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OIR POSDRU
Regiunea București Ilfov



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**Report on public policies on
SMEs digitalization identified for
improvement and examples of local
good practice**

Bucharest

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Executive summary

- The digital economy is transforming all areas of activity. Technologies such as the Internet of Things, 5G, Big Data, Blockchain and artificial intelligence (AI) help companies achieve greater productivity and relevance in the single market and/or globally.
- As a result, digitalization brings opportunities for all types of companies, including SMEs, but ensuring SMEs access to digitalization must be supported, coordinated and monitored.
- The current challenge is to change the way SMEs think, train and work to create added value by digital technologies.
- The European Commission, through the Digital Agenda for Europe, links digital competences with the concept of a modern economy with the ultimate goal of promoting digital skills.
- Romania has many advantages such as high internet speed, development of the ITC sector, state-of-the-art technology already present in large production facilities, as well as specialized labor force to benefit from digitalization and Industry 4.0.
- At the moment, the landscape of public policies in Romania that supports the digitalization of SMEs includes operational programs, national strategies and plans, de minimis aid, etc.
- The main areas for improving public policies regarding the digitalization of SMEs are:
 - Awareness of the need for SMEs digitalization
 - Appropriate technical solutions for SMEs digitalization
 - Increasing digital skills at all levels relevant for SMEs digitalization
 - Adequacy of digital solutions chosen by SMEs to market requirements
- In this context, the report presents public policies on the digitalization of SMEs identified for improvement, and examples of good local practice.
- The report proposes a number of measures and other public policies that can be developed to increase SMEs digitalization.
- Public policies play a crucial role in creating the right framework, and conditions for SMEs to enter the digital age.
- This requires a coordinated approach between the different levels of government to address the problems faced by SMEs and ensure their future competitiveness.
- The coordinated action of all institutions with a role in increasing the degree of SMEs digitalization in Romania will lead to the improvement of DESI index and the transition to the digital economy.

1. Global, regional, and national context

A. Introduction

Digitalization is the process by which digital technologies are used to change the way business is conducted and has a massive impact on economies around the world.

The digital revolution has taken place globally and has led to the recognition of the importance of digital transformation in the economy. The digital revolution involves three main processes:

Digitization – Converting products and services into digital format so that they can be presented online

Digitalization – Innovation in business processes and models by exploiting digital opportunities

Digital transformation – Redesigning the activity of companies as a result of the implementation of digitalization

Digitalization highlights the need to re-evaluate business models and transform value chains under the impact of digital technologies. According to the international consulting group Booz & Company, **a 10% increase in digital activities can reduce a country's unemployment rate by 84%.**

SMEs digitalization has the advantages and challenges presented in the following table:

Advantages of SMEs digitalization	Challenges of SMEs digitalization
<ul style="list-style-type: none"> ▪ New products/services 	<ul style="list-style-type: none"> ▪ Profound changes in customer requests
<ul style="list-style-type: none"> ▪ Information and knowledge flows 	<ul style="list-style-type: none"> ▪ Fast moral wear and tear of online products
<ul style="list-style-type: none"> ▪ Digital technologies 	<ul style="list-style-type: none"> ▪ Major changes in the skills needed for human resources
<ul style="list-style-type: none"> ▪ Digital interconnectivity 	<ul style="list-style-type: none"> ▪ Convergence of several technologies
<ul style="list-style-type: none"> ▪ Easy access to customers and markets with potential 	<ul style="list-style-type: none"> ▪ Aspects related to cybersecurity issues

1. Global, regional, and national context

B. A new global and regional paradigm

The digital economy is a global economy that favors intangible products (e.g., information, processes, platforms), and is intensely interconnected.

The ITC industry is an industry sector that optimizes and streamlines the classical economy in all areas, by transmitting essential information in a timely manner, regardless of the distance between the source and the beneficiary of the information.

Technologies such as IoT, 5G, Big Data, Blockchain and artificial intelligence help companies gain more flexibility in the supply chain, help increase data security and strengthen remote work capabilities and process automation.

The convergence of these technologies leads to a digital change in products, processes, and business models.

At the global level and at the level of the European Union, there is a need for both a digital economy and an upgrade of the skills needed to increase the digital transformation capacity of all types of companies in all industries.

The digitalization status of industries varies mainly between high-tech and traditional fields, but there are also notable differences between the digitalization of large enterprises and SMEs.

Studies conducted to quantify the impact of digitalization on SMEs show an average revenue growth of 25% and an average cost reduction of 22%.

Some data from the documents show the transformative impact of digitalization on the European Union:

- The ITC industry contributes **4%** to EU GDP and employs more than 9.1 million people
- The internet economy creates five jobs in the EU for every two "offline" jobs lost
- The EU's digital economy is growing by **12%** every year and it is estimated that there are more mobile subscriptions in the EU than people
- It is estimated that half of the increase in the productivity of EU companies comes from investment in information and communication technology

1. Global, regional, and national context

C. Digitalization in România

According to the Small Business Act Factsheet 2019 for Romania, a report by the European Commission, SMEs represent **99.7%** of companies in the economy and employ **66%** of employees. That is why it is essential that the digitalization of these companies be guided, supported, coordinated.

The strategic documents that guide the digitalization of the Romanian economy are the following:

- National Strategy for Competitiveness 2015-2020
- National Strategy for Research, Development, Innovation 2014-2020
- Competitive Romania Strategy
- National Strategy on the Digital Agenda for Romania 2020
- National Investment and Economic Recovery Plan
- National Recovery and Resilience Plan

The National Strategy on the Digital Agenda 2020 defines the following four main areas:

1. e-Governance, Interoperability, Cyber Security, Cloud Computing and Social Media

– An area that aims to increase efficiency and reduce costs in the public sector in Romania by modernizing the administration.

2. ITC in education, culture and health

– A field aimed at supporting these technologies at the sectoral level.

3. ITC in e-commerce, as well as research, development and innovation in ITC

– A field that aims at Romania's regional comparative advantages and supports economic growth in the private sector.

4. Broadband and digital infrastructure services

– An area aimed at ensuring social inclusion.

Romania's economy is mainly based on services (**67%** of GDP), manufacturing (**22%** of GDP), agriculture (**7%** of GDP) and non-processing industries (**4%** of GDP).

The concepts of digitalization and Industry 4.0 are becoming a reality. Automation, artificial intelligence, the Internet of Things (IoT), other advanced technologies quickly capture and analyze a multitude of data that provide many types of information.

The current challenge is to change the way of thinking, training, working of economic agents to create added value by digital technologies.

Romania has the necessary advantages (internet speed, IT sector development, state-of-the-art technology already present in large production facilities, specialized workforce) to make a leap towards digitalization and Industry 4.0.

1. Global, regional, and national context

D. Funding programs

- **POC 2014-2020** – Innovative enterprises of start-up and spin off type. Program objective: Development of new or significantly improved products, technologies/processes and/or services.
- **POC 2014-2020** – Innovative technological project. Program objective: Encouraging private investment in research and innovation, by increasing the number of enterprises seeking to introduce innovation in their activity through projects that develop new or substantially improved products and/or processes, for production and marketing, based on research or industrial property rights.
- **POC/PI2.2/OS2.2/Action 2.2.1** – Support for the transition from outsourcing to innovation-based development in ITC-focused SMEs, as well as collaboration between cluster structures in the ITC industry.
- **POR 2014-2020** – Innovation infrastructure and technology transfer. Program objective: Development of innovation and technology transfer (ITT) entities in urban and rural areas, in national and/or regional smart specialization fields.
- **POR 2014-2020** – Supporting science and technology parks. Program objective: Increasing innovation in companies by supporting innovation and technology transfer entities in areas of smart specialization.
- **POR 2014-2020** – SMEs in partnership with innovation and technology transfer entities. Program objective: Making investments for SMEs for the implementation of a research-innovation result in partnership with an innovation and technology transfer entity (ITT).
- **POCU 2014-2020** – Innovation through training. Program objective: Improving the level of knowledge/skills/capabilities related to the economic sectors/areas identified according to the SNC and SNCDI of the employees.
- **Creative Europe Program, Horizon 2020** – SME Instrument, COSME, INTER REG Danube & EUROPE.
- **POR 2014-2020** – Business incubators. Program objective: Support structures for business incubation.

Several national programs have also had a digitalization component. Whether we are talking about Start-Up Nation or POR Axis 2 regional programs, they are a source of funding for SME digitalization projects.

