



GOVERNMENT OF MONTENEGRO
MINISTRY OF ECONOMY

INDUSTRIAL POLICY OF MONTENEGRO 2019-2023

Podgorica, October 2019

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Abbreviations

AES	Program for authorized economy subjects	OPS	Program ovlaštenih privrednih subjekata
AMECO	European Commission Annual macro-economic database	AMECO	Godišnja baza makroekonomskih podataka Evropske komisije
CCEQ	EU Candidate and Potential Candidate Countries' Economic Quarterly	CCEQ	Ekonomski kvartalni izvještaj o zemljama kandidatima i potencijalnim kandidatima
CDPM	Cabinet of Deputy Prime Minister	KPPV	Kabinet Potpredsjednika Vlade
CEFTA	Central European Free Trade Agreement	CEFTA	Centralno-evropski sporazum o slobodnoj trgovini
COSME	EU programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises	COSME	Program EU za konkurentnost malih i srednjih preduzeća 2014-2020
COST	European cooperation in science and technology	COST	Program EU za saradnju u oblasti nauke i tehnologije
CPM	Cabinet of Prime Minister	KPV	Kabinet Predsjednika Vlade
DB WB	Doing Bussines World Bank Report	DB SB	Izveštaj Svjetske Banke "Doing Business"
DG GROWTH	Directorate-General for Internal market, industry, entrepreneurship and SMP	DB GROWTH	Generalni direktorat za unutrašnje tržište, industriju, preduzetništvo i MSP
DG CNECT	Communications Networks, Content and Technology	DG CNECT	Mreže za komunikaciju, sadržaj i tehnologiju
EaSI	Programme for Employment and Social Innovation	EaSI	Program EU za zapošljavanje i socijalne inovacije
EBRD	European Bank for reconstruction and development	EBRD	Evropska banka za obnovu i razvoj
EC	European Commission	EK	Evropska komisija
EDIF	Western Balkans Enterprise Development & Innovation Facility	EIDF	Fond za razvoj inovativnih preduzeća Zapadnog Balkana
EEN	Enterprise Europe Network	EMP	Evropska mreža preduzetništva
EFSI	European Fund for Strategic Investments	EFSR	Evropski Fond za Strateški Razvoj
EIA	Environmental Impact Assessment	EIA	Procjena uticaja na okruženje
EIB	European Investment Bank	EIB	Evropska investiciona banka
EIICM	European informative and inovation centre	EIICM	Evropski informativni i centar za inovacije
EIF	European Investment Fund	EIF	Evropski investicioni fond
EMAS	Eco-Management and Audit Scheme	EMAS	Eko menadžment i kontrolne šeme
ENEF	WB EDIF Enterprise expansion fund	ENEF	Fond za razvoj inovativnih preduzeća ZB -za razvoj
EIO	European Integration Office	KEI	Kancelarija za Evropske integracije
Erasmus+	EU programme for education, training, youth and sport	Erasmus+	Program EU za obrazovanje, trening, mlade i sport
EU	European Union	EU	Evropska unija
EUSAIR	EU Strategy for Adriatic Ionian Region	EUSAIR	EU strategija za jadransko jonski region
EUSDR	EU Strategy for Denube Region	EUSDR	EU strategija za dunavski region
EUREKA	Intergovernmental organisation for market-driven industrial R&D	EUREKA	Međuvladina organizacija za istraživanje i razvoj vođena potrebama tržišta
EUROSTAT	EU statistical office	EUROSTAT	Statistički zavod EU
FDI	Foreign direct investment	SDI	Strane direktne investicije
FSC	Forest Stewardship Council certification	FSC	Sertifikacija gazdovanja šumama
GCI	Global Competitiveness Index	GCI	Indeks globalne konkurentnosti
GDP	Gross Domestic Product	BDP	Bruto domaći proizvod
GEI	Global Entrepreneurship Index	GEI	Index globalnog preduzetništva
GETI	Global Enabling Trade Index	GETI	Globalni index omogućavanja trgovine
GERD	Gross domestic expenditure on research and development.	GERD	Bruto domaći izdaci za istraživanje i razvoj
GII	Global Inovation Index	GII	Index globalne inovacije

GMP	World Health Organisation Good Manufacturing Practice	GMP	Dobre prakse u proizvodnji Svjetske zdravstvene organizacije
GVA	Gross Added Value	BDV	Bruto dodata vrijednost
H2020	Horizon 2020 EU Research and Innovation programme	H2020	Program EU Horizont 2020 za istraživanje i inovacije
ICT	Information and communication technology	ICT	Informacione i komunikacione tehnologije
IDF MNE	Investment and Development Fund of Montenegro	IRF CG	Investiciono-razvojni fond Crne Gore
IESE	The Venture Capital & Private Equity Country Attractiveness Index	IESE	Indeks privlačnosti rizičnog i privatnog kapitala
IFI	International Financial Institutions	MFI	Međunarodne finansijske institucije
IMF	International Monetary Fund	MMF	Međunarodni monetarni fond
IP 2023	Industrial policy	IP 2023	Industrijska politika
IPA	Instrument for pre-accession	IPA	Prepristupni instrument
IPARD	Rural Development component of the Instrument for Pre-accession Assistance	IPARD	Prepristupni instrument za ruralni razvoj
IPCEI	Important projects of common European interests	IPCEI	Važni projekti od zajedičkog evropskog interesa
IPI	Industrial production index	IPI	Indeks industrijske proizvodnje
ISSP	Institute for Strategic Studies and Prognoses	ISSP	Institut za strateške studije i projekcije
ITRE	European Parliament Committee on Industry, Research and Energy	ITRE	Komitet za industriju, istraživanje i energiju Evropskog Parlamenta
KET	Key enabling technologies	KET	Ključne tehnologije u nastajanju
LEIT	H2020 Leadership in Enabling and Industrial Technologies	LEIT	H2020 Liderstvo u rastućim i industrijskim tehnologijama
MAP REA	Multi-Annual Action Plan for Regional Economic Area	MAP REA	Višegodišnji akcioni plan za regionalnu ekonomsku oblast
MARD	Ministry of Agriculture and Rural Development	MPPR	Ministarstvo poljoprivrede i ruralnog razvoja
MC	Ministry of Culture	MK	Ministarstvo kulture
MD	Ministry of Defence	MO	Ministarstvo odbrane
MSDT	Ministry of Sustainable Development and Tourism	MORT	Ministarstvo održivog razvoja i turizma
ME	Ministry of Economy	MEK	Ministarstvo ekonomije
MED	Ministry of Education	MP	Ministarstvo prosvjete
MF	Ministry of Finance	MF	Ministarstvo finansija
MFA	Ministry of Foreign Affairs	MVP	Ministarstvo vanjskih poslova
MFF	The Multiannual Financial Framework	MFF	Višegodišnji Finansijski Okvir
MH	Ministry of Health	MZ	Ministarstvo zdravlja
MIDAS	Montenegro Institutional Development and Agriculture Strengthening	MIDAS	Projekat institucionalnog razvoja i jačanja poljoprivrede CG
MIPA	Montegrin investment promotion agency	MIPA	Agenciju za promociju investicija Crne Gore
MLSW	Ministry of Labor and Social Welfare	MRSS	Ministarstvo rada i socijalnog staranja
MMSP	Micro, small and medium enterprises	MMSP	Mikro, mala i srednja preduzeća
MNGOV	Government of Montenegro	VCG	Vlada Crne Gore
MONSTAT	Montegrin statistical office	MONSTAT	Uprava za statistiku Crne Gore
MPA	Ministry of Public Administration	MJU	Ministarstvo javne uprave
MS	Ministry of Science	MNA	Ministarstvo nauke
MSP	Small and medium sized enterprises	MSP	Mala i srednja preduzeća
NATO	North Atlantic Treaty Organization	NATO	Sjevernoatlantski Savez
NACE	Nomenclature generale des Activites economiques	NACE	Klasifikacija djelatnosti
NCTS	New computerised tranzit system	NCTS	Novi komjuterizovani tranzitni sistem
NIPAC	National IPA Coordinator	NIPAC	Nacionalni IPA koordinator
NUTS	The Nomenclature of Territorial Units for Statistic	NUTS	Klasifikacije teritorijalnih jedinica za statistiku
OG	Operational objective	OC	Operativni cilj

OECD	Organisation for economic cooperation and development	OECD	Organizacija za ekonomsku saradnju i razvoj
UN	United Nations	UN	Ujedinjene Nacije
UNDP	United Nations Development Program	UNDP	Program za razvoj Ujedinjenih Nacija
PAMN	Program for Accesion of Montenegro into the EU	PPCG	Program pristupanja Crne Gore
R&D	Research and development	R&D	Istraživanje i razvoj
RCC	Regional Cooperation Council	RSS	Regionalni Savjet za Saradnju
RCA	Revealed comparative advantage	RCA	Otkrivene komparativne prednosti
RIS ^a	Research and Innovation Strategies for Smart Specialisation	RIS*	Strategija istraživanje i inovacije za pametnu specijalizaciju
S ³ P	S3 smart specialisation platform	S ³ P	Platforma S3 za pametnu specijalizaciju
SBA	Small Business Act	SBA	Akt o malom biznisu
SEE 2020	South East Europe 2020	SEE 2020	Strategija Jugoistočna Evropa 2020
SEEIST	South East European International Institute for Sustainable Technologies	SEEIST	Međunarodnog instituta za održive tehnologije na prostoru Jugoistočne Evrope
SG	Strategic goal	SC	Strateški ciljevi
SIDA	Swedish International Development Cooperation Agency	SIDA	Svedska Međunarodna Agencija za saradnju i razvoj
SNA	System of National Accounts	SNR	Sistem nacionalnih računa
SPIRE	Sustainable Process Industry through Resource and Energy Efficiency	SPIRE	EU inicijativa pokrenuta od strane sedam sektora prerađivačke industrije
SWOT	Strengths weaknesses, opportunities, threats	SWOT	Analiza snaga-slabosti-prilika-prijetnji
TEU	Treaty establishing the European Union	UEU	Ugovor o Evropskoj uniji
TFEU	Treaty on the functioning of the European Union	UDEU	Ugovor o funkcionisanju EU
VB TLI	Trade Logistics Index	VB TLI	Indeks trgovinske logistike
VCPE	Venture Capital and Private Equity Country Attractiveness Index	VCPE	Indeks privlačenja rizičnog i privatnog kapitala
WB	World Bank	SB	Svjetska banka
WBIF	Western Balkans Investment Framework	WBIF	Investicioni okvir za Zapadni Balkan
WEF	World Economic Forum	SEF	Svjetski ekonomski forum
WTTC	World Travel & Tourism Council	WTTC	Svjetski savjet za putovanja i turizam
ZZZCG	Employment Agency Montenegro	ZZZCG	Zavod za zapošljavanje Crne Gore

I. INTRODUCTION

1. Importance of Industrial policy of Montenegro

Industrial policy of Montenegro 2019-2023 (Hereinafter referred to as: IP 2023) is a strategic document for the development of the competitiveness of the economy of Montenegro with a focus on the industrial sector. IP 2023 recognizes that the real drivers of change and development are legal entities that need to maximize their potential for growth, development and competitiveness with adequate support.

IP 2023 represents a continuation of activities implemented within the Industrial policy until 2020 (Hereinafter referred to as: IP 2020) which was adopted in June 2016. After three years of implementation, in February 2019 a mid-term review of the effects of implementation was prepared, which was a basis for a revision and, in accordance to the recommendations, a new policy for the period 2019-2023 was formulated.

The main purpose of the IP 2023 is to establish a strategic framework and industrial development priorities that are realistic and achievable, taking into account the available natural, human and financial resources for achieving dynamic economic growth, sustainable development and increasing the number of jobs through coordinated interventions by the relevant institutions.

A competitive industrial base is driving the growth of productivity, innovation and investment, while encouraging employment, and providing a better standard of living for all. Montenegro operates in an intensely competitive global environment, where changes are the only constant, and where changes have a strong impact on the transformation of our legal entities, and as a small and open system, with Euro as an official currency in place, Montenegro must constantly adapt to these changes and create space for growth and development. Although a significant economic progress has been made in recent years, the growth potential of the industrial sector has not been sufficiently valorized and the document IP 2023 proposes coordinated activities in the context of strengthening the model of integrative industrial policy.

