Digital connectivity under the WBIF
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1. INTRODUCTION

This guidelines aim to clarify the scope of digital connectivity and the eligibility of projects under WBIF.

The support to the Digital Connectivity under Western Balkans Investment Framework aims to contribute to the Western Balkan region's extensive digital infrastructure investment needs, as a complement to the adoption of the digital *acquis* in the framework of the EU accession process. This is in line with the WBIF objectives.

Digital infrastructure is supported by the WBIF since 2018 as a conclusion of the 17th WBIF Steering Committee meeting in Frankfurt (13th December 2017). The extension of the WBIF eligibility sectors to Digital Infrastructure contributes to the process of digitalisation of the Western Balkan region. The support provided through the WBIF aims at preparing mature investment projects.

Digital Connectivity under WBIF will contribute to the EU perspective of the Western Balkan region in the digital sphere, drawing lessons from the implementation of the EU Digital Single Market (DSM) in the EU and facilitating the digital integration of the European continent.

Digital Connectivity in the Western Balkans must be built on reliable, trustworthy, high-speed, affordable networks and services that safeguard consumers and citizens' fundamental rights to privacy and personal data protection while also encouraging innovation.

Solid infrastructures, resources and services are the pillars towards a thriving data-driven economy. This includes broadband, open data portals and research infrastructures that support data-driven innovation, based on fast internet and the availability of large and flexible computing resources (including high performance computing, grid and cloud computing infrastructures and services, and statistical infrastructures). The WBIF could help support the preparation of data infrastructure, to interconnect public administrations, research and education networks within an economy, the region or with the EU.

2. SCOPE

Broadband networks provide the backbone for digital products and services which have the potential to support all aspects of citizens in the Western Balkans. The Commission has identified fixed broadband internet connectivity as a priority area for potential WBIF support.

WBIF broadband connectivity can also help prepare infrastructure towards connectivity in a gigabit society and other EU initiatives such as: Infrastructures for scientific data (like European Open Science Cloud, including connection with GÉANT), High performance computing (HPC)).

Relevant WBIF investments, by blending EU grants with loans from International Financial Institutions increase the leverage of EU assistance, create synergies and can complement other funding mechanisms such as national allocations of the Instrument for Pre-Accession Assistance (IPA), and existing digital initiatives where Western Balkans economies are already participating, like Broadband Competence Offices (BCO), Digital Innovation Hubs (DIHs), or the cybersecurity programme under IPA II.

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3. BACKGROUND –DIGITAL CONNECTIVITY

3.1. The key role of high-speed broadband networks

The development of high-speed networks today is having the same impact as the development of electricity and transportation networks had a century ago. Services are converging and moving from the physical into the digital world, universally accessible on any device, be it a smartphone, tablet or a personal computer. Digitalisation is a precondition for industry to develop and remain competitive.

A fast and secure Internet of high quality is a prerequisite for a modern, futureproof society and economy. Broadband infrastructure and services are fundamental components of the Internet. The Western Balkans has significantly lower broadband penetration rates than the EU Member States average. Especially rural areas are lacking broadband connections. This is a challenge, but also an opportunity. The Western Balkans can leapfrog, i.e. passing to a state of the art, fibre based broadband without passing the multiple copper-based stages that is usual for the early adopters of broadband. Fibre is cost-efficient and reliable, something that can accelerate the rollout pace.

The development of broadband infrastructure lags behind in several areas – i.e. certain projects are not bankable for private sector actors. Investment support could enable the much-needed development of broadband infrastructure to connect, for example, rural, less densely populated areas. Western Balkan economies are increasingly prioritizing these investments but flag the need for blended investment mechanisms – e.g. investment grants, blended financing, interest rate subsidies.