Technologies transforming the business environment today

Source: World Economic Forum, Researchgate

Artificial Intelligence



Machine Learning



Robotic Process Automation



5G Technology



**Blockchain and
Crypto currencies**



**Big Data
and Cloud**



**Virtual
Reality**



**Internet of
Things (IoT)**



2. The need to develop digital skills

A. General context

The digitalization of the environment in which companies operate has a strong acceleration trend in recent years. The revolution started by Industry 4.0 is not represented just by technology, but by people. Today, large companies in the manufacturing industries are undergoing a deep digital change, designed to streamline increasingly complex production processes, through new technological solutions, in order to meet customer needs.

The European Commission, through the Digital Agenda for Europe, combines digital skills with a modern economy with the ultimate goal of promoting digital skills.

Regarding digital skills, the report of the Digital Economy and Society Index (DESI) from 2020 shows that Romania ranks 11th out of 28 in terms of connectivity.

In 2019, Romania improved its results in terms of coverage, but stagnated in terms of use. In particular, high-speed broadband coverage has increased to **82%**, but the country is still behind most Member States (EU average is **86%**).

The level of at least basic digital skills and the level of at least basic software digital skills place Romania on the 27th place among the EU member states.

Less than a third of people aged 16 to 74 years old have at least basic digital skills (**58%** at EU level as a whole), while **35%** have at least basic software skills (compared to a EU average of **61%**).

In terms of digital skills above the basic level, Romania ranks last in the EU, with only **10%** of people.

Romania ranks 27th among EU countries in terms of the integration of digital technology by enterprises, well below the EU average.

Compared to the last two years, the place occupied by Romania has remained stable in this field. Almost no change was found in any of the indicators. **23%** of Romanian companies exchange information electronically, while only **8%** use social media communication platforms (EU average: **25%**).

There has been a slight improvement in the share of SMEs making online sales, from **8%** in 2018 to **11%** in 2019, but this remains well below the EU average of **18%**.

More and more SMEs sell their products abroad using the online environment, but this only applies to **6%** of the total number of SMEs, compared to an EU average of **8%**.

2. The need to develop digital skills

B. National context

The analysis of the labor market in Romania, from the perspective of changes in the occupational structure, has revealed 3 major categories of occupations: the dominant ones, those that have significantly changed their content and the emerging ones. Regardless of their typology, most occupations have changed in the content of work, the main generating factors being the adaptation to customer needs, increased competition and technological refurbishment.

The development and expansion of the private sector, and the requirement to stabilize certain market segments have led to the development of "beneficiary/customer-oriented" policies at the level of companies and, therefore, increasing the role of factors such as "adapting to customer needs" and "increasing competition in the field".

According to the DESI 2020 report, Romania continues to have the lowest level of use of internet services among EU Member States, which corresponds to the lowest level of basic digital skills in the whole country (see previous chapter). **18%** of people aged 16 to 74 years old have never used the internet (EU average: **9%**). Only **3%** of Romanian internet users sell products online and only **4%** attend online courses.

Technological progress in the digital field has a special influence on existing occupations on the labor market. In this context, the need for permanent qualification among employees has become a constant variable in the business environment, companies being forced to ensure a continuous training process, especially regarding the digital skills.

The same report shows that, although there has been a slight increase in the percentage of ITC specialists in the previous year, they represent a much lower proportion of the workforce than in the EU (**2.2%** compared to an average of **3.9%** EU).

The ITC specialists represent 1.2% of all employed women. On the other hand, Romania has good results in terms of ITC graduates, ranking 5th among the Member States, with **5.6%** of all graduates.

Several national programs have also had a digitalization component. Whether we are talking about Start-Up Nation or POR Axis 2 regional programs, they are a source of funding for SME digitalization projects.

2. The need to develop digital skills

C. Skills levels

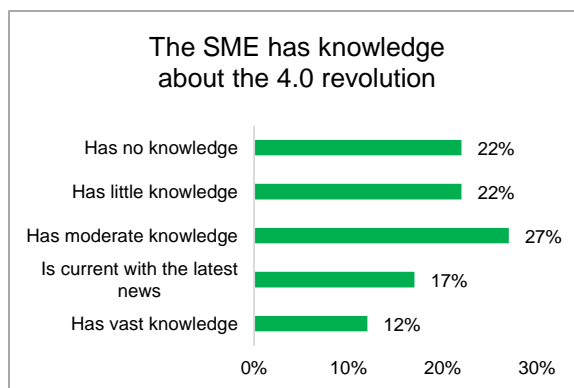
Three main categories of digital skills can be identified, which are used in different models for measuring or developing digital skills.

These three categories apply to different types of skills and users:

- **Basic digital skills**, which represent digital literacy, both for personal and work use.
- **Digital skills**, which relate to employment, include the core competencies to which are added the knowledge needed in the workplace, mainly the use of ICT applications.
- **Digital skills for ITC professionals**, which, in addition to the above categories, also include the necessary expertise in the ITC sector, as well as the ability to develop new digital solutions, products or services.

According to the survey carried out within the "40Ready" project funded by the Interreg Europe program, a major interest of the respondents for the I40 field and for the development of digital skills was confirmed.

If **22%** of SMEs say they have no knowledge of the 4.0 industrial revolution, and another **22%** say they have little knowledge, **27%** consider that they have moderate knowledge. The percentage of SMEs that are up to date with the latest developments in the field represents **17%** of respondents and those with extensive knowledge represent **12%**.



Therefore, the study shows that **71%** of the responding SMEs consider that they need knowledge about the 4.0 revolution, **72%** of the SMEs have started to prepare for its challenges but only **22%** have started the necessary changes. Among the technologies of the I40 revolution the most interesting for the responding SMEs are the following:

- **Social Media – 34%**
- **Mobile Services – 31%**
- **Cloud Technologies – 29%**
- **Cybersecurity – 24%**
- **Robots and automations – 21%**

The SMEs participating in the study value at the same time the development of knowledge (67%) in this field with their immediate implementation (113%, exchange of experience, mentoring).

External factors triggering the digitalization of companies

Source: Forbes, valoria Valoria

New business models



39% at global level
37% in Romania
27% in Romanian SMEs in 2020

New technologies



45% at global level
34% in Romania
52% in Romanian SMEs in 2020

Digitalization of competitors



39% at global level
42% in Romania
29% in Romanian SMEs in 2020

Clients expectations



43% at global level
29% in Romania
27% in Romanian SMEs in 2020

Disruptive competitors from other industries



25% at global level
17% in Romania
11% in Romanian SMEs in 2020

Pression from partners, suppliers



19% at global level
12% in Romania
10% in Romanian SMEs in 2020

3. Digital maturity of SMEs in Romania

A. General context

According to the survey „The Barometer of Digitalization in Romania 2020" conducted by the consulting company Valoria every two years, there are 5 categories of companies in terms of digital maturity:

Traditionalist companies – They have inadequate technologies that lead to limited use of digital data. Compared to the 2018 edition of the study when there were **23%** such companies, in 2020 there are **21%**.

Beginner companies – They have started to implement digital technologies and/or develop a strategy for digital transformation. Compared to the 2018 edition of the study when there were **37%** such companies, in 2020 there are **31%**.

Minimalist companies – They have created an adequate technological infrastructure, have a strategic direction for digital transformation and have implemented some digital solutions. Compared to the 2018 edition of the study when there were **24%** such companies, in 2020 there are **30%**.

Advanced companies – They have an appropriate technology infrastructure, a digital transformation strategy and digital technologies for the entire company. Compared to the 2018 edition of the study when there were **9%** such companies, in 2020 there are **10%**.

Leading companies – They have integrated digital technologies across the company and achieved substantial improvements following the digital transformation. Compared to the 2018 edition of the study when there were **7%** such companies, in 2020 there are **8%**.

Although the values differ from one edition to another and from one level of maturity to another, the most significant is the decrease of **6%** of beginner companies, which translates upwards to the level of minimalist companies.

Even if not a major one, this is a progress that shows a general trend of Romanian companies to adopt digital solutions.

