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# THE RELATIONSHIP BETWEEN DIGITAL TRANSFORMATION AND CORPORATE STRATEGIC COMMUNICATIONS IN SOUTHERN EU COUNTRIES

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#### Abstract

The intensive technical-technological development and the Covid-19 pandemic have accelerated the digital transformation of communication agencies and corporate communication sectors. Until the outbreak of the pandemic, the professional and academic debate focused on new media and channels provided by digital technologies, for example: social media, the Internet or websites (Duté , 2017). In the current phrase digital technologies are extended in the context of models of digital technologies that can modify communication processes with stakeholders (Artur V, Page Society, 2021, Vaner , 2021). Accordingly, digital transformation in times of risky business turbulence in business is a priority focus of research interest because digital transformation produces changes that affect the productivity and economic sustainability of corporations. This paper investigates the relationship between COMTECHNA (digital technologies) and economic entities in Southern European countries, i.e. the degree of investment in digital transformation and the competitiveness of digital communications professionals in Russia. Macedonia and the impact on economic sustainability. Relevant data from 2021 was used for the analysis of the current situation. On the basis of the identified indicators, it was shown that economic entities do not invest enough in digital transformation, which results in a low level of competitiveness of digital communications professionals, and thus decreased productivity and unstable economic sustainability.

Keywords : digital transformation, business entities, digital communications professionals, business

JEL classification : I24, J29, O32, M37, M39

### INTRODUCTION

Digital transformation generates a new paradigm in modeling the mental and communication code of business entities in the 21st century. With the application of smart technologies, individuals in the feedback exchange experience increased participatory self-efficacy, which, in turn, is associated with higher individual creativity. (Park et al., 2021). Modification in the application of digital communication tools is a corporate imperative for competitiveness and sustainable development. Globalization has become an invasive challenge in the creation of digital business architecture in which the strategy of knowledge-based societies continuously generates and distributes information in order to improve corporate competitiveness. Effective management of the digitization of communications is conditioned by the application of modified digital tools

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and technologies at all hierarchical levels in corporations, as well as with heterogeneous external stakeholders. This especially refers to the digitization of communication processes with internal and external stakeholders, digitization of the infrastructure, i.e. supporting internal communication flows in the communications department or communications agencies. A special differentiation and transformation of the digital infrastructure should be carried out in the specific infrastructure for functional needs and in the generic infrastructure that is relevant for any corporate sector, for example: mobile equipment for working from home or for video-conferencing (Bigstad, 2017, Konstantinidis i sor., 2018, Zerfas I Brokhaus, 2021). The need for digital infrastructure improvement and transformation is an integral part of the Sustainable Development Goals (SDG) of the 2030 Agenda . Europe's goal is to tackle the crisis through the application of artificial intelligence, strengthening digital competences by applying technology to support learning (Sillence et al .,2022), harness the power of digital transformation and prepare the EU economy for the challenges of the next decade. The Sustainable Development Goals (SDG) of the 2030 Agenda, which were agreed by the United Nations in September 2015, emphasize the role of digital technology in improving sustainability (United Nations. The 2030 Agenda for Sustainable Development; United Nations: Paris, France, 2015). The 2030 Agenda incorporates a "plan of action for people, planet and prosperity" defined to "direct the world towards a sustainable and resilient path" (United Nations. Take Action for the Sustainable Development Goals ; United Nations: Paris, France, 2020 ). In this context, digital transformation has the potential to enable the achievement of sustainable conditions. Although most scholars agree that digital transformation can be an effective tool for creating sustainable development (Sachs, JD; Schmidt-Traub, G.; Mazzucato, M.; Messner, D.; Nakicenovic, N.; Rockström, 2019), separate research has shown that the effects of digital transformation on sustainable development are unclear ( Del Río, CG; Fernández, MCG; Colsa, AUU ., 2021). For example, Beier et al. argues that "it remains unclear whether the digital transformation of the economy can be aligned with the Sustainable Development Goals" ( Beier, G.; Fritzsche, K.; Kunkel, S.; Matthess, M.; Niehoff, S.; Reißig, M. ; van Zyl-Bulitta, V. A Green, 2020) . Similarly, Brenner et al. stated: "Although digitalization offers new avenues and (unprecedented) opportunities, its potential to achieve or hinder the sustainability of ecological, economic and social human systems remains unclear" (Brenner, B.; Hartl, B, 2021). According to (Carlini et al. 2022) while businesses sought information through digital tools to inform business decisions, they discovered incomplete and inaccurate information that affected their success in decision making. Overall, the relationship between digitalization and sustainability is a controversial issue that must be further explored in order to assess whether digital transformation can actually help corporations achieve the Sustainable Development Goals. In that direction, security and innovation as a catalyst for change have an important role. They are a tool for analyzing the impacts of change and an instrument for ensuring that any transition leads to an increase in global well-being. Investing in innovation and technological development today will, in the long run, contribute to reducing meeting costs and achieving long-term political goals related to climate and environmental goals. Europe has brains, skills and innate creativity. As a rich community of researchers and innovators, the EU is in a strong position to take the lead in developing and deploying solutions for green and inclusive growth that are applicable within the EU and globally. To fully exploit that potential, countries need to increase research spending. In that context, EU member states need to invest 3% of GDP in research, development and innovation, but that goal has not yet been achieved (Towards a Sustainable Europe by 2030). It changed the paradigm in the business environment in terms of actualizing the need to integrate information technology at all levels of corporate operations that creates competitiveness in the business environment and contributes to productivity and economic development. The current situation regarding the application of digital technologies in strategic corporate communications with internal and external stakeholders managed by professional communicators is not at a satisfactory level. Considering the current situation, this scientific paper analyzes and comments on the key determinants and factors for the impact of digital transformation on the processes that generate competitive corporate strategic communications using digital tools.