The strategic development framework of the Montenegrin economy sets an ambitious, but also achievable perspective for future growth. The realization of the development agenda, or the agenda of continuous economic reforms, requires the coherence of government policies and investments, in areas that support long-term sustainable development, and in conditions of a stable and stimulating business environment. The added value of the Montenegrin development policy should be its rapid adaptation to changes, good coordination of policies, forecasting and projecting of priorities, and ensuring that **industrial policy and complementary policies** are well linked and targeted, respecting the lessons learned from the previous period and including the development framework of the new challenges such as the stimulating innovation environment, the digital economy and the gradual introduction of a circular economy.

Analysis show that the manufacturing industry and energy sector, together with the tourism industry, as an integrative service industry which together link more branches and industries, are key strategic sectors for the long-term development of competitiveness. These strategic sectors and supporting sectors are areas with a focus on priority development in regard to the industrial policy, which should be linked to other relevant policies, in order to achieve the effective realization of strategic development goals. At the same time, modern global business requires the joint connectivity of strategic sectors with

better use of information and communication technologies, improved transport connectivity, increased use of business services for entrepreneurs.

Industrial policy is largely a horizontal policy and provides **framework general conditions for industrial competitiveness**, whose implementation provides:

- **Competitiveness** - diversified industrial base, oriented towards efficiency and productivity,
- **Modernity** - efficient use of new technologies and the development of a knowledge-based economy, with the promotion of smart specialization,
- **Dynamism** - strengthening entrepreneurship and micro, small and medium sized enterprises and their innovative potentials,
- **Attractiveness** - a business environment that attracts investments in different sectors and regions,
- **Sustainability** - improving the use of available resources based on the principles of green economy and environmental protection,
- **Integration** - linking and promoting the development of key sectors and sectors which support industrial development.

While the policy covers the period up to 2023, its actual impact can be considered in the context of the **long-term development framework** through planned support and implementation of measures aimed at promoting the internationalization of Montenegrin companies, the implementation of innovations and new technological solutions in industry, the development of a more resource efficient economy and good management of the environment, all with an aim to create greater added value to all stages of development of legal entities and the strengthening of an internationally competitive industry.

2. Scope of Industrial policy

Industrial policy refers to policy of industrial development, with the term "industry" regarding to the organization and strategic management of human, financial and physical resources that will be used to successfully respond to the growing economic challenges and competition at the global level. In other words, the industry has a wider meaning than what the concept of an industrial sector implies.

For the purposes of the creating of the IP 2023 document, the scope of the Industrial policy of Montenegro implies the domain of the **NACE sectors B-E**, in accordance with the Eurostat methodology, which defines a part of the nonfinancial „business sector“: Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D) and Water supply, sewerage, waste management and remediation activities (E). Namely, the total non-financial sector comprises sectors B to J and L to N, including the S95 Statistical Classifications of Economic Activities of the EU - NACE Rev. 2, but the IP 2023 document focuses on the previously defined **industry sector**. In addition, IP 2023 includes a number of **related investments**, or program activities in related sectors such as transport, construction, tourism and ICT. These related investments are primarily observed in the context of the multiplicative effect of programs and investments that support not only industrial development as such, but also the development of the industrial sector as a prerequisite for the development of other (related) activities, which, again, in return, stimulate industrial development. In this context, IP 2023 activities include certain programs that support the development of infrastructure activities, diversification of the tourist offer and various aspects of the innovation policy.

3. Compliance of IP 2023 with the existing strategic framework

Understanding the current development concept, based on information on the achieved level of implementation of relevant policies, is one of the prerequisites for establishing a framework for the good functioning of the industrial policy. In that sense, relevant policies and documents have been identified and analyzed, which represent a strategic development framework at the national level, and basic preconditions have been created for identifying the development potentials and orientations formulated in horizontal, thematic policies.

The Industrial policy of Montenegro for the period from 2019 till 2023, as shown in Graph 1, links with strategic national documents, as well as documents from the EU and the region. Key recommendations for the formulation of industrial policy, derived from the process of creating a comprehensive development policy of Montenegro and harmonization with the principles of industrial policy of the EU, relate to the selection of measures whose application would effectively influence the increase of international competitiveness of the country for Montenegro.

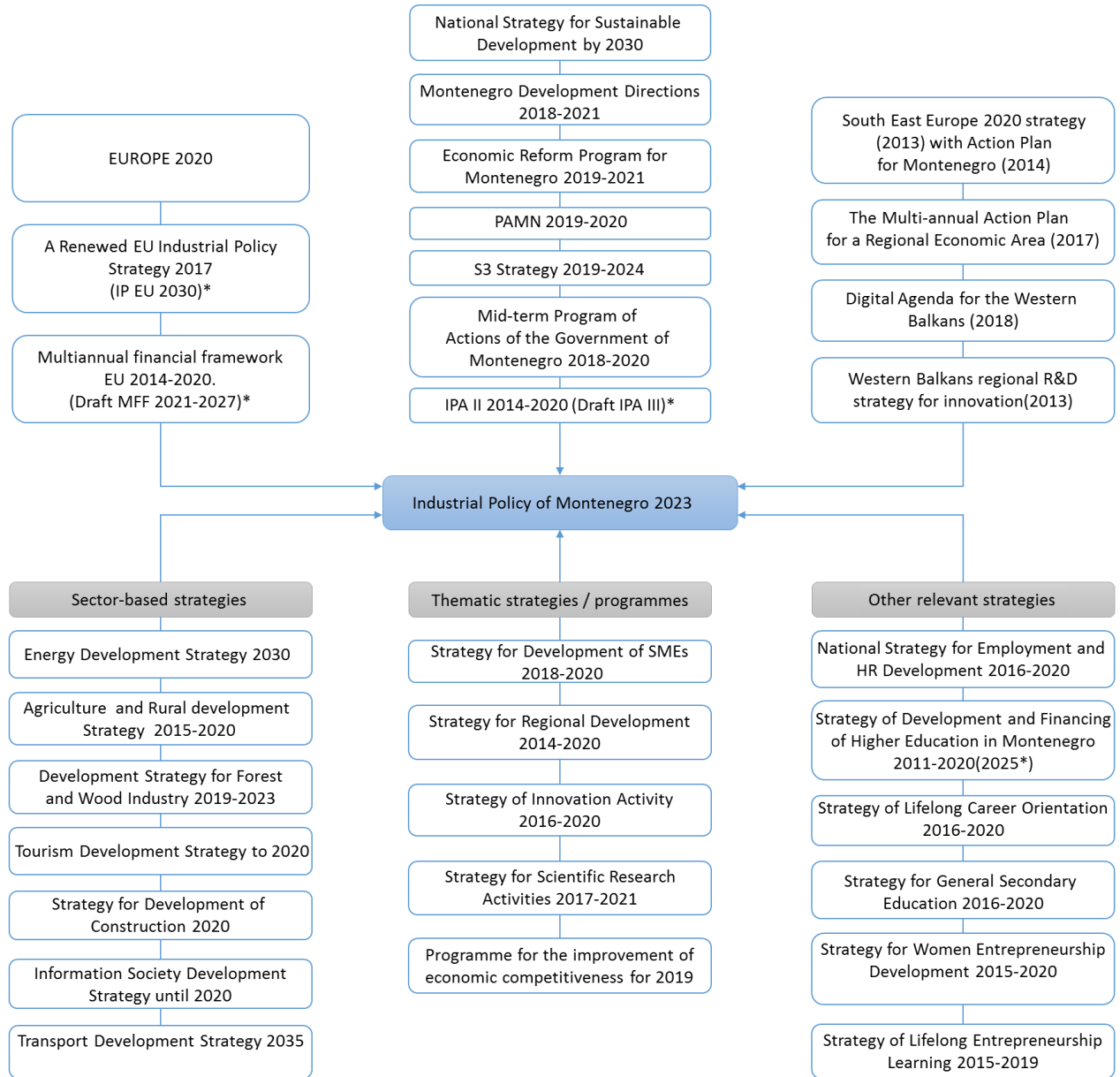
3.1. The national context

The following current **strategic documents** or the policies are of key significance for defining the framework of the Industrial policy in Montenegro:

- National Sustainable Development Strategy until 2030.
- Directions of Development of Montenegro for the period 2018-2021.
- Economic Reform Programme for the period 2019-2021.
- The Smart Specialization Strategy of Montenegro S3 2019-2024.

The following graph illustrates the linkages of strategic documents of the national, regional and EU framework:

Graph 1. Overview of the linkages between strategic documents



The National Strategy for Sustainable Development until 2030 is the umbrella, horizontal and long-term development strategy of Montenegro, which is not only referring to the environment and economy, but also on the irreplaceable human resources and precious social capital that should enable prosperous development. Industrial policy is integrated into the pillar of economic development.

The Development Directions of Montenegro for the period 2018-2021, as a mid-term umbrella development implementation document, have determined the strategic goal of development of Montenegro- increasing the quality of life in the long term. In the function of achieving the strategic development objective, four priority development sectors have been formally identified: tourism, energy, agriculture and rural development and manufacturing industry, which also represent the framework and areas for the improvement of industrial development.

The Economic Reform Programme for Montenegro 2019-2021 is the most important document of Montenegro in the economic dialogue with the European Union and the key country strategy document for medium-term macroeconomic and fiscal programming, which also contains the accompanying agenda of structural reforms important for reducing or eliminating obstacles to economic growth and strengthening the overall competitiveness of the country. Industrial policy is largely in line with ERP priority reform areas/measures, particularly in the sectoral development and development of the SMEs (ERP priority reform areas: the energy market and transport market reform, Sectoral development, The business environment and reduction of the grey economy, Research, development and innovation (RDI) and the digital economy, Trade-related reforms, Education and skills).

The Program of Accession of Montenegro to the European Union for the period 2019-2020 provides an overview of the planned activities in the negotiation chapter 20 - Entrepreneurship and Industrial policy. The EU emphasizes entrepreneurship and industry as one of the priorities for the future of the European economy and defines this chapter through the segments of entrepreneurial and industrial policy and sectoral policies that contribute to increasing competitiveness in the market. Pursuant to the principles and guidelines of the strategy Europe 2020 for growth and employment, among the objectives of the negotiation chapter 20 are the creation of a favourable business environment, the increase in domestic and foreign investments, the improvement of small and medium-sized enterprises, the increase in industrial production and the strengthening of competitiveness. The key obligation in the chapter, in the Program of Accession of Montenegro to the European Union for the period 2019-2020, is the preparation of the document Industrial Policy of Montenegro 2019-2023, which represents the continuity of activities on the fulfillment of the **closing benchmark related to the development and implementation of a comprehensive industrial policy strategy, with the support of the system evaluation of indicators and benchmarks, as suggested in the EU integrated industrial policy.**

The Medium-term Work Program of the Government of Montenegro for the period 2018-2020 states that the key priority of economic policy in the medium term is the achievement of dynamic economic growth and development as a prerequisite for increasing the standard of living of citizens. Strategic goals within IP 2023 are aligned with the objectives and key commitments of the Medium-term Work Program of the Government 2018-2020, primarily under Priority 1, with a particular emphasis on commitment 1.3 under the jurisdiction of the Ministry of Economy, which should contribute to the improvement of the competitiveness of the processing industry, through technological modernization, innovation and development of crafts. The mentioned activities are the subject of the realization covered by the Action plan for the implementation of IP 2023.

Through **the IPA II instrument**, the EU supports the competitiveness and innovation sector, in different programming years for the period 2014-2020, as well as specific projects under the Union Program (H2020, COSME, Erasmus +, EaSI and others).

In this regard, the IP 2023 also agrees with the existing **sectoral strategies**, as shown in Graph 1 - an overview of the relationship between strategic policies. The strategic objectives of the IP 2023 and certain activities given in the IP 2023 Action Plan are complementary to the activities within the strategic documents in the field of energy, transport, construction, information society, tourism, forestry and agriculture in terms of support of the mentioned sectors and their contribution to the development of priority industrial sectors.

Special attention in the horizontal binding of strategic documents is devoted to the analysis of the relation with specific thematic strategies, in particular with the **Regional Development Strategy** for the period 2014-2020 which has a horizontal dimension of relation with a large number of strategic documents, giving an accent on the regional aspect of the development of the northern, central and coastal regions of Montenegro. The commitment of the IP 2023 to the Regional Development Strategy 2014-2020 is evident, especially in the field of investments in physical infrastructure, but also in the planned activities aimed at achieving a more balanced socio-economic development of all local self-government units and the region, based on competitiveness, innovation and employment.