In the case of Romanian SMEs, the percentages determined from the same source are the following:

- **Traditionalist companies – 61%**
- **Beginner companies – 22%**
- **Minimalist companies – 11%**
- **Advanced companies – 4%**
- **Leading companies – 2%**

3. Digital maturity of SMEs in Romania

B. Maturity model

The digital maturity model is based on the following 5 pillars:

- **Customers**
- **Strategy**
- **Technology**
- **Operations**
- **Organizational culture**

Each of these pillars is relevant for assessing and describing the maturity level of a company as follows:

- **Customers** – The SME provides an experience where customers see the organization as their digital partner and use their favorite channels of interaction both offline and offline
- **Strategy** – The SME focuses on how the business transforms or functions to increase its activity and competitive advantage through digital initiatives

- **Technology** – The SME has the technology to support the success of the digital strategy, helping the company to create, process, store, secure and exchange data to meet customer needs at low cost and low overhead
- **Operations** – The SME executes and evolves its processes and tasks through the use of digital technologies to lead strategic management and increase the efficiency and effectiveness of the business
- **Organizational culture** – The SME defines and develops an organizational culture with governance processes and human resource management to support progress along the digital maturity curve and to ensure the flexibility to achieve its goals of growth and innovation

To assess the alignment of SMEs with the maturity model, it is only necessary to complete the answers to an online questionnaire. By analyzing the answers of the authorized representatives of the SMEs, the maturity model is obtained, both in terms of general maturity and the specific evolution on the 5 pillars described here.

Such an approach will also allow monitoring before and after the progress of digitalization of SMEs.

The 2020 edition of the White Book of SMEs in Romania shows that the main elements used by the Romanian SMEs are the following: the computer (89.93%), e-mail (88.14%), internet (88.14%), intranet (50.61%), social media (43.10%), the company's own website (34.62%), online transactions (7.51%).

Success factors in digitalization of companies

Source: Forbes, Valoria survey

Technology



54% at global level
69% in Romania
72% in Romanian SMEs in 2020

Company management



32% at global level
44% in Romania
51% in Romanian SMEs in 2020

Vision and strategy



30% at global level
39% in Romania
35% in Romanian SMEs in 2020

Specialty knowledge



27% at global level
37% in Romania
49% in Romanian SMEs in 2020

Available budgets



26% at global level
41% in Romania
63% in Romanian SMEs in 2020

Employees competences



19% at global level
35% in Romania
48% in Romanian SMEs in 2020

Collaborative attitude



11% at global level
15% in Romania
21% in Romanian SMEs in 2020

4. Analysis of public policies

A. European context

Programs in the European Commission's attention, such as Digital Europe, address with priority the digitalization of SME activities and e-commerce, more specifically:

- Strengthening synergies between public policies, supporting e-commerce for SMEs, the digital single market
- Markets and public policy in the information society
- Supporting SMEs in adopting digital technologies

The European Commission stimulates the digitalization of the European industry, paying special attention to traditional sectors, small and medium-sized enterprises and the resolution of regional disparities.

The first initiative related to support the digitalization of the European industry is called "Digitizing European Industry" and was launched under the Digital Single Market package in April 2016.

The aim of the initiative is to support companies of all sizes, regardless of location and industry in Europe, to gain the full benefits of digital innovation.

A study by the European Investment Bank in 2019 illustrates that SMEs across Europe face difficulties in accessing finance, as banks may lack the expertise to evaluate digital projects, which puts digital projects at a disadvantage compared to other types of projects. The European Investment Bank's recommendations include the development of a set of dedicated financial instruments for digital projects, accompanied by other dedicated measures.

Best practices in EU Member States show that a regional network of agencies to coordinate and encourage digital transformation in the country must have a central authority with a role, among other, in drawing up the digital transformation policies of the companies.

The central authority collaborates with other strategic agencies and state institutions that contribute to the development and enforcement of digitalization policies. Another important pillar of policies aimed at the digital transformation of the European industry is a network of Digital Innovation Centers (DIHs). The digital innovation centers are defined as one-stop shops that help companies become more competitive by digital technologies. DIHs are regional cooperation centers between several partners, which include research and technology organizations (RTOs), universities, industry associations, chambers of commerce, incubators, accelerators, regional development agencies and even governments. DIHs rely on technology and provide access to the latest knowledge, expertise and technology to support companies in piloting, testing and experimenting with digital innovations.

4. Analysis of public policies

A. European context

DIHs can also provide business support and funding to implement these innovations.

The European Parliament has established a financial package for the Digital Europe Program for the period 2021-2027 and introduced a special definition for European digital innovation centers for the transparent distribution of funds.

European Digital Innovation Hubs (EDIH) provide access to technical expertise and experimentation so that those interested can "test before investing".

EDIH also offers innovation services, funding consulting, as well as training and skills development necessary for a successful digital transformation.

In the context of the new Multiannual Financial Framework 2021-2027, the European Commission has proposed a new funding program, dedicated to exclusivity,

supporting the digital transformation of the economy and society. The **Digital Europe Program** aims to enhance the EU's international competitiveness, which is important in developing the EU's strategic capabilities, by supporting the development of key areas such as::

- Artificial intelligence
- High performance numerical calculation (HPNC)
- Cybersecurity
- Advanced digital skills
- Digitalization of public administration and interoperability

The role of European Digital Innovation Hubs (EDIH) is to ensure that innovative digital solutions, based on new technologies, are integrated into the day-to-day business of companies and public administrations.

Thus, the digital innovation centers offer the opportunity to experiment and test these technologies, to apply them according to the specific needs of the field of activity of each company or institution in the public sector.

At European level, Romania proposed the amendment of the Small Business Act, the act that regulates, through ten principles, the way in which, at European and Member State level, public policies should be designed, starting from the idea of "Think Small First", specifically the regulations to meet the needs of SMEs, and then think to the rest of the companies.

The proposal can be materialized either by adding a new principle to the existing ten, or by adding clarification to principle 8 of the Small Business Act: "Skills and innovation for SMEs,, ("Skills and innovation").

4. Analysis of public policies

B. National context

Public policies play a crucial role in creating the right framework conditions for SMEs to enter the digital age.

This requires a coordinated approach between the different levels of government to address the problems faced by SMEs and ensure their future competitiveness.

At present, national legislation is limited to draft legislation transposing the Community legislation or creating the framework for its direct application, specifying only the Community acts concerned, accompanied by their identifying elements.

The “Industry 4.0” concept focuses on the digitalization of all physical assets and processes as well as the integration into digital ecosystems together with the digital assets of companies.

According to the Government Program for 2018-2020, adopted by Government Decision no. 1/2018 of 29 January 2018 for granting the Government's trust - Public Policies Chapter on SMEs - point 4 - National Entrepreneurial Development Program (PNDA) and Government Decision no. 859/2014 on the approval of the Government Strategy for the development of the small and medium enterprise sector and the improvement of the Romanian business environment Horizon 2020, in force since 13 October 2014, the main public policy options applicable to SMEs concern the orientation of SME implantation/relocation and the approach of the markets of interest for them, as well as the process of development/modernization of the national entrepreneurial ecosystem. On 12 September 2019, the Romanian Government approved the draft law no. 628/2019 on business incubators and accelerators, with the purpose

to change the existing legal framework, in the sense of supporting companies in the initial stages of development.

Government Decision no. 89/2020 of 28 January 2020 provides for the organization and functioning of a new body, the Authority for Romania’s Digitalization (ADR).

ADR takes over the activities and structures of the Ministry of Communications and Information Society related to the fields of information technology, information society and national interoperability framework. The new legislative act abolishes the Ministry of Communications and Information Society and creates a new entity, the Ministry of Transport, Infrastructure and Communications. The new ministry has responsibilities for the development of electronic communications policies and the implementation of electronic communications infrastructure policies.

4. Analysis of public policies

B. National context

ADR has as responsibilities:

- (i) developing IT action plans
- (ii) organizing and coordinating the implementation of e-government and e-government projects
- (iii) coordinating public policies to ensure the interoperability of the public administration IT system
- (iv) monitoring and evaluation of central government IT systems in order to achieve the strategic objectives supported by those systems
- (v) overseeing and coordinating government programs at the national level for IT infrastructure and services

ADR performs the following functions: strategy, regulation, approval, representation, state authority, administration and management, promotion, coordination, monitoring, control and evaluation of policies, inter-institutional communication, implementation and management, intermediate body.

ADR currently manages the following information systems of national interest:

1. National Electronic Online Payment System (SNEP) - GHIȘEUL.RO
2. Computer System Electronic Single Point of Contact (PCUe)
3. Electronic Public Procurement System (SEAP)
4. Electronic Transport Assignment Information System (SIAE)

The National Committee for Digital Transformation (CNTD) is an advisory body, part of the ADR, bringing together for the first time a state authority with the private sector and civil society (universities, DIHs, SMEs, large IT companies).