### 1. GLOBAL TRENDS ON THE RELATIONSHIP BETWEEN COMTECHNA AND THE COMPETITIVENESS OF DIGITAL COMMUNICATIONS PROFESSIONALS

The global pandemic, Covid-19, influenced the creation of a new, virtual social and business landscape in which digital technologies had a dominant application. The application of efficient strategies for establishing effective communication in times of crisis was particularly important. It has caused the need for extraordinary skills and competencies to modify communications using digital tools. In that context, the creation of strategic communications that will contribute to dealing with the crisis, by distributing convincing and inspiring information to the public, was of essential importance. Smart technologies that provide instant and timely feedback can generate much greater individual creativity in teams (Park et al., 2021). In those social conditions, there was an imminent need to approach building a new future that changed the paradigm in all segments of life and work. But everyday interaction with technologies inevitably leads to the generation and storage of large amounts of digital data and in some cases digital clutter (Sillence et al., 2022). Considering that the changes are constant and with increased intensity, the need to adapt the communicators to the new conditions became imperative. The only way to revitalize from the crisis and deal with the challenges was and is the digital transformation. It means to strengthen the ability to implement digital software in business operations, as well as to apply digital tools to inform and involve stakeholders. In such a business environment, value creation in a world created by technology is an imperative and a global trend of businesses (European Association for Public Relations Education and Research, European Association of Communications Directors, 2021). Some global industries and sectors have successfully coped with the uncertainty and isolation generated by the pandemic, but some have failed to adapt and endure. Corporations faced complex challenges in functioning. According to (Sillence et al., 2022) more recently, studies have shown a number of different individual and organizational factors that influence the extent to which people collect digital data in the workplace (Oravec 2018; McKellar et al. 2020).

The crisis also forced professional communicators to create new practices for the new future, above all, how digital infrastructure and communication technologies can be implemented, what are the future applications for video conferencing for communication with stakeholders, how can new communication roles contribute to the success of organizations in conditions of automation of information search and maintenance of relations with stakeholders through communication. This means that the way of working,

cooperation and communication is drastically transformed during the pandemic (Nagel, 2020). Corporate communication interaction took place at a distance and work from home (Bloom et al., 2021). The application of distance interaction using digital communication tools mostly took place using digital platforms such as: Zoom, MC Teams, Skype and other tools for holding video conferences (Serhan , 2020). While video conferencing at work has long been largely limited to communication in internal workflows between employees in an organization (Park et al., 2014), the pandemic has fundamentally changed operations. In the communications segment, video conferencing has been applied far beyond the boundaries of organizations to mediate interaction with consumers, potential job applicants and the media. This represents an important shift in stakeholder communication, which means that professional communicators are using video conferencing as a powerful digital communication tool. in the interaction with internal and external stakeholders. In that context, the thinking about whether even after the end of the pandemic, i.e. post-covid period, professional communicators will continue to use digital tools in interacting with stakeholders.

