portfolio. In leading the work on a Europe fit for the Digital Age, you will ensure all policy dimensions are fully taken into account.

A Europe fit for the digital age

The digital transition will have an impact on every aspect of our economy and society. Your task will be to ensure that Europe fully grasps the potential of the digital age and strengthens its industry and innovation capacity. This will be a key part of strengthening our technological leadership and strategic autonomy.

- I want you to co-lead our work on a new long-term strategy for Europe's industrial future, working together with the Executive Vice-President for an Economy that Works for People. In implementing the strategy you will work with the Member States and involve businesses of all sizes. You should maximise the contribution of investment in research and innovation in supporting our policy objectives.

- You will ensure cross-fertilisation between civil, defence and space industries.

- You will co-lead the work on a new SME strategy, working together with the Executive Vice-President for an Economy that Works for People. This should focus on supporting small businesses, entrepreneurs and start-ups, notably by reducing the regulatory burden and enabling them to make the most of digitisation.

- In the first 100 days of our mandate, you will coordinate the work on a European approach on artificial intelligence, including its human and ethical implications. This should also look at how we can use and share non-personalised big data to develop new technologies and business models that create wealth for our societies and our businesses.

- I want you to coordinate the work on upgrading our liability and safety rules for digital platforms, services and products as part of a new Digital Services Act. In this context, you should ensure the working conditions of platform workers are addressed.

- You will coordinate the work on digital taxation to find a consensus at international level by the end of 2020 or to propose a fair European tax.

Mission letter to the Commissioner-designate for Internal Market

I would like to entrust you with the role of Commissioner for the Internal Market.

Europe's industry provides a livelihood for millions, and is a driver of jobs and growth. Our companies are able to thrive because of Europe's single market, the largest in the world of its kind and one of our greatest assets. By removing barriers and opening access for firms to a large and competitive market, it drives Europe's innovation and competitiveness and makes us a desired trading partner for countries around the world.

This digital transition is helping us to redesign our economy, make our industry more competitive and find new solutions to societal challenges. We have to make the most of the opportunities this creates while preserving the high privacy, security, safety and ethical standards that Europeans expect.

The digital economy and society

Your task for the next five years is to put in place the right framework to allow Europe to make the most of the digital transition, while ensuring that our enduring values are respected as new technologies develop.

- I want you to contribute to the work on enhancing Europe's technological sovereignty. This means investing in the next frontier of technologies, such as blockchain, high-performance computing, algorithms, and data-sharing and data-usage tools. It also means jointly defining standards for 5G networks and new-generation technologies.

- As part of this, you will lead the work on a coordinated European approach on artificial intelligence and on the new Digital Services Act.

- I want you to focus on building a real single market for cybersecurity, notably looking at certification, implementing rules on security of network and information systems, rapid emergency response strategies and other relevant areas. You should lead the work to build a joint Cyber Unit to better protect ourselves.

- As part of a transition that supports people, I want you to contribute to an updated Digital Education Action Plan. This should focus on digital literacy and equipping young people and adults with the skills they need for life and work in the digital age.

A future-ready European industry and single market

Your task over the next five years will be to guarantee the smooth functioning of the single market, ensuring it adapts to the modern economy and to new business models. This will allow our industry, small businesses and entrepreneurs to grow, scale up and employ more people.

- I want you to contribute to a comprehensive long-term strategy for Europe's industrial future. This should cover all aspects that affect industry and its competiveness, from investment and public procurement to trade, skills, innovation and supporting small and medium-sized businesses (SMEs).

- All parts of European industry should contribute fully to the objective of a climate-neutral economy by 2050. You should ensure that our new Circular Economy Action Plan feeds into to our overall industrial strategy.

-I want you to contribute to the new SME strategy to help them scale up and expand, including through improved access to finance. As part of this, you will appoint a Commission SME Envoy.

- You will be responsible for the smooth day-to-day functioning of the single market. I want you to focus on the implementation and enforcement of rules at the European, national, regional and local levels. You should also look at the remaining barriers relating to goods and services and help remove any artificial distinctions between new digital markets and more established markets.

- You should establish a level playing field throughout the single market and contribute to the work addressing the distortive effects of foreign subsidies, in particular in relation to public procurement.

- I want you to take a close look at our intellectual property regime to ensure that it is coherent, is fit for the digital age and supports our competitiveness.

- I also want you to lead the Commission's reflections on issues such as Europe's technological sovereignty in key value chains, including in the defence and space sectors, common standards and future trends.

Defence industry and space

The European defence industry generates a total turnover of €100 billion per year, and space policy is one of our Union's most valuable and strategic assets. More cooperation in defence spending and space will have a positive spillover effect on the European economy.

- You will be responsible for the implementation and oversight of the European Defence Fund. In doing so, I want you to encourage collaborative projects with as much cross-border participation by small and medium-sized enterprises as possible.

- I want you to focus on building an open and competitive European defence equipment market and enforcing EU procurement rules on defence.

- I want you lead on the implementation of the Action Plan on Military Mobility, in close cooperation with the Commissioner for Transport.

- You should foster a strong and innovative space industry, maintaining the EU's autonomous, reliable and cost-effective access to space.

- As part of this, you will implement the future Space Programme, covering Galileo and EGNOS, the EU's global and regional satellite navigation systems and Copernicus, the EU's Earth observation programme.

- You should explore ways in which we can make the most of our assets to deliver on climate objectives, including the use of Copernicus to monitor CO2 emissions.

- I would like you to focus on improving the crucial link between space and defence and security. You should support the Member States in increasing the uptake of the Galileo Public Regulated Service, which can be used by governments for emergency services, peacekeeping operations and crisis management.

As a rule, you will work under the guidance of the Executive Vice-President for a Europe fit for the Digital Age. You will be supported in your work by a new Directorate-General for Defence Industry and Space, as well as the Directorate-General for Communications Networks, Content and Technology and the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs.

Challenges

We are all feeling the concrete effects of digitalisation. Especially for the younger generations, each action has its app: to communicate, find an electric bike, scan food and cosmetics to know their health impact. Beyond making our lives easier, Artificial Intelligence (AI), big data, cloud, super- (and soon quantum) computing, blockchain and high-speed connectivity can help us solve some of the world's biggest challenges: from fighting climate change to treating cancer and producing affordable and safe food.