The EU can contribute to the Western Balkans broadband roll-out. During the 2014-2020 programming period, the EU made available a wide variety of financial tools to support EU Member States and private investors to boost broadband investment. Some examples of concrete projects are

- Equal access to fast broadband across Poland
- Rural Network project in Slovenia;
- Ultra-fast broadband infrastructure for Sicily;
- Next-generation network for rural areas of Latvia;

3.2. Broadband connectivity in the Digital Agenda for the Western Balkans

The Western Balkans Summit in Trieste (July 2017) endorsed a multi-annual action plan for digital development as part of the "Regional Economic Area". This plan enhances cooperation between the different economies, while including them into already existing EU structures in order to facilitate the exchange of best practices and reduce the digital divide. The digital components of Multi-annual Action Plan for a Regional Economic Area in the Western Balkans (MAP) focuses on four key policy areas:

(i) Broadband connectivity;
(ii) Cyber security
(iii) eSkills; and
(iv) Digitisation of industry

The first policy area focuses on broadband networks – and should ultimately result in large-scale efficient and smart investments in broadband infrastructure. Focusing on a higher

level of broadband connectivity (both in coverage and speed) is interconnected to, and key for, achieving tangible results in the other three policy areas. These policy areas require good digital service infrastructures in order to ensure the supply of innovative and competitive services to both consumers and businesses (and could therefore act as an important lever for socio-economic development, high value jobs generation and a vibrant knowledge-based society).

In other words, the full economic and social benefits of a digital transformation will only be achieved if a widespread deployment and take-up of high capacity internet networks is achieved – both in urban as in rural areas and across all actors in society.

On the 6th February 2018, the European Commission presented "*A credible enlargement perspective for and enhanced EU engagement with the Western Balkans*". In May 2018, at the Sofia Summit, The Digital Agenda for the Western Balkans became part of the one of the six flagships for this initiative. Action 5.2 of this flagship aims to support the deployment of broadband in the Western Balkans.

3.3. The Digital Single Market Strategy

The Digital Single Market Strategy for Europe sets out the following target for 2025: "*All European households, rural or urban, should have access to networks offering a download speed of at least 100 Mbps, which can be upgraded to 1 Gigabit*". The DSM has an ambitious agenda that needs to be backed with necessary investments in the current EU member states to achieve these targets.

The Western Balkan economies await a challenging task to close the gap with the current EU member states – in general the internet speed and accessibility of broadband connections in the Western Balkans are significantly below the EU average. Furthermore, the economies have to work towards the ambitious goal set out in the DSM. Therefore, a large amount of investments will need to follow in the coming years to efficiently use, improve and extend the current broadband infrastructure. While most of these investments should come from private operators, it is clear that in certain areas some form of public (co)financing will be necessary. Public intervention should focus on preparing digital projects and reducing the cost of investments, and where necessary provide public funding within the framework of national broadband strategies.

4. THE ADOPTION AND SCOPE OF DIGITAL CONNECTIVITY IN THE WBIF

TA under the WBIF should lead to the identification and establishment of mature projects that are eligible for investment funding. These projects have to be connected to the EU's strategy on connectivity for a European Gigabit Society. Achieving this objective will be very challenging in rural areas and other disadvantaged regions (remote, mountainous or sparsely populated areas) where depopulation and a lack of economic opportunities are higher. Today, broadband projects in remote areas are struggling to find grants and funds for investment. In order to support the Western Balkan economies and private investors, as well as to promote economic growth and opportunities, WBIF funding could provide financial tools that can boost broadband investment in the region.[1]

[1] For an overview of EU funding for Broadband (not accessible for Western Balkan economies): https://ec.europa.eu/digital-single-market/en/news/overview-eu-funding-broadband

5. BROADBAND CONNECTIVITY CHALLENGES IN THE WESTERN BALKANS

The Western Balkan region faces important and different challenges than most of the EU member states when it comes to the development of their broadband connectivity. Achieving convergence is necessary in the light of a possible accession to the EU's DSM, but also to achieve a robust level of economic development.

Large-scale investments are necessary to catch-up with the EU and to enable a digital transition. Investments have to ensure that the developments of their broadband infrastructure is future-proof and focused towards the most pressing needs - i.e. overall penetration rate, rural-urban divide, low broadband speeds and connecting schools, governments and health institutions.

5.1. The low level of broadband penetration rates

The following table highlights one of the main critical challenges: the broadband penetration rate in the Western Balkans is significantly lagging behind the EU-average.