Industrial policy by 2023 is horizontally linked with **other thematic strategic documents**, with which it has complementary development goals such as the MSME Development Strategy, the Strategy for the Development of Innovative Activities and the Strategy of Scientific Research Activities. Finally, in defining IP 2023 activities, a special focus is on horizontal alignment with other relevant strategies, which is particularly related to the field of education, employment and entrepreneurship development, in order to contribute to the realization of the purpose and vision of the Industrial Policy.

From the aspect of the integration of the Industrial Policy with numerous strategic and thematic documents and policies, in the sense that IP should support the development of interconnected sectors such as energy, transport and information and communication technologies, entrepreneurship, innovation, education, regional development and others that influence the competitiveness of industry, a large number of actors involved at the level of all relevant public sector institutions are involved in the process of harmonization and implementation of the policy, with the participation of private sector representatives (elaborated more detailed in chapter IV in the part of the coordination structure for the implementation and monitoring of industrial policy).

In the hierarchy of **international obligations**, when it comes to industrial policy, IP 2023 is aligned with the obligations of membership in the World Trade Organization (WTO), NATO membership obligations (tenders and standards), and internationally accepted commitments to membership in the World Bank and the IMF. Full membership in the WTO, where Montenegro is a member since April 29, 2012 enables the integration into the multilateral trading system through the implementation of relevant WTO agreements in the areas of customs and trade in commodities, services and trade aspects of intellectual property. Montenegro is a full NATO member since June 5, 2017, making the state closer and more attractive to co-operate with investors from partner countries, members of the Alliance. Additionally, a significant number of free trade agreements (FTA) applied by Montenegro contribute to creating a stimulating investment environment and further improving the competitiveness of the whole economy.

3.2. Compliance with the EU key policies in the context of the European integration concept

In addition to national umbrella documents, the framework for the formulation of Industrial Policy of Montenegro is also the **principles of EU industrial policy** defined in Article 173 of the Treaty on the Functioning of the EU (TFEU), elaborated in the Europe 2020 Strategy (2010) and recommendations for the Western Balkans region through the SEE 2020 Strategy (2013) and an Action plan for the implementation of SEE 2020 for Montenegro (2014). The principles of EU industrial policy are taken over

by Article 94 of the Stabilization and Accession Agreement of Montenegro with the EU. These documents, as well as the documents adopted before in relation to the harmonization of EU Industrial policy with the industrial policy of the member states, are integrated in the IP 2020.¹

In September 2017, the EU improved the framework for the harmonization of industrial policy by adopting a new strategic document: Investing in smart, innovative and sustainable industry – A renewed EU Industrial Policy Strategy (52017DC0479)² and the accompanying working document related to the need to develop indicators³ of the success of the new strategic document in the field of industrial policy.

Industrial policy is largely interconnected with various other areas, affecting simultaneously other EU policies, especially those related to strengthening the internal market, innovation and research, as well as environmental protection and employment. That is why, **other EU strategic documents** are also important, along with an innovative industrial policy strategy in order to promote the competitiveness of enterprises and industry as a whole: the EU smart specialization platform, the Single Digital Market Strategy, the Single Market of Commodities and Services, the Energy Union, the Bio economic Strategy, the Circular Economy Package and Union of capital markets, along with the EU's program priorities set out in the proposal of the EU multiannual financial framework (MFF 2021-2027).⁴ The European Commission has also set up a team of experts to prepare the EU Industrial Policy 2030.

In the process of harmonization and formulation of policies, the EU in certain areas and under the conditions established by the agreements (TEU, TFEU⁵) has the authority to implement measures to **support, harmonize or supplement** the measures of the Member states, without thereby in any way substituting their competencies in those areas (Article 2 of the TFEU). Industrial policy is one of the European policies in the field of EU internal actions, and as such it is formulated in cooperation between the European Commission and the Member States.

Article 173 of TFEU states that "the EU and the member states **provide the conditions necessary for the competitiveness of the industry** within the EU. For this purpose, in accordance with the system of open and competitive markets, their actions are aimed at accelerating the adjustment of the industry to structural changes; encouraging a favourable environment for initiatives and the development of businesses across the EU, in particular the SME sector, stimulating a favorable environment for co-operation between legal entities, and stimulating better exploitation of the industrial potential of innovation, research and technological development policies. "In addition, it is stated that "the Commission may initiate any initiative useful for encouraging such compliance, in particular the initiatives aimed at establishing **guidelines and indicators**, organizing the exchange of **best practices** and preparing the elements necessary for **periodic monitoring and evaluation**".

Competences in the field of harmonization and monitoring of EU industrial policy have been delegated to the Directorate General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROWTH). The key areas of competence within the industry relate to industrial policy, innovation, sustainable and circular economy, intellectual property, socially responsible behavior and the integration of European companies into international chains of value in order to increase competitiveness, generate overall

¹ While creating the Industrial Policy of Montenegro 2020, principles and provisions of the EU industrial policy were taken into consideration whose framework is clearly determined in the documents: "An industrial policy for the globalisation era" (COM(2010) 614), "Industrial Policy: Reinforcing Competitiveness" (COM(2011) 642), "A stronger European industry for Growth and Economic Recovery

² Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, Investing in a Smart, Innovative and Sustainable Industry, A renewed EU Industrial Policy Strategy, Brussels, 13.9.2017, COM(2017) 479 Final.

³ Industrial policy indicators – Working document EC, 1.7.2018).

<http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupMeetingDoc&docid=14566>

⁴ The Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Region, A modern Budget for a Union that Protects, Empowers and Defends, The Multiannual Financial Framework for 2021-2027, COM(2018)321final, 2.5.2018, Brussels.

⁵ Treaty establishing the EU; Treaty on functioning the EU;

economic growth and jobs. At the same time, the Directorate-General for Communication Networks, Content and Technology is in charge of the digital economy, including the promotion of digitalization of companies (DG CNECT⁶). The European Fund for Strategic Investment (EFSI⁷) is also very important, especially in order to stimulate competitiveness on a single market. Bearing in mind the EU framework, formulation and management of industrial policy in the EU, the following is an excerpt from key EU and regional policies relevant to the development of Industrial policy in Montenegro.

3.2.1. Renewed strategy of the EU industrial policy

Industry plays an important role in the economy of the European Union, creating over **80% of European exports** and private innovation and generating new jobs⁸. The industry employs 36 million workers (end of 2018), accounting for **15%** of total employment in the EU⁹. In the structure of added value in a gross amount, the industrial sectors contribute with **19.5%** (B-E), while this indicator in the GDP structure for 2018 is at a level of **17.4%**¹⁰.

The EU's industrial structure is undergoing a profound transformation driven by digital and other new technologies and new business models. The need for modernization has been identified to ensure the competitiveness of industry in the global market by adopting technological change, integrating products and services, developing technologies that use less energy, reduce waste and avoid contamination, and investment in labor with adequate qualifications.

In the autumn of 2017, the European Commission published a **Communication on a Renewed EU Industrial Policy Strategy** (COM 52017DC0479), outlining the main emphasis and framework of the new strategy towards a smart, innovative and sustainable industry. The Strategy has added a list of initiatives that are already in the implementation, as well as the measures and initiatives that are being planned.

⁶ DG CNECT (Communications Networks, Content and Technology); DG GROWTH (Internal Market, Industry, Entrepreneurship and SMEs);

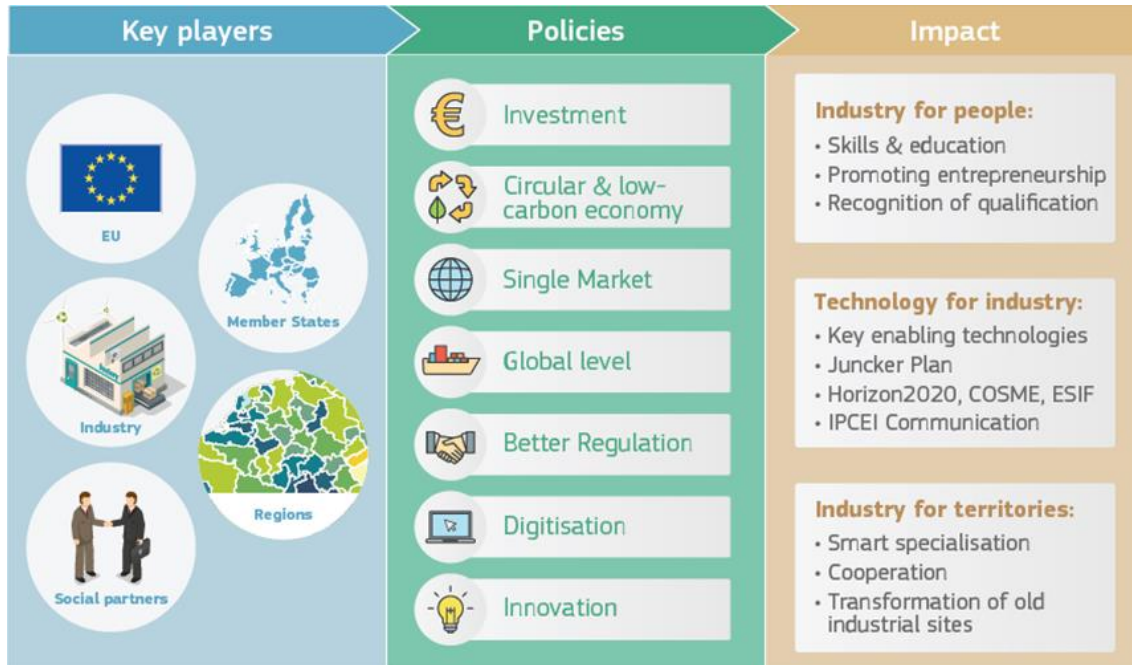
⁷ European Fund for Strategic Investments (EFSI)

⁸ https://ec.europa.eu/growth/industry_en

⁹ <https://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tec00109&language=en>, [nama_10_a64_e]

¹⁰ The industry sector is most represented in the GDPs of Ireland (36%) and the Czech Republic (32%). In Romania, Slovenia and Slovakia this indicator is 27%, while in Germany, Poland and Hungary it is 26%, for the year 2018. At the same time, industry sector takes least parts of the GDP in Luxembourg, Cyprus and Malta (2018 - 7%, 8% and 10% respectively). EUROSTAT, [nama_10_a10], GVA & [nama_10_gdp], 17.04.2019.

Graph 2. Industrial eco-system¹¹



The key objective of the EU strategy Innovative strategy for industrial policy is to **ensure the competitiveness of European industry in the era of globalization and digitization**. Industrial competitiveness is encouraged by measures such as the **promotion of digitization, investment and research and innovation in European industrial sectors, the construction of a low-polluting circular economy system, investment in new technologies and infrastructure for industrial transformation, internationalization, and the deepening of the single market**.

In the renewed EU Industrial Policy Strategy, the European Commission is particularly focused on promoting innovation and investment in the creation innovative products of better quality, processes and technologies. Support is directed to the so-called inter-sectoral area for stimulating innovation that can contribute to growth in different sectors, creating synergies among sectors and multiplying effects in job creation and competitiveness. This particularly refers to the need to strengthen the capacity of the industry in a way which creates a framework for supporting companies in the direction of the international market and global networks, for which companies themselves need to modernize and digitalize their business through the development of new business models and adoption of smart and clean technologies. At the same time, the European Commission supports businesses while accessing important resources such as financing, energy, raw materials and skilled labor.

The innovation framework of the EU's industrial policy strategy is one of important challenges for the development of the IP 2023 for the coming period.

3.2.2. Smart specialization strategy

Smart specialization is an innovative EU approach that aims to encourage growth and employment in Europe, enabling each region or state to recognize and develop its own comparative and competitive advantages and transform them into products and services available on the market. By developing the Smart Specialization Strategy, the EU is emphasizing a new model of economic development at the

¹¹ <http://www.europarl.europa.eu/cmsdata/148941/Dana%20ELEFTHERIADOU.pptx> (Brussels, 16 October 2017);

national or regional level, which is based on targeted support for scientific and innovative activities through partnership between country, academic community, business area and civil society, with bottom-up approach.

The European Commission has established a **smart specialization platform** which, from 2011, provides advice to regional and national authorities on how to recognize the strengths and comparative advantages of the region, how to prioritize research and innovation in a competitive area, and how to define a common vision of regional innovation within a smart specialization strategy. A total of 18 member states are included in the S3 platform, which have 180 registered regions, and there are also 7 non-member countries and 18 regions within them, including Montenegro, which is a single region in accordance to the NUTS classification¹².