Digital technologies have radically transformed the world's economic landscape. In 2001, only one of the top five largest companies in the world by market capitalisation was a digital company. Today, the top five are all from the digital sector, and none is European. Similarly, there is no EU company in the world's top digital 15. As a result, the contribution of European businesses to global digital supply chains has gradually diminished, despite the fact that the region remains one of the world's largest markets for digital products and services.

A lot has been done over the last five years to address the challenges and opportunities of the digital transformation[1]. The Digital Single Market Strategy has reduced market fragmentation, increased data flows and market fluidity, and updated existing rules to the digital age. Consumer access has improved through the ban on unjustified geoblocking, portability of content, the end of roaming, and WiFi4EU. Market framework conditions have been bettered through the new telecom Code, the Directive on Audiovisual and Media Services, the updated Copyright regime and the Regulation on platforms. Actions on digital skills and digitising industry and the public sector, combined with the future Digital Europe Programme, will also contribute considerably to a successful digitalisation of the economy. Enforcing these rules will be essential over the coming years.

We must now build on these achievements. The Sibiu Declaration underlined the importance of acting in unison as the EU, not as individual Member State, and upholding the principle of fairness in the context of the digital transformation. A clear mandate for action is in place.

Accordingly, the EU should strive for, and promote internationally, **a European way of doing digital policy that is human-centric and founded on respect for fundamental rights and European values**, distinct from both a laissez-faire approach (privately-ruled digital economy and society), and a top-down controlled model. This third way will enhance trust and privacy, promote an inclusive digital society and sustainable economy as a basis to build the next competitive advantage for European companies acting worldwide in the digital age. It will allow Europe to create wealth for our societies and our businesses in accordance with its core values.

Achieving this goal will require new and innovative policymaking, accompanied by the necessary financial support. Europe must play to its strengths and ensure the successful digitalisation of those areas that define its competitiveness: energy, mobility, health, manufacturing and finance. This would allow Europe's industry and

[1] As our own international Digital Economy and Society Index (i-DESI) shows, the four top countries in Europe are also leading on the global stage. They are just behind South Korea and have higher scores than the United States and Japan. However, the comparison shows that the EU's average in digital performance is significantly lower.

services to use European solutions for digitisation and set global standards for safety, security, data protection, privacy, trust and sustainability.

This is all the more important since Europe currently still depends on foreign technologies for key parts of the digital supply chain. In essence, while connectivity infrastructure is mostly European, the necessary computing capabilities, hardware and software for machines, robots or cars is often made elsewhere, in countries that do not necessarily respect European values and fundamental rights.

This technological dependence could translate into dependence for the next wave of data infrastructure and service solutions: there is a risk that Europe will become a simple consumer of products and services made in third countries.

To reverse the trend, the EU must take urgent steps to increase its support for key enablers of the digital economy (connectivity, hardware, data, AI, cybersecurity, digital skills), particularly where its place in the supply chain is weak or fragile. But the EU is fully capable of doing so and has done so through public-private partnerships, like the ones already established in micro-electronics and supercomputers.

In terms of GDP growth, estimates suggest that deploying the necessary key technology across Europe would lead to a +1.1% EU GDP/year average growth – a cumulative impact of +14.1% GDP (€2.3 Trillion in real terms) by 2030.[2]

On the economic side, the EU must make full use of its main competitive advantage; the Single Market, and strengthen its online dimension. Areas to examine specifically include strengthening the online dimension of the Single Market, improving digital infrastructure and services supply and quality, and fostering the take-up of advanced digital technologies by businesses and the public sector. On the social side, the key challenge will be to continue to embed core European values in a digitised world. Examples of areas to address include the dissemination of illegal content, disinformation and harmful content, personal data protection, and the need to digitally preserve Europe's cultural heritage.

Digital technology should be used to tackle some of our most pressing societal challenges. Preserving the environment and fighting climate change have become global policy goals to be supported by all other European policy areas, and digital is no exception.

[2] SMART 2017/0094 "Shaping the Digital Transformation of Europe" (European Commission study awarded to McKinsey&Company – still ongoing).

In light of these challenges, we propose **four interdependent and complementary policy domains** matching the political guidelines presented by President-elect Ursula von der Leyen. In these domains, action at EU level through targeted regulatory, investment and mobilisation measures will be pivotal:

- **A Europe fit for the digital age**
- **Digital for a European Green Deal**
- **Digital for European democracy**
- **A stronger Europe in the digital world**

We propose to prioritise for adoption measures under these policy domains (detailed below):

Proposal to be adopted within the first 100 days of the new Commission:

- Regulatory Framework for Artificial Intelligence (together with DG GROW/DG JUST/DG SANTE)

Proposals to be adopted by the end of 2020:

- Digital Services Act (together with DG GROW/DG JUST/DG HOME) in the context of the new industrial strategy
- Greening ICT (together with DG ENV/DG CLIMA/DG GROW/DG ENER)

Initiative as part of a broader industrial strategy:

- Enhancing Europe's technological sovereignty (together with DG GROW/DG RTD/DG COMP)

Objectives and policy actions

1. A Europe fit for the digital age

"I want Europe to strive for more by grasping the opportunities from the digital age within safe and ethical boundaries."

Ursula von der Leyen, President-elect of the European Commission

1.1. Technological sovereignty

"It may be too late to replicate hyperscalers, but it is not too late to achieve technological sovereignty in some critical technology areas."

Ursula von der Leyen, President-elect of the European Commission

Virtually all future products and services will rely on data, software (algorithms, cloud computing), hardware (semiconductors, chips, High Performance Computers), infrastructures, (cloud computing, data centres) and connectivity in order to function. Today, however, Europe punches below its weight in supplying global digital technologies. This is despite the EU being one of the world's largest markets for

digital products and services. As a result, **Europe is increasingly dependent on foreign technologies in key parts of its economy[3], some of them essential to our strategic safety. The risk is that the next digital transformation wave will be entirely shaped by third countries** with two inter-related consequences. First, key foundations of Europe's society and its values will come under increasing strain, as relying on third countries means relying on *their* values. Second, Europe's position and influence in global markets will be eroded, affecting European leadership and jeopardizing our technological sovereignty in key industrial strategic value chains.

In the coming years, the next wave of digital advances is expected to accelerate in economic sectors where Europe is strongest (e.g. manufacturing, mobility, energy, health, finance). Europe cannot afford falling behind. The EuroHPC[4] initiative is a step in the right direction, and we should emulate such success in other key areas e.g. AI, 5G, Internet of Things (IoT), blockchain, quantum, virtual reality, etc.

