ACT Digital: The Strategic Role of Analytics, Creativity and Technologies for Cultural and Creative Sector and Education

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Abstract. The aim of the paper is to discuss the impact of information technology on socio-economic, cultural processes and the consequent need for a balanced digital transformation, especially in higher education and the creative and cultural sectors, bridging the digital divide and fostering analytical thinking without underestimating creative skills.

Keywords: Digital Transformation, Education, Culture, Creative Sector.

1 Digital Transformation as a Supranational, National and Organizational Level Priority

The importance of digital transformation in society is no longer questioned. It has been set as a national, as well as an international, supranational priority and a goal for the development of regions, countries and organizations.

On the legislative level the importance of digital environment and competencies has been well acknowledged. In recent decade, it is recognized that the combination of digital technologies with other advanced technologies and service innovation offers opportunities for increasing industrial competitiveness, growth and jobs and addressing societal challenges. One of European Commission's aims is integrating digitalisation in all industrial technologies and societal challenges. The Covid-19 pandemic and its consequences has accelerated the urgent need for digital transformation and highlighted the importance for European Union (EU) and the world to be better prepared for and more resilient to systemic shocks. The EU has stepped up to these challenges by accelerating the twin – green and digital transitions – and associated transformation of economy, industry and society (European Commission (1), 2021) The EU has developed such a regulatory environment, a number of initiatives and platforms that facilitate the introduction of technologies and the development of digital competences in various fields, including cultural and creative sectors and education. These objectives are to be

achieved by implementing various programs, such as The European Digital Strategy, Digital skills initiatives (e.g., The European Skills Agenda, The Digital Education Action Plan), investments aimed to tackle green and digital recovery by committing sizeable financial efforts (e.g., The Recovery and Resilience Facility, The Digital Europe Programme, Horizon Europe). At the implementation level, this means that each National Recovery and Resilience Plan needs to justify how it will contribute to the digital transition, economic and social convergence, sustainable growth and the integration of the economies of the EU (European Commission (2), 2021).

Digital transformation is also one of the main priorities of Latvia's medium and long-term development and is addressed in broader national strategies and guidelines. In The 2021-2027 National Development Plan (NDP 2027), the digital transformation and information communication technologies (ICT) are seen as the key to productivity, economic growth:

1. ICT catalyses change in the economy, public administration and society;
2. The targeted application of ICT helps transform existing and create new processes, business models, habits and culture in all fields;
3. The knowledge society is the motivated, skilled and intelligent driver of a comprehensive digital transformation of Latvia, since it is able to understand, adapt and make full use of the new reality facilitated by digitalisation.

Further digital transformation is set as an overarching goal and as a priority of all sectors, especially in such areas as innovation and science, education, health care, inclusive society and labour market, infrastructure, regional development, security as well as the environment and energy (Cross-Sectoral Coordination Center, 2020).

The priorities set out in the above-mentioned NDP 2021-2027 are supported by The 2021-2027 Latvian Digital Transformation Guidelines that emphasize the impact the digital transformation has on all sectors of the economy and everyday life, work and communication:

1. Technological developments are changing the structure of the labour market and significantly increasing economic productivity;
2. ICTs are increasingly integrating into a wide range of sectors, significantly affecting their competitiveness, productivity and driving the economy as a whole;
3. Digital work processes, digital products and services play a crucial role in the functioning of the Latvian economy, reducing the range of issues to be handled in person and manually to the absolute minimum.

There is no longer a question of whether or not a country or organization should consider implementing a digital transformation. This is an inevitable reality and a precondition for a successful development. Success of the implementation of digital solutions is related to two critical factors: 1) the available ICT infrastructure and 2) the qualifications of human resources and their readiness to implement new approaches (Vides aizsardzības un reģionālās attīstības ministrija, 2020).

2 Infrastructure and Skills: Opportunities and Obstacles to the Successful Implementation of the Digital Transformation

Despite the fact that the legislative framework for digital transformation is favourable, as well as financial support is available to countries and organizations, there are several challenges to overcome for a successful digital transformation in any of the industries.