Through engaging the bottom-up approach and partnership, Montenegro has for the first time developed Guidelines for smart specialization 2018-2024, with the definition of priority development sectors, which facilitated the preparation of the new Strategy for smart specialization 2019-2024. The implementation of the Smart Specialization Strategy (S3) is of great strategic importance to Montenegro, as it can encourage public and private investment in research, technological development and innovation, with the aim of achieving excellence in research and strengthening the potential of domestic products, services and technologies for commercialization, and with the support of EU funds.

The Smart Specialization Strategy S3 2019-2024 identifies priority areas with the greatest potential for economic development, in which research and development are key factors for boosting competitiveness: Sustainable agriculture and the food value chain, Sustainable and health tourism, Energy and a sustainable environment, with the support of Information and communication technologies as a horizontal priority. Montenegro is the first non-EU country to adopt the S3 Smart Specialization Strategy.

The concept of smart specialization, as a way to modernize and support the most promising industrial sectors in order to develop innovation, adopt new technologies, create new products and services based on knowledge, has been recognized as a particular challenge in the formulation of IP 2023. In this regard, Montenegro's Industrial Policy 2019-2023 is aligned with the Smart Specialization Strategy S3 2019-2024 in all defined priorities, especially in the segments of improving the innovation infrastructure in accordance with the needs of enterprises, developing innovation through cooperation of scientific research institutions and enterprises, stimulating investment in the manufacturing industry, certification of management systems food quality and safety, improvement of energy infrastructure, energy efficiency and use of renewable energy sources, then in the field of industrial pollution and industrial emissions, remediation and environmentally sound management of industrial waste, preservation and self-sustainable use, protection and improvement of the environment, ICT infrastructure and public services offer, digital transformation, etc.

3.2.3. Digital Agenda

The EU's Digital Agenda is one of the seven pillars of the Europe 2020 strategy that sets the objectives for the growth of EU by the year 2020. The Digital Agenda proposes better use of information and communication technology (ICT) potentials in order to foster innovation, economic growth and progress.

Striving for economic growth and preparation for the benefits of a single market after joining the EU, Montenegro accepts the Digital Agenda of the EU, especially in the three most important pillars for the

¹² <http://s3platform.jrc.ec.europa.eu/regions/ME/tags/ME>. In accordance with the EU Regulative number 1059/2003 of the European Parliament and European Council from May 26th, 2003 on establishing a common classification of territorial units for statistics (NUTS), Montenegro is defined as a unique NUTS3 region (NUTS 1= NUTS 2 = NUTS 3). On the basis of this, with regard to development of the strategy of smart specialization and economic development based on knowledge, a state is regarded as a single region and needs to find its place among a total of 272 NUTS II regions within EU-28.

Industrial policy of Montenegro, promoting rapid and ultra-fast Internet access for all, investing in research and innovation in the field of information and communication technologies (ICT), and using the opportunities available through the Horizon 2020 programs, promoting digital literacy, skills and inclusion, given that Montenegro faces inadequate supply of workers with digital skills.

Additionally, it is necessary to bear in mind the Commission's Communication Strategy for the European Gigabit Society by 2025, which sets the vision of Europe in which the availability and occupancy of high-capacity networks allows the wide use of products, services and applications in the digital single market. This vision relies on three main strategic objectives for 2025: 1. Gigabit connectivity for all major socio-economic drivers, such as schools, transport nodes and main service providers, as well as digitally-intensive enterprises, 2. Continuous 5G coverage of all urban areas and main roads of terrestrial transport, and 3. Access to connectivity that offers at least 100 Mbps for all European households.

3.2.4. Green growth and circular economy

In 2015, the European Commission adopted an Action plan to help accelerate the transition of Europe to the circular economy, strengthening of global competitiveness, promotion of sustainable economic growth and creating of new jobs. The Action Plan sets out 54 measures to "rounding up" of the life cycle of products: from production and consumption to waste management and the secondary raw material market.

Managing the life cycle of natural resources, from extraction through design and production, to what is considered as waste is essential for green growth and part of developing a cost-effective, resource efficient, circular economy in which nothing is given away. A smarter design that allows products to be modified, reused, re-processed and recycled should become a norm.

Montenegro, which is significantly oriented towards tourism, declared as an ecological state, must pay special attention to the valorization of green growth and circular economy, by integrating demographic, social, natural and economic aspects of economic development, as stated in the National Development Strategy of Montenegro by 2030, which took over the universal UN objectives of sustainable development in the national context. IP 2023 respects the principles based on the development of green economy, resource efficiency and sustainable production and consumption, industrial waste management, the introduction of environmental standards and defines specific measures and activities for their implementation.

3.3. The regional context

Newer regional development documents, with which the strategic document IP 2023 is harmonized, are the following:

- Working paper of the European Commission, **Measures of Support for the Digital Agenda of the Western Balkans (2018)**¹³, with defined priorities: 1. Reduction of roaming prices, by establishing a map for the gradual abolition of tariffs, 2. Development of broadband Internet, 3. Development of eGovernment, eProcurement, eHealth and digital skills; 4. Development of capacity in the area of security and digitization of industry, to ensure that all sectors benefit from digital innovation, and 5. Adoption and application of the EU acquis in the field of a single digital market. These priorities are also recognized in the context of future industrial development.
- **Multi-annual Action Plan for the Regional Economic Zone** of the six Western Balkan countries (WB6, MAP REA, RCC¹⁴), adopted within the Berlin Process, by the declaration of the Prime Ministers of the countries of the region, in Trieste, 12 July 2017, defines actions for the next four priorities: investment,

¹³ Commission Staff Working Document, Measures in support of a Digital Agenda for the Western Balkans, 22.6.2018 SWD(2018) 360 final

¹⁴ Regional Cooperation Council, Multi-Annual Action plan for a Regional Economic Area in the Western Balkan Six, 12 July 2017, Trieste, Italy.

trade, mobility and digital integration, which represents compliance with the strategic goals of industry development in Montenegro.

- **The EU macro regional strategy for the Danube Region (EUSDR¹⁵)** - in the context of supporting the development of the Montenegrin industry, the following areas of action are recognized: a) linking the Danube Region with the promotion of sustainable energy, promoting culture and tourism, b) environmental protection of the Danube region through restoration and maintenance of water quality, environmental risk management, c) building prosperity in the Danube Region through the development of a knowledge society through scientific research, education and information technologies, support to the competitiveness of enterprises, including development of clusters, investing in people and skills.

- **The EU Macro-regional Strategy for the Adriatic-Ionian Region (EUSAIR¹⁶)** - is built on four thematic pillars: blue growth, linking the region (transport and energy), environmental quality and sustainable tourism. In addition, "enhancing of research and development, innovation and SME" and "strengthening capacities including communication" are two cross-cutting aspects that intersect each of the pillars. Montenegro's industrial policy is in line with the aspects of the development of the EUSAIR strategy in several areas.

II. ANALYSIS OF CURRENT SITUATION IN MONTENEGRIN INDUSTRIAL DEVELOPMENT

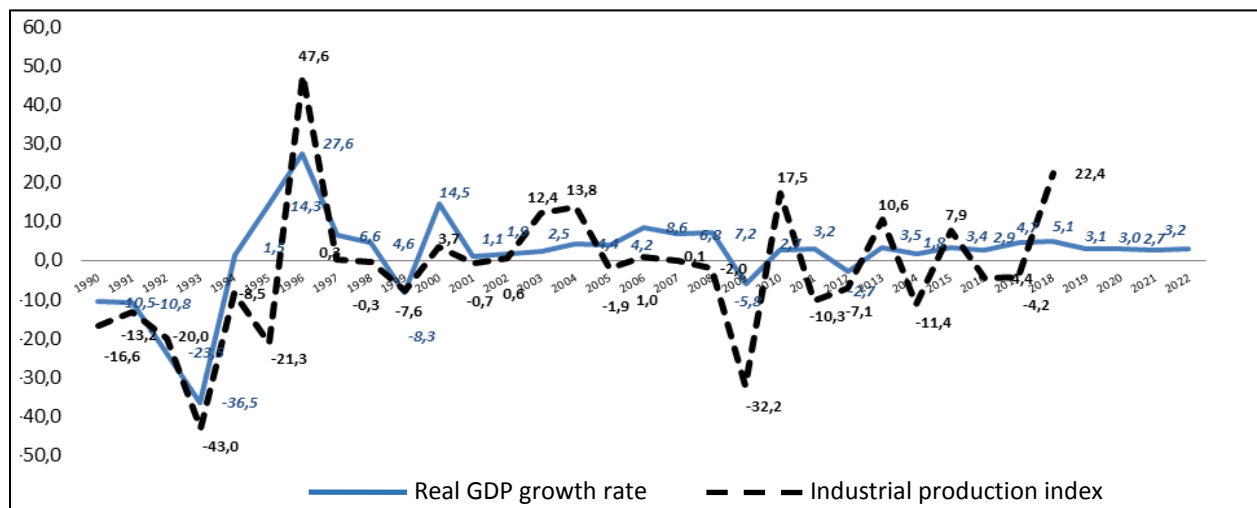
1. The position of industry in the economic development of Montenegro – trends of development

In terms of a transition, small and open economic systems, such as the Montenegrin, are intensively changing their economic structure. For the purpose of comparison, at the beginning of the 1990s transitional recession, the economic structure of Montenegro, developed within the Social Federalist Republic of Yugoslavia, was based on the concept of **industrialization** as a **development model**, whose share of industrial production in the domestic product in the year 1990 was 35%. The economic structure at that moment was predominantly oriented towards the production of commodities for further reproduction for the large Yugoslav market and final processing in other republics, with poor orientation towards export and high dependence on import on key product inputs. All that happened during the 1990s in this region (the breakdown of the country and markets, the war in the surrounding, hyperinflation, UN and EU sanctions, and the final decision on taking over gradual competencies in the areas of monetary, customs and foreign trade policy) - confirmed the overall vulnerability of the industrial sector and the radical change in the economic structure, with the ending of the dominance of large value chains in the metal and energy sectors, and the dynamic growth of the service sector at the expense of agriculture and industry.

¹⁵ European Commission, EU strategy for the Danube region, COM (2010) 715/4. Strategy for the Danube region comprises activities in nine member states of EU (AT, BG, HR, CZ, DE; HU, RO, SK, SI), states of expansion (BA, ME, RS) and neighboring states (MD, UA).

¹⁶ Communication concerning the European Union Strategy for the Adriatic and Ionian Region - 17.06.2014 - COM (2014) 357 final.

Graph 3. Montenegro 1990-2018: Industrial production index and real GDP growth rate



Source: UNSTAT 1990-2018; Projections of GDP 2019-2022 (Macroeconomic and fiscal policy guidelines for 2019-2022)

The beginning of the 21st century was characterized by **three phases of reforms** (the first phase consists of privatization, internal pricing liberalization policy and external economic liberalization, macroeconomic stabilization; the second phase included imposing of its own legal system, the creating and strengthening of new institutions necessary for the regulation of the market, improving of the business environment and the adoption of international standards, as well as the co-ordination of economic policies; while the third or the "current" phase assumes the total reintegration into international economic relations, which will be ended in the process of EU accession).

The above mentioned turbulent period can also be shown by monitoring changes of growth in the **GDP** and **movement trends in industrial production index**, as shown in Graph 3. Industrial production followed the growth of GDP, but in periods of crisis and decline in economic activity, the decline in industrial production was higher than the decline of the GDP (e.g. 1993 or 2009), and vice versa, in periods of recovery and expansion. That **correlation** ends with the double bottom of the economic crisis, from when the growth rate of the GDP is constantly increasing, while the level of industrial production is determined by a large number of factors, both economic factors and non-economic factors (for example, climate factors in the production of energy from the Hydro Power Plants).

Industrial production is an important economic indicator for creation of the economic policy, monitoring the trend of commercial activity and especially for the needs of national accounts.

Table 1. Share of the industrial production in the GDP in the period from 2010-2018.