Artificial Intelligence is the main technological revolution of the immediate future. It carries huge promises, from helping diagnose diseases, to fighting climate change, improving public services (from health to mobility) and the quality of manufacturing or agriculture or anticipating cybersecurity threats, but also raises concerns – such as ethical implications or impact on jobs. As highlighted in the Sibiu Strategic Agenda outline, **Member States should work together to boost the development of EU-made AI** in a way that is compatible with protecting our values and freedoms, as well as safeguarding our democracies, economies and way of life.

Another important area in connection with AI, and with the success of the digital transformation more broadly, is **processing and access to data**. Available research[5] shows that around 40% of businesses in the EU experience problems with accessing relevant data from another company, which often puts them at a competitive disadvantage and prevents the development of new services and products based on the secondary re-use of data. In addition, 70% of AI workload will be deployed in the cloud and at the edge network by 2022[6]. Moreover, only 10% of European companies employing more than 10 people used big data analytics in their activities[7] and only 18% cloud computing[8]. The EU is not far behind the US in this respect[9], indicating that the EU can actually leapfrog the US if the right framework for data access, sharing and use is put in place. This concerns both non-personal data, e.g. generated by machines in industrial contexts, and some personal data, e.g. generated by IoT objects in smart home environments. In addition to this, there is a growing need to ensure that the public sector can benefit from easier access to relevant private sector data for public interest reasons. Some Member States (France,

[3] In cloud computing, the biggest European cloud service provider does not even capture 1% of the global market share.
[4] The European High-Performance Computing Joint Undertaking pools European resources (a budget of around €1 billion) to develop top-of-the-range supercomputers based on European technology.
[5] Deloitte, Study on emerging issues of data ownership, interoperability, (re-)usability and access to data, and liability, 2017; Everis, Study on data sharing between companies in Europe, 2018; public online consultation further to the Communication 'Building a European data economy', spring 2017.
[6] IDC, 2018.
[7] Eurostat.
[8] DESI 2019.
[9] 72% of large US corporations participating in a big data survey reported that they have yet to forge a data culture, Big Data and AI Executive Survey 2019, New Vantage Partners.

Finland) have already started legislating in this area and there is a risk of fragmentation if no EU action is proposed soon.

Europe's ability to be present on global technology markets has so far been held back by a significant lack of investment at scale in technology compared to third countries. To secure its long term prosperity, Europe must quickly take measures to solidify its position in those key strategic digital technologies that will underpin future economic growth. An ambitious agenda is needed to ensure that Europe features prominently in how technology is designed, manufactured, deployed and secured. For this, a new approach to strategic investment is needed: one where we recognise that the scale of these projects is such that none of the Member States can achieve them alone so it is essential for Member States to act together and step up co-investment. To develop **strong and resilient digital value chains**, the EU needs a framework to launch cross-border projects *at speed and scale*, based on commitments commonly agreed by Member States[10].

Ensuring digital leadership and building a strong data-driven economy will depend on the **ability to protect against cyberattacks.** The importance of cybersecurity will only increase further if we are to protect our critical infrastructures and the public services dependent on them, particularly as connected objects will provide many more points of vulnerability.

Action 1: A framework for Artificial Intelligence that protects and empowers

"In my first 100 days in office, I will put forward legislation for a coordinated European approach on the human and ethical implications of Artificial Intelligence. This should look at how we can use big data for innovations that create wealth for our societies and our businesses.

I will make sure that we prioritise investments in Artificial Intelligence, both through Multiannual Financial Framework and through the increased use of public-private partnerships.

Data and AI are the ingredients for innovation that can help us to find solutions to societal challenges, from health to farming, from security to manufacturing.

In order to release that potential we have to find our European way, balancing the flow and wide use of data while preserving high privacy, security, safety and ethical standards."

Ursula von der Leyen, President-elect of the European Commission

An ambitious regulatory framework

A proliferation of non-ethical AI systems on the European market could significantly diminish trust in this strategic technology and stifle its uptake. In addition, an influx of

non-compliant AI technologies could severely harm EU citizens and businesses. While the General Data Protection Regulation sets a robust legal framework for automated decisions taken on the basis of personal data, it does not cover the entire spectrum of risks and potential harms brought by the use of AI in various applications. Moreover, there is an overall lack of legal clarity that can lead to regulatory fragmentation and jeopardise the development of AI goods and services across the Single Market. Further horizontal and risk-management concerns emerge, in particular where AI applications pose risks to fundamental rights.

To address these challenges, we propose an action aiming to cover the key horizontal issues grouped in two different clusters:

1- **Protect**: confidence and trust in AI-based products and services:

- transparency
- safety and robustness

2- **Empower**: Governance of an EU-wide cooperation system to develop AI

- use of data
- EU cooperation on AI development

Main elements:

1-**Protect**: The AI legal framework will not replace the existing legal rules for consumer protection or products safety but will complement them. As a first step, it is necessary to look at the existing legislation and address the issues specific to the nature of AI:

- impossibility to describe in a finite manner all possible outcomes including those that might differ significantly from the intended purpose of the product or the service. The legislator can build on the experience from medicaments where side effects are described in terms of statistical adverse outcomes of an otherwise safe and beneficial product.

- possible severe alteration of the causation principle: This principle allows to determine contractual and extra-contractual responsibility. Autonomous decision-making can change causation but there are many examples of absence of causation that is anyhow covered by insurance (dog owner can be insured within limits for the animal's irrational behaviour).

Furthermore, we need to focus on **transparency** and a **risk-based approach to responsibility** (also inspired by the FDA guidance on AI in medical devices).

2-**Empower**: The Commission has received numerous calls from different stakeholders to regulate common data spaces that are fundamental to feed and refine AI algorithms. AI in health care, transport or finance needs diversity of datasets to function well. The necessary regulatory intervention can be light as it would focus on the interaction among different players and on the guarantees of fairness and non-discrimination in participatory projects. Rules regarding access to and use of data and governance of such data spaces might be part of the regulatory framework for

AI. A softer alternative would be simple guidance although in some cases this does not guarantee legal certainty.

An action plan to build up the EU's AI capacity is needed, with the aim of securing the key industrial supply chains on which AI is built, as well as facilitating the uptake of trusted AI solutions across all sectors of the economy.