### 2. THE IMPACT OF DIGITAL TRANSFORMATION ON STRATEGIC BUSINESS COMMUNICATIONS

Building and maintaining trust is one of the most important issues that professional communicators in Europe are focused on (Zerfass et al., 2018). According to them, trust is expected to dominate the agenda of the profession, at least until 2024. This is of particular importance because, even after the pandemic, professional communicators create communication strategies in which the dominant media for distributing information to stakeholders are digital tools. According to Zerfass et al., (2007), who have continuously monitored the key issues for the future of the profession since 2007. they note trends that have dominated for 15 years. This particularly applies to five segments in which longitudinal movements are observed. The most important segment in 2007 was dealing with the digital evolution and social networks. Statistically, the implementation of digital transformation increased from 48.9% in 2007 to 54.9% in 2011. Since 2011, the use of digital tools in strategic communications has been declining and in 2021 it will be 21.7%. The logical explanation for this drastic reduction in the percentage use of digital tools in the process of strategic communications of professional communicators is that communication via the Internet is an integral part of the daily work of communicators and they do not see it as a problem. However, strengthening the digital infrastructure to realize online communications and algorithms are considered a complex challenge in the future (Zerfass et al., 2018). A similar condition can be observed in the acceptance of the challenge to meet the need to cover a larger audience to which information will be distributed through more digital media in conditions of limited resources. This is particularly true given that while the implications of excessive clutter for employees and organizations in terms of reduced productivity, cyber security and data protection are becoming better understood (Neave et al. 2019), much less is known about the ways in which other groups accumulate and manage their digital data and the role of different technologies in this process (Sillence et al., 2022). A decade ago, 33.8% of professional communicators considered it one of the top three priorities (Zerfass et al., 2012), but although the importance of informing stakeholders during a pandemic is much greater, its trend is decreasing to 24, 4% in 2021. This drastic decline in the use of digital

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communication tools during a pandemic is logically explained as institutional progress, because digitalization is an integral part of work (Grandien&Johansson, 2012), similarly, communications during the challenge of dealing with the pandemic took place using of digital tools.

## 3. EDUCATION, SCIENCE, TECHNOLOGY, RESEARCH, INNOVATION, DIGITALIZATION, A PREREQUISITE FOR ACHIEVING A SUSTAINABLE EU ECONOMY

In the official document of the European Union, "Sustainable Europe until 2030", in chapter 3.2., Durability transition, in 3.2.1., Education, science, technology, research, innovation and digitalization, recommendations are given for permanent, lifelong education, intensification of scientific and empirical research, application of innovative technologies and digitalization as a prerequisite for achieving a sustainable EU economy that meets the SDGs. 56). Special emphasis is placed on investing in maintaining continuity to raise awareness to extend knowledge and improve skills correlated and compatible with the SDGs. According to the European Commission, permanent education, training and lifelong learning are imperative for creating a culture of sustainability. The EU leaders are unanimous in their view that their activities should be focused primarily on the European Education Area by 2025, in order to use the full potential of education, training and culture as agents for generating new jobs, economic growth and social justice. According to them, education in itself is a virtue and as a priceless resource it should be used to achieve sustainable development. In that context, the focus should be on improving equal access to inclusive high-quality education and training at all stages of life, from early childhood through higher education and adult education. This situation has intensified during the COVID-19 pandemic with many aspects of teaching and learning, as well as support services and administrative services going online (Sillence et al., 2022). In the curricula of educational institutions and the business policies of businesses, organizations should be encouraged to adopt the SDGs as guidelines for their activities which will be maximally supported with the intention of becoming places where sustainability skills are not only taught, but also are actively practiced. Reforms and modernization of the educational and business systems should be aimed at developing new skills for a digital society for the growth and sustainability of the economy. Technology, especially social media, plays an important role in both the social and educational identity of students and is important at key transition points (Dyer 2020; McLaughlin and Silence 2018; Thomas et al. 2017, Sillence et al., 2022). It highlights the impact of social media exposure during an event and the value of brand networking as a brand building strategy (Bredikhina et al., 2022). Improvement of ICT capacities, skills and basic digital competences should be implemented in accordance with the EU Action Plan for Digital Education (57). Likewise, educational and business systems should be focused on artificial intelligence (58) as an imperative of the future. Harnessing the power of digital transformation to meet the SDGs is a clear priority. The EU is fully committed to improving capacity and expertise in key digital technologies such as connectivity, "internet of things", cyber security, blockchain or high-performance computing, while also focusing on the potentially negative externalities of digital infrastructures. Artificial intelligence is an area where the EU lags behind China and the US (59). Therefore, the EU promotes the need to improve the capacities for digital

