



Co-funded by the European Union



Implemented by



Internews



Akademie

MAPPING OF ACTORS: IDENTIFICATION OF POTENTIAL COOPERATION PARTNERS FOR MEDIA OUTLETS IN THE WESTERN BALKANS



MAPPING OF ACTORS: IDENTIFICATION OF POTENTIAL COOPERATION PARTNERS FOR MEDIA OUTLETS IN THE WESTERN BALKANS

Year: 2023

Author: Amra Kapo, PhD

This report was created as part of the Multi-Donor Action which was jointly co-financed by the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH with technical support by Internews and DW Akademie. The content of this report, as well as the findings presented in it, do not necessarily reflect the views of the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Contents

Executive Summary	1
1 Introduction.....	4
2 Digital Ecosystem Mapping.....	6
2.1 Overview of the existing digital ecosystem for media outlets in the Western Balkans	8
2.1.1 Components of the digital ecosystem for media outlets	8
2.1.2 Characteristics of the digital media ecosystem in Western Balkans	10
2.2 Mapping of Media Outlets and IT Companies.....	14
2.2.1 Analysis of Media Outlets landscape in Western Balkans	15
2.2.2 IT Companies in the Western Balkans	21
2.3 Current partnerships between media outlets and IT companies.....	23
2.3.1 Challenges of Cooperation with the IT Sector	25
2.3.2 Opportunities for Cooperation with the IT Sector	27
2.4 Current Technologies and Digital Platforms.....	29
2.5 Key Trends and Initiatives	31
3 Models of Partnership.....	37
3.1 Joint Content Creation	37
3.2 Distribution Partnerships.....	38
3.3 Product Partnerships	39
3.4 Potential in advancing media through collaborations with the IT sector.....	41
4 Conclusion	47
References.....	49
Annexes	51

List of tables

Table 1. Examples of IT companies or startups in Western Balkan that cooperated with media or may offer products or services for media – detailed overview in Annex 1	22
Table 2. Current technology trends in the Western Balkan media landscape	31
Table 3. Trends in the digital media landscape	35
Table 4. List of IT companies or startup in Western Balkans that cooperate with media or may offer services for media	52

List of figures

Figure 1. DESI 2022 Western Balkan region countries - Integration of digital technology dimension.....	7
Figure 2. Digital media ecosystem.....	9
Figure 3. Digital media ecosystem in Western Balkans – qualitative analysis perspective	11
Figure 4: Online media existence.....	19
Figure 5. Partnership between media outlets and IT companies in Western Balkan – qualitative analysis perspective	23
Figure 6. List of useful IT applications for media outlets.....	29
Figure 7. List of potential areas of collaboration between media outlets and IT companies/startups – Advanced media outlets.....	41
Figure 8. Short description of suggested partnerships - Advanced media outlets.....	42
Figure 9. List of potential areas of collaboration between media outlets and IT companies/startups – Media outlets undergoing transformation	43
Figure 10. Short description of suggested partnerships – Media outlets undergoing transformation.....	44
Figure 11. List of potential areas of collaboration between media outlets and IT companies/startups – Traditional media outlets.....	45
Figure 12. Short description of suggested partnerships – Traditional media outlets	46

List of abbreviations

AI	Artificial Intelligence
AR	Augmented Reality
BMZ	German Federal Ministry for Economic Cooperation and Development
CMS	Content Management System
DESI	Digital Economy Society Index
EU	European Union
IT	Information Technologies
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
PWAs	Progressive Web Apps
VR	Virtual Reality
WB	Western Balkans

Executive Summary

This study is conducted within the *SustainMedia - Support to Media Freedom and Pluralism in the Western Balkans* project, which is currently partnering with 66 media outlets from the Western Balkans to find possible matches and work on potential collaborations between media outlets on the one hand, and start-ups and the IT sector on the other hand. The study, which maps the innovative and digital ecosystem for media outlets, provides an overview of the current ecosystem and develops recommendations for potential cooperative opportunities for current project beneficiaries, and even goes beyond, taking into account contribution to the overall media landscape. It is a part of the Multi-Donor Action is jointly co-financed by the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in cooperation with Internews and DW Akademie.

With its aim to provide a comprehensive analysis and mapping of the current state of the digital media landscape in the Western Balkans, examining the opportunities and challenges that arise from the increasing influence of digital media in the region, the study contributes to the specific objective of “Enhancing capacities of professional independent media outlets to better adapt to the changing media environment”, within the overall objective of “Strengthening participatory democracies and the EU approximation process in the Western Balkans by building the capacity of media outlets; and by stimulating an enabling financial environment for civil society and pluralistic media”.

Digital Media Ecosystem in Western Balkans

In this study we identify and elaborate at least six components of the digital media ecosystem: (1) content creators and distributors; (2) consumers/users; (3) monetization channels; (4) advertising networks, (5) data analytics and insights and (6) social media, streaming and e-commerce platforms. Qualitative findings have revealed four major traits of the digital media ecosystem in Western Balkans: (1) market underdevelopment (the market significantly lags behind the developed countries); (2) financial constraints (media outlets are not resourceful enough and lack funding to use advanced services digital media ecosystem offers); (3) media dynamics and technological uptake (traditional media outlets recognize the opportunity in digital media and mostly possess digital channels as secondary screens to their main formats, with larger media also utilizing the opportunities of YouTube and podcast format); (4) driven by donors or media outside of WB (independent media outlets are mainly driven by donors and external investments. Furthermore, the main reasons for slower progress in the media landscape and with media outlets in Western Balkans are identified in the study, namely: (1) economic challenges, (2) lack of infrastructure, (3) regulatory environment, (3) media ownership and control, (4) lack of training and skills and (5) monetization challenges. Each of these reasons are elaborated, with the support of arguments from the primary study.

Mapping of the media outlets and IT companies in the Western Balkans

Comprehensive maps of media outlets and IT companies in the Western Balkans are created, with detailed lists of both categories provided. Here, it can be concluded that there are plenty of actors in both sectors as

well as the sector is growing. The study further groups media outlets into three main categories, taking the level of digital transformation and technology adoption: (1) advanced media outlets, (2) media outlets undergoing transformation, and (3) traditional media outlets. In terms of IT companies, and general in the IT sector, which is very prolific in the region, the study selected ones that demonstrate innovativeness and an advanced assortment of services and products, positioning them as potential collaborators for media outlets seeking to improve their digital presence, engagement strategies, and content delivery mechanisms.

Challenges and Opportunities in Collaboration between Media Outlets and IT Companies

Collaboration and partnerships between media outlets and IT companies in the WB region are, in principle, at a low level. Media outlets are using just general and simple services from IT companies, such as hardware, software, or network services, without any innovative potential. Furthermore, there is no generic collaboration between the two sides, since media outlets mainly have the perception that IT companies charge too high for their services while IT companies mainly have the perception that media outlets want to charge advertising fees to them. There are several exemptions, such as the case of Smartocto or Picasa and their media development activities, but otherwise, the collaboration is only initiated when the external opportunity arises (e.g., through donor funding).

Media outlets see several key challenges relevant to the cooperation with IT companies: (1) focus of the IT companies on foreign markets: most of the IT companies operating in the WB region are export-oriented and offer their services on developed markets, worldwide – ergo – not focusing on local firms, let alone local/regional media; (2) understanding of media outlets' needs: the needs and requirements of the media are not well understood by the IT companies –to help the media with their varying needs (dependent upon the type of the media and level of the development of the media outlet) IT companies should have the minimum level of knowledge on what are the main issues in the media landscape; (3) lack of funds – media outlets often do not have budgets that would allow proper IT solution with innovative potential to be implemented.

Alongside with challenges, the following opportunities are identified: (1) reputation and responsibility: IT companies can demonstrate social responsibility and build their reputation through cooperation with media outlets (2) complementarity: IT companies can complement media outlet activities and further generate new ideas to increase the impact of the content, to provide new services or to optimize work; (3) cost-effectiveness and performance: in the long run, solutions implemented through collaboration with IT companies pay off to media outlets since they become more cost-effective and increase their performance.

Current Technologies and Digital Platforms

Based on the research conducted in this study, five broad categories of useful IT applications for media outlets: (1) video and audio editing; (2) project management and collaboration; (3) social media management and marketing; (4) content management and publishing; (5) video hosting and distribution.

In the category of video and audio editing, the following IT applications are useful to media outlets: Adobe Creative Cloud, Avid Media Composer, Final Cut Pro X, and DaVinci Resolve. Project management and collaboration encompass Slack, Asana, and Baseroom apps, while in the social media management and

marketing category following apps appear: Hootsuite, Adobe Creative Cloud, Avid Media Composer, Final Cut Pro X, DaVinci Resolve and Pro Tools. In content management and publishing, there are WordPress and Custom CMS at disposal, while in video hosting and distribution there are YouTube and Vimeo.

Essential Technology Trends and Initiatives Relevant for Media Outlets

There are three groups of technology trends relevant for media outlets in Western Balkans identified in this research: (1) content creation trends (adapting to user needs, use of podcasts; video content; use of data analytics to generate content); (2) content distribution trends (membership models, newsletter, subscription models and social media); (3) product development trends (the use of artificial intelligence – AI). At the same time, there are plenty of opportunities that media outlets are already utilizing worldwide, which are described and illustrated in the study, such as AI-generated content, immersive media, data journalism, personalization and recommendation, paywalls, and micropayments, blockchain for content authenticity,

Models of Partnership

Generating models of partnership is one of the key results of this study. Namely, the study suggests three main modes of collaboration between media outlets and IT companies that can benefit media outlets greatly and ultimately increase their performance. Those are: (1) joint content creation: producing engaging content for the media outlets' audience, where various technologies such as data visualization tools, virtual/augmented reality tools, artificial intelligence writing assistants, interactive video infographics, 360-degree videos and live streaming solutions could be used; (2) distribution partnership: optimizing the distribution of content, where various technologies such as content management systems, mobile apps, and progressive web apps, as well as chatbots and AI-powered assistants, can be used to enhance distribution of the content produced by media outlet; and (3) product partnerships: co-creation and joint developing and offering new products/services to target audience/users, where various technologies such as e-commerce platforms, subscription management systems, and personalization algorithms can be used. Further detailed suggestions for partnerships are outlined for each of the models, in line with the level of the development of the media outlets (advanced media outlets, media outlets undergoing transformation, and traditional media outlets).

1 Introduction

The Western Balkan region (Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, Kosovo* and Serbia) has an interesting media outlets landscape which, due to complexities in various areas in the region, has been progressing slowly in comparison to other regions. However, technological advancements and high Internet usage in the region have led to the increased relevance of digital transformation in all segments of society – hence – in media as well. Digital media platforms, as well as social media sites, evolved into potential instruments for news and content dissemination.

The shift towards digitalization presents media outlets in the Western Balkans with different opportunities and challenges. In terms of challenges, first, there is a need for strengthening the capacities of media outlets enabling them to pilot new business ideas, extend audiences and increase and diversify revenues, and ultimately improve their economic performance. Second, media outlets lack skills and capabilities for quality reporting and there is a need to upgrade the reporting skills. Finally, there is a need to strengthen regional networks and facilitate exchanges and cooperation among media outlets, but also between media outlets and other relevant actors and stakeholders. The most relevant enabler and opportunity for digital media outlets is the understanding of the digital media ecosystem. The digital media ecosystem refers to the network of different platforms, tools, and services that media outlets can use to create, distribute, and monetize their content online.

The main aim of the study was to provide a comprehensive analysis and mapping of the current state of the digital media landscape in the Western Balkans, examining the opportunities and challenges that arise from the increasing influence of digital media in the region. Furthermore, the study assessed the state of the art of the current partnerships between media outlets and the IT sector, as well as current trends in terms of technology and digital platforms. Finally, the study informs of the potential future models of partnership between media outlets and the IT sector that should result in enhancing the capacities of professional independent media outlets to better adapt to the changing media environment.

Methodologically the study encompassed desk research and primary data collection. The main objectives of the desk research were: (1) to identify the main documents relevant to the topic and (2) to generate a database of media-relevant start-ups and IT companies operating in at least one country of the Western Balkans. The main objectives of primary data collection using qualitative tools were (focus groups and semi-structured in-depth interviews): (1) to provide the necessary information to ensure an understanding of the overall picture of the existing, media outlets from Western Balkans relevant, innovation ecosystem and digital ecosystem, (2) to understand key themes, trends and models for existing partnerships between media outlets in Western Balkans and start-up and/or IT companies, (3) to outline current gaps in relation to partnership between these two sectors (media and IT/ digital innovation sector), (4) to indicate on future partnerships among GIZ's 23 strategic media partners and potentially also on synergies and collaborations for GIZ's small grants beneficiaries.

*All references to Kosovo, whether the territory, institutions, or population, in this text shall be understood in full compliance with United Nations' Security Council Resolution 1244 and without prejudice to the status of Kosovo.

Qualitative tools, namely, semi-structured in-depth interviews and focus groups are selected as an appropriate research method since they represent open-ended, discovery-oriented methods to obtain detailed information about a topic from a stakeholder. These methods assume flexible structure, interactivity, depth, generation of new knowledge, and (in the case of semi-structured in-depth interviews) an individualized approach. The focus group technique was applied to the key strategic media partners and additional media outlets suggested by GIZ, while the semi-structured in-depth interviews were applied to all stakeholders (media outlets, IT firms, and relevant GIZ projects). In total, one focus group with six participants (out of the 23 partner media outlets) was conducted as well as 10 semi-structured in-depth interviews.