2.1 Infrastructure

It is recognized that the availability of a modern, accessible and high-quality ICT infrastructure is one of the preconditions for the dynamic development of the ICT sector and also of the modern global economy (Domnīca Certus, 2017). Access to a fast and reliable broadband connection is crucial in the current context, in which key societal and economic services are delivered online. A modern and robust digital infrastructure provides the necessary coverage for these services (European Commission (3), 2020).

In terms of infrastructure, Latvia is in a relatively good situation, as the barriers created by the infrastructure are relatively low. According to the DESI index 2020, the connectivity across EU has improved in recent years, reaching 86%, but Latvia with 93% performs above EU average. The share of households with access to the internet in Latvia reached 89.7% in 2020, the difference between access in urban and rural areas was 3% (88.7% of households have access to broadband internet in cities, but 84.7% in rural areas). Between 2019 and 2020, the availability of broadband internet in rural areas increased by 6.8%. The intensity of use also gradually increases. In 2020, compared to 2019, the share of regular internet users who use the internet at least once a week increased by 3.2%, reaching 86.9% (European Commission (1), 2020).

2.2 Skills

The degree of integration of digital technologies is also closely linked to skills. Digital skills are the backbone of the digital society. They enable people to use digital services and engage in basic activities online, especially when mobility is restricted. In the context of the digital transformation, when more and more jobs are being automated, the importance of technology in all areas of work and life is growing, and the requirements for digital skills are also increasing and changing. The study found that the Covid-19 crisis has shown that empowering citizens with adequate digital skills to access information and services is crucial for the whole population, however there is a worrying digital skills gap in Europe. Despite the fact that in the last four years the level of digital skills has continued to grow slowly, rates remain relatively low and a large part of the EU population still lacks basic digital skills, even though most jobs require such skills. 58% of individuals have at least basic digital skills, 33% - above basic digital skills and 61% of individuals have at least basic software skills (European Commission (3), 2020).

On human capital, Latvia ranks 24th among EU countries, with several indicators deteriorating in the last years. Basic and advanced digital skill levels remain well below the EU average. Only 43% of people aged 16 to 74 have at least basic digital skills and only 24% have advanced skills. An analysis of the data on the reasons why households do not have access to the internet also supports the thesis that the degree of implementation of digital technologies depends only in part on technological barriers. It outlines the importance of acquired skills in aiding digital transformation The top reasons for not having internet access at home in 2019 remain the lack of need or interest (46% of households without internet access in 2019), insufficient skills (44%), equipment costs (26%) and high-cost barriers (24 %) (European Commission (1), 2020).

The analysis of various sources leads to the conclusion that the development of skills is an essential precondition for successful digital transformation at all levels. However, skills development needs to be considered in two main directions:

1. Development of digital skills at all levels. At a basic level, it will allow people to perform daily activities, receive services. At a higher level, it will enable the implementation of digital solutions and innovation;
2. Development of non-automated, cross-cutting skills that will foster innovation, cooperation and interdisciplinarity.

The approach to the necessity for multidimensional skills development is confirmed by research as discussed in the following paragraph.

According to global tendencies many professions will change or disappear due to technology, especially automation, and the workforce will require retraining, reskilling. Report shows, although with a slight delay from global processes, automation has an impact on the Latvian labor market. The greatest potential for automation is for predictable physical activities and operation of various equipment and machines – it is estimated that it is currently technically possible to automate 81% of the time devoted to such activities. There is also a great potential for automation in data collection (64%) and processing (69%), but the lowest – in human management and development. In terms of sectors, automation will have a relatively smaller impact on education, business management and healthcare. Therefore, solutions for retraining and reskilling activities must be sought immediately in order to avoid social issues, for example, increasing unemployment. Moreover, roadmaps for new knowledge and practices need to be developed and possible career change trajectories outlined, recognizing that skills required in the labor market, such as interdisciplinary planning, finding creative solutions and making effective decisions, are not the ones that can be quickly taught to retrain workers. This conclusion is also supported by Author's study who found that the basic difference with respect to typical gig economy jobs is that cultural and creative jobs generally require highly skilled and qualified personnel therefore high levels of specific human capital investment are necessary and their productivity is much harder to assess than in technical positions (Domnīca Certus, 2017).