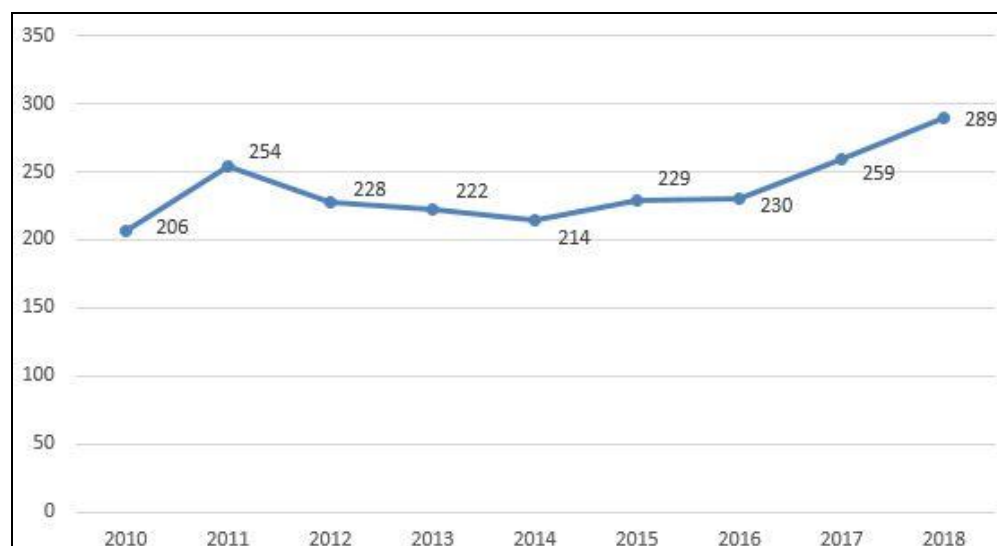
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Industrial production (mil. €)	347,5	329,9	327,4	376,9	376,6	387,1	403,6	393,1	476,7
GDP (mil. euro)	3.103	3.234	3.148	3.327	3.457	3.624	3.954	4.299	4.663

Source: Monstat, The national statistics authority of Montenegro

Industrial production, observed in absolute amounts, has in recent years recorded uniform values, with certain smaller oscillations, caused by movements within the industrial structure itself. Growth in the share of industrial production in the GDP for the year 2018 is the result of higher production activity especially in the Manufacturing Sector and in the Electricity Supply Sector. The gross added value in the

manufacturing industry sector, in the period 2010-2018 recorded uniform values, with a slight growth tendency, which, however, is not sufficient for a significant shift and increase of industry in the GDP structure (Graph 4).

Graph 4. Gross Value Added in manufacturing industry per capita 2010-2018 €, constant prices



Source: Monstat, The national statistics authority of Montenegro

When the word is about the production of important industrial products in Montenegro, in the period 2011-2018, the industrial production recorded growth in the years 2013, 2015 and 2018. (In 2015 growth was recorded only due to the result of growth of the manufacturing industry, while in the years 2013 and 2018, growth was achieved as a result of the growth of electric energy production). The **industrial production index in 2018¹⁷** was recorded at a record level of 22.4%, primarily due to the growth of production of electric energy of over 62%, the growth of the manufacturing industry of 12%, and also due to the decline in the extracting of ore and stone by 21%, as shown in Table 2.

Table 2. Industrial production index in Montenegro for the period 2011-2018 (average annual rates)

	Industry - total	Extracting ore and stone (B)	Processing industry (C)	Electric energy supply (D)
2011	-10.3%	6.3%	6.8%	-32.7%
2012	-7.1%	-21.0%	-10.1%	1.4%
2013	10.6%	-1.4%	-5.0%	38.7%
2014	-11.4%	14.4%	-6.7%	-19.6%
2015	7.9%	-8.1%	19.9%	-5.9%
2016	-4.4%	-18.1%	-7.8%	3.5%
2017	-4.2%	113.9%	-9.3%	-24.6%
2018	22.4%	-21.3%	12.1%	62.1%

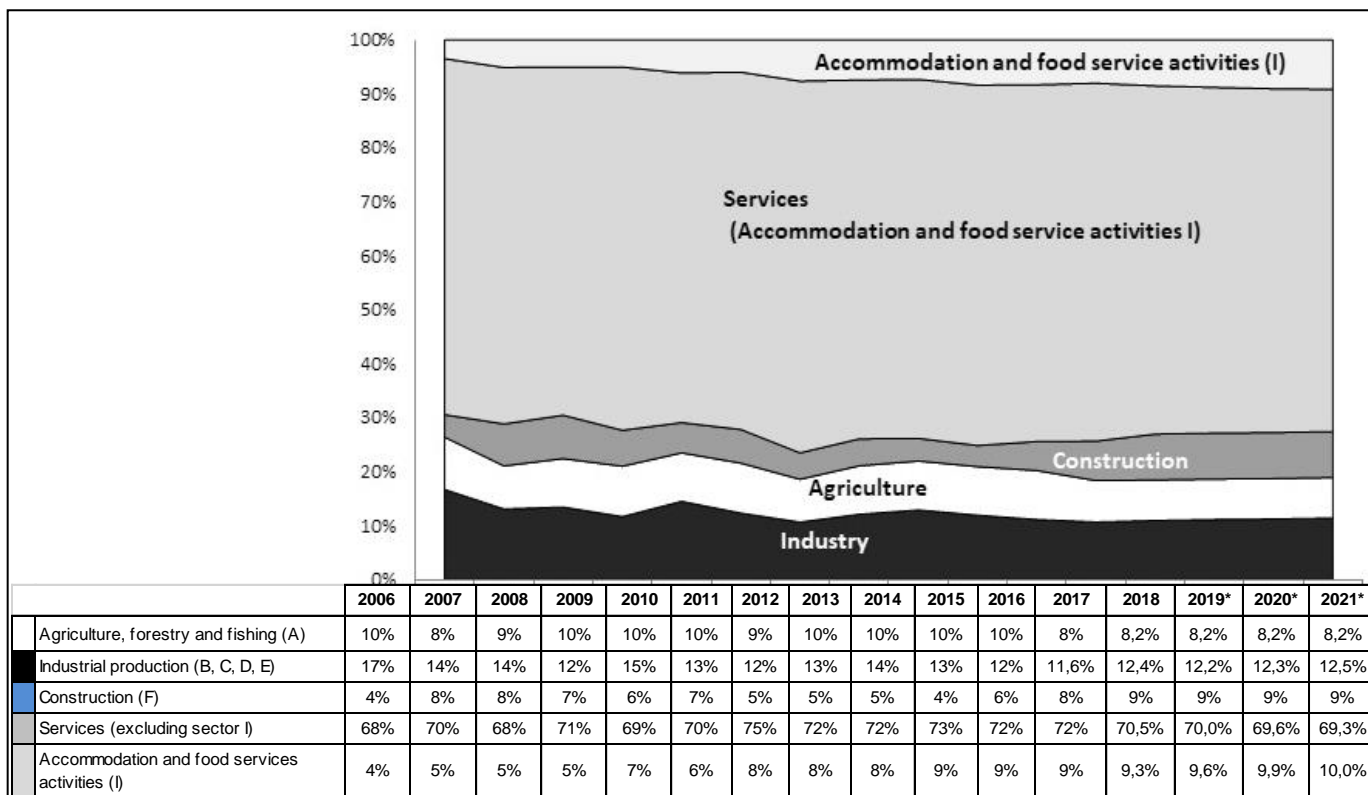
Source: Monstat, the national statistics authority of Montenegro, 2019

Graph 5 points to the gradual changing of the structure of the Economy of Montenegro, from the „over industrialized” and „rigid” economy (economic structure) in the Yugoslav market to the gradual building of open, service oriented economy, with EURO as the official currency which is significantly dependent

¹⁷ Overview of the index of the industrial production available by the data of MONSTAT for sectors B-extraction of ore and stone, C-processing industry and D- producing electric energy and water supply.
Classification of activities <https://www.monstat.org/cg/page.php?id=107&pageid=107>

on external demand with the **development model based on the growth of foreign direct investments (FDI) and strengthening of the service sector** (which has the highest employment rate growth). This trend is also confirmed when the period after the renewal of independence is monitored.

Graph 5. GVA structure 2006-2018 and projection to 2021

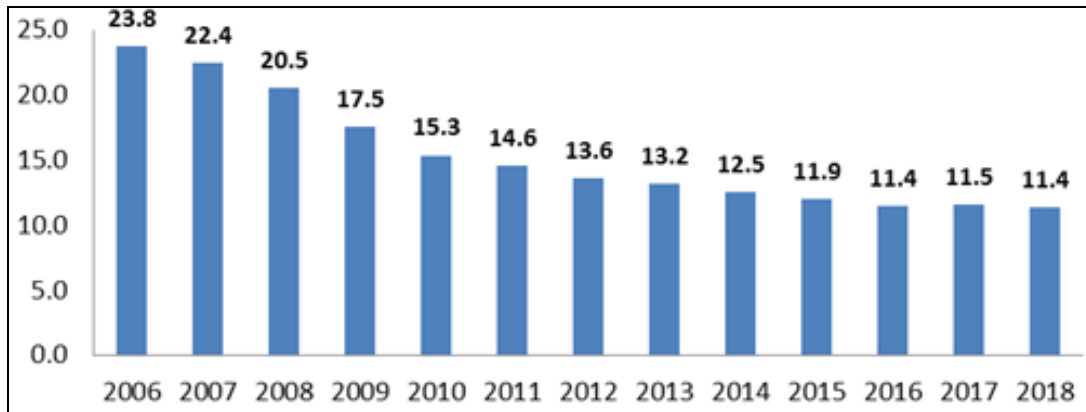


Source: Monstat, The national statistics authority of Montenegro, 2019, PER 2019-2021

The participation of sectors B, C, D and E (industrial production in the narrow sense of meaning) **continues to record a decreasing trend in gross value added (GVA)**, from 17% in the year 2006, which "stops" at 12.4% in the year 2018 (the manufacturing industry is reduced from 9% to 5% within that structure). The projections of the Ministry of Finance in the Economic Reform Programme in the medium-term period indicate a 12.5% share of industrial production, in the structure of GVA by 2021. The service sector is constantly increasing until 2018, while the sectors of providing accommodation services and food services contained within show continuous growth in the medium term (up to 10% in GVA). Agriculture is consolidated at 8.2% of GVA share by the year 2021.

When the **movement of the number of employees in the industry for the period 2006-2018** is concerned, a decreasing trend is noticed, which is presented on Graph number 6. **The number of employees in sectors B, C, D and E is decreasing** compared to the total number of employees. The average number of people employed in industry for the year 2018 was 21.584 (11.4%), while the total number of employees was 190.132.

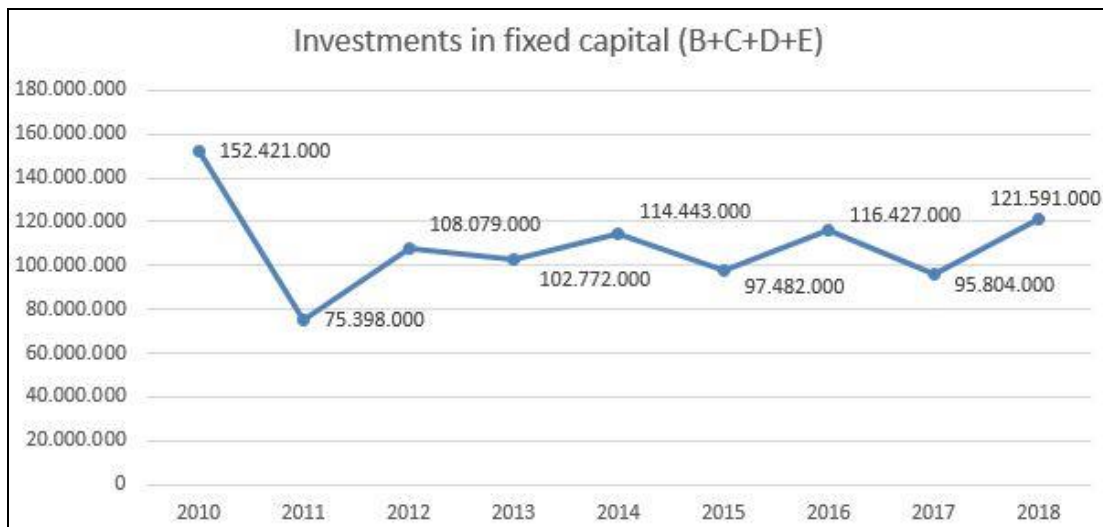
Graph 6 : Employment in industry 2006-2018 (%)



Source: Monstat, the national statistics authority of Montenegro, 2019

When considering the **structure of investments in fixed assets**, with the year 2011 excluded with a low level of investment achieved, the continuity in investments was recorded in the previous period, where in 2018 are at higher level than in 2017. Despite an increase of 33% in investment in the manufacturing sector compared to 2017, the level of investment in the manufacturing sector of around 40 million euro at an annual level cannot sufficiently contribute to the modernization of industry, as an important precondition for improving the competitiveness of the Montenegrin industry, and effectively increase the share of the manufacturing industry in the overall structure.