The action plan will focus on:

- Prioritising increased investment in research and innovation in AI, both through the Multiannual Financial Framework and through the increased use of public-private partnerships
- developing the key infrastructures necessary for large scale testing of AI solutions, in particular data spaces which would be funded through DEP (see Action 4 below and Action 3 under the Digital for a European Green Deal section) and
- implementing and updating the actions and investments already identified by Member States and the Commission in the Coordinated Plan for Artificial

It is necessary to identify the projects of Common Interest in AI, which require co-investment by the Commission, Member States and possibly private sector.

Action 2: A framework for improving data availability to support European data-driven services and the development of Artificial Intelligence. The competitiveness of Europe's businesses will depend on their capacity to exploit data, especially regarding Artificial Intelligence. Inability to do so will put Europe at risk of losing its leadership in key sectors to third countries, where a data-driven economy is emerging.

A lot has been done in the EU to facilitate the free flow and access to data in line with European values (GDPR, Free Flow of Data Regulation, Public Sector Information Directive). Still, from an international perspective, in terms of data availability and data assets, the US boasts online platforms holding huge amounts of data, while China has large access to citizen's data. To secure its competitiveness in the data-driven economy, Europe must leverage its strengths in specific sectors (e.g. manufacturing, health, energy), by strategically promoting data-sharing arrangements particularly in those areas. A European framework for improving data availability, may require legislative action to ensure innovation and competition. **It should include actions that could tackle, among others, the following:**

- **As part of the AI regulatory framework,**
  - matters related to quality, transparency and interoperability of data
  - further barriers to data reuse in specific sectors, such as health, energy, manufacturing, thus contributing to secure common data spaces.
- Data sharing in specific sectors, such as health, energy, manufacturing, through secure common data spaces.
- Access to data needed to ensure effective competition particularly where data is key to market dominance
- Ensuring that Internet of Things data can be exploited and does not lead to market foreclosure, for example in after sales services or repairs markets

- Providing certain public sector bodies with access to private sector data for specific public tasks at preferential monetary conditions

Investment in common European data spaces will contribute to the availability of a critical mass of data from the public and private sectors for innovation, with the right level of quality and interoperability.

Action 3: An initiative for technological sovereignty (part of the new industrial strategy)

Following clear political commitment by Member States, the EU has already successfully launched together with Member States major cross-border projects in key technology areas such as supercomputers and microelectronics. There is a need to explore the best way to identify priorities and instruments to procure, deploy and operate joint digital infrastructure projects with Member States that will benefit our economies and societies – e.g. to establish a pan-European secure and interoperable blockchain infrastructure, an EU-wide network of AI facilities supporting industry and public services and hardware components for data processing (incl. neuromorphic and quantum architectures) to guarantee Europe's autonomy in edge computing and AI applications.

Action 4: A strategy to ensure increased cyber-resilience of critical infrastructures, and cybersecurity by design of Information and Communications Technology (ICT) products and services:

Threats, risks and vulnerabilities continue to evolve in cyberspace and therefore, cybersecurity must stay as a top priority for the EU, especially when it comes to increasing the cyber-resilience of our critical infrastructure. The Commission's approach is centred around following three priorities: Firstly, cooperation and information sharing should embrace the spirit of need to share rather than need to know. Secondly, critical infrastructures and other users should be able to use cybersecure ICT products and services. Thirdly, cybersecurity governance at EU level needs to be strengthened to allow for a collective response to serious threats and incidents.

The Directive on Security of Network and Information Systems (the 'NIS Directive') is the cornerstone for the cybersecurity legal framework in the EU, setting forth provisions on the cybersecurity of essential services operators. The evolution in the threat landscape, as well as the implementation experience where national approaches vary considerably, show the need for a revision of the NIS Directive in order to bring its key pillars (national capabilities, EU cooperation and risk management for key companies) to the next level. An improved framework for pro-active information sharing will be essential for improving the overall EU resilience in a decisive manner. For the purpose of increasing the level of protection of our critical infrastructure as well as consumers in general, there is also a need to strengthen the cybersecurity of ICT products and services, which is becoming ever more important in a context where connected devices are entering the market by the billions. If 'everything is connected', one incident can affect the whole system, with serious economic and social consequences. While the Cybersecurity Act is a step in the right direction – by establishing an EU-wide common cybersecurity certification approach -

existing EU legislation does not cover the whole spectrum of cybersecurity risks for digital products and services in a horizontal way. Therefore, there is a need to further consider a "cybersecurity by design" approach by establishing common cybersecurity requirements for ICT products and services that are to be placed in the EU market. It could be achieved either through co-regulatory approach involving industry or specific legislation.

As part of the implementation of the Cybersecurity Act, work must continue on the roll-out of cybersecurity certification schemes in the priority areas (i.e., IoT, cloud computing, critical or high-risk applications, 5G, etc.), accompanied by more investment into developing cutting edge cybersecurity solutions "made in the EU".

Finally, a new structure (Joint Cybersecurity Unit) needs to be developed to allow for a structured and coordinated mutual assistance mechanism at EU level to react to serious incidents. Such mechanism could build on the implementation of the 2017 EC recommendation on Coordinated Response to Large Scale Cybersecurity Incidents and could bring together resilience, law enforcement and defence dimension of cybersecurity.

1.2. Digital for economy and society

"I believe Europe can successfully manage the transformation into the digital age, if we build on our strengths and values."

Ursula von der Leyen, President-elect of the European Commission

The digital transformation is changing the way we design and manufacture products, as well as the entire services ecosystem. If properly managed, it can create unparalleled opportunities for businesses and citizens: from easier interaction with public authorities, to 'smarter' and more sustainable mobility, energy, water, and waste services for our communities, to delivering better health solutions even in remote areas. For example, the ability to share health data across the EU borders brings benefits to citizens as they move around the EU, but also the possibility to pool health data towards big data. Big data is, in turn, the foundation for e-health innovation[11] both for new techniques to prevent, detect or treat health conditions, and for solutions to improve health care delivery.

At the same time, the digital transformation is not without its challenges. From increased investment needs to uneven uptake of digital technologies leading to social tensions, there are multiple aspects that policy-makers should examine and address in the next mandate. Above all, the EU policy framework should foster innovation and sustainable economic growth while providing for an inclusive digital transformation across the EU.