Currently, a lot of attention is paid to various digital skills development programs, but the balance must be achieved in terms of digital, humanitarian and social skills, without underestimating the importance of the latter two. Otherwise, in the future it could lead to another skill gap in social, emotional, cultural competencies, which could create the risk to economic development, social cohesion and democratic stability. This

will not be the case if the arts and humanities regain their prestige and alongside the years-long tendency to support and stimulate STEM programs, there will be investment in the STEAM concept at EU level.

3 Higher Education Institutions as Enablers of Digital Transformation

In order to achieve the digital goals, set in the supranational and national strategy papers these must be integrated at the core of organizations' strategies and there must be places to acquire the necessary skills.

It is particularly important to ensure that digital transformation takes place in those organizations that play a strategic role in the development of society and economy. One of these sectors is education, especially higher education.

Various studies and reports on higher education for several years have emphasized the need for educational institutions to consider technological developments and to provide services in line with the opportunities offered by information technology, providing remote, inclusive and online learning opportunities (European Commission (2), 2020).

In recent years, higher education sector has discussed blended and flexible learning, however reality has been that online resources have supplemented the dominant mode of delivery (in-person). As highlighted in various reports, the higher education landscape is at the crossroads of an amazing digital shift (Deloitte, 2019). It is expected that the next shift likely will be from mass face-to-face to mass digital learning, therefore future courses should be designed through technology – "digital first" – and supplemented by face to face, human support (KPMG International, 2020) .

The pandemic highlighted a number of shortcomings and challenges for successful digital, online studies: accessibility, skill gaps, methodology and materials adopted for digital learning. However, reports and expert opinions also focus on how this represents an opportunity to rethink and reconceptualize the nature and methods of teaching and learning and to create an inclusive environment that fosters equity and diversity, ensures equity of access, participation and completion of higher education, with a special focus on students from under-represented, disadvantaged and vulnerable groups (Farnell, Skledar, Ninoslav, & Schmidt, 2021). Furthermore, the pandemic has boosted the development of new, digitally-based educational platforms and an acceleration of Ed-Tech innovation, and this is likely going to be a permanent change that could revolutionize the educational system (OECD, 2020).

Finding solutions to the current challenges and long-term benefits in terms of socio economical, quality assurance, sustainability, adaptiveness and resilience aspects of the higher education ecosystem could be achieved.

Socio economical. For various reasons, some groups in society currently have limited access to qualitative higher education services. These are, for example, territorial or social barriers that prevent them from studying in a chosen institution. The more distance and online study opportunities will be offered, the more accessible and inclusive the higher education ecosystem will become.

Quality assurance. Opportunity to receive a distance education service without territorial barriers means that higher education institutions (HEI) compete not only on the national but also on the global level. As a result, the competition is increasing and each institution is forced to constantly upgrade and improve its offer. The sector is facing increasing domestic and international competition, the challenges of supporting life-long and more flexible learning, questions about the cost and efficiency of delivering higher education. In this context, digital as a strategic question is more important than ever (Iosad, 2020).

Sustainability. HEI provides not only educational services and invests in research and innovation, but is also co-responsible for the wider human-made challenges of the environment, climate, lifestyle, migration, health, democratic stability, etc. areas. Higher education produces economic, social, cultural and environmental impact in the community, be it at the local, regional, national or global level (OECD, 2017). HEI must be more involved and active in processes that reduce the human footprint, promote the circular economy and promote societal equality. Information technology can help achieve these goals.

Adaptiveness and resilience. The integration of digital transformation into the strategies of organizations, as well as its purposeful implementation will enable greater adaptability and resilience. In unexpected situations HEI will be able to provide a well-thought-out and high-quality service. To survive the current and future shocks, digital needs to be part of institution wide strategy rather than a bolt on or afterthought. Covid-19 crisis has strengthened the role of digital workflows for institutional resilience within teaching, research, and professional services (Iosad, 2020).