transformation and a new code of ethics for its application in order to become a leader at the global level and improve the economic power for sustainable development. This is how the EU can help ensure that AI is a net benefit to people's lives and work. Because artificial intelligence enables the instantaneous generation, distribution and processing of enormous amounts of information and data, it has the potential to increase productivity in many business areas. Research and innovation have an important role as a catalyst for change. They are a tool for analyzing the impacts of change and a means of ensuring that any transition leads to an increase in our well-being. Europe has talented brains, skills and innate creativity. Those strengths build the European community of researchers and innovators. The EU is in a strong position to take the lead in developing and deploying solutions for green and inclusive growth that will be applicable in the EU as well as globally. But to make full use of this potential EU tool, countries need to increase research spending. The EU agreed that by 2020, 3% of GDP member states should invest in research, development and innovation, but we are still far from achieving this goal.

European Union leaders agree that research and innovation are the catalyst for sustainable competitiveness, growth and investment. According to them to speed up the sustainability transition, research and innovation, funding should be supplemented with strategic access to investments, enabling innovative solutions to reach the market because they are often capital intensive and high-risk investments. The instruments, as it is The European Fund for Strategic Investments, all created to support the reduction of risks for that type of investment, making them more attractive to private stakeholders. The newly proposed European Innovation Council can help in that regard too with top class support innovators, start-ups, small companies and researchers to succeed in dealing with highrisk innovation projects, in order to ensure the benefit of intellectual cross-multiplication. The EU and its member states could focus on funding breakthrough technologies and innovative companies that have the potential to become leaders of the EU and the global market for sustainable transition, which will ensure effective and timely penetration of these innovations. The EU and its member states will also need to promote stronger connections between researchers and business. EU Research, Development and Innovation hubs and incubators are important to support sustainable development, and therefore collaboration between researchers and businesses is necessary to exchange best practices and encourage innovation. While large companies may have the means to develop their research activities in the internal corporate environment, this is often not the case case for small and medium enterprises. Stronger and more intensive direct links with the research community produces the potential to bridge this gap. The European Institute of Innovation and technology (EIT), has 40 innovation centers in the countries of EU that unite the triangle of knowledge of education, research and business. These changes generate the need to create new business models that will be vital and efficient for sustainability in implementing the transition. During the last decades, driven by the digital transformation, a constantly growing number of companies are looking at it SDGs as an integral part of their competitiveness and growth strategy. They realized that according to the United Nations 2030 Agenda, responsible business can lead to more sustainable profit and growth, new market opportunities and long-term shareholder value. In that context, different forms of additional incentives for integrating the SDGs in businesses as well as exploring the potential of new technologies and the circular economy.

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### 4. COMMTECH AND DIGITAL INFRASTRUCTURE

The global pandemic has generated a need for the creation of new instruments in the management of crisis communications. According to the EACD community of communicators, teams are moving towards interactive learning and innovation in order to adapt to the new future. They point out that the changes are primarily focused on the digital transformation of communications, which will contribute to dealing with future challenges. For communicators, the need to embrace digital communication technology, CommTech, is inevitable. European Communication Monitor (ECM 2021), Global CommunicaWon Monitor 2021, conducted research in 46 countries in Europe in which CommunicaWon professionals from governmental and non-governmental institutions and communications agencies were surveyed. The research is focused on investigating four constructs: current challenges related to the digitalization of strategic communications (Falkheimer&Heide, 2018, Nothhaft et al. 2019) and public relations (Tench&Vaddington, 2021, Valentini, 2021) and the changing role of practitioners. This includes practices for implementing digital infrastructure in communications departments and agencies and the level of competence to apply digital technologies in the communication process. The distinction in the research is made according to different countries and types of organizations. The survey also identifies communications departments with outstanding performance. Research on the need for digital transformation, ie. building digital infrastructure and digitizing communication between stakeholders and workflow is a top priority for 87.8% of communications professionals across many communications sectors and agencies in Europe. The indicators show that 83.9% of the respondents consider building the digital infrastructure as a top priority for the efficient operation of a communications department or agency. The percentage (87.8%) of respondents who are of the opinion that digitalization of communication processes between stakeholders is a priority is also high. (Chart 1)