The relevant policy is Government Decision 89/28 January 2020 "A digital Agora and a technical body" Public appeal to 400 registered entities. The structure of the council brings together important stakeholders from both the public and private sectors.

Activity: agile working groups on the following topics: digital transformation, digital skills, government cloud, electronic identity, AI and Big Data, electronic invoicing, interoperability.

4. Analysis of public policies

B. National context

With a score of **24.9**, Romania ranks 27th among EU countries in terms of integration of digital technology by companies, well below the EU average of **41.4**, according to the 2020 DESI report.

Compared to the last two years, the place occupied by Romania has remained stable in this field. Almost no change was found in any of the indicators. **23%** of Romanian companies exchange information electronically, while only **8%** use social communication platforms (EU average is **25%**).

On the other hand, the report shows that there has been a slight improvement in the share of SMEs making online sales, from **8%** in 2018 to **11%** in 2019, but this remains well below the EU average of **18%**. More and more SMEs are selling their products online abroad, but

this situation applies to only **6%** of the total number of SMEs, compared to an EU average of **8%**.

At national level, the National Strategy Digital Agenda for Romania 2020, approved by Government Decision no. 245/2015, has established as a strategic line of development, among others, the financing of initiatives in the field of ITC in Romania, aiming to increase the public contribution to support initiatives in the field of ITC innovation.

However, as mentioned in the DESI report, Romania does not have a national strategy for digital transformation for enterprises. Romania supports the ecosystem of start-ups through the Start-up Nation program, including start-ups that produce innovations or integrate them into new product and service developments.

The digitalization of SMEs is the main priority, defining the life and value chain: “registration-authorization-licensing-production-payments-sales-distribution”.

The development policies of the SME sector and of the business environment in Romania are correlated with the strategy at the level of the European Union regarding the SME sector from promotion and support to the Digital Single Market.

Romania would benefit from a national strategy that focuses on the digital transformation of enterprises. Specific measures are needed to support the digitalization of SMEs and to raise awareness of the relevance and benefits of adopting digital technologies.

4. Analysis of public policies

C. Operational Programs

Competitiveness Operational Program 2014-2020 (POC)

The National Program for the digitalization of micro, small and medium enterprises, approved on 14 August 2020, is funded under the Competitiveness Operational Program 2014-2020, through Priority Axis 2 - Information Technology and Communication (ITC) for a competitive digital economy, Investment Priority 2b - Development of ITC products and services, e-commerce and ITC demand; Specific Objective OS 2.2 - Increasing the contribution of the ITC sector to economic competitiveness; Action 2.2.1 - Support the growth of the added value generated by the ITC sector and innovation in the field through cluster development and Action 2.2.2 - Support the use of ITC for business development, in particular the e-commerce framework.

The Ministry of European Funds will carry out the necessary steps to amend the Competitiveness Operational Program 2014-2020, by introducing the Regional Development Agencies as eligible beneficiaries under Action 2.2.2. - Support the use of ITC for business development, in particular the e-commerce framework.

The objective of the **National Program for the digitalization of micro, small and medium enterprises** is to increase the competitiveness of Romanian SMEs by:

a) development of innovative products/services/applications in the field of information technology and communication (ITC) to support SMEs and public authorities, aiming at financing innovative ITC products/services/applications to ensure the transition from production by outsourcing to based development

on innovation, as well as collaboration between members of a cluster in the ITC industry or between them and members of other clusters, in order to ensure quick and easy access to the implementation of the innovative IT products obtained;

b) providing non-reimbursable financial support for the digitalization of micro-enterprises and SMEs from sectors other than ITC, in the 8 developed regions of Romania, in order to increase the competitiveness of SMEs and revitalize the ITC sector, as de minimis aid.

Industry 4.0 introduces the concept of smart factory, in which a modular ecosystem of cyber-physical systems monitors physical processes, creates a virtual copy of them and makes decentralized decisions.

4. Analysis of public policies

C. Operational Programs

Competitiveness Operational Program 2014-2020 (POC)

Government Decision no. 677 of 14 August 2020 on the approval of the National Program for the digitalization of micro-enterprises, provides for SMEs as follows:

- The implementation timeframe of the National Program for the digitalization of micro, small and medium enterprises is until 31 December 2023.
- The result indicator of the National Program for the digitalization of micro, small and medium enterprises is 3H9 - Gross value added generated by the ITC sector within the Competitiveness Operational Program 2014-2020.

At the level of the sub-administrator of the de minimis scheme – the Regional Development Agencies – as well as the beneficiary of the de minimis aid, the indicators considered are the following:

- **Achievement indicators** – The target value measured at the end of the implementation period
- **Outcome indicators** – The value measured at the end of the sustainability period, specifically three years from the date of the final payment to the beneficiary

Eligible beneficiaries for projects aiming to achieve objective a) are:

1. ITC-focused enterprises (micro-enterprises, small enterprises, medium-sized enterprises) operating in Romania

2. Enterprises (micro-enterprises, small enterprises, medium-sized enterprises) operating in Romania, within ITC-focused clusters

3. Consortia formed by the entities defined in points 1 and 2 and enterprises (micro-enterprises, small enterprises, medium-sized enterprises) operating in Romania.

For projects aimed at achieving the objective of art. b), the eligible applicants are the Regional Development Agencies (RDAs). The final beneficiaries of de minimis aid are micro, small and medium-sized enterprises with a main object of activity other than information and communication technology.

4. Analysis of public policies

C. Operational Programs

Human Capital Operational Program 2014-2020 (POCU)

Romania has established, through the National Strategy on the Digital Agenda for Romania 2020, Pillar VI, increasing the level of digital literacy, skills and inclusion because it creates a bridge to the digital divide for all consumers, so that they benefit equally and the full benefits of ITC services. The Romanian Government has assumed through the Partnership Agreement 2014-2020 the horizontal implementation of ITC at the level of enterprises and authorities as well as the consolidation of the digital business environment.

According to the study carried out under the "40Ready" project in the near future, SMEs shall need access to European funds as the main source of confidence on which to base their efforts to adapt to the Industrial Revolution 4.0.

According to the POCU 2014-2020, although **45%** of Romanians aged between 16 and 74 use the internet at least weekly, **42%** of the total number of people in Romania have never used a computer.

There is a clear gap in computer skills between generations and levels of education, positively correlated with age and level of education.

Technological progress in the digital field has a special influence on existing occupations on the labor market.

In this context, the need for permanent qualification among employees has become a constant variable in the business environment, companies being forced to ensure a continuous training process, especially in the digital field.

In line with the objectives set out in the Partnership Agreement 2014-2020, the National Strategy for Competitiveness 2015-2020, the National Strategy for Research, Development and Innovation 2014-2020, the National Strategy for Employment 2014-2020, the National Strategy on Learning for All Lifelong Learning, Investment Priority 10.iii aims to improve equal access to lifelong learning for all age groups in a formal, non-formal or informal setting, updating the knowledge, skills and capabilities of the workforce and promoting flexible learning pathways, including through professional orientation and through the validation of the acquired competencies in order to adapt the activity to the dynamics of the economic sectors with competitive potential identified according to SNC and in the fields of intelligent specialization according to SNCDI.

4. Analysis of public policies

C. Operational Programs

Human Capital Operational Program 2014-2020 (POCU)

Consequently, the POCU has provided priority axis 3, jobs for all and the promotion of sustainable and quality employment and support for labor mobility as set out in thematic objective 8. Improving equal access to lifelong learning for all groups in a formal, non-formal or informal setting, updating the knowledge, skills and capabilities of the workforce and promoting flexible learning pathways, including through vocational guidance and the validation of acquired skills, is the investment priority.

POCU has a specific objective 3.12 Improving the level of knowledge/capabilities/skills related to economic sectors/areas identified according to the SNC and SNCDI of employees.

Digital skills have become imperative to any management process, production flow or service flow, a situation found in the background of the growing importance of IT.

ITC has become a cross-industry (meta-industry) that affects most economic sectors, with a significant impact on increasing competitiveness and productivity at work.

In the coming years, more than **90%** of jobs will require basic digital knowledge as a mandatory requirement.

Studies also indicate that **40%** of residents have never used the Internet, a situation that affects access to existing opportunities on the labor market but also fewer sources of information.

Under this call for projects, the following activities are eligible:

1.3.1. Activity 1 (relevant and mandatory): Providing training programs

This activity envisages the provision of professional training programs exclusively in the field of digital literacy and information and communication technology: level 2-4 qualification programs according to the National Qualifications Framework, approved by Government Decision no. 918/2013, with subsequent amendments and completions, including introductory programs in a qualification, specialization and advanced training programs, training programs in key competencies, completed with certificates with national employer/international recognition.