The more pervasive digital transformation becomes in the economy, and the more these disruptive technologies continue to drive change, the more integral they become to the success of HEI. It has become unthinkable that universities would be able to effectively manage most of their biggest challenges without the use of digital whether they be in attracting, retaining and engaging students and alumni; operating efficiently and effectively; driving quality and innovation in teaching and learning; fostering research collaboration; or partnering with employers (Ernst & Young LLP, 2020).

4   The Role of the Creative and Cultural Sector in the Digital Age

In the context of digital action, the cultural and creative sector (CCS) can be viewed and analyzed from two aspects:
1. Considering the sector's contribution to economic, social aspects and sustainability, it is crucial that the sector undergoes a digital transformation and is able to deliver products and services according to the requirements of digital age;
2. As a result of the introduction of digital solutions, many professions will be affected by automation, but on the other hand, the creation and implementation of digital solutions requires creative thinking and social and emotional skills,

and the development of non-automated skills and creative thinking will become increasingly important.

As a result of the above, it is necessary:
1. To develop and strengthen the cultural sector as a whole, as well as its digital maturity;
2. To introduce the content of studies related to creativity and culture in the process of education and training of other sectors;
3. To promote inter-sectoral cooperation for innovations and sustainability.

As mentioned in previous sections, digital transformation is affecting all industries and the cultural and creative sectors need to adapt to the new digital reality. According to research successful development of cultural sectors has a wide-ranging impact in the following areas:

1. Economic and employment. Cities and regions could consider CCS as well as cultural participation as a driver for both economic and social impact in its own right and throughout the economy. The sector produces new products and services and is also an important supplier of ideas and new approaches for other companies to innovate. Massive digitalization coupled with emerging technologies, such as virtual and augmented realities, can create new forms of cultural experience, dissemination and new business models with market potential. A "presence at a distance" (artificial intelligence, virtual and enriched reality, Internet of Things, etc.) that builds a new "experience economy" is one of examples.

2. Social impact (well-being and health, inclusion, urban regeneration, etc.). The lockdown and social distancing measures have made evident the importance of arts and culture for people's mental well-being and health. This recognition provides a new opportunity to capitalize on the role of arts and culture in the prevention and treatment of illness across the lifespan, contributing to solutions for health and welfare systems. Over the past years, the emergence of new digital technologies has enabled massive production of content and its instant diffusion through open platforms (e.g., Wikipedia), new media distributors (e.g., Netflix), social networks and content communities (e.g., YouTube).

3. Sustainability. The capitalization on the role of culture to help raise awareness about the complex challenges of climate change and population ageing is needed. The contribution of culture is important in other areas of local development, from rebuilding public trust to contributing to post-pandemic urban design adapted to social distancing rules (OECD, 2020). Access to culture plays an important role in the stability of democracy, since free access to accumulated knowledge and evidence of cultural heritage is an integral part of a democratic society (Vides aizsardzības un reģionālās attīstības ministrija, 2020). For example, over the past decades, museums have become drivers of local development and anchor institutions for many communities. They increase the attractiveness of their cities, towns or communities as places to visit, live and invest in, and are increasingly regarded as vital community hubs at the heart of urban regeneration efforts.

There is a need to promote greater complementarities between culture and other policy sectors and digital transformation.

Education can benefit from advances in cultural and creative sectors, particularly in the use of new digital tools that build on gaming technologies and new forms of cultural content, ensuring a distance and distributed learning and digitally mediated access to cultural resources and experiences. A coordinated effort by public and private players of the global content platform economy could lead to the building of an inclusive cultural-educational ecosystem that accelerates both advanced digital literacy and the development of a new generation of creative entrepreneurs. The strategic complementarities between CCS and the educational sector are essential for the development of new forms of digital "edutainment" (for instance in the field of serious educational games), as well as to develop new platform concepts and formats that integrate various elements of (possibly gamified) interactive learning, group exchange and co-creation of content, advanced digital curation of educational and cultural content. The "serious gaming" industry might consequently become a partner for government, schools and technology companies, among others on a greater scale.

