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POLICY BRIEF

Anchoring Romania on the path to digital transformation

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INTRODUCTION

In the first half of 2019, Romania will hold the rotating presidency of the EU Council, a first since it joined the EU in 2007. For a six months period, Romania will steer the different working groups of the EU Council, ensure a continuous cooperation among Member States and set the priorities of the EU agenda. Consequently, Romania needs to ensure that the country's EU expertise will be put forward to serve the correct functioning of the EU mechanisms, in the interest of the Union, in general, and of its own people in particular. Given the rapid changes brought by digital technologies in all the layers of our society and the challenges it poses to all Member States, Romania needs to set the digital transformation as one of the top priorities on the EU agenda during its presidency.

In the context of the Eurosfat panel *„Is EU embracing the digital transformation at its full speed?"*, Europuls and its partner, Smart Everything Everywhere, would like to contribute to defining the list of priorities that Romania should focus on during its EU Council presidency, mainly EU's digital future.

Launched in 2010, the [Digital Agenda for Europe](#) is one of the seven flagship initiatives of the Europe 2020 strategy. It aims at fostering economic growth by tapping into the potential of ICT technologies and creating a European Digital Single Market, which allows individuals and businesses easier access to and delivery of services and products in a safe and competitive online environment. As one of **the main political priorities of the European Commission, the Digital Single Market** holds enormous potential: is estimated to bring an additional 415 bilion euros in the European economy, better and more numerous jobs, improved governmental services and easier access to knowledge and information. To secure EU's role as a leader in the globalised and increasingly digital economy, it is vital that our future growth is led by innovation in these technologies and not just by simply reacting and adapting to its developments.

However, there are still several **obstacles** that challenge the achievement of this potential at EU level: fragmented digital markets caused by national online services and insufficient cross-border online commerce; distrust in online shopping and data security, insufficient investment in digital infrastructure, slow innovation and research capabilities, lack of digital skills and unharmonized regulatory frameworks for digital content and intellectual property rights. While there is a noticeable divide between the more „digitalised" Member States and the ones lagging a bit behind, it is undeniable that EU should continue to collaboratively work towards reaping the socio-economic benefits of the digital economy.

Romania, as one of the countries facing both challenges and opportunities in the face of digitisation, should take the occasion of the Presidency to increase its efforts at national level and also call for a more determined, collective effort to step up progress in this respect at European level.

1. Digital infrastructure and interoperability - key enablers of change

Digital services can only be delivered if enabled by efficient digital infrastructures. As more people and businesses get online, the infrastructure that supports these fast-growing data flows needs to keep up. This digital activity is already constrained by impediments that limit the speed of mobile devices, network capacities, access to high-speed broadband internet and high costs in less developed areas. The nature and gravity of this challenge is uneven among the Member States but overall there is a strong need for an improved infrastructure that supports the ever increasing digital growth.

However, the digital infrastructure should go hand in hand with policies that support interoperable networks and systems which allow a smooth exchange of data among the Member States. Given the free movements of goods, capital, services and people, the European digital economy relies on how well the different actors interact electronically with public administrations and their services across-borders.

The European Interoperability Framework aims at helping European public administrations to modernise and set up interoperable digital services for greater transparency and improved services for citizens and business across countries. It is the commitment of national authorities that will ensure its success or failure.

Despite having the fastest broadband connection, Romania is lagging behind in developing digital services starting from the real needs of its citizens, adapted to the context, inclusive and accessible to all and which ensures data and privacy protection. Four rules should guide the development of all e-government systems, in line with the latest global developments: mobile first, cloud enabled, open by default, security and privacy.

In order to achieve this, internet connectivity for rural areas of Romania must remain a priority for decision-makers.

On the other hand, investment in infrastructure should be reinforced, as the shift from 4G to 5G could give Romania an opportunity to gain leadership. The leap to 5G networks in Romania would allow connecting a greater number of industrial processes and machines, reshaping entire industries and turning the internet into the backbone of all other infrastructures. New spectrum for 5G will need to be allocated and governments should work together to make the necessary frequencies available at the same time in all markets.