The actuality of the need for digital transformation in the global business environment is the focus of interest and research in this paper, which quantitatively and qualitatively analyzes the current state of the business environment in the countries of Southern Europe. The goal is to obtain accurate information about the current conditions in the

digital infrastructure segment and the application of digital tools by communication professionals in order to improve communication with stakeholders as a prerequisite for improving productivity, competitive resilience and economic development. The analysis is based on the official statistical indicators from the European Communication Monitor , 2021, EUPERA, 2021. Because R. S. Macedonia is listed in the research conducted by the European Communication Monitor, but no results are listed, research was done using a digital survey questionnaire that contains 41 claims with a scale of attitudes from 1 to 4 from which respondents choose one attitude. The research indicates that digital transformation as a priority business trend is transferred, implemented and applied by professional communicators in the business sector in Russia. S. Macedonia, but it is not at a satisfactory level. The comparative analysis of the situation with the digital infrastructure and the application of digital communications in the countries of Southern Europe and Macedonia was made. In the countries of Southern Europe, the highest level of investment is in Serbia with 4.57, and the lowest in Macedonia with 3.54. According to the indicated indicators for investment in digital infrastructure in the countries of Southern Europe, it is concluded that there is an evident disparity in relation to the countries that create and promote the 2030 Agenda and the rest of the countries, because the highest rate of investment in digital infrastructure is in Serbia 4.57, which is not a member of the EU, while the lowest rate of investment in Italy 4.22, which is a member of the EU. According to the indicator, for the digital infrastructure of business entities, a negative trend is observed in EU member states in relation to non-EU countries. Although the countries of Southern Europe that are members of the EU are creators and promoters of the need for digital transformation, the indicators still indicate a low level of activity in that segment.

Table 1. Digital	transformation in the	countries of Souther	n Europe / Digit	al infrastructure 2021
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South	Serbia	Portugal	Slovenia	Croatia	l would	Spain	Italy	Macedonia
Euro	4.57	4.56	4.52	4.45	4.42	4.35	4.22	3.54
Source : Euro	opean Comm	unication Mon	1					

Regarding the application of digital tools by communication professionals, the situation in the countries of Southern Europe is similar to the investment in digital infrastructure. According to the obtained indicators, the highest level of application of digital technology by professional communicators in the countries of Southern Europe is in Spain with 4.62, and the lowest in Macedonia with 2.41. According to the indicated indicators for the application of digital technologies by professional communicators in the countries of Southern Europe, it is found that there is a higher level of application of digital technologies by professional communicators in the countries of Southern Europe that are members of the EU compared to non-member countries. At the European level, there is a significantly lower level of application of digital technologies in communication processes in the countries that create and promote the 2030 Agenda and other countries, because the highest rate of application of digital technologies is in Turkey, 4.73, and the lowest rate of investment in France 3.42. It is also noted that according to the obtained results, the highest rate of application is in the countries of Eastern Europe, 4.55, and the lowest level of investment is in the countries of Western Europe, with 4.04. According to the indicator, for the application of digital technologies by communication professionals, a negative trend is observed in the countries of Western Europe in relation to the countries of Southern Europe. Although the countries of Western Europe are creators and promoters of the need for digital transformation and application of digital technologies, the indicators indicate a low level of activity in that segment.