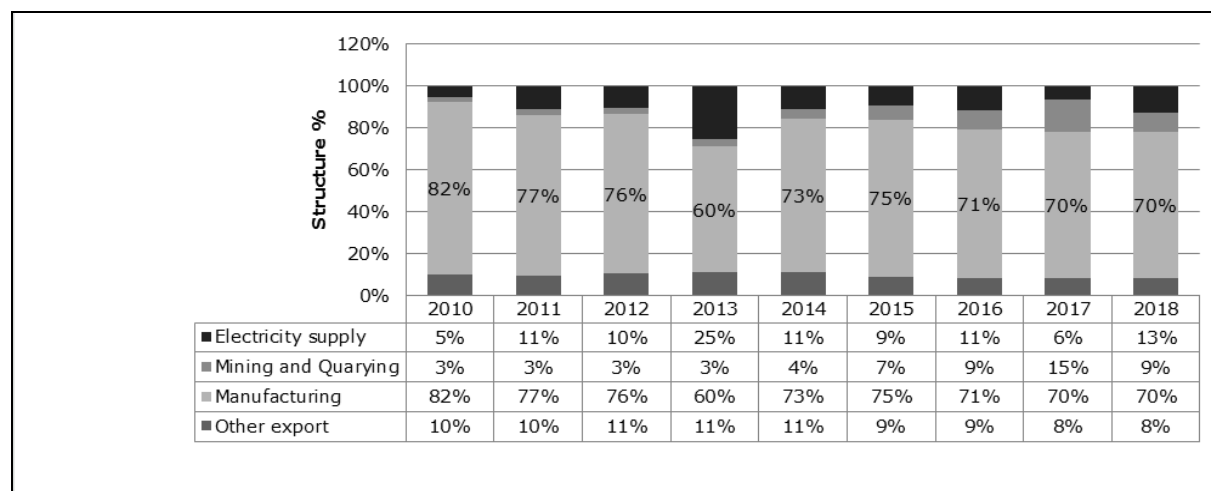
Graph 7. Investments in fixed capital in industrial sector 2010-2018



Source: Monstat, the national statistics authority of Montenegro, Statement, Investments in fixed assets, Oct. 2019

When looking at the export structure, **the industry is significantly represented in total exports of commodities**: in the period from 2010 to 2018, the average share was at the level of 90.4%. In recent years, as shown in the following graph, this share has slightly increased, while in 2018 the industry is represented in commodities exports by 91.7%.

Graph 8. Commodity export structure 2010-2018



Source: Monstat, the national statistics authority of Montenegro, 2019.

In the structure of industrial export in the period from 2010 to 2018, despite smaller oscillations in comparison to the beginning of the observed period, the dominant participation of the **manufacturing industry in the total exports in the 2014-2018 period is evident** with shares of 73.4%, 75.1%, 70.7%, 70.2% and 70.1%, respectively. In terms of exports, besides the most important export products traditionally - metal products, a significant place is taken by agricultural and food products, raw materials and processed wood and other products. Nevertheless, the absence of diversification presents a considerable deficiency of the Montenegrin industry, in terms of the number and type of products being exported, as well as the number of countries in which they are exported.

Diversification of industry presents a very important segment of further development, in which direction plans and projections of development should be moving towards the production of ecologic food and beverages, construction, financial services, and production of products with a higher degree of processing. The potential lies in investments to renewable energy sources, construction of energy efficient buildings, sustainable organic agriculture, which implies necessary support for ecologic innovations, improvement of energy efficiency and efficiency in using resources in SMEs and development of innovative entrepreneurial ventures in the field of information technologies and creative industries.

In the context of planned projections in the forthcoming period under the Guidelines for Macroeconomic and Fiscal Policy for the period 2019-2022, with the basic macroeconomic scenario for a projection has been made that the real GDP growth rate¹⁸ will fluctuate with the following dynamics: 3.1%, 3%, 2.7% and 3.2% respectively. Macroeconomic framework in Montenegro, in the period 2019-2022, is characterized by the continuation of investment activity, diversification of the domestic economy, with strengthening of production and export, further improvement of fiscal position and moderate growth of private consumption and import. Bearing in mind that the growth of the Montenegrin economy was based on strong investment activity in the past two years, in the next four-year period further investment growth is foreseen, in the first two years of the projection period, and as a result of high base, the level of investments was maintained at the level achieved. Driving forces of Montenegro's economic growth will still be tourism, energy, agriculture and manufacturing sectors, and further growth of the Montenegrin economy will be stimulated by investment activity and engagement

¹⁸ Real GDP growth rate in 2018 amounts to 5.1%.

of domestic potentials in the construction and transport sectors, as well as multiplier effects on related sectors.

2. Key results of implementation of the Industrial policy of Montenegro by 2020, in period 2016- 2018

In the process of implementing the Industrial Policy of Montenegro by 2020, a **mid-term review of industrial policy** was carried out, which analyzed the significance and impact of the implementation of the Industrial Policy by 2020, in the period 2016-2018, as part of the external and participatory evaluation process. Evaluation was based on the analysis of the effects of industrial policy on selected economic indicators and indicators of competitiveness, analysis of the results of annual action plans and assessment of the perception of all relevant actors, based on criteria for evaluation (relevance, efficiency, effectiveness and impact of policy).

2.1. Achievement of selected economic indicators and indicators of competitiveness

The successful implementation of IP 2020 assumed growth, or the achievement of targeted values of selected economic indicators and indicators of (international) competitiveness. As indicators of the realization of the policy, the following **economic indicators** were selected: 1) gross value added industries (sectors B, C, D, and E), 2) industry share in GVA (gross value added), 3) industrial production index, 4) gross value of production industry, 5) the number of employees in industry, 6) the number of employees in industry in relation to the total number of employees, 7) productivity in industry, and 8) the participation of industry in total commodities exports.

Table 3. Selected economic indicators within the Industrial policy by 2020 document

Economic indicators	Starting value in 2015	Achieved in 2018
Gross value added industries (sectors B, C, D, E ¹⁹ , constant prices)	379,414	466,017
Industry share in gross value added industry (sectors B, C, D, E, constant prices, %)	13.10%	12.4%
Industrial production index, IPI (B, C, D)	7.9	22.4
Gross value of production (sectors B, C, D, E, current prices, 000 €)	918,115	1,143,272
Number of employees in industry (B,C,D,E)	20,973	21,584
Number of employees in industry in comparison to the total number of employees, %	11.9%	11.4%
Productivity of work in industry (in €)	18.090	21.590
Share of industry in the total commodities export	91.0%	91.8%

Source: Monstat, The national statistics authority of Montenegro, 2019.

The analysis of selected economic indicators indicates that, after three years of implementation, the industry's participation in gross value added has decreased, from 13.1% in 2015 to 12.4% in 2018, with a medium-term slight growth forecast of up to 12.5% in 2021. (Economic Reform Programme, 2019-2021). **The industrial production index** reached a record level of 22.4% in the year 2018, primarily due to an increase in electricity production of over 62%, while the processing industry grew by only 12% and the mining and quarrying industry grew by 21%. **The number of employees in the industrial sector** increased by 611, but the structure of total registered employment was decreased by 0.5%. **Productivity of work** is slightly improved. The same trend was recorded in the **share of industry in total exports** (increased by 0.8%).

¹⁹ B: Extraction of ore and stone, C: Processing industry, D: Supply of electric energy, E: Water supply – Monstat 2019.

Seven competitiveness indicators based on international rankings that measure a number of factors affecting competitiveness that were included in IP 2020 are presented in the following table.

Table 4. Selected indicators of competitiveness in the Industrial policy by 2020 document

Indicators of competitiveness	Starting value	Targeted value	Achieved value
1. Global competitiveness: Global competitiveness index, GCI, ranking (World economic forum) ²⁰	70./140 (2015-2016)	Improvement by 10% in the GCI (63.)	71./140 (2018-2019)
2. Business environment: World Bank report Doing Business ²¹ , ranking	46./186 (2016)	Improvement by 10% in Doing Business (41.)	50./190 (2018)
3. Entrepreneurship: Global Entrepreneurship Index, GEI, ranking (Global Entrepreneurship & Development Institute) ²²	54./132 (2016)	Ranking in top 50 in GEDI	60./137 (2018)
4. Innovations: Global Innovation Index, GII, ranking ²³	41./141 (2015)	Improvement by 10% in GEDI (36.)	52./126 (2018)
5. Access to the market: Global Enabling Trade Index ²⁴ , ranking , WEF	49./138 (2014)	Improvement by 10% u WEF GET Index ranking (45.)	62./136 (2016)
6. Quality of services of trade logistics: World Bank Trade Logistics Index ²⁵ , ranking	67./160 (2014)	Improvement by 10% in WB TLI ranking (60.)	77./160 (2018)
7. Finance: IESE ²⁶ Venture Capital & Private Equity Country Attractiveness Index, VCPE index, ranking	91./120 (2015)	Improvement by 10% in IESE VCPE Index ranking (82.)	85./125 (2018)

Source: Mid-term overview of the Industrial policy by 2020, Ministry of Economy, March 2019

The above stated review shows that the planned improvement of the position of Montenegro on international competitiveness lists was not achieved by 2018, compared to the projected values. GCI is smaller in relation to the starting value, 8 positions from the target, while the DB rank is approximately the same as the starting value, 9 positions from the target. Also, GEI - Global Entrepreneurship Index, GII - Global Innovation Index, GETI and VB TLI (Trade Logistics Index) are lower than the initial value for 11, 16, 17 and 17 positions. The VCPE index²⁷ which measures the attractiveness of investments for investors, especially for risky capital (investing in new start-up companies that provides entrepreneurs with the necessary capital and professional skills in starting a business), has roughly reached its objective.

It is important to note that the mid-term review of the achievement of the IP 2020 was concerned only with the results achieved in the first three years of implementation of the measures, which is a very short period for the essential effect of the undertaken measures and a significant improvement in the position on the lists which provide assessment of the international competitiveness of the state.

Generally speaking, the achieved values of selected economic indicators and indicators of competitiveness at the end of 2018 point to the assessments given to the mid-term policy review that many processes have been started in the industry area, and that measurable impact on the development performance of the economy of Montenegro can be expected in the forthcoming period, with continuous support, investment and implementation of measures.

²⁰ http://www3.weforum.org/docs/GCR2018/03CountryProfiles/WEF_GCI4_2018_Profile_Montenegro.pdf

²¹ <http://documents.worldbank.org/curated/en/170561541153212267/pdf/131772-WP-DB2019-PUBLIC-Montenegro.pdf>

²² <http://thegedi.org/global-entrepreneurship-and-development-index/>

²³ <https://www.globalinnovationindex.org/search/Montenegro>

²⁴ http://reports.weforum.org/global-enabling-trade-report-2016/enabling-trade-rankings/?doing_wp_cron=1550773905.3192610740661621093750

²⁵ <https://lpi.worldbank.org/international/scorecard/radar/254/C/MNE/2018#chartarea>

²⁶ <https://blog.iese.edu/vcpeindex/>

²⁷ Venture Capital and Private Equity Country Attractiveness Index.

2.2. Level of realization of activities of the Industrial policy

Action plans of the IP 2020 for the period 2016-2018 were targeted at achieving four strategic goals of IP 2020 with 21 measures, including a total of **71 activities**.

Table 5. Overview of planned and realized activities of IP 2020 through sources of funding for period 2016-2018

IP AP 2016-2018	PLANNED	REALIZED	LEVEL OF REALIZATION
National budget	52,392,346.05	42,418,887.25	81.0%
Public sector	438,340,032.00	401,688,713.95	91.6%
IPA	12,781,395.40	3,602,518.48	28.2%
Donor programs	15,256,674.00	17,634,598.58	115.6%
Private sector	315,697,487.54	237,699,406.74	75.3%
TOTAL €	834,467,934.99	703,044,125.00	84.3%

The implementation of the action plans 2016-2018 was assessed as satisfactory. According to available data, the total value of realized investments for the implementation of the three action plans is € 703,044,125, which represents 84.3% of total planned budget and shows a positive trend in the accuracy of planning, since the realization in 2018 reached a very good level of achievement of as much as 98.4%.