> Note: most EU-economies have achieved a certain level of maturity in their broadband penetration rate – i.e. a percentage between 30-40% which corresponds with universal broadband access for all inhabitants. Western Balkan economies need to catch-up with the European Union

Table 1 – Fixed broadband penetration rate (per population) in 2016

	EU28[2]	AL	BA	ME	MK	RS	KS
2013	29.2%	6.4%	13.4%	15.4%	N.A.	16.4%	9.2%
2014	30.5%	7.3%	14.2%	16.7%	N.A.	17.2%	10.5%
2015	31.6%	8.8%	16.6%	18.1%	N.A.	18.7%	11.9%
2016	32.7%	9.3%	17.4%	18.5%	18.4%	20.5%	13.1%

Obtaining higher penetration rates is necessary to enable a digital transition in Western Balkan economies – in other words; a further development of broadband penetration rates is needed for the development of a digital ecosystem or to simply provide access to e-commerce, e-government, e-health applications. The current globalized and interconnected economy requires also internet access for the efficient functioning of an economy – e.g. transportation, logistics, and payments.[3]

[2] Most EU-economies have achieved a level of maturity in their broadband penetration rate – i.e. a percentage between 30-40% which corresponds with universal access. According to the DESI-index, fixed broadband is available to 98% of Europeans, and 76% of European homes can access high-speed broadband (at least 30 Mbps).

[3] The Baltic states and Romania / Bulgaria can be inspiring examples for the Western Balkan region. These economies have significantly higher broadband penetration rates in comparison to their level of economic development. A result of a well-developed broadband strategy aimed at leapfrogging, but also obtaining optimal economic advantage of the digital transition. Western Balkans economies could learn from these trajectories – or even obtain a higher level of leapfrogging, by adopting best practices in their broadband strategy.

5.2. The rural-urban divide in broadband access

Particularly challenging in the Western Balkan economies is the significant gap of broadband coverage between rural and urban areas, and between income levels. This lack of access can distort an even, well-balanced economic development in a country. Nevertheless, it should be one of the key priorities to close this gap or to mitigate this adverse effect in the best possible way – there is a lack of knowledge on this field and a need for TA to obtain better insights.[4]

Most Western Balkan economies are aware of the necessity to develop their broadband infrastructure to connect rural, less densely-populated areas. This 'rural broadband development' should be prioritized, but will be very challenging – TA could enable knowledge and capacity building in order to define the right projects, type of government support and secure successful implementation with a long-term perspective.

5.3. The low broadband speed in the Western Balkans

Obtaining a higher broadband penetration is one thing, but it says nothing meaningful about the quality of access – i.e. few households in Western-Balkan economies have access to speeds above 10 Mbit/s, which limits the ability to take greater advantage of the internet. Several studies point out that only broadband speeds higher than 10 Mbit/s can bring significant economic benefits such as greater innovation and productivity, higher household income, social benefits (improved access to e-services, e-health, education and banking services) and environmental benefits (more efficient energy consumption).

Table 2 – Distribution of retail broadband lines by download speed (2016)

	BA	**ME**
≤ 2 Mbit/s	4.75%	19.45%
2-10 Mbit/s	65.67%	50.31%
≥ 10 Mbit/s	29.52%	30.24%

A low broadband speed only enables basic internet functions – i.e. e-mail, web surfing; but is not capable of allowing a true digital transformation towards more complex applications. The ambitious goals of the DSM-strategy have to been seen in this light and should also be the key objective for Western Balkan economies when developing their broadband infrastructure because the acquired level broadband speed will be at least 100 Mbps for all European households in 2025.

Note: The infrastructure in the EU countries is more developed – i.e. three-quarters (75.1%) of EU homes had access to connections with at least 30 Mbps actual download speed in 2016. The above-

[4] The main standard fixed broadband coverage was estimated to cover 95.5 % of homes within the EU in 2014, whereas the coverage in rural areas was estimated 83.2 %. There exist discrepancies in these figures – Western European economies do not have a significant gap between rural and urban areas, whereas Romania and Bulgaria have for example a gap of around 35% between these areas.

mentioned rural-urban divide is significantly narrower because of a strong support by the several EU-investment funds.[5]