Courses that support both the acquisition of basic skills and the acquisition of advanced skills in the field of ITC are funded.

4. Analysis of public policies

C. Operational Programs

Human Capital Operational Program 2014-2020 (POCU)

In this call for projects, training programs can be provided exclusively in the field of digital literacy and for the acquisition of basic/advanced skills in the field of ITC. This activity is addressed to employees in companies and aims to increase professional performance in line with the requirements of jobs in potentially competitive economic sectors identified according to the SNC and in the areas of smart specialization according to SNCDI.

1.3.2 Activity 2 (relevant): Assessment and certification of professional competences

This activity aims at assessing and certifying professional skills exclusively in the field of digital literacy and information and communication technology.

This activity considers both the evaluation and the certification of the professional competences obtained in other ways than the formal ones, respectively non-formal and / or informal, in accordance with the provisions of the Government Ordinance no. 129/2000 on adult vocational training, republished, with subsequent amendments and completions, as well as the assessment and certification of professional skills in the IT field, in order to obtain certificates with national/employer/international recognition.

The activity of evaluation and certification of professional competencies in the IT field envisages the recognition of competencies related to the requirements of jobs in the economic sectors with competitive potential identified according to SNC and in the fields of intelligent specialization according to SNCDI.

In this call for projects, the assessment and certification of professional skills obtained in other ways than the formal, respectively non-formal and/or informal ones, the certification of professional competences, refer exclusively to the field of digital literacy and the basic/advanced competences in the field of ITC.

1.3.3 Activity 3 (relevant and mandatory): Support for businesses to organize on-the-job learning programs in the field of digital literacy and information and communication technology

This activity will support enterprises operating in one of the potentially competitive economic sectors identified according to the SNC and in one of the areas of smart specialization according to SNCDI or enterprises intending to adapt their activity to these economic sectors/ areas of

4. Analysis of public policies

C. Operational Programs

Human Capital Operational Program 2014-2020 (POCU)

smart specialization mentioned above, in order to develop and introduce work-based learning programs.

The support may consist in the analysis of the possibilities and potential of digitalization of enterprises, the prospects for their development through the introduction and integration of digital technology and the determination on this basis of the need for training in ICT.

In this call for projects, on-the-job learning programs focus exclusively on the field of digital literacy and for the acquisition of primary / advanced ICT skills.

1.3.4 Activity 4 (support activity): Organizing and conducting employer awareness campaigns

This activity envisages the organization and development of awareness campaigns for employers working in the economic sectors with competitive potential identified according to the SNC and in the areas of smart specialization according to SNCDI or employers who intend to adapt their activity to these economic sectors/areas of smart specialization mentioned above, on the importance and need for employee participation in continuing education programs.

This call for projects encourages and supports the training and certification of advanced digital skills and as a result will give additional points to projects aimed at conducting courses and/or evaluating and certifying employees for the acquisition of advanced digital skills for the use of necessary/implemented ITC applications.

at work (e.g., use of ITC applications for production, design, etc.), and/or advanced digital skills in IT.

The implementation period of a project submitted under this call for projects is a maximum of 18 months.

In this call for projects, the eligible target group includes employees with individual employment contracts (full-time or part-time) who come from companies that carry out their main or secondary activity in one of the economic sectors with competitive potential identified according to SNC and in the areas of smart specialization according to SNCDI or in enterprises that intend to adapt their main or secondary activity to at least one of these economic sectors or one of the areas of smart specialization mentioned above.

4. Analysis of public policies

D. De Minimis Aids

Impact on the competitive environment and the field of state aid

By correlating the measures adopted with those provided for in Regulation (EU) no. Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market pursuant to Articles 107 and 108 of the Treaty and Regulation (EU) No 1095/2010 Commission Regulation (EU) No 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid, ensures the compatibility of the State aid measures envisaged with the relevant European legislation.

Legislative effects:

- "State aid scheme to increase the contribution of the ITC sector to economic competitiveness"

- "De minimis aid scheme to increase the contribution of the ITC sector to economic competitiveness"
- "De minimis aid scheme Digitalization of SMEs"

The legal basis for the De Minimis Aid Scheme, Digitalization of SMEs is as follows:

- a) Operational Program Competitiveness 2014-2020
- b) Regulation (EU) no. 1407/2013 of 18 December 2013 for the application of art. 107 and 108 of the Treaty on the Functioning of the European Union de minimis aid
- c) Emergency Ordinance no. 77/2014 on national procedures in the field of state aid, as well as for amending and supplementing the Competition Law no. 21/1996, with subsequent amendments and completions

d) Emergency Ordinance no. 66/2011 on the prevention, ascertainment and sanctioning of irregularities in obtaining and using European funds and/or national public funds related to them

e) As previously mentioned, there is a de minimis aid component provided in Government Decision no. 677 of 14 August 2020 on the approval of the National Program for the digitalization of micro, small and medium enterprises financed under the Competitiveness Operational Program 2014-2020

4. Analysis of public policies

E. Digital Innovation Hubs

Digital HUBs (DIHs) have been set up to support the alignment of development regions at national level with European standards for digitalization, innovation and research and development. DIHs meet regional and national entities: Employer Structures, the Academic Environment, Private SMEs and large companies, Local and Central Authorities as well as any entity that can add value to the alert and efficient development to implement successfully digital transformation in Romania. Following the efforts to support the development of digital innovation centers, the Romanian Digitalization Authority has launched the national procedure for selecting the centers that will have the opportunity to become members of the European Network of Digital Innovation Centers – EDIH Network. For a professional and transparent selection, the ADR details:

the **qualification criteria** as a Digital Innovation Center and the **tie-breaking criteria** (previous experience, proposed methodology, representativeness for the proposed region and field, resources and ecosystem).

From the selection process launched by ADR for the selection of DIHs ready to support the efforts of national and European authorities in accelerating the digital transition organized in September 2020, we mention the regional distribution of applications as follows:

6 applicants from the Bucharest-Ilfov Region; 2 applicants from the Center Region; 2 applicants from the North-East Region; 2 applicants from the North-West Region; 3 applicants from the South-East Region; 1 applicant from the South-Muntenia Region; 1 applicant from the South-West Oltenia Region; 1 applicant from the West Region.

The applications were analyzed by an evaluation commission composed of representatives of the ADR and the Ministry of Economy, Energy and Business Environment, respecting the evaluation criteria presented. This process also considered the need for at least one European digital innovation center to operate in each development region. If in a region, there were several applications that exceeded the minimum threshold of 50 points, a maximum of 2 DIHs were declared admitted, depending on the score obtained.

Of the 18 applications, 12 were declared admitted and 6 rejected.

The Government of Romania, through the Romanian Digitalization Authority, encourages the creation and development of digital innovation centers, which should complement the national efforts in the field of SME digitalization.

4. Analysis of public policies

F. SIPOCA 18 și 20

Relevant for SMEs is the public policy project initiated in 2019, ECOM - Improving the rules, procedures and mechanisms necessary for the Ministry of Communications and for the Information Society in order to further develop the e-commerce sector, SIPOCA code 18.

The project aimed to stimulate the efficient and secure development of the e-commerce system by improving the administrative capacity of the Ministry of Communications and Information Society responsible for coordinating and fulfilling the strategic lines of e-commerce development provided in the National Strategy on Digital Agenda for Romania 2020.

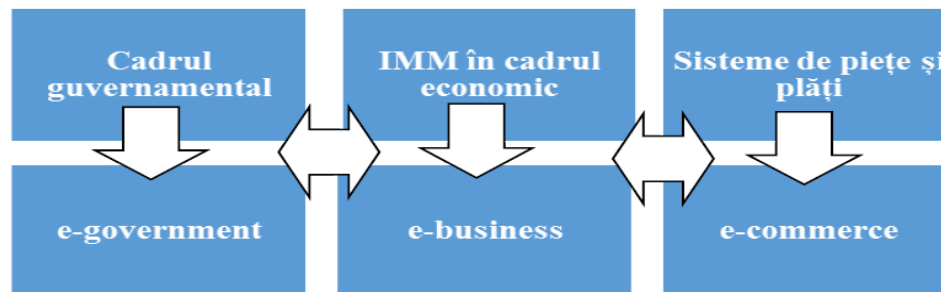
Separately, the public policy focused on "Life Events" from the EGOV project, SIPOCA 20) details:

- Electronic services for citizens and business
- E-government systems for the business environment

The objectives of SIPOCA 20 are the following:

- Reducing the fragmentation and grouping of electronic public services in the form of the concept of life events
- Ensuring the legislative, institutional, procedural and operational framework for the use of e-government tools

These projects are contextual and timely, so it requires the development of a new public policy in the medium and long term, which can stimulate SMEs and encourage the internal business environment under the motto "development through digitalization", as provided by the Government Strategy for the development of the small and medium enterprises sector and the improvement of the business environment in Romania – Horizon 2020, approved by Government Decision no. 859/2014.