There are five main chapters of the study, together with the introduction (chapter 1) and recommendations and conclusions (chapter 5). In chapter 2, the mapping of the digital ecosystem is presented, by providing an overview of the existing digital ecosystem in Western Balkan countries, as well as by mapping media outlets and IT companies in the region. This chapter also assessed current partnerships between media outlets and IT companies, outlining the main challenges of cooperation as well as opportunities for cooperation. Furthermore, an overview of current technologies and digital platforms available to media outlets is given, based on the research findings. Financially, this chapter concludes with the identification of key trends and initiatives relevant to media outlets and their adaptation to the changing environment. Chapter three then focuses on the three models of partnership that the research conducted in the study identified as most feasible and most promising for the media outlets, namely: (1) joint content creation, (2) distribution partnership, and (3) product partnerships. Finally, chapter four gives a specific set of actionable recommendations on the identified modes of partnership as well as general conclusions.

This study is not without its limitations. The initial barrier refers to the lack of reliable and comprehensive secondary data for the Western Balkans region. Namely, the availability of studies for the region as well as for each individual economy is low, and those are mostly information not up to date and not fully reliable. Because most of the media outlets and IT firms are private entities, they further do not publicly disclose all their cooperation details, thus the study and its completeness should be observed through these lenses. Furthermore, while qualitative methods are helping in understanding the nature and dynamics of the cooperation, it may not provide a measurable or generalizable understanding of the phenomena. Despite these limitations, study represents an excellent starting point for further analyses of digital ecosystem relevant for media outlets, as well as an overview of partnerships between media outlets and IT firms with suggestions for further improvements and partnership models.

2 Digital Ecosystem Mapping

The innovation ecosystem is a dynamic network of interconnected actors, organizations, and institutions that contribute to the creation, development, and dissemination of novel concepts, technologies, and solutions. It includes a variety of stakeholders from different sectors, such as academia, industry, government, and civil society (quadruple helix model of innovation). This ecosystem facilitates experimentation, collaboration, and the development of ground-breaking innovations¹.

The digital ecosystem², on the other hand, is primarily concerned with the technological and digital aspects of innovation. It focuses on the incorporation of digital tools, technologies, and platforms into various industries, facilitating transformational changes in how businesses operate, how services are provided, and how information is disseminated. This ecosystem consists of numerous digital services, products, and platforms that facilitate communication, data administration, and technological progress.

In terms of the levels of digital transformation, a recent Digital Economy Society Index in Western Balkans provided a framework for permanent monitoring of digital transformation in the Western Balkans³. DESI has four main dimensions: human capital, connectivity, integration of digital technology, and digital public services. DESI is a suitable indicator to be used by the WB region to measure the progress in digital competitiveness and to compare digital performance among WB economies and the region's average performance with that of the EU.

Individual DESI indicators show key areas where the performance and competitiveness of each WB economy could improve in relation to the performance of other WB economies and the WB region and EU. In this study, we present an overview of the integration of the digital technology dimension, which measures the digitalization of business (use of electronic information sharing, social media, and more advanced digital technologies such as cloud services, big data analytics, and artificial intelligence), actions taken by enterprises regarding environmental sustainability and e-commerce.

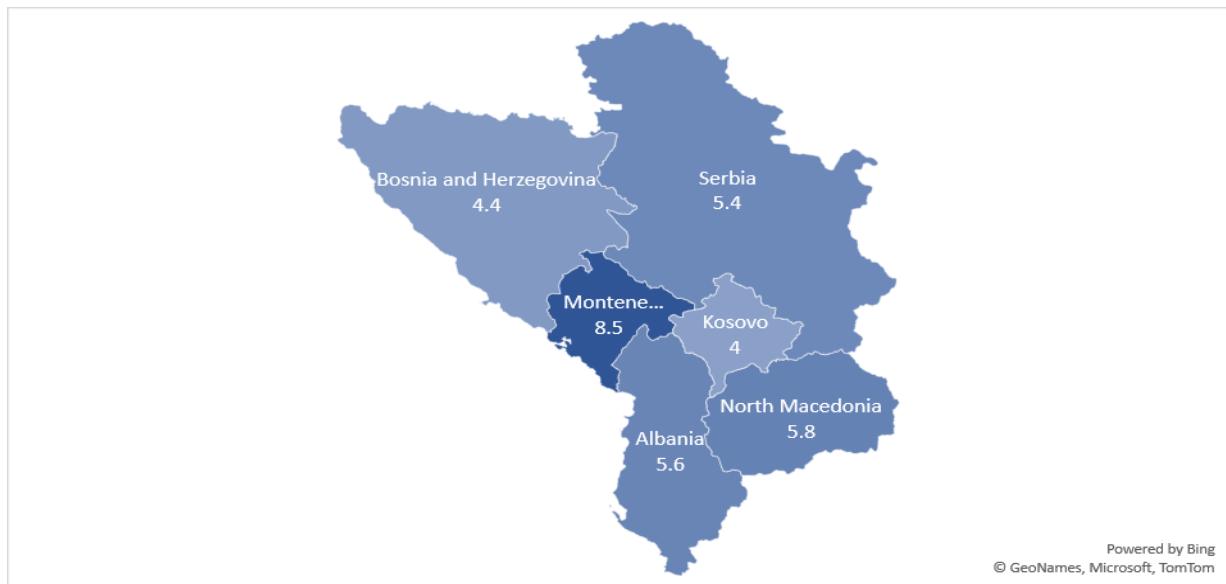
The overview is presented in Figure 1, and it shows that Montenegro is the most developed in this manner while Kosovo* is the least developed. WB region scored below the EU average in all DESI dimensions in 2022. Montenegro, Serbia, and Albania scored above the WB average in the overall DESI for 2022.

¹ de Vasconcelos Gomes, L. A., Facin, A. L. F., Salerno, M. S., & Ikenami, R. K. (2018). Unpacking the innovation ecosystem construct: Evolution, gaps and trends. *Technological forecasting and social change*, 136, 30-48.

² Barykin, S. Y., Kapustina, I. V., Kirillova, T. V., Yadykin, V. K., & Konnikov, Y. A. (2020). Economics of digital ecosystems. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 124.

³ Tintor, V., Jovanović, N., Bocarova, V. & Bugarski, M. (2022). Western Balkans Digital Economy Society Index. Regional Cooperation Council (RCC).

Figure 1. DESI 2022 Western Balkan region countries - Integration of digital technology dimension



Principal actors⁴ in the digital ecosystem are as follows:

- **IT Companies:** Businesses that provide software, hardware, and digital solutions, including application development, cybersecurity, and data analytics.
- **Accelerators and incubators:** Organizations that provide mentoring, resources, and networking opportunities to early-stage start-ups in order to help them refine their business models and accelerate their growth.
- **Academic institutions:** Organizations that contribute to the innovation ecosystem through research, knowledge transfer, and the creation of intellectual property.
- **Government and Regulatory Bodies:** Entities that develop policies, regulations, and frameworks to encourage innovation, investment, and the development of the digital economy.
- **Non-Profit Organizations and Non-Governmental Organizations:** Entities that support particular causes, social innovation, and community development via various initiatives within the innovation ecosystem.
- **Media Outlets:** Platforms that play an essential role in disseminating information about innovation trends, success stories, and opportunities, thereby nurturing ecosystem-wide awareness and collaboration.

Those six relevant groups of organizations in the digital ecosystem jointly contribute to digital transformation in society. This study is focused on two groups: media outlets and IT companies.

⁴ Pellikka, J., & Ali-Vehmas, T. (2016). Managing Innovation Ecosystems to Create and Capture Value in ICT Industries. *Technology Innovation Management Review*, 6(10), 17-24.

2.1 Overview of the existing digital ecosystem for media outlets in the Western Balkans

In recent years, the Western Balkans' digital landscape has undergone some transformation, with media outlets adopting digital technologies to some extent in order to engage audiences, disseminate information, and investigate new channels of content delivery. The media sector in Western Balkan countries can be characterized as very fragmented. Traditional media are making an effort to expand their internet presence throughout the region, and most of the major newspapers and TV channels have websites where content can be directly accessed.⁵ The media landscape in general is highly fragmented and saturated, but instead of bringing more diversity, the outcome is low profitability and undermining of economic sustainability.⁶ This section provides a comprehensive overview of the digital ecosystem in which Western Balkan media entities operate. It investigates the various components of this ecosystem, analyzes their interdependence, and identifies key trends that are influencing the media and digital convergence in the region.

2.1.1 Components of the digital ecosystem for media outlets

The media outlets' digital ecosystem encompasses a multifaceted network of digital platforms, instruments, and services employed by media organizations for the online creation, dissemination, and monetization of their content. The digital ecosystem for media outlets comprises different elements, including but not limited to websites, social media channels, mobile applications, tools for email marketing, video streaming facilities, digital advertisement networks, and beyond. Within the digital ecosystem, each component interacts synergistically to offer a smooth and integrated experience for the audience. A robust digital ecosystem empowers media organizations to extend their reach to a broader audience, engage with them across an array of platforms, and monetize their content through diverse means. Additionally, it facilitates the collection of invaluable data concerning the audience's preferences and behaviors, thereby enabling media outlets to refine their content and advertising approaches. Ultimately, a meticulously crafted digital ecosystem is pivotal for a media organization's triumph in today's digital era.

The components of the digital ecosystem in the Western Balkans are interconnected, creating a seamless user experience and allowing for the consumption of diverse content. For example, media outlets frequently share their content across social media platforms, directing users back to their websites or applications for more comprehensive coverage. Interactive content, such as data visualizations, encourages user interaction and sharing on social media, thereby driving traffic back to the platforms of media outlets. In addition, mobile applications facilitate direct user engagement by providing personalized content recommendations and notifications.

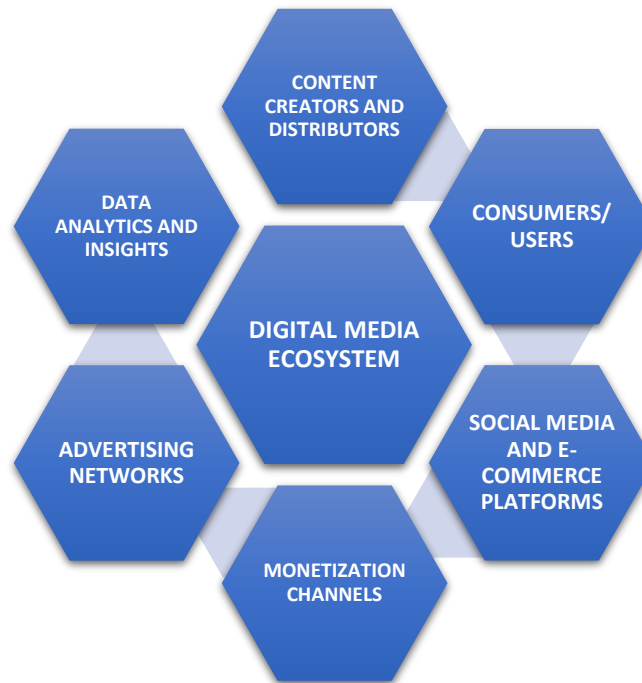
⁵ Stojarová, V. (2020) 'Media in the Western Balkans: who controls the past controls the future', *Journal of Southeast European and Black Sea*, 20(1), pp. 161–181. doi: 10.1080/14683857.2020.1702620.

⁶ Brogi, E., Dobrova, A., Parcu, P.L. 2014. Freedom of media in the Western Balkans. Directorate-General for external policies of the union. EU. Brussels.

Retrieved from: [http://www.europarl.europa.eu/RegData/etudes/STUD/2014/534982/EXPO_STU\(2014\)534982_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2014/534982/EXPO_STU(2014)534982_EN.pdf)

The digital media ecosystem is a comprehensive structure that encompasses various integral components, each playing a crucial role in the overall functioning and success of media organizations in the digital landscape (see Figure 1). We can say that there are at least six such components: (1) content creators and distributors; (2) consumers/users; (3) monetization channels; (4) advertising networks, (5) data analytics and insights, and (6) social media, streaming and e-commerce platforms.

Figure 2. Digital media ecosystem



Content creators and distributors are the individuals or organizations responsible for generating and disseminating content. To reach their target audience, they produce digital content such as articles, videos, and images and distribute it across a number of platforms. There are several useful tools used to create and distribute content to the broader audience:

- Websites: Media organizations maintain websites as centers for news, articles, multimedia content, and user engagement.
- Mobile Apps: Numerous media outlets offer mobile applications that give consumers access to news, personalized content, and push notifications while on the go.
- Online Video and Streaming: Media entities utilize video content, live streams, and podcasts more frequently to enhance storytelling and attract audience attention.

Another element is consumers/users which represents the individuals or entities that consume the content created and distributed by the media organizations. They interact with the content across various platforms, and their engagement, preferences, and behaviors are crucial for the success of media organizations. Recent trends in the digital media ecosystem related to users are focused on:

- Interactive Content: Content that is interactive, such as infographics, data visualizations, and surveys, enhances the user experience.
- User-Generated Content: Through user-generated content, comments, and community forums, media outlets encourage audience participation.

In addition, another way of interacting with potential audiences is through social media and e-commerce platforms where the content is distributed and the consumers interact with it. Social media platforms facilitate the sharing and engagement of content, while e-commerce platforms provide a platform for the transaction of goods and services.

To monetize their content, there are various possibilities through which media organizations generate revenue from their digital content. There are several trends evident in this regard: subscription models, pay-per-view, and content licensing. In order to reach a broader audience, media outlets tend to use platforms that connect advertisers with media organizations. They facilitate the placement of advertisements in the digital content created and distributed by the media organizations, thereby helping them generate revenue.