5.4. A shift towards fibre technology is required in the Western Balkans

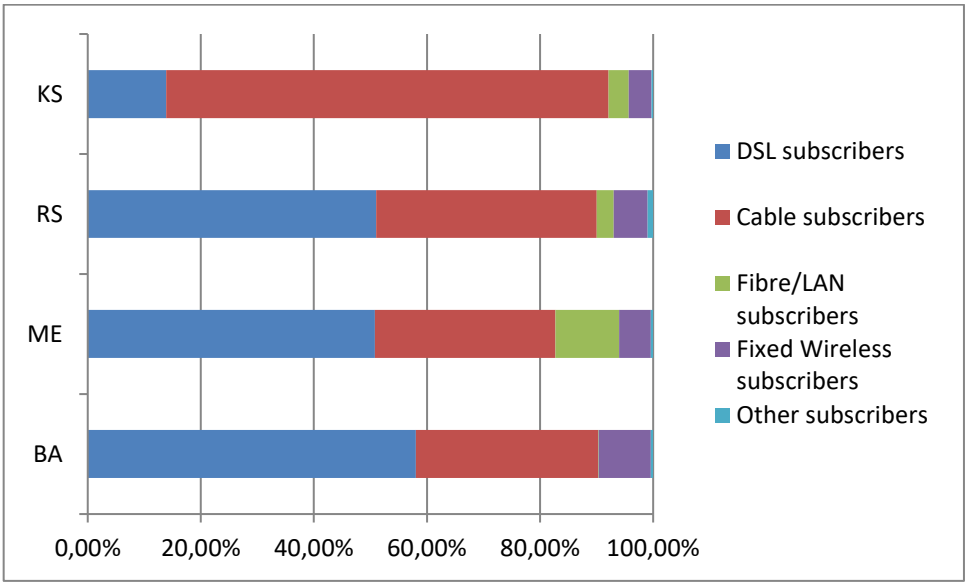
Another key challenge for the Western Balkan economies will be to invest in a broadband network infrastructure that is capable to provide higher broadband speeds. Therefore, it should take into account the future economic development and the high demands put forward in the DSM-strategy.

Fixed broadband can be delivered over different kinds of fixed lines:[6]

(i) repurposed telecom copper lines (which now support DSL-technologies)
(ii) coaxial cable (laid mainly by cable television operators)
(iii) fibre infrastructure

Fibre provides high bandwidth rates over long distances, offers capacity that can be expanded, is more secure and requires significantly less energy. According to a World Bank Group study, only investments in fibre are a long-term viable option in the future to keep up with the growing pace of connected devices, growing demand and fast evolving applications.

Table 3 – Fixed retail broadband by technology (by subscription) in 2016



The main problem with both DSL and coaxial networks are their limitations to keep up with the ever-increasing requirement of higher bandwidth rates. Western Balkan economies should shift their broadband investment strategy towards fibre technology and the creation of new networks rather than relying on the older DSL or cable networks – often controlled by state-owned companies.

[5] E.g. Connecting Europe Facility (CEF), European Regional Development Fund (EFRD), European Agricultural Fund for Rural Development (EAFRD), European Fund for Strategic Investments (EFSI).

[6] For more information about broadband technologies: https://ec.europa.eu/digital-single-market/en/news/comparison-broadband-technologies

5.5. The difference between mobile and fixed broadband infrastructure

Mobile broadband should be distinguished from fixed broadband access. It is necessary to invest in a strong fixed broadband infrastructure for high-end purposes. Only fixed broadband can fulfil a real digital transformation because of the high-speed requirements of digital applications.

In other words, mobile broadband is an increasingly important complement of fixed broadband access – this should not be underestimated in Western Balkan economies. However, it should not be regarded as a substitute for fixed broadband networks.

> Note: nevertheless, in specific cases, it can be regarded as a substitute for fixed broadband networks. Geographic issues (i.e. sparsely populated and difficult accessible areas) could necessitate the reliance on fixed-wireless options.

6. DIGITAL INFRASTRUCTURE UNDER WBIF

Gigabit connectivity for all of the main socio-economic drivers and access to connectivity offering at least 100 Mbps for all European households are two of the main strategic objectives of the EU's strategy on Connectivity for a European Gigabit Society. In order to fulfil this vision, a strong broadband infrastructure is a pre-requisite.