 Table 2. Analysis of the use of digital tools by communication professionals in business entities in

 Southern Europe and Russia. Macedonia 2021

Southern	Spain	Portugal	Serbia	Slovenia	BiH	Croatia	Italy	Macedonia	
Europe	4.62	4.6	4.54	4.53	4.51	4.47	4.44	2.41	

Source : European Communication Monitor, 2021, EUPERA, 2021

Regarding the digitalization of communication processes in Europe, a negative trend can be observed in the countries of Western Europe in relation to the countries of Southern Europe. In relation to the countries of Southern Europe, Macedonia is at an overwhelmingly lowest level in terms of the application of digital technologies in the implementation of communication processes. (Table 2)

Regarding the creation of strategies and concepts for digitization of communications in the course of corporate work processes, the situation in European countries shows a positive trend. However, according to the indicators obtained from the research, there is a need to improve the digitalization of communications in the work process, i.e. performance of work tasks. (Table 3)

 Table 3. Creation of strategies and concepts for digitization of communications in the course of corporate work processes

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Soı Eu	uthern rope	Spain 3.48	Portugal 3.36	Slovenia 3.35	Serbia 3.31	BiH 3.27	Italy 3.28	Croatia 3.20	Macedonia 2.24

Source : European Communication Monitor , 2021, EUPERA, 2021

According to the results obtained from the research on the creation and implementation of strategies and approaches for building a digital infrastructure in which the focus was on promoting a model for the efficient use of information technologies, the level of quality of services and the necessary capacities for functioning, the highest level is in Spain 3.48 for creating a strategy for building a digital infrastructure, while the lowest level in Southern Europe is in Macedonia 2.24, which indicates the fact that the current situation in relation to the digital infrastructure in organizations does not meet the needs for efficient digital communication with internal and external stakeholders. The comparative analysis of the differences in the existing strategies and approaches to digitization between sectors and communication agencies in the countries of Europe shows that the organizations in the countries of Western Europe are at a lower level in relation to the digitalization strategies created by the countries in Southern, Eastern and Northern Europe. This indicator imposes the dilemma regarding the fact that organizations in highly developed economies in Western Europe, where the need to apply digital communications is created and promoted, are at a lower level than other European countries. Table (4).

 Table 4.
 Analysis of differences in existing digitization strategies and approaches between communication sectors and agencies in European countries

Western Europe	Belgium 3.25	Great Britain 3.34	Netherlands 3.02	France 3.20				
Southern Europe	Serbia 3.31	Portugal 3.36	Slovenia 3.35	Croatia 3.20	l would 3.29	Spain 3.48	Italy 3.28	Macedonia 2.24
Eastern Europe	Turkey 3.89	Russia 3.66	Bulgaria 3.43	Romania 3.66				
Northern Europe	Sweden 3.14	Norway 3.21	Finland 3.14	Denmark 2.73				
Central Europe	Germany 3.25	Switzerland 3.23	Austria 3.30					

Source : European Communication Monitor , 2021, EUPERA, 2021

From the table it can be seen that in the countries of Eastern Europe (3.66) the level of created strategies for digital transformation is the highest, i.e. for the application of digital technologies in communication with stakeholders. The countries of Southern (3.31) and Western Europe (3.20) have a lower level, while the countries of Northern Europe (3.05) have the lowest level.

to intensify the processes of creating systems for functional digital infrastructure and digital competence based on improving capacities and performance, i.e. the competencies of professional communicators in business operations for creating virtual work environments. Economic trends are increasingly focused on the generation, creation, accentuation, accumulation, analysis and application of information and knowledge. The multidimensional performance of digital technology enables innovative content creation and business processes that contribute to more productive use of capital and labor. The global applicability of digital technologies enables the creation of innovative business models and communication practices, as well as a faster and simpler flow of information, the expansion of linking to global markets and the emergence of new markets with the application of digital technology.

### CONCLUSION

The application of digital technologies in the development of communication processes with stakeholders is a relatively new tool used by organizations to create efficient business processes and cooperation with internal and external stakeholders. Organizations in developed countries continuously monitor and implement trends regarding the application of information and communication technologies that will contribute to improving the flow of information on which the quality of work and market competitiveness depends. Depending on the intensity and volume of use, their sustainable development will depend. In that context, the current situation regarding the application of digital technologies in business communication processes in Macedonia is at the lowest level compared to the countries of Southern Europe and Europe as a whole. Depending on how timely the organizations will apply them and with what dynamics they will react to the changes in technology, their existence in modern conditions of business functioning will also depend. The general impression is that developing countries are at a very low level in terms of investment in improving and using digital infrastructure than developed European countries. The dynamics of change transform businesses partly in a negative connotation in that information is treated as a commodity on which wealth depends, ie. the economic power of countries. Investing in digital infrastructure, education to improve digital competences and the application of digital tools in societies based on knowledge and economic power are fundamental for competitive sustainable development. Hence the recommendation that countries should promote the new order of societies based on digital knowledge and competences to encourage and create the new cognitive corporate code for the acceptance and application of digital technologies that is in function of creating a demand base of digital products. By creating innovative digital applications, they will influence the change in the attitudes of business entities and consumers. In perspective, when they reach the level of attracting knowledge and capital through investment in digital infrastructure and the transfer of information and communication technologies through the international exchange of knowledge and practices from developed economies in the segment of reengineering of business entities and business processes, as well as improving the competence of professional communicators to use digital tools will intensify productivity and development.