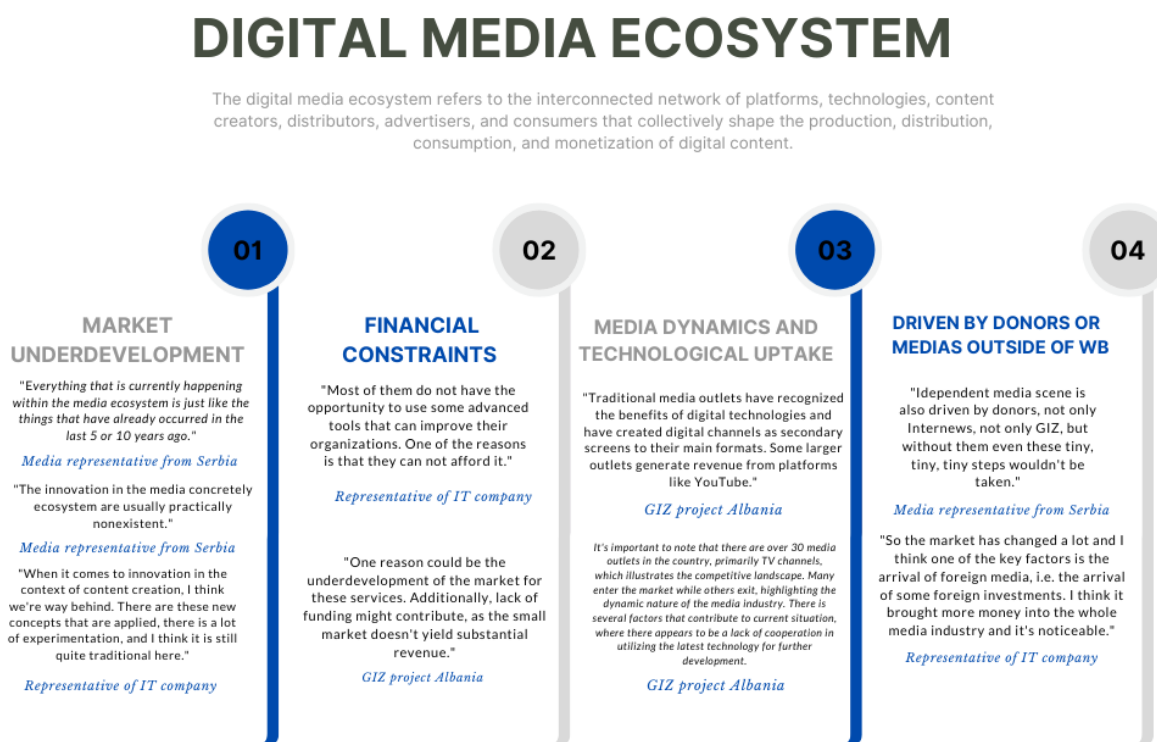
Finally, data Analytics and insights involve the collection, analysis, and interpretation of data related to the audience preferences, behaviors, and interactions with the digital content. It enables media organizations to gain insights into their audience and refine their content and advertising strategies accordingly.

Together, these components form a cohesive and interrelated ecosystem that enables media organizations to create, distribute, monetize, and optimize their digital content, ultimately contributing to their success in the digital age.

2.1.2 Characteristics of the digital media ecosystem in Western Balkans

The media landscapes across the Balkans present a diverse array of challenges, opportunities, and dynamics that shape the flow of information, public discourse, and media consumption within the region. Each country exhibits distinct characteristics, reflecting its historical, political, and socio-economic context. Qualitative data analysis pointed out the fact that the digital media ecosystem in the countries of the Western Balkans is severely underdeveloped.

Figure 3. Digital media ecosystem in Western Balkans – qualitative analysis perspective



The overall analysis of the digital media ecosystem resulted in four themes, which are shown in Figure 3 above. The first one is **market underdevelopment**. The participants in the interview agreed with the fact that the media landscape has great potential, but that it is currently not being used by extent and intensity as in developed countries. Examples of statements that support these allegations are given below:

"The innovation in the media ecosystem concretely, are usually practically nonexistent. Everything that is currently happening within the media ecosystem is just like the things that have already occurred in the last 5 or 10 years ago."

Media representative from Serbia

"When it comes to innovation in the context of content creation, I think we're way behind. There are these new concepts that are applied, there is a lot of experimentation, and I think it is still quite traditional here."

Representative of IT company cooperating with media in WB

Television remains a dominant medium across the Balkans, serving as the primary source of news and information⁷. Public broadcasters hold significant influence, often facing competition from privately-owned

⁷ Trail, L. (2019). Media Sustainability Index, The Development of Sustainable Independent Media in Europe and Eurasia. Washington DC, US: IREX. ISSN 1546-0878

outlets. However, the media market's profitability is a recurring concern, with many commercial entities struggling to generate profits due to economic challenges and limited investment⁸.

The media environment is not immune to polarization, political interference, and external pressures⁹. Divisions between entities, evident in Bosnia-Herzegovina and Kosovo, are mirrored within the media, leading to editorial stances aligned with government or opposition interests. This has led to instances of biased reporting and self-censorship¹⁰.

There are several reasons for slower innovation progress recorded in the Western Balkan media outlets landscape: economic challenges, lack of infrastructure, regulatory environment, media ownership and control, lack of training and skills, and monetization challenges. Many countries of the Western Balkans face **economic challenges** that primarily mean a lack of available funds and investment in innovation. The above is especially pronounced in the case of non-commercial media, which have limited resources and are mostly dependent on donors. Additionally, insufficient funds also entail smaller and mostly insufficient investments in infrastructure, which implies a lack of **technological infrastructure** that includes limited access to high-speed Internet and advanced broadcasting equipment, and insufficient funds for investments in new technological solutions (e.g., applications, analytics, etc.).

Complex and sometimes outdated **regulatory frameworks** create barriers to innovation. Vague regulations related to digital media, intellectual property, content distribution, and implementation of GDPR discourage media houses from pursuing innovative approaches. Also, concentrated **media ownership** can stifle innovation by limiting the diversity of voices and perspectives. When a few entities dominate the media landscape, there may be less incentive to invest in new ideas that might challenge the status quo. Ownership concentration also poses a challenge, where a few influential business figures hold significant control over media outlets. Such concentration can influence editorial decisions and potentially impact the diversity of perspectives presented to the public. Additionally, many media in the countries of the Western Balkans are under political pressures that interfere with the work of the media and limit the freedom of journalists and media companies to experiment with innovative methods of storytelling and critical reporting.

The qualitative analysis pointed to a **lack of training and skills** for media professionals in the region, which slows down innovation and the effective adoption of new technologies and digital platforms. Also, considering that traditional media have been transformed into digital, a generational gap is also evident, which further slows down innovative practices. And finally, developing sustainable business models for digital media can be challenging. Many media outlets struggle to effectively **monetize online content**, which can hinder investment in innovation.

⁸ EU – WESTERN BALKANS MEDIA DAYS (2017). Recommendation from workshops. Tirana.

⁹ Seldi.net (2022). Media Capture in the Western Balkans: From captured states to captured media. Policy brief No 18, December 2022

¹⁰ Stojarová, V. (2020). Media in the Western Balkans: who controls the past controls the future', *Journal of Southeast European and Black Sea*, 20(1), pp. 161–181. doi: 10.1080/14683857.2020.1702620.

The most significant obstacle highlighted in the interviews is related to the lack of financial resources, which "holds back" innovation and digitalization of the media. It is especially present in non-commercial media that mostly depend on donor funds. The above is illustrated by the interlocutor's statements:

“One reason could be the underdevelopment of the market for these services. Additionally, lack of funding might contribute, as the small market does not yield substantial revenue.”

GIZ project Albania

“So, what we see here is that these sustainability problems and we think that there is a lot of innovation missing. Most of them do not have the opportunity to use some advanced tools that can improve their organizations. One thing is that they cannot afford it. Another thing is that they are not new. So, a lot of these media were created from the transit of print media. So, there are quite a few older people who are not so open to digitization.”

Representative of IT company that cooperates with media

Regardless of the ubiquitous problem related to the lack of financial resources and the struggle for market share, the media landscape in the Western Balkans has gone through a significant transformation. The transformation is mainly reflected through the integration of digital technologies into traditional business models. Traditional media, which once relied exclusively on conventional formats, began to recognize the advantages offered by the digital realm. As a strategic response to this shift, digital channels were established that transformed traditional business models, creating opportunities to access new clients and market share.

A prominent example of this adaptability can be found in the tactics of larger media firms, some of which have begun to use various social networks to exchange content, attract viewers to existing portals, and generate more revenue. This transition from traditional media to digital platforms demonstrates the industry's acknowledgment of the necessity to embrace technological changes to remain relevant and lucrative. It is illustrated in the following statements:

“Traditional media outlets have recognized the benefits of digital technologies and have created digital channels as secondary screens to their main formats. Some larger outlets generate revenue from platforms like YouTube.”

GIZ project Albania

“It's important to note that there are over 30 media outlets in the country, primarily TV channels, which illustrates the competitive landscape. Many enter the market while others exit, highlighting the dynamic nature of the media industry. There are several factors that contribute to the current situation, where there appears to be a lack of cooperation in utilizing the latest technology for further development.”

GIZ project Albania

Progress in terms of transformation is visible. All media are trying to integrate technology into their business models, according to their own capabilities. In addition to internal resources, two parties have made a major contribution: (i) foreign media that have entered local markets and (ii) international organizations that strengthen the media in the countries of the Western Balkans through activity projects. The above was highlighted several times during the interview, and examples of statements that best illustrate the importance are given below:

“So even though something is happening, it's like two completely separated processes. And yeah, outside of it, the independent media scene is also driven by donors, not only Internews, not only GIZ, but without them even these tiny, tiny, tiny steps wouldn't be taken.”

Media representative from Serbia

“The market has changed a lot and I think one of the key factors is the arrival of foreign media, i.e., the arrival of some foreign investments. I think it brought more money into the whole media industry and it's noticeable.”

Representative of IT company that cooperates with media

“I think it is a great thing that Bloomberg has entered our market because they do a different kind of analytics and present data in a different way. This led to raising the benchmark in the media to a completely different level. Other media need to try to show some things in a different way.”

Media representatives from Bosnia and Herzegovina

2.2 Mapping of Media Outlets and IT Companies

In the context of this study, media outlets and IT companies are the two most important elements of innovation and the digital ecosystem. While the ecosystem includes a variety of stakeholders, such as start-ups, accelerators, investors, and universities, the decision to limit our investigation to media outlets and IT companies stems from the study's primary objectives and desired outcomes. The primary objective of this study is to identify potential cooperation partners within the innovation and digital ecosystem for media entities in the Western Balkans. By focusing on media channels and IT companies, we are strategically aligning our research to promote collaboration, development, and digitalization within the media industry. IT companies at the forefront of technological advancements can provide media channels with customized solutions to their problems. Collaboration between these sectors can result in the development of innovative tools, content formats, and audience engagement strategies that cater to the changing requirements of audiences.

The identification of media outlets and IT companies in the Western Balkans was accomplished predominantly through a process of desk research. This process involved the collection of data from multiple sources, including online sources, reports, and pertinent publications. In addition to digital sources,

local industry experts and organizations were interviewed to ensure a comprehensive understanding of the ecosystem as well as trends when it comes to digitalization in the sector.

2.2.1 Analysis of Media Outlets landscape in Western Balkans

The media environment in the Western Balkans is a dynamic and developing ecosystem defined by a complex interplay of political, economic, and social forces that influence the region's various media sources. The table below represents key characteristics of media outlets landscape in western Balkans countries.

Albania	<p>Television is the leading medium, although the internet is rapidly catching up in popularity. In addition to the public RTSH TV networks, three national private TVs—Top Channel, TV Klan, and Vizion Plus—operate alongside numerous local stations. Digital terrestrial (DTT) and satellite packages are offered by two companies. RTSH oversees national radio stations, complemented by two commercial networks and many local and regional stations. The BBC broadcasts in Tirana on 103.9 FM. Media ownership is concentrated among a few business figures.</p> <p>Press freedom prevails, with TV and radio regulated independently, and the press self-regulating. Self-censorship can stem from owners' interests and external influences, including organized crime. In 2020, Freedom House categorized Albania's press and speech freedoms as "partly free," noting political interference. Although Albania faces disinformation risks, concerted fake news production efforts are not evident. As of July 2022, around 2.2 million Albanians, or 76% of the population, were online (InternetWorldStats.com). The state does not restrict online access, and Facebook dominates the social network landscape¹¹.</p> <p>The proliferation of online media and blogs has witnessed considerable growth in recent years. In contrast to print, radio, and television outlets – which are meticulously listed in the National Business Center's database – there is an absence of documentation regarding the number of existing news websites. The expansion of Internet availability has been gradual, marked by substantial enhancements in recent times, albeit still trailing behind the European average. Due to relatively modest internet penetration rates, the impact of online media in comparison to Europe remains constrained. However, the IREX 2021 report signals a shift in this landscape, indicating a continuous rise in internet penetration coupled with increased usage of social media. An endeavor to regulate online media prompted the Parliament to pass two contentious online media laws in late 2019, sparking international discourse on media freedom in Albania¹².</p>
Bosnia and Herzegovina	<p>The media landscape reflects Bosnia-Herzegovina's differences. The official broadcaster BHRT is important, although the most influential TV stations are Bosniak-Croat (RTVFBiH) and Serb (RTRS). The ruling parties control these channels.</p>