Taking into account information provided by Beneficiaries about evolving investment needs and also experience in the EU, potential projects may include infrastructure projects in the following domains:

- **Broadband**: **The main focus of the WBIF is on high level of broadband connectivity.** Both in coverage and speed, broadband is key to develop the digital transition. Industry, government services, and the economy at large require an efficient digital services infrastructure in order to ensure the supply of basic services of the digital age, and promote innovative and competitive services to citizens and business.

  In addition, the following investments in infrastructure can be considered:

- **e-Infrastructures** which address the needs of scientists and researchers for digital services in terms of networking, computing and data management. An example is the European Open Science Cloud, which aims to develop a trusted, open environment for the scientific community for storing, sharing and reusing scientific data and results. It will provide European science, industry and public authorities with world-class digital infrastructure that bring state of the art computing and data storage capacity to the fingertips of any scientist and engineer in the European Union. WBIF can support the development of eInfrastructures in the region and also facilitate their access to EU infrastructure.

- The EU has several projects to **interconnect administration, research and education networks with speeds of up to 500 Gbps.** The most well-known project is the GÉANT network that interconnects Europe's national research and education networking (NREN) organisations, operates at speeds of up to 500 Gbps. The Western Balkan region is only to a limited extent included in the network. GÉANT

can also serve as an example for projects that aim for more interconnectedness on a national or regional level in the Western Balkan region.

Inspiring examples are: New Generation Data Centre Portugal; Greek Public Services' ICT Infrastructure.

- **High performance computing (HPC)** also known as supercomputing, involves thousands of processors working in parallel to analyse billions of pieces of data in real time, performing calculations thousands of times faster than a normal computer. In the digital era, it is at the core of major advances and innovation and a strategic resource for Europe's future. Supporting HPC in the Western Balkans will open doors for cooperation with the EU, notably with neighbouring EU Member States and HPC planned centres in Sofia (Bulgaria) and Maribor (Slovenia). WBIF can support the mapping of industry, business, research needs that may require HPC capabilities to fully exploit the potential.

  Inspiring examples are: Supercomputing Center Czech Republic; Sofia Tech Park; Sunderland's Sofware City.

The EU and Member States strive for open, efficient and inclusive public institutions, providing borderless and interoperable digital public services to all citizens and businesses. *eGovernment infrastructures* support administrative processes, improves the quality of the services and increases internal public sector efficiency. Using digital technologies as an integrated part of governments' modernisation strategies can unlock further economic and social benefits for society as a whole, contributing to create an environment more conducive to investment, growth and jobs. While *eGovernment infrastructures* have not been included as eligible sub-sector in the current version of the Digital Connectivity guidelines, the WBIF could decide to include it in future guidelines following consultation of stakeholders.

7. POSSIBLE PROJECTS AREAS

- "Broadband Mapping" ALL ECONOMIES

  Several economies require TA to develop mapping of existing infrastructure and white zones. These projects should focus on identifying the suitable projects that can be financed under the WBIF.

  They should ideally lead to a common approach in all Western Balkan economies that aligns with the priorities set out in the DSM.

- "Rural/urban broadband development" ALL ECONOMIES

  Western Balkan economies struggle to obtain higher penetration rates in rural, more sparsely populated areas. These projects should focus on connecting governments, schools, health institutions; by providing investment support to projects that struggle to attract private sector support.

  TA-funding can be used to identify white zones, to develop rural broadband strategies, to set-up the right projects with a long-term view (in line with the EU's DSM).

Ideally, these studies should focus on the creation of business cases whereby private sector investments can be mobilized by public sector support.

- "Fixed-wireless for sparsely populated areas" ALL ECONOMIES

Serbia signalled their interest to apply for TA and Investment support for projects that could lead to establishment of fixed-wireless infrastructure in white zone areas. Other Western Balkan countries voiced similar ideas.

TA could lead to more knowledge/competence building and expertise in this area. Ideally, (pilot) projects should be identified and the right business cases and cooperation between public and private sector actors.

Fixed-wireless is a substitute for fixed broadband infrastructure in sparsely-populated and/or difficult accessible areas – these technologies are a solution to connected governments, schools, health institutions in the most remote areas.

- "Digital Broadband Highway" REGIONAL

Western Balkan needs more regional cooperation on the level of infrastructure investments in regional broadband connectivity. TA-funding and subsequently investment support under WBIF can pave the way for more regional interconnectivity in the Western Balkans. It could lead to important joint collaboration projects on digital connectivity in the region.