### REFERENCES

- Arthur W. Page Society. 2022. Ge[ng started in CommTech: From professional to pathfinder.
- https://commtechguide.page.org/ge.ng-startedincommtech-from-professional-topathfinder/a-new-profession-emerges/ [17.05.2021]
- Azher Parvez M and Satyanarayana Chary T. 2 017. Foreign Direct Investment (FDI) and Telecommunication Sector in India. J Telecommun Syst Manage 6: 151. Doi: 10.4172/2167-0919.1000151. Journal of Telecommunications System & Management. Vol 6(1): 151, Issue 1 Citation: Azher Parvez M, Satyanarayana Chary T Foreign Direct Investment (FDI) and Telecommunication Sector in India. J Telecommun Syst Manage 6: 151. doi: 10.4172/2167-0919.1000151
- Beier, G.; Fritzsche, K.; Kunkel, S.; Matthess, M.; Niehoff, S.; Reißig, M.; van Zyl-Bulitta, V. A Green Digitized Economy? 2020. Challenges and Opportunities for Sustainability. *Inst. Adv. Sustain. Stud. (IASS) Fact Sheet* 2020, 1, 1–10. [Google Scholar] [CrossRef]
- Brenner, B.; Hartl, B. 2021. The Perceived Relationship between Digitalization and Ecological, Economic, and Social Sustainability. J. Clean. Prod., 315, 128128. [ Google Scholar] [CrossRef]
- Bredikhina , N., Gupta , K., Kunkel , T. 2022. Superboosting the athlete social media brand: events as an opportunity for follower growth, European Sport Management Quarterly
- Carlini , J., Thomson , A., O'Neil , A., Green , A. 2022 . Understanding the interplay between event communications and local business decision-making using signaling theory: the case of the 2018 Commonwealth Games
- Del Río, CG; Fernández, MCG; Colsa, AUU Unleashing the Convergence Amid Digitalization and Sustainability Towards Pursuing the Sustainable Development Goals (SDGs): A holistic review. J. Clean. Prod. 2021, 280, 1–40.

- Bloom, N., Davis, SJ, & Zhestkova, Y. 2021. COVID-19 shied patent applicaDons toward technologies that support working from home (Becker Friedman Institute for Economics Working Paper, 2020-133). University of Chicago. h tt ps://bfi.uchicago.edu/wp-content/uploads/2020/09/BFI\_WP\_2020133.pdf [17.05.2021]
- Brinker, S. 202 2. MarkeDng technology landscape supergraphic. 2020. Martech 5000 – really 8,000, but who's counDng? h tt ps://chiefmartec.com/2020/04/markeWngtechnologylandscape-2020-martech-5000/ [17.05.2021]
- Bygstad, B. 2017. GeneraWve innovaWon: a comparison of lightweight and heavyweight IT. Journal of InformaDon Technology, 32 (2), 180–193.
- Chaffey, D., & Smith, PR. 2017. *Digital markeDng excellence: Planning, opDmizing and integrating online markeDng* (5th ed.). Routledge.
- Constan<sup>n</sup>ides, P., Henfridsson, O., Parker, GB 2018. Pla.orms and infrastructures in the digital age. *InformaDon Systems Research*, 29 (2), 381–400.
- DataEuropaEU. 2020. Changes in the labor market. h tt ps://data.europa.eu/en/impactstudies/covid-19/changes-labour-market [17.05.2021]
- Doughty, C. 2019. *The what, why, who, how of martech. MarkeDng technology made simple(r).* www.martechalliance.com/what-why-how-martechmarke Wngtechnology [17.05.2021]
- Duhe, SC (Ed.). 2017. New media and public relations (3rd ed.). Peter Lang. European Union. (2021). About the EU: Countries. Retrieved from h ps://europa.eu/europeanunion/about-eu/countries\_en [17.05.2021] Eurostat. 2021. Living conditions in Europe – income distribution and income inequality.
- Nagel, L. 2020. The influence of the COVID-19 pandemic on the digital transformation of work. *International Journal of Sociology and Social Policy*,