¹¹ <https://www.bbc.com/news/world-europe-17680734>

¹² <https://www.kas.de/en/web/balkanmedia/media-outlets>

	<p>The media sector has approximately 200 commercial radio and TV stations in a tough advertising market. Broadcasters earn more from advertising than paper. Bosnian broadcasters compete with Serbian and Croatian networks, which are freely accessible via cable. Reporters Without Borders says a volatile political context in BiH makes media freedom difficult. Concentrated media ownership lacks transparency. Internet usage reached 2.8 million in July 2022, 87% of the population (Internetworldstats.com). No content filtering exists online, and Facebook dominates social media¹³.</p> <p>The absence of legal obligations for the registration of online media in Bosnia and Herzegovina (B&H) has led to a lack of accurate numbers. Currently estimated at around 100, online portals exhibit a wide variance in quality. Many portals are gradually adopting professionalism and self-regulation models for their operations. However, a significant portion lacks identification and basic contact information, often disseminating unverified and manipulative content that contravenes the Press Code. Despite this, online portals enjoy immense popularity, particularly among young audiences. Ongoing research aims to establish a transparent registration system for online portals that upholds editorial and ownership transparency while safeguarding freedom of speech from undue legislative restrictions.</p> <p>Internet penetration has notably risen in the past decade that surge in internet users has fueled the growing popularity of online media sites. The quality divide remains evident, as some portals move towards professionalism and self-regulation while others lack identification and transparency. The B&H Press Council lists approximately 100 online news portals on its website, but some estimates suggest a total of around 2,000. The European Commission's 2020 report for B&H highlights the limited regulations for online media and the increasing spread of disinformation and hate speech on digital platforms¹⁴.</p>
Kosovo	<p>Kosovo possesses a notably high number of media outlets relative to its population, yet their reliance on advertising revenues often fails to yield profit due to limited foreign or domestic investment. Television stands as the predominant medium, with three of the 20 licensed stations broadcasting nationally. The prevalence of cable in most households results in robust competition between Kosovo-based and popular Albanian networks. Established with editorial independence, public broadcaster RTK plays a pivotal role, with its flagship TV bulletin serving as a significant news source. Print newspapers face decline and internet competition, with a combined daily circulation of approximately 12,000 copies.</p> <p>While the constitution safeguards free expression, media contend with political interference, corruption, and financial pressures, according to Freedom House. The media environment is categorized as "partially free". As of July 2022, approximately 1.69 million internet users, constituting 90% of the population, were recorded (Internetworldstats.com). Facebook leads the social network landscape with 1.1 million users, followed by YouTube. Online media is progressively supplanting traditional</p>

¹³ <https://www.bbc.com/news/world-europe-17211939>

¹⁴ <https://www.kas.de/en/web/balkanmedia/media-outlets1>

	<p>sources, particularly as some print media shift to online-only publication. Investors are also turning their focus to news portals rather than broadcast media¹⁵.</p> <p>Beyond the initial public internet access provided by the Post and Telecom of Kosovo (PTK), the issuance of the first authorizations for private internet providers occurred in 2005. The adoption of the internet among Kosovars has been met with great enthusiasm. Based on household data, the internet penetration rate for 2019 stood at 88.8 percent, as reported by internetworldstats.com. There has been a swift increase in the audience deriving their news from online media, with a notable rise in exclusive consumption of online news. Many media outlets now extend their programming online through diverse channels, readily sharing news on social networks. Furthermore, several have adapted their news services and formats to cater to smartphone users¹⁶.</p>
North Macedonia	<p>Television is the primary news source in North Macedonia, with stiff competition between public broadcaster MRT and five dominant national commercial stations. The media landscape encompasses both major business-operated TV stations and smaller newspapers and news websites. This divide highlights the range of media outlets. Political polarization is evident, as outlets often align with either the government or the opposition. A leading press group's financial issues led to the closure of three daily newspapers in 2017. Many printed publications rely on financial support from the government or business groups. As of July 2022, there were 1.6 million internet users, constituting 81% of the population (Internetworldstats.com). Facebook is a prominent social media platform¹⁷.</p> <p>The inception of the internet in Macedonia dates to the mid-1990s. The country boasts a considerable array of internet portals, although the precise count remains uncertain. A registration procedure for web portals was implemented in June 2014, with the Macedonian Academic Investigative Net (Marnet) entrusted with domain registration. However, a public record of these registrations is not yet available. The influence of blogs and social media pervades the daily lives of numerous citizens. These platforms play a pivotal role in organizing public events and disseminating news¹⁸.</p>
Montenegro	<p>As of 2020, the Agency for Electronic Media reported the presence of 14 commercial television stations and 35 commercial radio stations, alongside the national public service broadcaster and 19 local public services, encompassing five television and 14 radio stations. Additionally, seven daily newspapers operate at the national level¹⁹.</p> <p>Montenegro's media landscape is densely populated, comprising newspapers, the public broadcaster RTCG, and commercial TV and radio stations. Numerous commercial outlets grapple with profitability challenges. Montenegro is occasionally termed a "media colony" due to the presence of outlets from neighboring Serbia, Bosnia, and Croatia that operate within the country. Media outlets encounter significant economic pressures, as</p>

¹⁵ <https://www.bbc.com/news/world-europe-18328868>

¹⁶ <https://www.kas.de/en/web/balkanmedia/media-outlets4>

¹⁷ <https://www.bbc.com/news/world-europe-17551488>

¹⁸ <https://www.kas.de/en/web/balkanmedia/media-outlets5>

¹⁹ <https://www.kas.de/en/web/balkanmedia/media-outlets6>

	<p>highlighted by Reporters Without Borders (RSF). Freedom House notes that the government tends to allocate public advertising contracts away from opposition media. Journalists reporting on corruption and organized crime face the threat of violence. In 2020, Freedom House reclassified Montenegro as a hybrid regime rather than a democracy, citing diminishing standards in governance, justice, elections, and media freedom. As of July 2022, approximately 547,000 individuals, constituting 87% of the population, were internet users (Internetworldstats.com). Facebook reigns as the most popular social network²⁰.</p> <p>daily newspapers have since launched and continuously updated their websites, albeit with a comparatively smaller audience reach. Another noteworthy success is the online portal of the Public Service Radio-Television of Montenegro, introduced in January 2013²¹.</p>
Serbia	<p>Television indisputably stands as the primary source of news and information, with the flagship public network RTS1 and a few others dominating the market. The media landscape boasts over 90 TV channels, and viewers in Serbia dedicate more than five hours daily to television, marking the highest European average. Six TV stations possess national broadcasting licenses, while 30 hold regional licenses. Approximately 70% of the audience is drawn to the national TV broadcasters. Notably, RTS1 holds top popularity, capturing up to a quarter of the audience and offering robust competition to commercial stations, including the leading TV Pink.</p> <p>In recent times, the Serbian Progressive Party (SNS) has progressively curtailed political rights and civil liberties, placing pressure on independent media, the political opposition, and civil society organizations, according to the advocacy group Freedom House. As of July 2022, around 6.7 million individuals, making up 78% of the population, were internet users (Internetworldstats.com). The latest statistics indicate 4.8 million Facebook users. Internet access remains unrestricted, as affirmed by the NGO Freedom House²².</p> <p>In recent times, online media have experienced rapid growth and increased influence, resulting with the internet becoming the primary information source for many individuals. However, despite this surge, the quality of online media in Serbia is currently deemed unsatisfactory, presenting a significant challenge. The ongoing focus revolves around the professionalization of online media²³.</p>

The impact of digitalization and the internet cannot be understated. Online media and social networks, particularly Facebook, are emerging as essential platforms for news consumption and interaction. The shift

²⁰ <https://www.bbc.com/news/world-europe-17670042>

²¹ <https://www.kas.de/en/web/balkanmedia/media-outlets6>

²² <https://www.bbc.com/news/world-europe-17912585>

²³ <https://www.kas.de/en/web/balkanmedia/media-outlets9>

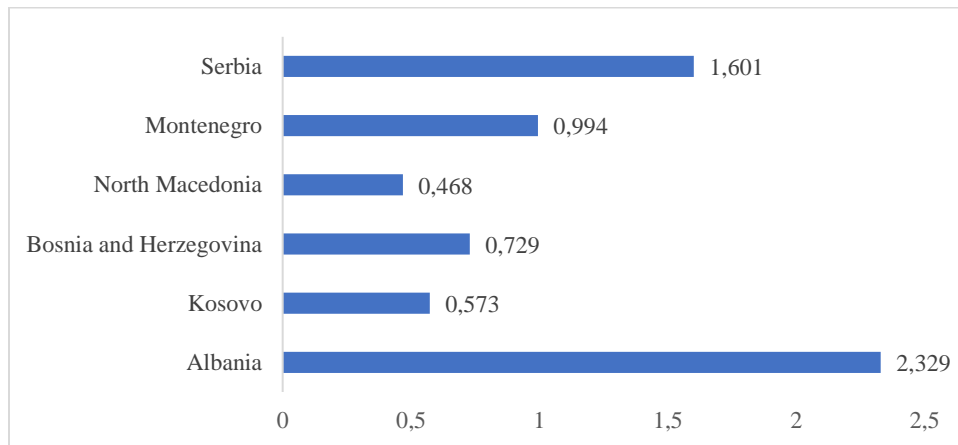
toward online-only publication, as observed in some countries, signifies the changing media landscape, wherein traditional formats face decline.

While press freedom is generally upheld, media environments are frequently categorized as "partially free" due to issues related to political interference, corruption, and economic pressures. These challenges threaten the media's ability to function as effective watchdogs and agents of transparency.

As the Balkans strive for progress, media literacy, regulatory frameworks that safeguard independence, and diverse ownership are crucial factors in fostering healthy and robust media landscapes. The role of media in shaping societies, informing citizens, and promoting democratic values remains paramount, making it imperative to address the challenges and work towards an informed and engaged public sphere.

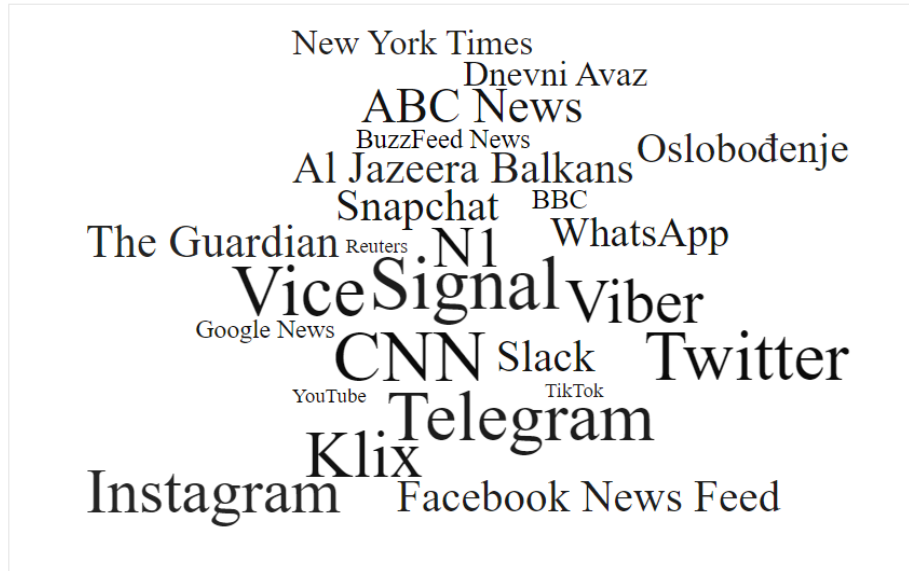
The graphic below illustrates the presence of online media. As observed, the highest prevalence is in Albania, followed by Serbia, while the lowest presence is in North Macedonia.

Figure 4: Online media existence²⁴



Specific media outlets as well as social media platforms and communication tools that mentioned in the interviews and focus groups:

²⁴ <http://digitalsocietyproject.org/data/>



Based on the data collected, the profiling of media outlets is conducted into 3 main categories based on the level of digital transformation and technology adoption. Each category has its own challenges and opportunities when it comes to adopting technology and digital transformation.

Advanced Media Outlets

These are media organizations that are at the forefront of adopting technology and digital platforms. They utilize a range of technologies, not just analytics tools. They often employ AI tools to automate content creation processes. These organizations are financially stable and have substantial investments in various media tools. They have sizable teams with specialists dedicated to digital and analytics. They emphasize both technological and organizational foundations. They have processes and structures that support innovation and growth. The culture of these organizations is centered around innovation, growth, and product development.

- Utilize a variety of technologies, not limited to analytics tools.
- Employ AI tools to automate content creation processes.
- Financially stable organizations with substantial investments in media tools.
- Have large teams with specialized roles in digital and analytics.
- Emphasize both technological and organizational foundations.
- Processes and structures support innovation, growth, and product development.
- Organizational culture focuses on innovation and development.

Media Outlets Undergoing Transformation

This category includes medium-sized media organizations in the process of transformation. They have a larger editorial and organizational structure compared to smaller outlets. Sales and editorial departments are separate, unlike smaller organizations where journalists may handle sales. These outlets are more open

to trying new tools but often have limitations due to financial constraints. They may have concerns about the success of implementing new technologies and the financial feasibility of such endeavors.

- Medium-sized organizations in the process of change.
- Larger editorial and organizational structure compared to smaller outlets.
- Sales and editorial functions are separate.
- More open to experimenting with new tools.
- Face limitations due to financial constraints.
- May have concerns about successful implementation and financing.

Traditional Media Outlets

These are small organizations that may still rely heavily on print and have limited resources. They might be in the early stages of transitioning to digital platforms. Due to their size and limited capacity, they may face challenges in adopting new technologies. Older generations in these organizations might resist changing their mindset and ways of operation.

- Small organizations, potentially reliant on print.
- Limited resources and capacity.
- Potentially in the early stages of transitioning to digital platforms.
- Challenges in adopting new technologies.
- Resistance to change, especially in older generations.
- May still have a print-only focus.