The World Bank set up the Balkans Digital Highway initiative to explore and advance infrastructure-sharing opportunities in the Western Balkans region.– The first results can be seen in "Fostering Infrastructure Sharing in the Western Balkans : Balkans Digital Highway Pre-feasibility Studies"(June 2019).

- "Infrastructure-sharing" ALL ECONOMIES

TA-funding should explore how the development of broadband connectivity infrastructure projects can be included in other projects – i.e. energy, telecom, rail, road infrastructure projects. It should lead to the adoption of a systematic approach that could lead to mutual benefits and cost-sharing.

- "Research infrastructures (mapping)" ALL ECONOMIES

State-of-the-art research infrastructures (including eInfrastructures) becomes increasingly complex and costly, often requiring integration of different equipment, services and data sources, as well as extensive transnational collaboration. TA-funding should explore needs related to research infrastructures that could provide resources and services for research communities to conduct research and foster innovation. The infrastructure can be used beyond research (e.g. public services) and may include major scientific equipment or sets of instruments collections, archives or scientific data, computing systems and communication networks, any other research and innovation infrastructure of a unique nature which is open to external users

TA should lead to cooperation with other EU initiatives such as the European Research Infrastructures, the European Open Science Cloud, or the GÉANT Project.

- "Digital infrastructure in other sectors (transport, environment)"
  ALL ECONOMIES

  TA may explore synergies related to digital and other sectors, especially transport and environment.

  Digitalisation, new technologies and big data have the potential to change the way cargo and traffic flows are organised and managed, they generate business opportunities and pave the way for innovation, new services and business models. It enables cooperation between supply chain actors, better supply chain visibility, real-time management of traffic and cargo flows, simplification and the reduction of administrative burden, and allows for a better use of infrastructures and resources, thereby increases efficiency and lowers costs.

  To reap those benefits transport should become digital by default. Electronic data should flow seamlessly through supply chains including the exchange of data with public authorities and between businesses. Data should be used data to generate added value for business.

  When building new roads, adding a duct that can be used for broadband cables is a marginal extra cost at the time of construction (see also the Broadband Cost Reduction Directive 2014/61/EU). It is building in the technology for the future.

8. ANNEX I. INVESTMENT AND TA BROADBAND DEVELOPMENT NEEDS PUT FORWARD BY WB6

Note: These projects were a preparation made by representatives of the Western Balkan beneficiaries in the framework of a breakout session on digital integration of the RCC MAP Digital Contact Points on the 12th of March 2018. The representatives emphasized the need for WBIF investment in the field of broadband connectivity and mentioned several possibilities for future projects.

Digital capital investment needs

Albania - *Single project Pipeline*

Project for Regional Broadband Infrastructure Development

Description: The project aims to improve the digital connection in the cross border area by creating conditions for cross-border services between the Western Balkan countries and strengthening of economic and social development in the region.

Total Investment Cost: EUR 48,000,000 (Preparation: 3,500,000, Implementation: 44.500.000); Project status / Details: Premature; Strategic importance: Regional

Improving Tourism and business related Infrastructure in the cross border area in Korca, Albania

Description: The project aims to improve the digital connection in the cross border area by creating conditions for cross-border services between the Western Balkan countries and strengthening of economic and social development in the region.

Total Investment Cost: EUR 26,520,000; Project status / Details: Mature; Strategic importance: National/Regional

Serbia *– Economic Reform Program 2018-2020*

Development and improvement of the national broadband communications infrastructure

In November 2016, the National Broadband Network Implementation Plan project, which includes analyses of, plans and cost estimates for the further development of the broadband access, was started. During the three upcoming years, Serbia plans to adopt the Law on Broadband Communications Infrastructure; connect education and culture institutions to AMRES; prepare and plan the establishment of a unique national telecommunication network; analyse, prepare and design pilot projects; operationally establish a single national telecommunication network; construct access broadband networks in municipalities across the country.

Funds for financing the reform in the amount of EUR 910,408 are provided by the 2018 Budget Law. The allocation for financing the reform in 2019 and 2020 amount to EUR 646,408 per each year. Potential non-budget funds are provided for 2018, 2019 and 2020 in the amount of EUR 58 million per each year.