Healthcare and social services can benefit from greater linkages with cultural and creative sectors to improve well-being, prevent illness or delay its onset, favor the adoption of healthy habits, and prevent social isolation. There are several promising new research areas: a) arts/culture and health, b) arts/culture and social cohesion, c) "cultural welfare". Art-based techniques and methodologies may open up new research programs with important economic and social impacts. Such a new field will also call for new professional training to combine cultural skills with those of nursing, medical or social service skills.

In summary, there is a need to strengthen resilience of CCS to future crises and support their further growth, for example by initiating the digitalization of artwork and cultural infrastructure, promoting greater complementarities between culture and other policy sectors. This allows creative industries to challenge other pre-existing trends that undermine the strength, resilience, and importance of the CCS. Whereas the impoverishment and downsizing of the CCS would have a negative impact on cities and regions not only in terms of direct economic and social impact but also in terms of well-being, the vibrancy of cities and communities, and cultural diversity (OECD, 2020).

5 Digital Transformation of the Cultural Sector: The Case of Latvia

The cultural sector is sensitive to any restrictions on assembly or movement. They leave both short-term and long-term effects on the industry. Research on the impact of the pandemic on cultural consumption in Latvia confirms the findings of international research on the medium and long-term impact.

5.1 Digital Consumption

Digital consumption increased markedly during the pandemic and is not expected to decrease in the medium term. Culture and creative organizations need to integrate dig-

ital communication and digital content into their long-term strategies, as the study confirms that Latvian society is not ready to resume consuming cultural services and products in person in the near future, even if pandemic restrictions will be eased. Only the complete cancellation of restrictions and the epidemiological situation could encourage to resume consuming the culture in person. The emergency situation in Latvia due to the Covid-19 pandemic was declared for the second time from November 9, 2020 to April 6, 2021. By July 26, 2021, only 35,32% of the population had been fully vaccinated (Latvijas atvērtie dati, 2021), so it can be predicted that restrictions in Latvia will remain at least until the end of the year, therefore the level of digital consumption will remain relatively high.

Various data sources confirm the high level of consumption of digital cultural content in Latvia.

According to the data from the Central Statistical Bureau, the popular purpose of using the internet is related to the digital consumption of culture: 81.7% of the population read news portals, newspapers or magazines online, 34.2% of internet users store documents, images, music, video or other files in data storage on the internet (clouds). Demand for e-commerce services is increasing. 62.8% of the population use the internet to purchase various goods and services, and compared to 2019, this indicator increased by 9% (Centrālā statistikas pārvalde , 2020).

The data on the survey on cultural consumption also confirm that the consumption of culture on the internet has significantly increased during the last year. The online viewing of Latvian films has increased the most – in 2018 only 16% of the population had done so, then in 2019/2020 already 48%. There has also been a significant increase in the proportion of people who watch or listen to cultural broadcasts on the Internet (increase from 19% to 45%), watch foreign films online (from 34% to 57%), listen to music online (from 32% to 54%), download foreign or Latvian films (from 12% to 32%) (Latvijas Kultūras akadēmija, SIA „Analītisko pētījumu un stratēģiju laboratorija", SIA „SKDS", 2020).

5.2   CCS Digital Strategies during the Covid-19 Pandemic

Strategies for digital activities of the Latvian creative and cultural sector in the first wave of the Covid-19 pandemic were described in the publication "Impact of Digital Technologies on Development of Creative Industries". This study identified the main challenges for organizations during the Covid-19 pandemic: a) maintain a link with its consumer, audience; b) resolve the issue of profit and commercialization at a time when the usual provision of services, products is not possible. Analysing the digital activities of representatives of cultural and creative industries during the Covid-19 pandemic, it was concluded that digital activities have become more diverse than before the pandemic. Analysing the representatives of the Latvian sector, four goals of digital activities were identified: a) social; b) communicative; c) identity building; d) commercial (Pilege, Plota, & Pilegis, 2020). In the subsequent period from July 2020 to 2021, there were no significant changes in the types of activities, as assembly restrictions remained.