2.2.2 IT Companies in the Western Balkans

The outcome of the research yielded a selection of IT companies that display an assortment of innovative technologies, services, and products, positioning them as potential collaborators for media outlets seeking to improve their digital presence, engagement strategies, and content delivery mechanisms. This compilation encompasses those entities that offer specialized products and services designed to cater to the distinctive requirements of media outlets. It is essential to acknowledge that this list while providing valuable insights into potential collaborative prospects, should not be perceived as exhaustive. The dynamic nature of the digital landscape suggests that numerous other IT companies may also offer pertinent solutions for media outlets. The primary emphasis has been placed on spotlighting companies that exhibit a strong alignment with the innovation and digitalization needs of media organizations in the region. The table below represents the examples of IT companies or startups in Western Balkans that cooperated with media or may offer products or services for media outlets. A detailed overview of identified IT companies or startups is available in Annex 1.

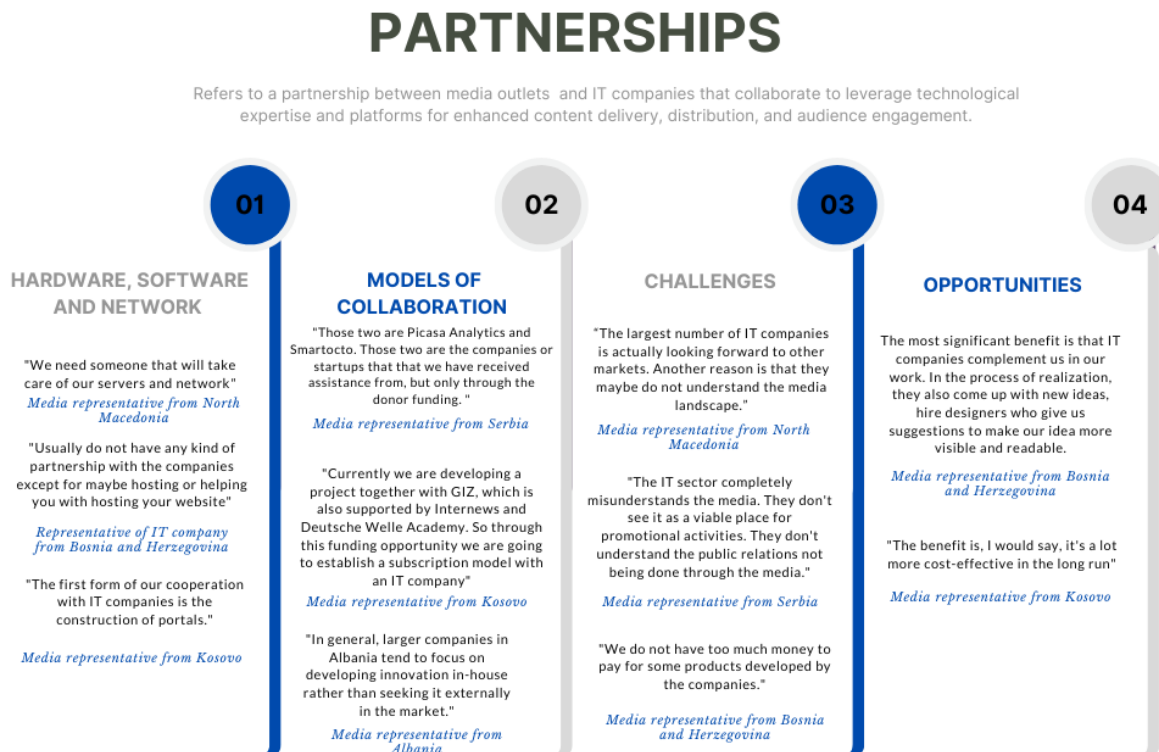
Table 1. Examples of IT companies or startups in Western Balkan that cooperated with media or may offer products or services for media – detailed overview in Annex 1

Country	Company	Description	Web site
Albania	Manaferra	SEO Web Development Pay Per Click	https://www.manaferra.com/
Albania	Albania Tech	Platform for startups	https://albaniatech.org/albaniatech/
Albania	New Born Media	Mobile App Development Web Development	https://newborn.media
Bosnia and Herzegovina	NSoft	Web Development	https://nsoft.com
Bosnia and Herzegovina	App Impact	Content management system development	https://www.appimpact.ba/
Bosnia and Herzegovina	BITAliance	Network of IT companies	https://bit-alliance.ba/
Kosovo	Kosbit	Software Development	https://kosbit.net/
Kosovo	Kutia	Web Development Custom Software Development Mobile App Development	https://kutia.net/
Kosovo	Koha Net	Custom Software Development	https://www.koha.net.
Montenegro	Aisconverse	Web Development E-Commerce Development	https://aisconverse.com/
Montenegro	Codingo	Web Development Custom Software Development Mobile App Development	https://codingo.me/
Montenegro	Om3ga solutions	Custom Software Development Mobile App Development	https://om3ga.org/
North Macedonia	Inplayer	Montetization of digital content	https://inplayer.com/
North Macedonia	Bintern	Web Development Other Application Development	https://bintern.com/
North Macedonia	Pikasa.ai	Data analytics for media outlets	www.pikasa.ai
Serbia	ComIT	Web Development Mobile Apps SEO	https://comit.rs/
Serbia	Smartocto	Data analytics for media outlets	www.smartocto.com
Serbia	Cubes.rs	Web Development Custom Software Development Mobile App Development	https://cubes.rs/our-projects/

2.3 Current partnerships between media outlets and IT companies

The media landscape is witnessing a transformative shift, marked by an increasing inclination towards digital platforms. Participants recognize the significance of collaborations with IT companies and startups to navigate this transition. Current engagements primarily revolve around hardware and network maintenance, web development, and application development. Figure 5 below presents key themes derived from the qualitative analysis of the interviews.

Figure 5. Partnership between media outlets and IT companies in Western Balkan – qualitative analysis perspective



Even though they are aware of the importance of cooperating with IT companies, during the discussion, it became evident that media outlets have limited existing partnerships with IT companies or startups. Most collaborations that do exist are centered around basic needs, such as website hosting or occasional interactions. Exemplary statements are presented below:

"We usually need someone that will take care of our servers and network."

Media representative from North Macedonia

"Usually do not have any kind of partnership with the companies except for maybe hosting or helping you with hosting your website."

Representative of IT company from Bosnia and Herzegovina

Participants noted that IT companies often prioritize revenue generation and may not fully comprehend the potential of media outlets as powerful promotional platforms. This lack of understanding and engagement has led to a gap in meaningful collaboration between these two sectors.

Software development is yet another area where IT corporations and media organizations have collaborated. They underline that the partnership was made possible by the creation of software and other digital technologies that can enhance several media operations. From more straightforward WordPress-based options to specially created content management systems for media management, real-time communication, and delivery. Participants see the potential to use IT know-how to increase content distribution and streamline daily procedures. Additionally, the fight against false news is brought up as a potential area for cooperation, underlining the significance of technology in addressing current technological needs.

"The first form of our cooperation with IT companies is the construction of portals."

Media representative from Kosovo

"We have our own application that is rented. We have a dedicated CMS for printing, which was later developed into a CMS for the web that we work on every day."

Media representative from Bosnia and Herzegovina

One of the notable organizations in this context is Smartocto, a platform specializing in data analytics and content optimization for media organizations. Smartocto collaborates closely with media outlets to enhance their digital strategies and improve content engagement. Another noteworthy player is Picasa, a data analytics company specializing in development and implementation of tools, software, and machine learning algorithms to help its partners learn the media environment and make informed decisions.

There are two types of media yield from qualitative analysis: (i) those who use outsourcing of one or more IT companies for specific purposes and (ii) media that have available in-house IT teams. The first group is more common, since is more affordable for most of the media. Very often, this group is funded by international donations and cooperation is viable due to foreign funds and project activities only:

"Those two are Picasa Analytics and Smartocto. Those two are the companies or startups that we have received assistance from, but only through donor funding."

Media representative from Serbia

"Currently we are developing a project together with GIZ, which is also supported by Internews and Deutsche Welle Academy. So, through this funding opportunity, we are going to establish a subscription model with an IT company."

Media representative from Kosovo

Larger commercial media see the advantage of having devoted IT specialists who can manage a variety of technology-related activities in-house. They are supporting tasks like web development, software development, and others. Media companies are typically more independent and responsive to their technical needs when they have an internal IT team.

"In general, larger companies in Albania tend to focus on developing innovation in-house rather than seeking it externally in the market."

Media representative from Albania

"In 99% of cases, we depend on ourselves and have our own solutions and products. We have our own CMS that we made, which makes the work of journalists much easier."

Media representative from Bosnia and Herzegovina

Summary

- Participants indicated limited existing partnerships with IT companies or startups.
- Most collaborations were primarily focused on website hosting or sporadic interactions.
- IT companies often prioritize revenue generation and don't fully understand the value of media outlets as promotional platforms.
- Partnerships often revolve around technology implementation, data analysis, and content optimization.
- However, there is room for improvement in terms of more strategic and sustainable collaboration.
- The need for customized solutions that align with media organizations' goals and challenges emerged as a key consideration in successful partnerships.
- While some attempts at partnership have been made, they lean toward traditional collaboration rather than jointly creating innovative content or solutions.
- The development of the innovation ecosystem is still in its early stages, and demand for innovation in the media market appears to be lacking.

2.3.1 Challenges of Cooperation with the IT Sector

Participants shed light on the challenges encountered in fostering collaboration between media outlets and the IT sector. IT companies tend to prioritize other sectors due to the perception that media outlets are not lucrative markets for them. Additionally, differing views on the value and role of media hinder cooperation.

Misunderstandings about media ethics, content production processes, and the promotional potential of media outlets further complicate efforts to bridge this gap. Budget constraints emerge as a significant challenge in fostering partnerships with IT companies. While both media outlets express interest in collaboration, financial limitations often determine the extent of engagement. Balancing investments in technology, equipment, and skilled personnel is crucial to overcoming these hurdles and ensuring sustained growth in the digital realm.

“We don't have too much money to pay for some products developed by the companies.”

Media representative from Bosnia and Herzegovina

“The IT sector works for big money, and we can't provide them what the developed countries they work for and there are no borders for working on IT technologies.”

Media representative from Bosnia and Herzegovina

During the qualitative research on the cooperation between media companies and IT companies, a significant challenge related to the lack of qualified IT specialists emerged, which is not limited only to the media sector. One participant indicated that this shortage could prevent a timely response to urgent IT projects.

“Another reason is that here, IT companies also face problems related to the workforce. The company with which we currently cooperate, and which maintains our platform tells us at meetings that they cannot receive new requests that are urgent, given that they do not have workers to work on them.”

Media representative from Bosnia and Herzegovina

In addition, the respondents agreed that there is a misunderstanding between IT companies and the media. Media generally cannot express their needs in such a way that IT companies implement them and satisfy all requirements. Exemplary statements are presented below:

“The largest number of IT companies is actually looking forward to other markets. Another reason is that they maybe do not understand the media landscape.”

Media representative from North Macedonia

“IT companies are generally not interested in cooperation with domestic companies in general, not related to the media themselves, and the development of any solutions. They are simply not in the mood for many reasons. One is money, but not the most important. The second reason is because there is no media outlet that has know-how to give them a project task, follow it up and receive it as a product, and then construct it further.”

Representative of IT companies from Bosnia and Herzegovina

“The IT sector completely misunderstands the media. They don't see it as a viable place for promotional activities. They don't understand the public relations not being done through the media.”

Media representative from Serbia

Summary

- Challenges include IT companies prioritizing other sectors, media outlets not being a lucrative market for them, and differing perspectives on media's role and value.
- Misunderstanding of media ethics and content production also hinders collaboration.
- Scarcity of qualified IT professionals.
- Limited resources, both financial and human, hinder the ability of many media organizations to fully leverage the potential of digital technologies.
- Additionally, resistance to change, fear of new tools, and a lack of expertise can slow down the integration of IT solutions.

2.3.2 Opportunities for Cooperation with the IT Sector

Despite the challenges, participants saw promising opportunities in partnering with IT companies. Collaborations could result in jointly developed analytical tools, software solutions for content dissemination, interactive data visualization tools, augmented reality applications, and advanced text-to-speech translation systems. These collaborations have the potential to revolutionize media engagement and enhance the overall audience experience.

In addition to the challenges discussed earlier, the scarcity of skilled IT professionals in the market presents an opportunity for collaboration. By partnering with media outlets, IT companies can potentially tap into a broader client base and offer their expertise to address this industry-wide challenge. This partnership could involve knowledge-sharing and skill-development initiatives to nurture a larger pool of IT professionals that could serve the evolving needs of both sectors. Examples of statements from respondents who are satisfied with cooperation with IT companies are given below:

“The most significant benefit is that IT companies complement us in our work. In the process of realization, they also come up with new ideas, hire designers who give us suggestions to make our idea more visible and readable.”

Media representative from Bosnia and Herzegovina

“The benefit is, I would say, it's a lot more cost-effective in the long run.”

Media representative from Kosovo

The potential for IT companies to develop tools that facilitate improved communication, content creation, and analytics within media outlets is highlighted. The need for applications that streamline communication and content sharing was emphasized, indicating a space where IT companies could contribute meaningfully. Importantly, the collaboration between these sectors also holds the promise of enhancing media literacy efforts, thereby countering misinformation, and fostering critical thinking skills among audiences.

Summary

- Participants highlighted potential benefits such as jointly developing analytical tools, software for content dissemination, interactive data visualization, augmented reality applications, and text-to-speech solutions.
- Collaboration with IT companies could provide valuable technological solutions that enhance the media landscape and audience engagement.
- The scarcity of skilled IT professionals in the market presents an opportunity for collaboration.
- The organization's ongoing efforts to engage with IT experts underscore its openness to explore such collaborations. However, the shortage of media-savvy IT professionals and the unique demands of the media industry pose obstacles to these opportunities.