This reform is a follow up of the *Economic Reform Program 2017-2019* which envisages the construction of broadband access networks in municipalities across the country and to make the single national telecommunications network operational.

North Balkans Next Generation Access Network (NOBAL NGA network)

A trilateral project of cross-border empowerment of national public networks of Bulgaria, Romania and Serbia.

The main goal of the proposal is to provide the respective government bodies and public institutions with a high-speed protected communication channels to exchange information with corresponding bodies from the other countries. The objectives encompass:

- Establish cross-border links between the NGA public networks of the three countries;
- Invest in NGA broadband development in border regions to reach the Digital Agenda 2020 indicators;
- Provide free active and passive access to research, education, and other public networks relevant to EU funded and supported projects and initiatives;
- Backup the national NGA infrastructure and public services via international passive and active topology loops;
- Develop network protection tools and systems to guarantee high-level cybersecurity of the international feeding links;
- Establish ground and tools for the relevant government bodies to exchange information in a secure and trusted manner;

- Foster a favourable environment for cross-border projects in electronic government, education, health, and other e-services

Kosovo* - *Economic Reform Program 2017-2019*[7]

Extending relevant ICT network infrastructure for socio-economic development - As a continuation of ERP 2016-2018 the reform aimed to enhance access and use of ICT through the extension of broadband infrastructure and supporting digital businesses to fully participate and maximize the benefits of digital economy in a global market. Based on NDS, Digital Agenda for Kosovo 2013-202037 and Strategy on IT38, through this measure it is aimed to achieve the coverage (penetration) with broadband infrastructure to the extent of 98% households. It anticipates:

- Expansion of high-speed broadband infrastructure will continue in uncovered areas with a focus on rural areas and including all schools, libraries, health institutions that are in that area within **2018**. Estimated cost of implementation 9 million EUR.
- Expansion of high-speed broadband infrastructure will continue in uncovered areas with a focus on rural areas and including all schools, libraries, health institutions that are in that area within **2019**. Estimated cost of implementation 9 million EUR.

Broadband connectivity TA projects approved since 2018 under the WBIF

Albania Regional Broadband Infrastructure Development

Higher penetration rates and improved access to the internet are essential to enable a digital transition in the Albanian economy. The penetration rate of fixed broadband has reached 10%, the lowest in the region, and covers only 30% of households, with a significant urban-rural divide - 15% average in urban areas and 1% in rural areas. The current bandwidth speed in fixed and mobile networks is less than 30 Mbps.

Building on the results of a pre-feasibility study developed under the UNDP in 2017, the WBIF allocated a €0.5 million grant in June 2018 for the next stage of the project - feasibility study and development plan for efficient and smart investments in broadband infrastructure across the country. ICT investments covered by the project will ensure better internet connection for schools, hospitals, public institutions, local administrations and households.

North Macedonia Digital Economy (NODE) Project

The overall rationale for the Project is the need to address and rectify inequalities in socioeconomic development across the country by bridging national Digital Infrastructure gaps and improving Digital cohesion. A specific objective this Project is pursuing is the following:

To improve access to high-speed broadband services in Project areas and to improve access to online knowledge sources, online services, and labour markets for citizens, public institutions and businesses.

As a result of the implementation of the foreseen activities the following major results are expected to be achieved:

- Significant decrease of White areas in the country;

[7] * This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence

- Improved connectivity in justified Grey areas;
- Significant decrease of unconnected public institutions;
- Developed infrastructure for connection of free-of-charge WIFI internet access in identified public areas;
- Improved technical viability to provide ultra-fast internet access for Households;
- Increased number of ultra-fast access subscriptions.

Broadband Infrastructure Development in Montenegro

The main objective of the project is to increase broadband coverage and availability of new generation broadband networks to the currently uncovered (mostly rural) areas in Montenegro. This provides strong support to cross-border linking of ICT infrastructure and digital integration between Western Balkan countries with the pan-European digital market as well. To support the project, the development of National Operational Broadband Plan is required, in order to identify areas with the lack of commercial interest and to define models for technical and financial solutions for located areas, so-called "white zones".