Relationships between the real and digital environment

4. Analysis of public policies

G. National Investment and Economic Recovery Plan

Education, knowledge transfer and support to accelerate the digitalization of the business environment – this direction is part of the National Investment and Economic Recovery Plan which will provide support for: increasing digital skills, creating jobs in the digital sector and related fields (automation, robotics, data analysis, etc.), encouraging and accelerating the use of internet services and the integration of digital technology by enterprises (including advanced technologies: big data, artificial intelligence, cloud in general and "software as a service" as a strategic sub direction).

Creation of the interoperability hub coupled with the identification and connection to it of basic (main) data registers. This allows institutions responsible for a public service to provide digital access without asking companies for information held by other institutions.

For example, ONRC will be able to provide services by obtaining information directly from ANAF, the Ministry of Internal Affairs or other structures of the Ministry of Justice. This will make it possible not only to provide faster public services, but also to increase the fairness of public action towards taxpayers, with effects in reducing administrative errors that translate into net costs for businesses. The value of the project is estimated at 10 million euros.

Generalizing the use of electronic signatures at the level of civil servants in public administration, so that they can communicate digitally with companies, reducing reaction time and facilitating the early correction of possible errors.

The development of an effective single point of contact will increase the visibility of public services, with the main effect of reducing time.

for the search for information by companies and with the advantage of encouraging the unification of administrative practice in relation to companies and citizens.

The introduction of the electronic identity card and other electronic identification schemes will allow complete remote interaction with the public administration, with the clear effect of lowering costs. The value of the project is estimated at 20 million euros;

Migration of public services in a government cloud, in order to reduce the costs of companies in interaction with the state and, in the long run, even the need to finance some services.

4. Analysis of public policies

G. National Investment and Economic Recovery Plan

Realization or restoration of computer systems involved in "life events" of citizens and companies. Essential aspects of a company's interaction with the administration will become fully digital: obtaining financing (e.g., state aid, various forms of support, environmental fund), registration of assets (e.g., cars), pursuing lawsuits, collecting taxes, etc.

Development of Open Data systems that will allow a structured access of the private sector to the data patrimony – including historical – of the public administration.

Constantly making major investments in increasing the capacity to manage cyber risks.

Another objective is the modernization of the mfinante.gov.ro and anaf.ro platforms.

A partnership with the NGO Code4Romania was started for the website of the Ministry of Public Finance. The new portal will meet the highest standards at European level in terms of UX/UI and will set a new level of user quality in terms of government sites in Romania.

Another important step for the computerization of ANAF is represented by the SAF-T project. Simplifying payments for tax obligations is another important pillar in the process of digitalization of the tax administration which has the effect of stimulating the digitalization of SMEs by building and strengthening a digital interaction framework with the business environment, essential for citizens and companies to obtain efficient and quality public services remotely.

Through the close collaboration with the Authority for Romania's Digitalization, the legal entities have

the possibility to make payments with the bank card on the ghiseul.ro platform.

Another new element is represented by the interconnection of the Virtual Private Space (SPV) with the ghiseul.ro platform for the benefit of the over 1.3 million SPV users.

The digital transformation of the Tax Administration and the Treasury aims to eliminate travel, queues at the physical counter and turn them into clicks on electronic devices.

Computerization will lead to a simple interaction with state authorities.

The results of digitalization will translate into a greater degree of transparency, efficiency, better collection of taxes and duties, as well as a lower rate of tax evasion and red tape of institutions.

4. Analysis of public policies

H. National Plan for Economic Recovery and Resilience (PNRR)

The National Plan for Economic Recovery and Resilience (PNRR) is a strategic document structured on two priorities: reforms and investments, which brings Romania the perspective of modernization and profound changes expected by civil society, business and the public sector in Romania.

Investments in business competitiveness and access to research and innovation are intended to strengthen the economic competitiveness of the European SME market, increase added value, improve the quality of products and services obtained, refurbish, robotize and automate industrial processes, digitize the activity of SMEs, but also to the development of research, innovation and intelligent specialization activities by the National Research and Development Institutes and SMEs, which have as final goal

placing competitive products and services on the market in accordance with the quality and price requirements of consumers.

The digitalization of companies, and especially of SMEs, is a determining factor in competitiveness. In Romania, the integration of digital technologies by enterprises remains at a very low level, and the share of companies using electronic information sharing has decreased from **22%** in 2015 to **17%** in 2017 (European Commission, 2018).

The investment component of PNRR includes the Economic Competitiveness, Digitalization and Resilience pillar.

This pillar has as objectives::

- Increasing the competitiveness of the business environment through access to refurbishment, industrial automation, digitalization and by improving the quality of the products and services obtained in this way.

- Increasing the contribution of technology transfer activities to obtaining innovative products and services competitive on the market, digitalization of activities for major public services in the field of health and education.
- Increasing Romania's resilience in the field of cybersecurity, health and food crises.

Economic cohesion is the objective with the greatest impact of PNRR.

Circumscribed to this objective, the intervention priority 36 for SMEs provides support for the digitalization of SME activity (purchase of IT equipment, SME-specific software, digitalization of operational activities, optimization of production activities, customer management, supplier management etc.).

4. Analysis of public policies

H. National Plan for Economic Recovery and Resilience (PNRR)

PNRR's contribution to supporting the digital transition relevant for SMEs is made through intervention priority 47, the digitalization of the Ministry of Public Finance and ANAF.

The motivations of Romanian SMEs and large enterprises for the implementation of automation and robotics are to increase product quality and increase production volume.

Complementary to the Regional Operational Program, PNRR through the allocated funds will improve the business climate, will favor investments and will promote the increase of the size and productivity of SMEs through digitalization.

The following reforms are needed for a resilient, innovative, competitive and digitalized business environment:

- Digitalization and simplification of business start-up procedures as well digitalization of the process of issuing tax certificates and obtaining agreements/approvals for the implementation of investments financed by the entrepreneurial environment
- Regulating the legal framework for the establishment, organization and operation of Intelligent Specialization Parks and granting them fiscal facilities. Promotion and approval of the Emergency Ordinance for the establishment, organization and operation of Intelligent Specialization Parks..

According to PNRR, out of the estimated budget of Business and Entrepreneurial Ecosystems of 3.8 billion euros, 200 million euros are the investments planned in support for the digitalization of SMEs.

Under the specific objective of the EFRD – Boosting the growth and

competitiveness of SMEs under Priority Axis 1 (AP1) – "A competitive region through innovation, digitalization and dynamic enterprises", which has a global allocation at the level of the 8 regional programs of 1.3 billion euros.

The main target groups are enterprises, clusters, business incubators, accelerators, as well as partnerships between them.

Access to finance for enterprises is supported through the Intelligent Growth, Digitalization and Financial Instruments Operational Program (POCIDIF), under Priority Axis 10 (AP10).

In addition, enterprises and the business environment are supported by the Education and Employment Operational Program (POEO) and the Operational Program for Fair Transition (POTJ).

4. Analysis of public policies

I. SME Growth Program in Romania

Within the Romanian SME Growth program, Innovation Norway launches the second call for project proposals with an available budget of EUR 18,466,666 under the Norway 2014-2021 grants.

The program aims to stimulate value creation and sustainable development in the Romanian entrepreneurship sector by encouraging long-term cooperation between entities from Iceland, Liechtenstein, Norway and Romania, based on business development and innovation in the fields of:

- Sustainable business development
- Green industry innovation
- Information Technology and Communication (ITC)
- Sustainable development of the marine and maritime sector (Blue Growth)

It is also expected that the projects will increase the competitiveness of Romanian enterprises in the mentioned fields, in the form of increasing turnover and net operating profit and job creation, as well as contributing to the development and application of innovative technologies, processes and solutions, reducing CO2 emissions and more energy efficient production processes.