2.4 Current Technologies and Digital Platforms

Participants shared insights into the digital tools and platforms they currently utilize. These include custom content management systems, social media platforms like Facebook, Instagram, Twitter, and YouTube, as well as analytics tools such as Google Analytics, Smartocto, and Picasa. While there's a recognition of the need for innovation, some have explored artificial intelligence tools for data processing, though AI adoption remains relatively modest. YouTube emerged as a prominent platform for video content, although difficulties in monetization due to language recognition limitations were highlighted. The complete list of used software in the digital media landscape in Western Balkans is available in Figure 6.

Google Analytics, YouTube, and social media platforms play pivotal roles in the digital strategies of media outlets. These platforms facilitate audience engagement and data-driven decision-making. The discussion highlighted the importance of seamless integration, rapid content delivery, and user-friendly interfaces. Furthermore, outlets are venturing into multimedia journalism, requiring journalists to hone diverse skill sets encompassing photography, videography, and data visualization.

Several portals have developed its own Content Management System (CMS), a testament to their commitment to streamlining journalistic workflows. This in-house CMS automates tasks and optimizes content distribution, exemplifying dedication to staying ahead in the digital age.

Figure 6. List of useful IT applications for media outlets

	VIDEO AND AUDIO EDITING	
	Adobe Creative Cloud (Premiere Pro, After Effects)	✓
	Avid Media Composer	✓
	Final Cut Pro X	✓
	DaVinci Resolve	✓
	PROJECT MANAGEMENT AND COLLABORATION	
	Slack	✓
	Asana	✓
	Baseroom	✓
	SOCIAL MEDIA MANAGEMENT AND MARKETING	
	Hootsuite	✓
	Adobe Creative Cloud (Premiere Pro, After Effects)	✓
	Avid Media Composer	✓
	Final Cut Pro X	✓
	DaVinci Resolve	✓
	Pro Tools	✓
	CONTENT MANAGEMENT AND PUBLISHING	
	Wordpress	✓
	Custom CMS	✓
	VIDEO HOSTING AND DISTRIBUTION	
	YouTube	✓
	Vimeo	✓

Real-time communication tools like Slack play a significant role in ensuring seamless internal communication within the newsroom. The significance of real-time tools is evident in the context of sharing multimedia content promptly.

Additionally, the importance of analytics tools for measuring audience engagement and behavior is emphasized. All taken into account, participants expressed a strong interest in fostering innovation within their respective media outlets. They acknowledged the evolving trends in audience preferences, including the shift towards mobile-first content consumption, the dominance of video content, and the challenge of shorter attention spans. To address these trends and attract younger audiences, the participants believed in the necessity of adapting content to shorter formats and incorporating engaging visual experiences. Collaborations with IT companies were seen as a potential avenue for driving innovation and implementing technological advancements that align with these changing dynamics.

Summary

- Participants use various digital platforms and technologies, including custom CMS, social media platforms (Facebook, Instagram, Twitter, YouTube), analytics tools (Google Analytics, Smart Doctor, Picasa), and content creation tools (Adobe Premiere, Photoshop, Canva).
- Some participants have explored AI tools for data processing, but AI adoption remains limited.
- YouTube is a popular platform for video content, but challenges exist in monetizing content due to language recognition limitations.
- Technologies range from basic tools like Google Analytics to more advanced solutions involving data analytics, AI, and automation.
- Larger, financially stable organizations tend to adopt a wider array of technologies to drive their digital strategies, while smaller ones are limited by resources and often struggle to embrace more sophisticated platforms.
- Participants expressed interest in innovation, particularly in content creation and distribution methods.
- The desire to attract younger audiences necessitates adapting content to shorter formats and engaging visual experiences.
- Collaborations with IT companies are seen as a potential avenue for innovation and technological advancement.

2.5 Key Trends and Initiatives

Audience preferences are driving key trends in the media industry. The media representatives pointed out the rise of multimedia consumption, and they're adapting their approaches accordingly. Initiatives like explanatory journalism are being introduced to enhance the audience's understanding of complex topics. Additionally, investing in visual content, such as high-quality videos and graphics, is becoming imperative to attract and retain diverse audiences. Hence, throughout the discussion, participants identified key trends shaping the media landscape. These included the growing emphasis on mobile-friendly content, the rising popularity of video consumption, and the adaptation required to capture the attention of audiences with reduced attention spans. In response to these trends, participants saw initiatives such as the development of tools for interactive data visualization, content tailored for shorter formats, and innovative solutions like text-to-speech translation as potential avenues for keeping audiences engaged. A thorough list of the most recent initiatives for digitization in the Western Balkan countries, divided into three categories: content creation, distribution, and product development are presented in Table 2.

Table 2. Current technology trends in the Western Balkan media landscape

Type	Description	Quotes
Content creation	User needs Adapting to the needs of individual users is one of the media's focuses. It refers to the specific requirements, wishes, and expectations of individuals or groups that use digital media content or platforms. Understanding and addressing user needs is critical to creating personalized, accessible, and engaging digital media experiences. The above enables > Content Accessibility, High-Quality Content, Personalization, Interactivity and Content Variety.	<i>"Establish a strategy for creating media content that is aimed at the audience. And this is now one of the biggest trends in the industry, which is talked about literally at every major media conference, and more and more major media organizations are following and implementing this model."</i> Representative from the IT company from Serbia
Content creation	Podcasts Podcasts have grown in popularity as a type of digital media consumption, providing users with an easy way to access a large range of audio information on a variety of themes. Understanding user needs in the context of podcasts is critical for podcast makers and platforms in order to deliver material that resonates with their target audience. Podcasts	<i>"What is noticed when talking about some innovative formats, in the Western Balkans, the podcast is something that is still innovative, but in essence, this is not the case. That is, it is no longer so innovative, but has become a media standard."</i>

	<p>enable: Variety and quality of content, ease of discovery, streaming and download options, and user-friendly platforms.</p>	<p>Representative from the IT company from Serbia</p>
<p>Content creation</p>	<p>Video content</p> <p>Video material has emerged as a critical component in the context of media digitalization and enhancement. The rise of digital platforms, increased internet access, and technological breakthroughs in video creation have resulted in a substantial shift in how media is viewed and produced. Video content has various advantages, the most notable of which are: accessibility and reach, as well as platform diversification (for hosting and distributing video content, such as YouTube, Vimeo, TikTok, and Instagram). Diversification, on the other hand, refers to talented individuals who will be able to adapt the developed material to various media and users.</p>	<p><i>“Today, video content is something that dominates and that everyone wants, but you need to adapt that content to every social network today. When it comes to the format of the video, it is necessary to subtitle it, since you have feedback that a large number of people want to watch the video, but they don't want to play the sound, they want to read, etc.”</i></p> <p>Media representative from Bosnia and Herzegovina</p>
<p>Content creation</p>	<p>Data analytics</p> <p>It entails the methodical study of data to draw forth insightful patterns, trends, and insights that guide strategic decision-making. Data analytics has completely changed how the material is produced, shared, and optimized in the media sector.</p>	<p><i>“I definitely think that the media should understand the importance of data. Data analysis, and decision-making based on data. I know that there are media that have detailed analytics for each journalist or news item. This is truly an area whose benefits need not be emphasized.”</i></p> <p>Representative of the IT company from Serbia</p>
<p>Content distribution</p>	<p>Membership models</p> <p>Membership models have grown in popularity as a means for content providers, platforms, and media corporations to monetize their offerings while also delivering unique benefits</p>	<p><i>“There are membership models that are based on donations. For example, the Guardian is an ideal example where all</i></p>

to their audience. They provide the following services: Exclusive Content, Monetization for Creators, Direct Support, and an Ad-Free Experience.

One example of a similar platform is Patreon which gives creators the tools they need to reliably reach their fans, strengthen their communities, and build sustainable businesses. Besides, offers more than 20 useful applications for the media workforce.

content is open, but if people want, they can donate money.”

Representative from the IT company from
Serbia

**Content
distribution**

Newsletter

In the world of digital media, newsletters are a valuable tool that helps organizations and content producers build niche communities, distribute customized information, and engage directly with their audience. In an era of information overload, they provide a more personal, targeted, and regulated manner to communicate with readers.

“Now newsletters are again relevant in the industry and globally. So many media houses have newsletters that they send even several times a day.”

Representative from the IT company from
Serbia

**Content
distribution**

Subscription models

Subscription models have been an important tactic for content producers and media businesses to adapt to these changes since the development of digital technology, which has changed how media is consumed, created, and delivered.

They provide a sustainable business model that fosters ongoing content production and innovation while enabling content producers and media organizations to distribute valuable, pertinent, and engaging content directly to their audience.

“The general trend that has been working in the last 5 years is the transition to a subscription model. Lately, as far as global clients are concerned, we hardly have any clients that don't have some form of subscription. Sometimes it's a dynamic paywall that lets you read one or two stories, and then you need pay to read the rest. And sometimes it's a hard paywall that prevents reading until you subscribe.”

Representative from the IT company from
Serbia

**Content
distribution**

Social media

Using different social networks offers access to different target groups. Recently, the

“I'm not sure how much these new platforms are being used, primarily

popular network has become TikTok, which on the one hand brings a completely new audience and implies additional adaptation of the content. Social networks are mainly used to distribute content, encourage interaction, and meet the growing expectations of users. In addition to the above, social networks are a great source for discovering new content.

social networks like TikTok. TikTok is something that the media in Europe are now starting to use more and more and it is becoming an important way of communication that at the same time implies a completely different type of content creation.”

Representative from the IT company from Serbia

Product development

Artificial intelligence

Many facets of the media landscape have been transformed by it, including content development, delivery, audience engagement, and personalization. The way that media is created, consumed, and enhanced in the digital age is still being shaped via integration into multiple media processes.





“Startups could assist major TV channels in implementing technologies like machine learning, blockchain, and AI to innovate and analyze customer behavior.”




Representative of GIZ project from Albania

This area of digitalization is in Western Balkan. This segment of digitization in WB is still in its infancy. It is used sporadically, and mostly only for testing.

Despite the digitization of the media landscape, traditional players are finding it difficult to adopt future-oriented strategies. Participants noted that even the major players have only scratched the surface in terms of digital integration. Qualitative analysis highlights the constant struggle to adapt to digital advances in the media industry. Although progress is visible, most media outlets are far behind in following world trends. We have analyzed the most significant ones (Table 3), as a reminder and an opportunity to further upgrade the media landscape in the countries of the Western Balkans.

Table 3. Trends in the digital media landscape

Trends	Description	Example	Link
AI-generated content	AI algorithms are rapidly being used by media sources to generate articles, reports, and even video material. This aids in the automation of routine processes such as data summarization and financial report generation.	Associated Press uses Automated Insights' Wordsmith platform to generate automated news reports.	
Immersive Media	More immersive and interactive material is being created using Virtual Reality (VR) and Augmented Reality (AR). VR documentaries, AR-enhanced news applications, and immersive narrative experiences are examples of this.	The New York Times has experimented with VR storytelling, such as their VR documentary "The Displaced" which tells the stories of child refugees.	
Data journalism	Journalists use data analysis technologies to get insights from databases. To help clarify difficult stories, this approach involves developing data visualizations, interactive charts, and infographics.	This data-driven journalism site founded by Nate Silver uses extensive data analysis and visualizations to explain politics, economics, and more.	
Personalization and Recommendation	Machine learning is being used by media outlets to tailor content recommendations for users. This increases user engagement by suggesting articles, movies, or podcasts that are relevant to the user's interests.	The Guardian offers personalized content recommendations through its "My News" feature. This feature allows readers to customize their news feed based on their interests and preferences.	

Trends	Description	Example	Link
Paywalls and Micropayments	Media companies are experimenting with different paywall tactics, such as metered paywalls (limited free material before requiring a subscription) and micropayments (paying a small price per article).	The Times uses a paywall model that restricts access to premium content. It also offers micropayments for individual articles through their "Paying for Articles" feature.	
Blockchain for Content Authenticity:	The use of blockchain technology to authenticate the veracity of news articles and digital assets is being investigated. This can aid in the fight against disinformation and assure the credibility of content.	Civil is a blockchain-based journalism platform that aims to enhance trust and transparency in news by using blockchain to track the provenance of content and ensure its accuracy.	
Interactive new platforms	Media outlets are creating interactive news platforms that allow readers to interact with stories, study data, and even participate in the current investigations.	ProPublica often involves readers in their investigations and encourages interaction with their "Get Involved" section, where readers can contribute data or stories related to ongoing investigations.	

Summary

- Participants noted trends such as the shift towards mobile-first content, video consumption, and shorter attention spans.
- Developing tools for data visualization, interactive content, and text-to-speech translation were identified as potential initiatives to engage audiences.
- The participants highlighted several key trends and initiatives in the Balkan media landscape, such as the emphasis on audience-centric content creation, the adoption of analytics to inform decision-making, the rise of podcasts, and the exploration of new distribution channels.
- Global trends such as: interactive platforms, immersive media, blockchain for content authenticity, paywalls, and micropayments are not yet implemented in media outlets in Western Balkan.

3 Models of Partnership

Partnerships between media outlets and start-ups or IT companies have emerged as a dynamic avenue for innovation. These collaborations harness the distinct strengths of both media organizations and technology pioneers, resulting in groundbreaking approaches to content creation, distribution, and audience engagement. This study delves into three primary partnership models that have gained prominence in this intersection between media and technology. Each model represents a unique avenue through which media outlets and technology-focused entities collaborate to bring novel experiences to audiences and navigate the ever-changing media landscape. Additionally, this study offers examples of exploring the potential in collaboration of media outlets and IT companies/startups taking into account different levels of their digital readiness.