2. Digital skills for a digital future

Digitisation has multiple implications for the labour market. Rapid innovation in ICT transforms the nature of jobs and the skills required to perform such jobs. In the future, almost all jobs will require digital skills and the EU workforce should adapt very quickly.

However, in 2016, the share of non-users of internet continued to diminish but still 16 % of the EU population has never used internet before. Almost two fifths of the EU workforce has little or no digital skills and the situation is

more challenging depending on geographical areas (South-Eastern Europe performing worse than Northern and Western Europe), category of socially vulnerable groups (the elderly, unemployed and disabled people) or gender (low share of women in science, technology, engineering and mathematics).

Moreover, the demand for ICT professionals is steadily growing while the number of graduates is not keeping pace. As a result, many open vacancies in the ICT sector cannot be filled, despite the high level of unemployment in Europe. If nothing is done, the Commission predicts there could be up to 500,000 unfilled vacancies for ICT professionals by 2020 all over Europe. This clearly results in a mismatch of skills that are currently available and those actually required on the labour market.

In this era of rapid technological changes, the education systems need to adapt and find innovative means to effectively train the next generation of workers.

In Romania, the digital skills of the overall population and the workforce are among the lowest in the EU, despite the country's increased rate of well qualified ICT specialists. While efforts are being deployed through the use of European funds and a national strategy that focuses on ICT in education and training, more sustained policies and actions are required.

Very early in school, the curriculum should incorporate digital literacy, ICT and programming skills, and targeted extra-curricular activities, while teachers should be supported to adapt and retrain for this new curriculum.

Furthermore, Romania should embark on an ambitious and committed journey of upskilling and reskilling its workforce and the private sector should also contribute by actively driving this training. Accordingly, in the medium term, there is a strong need for Romania to realign its educational institutions with industry to meet the realities of the industrial internet.

For a sustainable impact, the Romanian national coalition for digital jobs should be endorsed at the highest political level, be supported to scale up and spread to other ICT-using industries. Incentives like tax benefits could encourage companies to invest in human capital. Students could benefit from improved career guidance and mentorship, focused on digital careers and lifelong learning opportunities.

It is crucial that actors from both the private and public sector, civil society, NGOs, think-tanks and academia focus on the imperative common goal of decreasing Romania's digital skills' deficit and retaining the ICT specialists who leave the country to work abroad.

3. Leapfrogging to digitizing Romania's key industries

While the Digital Single Market strategy makes a number of valuable contributions, it is predominantly focused on the consumer side of the digital economy. There is a need to fundamentally change internet growth from the consumer side to the widespread digitisation of industry.

Romania's automotive industry represents ~ 15% of the GDP contribution and ~ 50% of the Romanian export. Given its size, the Romanian automotive industry could be a stronger contributor to the global automotive technology and innovation-based industry.

The only way ahead for Romania is to leapfrog traditional models for small and incremental innovation to adopting hi-tech solutions for the whole industry spectrum.

The industrial internet brings these two together: the slowly accumulated results of the industrial revolutions with the more recent and more explosive innovations in computing, information and communications systems.

4. Start-ups and digital disruption

Europe's competitiveness relies on a fair, innovative and sustained entrepreneurial ecosystem.
The European Commission as well as many other policymakers across Europe have put in place ambitious programmes to help local entrepreneurs start new businesses. However, not enough companies take on the size and scale to become global champions, an aspect that is hindering growth and job creation on the continent. A lack of investment and capital-raising opportunities at the key growth phase is one of the root causes coupled with key obstacles in e-commerce practices like un-harmonised regulatory frameworks and market fragmentation.

Europe's business ecosystem should be able to acquire the capital and talent necessary while benefiting from lower costs and good reliability of cross-border shipping, elimination of geo-blocking practices, simplified VAT systems, harmonised interoperability standards and copyright laws adapted to the digital age.