The EU has already taken important steps to maintain *trust and fairness* in the online ecosystem.[12] However, the changing landscape of digital services, including the concentration of user base and market power in the hands of a small number of

[11] When combined with technologies, such as artificial intelligence, high performance computing and big data analytics.
[12] E.g. The Platforms to Business Regulation, the eID Regulation, the recommendation on tackling illegal content online, etc.

players, demands further action by the EU. Online platforms, which are key vehicles for unprecedented information flows on the Internet, are also being abused of online platforms for conducting illegal activities and disseminating illegal content; this needs to be further addressed. The Commission put in place a range of soft and legal measures, but the fundamental changes in the services' ecosystem call for more clarity and better rules to swiftly and effectively tackle illicit behaviours while ensuring that cross-border online services can develop in a robust Single Market. In parallel, more needs to be done to enable the wide use of technology solutions (such as eID, cloud computing and blockchain) that can underpin trust online. The EU's ambition must be, through the Next Generation Internet initiative, to develop a digital environment that empowers end-users, respects European values and norms, encourages innovative research and innovation and brings long-term growth opportunities across all sectors of the European economy.

The EU should ensure an *inclusive and sustainable digital transformation* that benefits all. The challenges in this respect are not to be underestimated. While the diffusion of ICT is essential for stimulating economic development and boosting economic activity, without intervention this diffusion tends to be unequal. The business case for building high quality connectivity infrastructure in less populated areas is often weak. Additionally, technology can be a driver of income and wealth inequality because of its skills-bias nature and because innovators can capture high rents[13] (the digital company that acts first tends to benefit from the first mover advantage when entering a new market, notably due to network effects). It can also lead to significant labour market disruption and the need for new skills, in particular digital skills. Digitisation is massively increasing the demand for ICT specialists in the labour market - needed to develop and integrate new digital technologies, system and service platforms - as well as for basic and advanced user amongst the work force and population at large. Significant steps to tackle these challenges have already been taken through the Digital Single Market Strategy, but work will need to continue in order to mitigate the risk of a widening digital divide. To this end, efforts must be stepped up across the EU to ensure appropriate sustainable broadband infrastructure, as well as digital skills development, to allow European companies to take up digital technology in their day-to-day activities and be competitive at global level.

In view of the above, we propose six actions:

Action 1: A Digital Services Act (part of the new industrial strategy)

As announced in the President-elect's political guidelines, the Digital Services Act will 'upgrade our liability and safety rules for digital platforms, services and products, and complete our Digital Single Market'. The main objective of the act will be to update and clarify the regulatory environment, ensuring the proper functioning of the internal market for the provision of online services in Europe – **in particular, but not only, for online platforms**. This revised regulatory framework would better protect and empower users online, help innovative EU platforms to grow and scale-up, and bring stronger regulatory enforcement of rules and oversight of online services, in particular

[13] Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development, UN ESCAP Report

through better cooperation between national authorities and enforcement across borders.

The act will allow for the adoption of updated and uniform rules for digital services in the Single Market. The scope of the intervention would cover all digital services, in particular online intermediaries such as platforms (e.g. social media, search engines, marketplaces). The revised framework would update current rules on liability for more legal clarity and incentives for platforms to take appropriate measures, and add new obligations to tackle illegal content and illegal activities online while protecting fundamental rights and freedom of expression and information, transparency and algorithmic accountability, as well as for transparency of online advertising. Such a revised rulebook for digital services would provide greater safety, trust, and empowerment for users of global online platforms, while giving innovative EU businesses regulatory clarity to scale, grow, and compete globally.

The initiative would encompass a revision of the e-Commerce Directive and promote a set of binding duties and transparency obligations. It would also seek to reinforce and expand home-country control and put in place a dedicated regulatory structure for online platforms and digital services – based on faster and more efficient cross-border cooperation. This would address public policy concerns in a targeted, single market-friendly and transparent way, and strengthen media freedom and fundamental rights online. The initiative would add further clarity on a set of harmonised rules that would apply horizontally for all types of illegal content, as defined in EU and national law. The Commission has so far intervened with targeted measures concerning a small set of illegal activities, such as the Copyright Directive or the proposal on Terrorist Content Online, and has targeted a sub-set of those services concerned by the intermediation of content dissemination (e.g. the AVMSD covering video-sharing platforms). The Digital Services Act would complement these measures through a harmonised approach on duties of care reasonably and proportionately expected from different types of services for all categories of illegal content (currently not included in either of the sector-specific instruments). It would, in addition, correct the legal uncertainty and unjustified burdens in complying and enforcing the law due to emerging fragmentation in some Member States.

Action 2: Trustworthy digital solutions - Digital identity and blockchain (part of the new industrial strategy)

Trusted digital identity: Digital ID enables digital transactions and in a digital economy, the ability to establish individual identity uniquely, accurately and safely is of critical importance. Today, the lines between public and private identities online are blurred. Users increasingly rely on major online platforms as "de facto" authenticators but that convenience comes costly as users disclose excessive amounts of personal information to access basic digital services with limited knowledge and control over how their data is used. Additionally, the lack of strong identity verification procedures increases cybersecurity threats and risks of identity fraud. Online, as much as in the analogue world, a balance must be preserved between citizens' rights to privacy and to control the personal data that make up their digital identity (including the right to remain anonymous), and the need of business and public authorities to reliably verify the user's identity. End-users should be able to choose the means for online

identification and retain control of which identity attributes they intend to reveal. In addition, a digital identity management framework should be platform-independent, standardised and interoperable so as to allow citizens to use their national eIDs to access private services across borders. To that end, a trusted digital identity initiative will set clear enforcement and accountability rules, as well as regulatory obligations and incentives for the private sector to accept authentication based on trusted eIDs (such as those notified under the eIDAS Regulation)[14].

This initiative would also explore the links with distributed ledger technology/ blockchain: Blockchain inspired decentralised technologies are transformative technologies that provide greater trust and efficiency in the existing services and future ones. They introduce new paradigms for handling and valorising any transaction or exchange of data, as well as contributing to the emergence of new business models concerning machine to machine applications. The European Commission is working with Member States and industry to gain EU leadership in blockchain, e.g. by investing in R&D&I, in standard-setting and having the public sector taking a leading role, notably through the deployment of a European Blockchain Service Infrastructure.

Action 3: Supporting growth through wide take-up of digital innovations (part of the new industrial strategy): The main objective will be to use levers that reduce the digitalisation burden for companies.

Reinforce digital innovation infrastructures and ecosystems through the European networks of Digital Innovation Hubs: These hubs (281 networked hubs in total) will enable businesses, in particular SMEs, to experiment with digital technologies before deciding to invest. The focus is on fostering co-investment with Member States and regions and on achieving a pan-European network of complementary competences and testing facilities.