3.1 Joint Content Creation

Joint content creation involves collaboration between a media outlet and a start-up or IT company to produce innovative and engaging content for the media outlet's audience. This partnership model leverages the expertise of both parties to create content that adds value to the audience's experience. For instance:

- A news outlet might collaborate with a technology start-up to develop interactive data visualizations that simplify complex news stories.
- A lifestyle magazine could partner with a virtual reality start-up to create immersive travel experiences for its readers.
- A podcast series might collaborate with a language learning app to produce language lessons relevant to their target audience.
- Through joint content creation, media outlets can enhance their content offerings, attract new audiences, and differentiate themselves in a competitive landscape.

“When it comes to content production, we have sporadic cooperation only for specific stories. We do in-depth stories like mini journalism stories from 8 to 12 minutes. If the topic of the story is, for example, the IT sector or IT companies, we had a cooperation with them only for those specific content.”

Representative of media from North Macedonia

In joint content creation partnerships, media outlets collaborate with start-ups or IT companies to develop innovative content formats that enhance audience engagement and understanding. The following technologies can be utilized:

- Data Visualization Tools: Collaborators can use data visualization tools to create interactive charts, graphs, and infographics that simplify complex data and make it more accessible to audiences.
- Virtual Reality (VR) and Augmented Reality (AR): Media outlets can partner with VR/AR companies to produce immersive experiences, allowing audiences to explore stories in a three-dimensional space or overlay digital information onto the physical world.

- Artificial Intelligence (AI) Writing Assistants: AI-powered tools can aid journalists in generating content, conducting research, and even suggesting creative angles for stories.
- Interactive Video Infographics: Media outlets can collaborate with technology companies to create interactive video infographics that combine visual storytelling with data visualization. This can help explain complex topics in a more engaging and comprehensible way.
- 360-Degree Videos: Partnerships with VR/AR companies can lead to the creation of immersive 360-degree videos that allow audiences to explore environments and events as if they were present, enhancing engagement and understanding.
- Live Streaming Solutions: Collaborating with streaming technology start-ups can enable media outlets to provide live coverage of events, interviews, and breaking news, fostering real-time audience interaction.

3.2 Distribution Partnerships

Distribution partnerships involve media outlets teaming up with start-ups or IT companies to optimize the distribution of their content and engage more effectively with their audience. This type of partnership focuses on leveraging technology to reach and interact with audiences across various platforms. For instance:

- A media outlet might partner with a social media management start-up to automate and schedule content sharing, increasing their online presence.
- An online news platform could collaborate with a mobile app developer to create a dedicated app for delivering news updates directly to users' smartphones.
- A magazine could work with a podcast distribution platform to expand its reach and deliver audio versions of articles to a wider audience.
- By forming distribution partnerships, media outlets can amplify their content's reach, enhance user engagement, and adapt to changing consumer preferences.

“It is important for us how to reach the audience, and IT companies know how Google and Facebook algorithms work. These partnerships are really important to us so that we can reach a wider audience and so that a wider group of people.”

Representative of media from Bosnia and Herzegovina

Distribution partnerships focus on optimizing how content reaches audiences across various platforms and devices. The following technologies can be leveraged:

- Content Management Systems (CMS): Media outlets can collaborate with tech companies to implement advanced CMS that streamline content creation, scheduling, and distribution to different channels.

- Mobile Apps and Progressive Web Apps (PWAs): Partnerships can involve the development of mobile apps or PWAs that provide a seamless and responsive experience across devices, enhancing engagement.
- Chatbots and AI-Powered Assistants: Integrating chatbots and AI assistants into media outlets' platforms can offer personalized content recommendations, answer user queries, and guide navigation.

3.3 Product Partnerships

Product partnerships involve media outlets collaborating with IT companies or start-ups to develop and offer new products or services to their audience. These partnerships can lead to the creation of innovative offerings that align with the media outlet's brand and audience needs. For example:

- An online media platform might partner with an e-commerce start-up to integrate a seamless shopping experience, allowing users to purchase products featured in articles.
- A lifestyle blog could collaborate with a fitness app to offer exclusive workout plans and tracking tools to its readers.
- A news organization might team up with a subscription management start-up to provide personalized subscription bundles that cater to individual readers' interests.

Product partnerships entail the creation of new tools, services, or offerings that enhance audience experiences and engagement. The following technologies can play a role:

- E-Commerce Platforms: Collaboration with e-commerce start-ups can lead to the integration of online shopping experiences within media outlets' platforms, offering audiences the ability to purchase products mentioned in articles.
- Subscription Management Systems: Media outlets can partner with subscription management providers to offer flexible subscription models, granting users access to exclusive content and features.

“Maybe we can have a mutual support in terms of producing some kind of software that will be useful in implementation of the journalism generally.”

Representative of media from Bosnia and Herzegovina

“If there is a possibility actually to develop some sort of a software where we can use it as an ad platform for distribution of commercials so that some sort of a programmatic marketing, as we were talking about, that will put us in a I would say maybe not in an equal, but in a much better position to compete with Google ads and other similar platforms.”

Representative of media from North Macedonia

“Generally, for me, the product partnership is the best.”

Representative of media from Kosovo

- Personalization Algorithms: By partnering with companies specializing in personalization algorithms, media outlets can offer personalized content recommendations based on users' preferences and behavior.

3.4 Potential in advancing media through collaborations with the IT sector

All interested parties that participated in the qualitative study are eager to work together in all selected models. Cooperation is most visible in the product development model, but it is equally desirable in the partnership for content creation and distribution. However, there was a lack of understanding of all the possibilities that the IT sector may offer today, which can enhance present procedures, attract new audiences, and lead to a more effective business model for the media in Western Balkans countries. Below (Figure 7, Figure 9, Figure 11) is a proposal for possible cooperative partnership through three models: content generation, distribution, and new product development, which are also classified according to the level of media development in the observed environment. Examples of cooperation are briefly described below (Figure 8, Figure 10, Figure 12).

Figure 7. List of potential areas of collaboration between media outlets and IT companies/startups – Advanced media outlets

ADVANCED MEDIA OUTLETS

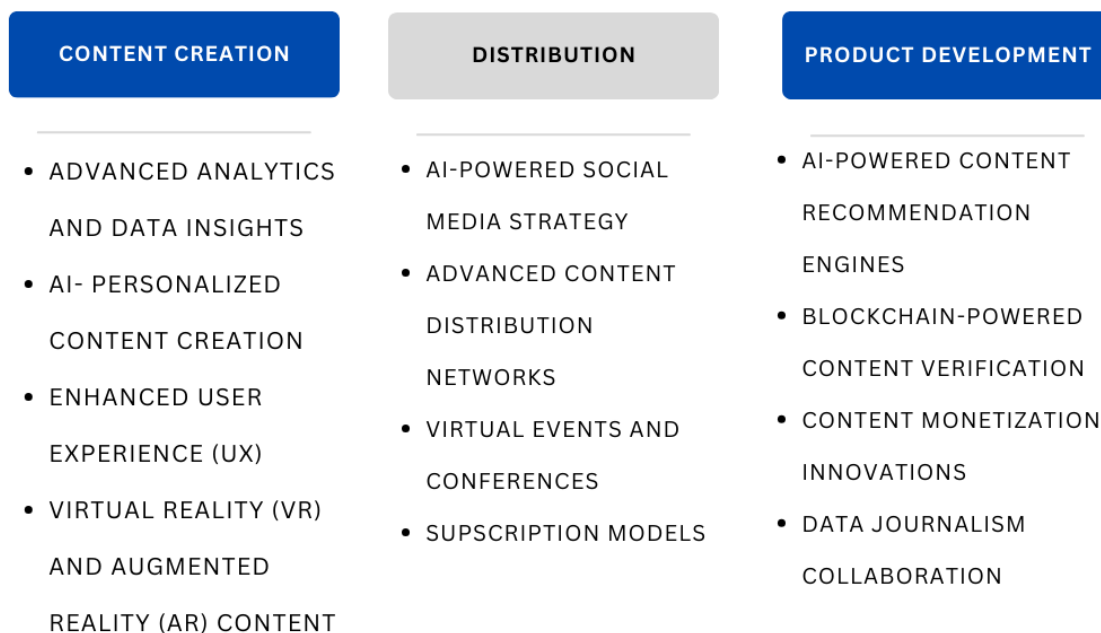


Figure 8. Short description of suggested partnerships - Advanced media outlets

ADVANCED ANALYTICS AND DATA INSIGHTS

IT companies/startups can use expertise in data science and machine learning to help media outlets make more informed decisions about content strategies, audience targeting, and monetization.

AI- PERSONALIZED CONTENT CREATION

IT companies/startups can develop AI models that generate high-quality articles, videos, and other media content based on predefined guidelines from media outlets. This innovation could significantly increase the speed and efficiency of content production.

ENHANCED USER EXPERIENCE (UX)

IT companies /startups can help enhance the UX by designing user-friendly interfaces, optimizing website performance, and integrating interactive features to keep audiences engaged.

VIRTUAL REALITY AND AUGMENTED REALITY

IT companies/sturtups could be involved in producing interactive documentaries, news visualizations, or even entertainment experiences that captivate audiences in new ways.

AI-POWERED SOCIAL MEDIA STRATEGY

Partnership is possible trough tools that analyze social media trends and user behavior to optimize content sharing schedules, platform selection, and engagement strategies. This will enhance the visibility and virality of media content.

ADVANCED CONTENT DISTRIBUTION NETWORKS

Media outlets in partnership with IT companies/startup can develop advanced content delivery networks that ensure lightning-fast and reliable distribution of media content to global audiences. This will enhance user experiences and reduce loading times.

VIRTUAL EVENTS AND CONFERENCES

Co-create virtual events, conferences, and webinars that showcase the content and expertise of media outlets. IT companies/startups will be assigned for the technical infrastructure, platforms, and tools needed to host engaging and interactive online events.

SUPSCRIPTION MODELS

IT companies use their expertise designing and implementing digital platforms that support various subscription tiers, payment gateways, and user authentication systems. This partnership allows media outlets to offer a range of subscription options, such as monthly, yearly, or access to specific content categories.

AI-POWERED CONTENT RECOMMENDATION ENGINES

IT companies/startups may develop advanced AI algorithms that analyze user behavior, preferences, and historical data to provide highly personalized content recommendations. This increase user retention and engagement.

BLOCKCHAIN CONTENT VERIFICATION

Partnership is possible to develop blockchain-based solutions that enhance content authenticity and combat misinformation. This will enhance media outlets' credibility and trustworthiness.

CONTENT MONETIZATION INNOVATIONS

Partnership can established in order to find innovative ways to monetize content, such as microtransactions, blockchain-based content ownership models, and pay-as-you-consume strategies.

DATA JOURNALISM COLLABORATION

IT companies/startups can be used to develop tools that allow data journalists to uncover, analyze, and visualize complex datasets, enabling deeper insights and more impactful reporting.

Figure 9. List of potential areas of collaboration between media outlets and IT companies/startups – Media outlets undergoing transformation

MEDIA OUTLETS UNDERGOING TRANSFORMATION

CONTENT CREATION

- COLLABORATIVE CONTENT TOOLS
- AI ASSISTED CONTENT CREATIONS
- AUTOMATED SOCIAL MEDIA CONTENT GENERATION
- COLLABORATIVE MULTIMEDIA STORYTELLING

DISTRIBUTION

- OPTIMIZED CONTENT DELIVERY (OTT)
- DATA-DRIVEN DISTRIBUTION STRATEGIES
- MOBILE APP DEVELOPMENT

PRODUCT DEVELOPMENT

- PODCAST PLATFORMS
- ANALYTICS PLATFORMS
- INTERACTIVE CONTENT EXPERIENCE
- CONTENT PERFORMANCE TRACKING

Figure 10. Short description of suggested partnerships – Media outlets undergoing transformation



Figure 11. List of potential areas of collaboration between media outlets and IT companies/startups – Traditional media outlets

TRADITIONAL MEDIA OUTLETS

CONTENT CREATION

- TRAINING IN DIGITAL TOOLS
- CONTENT MODERNIZATION
- CROSS-PLATFORM CONTENT
- INTEGRATION OF INTERACTIVE ELEMENTS

DISTRIBUTION

- ENHANCED ONLINE PRESENCE
- SOCIAL MEDIA INTEGRATION
- SEO OPTIMIZATION
- AUDIENCE ENGAGEMENT STRATEGIES

PRODUCT DEVELOPMENT

- DIGITAL ARCHIVE ENHANCEMENT
- LOCALIZATION TECHNOLOGY
- AUTOMATED TRANSCRIPTION SERVICES
- INTERACTIVE PRINT INTEGRATION

Figure 12. Short description of suggested partnerships – Traditional media outlets



4 Conclusion

The main objective of this study was to conduct a thorough analysis and mapping of the present condition of the digital media landscape in the Western Balkans. This study aimed to investigate the dynamic and evolving environment of media outlets in the Western Balkans, characterized by deliberate progress and regional complexities. The process was initiated by the rapid growth of technological developments and the widespread adoption of the Internet. These factors have played a significant role in driving the rise of digital transformation across several industries, including the media sector. Considering the complex issues presented by the digital paradigm change, several key areas have garnered attention. The need to strengthen the capabilities of media organizations has been a prominent focus. This involves enabling these media platforms to explore novel commercial ideas, expand their reach to a wider audience, diversify their sources of income, and strengthen their economic sustainability. Furthermore, the study has highlighted the urgent necessity to enhance the abilities and proficiencies within media establishments, underlining the significance of skill refinement in promoting journalism of superior quality. Finally, the research has advocated for the establishment of strong regional networks and the promotion of cooperation among media organizations, as well as with other relevant stakeholders, in order to cultivate a favorable atmosphere for development.