The aim of this program is to reduce economic and social disparities in the European Economic Area (EEA) and to strengthen bilateral relations between donor states (Norway, Iceland and Liechtenstein) and beneficiary states.

The program is managed by the Norwegian organization Innovation Norway, as a Fund Operator, in partnership with the Romanian Ministry of Economy, Energy and Business Environment.

The call for projects is for the development/implementation and investments in innovative environmentally friendly technologies, the development of “green” products and services and the development/implementation of “greener production processes”, the development of ICT products/ processes/solutions or components, investments in -marine structures, development of solutions related to maritime transport, development / investments in “blue” biotechnology, development/investments in mining resources on the seabed and development of solutions in the field of blue energy.

In addition, activities are funded to meet the needs of SMEs and their managers in areas such as training, coaching, guidance provided to SMEs through clusters, business organizations (e.g., incubators, accelerators, etc.), support activities in eco-innovation, circular economy or internationalization.

4. Analysis of public policies

J. Innovation checks

The purpose of innovation checks is the following:

- Supporting SMEs by financing projects with a high degree of innovation, with concrete results and real impact on the market
- Accelerate technology transfer between public research organizations (Service Providers) and SMEs (Beneficiaries)
- Capitalizing on the existing technical-scientific competencies in the public Research, Development and Innovation system in the productive sector by assisting SMEs in the development and modernization process, by purchasing new or advanced services, technologies and methods

The conditions for granting are as follows:

- Innovation checks can be issued in areas of smart specialization and in areas of public priority
- The maximum value of an innovation check is 50,000 lei, of which max. 90% of the total value (45,000 lei) is provided from the state budget
- The profile of the service provider can be found at www.erris.gov.ro
- Project budget: 50,000 lei
- Competition budget: 13,500,000 lei

Innovation checks are settled for a period of max. 6 months from the date they were released.

The impact report must be sent to the Executive Unit for the Financing of Higher Education, Research, Development and Innovation (UEFISCDI) 12 months after the completion of the project.

Innovation checks aim to support SMEs, by financing projects with a high degree of innovation, with concrete results and real impact on the market, in the bioeconomy, space and security, information and communication technology.

5. Best practices on public policies

The National Council of Small and Medium Private Enterprises in Romania (CNIPMMR) has used digitalization as an internal tool to increase its capacity to formulate and support alternative public policies regarding the SME sector.

As part of a project aimed at developing and strengthening operational and administrative capacity, CNIPMMR has developed a dedicated mobile application to obtain feedback on the alternative public policy developed by key players.

The digital tool was used to collect feedback that complements more traditional methods, such as organizing round tables with representatives of alternative policy institutions. The application served as a good practice to reach members and stakeholders on public policy issues that

concern SMEs, including the issue of SMEs digitalization. CNIPMMR in partnership with the Ministry of Economy, Energy and Business Environment produces the White Paper on Romanian SMEs, now in its 18th edition in 2020. The paper is the most in-depth analysis of the Romanian SME sector, forming the basis for strategy proposals. on the future directions of support and development of SMEs.

National Investment and Economic Recovery Plan. It provides grants for the digitalization of SMEs with a budget of 150 million euros. The objective is to support activities aimed at digitizing the activity of companies, especially companies with production activity that aim to provide IT equipment, use of electronic signature, broadband connection, purchase of standardized and customized software, automation of industrial equipment, automation of technological flows, etc.

The source of funding is from EU-POC funds, Priority Axis 2 and co-financing from the state budget.

The plan also provides funding for employee digital education programs for companies, the budget being 30 million euros, of which 20 million euros for digital education at SMEs and 10 million euros for medium and large enterprises for learning processes on complex industrial equipment.

The objective is to provide resources for small and medium-sized companies that invest funds in human resources for basic knowledge in the field of using specialized computer programs but also general ones.

Another program is Star-Tech Innovation (New Start-Up program). The objective of the scheme is to finance innovative start-ups through grants with an estimated value of 42,000 euros.

5. Best practices on public policies

In the National Plan for Economic Recovery and Resilience,

investments in digitalization and green transition aim to align with the objectives set by the European Union and included in the European Green Deal, as well as the development of major public services in the field of education and health online, but also increasing Romania's resilience in times of pandemic crisis.

Infrastructure investments are also envisaged that contain elements of artificial intelligence such as: management information systems for transport infrastructure, specific infrastructure management systems for climate change, smart grids for the transport or distribution of transition fuel, etc.

On the other hand, investments in the competitiveness of the business environment and access to research and innovation

are intended to strengthen the economic competitiveness of the European SME market, increase added value, improve the quality of products and services obtained, refurbish, robotize and automate industrial processes, digitalize the activity of SMEs, but also develop research, innovation and intelligent specialization of SMEs to the National Research and Development Institutes and SMEs, which have as final goal the placing on the market of competitive products and services in accordance with the quality and price requirements of consumers.

The national economic recovery and resilience plan provides for grants and support programs financed from non-reimbursable external funds and from the state budget, which aim to cover working capital, financing

investment needs, digitalization programs for companies, but also support measures to increase employment and social programs or subsidies.

Grants for innovative entrepreneurship and digitalization of companies:

- Grants for start-ups for students in competitive and innovative fields. Budget: 150 million euros.
- Grants for the digitalization of SMEs. Budget: 150 million euros.
- Financing digital employee education programs for companies. Budget: 30 million euros.

5. Best practices on public policies

Human Capital Operational Program 2014-2020 (POCU)

OIR-Bucharest proposed and obtained the inclusion in the Applicant's Guide, under Specific Conditions (page 3) of the results of the study carried out within the “40Ready” project financed by the Interreg Europe program. The mention clarifies that the study confirmed a major interest of respondents for the I40 field and for the development of digital skills. Also, among other things, it is shown that, following this analysis, the overwhelming majority of respondents in SMEs appreciated the Industrial Revolution 4.0 as an opportunity. The most important conclusion of the study is that, in the near future, SMEs need access to European funds as the main source of confidence on which to base their efforts to adapt to the Industrial Revolution 4.0.

Also at the initiative of OIR-Bucharest was included in Annex 3: Evaluation criteria and technical and financial selection (page 3) point 2.5 which mentions: “It provides training/ assessment and certification of digital skills in the following technological areas specific to Industry 4.0: social media; mobile services; cloud technologies; the Internet of Things; cybersecurity solutions; robots and automated machines; big data and data analysis; 3D printing; artificial intelligence; bitcoin; blockchain, etc.”

Law no. 102/2016 on business incubators, published in the Official Gazette no. 393 of 23 May 2016, provides for the establishment of business incubators, permanent financial, economic and legal support for entrepreneurs, as well as the possibility to access national and European funds for business development.

The business incubators are, according to the provisions of Law no. 102/2016, support structures for enterprises that are constantly trying to create a favorable and sustainable environment for newly established SMEs. The founders of technological and virtual business incubators are entitled to several tax facilities, which are granted on the basis of state aid schemes. All these facilities must be initiated by the local public authorities, within the limits of the annual budget.

Start Industry 4.0 - Digital skills and capabilities

To address gaps in digital skills, the Start Industry 4.0 program, co-funded by the European Social Fund through the POCU 2014-2020, provided direct training sessions to SMEs to support them with strategic planning and skills change to corresponds to Industry 4.0.

6. Other public policies that can be developed

A. General framework

In the digital age, we need technologically neutral and intelligent legislation, a long-term vision and keeping up with all technological developments.

According to the provisions of **article 9 of Law no. 346 of 14 July 2004**, the legislation on SMEs must comply with two requirements::

- a) not to add new tasks to SMEs, according to the constant number principle, and
- b) adhere to the “Think Small First” principle

These principles align national legislation with the provisions of the EU Small Business Act and are essential because SMEs need a flexible and sustainable legal framework that ensures fairness, transparency and equal ground for action for all companies.