- European Communication Monitor 2021. CommTech and digital infrastructure, videoconferencing, and future roles for communication professionals. Results of a survey in 46 countries.
- B russels: EUPRERA/EACD, EUPRERA European Public Relations Education and Research Association, Brussels, www.euprera.org
- EACD European Association of Communication Directors, Brussels, May, 2021, www.eacd-online.eu
- European Union, European Commission, Europe 2020 strategy, https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policycoordination/eu-economic-governance-monitoring-prevention-correction/ europeansemester/framework/europe-2020-strategy en
- Park, G., Oh, H., Lim, Ch., B., Bernice LZ Khoo, B., L., Z. 2022. Can smart technology make group members more creative? The effect of interactive feedback using sociometric badges on members' creativity, Behavior & Information Technology
- Knut H. Rolland, Lars Mathiassen, Arun Rai .2018. Managing Digital Platforms in User Organizations: The , Interactions Between Digital Options and Digital Debt , Information Systems Research, Volume 29, Issue 2, Pages iii-vi, 253-523
- Sillence, E., Dawson, A., J., McKellar, K., Neave, N. 2022. How do students use digital technology to manage their university-based data: strategies, accumulation difficulties and feelings of overload? Behavior & Information Technology

<sup>40 (9/10), 861-875.</sup> 

- Tench, R., & Moreno, A. 2015. Mapping communicaWon management competencies for European practitioners: ECOPSI an EU study. *Journal of CommunicaDon Management*, 19 (1), 39–61.
- Tench, R., Verčič, D., Zerfass, A., Moreno, A., & Verhoeven, P. 2017. CommunicaDon excellence. How to develop, manage and lead exceptional communicaDons. Palgrave Macmillan.
- Tench, R., & Waddington, S. (2021). *Exploring public relations and management communication* (5th ed.). Pearson.
- Topić, M., Cunha, MJ, Reigstad, A., Jelen-Sanchez, A., & Moreno, A. (2020). Women in public relations (1982-2019). *Journal of CommunicaDonManagement*, 24 (4), 391–407.
- Valenni, C. (Ed.). 2021. *Public relaDons* (Handbook of CommunicaWon Science, 27). DeGruyter Mouton.
- Verčič, D., & Zerfass, A. (2016). A comparaWve excellence framework for communicaWon management. *Journal of Communication Management*, 20 (4), 270– 288.
- Verhoeven, P., Zerfass, A., & Tench, R. 2011. Strategic orientaWon of communicaWon professionals in Europe. *InternaDonal Journal of Strategic CommunicaDon*, 5 (2), 95–117.
- Volk, SC, Berger, K., Zerfass, A., Bisswanger, L., Fetzer, M., & Kohler, K. (2017). How to play the game. Strategic tools for managing corporate communication Dons and creaDng value for your organizaDon (CommunicaWon Insights, Issue 3). Academic Society for Management &
- CommunicaWon.h tt p://bit.ly/ComInsights3 [17.05.2021]
- Weiner, M. 2021. *PR technology, data and insights: Igniting a positive return on your communications investment*. Kogan Page.
- Welch, M. 201. Appropriateness and acceptability: Employee perspecWves of internal communicaWon. *Public RelaDons Review*, 38 (2), 246–254.
- Zerfass, A., & Brockhaus, J. 2021. Towards a research agenda for CommTech and digital infrastructure in public relations and strategic communicaDon. Paper presented at the 24th Annual InternaWonal Public RelaWons Research Conference, Orlando, FL, USA.
- Seim , K., Sinkinson , M., 2016 . Mixed pricing in online marketplaces. Quantitative Marketing and Economics . Vol. (14 ), Issue (2), pages 129 - 155 , DOI 10.1007/s11129-016-9168-3