At the core of this study lies a comprehensive exploration of the digital media ecosystem, encompassing an intricate network of platforms, tools, and services that equip media outlets with the means to create, disseminate, and monetize content online. This ecosystem holds the transformative potential to reshape the media landscape in the Western Balkans.

The study's main objectives have been successfully accomplished through a rigorous combination of literature review and qualitative data gathering. At the beginning, the identification of pivotal documents and the construction of a database of media-relevant start-ups and IT companies operating in the Western Balkans was conducted. Through focus groups and semi-structured in-depth interviews, valuable insights into the prevailing innovation and digital ecosystems, partnership models, extant gaps, and prospective synergies was gathered.

Through five chapters, this study has demonstrated the digital landscape, methodically mapping the digital ecosystem and identifying media outlets and IT firms doing business in the Western Balkans area. The analysis has shown awareness of current partnerships, successfully exposing the multiple challenges and possible benefits for cooperative efforts. Furthermore, this has provided us with an opportunity to observe the current technologies and digital platforms that media organizations have access to, emphasizing the crucial trends and activities necessary for adjusting to the constantly changing digital environment. Main part of the report focused on three models of partnership that hold significant promise: joint content creation, distribution partnerships, and new product development. These models, derived from research, have the potential to serve as catalysts, improving the capabilities of media companies and strengthening their position in the current digital media landscape.

Given that this study aimed to provide guidelines for the media in the Western Balkans that would serve as a guide through the complex landscape of digital media, the advantages of this process as well as potential challenges are presented. The ensuing discourse outlines the benefits of this undertaking, while also acknowledging the potential obstacles that may arise. By acknowledging and tackling the obstacles while capitalizing on the numerous prospects within this domain, media organizations can enhance their online visibility, make valuable contributions to the expansion of the broader media ecosystem, and ultimately

assume a important role in promoting participatory democracies in the area. While acknowledging the constraints coming from data availability and the inherent complexity of private sector collaboration, this study provides a strong basis for future analyses of the digital ecosystem within the media landscape. Additionally, this study provides suggestions for enhancing and broadening collaborations between media and IT enterprises, thereby establishing the groundwork for future advancements and novel partnership frameworks.

References

- Barykin, S. Y., Kapustina, I. V., Kirillova, T. V., Yadykin, V. K., & Konnikov, Y. A. (2020). Economics of digital ecosystems. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 124.
- Brogi, E., Dobрева, A., Parcu, P.L. 2014. Freedom of media in the Western Balkans. Directorate-General for external policies of the union. EU. Brussels.
- de Vasconcelos Gomes, L. A., Facin, A. L. F., Salerno, M. S., & Ikenami, R. K. (2018). Unpacking the innovation ecosystem construct: Evolution, gaps and trends. *Technological forecasting and social change*, 136, 30-48.
- EU – WESTERN BALKANS MEDIA DAYS (2017). Recommendation from workshops. Tirana.
- Pelikka, J., & Ali-Vehmas, T. (2016). Managing Innovation Ecosystems to Create and Capture Value in ICT Industries. *Technology Innovation Management Review*, 6(10), 17-24.
- Stojarová, V. (2020) ‘Media in the Western Balkans: who controls the past controls the future’, *Journal of Southeast European and Black Sea*, 20(1), pp. 161–181. doi: 10.1080/14683857.2020.1702620.
- Seldi.net (2022). Media Capture in the Western Balkans: From captured states to captured media. Policy brief No 18, December 2022
- Tintor, V., Jovanović, N., Bocarova, V. & Bugarski, M. (2022). Western Balkans Digital Economy Society Index. Regional Cooperation Council (RCC).
- Trail, L. (2019). Media Sustainability Index, The Development of Sustainable Independent Media in Europe and Eurasia. Washington DC, US: IREX. ISSN 1546-0878
- [http://www.europarl.europa.eu/RegData/etudes/STUD/2014/534982/EXPO_STU\(2014\)534982_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2014/534982/EXPO_STU(2014)534982_EN.pdf)
- <https://www.kas.de/en/web/balkanmedia/media-outlets>
- <https://www.bbc.com/news/world-europe-17680734>
- <https://www.bbc.com/news/world-europe-17211939>
- <https://www.bbc.com/news/world-europe-17551488>
- <https://www.bbc.com/news/world-europe-17670042>

<https://www.bbc.com/news/world-europe-17912585>

<https://www.bbc.com/news/world-europe-18328868>

<http://digitalsocietyproject.org/data/>

Annexes

Annex 1: List of identified start-ups and IT companies

Annex 2: Focus Group/Interview guide

Annex 1: List of identified start-ups and IT companies

Table 4. List of IT companies or startup in Western Balkans that cooperate with media or may offer services for media²⁵

NO	COUNTRY	COMPANY	DESCRIPTION	WEB SITE
1	Albania	Dalerio Consulting	SEO Pay Per Click Voice	https://dalerioconsulting.com/
2	Albania	Manaferra	SEO Web Development Pay Per Click	https://www.manaferra.com/
3	Albania	Evolve.al Digital Agency	Web Development SEO Custom Software Development Mobile App Development	https://evolve.al/
4	Albania	Digital Vlora	Email Marketing SEO Web Development E-Commerce Development	https://digitalvlora.com/
5	Albania	UTDS Optimal Choice	SEO Pay Per Click Web Development	https://utds.al/
6	Albania	ABLIMITS STUDIO	Web Development E-Commerce Development	https://www.ablimits.com/
7	Albania	Albania Tech	Platform for startups	https://albaniatech.org/albaniatech/

²⁵ The list of selected companies provided should be viewed as incomplete due to certain limitations.

NO	COUNTRY	COMPANY	DESCRIPTION	WEB SITE
8	Albania Kosovo	New Born Media	Mobile App Development Web Development	https://newborn.media
9	Bosnia and Herzegovina	Authority Partners	Web Development	https://authoritypartners.com/
10	Bosnia and Herzegovina	Klika	Web Development	https://www.klika.us/
11	Bosnia and Herzegovina	LANACO	Web Development	https://www.lanaco.com/en/lanaco-information-technology/
12	Bosnia and Herzegovina	Ministry of Programming	Web Development	https://www.ministryofprogramming.com/
13	Bosnia and Herzegovina	Mistral	Web Development	https://mistral.com/
14	Bosnia and Herzegovina	NSoft	Web Development	https://nsoft.com
15	Bosnia and Herzegovina	QSS	Web Development; Hosting	https://qss.ba/
16	Bosnia and Herzegovina	App Impact	Content management system development	https://www.appimpact.ba/
17	Bosnia and Herzegovina	BITAliance	Network of IT companies	https://bit-alliance.ba/
18	Kosovo	Appdec	Software Development Creative Design Project Management	https://www.appdec.com
19	Kosovo	Kosbit	Software Development	https://kosbit.net/
20	Kosovo	Metdaan Media	TV and radio production Social publisher	https://metdaan.media/
21	Kosovo	Frakton	Custom Software Development	https://frakton.com/
22	Kosovo	Kutia	Web Development Custom Software Development Mobile App Development	https://kutia.net/

NO	COUNTRY	COMPANY	DESCRIPTION	WEB SITE
23	Kosovo	Koha Net	Web Development Custom Software Development Mobile App Development	https://www.koha.net.
24	Montenegro	Aisconverse	Web Development E-Commerce Development	https://aisconverse.com/
25	Montenegro	Bild Studio	Custom Software Development Web Development Enterprise App Modernization	https://www.bild-studio.com/en/
26	Montenegro	Codingo	Web Development Custom Software Development Mobile App Development	https://codingo.me/
27	Montenegro	Amplitudo	Web Development Custom Software Development Mobile App Development	https://amplitudo.me/
28	Montenegro	Om3ga solutions	Custom Software Development Mobile App Development	https://om3ga.org/
29	North Macedonia	Inplayer	Montetization of digital content	https://inplayer.com/
30	North Macedonia	Bintern	Web Development Other Application Development	https://bintern.com/
31	North Macedonia	Webdog Solutions	Web Development SEO	https://webdog.solutions/

NO	COUNTRY	COMPANY	DESCRIPTION	WEB SITE
32	North Macedonia	Webpigment	Web Development SEO & Pay Per Click	https://www.webpigment.com/
33	North Macedonia	IWANOWEB	Web design and maintenance SEO	https://ivanoweb.com
34	North Macedonia	Pikasa.ai	Data analytics for media outlets	www.pikasa.ai
35	Serbia	The Ave. Studio	Web creation and design Content creation Social media management	https://theavestudio.com/
36	Serbia	Makalu	Web Development	https://makalu.dev/
37	Serbia	ComIT	Web Development Mobile Apps SEO	https://comit.rs/
38	Serbia	Homepage	Web Development Pay Per Click	https://homepage.rs
39	Serbia	Superawesome	Video Production Web Development	https://sprawsm.com/
40	Serbia	Codeus	Web Development Custom Software Development Mobile App Development	https://codeus.rs/
41	Serbia	Presta	Web Development Custom Software Development Mobile App Development	https://wearepresta.com

NO	COUNTRY	COMPANY	DESCRIPTION	WEB SITE
42	Serbia	Smartocto	Data analytics for media outlets	www.smartocto.com
43	Serbia	Cubes.rs	Web Development Custom Software Development Mobile App Development	https://cubes.rs/our-projects/

Focus group/Interview Guide

Media outlets, IT companies and other relevant institutions

Respondent: _____ Title: _____

Institution: _____ Phone: _____

E-mail: _____ Date/time interview: _____

1. Background Information

- a. Can you tell me more about yourself and your role and your organization's involvement in the media or IT/digital innovation sector?
- b. Can you tell me about your current experience with partnerships between media outlets and start-up/IT companies?

2. Existing Innovation and Digital Ecosystem

- a. Please describe current digital/innovation ecosystem and digital ecosystem in the Western Balkans relevant to media outlets (*key players, initiatives, and trends in the region*).
- b. Can you describe the current process and technology used (digital platforms, tools, or services media outlets in the region commonly used to create, distribute, and monetize content)?
(main digital platforms used by media outlets in the Western Balkans, such as websites, social media platforms (Facebook, Twitter, Instagram, etc.), mobile apps, and video streaming services - the role of each platform in the distribution of content and audience engagement.
(the digital advertising landscape for media outlets in the region, including programmatic advertising, display ads, native advertising, and sponsored content - challenges and opportunities related to monetizing content in the digital ecosystem)
(how media outlets in the Western Balkans engage with their audiences through digital channels – use of audience analytics and data-driven approaches to understand audience preferences and behavior)
 - *changing patterns of content consumption by audiences in the region*
 - *shift towards mobile devices and the increasing preference for on-the-go content consumption*
 - *popularity of video content and its influence on media outlets' content strategies*

- *the role of social media platforms as major channels for content distribution and audience engagement*
 - *the most popular social media platforms among audiences in the Western Balkans*
 - *the growing importance of data-driven journalism and its impact on content creation and distribution*
 - *the use of AI and automation in media outlets' operations, such as content creation, curation, and distribution*
 - *the trends in digital subscription models and paywalls in the region*
 - *mention any other emerging technologies or trends that may impact the digital ecosystem for media outlets in the future*
- c. How do you perceive the role of innovation in the media industry? How important is it for media outlets to innovate to stay relevant and engage audiences?
- d. Can you provide examples of innovative approaches that media outlets in the Western Balkans have adopted to adapt to the changing media landscape?

3. Partnership Themes, Trends, and Models

- a. Did you witness any notable success stories or models of partnerships between media outlets and start-up/IT companies? Can you describe?
- b. Can you tell me about any **model and theme** of existing partnerships between media outlets and start-up/IT companies in the Western Balkans?
- **POSSIBLE MODELS: Joint content creation** (a media outlet may partner with a technology start-up to develop interactive data visualizations, virtual reality experiences, or augmented reality content); **Distribution Partnerships** (a media outlet may collaborate with an IT company that provides a digital tool or platform to facilitate content delivery across multiple channels, including mobile apps and social media); **Product Partnerships** (Media outlets team up with start-ups to develop and launch new products or services);
- c. Please give me the example of successful partnerships and the outcomes they have achieved?
- In general, how would you describe trend in the partnership.
 - Trends in digitalization of media outlets.
- d. In your work have you experienced any challenges with these partnerships? Example: Resource limitation, Risk aversion and Resistance to Change, the of awareness or understanding of the benefits and opportunities of collaboration between media outlets and start-ups/IT companies
- e. What specific type of start-up/IT companies that are commonly involved in these partnerships?
- Identify any innovative ideas or solutions proposed by the start-ups and IT companies that could benefit media outlets.
 - Assess the scalability and adaptability of the offerings provided by the start-ups and IT companies.
- f. What are the potential benefits of media outlets partnering with start-ups and IT companies? How can such collaborations enhance media outlets' digital presence and audience engagement?
- Can be connected to each model mentioned.

4. Identified Gaps in Partnerships

- a. Please identify current gaps or challenges related to partnerships between the media and IT/digital innovation sector in the Western Balkans!
- b. Are there any partnerships that have not been explored or opportunities that remain untapped?

5. Future Partnerships and Collaboration

- a. What type of partnership do you consider relevant between media outlets and start-up/IT companies - what themes or areas of collaboration could be explored?
 - in the first place indicate on future partnerships among GIZ's 23 strategic media partners and potentially also on synergies and collaborations for GIZ's small grants beneficiaries
- b. Please give me your opinion about following type of partnerships:
 - i. Joint content creation
 - ii. Distribution partnerships
 - iii. Product partnerships
- c. Which one most suits your needs? What are the potential problems? Can you identify any success story?
- d. Can you think of any innovative content formats or interactive tools that media outlets could develop in partnership with start-ups or IT companies?