Cultural institutions in Latvia continued to hold digital events, which have traditionally taken place in person. In 2021, the practice started in 2020 to implement the May

4 celebration events[1] in digital format was continued. A parade of folk costumes took place virtually. The innovation of 2021 was an opportunity to virtually try on folk costumes in the form of Facebook and Instagram filters, thus promoting a sense of cultural belonging and giving the opportunity to put on costumes for those who do not yet have them (LSM.lv kultūras redakcija, 2021). The traditional Latvian film marathon on May 4 was taking place in a virtual environment for the second year in a row, with a "cinema model". The films were arranged in a sequential program, the start of the screenings was adjusted to the time zone of each country, the marathon program could be watched all over the world only on 4th of May from 11:00 (Nacionālais filmu centrs, 2021). In 2021, the Latvian film marathon was watched in 38 countries, the most viewers were in Canada, the United Kingdom and Germany, but in general, viewers from all over the world have joined the Latvian film program (Delfi.lv, 2021). Innovative solutions were also being developed to counteract the side effects of passive cultural participation. As a special parallel event of the 2021 marathon, cinema-goers had the opportunity to move off the screen by participating in "The Daydreamers' morning exercise with a Cuckoo's Voice"[2], in which Latvian actors in historical characters and costumes directed gymnastics to the compositions of significant films in Latvian culture (National Film Centre Latvia, 2021). The recording with instructions for dance steps aroused great interest in social networks, attracting a large number of spectators to a cultural event created in Latvia – 68,000 views (K.K. fon Stricka villa, 2021). This is an example of how to actualize cultural heritage (in this case, film music) in a contemporary way, attracting representatives of modern popular culture and integrating it into events of different genres.

The annual Latvian Open-air Museum fair[3] was transformed into digital format. In 2020, the fair would have taken place for the 50th time, but due to assembly restrictions, it was decided to move it to the virtual format.

The pandemic has facilitated the digital transformation processes of organizations in Latvia, promoting long-term investments, operational restructuring and diversification of services. In response to the conditions dictated by the pandemic, which cancelled live attendance of cultural events, the concert hall "Lielais Dzintars" purchased equipment and became the first digital concert hall in Latvia, ensuring remote access, as well as creating a digital archive of events (LSM.LV, 2020).

Municipalities continued to maintain their information and communication function through various remote activities, such as setting up their own online studios. For example, Jelgava, a candidate city for the European Capital of Culture, created the platform "KultūrTāle" with an aim of strengthening, improving and developing the public involvement in culture (Jelgavas pilsētas pašvaldības iestāde "Kultūra", 2021).

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[1]   On 4 May 1990, Latvia proclaimed its independence from the USSR and restoration of the Republic of Latvia.

[2]   "Cuckoo's voice" is the song of the film "Breathe Deeply" / "Four White Shirts" (1967, USSR). The film is included in the Latvia`s cultural canon and is one of the most popular Latvian films. In April 2018, a restored version of the film was included in the prestigious Cannes Classics program of the 2018 Cannes Film Festival.

[3]   It is the central Latvian folk decorative arts and crafts trading platform with 40,000 visitors in 2 days.

At the beginning of the pandemic, the most active creators of the digital content were professional cultural organizations. This is due to the fact that these institutions already had digitalize archives or a greater capacity to create a digital offer. In the second phase (related to the second period of the state of emergency), the digital presence of amateur collectives also intensified. Previously created works were published, as well as those specially designed for the online format. The offer for children's audiences became more diverse, for example by, fairy tales (Ogres teātris, n.d.) or performances for families (Ogre Theater, 2021).

Organizations' digital strategies have evolved during global pandemic. Institutions that did not initially intend to offer products in digital format due to the prolonged state of emergency did it. For example, the Latvian Puppet Theatre opened a new platform "The Sofa Hall". The repertoire of this virtual theatre space consists of recordings of performances and digital adaptations for both children's and adult audiences in different languages (Latvijas Kultūras ministrija, 2021).