Improve access to finance for digital SMEs, start-ups and scale-ups: use of dedicated financial instruments under InvestEU with a twofold objective: (i) significantly reduce the difficulties in financing highly innovative SMEs and digital start-ups, often characterised by high risk profiles, need for long-term investments and lack of collateral and (ii) support digital innovation ecosystems, company scale-up and SME growth.

Action 4: Nurturing European talent: cooperation for digital skills (part of the Digital Education Action Plan)

On the basis of politically agreed targets to guide our work, the Commission should cooperate with Member States and social partners to:

(1) boost the basic digital skills of the population: 43% of EU citizens lack basic digital skills and are at risk economic and social exclusion. **The proposed objective to increase basic digital skills from currently 57% to 80% of the population by 2030**, calls for decisive policy action. It should primarily be borne at Member State

[14] More information about eIDAS Regulation is available in page 163

level with the support of the social fund. The EU's added value is in monitoring, skills intelligence, exchange of best practice and strategic development; notably for DG CONNECT through the Digital Skills and Jobs Coalition, including its EU-wide platform, and through EU Code Week.

(2) create a highly digitally skilled workforce to boost EU competiveness: Europe needs to increase the number of digital specialists and advanced users to enable the deployment of advanced digital technologies across the economy. Today, the EU lacks around 1 million ICT specialists and this could grow to 2 million by 2030[15]. **The proposed objective is to close this projected digital skills gap**. To achieve this goal, half of public support will need to focus on increasing the number of female specialists as few currently work in this field (17%). To achieve this goal, DG CONNECT proposes to:

a. Provide new training opportunities for ICT specialists in advanced digital skills (AI, Cybersecurity and High Performance Computing) funded by the Digital Europe Programme, the EIT and the Digital Opportunity Traineeship Initiative and by extending them up to 2030. Together they could support the training of 500,000 (25% of the gap) ICT specialists. Additionally, structural, national, regional and private funds would be needed.
b. Facilitate upskilling: Member States should set up a co-funded state/employer/employee reskilling tool to support training for SMEs and micro enterprises adopting new digital technologies. Competence centres and Digital Innovation Hubs could act as intermediaries, facilitating access to appropriately certified training. This would increase the number of "advanced users" with sector specific knowledge, supporting the digitisation of the economy.
c. Foster AI talent: Building on the AI coordinated action plan, create an EU framework for AI profiles and the related skills, which are necessary for deploying AI in different sectors.

(3) Increase the numbers of women in digital: The Commission will support Member States in fulfilling their commitments to the Women in Digital Ministerial Declaration. In particular, it will support them in developing strategies, exchanging best practices and monitoring progress through the Women in Digital scoreboard. In addition, DG Connect proposes to:

- Create a high-level expert group of leading tech women to provide the Commission with insights for policy responses and actions to increase the number of girls and women in digital.
- Launch a female role model campaign, including a European-wide Girls & Women Digital Day.
- Specify in calls under the Digital Europe Programme that the beneficiaries should aim to have 50% female participation in their training actions.
- Set up an investment facility and business acceleration support programme for innovative female-led SMEs and startups focused on strategic digital technologies.

[15] Vacancies for ICT- Online Repository (VICTORY): Data Collection.

- Gender equality will be a priority of the future Creative Europe and will be supported through studies, mentoring, training and networking activities.

2. Digital for a European Green Deal

"Europe must lead the transition to a healthy planet and a new digital world.

I want Europe to become the first climate-neutral continent in the world by 2050."

Ursula von der Leyen, President-elect of the European Commission

Climate change has sweeping consequences for life and livelihood; its effects are being felt in real time. All available means need to be used to address it. Industrial processes, agricultural practices, logistics systems and energy networks are areas that will benefit from major efficiency gains stemming from digitalisation. These gains have the potential to translate into major reductions to levels of greenhouse gas emissions.

The Commission Communication on "A Clean Planet for all" shows how Europe can lead the way to climate neutrality by 2050 and highlights the essential role digitalisation can play in meeting the objectives of the Paris Agreement and the 17 UN Sustainable Development Goals. As such, **Europe's digital policy and initiatives should support and accelerate the transition to sustainability**, in particular by enabling other sectors to transition to a carbon neutral economy. At the same time, it is also **important to reduce the carbon footprint of the ICT industry, aiming for carbon-neutral ICT by 2030/2035**. To this end, we propose the following actions:

Action 1: Greening ICT and circular economy: towards carbon neutral and circular digital technologies, networks and devices. The objective is to create a European industrial model for the digital sector that differentiates itself by putting sustainability and green growth at its heart. This will require actions on both the energy efficiency side of ICT infrastructure, such as data centres, equipment and devices as well as on their 'material' efficiency side, i.e. improving durability, recyclability, upgradability of products and possibility to communicate the performances via the energy label. Work on this is already ongoing and several DGs (amongst others DG CNECT, DG ENV, DG GROW, DG CLIMA, DG ENER) are involved in a mapping of the existing legal framework and financing possibilities for urgent action and material impact. Projects for reducing the ICT sector's carbon footprint will also receive funding under the DEP and InvestEU Programmes.

Lifespan and circularity of digital products and devices: To make digital devices repairable, updatable and recyclable, an immediate starting point could be the implementation of the existing instruments that already cover ICT products in their scope (eco-design, eco-labelling, waste from electrical and electronic equipment (WEEE)) e.g. through delegated or implementing acts or adapting work programmes and priorities. At a later stage and to improve recyclability and recuperation of rare earth and other key material components, a digital device product factsheet (passport) that would contain the product's origin, (chemical) composition, energy use and information on reparability and end of life handling could be considered. Energy-lean blockchain technology and applications, already being developed as a result of

EU efforts, should be deployed. Mandatory software updates should also be considered in order to increase the lifespan of digital devices.

Improve the energy efficiency of telecom networks: A first step to consider will be requiring telecom operators to give more visibility to consumers on the energy consumption and/or carbon emissions related to the provision of their services. In parallel, more stringent energy efficiency standards and certification schemes for networks and base stations could be developed and used as a basis for authorisation by national authorities.