Area	Description of the challenge
Awareness of the need for digitalization in SMEs	<ul style="list-style-type: none"> • Low general awareness of available digital solutions and their benefits • Low awareness of available funding options • Difficulties in assessing the digital maturity reached
Technical solutions for digitalization	<ul style="list-style-type: none"> • Technical solutions for the digitalization of state institutions involved in supporting the digitalization of SMEs • The offer of services for the digitalization of SMEs is varied, but fragmented between technologies, offers and suppliers, and distributed asymmetrically between industrial sectors • Often providers do not have options tailored to the needs of SME
Market fit of the digital solutions chosen by SMEs	<ul style="list-style-type: none"> • ITC clusters and incubators support SMEs in this often opportunistic and "on demand" orientation effort, limiting the number of supported SMEs through the deficient process. • Digital innovation centers are limited in number and are not known to SMEs • Limited cooperation between SMEs in integration into value chains and/or in addressing different markets/products
Relevant digital skills	<ul style="list-style-type: none"> • Increasing digital skills at all levels relevant to the digitalization of SMEs

6. Other public policies that can be developed

B. Proposals

Area	Challenges	Public policy	Recommendations for improvement	Details
Awareness of the need for digitalization in SMEs	<ul style="list-style-type: none"> Awareness of industry-specific technology areas 4.0 (social media, mobile services, cloud technologies, the Internet of Things, cybersecurity solutions, robots and automated machines, large data and data analysis, 3D printing, artificial intelligence, bitcoin and blockchain) 	POCU 3.12 Operational Program	Adding in the Applicant's Guide, in Annex 3 - Evaluation Criteria and Technical and Financial Selection, of a new evaluation criterion in category 2. Effectiveness, more precisely 2.5 The project has added value in the sub-category: <i>Training/assessment and certification of digital skills is provided in the following technological areas specific to Industry 4.0: social media; mobile services; Cloud technologies; the internet of things; cyber security solutions; automated robots and machines; large data and data analysis; 3D printing; artificial intelligence; Bitcoin; Blockchain, etc.</i>	<ul style="list-style-type: none"> Creation of a new monitoring indicator on the total number of approved grants that received a score in point 2.5 Recommendation already implemented
Awareness of the need for digitalization in SMEs	<ul style="list-style-type: none"> Improving the visit report, including clear elements about the digitalization of SMEs 	POCU 3.12 Operational Program	Including in the visit report clear elements on the objectives of digitization of SMEs and/or development of digital skills of employees	<ul style="list-style-type: none"> Verification of actions taken by SMEs in the context of their efforts to digitalize and/or develop employees' digital skills
Awareness of the need for digitalization in SMEs	<ul style="list-style-type: none"> Increasing the visibility of good practices 	POCU 3.12 Operational Program	A set of best practices	<ul style="list-style-type: none"> A set of good practices resulting from visits, to be posted on the OIR-Bucharest website in order to facilitate the integrated perspective on all relevant aspects of the project implementation

6. Other public policies that can be developed

B. Proposals

Area	Challenges	Public policy	Recommendations for improvement	Details
Technical solutions for digitalization	<ul style="list-style-type: none"> Lack of a unified approach to the digital maturity of SMEs 	Duties/ADR platform (DIH)	Easy calculation by SMEs of a digital score based on a national unitary digital maturity model	<ul style="list-style-type: none"> Creating a new, free, online self-assessment tool for SMEs to have a mini-report on the digital maturity category they fall into and with a minimum of critical actions to implement
Technical solutions for digitalization	<ul style="list-style-type: none"> Difficult access for employees in SMEs to the training of digital skills 	Duties of the Ministry of Investments and European Projects	Easy assessment by SMEs of the need to develop employees' digital skills	<ul style="list-style-type: none"> Creating a new, free, online self-assessment tool for SMEs to have a mini-report on the level of digital skills and a minimum of critical actions for their development
Relevant digital skills	<ul style="list-style-type: none"> Difficult access for employees in SMEs to the training of digital skills 	Duties of the Ministry of Investments and European Projects	Digital skills training vouchers (Interreg model)	<ul style="list-style-type: none"> A voucher worth a certain amount given to SMEs for accessing digital skills training
Technical solutions for digitalization	<ul style="list-style-type: none"> Difficult access for employees in SMEs to the training of digital skills 	ADR	Online catalog of digital skills training providers posted on the Electronic Single Point of Contact	<ul style="list-style-type: none"> The catalog contains the contact details of the suppliers and the offer of digital skills training (training, coaching, mentoring)

6. Other public policies that can be developed

B. Proposals

Area	Challenges	Public policy	Recommendations for improvement	Details
Technical solutions for digitalization	<ul style="list-style-type: none"> Difficult access for SMEs to various digitalization services 	ADR	<ol style="list-style-type: none"> Online catalog of digitalization services providers DIH online catalog 	<ul style="list-style-type: none"> The catalog contains the contact details of the suppliers and the services offered The catalog contains the contact details of the Digital Innovation Hub and the services offered
Technical solutions for digitalization	<ul style="list-style-type: none"> Difficult access for SMEs to audit services for the implementation of SME digitalization 	POC 2.2.2	Online catalog of audit services for the implementation of SME digitalization	<ul style="list-style-type: none"> The catalog contains the contact details of the suppliers and the services offered
Awareness of the need for digitalization in SMEs	<ul style="list-style-type: none"> Communication not adapted to the digital age within projects 	Ministry of Investments and European Projects/ADR through the Electronic Single Contact Point	E-book on e-communication	<p>The e-book shall comprise:</p> <ol style="list-style-type: none"> Communication actions (eg communication plan, online launch event checklist) Templates of useful communication documents in projects with the target audience (eg newsletters, infographics, social media messages)
Technical solutions for digitalization	<ul style="list-style-type: none"> Reduced online presence of SMEs (website) 	ADR	Website builder for SMEs	<ul style="list-style-type: none"> Creating a free online tool for SMEs to automatically build a minimal site The SME is guided in detail at all stages (eg domain acquisition, etc.)

6. Other public policies that can be developed

B. Proposals

Area	Challenges	Public policy	Recommendations for improvement	Details
Market fit of the digital solutions chosen by SMEs	<ul style="list-style-type: none"> Business incubators are not integrated with DIHs as part of the ecosystem that supports the digitalization of SMEs 	Law 102/2017 Business incubators	Revision of the law in the sense of integration with DIHs	<ul style="list-style-type: none"> Creating a clear framework for interconnecting actions in incubators and DIHs to generate synergies and maximum efficiency
Market fit of the digital solutions chosen by SMEs	<ul style="list-style-type: none"> Business incubators are not integrated with DIHs as part of the ecosystem that supports the digitalization of SMEs 	Law 102/2017 Business incubators	Online catalog of Business Incubators	<ul style="list-style-type: none"> The catalog contains the contact details of the suppliers and the services offered
Market fit of the digital solutions chosen by SMEs	<ul style="list-style-type: none"> The maximum level of the contribution of the individual-business angel investor does not meet the current needs of SMEs in the fields of smart specialization 	Law 120/2015 on Individual Investors-Business Angels	Revision of the law in the sense of raising the ceiling over 200,000 euros	<ul style="list-style-type: none"> Creating an adapted framework to meet the current needs of SMEs in the fields of smart specialization

Glossary

Abbreviation	Description
ADR	Authority for Romania's Digitalization
AI	Artificial Intelligence
ANAF	National Agency for Fiscal Administration
CNIPMMR	National Council of Small and Medium Private Enterprises in Romania
CNTD	National Committee for Digital Transformation
DESI	Digital Economy and Society Index
DIH	Digital Innocation Hub
ECOM	Electronic commerce sector
EDIH	European Digital Innovation Centers
EEA	European Economic Area
EFRD	European Fund for Regional Development
EU	European Union
GDP	Gross Domestic Product
GD	Government Decision
HPNC	High performance numerical calculation
SME	Small and Medium-Size Enterprise
IoT	Internet of Things
IT	Information Technology
ITT	Innovation and technology transfer entities
OECD	Organization for Economic Cooperation and Development
OIR	Regional Intermediate Body
NGO	Non-governmental organizations
PCUe	Electronic Single Point of Contact Information System
PNDR	National Rural Development Program 2014-2020

Abbreviation	Description
PNRR	National Plan for Economic Recovery and Resilience
POC	Competitiveness Operational Program 2014-2020
POCIDIF	Intelligent Growth, Digitalization and Financial Instruments Operational Program
POCU	Human Capital Operational Program 2014-2020
POEO	Education and Employment Operational Program
POR	Regional Operational Program 2014-2020
POTJ	Fair Transition Operational Program
RDAs	Regional Development Agencies
RTO	Research and technology organizations
SAF-T	Project Simplification of payments for tax obligations
SEAP	Electronic Public Procurement System
SIAE	Electronic Transport Assignment Information System
SIPOCA	POCA Information System
SNC	National Strategy for Competitiveness
SNCDI	National Strategy for Research, Development and Innovation
SNEP	National Electronic Online Payment System
SPV	Private Virtual Space
ITC	Information Technology and Communications
UI	User Interface
UX	User Experience



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