According to **sources of financing**, the majority of funds come from the public sector and the private sector (57% and 34% respectively, reaching over 90% of the total amount of investments), while the shares of the national budget, donor programs and IPA are significantly lower (6%, 3% and 1% respectively). The largest concentration of funds was in the activities in the energy sector, the WB Investment Framework and the funds of the Investment and Development Fund of Montenegro (95%).

From the aspect of the implementation structure according to the **strategic goals of the policy**, the largest amount of funds in the previous three years was invested in the realization of the activities of the second strategic goal which is the Investments and finances for industrial modernization in the total amount of €400.16 million or 57% of the total realization (predominant activities of Investment and Development Fund of Montenegro) 38% or €269.14 million were invested in activities related to Industry Competitiveness - Strategic Goal 1 (with predominant investments in the energy sector), while significantly less funds were invested in the realization of activities within the strategic goal 3 - Innovation and entrepreneurship, 5% or € 32.11 million and symbolically 0.01% or €1.63 million for strategic goal 4 - Access to the market.

Evaluation of the level of realization of these activities was carried out through monitoring of 125 indicators of achievement of results in annual action plans (certain activities were monitored with several indicators). The level of realization by activities and indicators of achieved activities is shown in the following table.

Table 6. Level of realization of activities in the IP 2020 document in the period 2016-2018

Level of realization	Activities		Indicators of achievement (IA)	
	Total - 71	Structure	Total - 125	Structure
Realized (R)	46	65%	80	64%
Partly realized (PR)	18	25%	36	29%
Not realized (NR)	7	10%	9	7%

Source: MTR 2016-2018;

As a result of annual implementation reports, 65% of activities were fully realized (46), while 25% of activities were partially realized (18); 10% (7) activities have not been realized. From the standpoint of the performance indicator, 80 out of 125 indicators (64%) were realized, 36 were partially realized (29%), while 9 were not realized (7%).

2.3. Perception of key actors in the implementation of the Industrial policy

Key actors in the implementation of industrial policy can be structured in two key groups. The first group is represented by policy makers, competent institutions, i.e. line ministries and policy enforcement bodies, then IDFMN, as well as business associations, which are actively involved by policy makers and business representatives. This group is covered by the coordination structure for the implementation of the Industrial Policy, which is presented in detail in the chapter on monitoring. Another group of stakeholders in the implementation of industrial policy are its own users, Montenegrin companies, entrepreneurs and clusters, users of various competitiveness support programs, including beneficiaries of favorable credit lines.

For the needs of the IP 2020 mid-term review, **the perception of key actors in the implementation of IP 2020** has been evaluated in on-line surveys. Two different questionnaires were conducted, focusing on relevant institutions and business associations, and enterprises using subsidies and loans, with an average response rate of 69% which, given the nature of the group of respondents, was rated as a very high response rate.

The results of the survey presented a very positive attitude of the respondents on the implementation of industrial policy at all levels of respondents-institutions, business associations and direct beneficiaries. Bearing in mind the high rate of response, it can be concluded that in this initial implementation phase, the Industrial Policy was in line with the identified needs and met the expectations of the key actors.

- Large majority of **institutional respondents** believe that the IP 2020 has been defined in accordance with the priorities and requirements of the state and has contributed to the achievement of the set strategic goals (88%). Two thirds of the respondents believe that the costs are proportional to the results achieved, while one third of the respondents estimate that the costs are only partially proportional to the results achieved. When it comes to the monitoring and evaluation system, the recommendations refer to the frequency and quality of the monitoring process, capacity building and better co-operation of competent ministries, the improvement of IT support and data collection, and more effective communication and promotion. As a general approach, respondents expect a continuous revision of the annual planned activities the policy itself with greater involvement of stakeholders.
- The largest number of **surveyed companies** was from the manufacturing sector (32%), followed by wholesale and retail trade (18%), construction and professional services, science and technical activities (14%). Tourism was represented by 7%, administrative and auxiliary services with 6%, transport, information and communication with 4%. In the period from 2016 to 2018, the surveyed companies had a total of 95 public calls, 74% of which were for grants (70) and 26% for Investment and development fund of Montenegro loans (25 credit lines). Some companies benefited from several programs in a given period. When assessing the effects, respondents pointed out that their primary interest was to increase labour productivity (an average grade of 4.15 on a scale of 1 to 5), improving the innovative potential of employees, and expanding product and / or service assortment (3.80 and 3.74). As the main obstacles in implementing the appropriate program, the users identified the following as priorities: problems in finding and retaining adequate staff; inability to maintain the number of employees in accordance with the requirements of the public call; difficulties in providing additional funds/collaterals/guarantees; application procedures are not considered a significant obstacle to obtaining grants and/or loans.

Suggestions of Direct beneficiaries for further improvement of the Industrial policy are focused on providing additional grants, investing more resources in clusters, supporting export-oriented SMEs, requirements for greater significance for the specificities of the sectors for support domestic investors, the need for more support in employment and training with focus to scarce occupations, etc.

2.4. Overview of achieved effects of realization by strategic goals

IP 2020 for the period 2016-2018 was realized through measures and activities defined on the basis on four strategic goals. The following table provides a summary of achieved results by strategic goals.

Table 7. Overview of achieved results by strategic goals

Strategic goal 1. Competitiveness of industry
<p>The focus of the strategic goal was to improve the physical capital, especially in the sectors of energy, information and communication technologies, the improvement of the availability of raw materials and technologies for increasing the competitiveness of enterprises; the development of human capital and skills for industrial competitiveness, as well as the improvement of the business environment itself.</p>
<p>Realized effects: significant investments have been realized to improve the physical capital as a precondition for strengthening industrial competitiveness and sustainability, significant investments in human resources have been realized, as well as in the improvement of the business environment.</p> <ul style="list-style-type: none"> • High level of investment realization in the revitalization and reconstruction of the hydroelectric plant Piva and the hydroelectric plant Perućica; preparation activities for revitalizing of the Pljevlja thermal power plant; revitalization is conducted for 8 small hydro energy plants; 7 new hydro energy plants are being built at the moment; significant investments have been finalized through construction of wind electric plants Krnovo i Možura; • The effects of the revitalization of existing power plants and the construction of new power plants have resulted in an increase in total electricity production, a higher share of renewable energy sources and a reduction in energy dependence in Montenegro; • In regard to the contribution of ICT to the development of a competitive industry, referring to broadband internet access, in 2018 the number of companies using internet access has increased, internet based on available speeds of 10 to 30 Mbps (33.5%) and internet based on speeds of more than 100 Mbps (12.9%). The number of companies using Internet access based on all available speeds is 99.2%; • The availability and content of the eGovernment Portal, with 564 registered electronic services in 2018, has been improved (4.4 times more than in 2015); • Through 110 supported projects in the IPARD program, increased added value in the food industry; improved quality of food products; increased competitiveness in the food processing industry and product diversification on the market; and improved standards of food safety, phytosanitary and sanitary standards; • Successful implementation of the Program for supporting of modernization of the processing industry by the model of financing purchasing of equipment through the loan arrangement with the Investment and Development Fund and the subsidy from the Ministry of Economy- 12 commercial entities were supported with the total amount of purchased equipment of approximate value of €1.4 million; • National grants were enabled within an invitation for joint financing of scientific and research activities in regard to development of new technologies and innovation of existing technologies through national projects and "H2020" and "Eureka"; • In the field of harmonization of education with the needs of the labour market, the focus was given secondary professional education and higher education: 31 innovated vocational education programs of levels III and IV were created, 82 occupational standards were created, 50 standards of professional qualifications were created along with 16 standards of qualifications of education levels as well as 14 exam catalogs for assessing non-formal and informal obtained knowledge; The quality of practical teaching (learning through work) in the fields of energy, telecommunications, manufacturing industry, food processing and construction was improved through training with the employer in accordance with the accredited program, practical training was realized with 116 employers; over 75% of technical schools carries out practical training with the employer; • The planned number of training programs for SMEs and strengthening capacities for development of entrepreneurship was realized, along with a large number of promotive events; • A program for enhancing employment in industrial sector and sectors which support the industrial sector has

<p>been realized through the activities of the Employment Agency of Montenegro; 772 persons completed various training programs in accordance with the needs of industry development and sectors which support the development of industry;</p> <ul style="list-style-type: none"> • Within the activities with an objective of improving the business environment in certain segments of the “Doing Business” report (company registration, building permits, registration of real estate), the effects achieved are at the planned level; • The capacities of the innovative and entrepreneurship center “Tehnopolis” in Nikšić were strengthened (28 tenants, several hundreds of training, EU projects, different events); business centers and incubators; the investment of establishing the Scientific and Technologic Park Podgorica was started; • Several project tasks have been created for the infrastructural preparation of business zones of local significance along with the program of promotion with an objective of attracting investors in these business zones.
<p>Recommendations: SG1 The competitiveness of industry is largely financed by the private sector (85%). It is necessary to encourage further investments in physical capital, to strengthen the cooperation between the public and the private sector in this area. Education is further adapted through a dual model and through the reinforcement of learning outcomes, practices and competencies in the higher education sector.</p>
<p>Strategic goal 2. Investments and finances for the modernization of industry</p>
<p>Within this strategic goal, the focus was on further development of financing models, better targeting and easier access to financing sources for competitive and innovative enterprises, as well as encouraging direct investments in priority sectors.</p>
<p>Realized effects: the investment framework has been improved in regard to the modernization of industry through a better approach, availability and access to finances, while at the same time direct investments in priority sectors were enhanced.</p> <ul style="list-style-type: none"> • Loans were secured for development of companies in the priority fields of industry, which together with connected fields of tourism and certain services stands for 879 companies, €260,82 million of support, out of which are 138 new registered companies in the field of industry; • Financial support was realized for improving solvency in the priority fields of industry through factoring arrangements for 58 companies; • A smaller number of loan arrangements was realized for investing into the ICT sector and financing of graduates in the industrial sector (22 companies); • Loan lines were realized for investing into enhancing competitiveness through greenfield and brownfield investments, redundancy programs and women in business – startup (30 companies); • Conditions were created for the realization of new financial instruments (guarantees) from the “COSME” fund; • An instrument for financial support was established for innovative and fast-growing enterprises through investing into owner's capital; • Priority infrastructural investment projects are realized in regard to the industry for implementation (energy and traffic) within the West Balkans Investment Framework (WBIF); • Realization of 6 investment projects has been completed on the basis of a public invitation from the year 2016 in accordance with the Decreee for encouraging direct investments.
<p>Recommendations: Dominant financial activities of this goal are realized by the Investment and development Fund of Montenegro (85%), further work needs to be done on the diversification of the program and targeting of specific loan arrangements for the needs of industry.</p>
<p>Strategic goal 3. Innovation and entrepreneurship</p>
<p>The activities within this strategic goal were aimed at improving the efficiency of innovative activities in enterprises and promotion of entrepreneurship and SME development, with a particular focus on the industry sector. Promotion of entrepreneurship and entrepreneurial culture for innovation and stable growth, increase in productivity and employment.</p>
<p>Realized effects: a number of enterprises that base their growth on an innovative approach in creating new products and services has been increased and co-operation/partnership between scientific and research institutions and commercial subjects have been improved.</p> <ul style="list-style-type: none"> • Grants for research and development and other forms of stimulation for companies to be engaged in research and innovation have been provided in order to establish a partnership between companies and science, in other

- words: their participation through grants for innovative research projects and the Center of excellence Program;
- The number of established partnerships of scientific and research institutes and commercial subjects with the approved grants is 22 for the year 2018, which is an increase compared to 8 partnerships for the year 2015. Within the framework of the national invitation for innovative projects, 7 grants were approved to companies in an amount of €2,75 million, 1 start-up was created and opening of 1 “spin-off” company on an university is planned;
 - In the framework of the improvement of the non-financial support model in accordance with the development and innovative needs of enterprises, awareness-raising seminars on the importance of intellectual property rights protection, two phases of the implementation of the mentoring program (in 30 companies) and numerous training and promotional activities were realized to encourage enterprises for preparation and submission of applications for different EU programs;
 - In the framework of encouraging industrial development in rural areas in the period 2016-2018, realization of supporting programs for the development of entrepreneurship in the field of agro-industry in rural areas was realized (national standards for food safety in farm processing facilities, 213 projects were supported);
 - In the part of support to enterprises/farms operating in rural areas, 29 projects for improvement of accommodation capacities have been supported;
 - In the framework of encouraging the improvement of existing and creation of new companies oriented towards priority sectors, several measures have been implemented which are mainly oriented towards tourism (accommodation capacities, support for diversification of tourist offer in the north part of Montenegro, innovations in entrepreneurship in tourism, etc.), and recently established lines for creative industries (“Creative Montenegro: Identity, Image, Promotion”) and a program for supporting the development of crafts.