Data centres, flows & cloud: The 2008 European Code of Conduct for data centres aimed at improving the energy efficiency in data centres, but progress has overall been limited. At the same time third country players get closer to reaching carbon neutrality in the coming years thanks to strategic investments in renewable energy (own windmills, solar energy, etc.) Promoting a European approach for sustainable data centres, cloud computing services and data flows along the entire computing value chain will be crucial not only for energy efficiency, but also for the competitiveness of the EU industry. This approach, which would be funded through the DEP, could include the development of data-driven solutions that optimise the design and efficiency of data centres and the identification of strategic geographical localisation for sustainable interconnections of cloud infrastructures commensurate to the mapping of data flows across the EU. Furthermore, the existing methodology and monitoring schemes for energy efficiency of data centres could be consolidated and transformed into targets (e.g. setting an ambitious objective for datacentres to become carbon neutral by 2030, functioning entirely on the basis of renewable energy sources). These methodologies could also apply to other settings, such as buildings and factories.

Green public procurement: EU institutions and Member States, as major consumers, have a key role to play in the shift to a more resource-efficient economy. By using their purchasing power to choose environmentally friendly goods and services, they can stimulate a critical mass of demand for more sustainable products that would otherwise be difficult to get to market. A move away from a voluntary approach for green public procurement could be considered as well as a significant expansion of its criteria and scope to cover areas not covered so far, such as software, cloud computing and blockchain.

Action 2: ICT for environment and climate. Beyond reducing the carbon footprint of the sector itself, ICT's largest influence will be by enabling energy efficiencies in other sectors (smart grids, smart buildings, smart mobility, smart logistics, less resource intensive manufacturing, etc.). Estimates indicate that ICTs could deliver approximately 7.8 GtCO2e of emissions savings, representing around 15% of total emissions in 2020[16]. Examples of projects that could have a great impact include stability, effectiveness and safety of low (zero) carbon electric grids, automated disassembly and separation of waste using AI and robotics. On top of these processes, ICT can also help prevent significant damage arising from disruptive

[16] SMART 2020: Enabling the low carbon economy in the information age.

weather patterns and phenomena, through climate impact modelling for optimal mitigation and adaption.

Action 3: Creating a common open European data space for the environment and climate action. This will allow for a wide collection and better access to the wide range of environmental "big" data and also help engage with citizens using digital tools. These platforms, funded through DEP, will support new AI and high performance computing based solutions and simulations, leading to identifying synergies between areas, such as connected and automated mobility, clean mobility based on alternative fuels, energy storage and smart grids and cross-border cooperation in the area of renewable energy. The Commission action will be covering business cases with cross-border links, such as renewable energy availability or connecting cross-border data centres with smart grids.

3. Digital for European democracy

"I want Europe to strive for more in nurturing, protecting and strengthening our democracy.

Women and men, old and young, East and West, North and South, our various national and cultural identities are the patchwork of our identity."

Ursula von der Leyen, President-elect of the European Commission

Digital technologies, and in particular the internet, have democratised information and the way people communicate. These have been a formidable tool for the promotion of plurality and social wellbeing, but have given rise to several challenges **to democracy** around trust and fundamental rights, which will need addressing.

The exposure of citizens to large-scale **disinformation** campaigns, including misleading or outright false information, is a major challenge for Europe. Disinformation can polarise debates, create or deepen tensions in society and undermine electoral systems, and have a wider impact on European security. Disinformation is often part of hybrid wars and aims at destabilising societies. As the Political Guidelines for the next European Commission 2019-2024 rightly point out, fighting disinformation in the era of social media and online platforms has to be a joint effort involving all relevant actors, from institutions to social platforms, from news media to single users.

Independent and high-quality media are the backbone of our democracy. The sustainability of the media sector in the digital age, its capacity to adapt and innovate, is crucial for the future of informed debate in Europe. The European Union has a role to play to protect media pluralism and journalistic standards in the digital age, and to support media innovation, the circulation of content across borders and cultural diversity. The success of the fight against disinformation will rely on many factors, including media literacy and the health and strength of the media sector.

Beyond disinformation, **cybersecurity threats and interferences can also influence democratic processes**, including elections. For the first time, the European elections in 2019 saw a joint effort by the Commission and Member States to coordinate with the objective of ensuring the security of the election process.

Based on this experience, we can foresee further cooperation to ensure the safety and fairness of future election processes.

At the same time, beyond media's impact on our democratic processes, technology can be a powerful instrument to **promote and preserve Europe's diverse cultural identities and heritage**. With mobile devices becoming the main access point for news and other forms of audiovisual and interactive media[17], this offers a great opportunity to produce, promote and **facilitate access to quality content and media that is made in Europe**.

3.1. Security and fight against disinformation

Action 1: Ensuring the security of the democratic process and tackling disinformation The Commission recommendation on free and fair elections, together with the compendium on cybersecurity of election technology produced by the NIS Cooperation Group[18] have played a significant role as a reference for national election preparation, and for the identification of potential threats in those elections. While fully ackapris agreementowledging Member States' competence in this area, the Commission would encourage a stronger link between national election authorities and the Computer Security Incident Response Teams (CSIRT Networks). Furthermore, a deeper cooperation at EU level should be established through fora such as election cooperation networks, and the NIS Cooperation Group.

Adopt a coregulatory framework on disinformation (to be decided if included in the Digital Services Act package or separate proposal): Building on the achievements of the Code of Practice on disinformation[19], a new coregulatory framework could establish binding rules for all platforms over a certain size and the advertising industry in a number of areas, while leaving sufficient flexibility for the industry to design appropriate policies adapted to the specificities of the services provided by platforms. Such areas could include transparency of political and issue-based advertising, scrutiny of ad placements, measures against fraudulent conducts, algorithmic accountability and access to platforms' data for research purposes. The Commission will assess the Code of Practice and identify further policy options. This could complement possible action which may be taken in the context of the European Democracy Action Plan. This, as announced in Ms von der Leyen's political guidelines, should address the threats of external intervention in our European elections, including proposals to ensure greater transparency on paid political advertising and clearer rules on the financing of European political parties.

3.2. Media and culture

Action 2: Content creation and distribution - Europe's cultural and creative sectors represent a market of about 7 million employees and 2.5 million companies. A

[17] Close to 80% of European internet users read the news or consume music, video or games online.
[18] The NIS Cooperation Group has been established through the 2016 Directive on security of network and information systems (the NIS Directive) to ensure strategic cooperation and the exchange of information among Member States in cybersecurity.
[19] The Code sets a wide range of commitments, from transparency in political advertising to the closure of fake accounts and demonetisation of purveyors of disinformation. The Code of Practice was signed by Facebook, Google, Twitter, Mozilla, as well as by advertising industry stakeholders in October 2018.

significant part of Europe's economy is based on its ability to produce, invent, and re-invent culture. In particular, the value-added in the audiovisual and multimedia sector has seen a tremendous growth over the past years in Europe (+10% between 2008 and 2016 for audiovisual, +26% for videogames). Ensuring Europe's leadership on content is thus pivotal for its competitiveness, as well as for preserving cultural diversity. Supporting the creation, distribution, access to and re-use of all digital content through a strong mix of existing and future financial programmes is fundamental. For wider access to and re-use of content, it is necessary to enable a strong, innovative European content sector capable of effectively targeting audiences in the European market and beyond.