5.3   Strategy of Digital Transformation of Cultural Heritage in Latvia

The pandemic has highlighted the importance of the digital transformation of cultural organizations and the digitization of cultural heritage. The importance of the CCS in economic growth has long been recognized, but the pandemic has shown the importance of culture in areas that have hitherto been underestimated, in terms of social cohesion, democracy and public health. Therefore, it is important to ensure the continuity and accessibility of cultural processes in times of crises and emergencies.

The digitization of cultural heritage needs to be encouraged, as it provides access to heritage values in a digital environment in a situation where physical collections of cultural institutions are not available. If this situation persists, there is a risk to the acquisition of knowledge and research processes in society, which in turn encourages the emergence of false news, subjective and unjustified interpretations and can lead to the development of dangerous, negative processes such as the restriction of democracy. Free access to accumulated knowledge and evidence of cultural heritage is an integral part of a democratic society (Vides aizsardzības un reģionālās attīstības ministrija, 2020).

In order to avoid similar situations in the future and promote the sustainability of the sector, Latvia's digital transformation strategy envisages the preservation and development of cultural heritage in the digital environment. The medium-term goal of 2027 is to make digital cultural heritage widely available to the public, create a digital cultural heritage platform and data ecosystem that ensures the application of modern research methods, the use of content in educational processes and its re-use in business solutions and services. As a result, cultural heritage is widely used in virtual and augmented reality products (Vides aizsardzības un reģionālās attīstības ministrija, 2020).

The creative industries have proven their importance in economic growth. A paradigm shift is also taking place in relation to cultural heritage, in which cultural heritage is seen as a potential for the growth of the country's economy, not only for representation and strengthening of identity. This is confirmed by the strategy's statement that

digital cultural heritage has great potential in various areas of the economy, in particular education and research, culture, tourism and the creative industries.

To achieve the vision of digital transformation in the field of digital heritage in Latvia, it is necessary to overcome several obstacles related to digital technologies:

1. The current version of the integrated platform for cultural heritage does not allow for re-use of data;
2. The cultural heritage data ecosystem is underdeveloped;
3. Digital humanities infrastructure and services are not sufficiently developed;
4. There is a lack of modern and tailor-made solutions and services for the consumption of digital cultural heritage;
5. Cooperation with businesses and NGOs in the field of digital cultural heritage is not close enough;
6. The range of digital cultural heritage, the provision of infrastructure and the level of competence are not sufficient for the development of modern technologies (Vides aizsardzības un reģionālās attīstības ministrija, 2020).

Addressing these challenges and meeting the significantly growing demand for digital cultural heritage, in particular for new and diverse content and the accumulation of digitally created cultural heritage, requires investment in both infrastructure and human resources. The rapid pace of technological development dictates the need to develop expertise in the field of digital cultural heritage.

6   Conclusions

EU has recognized the importance of digital transformation on policy maker level and strong legislative basis regarding digital competences and environment is established. Consequently, Latvia has followed this trend and also on national level marking the digital transformation as one of the hallmarks of productivity and economic growth in medium- and long-term national strategies.

Digital transformation is related to two key factors: ICT infrastructure and qualification of the population. While Latvia excels in terms of available ICT, adoption of digital technology and available skillset are lagging behind EU average. It is noted that Covid-19 pandemic has accelerated the digital transformation processes in all sectors. Education sector is perceived as the main contributor to reducing the shortage of digital skills enabling the community to adapt for the new reality. However, it has challenges and opportunities arising from the changing technological and socio-economic landscape.

Cultural and creative sector is viewed not only as a field which needs to adapt its operation to the digital landscape in order to maintain its own economic potential, but also as possible contributor which can supplement other sectors, most notably – education and healthcare.

During pandemic Latvian cultural sector has employed various strategies for digitalizing the content and has experienced notably accelerated digital consumption. The pandemic has capitalized the need for digitalization of cultural heritage as the traditional means for experiencing it are limited.

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