The Romanian start-up ecosystem is still young and the local market proves not to be profitable enough for a start-up to survive. Even though Romania is ranked 10th in the world and 1st in Europe in terms of average Internet peak connection speed, its digital market does not provide too many opportunities for local start-ups. Access to local and national funding is still challenging, many targeting international investors. In the

European digital city index, Romania does not fare very well, the capital being ranked on the 52nd place out of 60.

However, the Romanian tech ecosystem benefits from a wide pool of IT talent, relatively low wages and cheap operating costs which could make the country a regional innovation leader. Romania needs to build on this potential and further improve its efforts to support tech start-ups by:

- achieving more harmonization mostly in privacy laws and VAT, along with simplification and digitisation of public services

- boosting access to public and private funding, including alternative sources like crowdsourcing

- encouraging entrepreneurship as a career path and ensuring high-visibility and recognition of those successful

- embracing the culture of failure and enhancing the impact of experienced role models

- promoting the thriving tech hubs in the country and fostering networking opportunities among them and other EU hubs that facilitate dialogue and exchange of best practices

- increasing entrepreneurial support systems like incubators and accelerators to allow start-ups to scale-up and gain international exposure

- promoting greater partnerships between start-ups and multinationals which can act as customers, invest in

incubators and accelerators and provide mentorship and guidance

from the EU single market.

In recent years, the government has increased its support to local entrepreneurs through programs like [Start-up Nation](#) which is an encouraging initiative for the future of the ecosystem but it needs to be accompanied by a sustained business culture.

Romania and Member States should view the European start-up ecosystem as a whole and not as separated ecosystems in competition with one another. This will encourage collaboration, exchange of best practices and increased growth opportunities.

While Romania's start-up ecosystem is relatively young, there is great potential for growth, given that proper support systems are in place to allow them to scale-up and benefit

Conclusion

The industrial internet is key to innovation as almost no business today is run without the help of ICT. To reap its full benefits for future growth and to support job creation, policymakers will need to keep the internet open and provide a sound policy framework for its governance, namely related to access, privacy, security as well as for investment in new infrastructure like 5G.

Successful deployment of new technologies and business models will require innovation-friendly regulation consistent with a data driven economy, as well as efforts to improve the quality and digital readiness of human capital.

Romania needs to adopt a coordinated, integrated, efficient and transparent strategy for technological development, focusing on efficient use of public money, administrative simplification, wide access to participation in public tenders - in close consultation with industry, civil society and citizens. In addition, lifelong learning and new ways of delivering training are essential elements in ensuring that these technologies benefit all of society and leaves no one behind.

Romania has the necessary ingredients and **a strong potential to become a global provider of solutions for information technology,** cyber-security, internet-of-things, technology for smart cities, etc., and such opportunity should not be wasted.

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EUROPULS   *SMART EVERYTHING EVERYWHERE*

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ABOUT

Europuls – Centre of European Expertise

Europuls is an NGO launched in 2010 in Brussels by a group of Romanian European affairs experts. Europuls aims to promote the European integration of Romania and to contribute to the development of a European public space. Our goal is to encourage public debates on European issues through articles and studies, as well as through the organization of debates, workshops and conferences, alongside European Commissioners, Members of the European Parliament, political leaders, representatives of the civil society, experts and journalists.

Europuls is the initiator and main organizer of EUROSFAT, the annual forum of debates on European issues and is the founding partner of the RO2019 project for the support of the Romanian Presidency of the EU Council in 2019.

www.europuls.ro

ABOUT

Smart Everything Everywhere

Smart Everything Everywhere (SEE) is a catalyst for Romania's Digital Transformation. SEE provides a framework for accelerating Romania's transition into the digital age, leveraging the country's untapped digital potential – enabling it to grow, scale and become a global innovation hub. It focuses on three pillars of the digital future: industry 4.0, smart cities and citizens, and the digital state. SEE has an ongoing strategic dialogue with key decision-makers in Romania, Europe and the U.S. Our team has led major IT, digital innovation and entrepreneurship projects and policies while working with the Chancellery of the Prime-Minister, building powerful coalitions for the digital transformation of the country.

www.smarteverythingeverywhere.org