A new approach for supporting the European content industry – use a combination of tools in different EU programmes – Creative Europe, Horizon Europe, and Invest EU – to build a strong European content sector. For example, a more structured involvement of content producers in technology innovation projects under Horizon Europe can ensure that technologies are better fit for market reality. In parallel, Creative Europe can bring research projects close to the content industry through its markets and events. This will be matched by a programme of outreach to promote regulatory alignment with our partners around the world and particularly in our neighbours in a way that encourages the joint creation and use of content

Action 3: Digitising the European cultural heritage digitisation, access and re-use of cultural content - Making Europe's heritage easily digitally accessible and preserving it for the next millennium will help build and shape our future identity. About 22% of Europe's heritage collections is digitised, with only half of these available online. The devastation of Notre-Dame confirmed the urgency to act. The only digital model available is 10 years old and not sufficient to support reconstruction or useful for historical or study purposes. Initiatives will support actions to facilitate innovative creation and distribution, as well as digitisation of cultural material. These will build on the achievements of the new EU copyright framework, in particular the exception for digital preservation of cultural heritage and extended licences for out-of-commerce works.

"Notre-Dame Act" (a pan-European initiative for 3D digitisation of cultural heritage): This will be a key feature of a new Commission initiative on the sector's larger digital transformation; DEP and Horizon Europe funding will be used to support the 3D digitisation of artefacts, monuments and sites, addressing the need for benchmarks and standards, interoperable open public repository for 3D models, a network of competence centres on advanced digitisation of monuments and sites, and a reinforced role of Europeana.

4. A stronger Europe in the digital world

"For the generation of my children, Europe is a unique aspiration. ... It is an aspiration of a world full of new technologies and age-old values. Of a ***Europe that takes the global lead on the major challenges of our times****."*

Ursula von der Leyen, President-elect of the European Commission

Europe is in a global competition to control both technology and data.

The international race for dominance in digital technology and its applications has a direct impact on Europe's technological sovereignty and its ability to remain competitive across every economic sector. It will also be significant factor in supporting our values around the world.

Technologically advanced companies, in particular from the United States and China are shaping global value chains. Europe has no lack of innovative digital business ideas but few of them scale up and expand in Europe or shape these global markets. The level of ambition of other major players, who often benefit from state support, lower standards or lower tax rates, presents a risk to Europe's influence on global technological developments. Europe's comparative advantage globally lies partly in our ability to develop regulatory frameworks around digital issues, which involve complex societal and economic issues.

There is also untapped potential in the EU and its member states working together with the private sector, from leading digital players to addressing the emerging connectivity needs of vast regions of the globe, starting with our neighbours like Africa or the Western Balkans. Only by establishing digital within all EU external relations policies, upgrading relations with key international partners and leveraging the Digital Single Market to export our technology, our standards and our regulatory model/values, we will be able to strengthen Europe's technological sovereignty.

4.1. An EU-African digital partnership

Africa's **strategic challenge** is similar to that of Europe - securing sovereignty over technological digital development. The frontrunners in digital investments and development assistance in Africa today, China and the US both heavily promote their own industrial & commercial interests. As part of its digital silk-road strategy, China uses a mix of state-controlled companies, state loans and low deployment prices to become the main supplier not only of digital infrastructure, but also of the key elements of the data economy - data centres, eGovernment and smart cities solutions. The US "Better Utilization of Investments Leading to Development" ("BUILD Act") shifts policy from development to investment using only US private stakeholders, including the GAFAs.

While still the largest trading partner, investor and provider of financial assistance to Africa, the EU and its Member States (MS) are lagging behind. A strong, human-centric EU-Africa digital economy partnership based on human rights, democracy and the rule of law would far better serve our interests than one based on the current trends.

"The European Union is the world's biggest donor of development assistance. In doing so we seek to create a partnership of equals, without compromising freedom and dignity. I would like Europe to have a ***comprehensive strategy on Africa****, our close neighbour and our most natural partner. It is a continent full of opportunity and potential for cooperation and for business. It will become home to the youngest, fastest growing middle class in the world, with private consumption expected to reach*

€2 trillion a year by 2025. We must make the most of the political, economic and investment opportunities that these changes will bring."

Ursula von der Leyen, President-elect of the European Commission

Action 1. An Action Plan is under preparation as part of the "Comprehensive Strategy on Africa" called for in the Political Guidelines.

4.2. The Digital Agenda for the Western Balkans

The Regional Roaming Agreement **entered into force on** 1st July 2019, bringing up to 90% cuts in roaming tariffs within the region because both Serbia and Kosovo* agreed not to abandon this process despite their ongoing tensions. This indicates the potential of the digital agenda to make concrete progress on the ground in the Western Balkans and explains why the Digital Agenda has been the most successful of the flagship projects launched under the 2018 Communication on "A credible enlargement perspective for and enhanced EU engagement with the Western Balkans".

"I want to reaffirm the European perspective of the Western Balkans and I see an important role in the continued reform process across the region. We share the same continent, the same history, the same culture and the same challenges. We will build the same future together."

Ursula von der Leyen, President-elect of the European Commission

Action 2. The Digital Agenda for the Western Balkans. The EU and Western Balkan economies will continue to implement the Digital Agenda for the Western Balkans ad part of the Stabilisation and Association Process, in parallel with the Berlin Process. It will focus on broadband rollout to start preparing for 5G connectivity; reinforced cooperation on cyber-security; implementation of relevant parts of the EU eGovernment action plan; a skills package; and membership of the EU Artificial Intelligence alliance and Blockchain forum.

5. Conclusion

The principal challenge for digital is to put Europe's industries in a position to exploit the next wave of data-driven products and services, within safe and ethical boundaries. This requires significant investment to build capacity, but also a high degree of cooperation in strategic sectors and at all levels of the value chains. At the same time, developments must take place within stable and robust frameworks that both instil trust and confidence in citizens and allow businesses the necessary flexibility and predictability to innovate. Given the pace of developments, we need to act now.