Recommendations: SG3 Innovation and entrepreneurship are mainly financed by national budget (95%); promotion of investment by the private sector is required in order to develop their synergy. Promotion of mechanisms of energy efficiency needs to be included as well as the activities in the field of a digital economy. Programs of registering innovative start-up companies need to be intensified. Education needs to be enhanced with an objective to have better access to more funds within the EU innovation program.

Strategic goal 4. Access to the market

The focus within this strategic goal was on strengthening the export of enterprises in the priority sectors through realization of programs for promoting clusters and support for enterprises in implementation and certification based on standards, harmonization of technical regulations and accepting EU and NATO standards, as well as other activities of non-financial support to the SME sector within the plan of improving internalization.

Realized effects: financial and non-financial support for development of clusters through grants has been enhanced, in the field of improving capacities for managing clusters and promotion of development of new clusters as well as for compliance with the requests of international business standards and accepting EU standards.

- Realization of the program for encouraging cluster development in Montenegro (20 clusters were supported, while 51 clusters received technical support) was continued within improving the concept of organizing enterprises as parts of clusters and strengthening their connection.
- Cross-border cooperation has been established through the implementation of projects financed by the EU and other donors in order to improve the performance of new markets and promote the internationalization of clusters;
- A program for enhancing regional and local competitiveness was implemented through compliance with the requirements of international business standards, within which 77 enterprises were supported. In addition, through the implementation of incentives from the agricultural fund, among other issues, 6 agricultural production groups, 296 certified organic producers, as well as 3 producers involved in quality schemes were supported;
- When the word is about the harmonization of technical regulations and standards, during the implementation period, 160 technical regulations were adopted in order of further strengthening of the quality infrastructure system and further improving the competitiveness of enterprises. During the observed period, 6,463 standards (about 3% more than planned) were adopted also in order to create an appropriate environment for the implementation of technical legislation that came into force in accordance with the Program of Accession of Montenegro;
- In the area of standardization of procedures for codification and quality assurance of products for purposes of defense, in the observed period, 11 NATO standards were adopted in the field of codification and product quality assurance, thus fully administratively preparing for membership in the NATO codification system, as well as for adopting regulations on quality assurance in the industry sector for the needs of defense;
- In order to support the internationalization of companies and their operations in the foreign market, 252 companies received information on export markets and opportunities for international cooperation, while more than 1500 participants took part in business meetings within the “COSME” Enterprise European Network, “EEN”

project. In addition, 25 companies agreed and signed business cooperation agreements. Organized 33 business forums through partnership with “EEN” consortium.

Recommendations: SG4 Innovations and entrepreneurship are financed mainly from the state funds (91%). A certain number of activities with regard to customs and trade policies need to be included in the following period, especially relating to simplifying the customs procedures with an goal of reducing trade barriers and reaching out to foreign markets.

3. Selected economic indicators- Comparative overview

In the review of selected economic indicators, Montenegro has the best indicator of GDP per capita, expressed in purchasing power parity, in relation to all countries in the region. Montenegro is in the group of countries that have recorded a growth of more than 4% last year, and has the best indicator of the Global Entrepreneurship Index in relation to the countries of the region. On the other hand, the industry has the least share of the GDP, and the largest deficit of the current account in relation to GDP. According to the Global competitiveness index, it is on the 73rd position, i.e. only Serbia is better ranked.

Table 8. Selected indicators for the states in the region

Region	GDP/capita, by purchasing power parity standard (2018) EU=100	GDP rate of growth 2018	Industry (B-E) in Gross Value Added (2018)	Deficit of the current account in % of the GDP (2018)	GCI, Global Competitiveness Index (2019)	Global Entrepreneurship Index 2018 (rank/index)
Albania	31	4.1%	13%	-7,4%	81./141	83./24,2
Bosna and Herzegovina	31	3.1%	20%	-4,8%	92./141	95./20,7
Montenegro	47	5.1%	12%	-17,2%	73./141	60./31,2
Kosovo	n.a. (20*)	3.8%	18%	-6,1%	/	/
Northern Macedonia	38	2.7%	20%	-1,3%	82./141	66./29,1
Serbia	40	4.3%	26%	-5,1%	72./141	74./26,4

The „Doing Business“ index of the World Bank, ranked Montenegro at the 50th position in the year 2019. Northern Macedonia is the best ranked state here, especially in the areas of sub indicators, protection of minority investors, paying taxes, enforcing of contracts and liquidating of companies.

Table 9. The report on „Doing Business“ – regional overview 2019

Doing Business 2019	Rank total (190)	Registering companies	Issuing building permits	Connection to the electric network	Registering real estate ownership	Receiving loans	Protection of minor investors	Paying taxes	Foreign trade	Respecting contracts	Liquidating enterprises
AL	63	50	151	140	98	44	26	122	24	98	39
BH	89	183	167	130	99	60	72	139	37	75	37
MK	10	47	13	57	46	12	7	31	29	37	30
ME	50	90	75	134	76	12	57	68	47	44	43
RS	48	40	11	104	55	60	83	79	23	65	49
KS	44	13	100	113	37	12	95	44	51	50	50

4. Challenges of the Industrial policy in the following period

Continuous de-industrialization, over the past several decades, towards the economy dominated by the service sector has significantly increased the risks of the unbalanced development of certain sectors of the economy, the insufficiently diversified economic structure, which is significantly sensitive to changes in external demand and economic shocks. Low labour productivity in the industry, the structure of export concentrated on a small number of traditional markets, and the insufficient growth of industry in sectors characterized by the intensive use of technologies, or contemporary production processes, present the key structural disbalances of the economy of Montenegro and its industrial sectors.

The main obstacles to the growth of competitiveness of Montenegro in the context of IP 2023 are:

- **Deindustrialization:** measured by the employment indicators and the GVA industry in the structure of GVA;
- **The dominant role of traditional export sectors:** basic metals are still the most important export products, along with products from the industries of wood and food;
- **Low utilization of scientific research potential:** despite the achieved results in the field of research, there is still no growth in the use of specialist (scientific and research) knowledge for innovation in enterprises;
- **Regional disparities:** the regions of Montenegro have different patterns of industrial development, with the present deficiency in the development of the northern region;
- **Insufficient investment in the development of small and medium-sized enterprises:** at the level of all segments of the business sector, small and medium-sized enterprises (and entrepreneurs) provide the largest share in the turnover.

In this sense, there is a need to reduce these obstacles is through well-planned process of revitalization of the industrial sector and better valorization of available resources. The current state of the industry of Montenegro points to the necessarily more efficient use of the available potential, raising the level of competitiveness at the enterprise level, through investments aimed at introducing new technologies, innovation, increasing capacities and meeting standards and certificates for improving production and exports. The economy of Montenegro is already recognized in the services sector, primarily in tourism, but also in energy and transport sectors, and it is necessary to focus on the diversification of sources of economic growth in order to reduce the influence of external factors. Product diversification is one of key recommendations for further sustainable economic development of the industry.

In line with the new challenges of renewed Industrial policy of EU and contemporary trends in international economic relations, based on a realistic assessment of the actual potential of the economy of Montenegro, it is necessary to integrate, to the extent possible, new areas of the new industrial policy of EU (innovations, digitalization, investments, circular and low carbon and internationalization, human potential).

4.1. SWOT analysis

After reviewing the main characteristics of the economy of Montenegro, referring to industry, as well as specific areas that are recognized as under-valued, expressed in international competitiveness indicators, on one side and the identified strategic and supportive sectors, on the other side, the following is an overview of the basic limitations; and opportunities for industry development.

Table 10. SWOT analysis of the industrial development of Montenegro

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Favorable geographic location and proximity to the European market • Richness in natural resources (mineral raw materials, wood, water, energy) • Cheap and quality domestic raw materials • Relatively cheap and quality workforce • Favorable investment climate (incentives and tax allowances for investors) • Developed and competitive sector of tourism and services • Good transport connection to the sea and the importance of the Port of Bar • Implementation of the EU Stabilization and Association Agreement and significant experience in the process of accession to the EU • Membership in the WTO and application of the CEFTA 2006 Agreement • Implementation of the Free Trade Agreement (EFTA, Turkey, Ukraine, and others), economic co-operation as well as mutual encouragement and protection of investments with other countries • Membership in NATO • Significant potentials of cultural and creative industries 	<ul style="list-style-type: none"> • Use of energy-intensive and often outdated technology and equipment • Low productivity rate in industry • High participation in export of products of lower-processing stage • High dependency on import • Insufficient connectivity between the industrial sector and scientific research institutions • Insufficient investment in research and development • Discrepancy of the labour market and the education market • Weak industrial relations with other sectors in the economy • A small number of SMEs which develop development on innovation • Insufficiently developed road and rail transport infrastructure • Lower offer of special financial instruments and risky capital • Insufficiently developed awareness of the significance and effects of the introduction of measures of circular economy and green economy
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Developing products and services with higher added value • Modernization of production processes through the introduction of new technologies and innovations • Compliance with the requirements of international business standards and acceptance of EU standards • Ensuring resource efficiency through sustainable management and use of resources and preserving the quality of the environment • Internationalization of enterprises and higher foreign direct inflows • Integration into EU industrial development programs and projects (IPA II, Horizon 2020, COSME, EASI, etc.) • Efficient use of public-private partnerships • Reducing barriers to business development and access to the market • Greater connection of companies and scientific and research institutions • Digitalization of the economy and society • Development of the financial market and the possibility of access to funds for medium technology and high technology areas • Developing cultural and creative industries 	<ul style="list-style-type: none"> • Limited funds for investment in infrastructure and technology • Slowing down the structural reform process • Lack of capital for the development of the industrial sector • Administrative obstacles to investment and business development • Insufficient investment in education and training of employees • Dynamics in the labor market and education reforms • Weak administrative capacity for the absorption of available pre-accession instruments • Strong foreign competition is present in the local market • Costs and procedures in domestic and international transport

It can be concluded that the main strengths of Montenegro are in what it has to offer by its nature, geographical location and size. The main weaknesses are reflected in the use of energy-intensive and often obsolete technologies and equipment, due to which industrial production is characterized by high

share of products of lower processing phases and high dependence on import, as well as insufficient connection of the industry sector with scientific research institutions and other sectors in the economy.

The chances of removing these weaknesses are primarily reflected in the development of products and services with higher added value, encouraging innovation and introducing new technologies through industry collaboration with the scientific research community, digital transformation, enhancing co-operation between sectors, intensifying co-operation with foreign countries through EU integration, and investment flows with other countries. In addition, the gradual introduction of the principles of circular and low carbon economy can significantly contribute to the further development of a more resource efficient economy and good environmental management. Threats to valorize the aforementioned chances, apart from those relating to global and regional economic trends that Montenegro cannot have influence, are in the lack of funds for investments in infrastructure and technology, slowing down the process of structural reforms, especially those related to the labour market, as well as administrative obstacles to investment and trade.

4.2. Approach to the revision of the Industrial Policy through the prism of new challenges

The mid-term review of the IP 2020 for the period 2016-2018 assessed the degree of realization of the planned activities and effects of Industrial policy for the period 2016-2018, the results of economic indicators and competitiveness indicators and analysis of the results of the implementation of the annual action plans. In addition, the questionnaire has perceived the perceptions of all relevant actors (program beneficiaries and involved institutions) in accordance with the assessment criteria (relevance, efficiency, effectiveness and impact of the policy). Given the funding obstacles, the very positive perception of all interested parties on the importance of the existing IP, and the fact that certain industrial policy initiatives were initiated in 2017/2018, no radical change in strategic goals was recommended.

Bearing in mind the above, key evaluations and recommendations for further activities have been defined, proposals for modifying industrial policy and improving its implementation, including monitoring indicators, and identifying key directions on the basis of which an industrial policy review for the period of up to the year 2023 needs to be accessed, in order to respond to the challenges of the concept of renewed industrial policy.

In the part of the recommendations, among other things, it was proposed that the revision should include the following:

"Increasing the focus by narrowing includes the industrial policy itself; limit the scope to sectors B, C, D and E, with a focus on sector C. Measures relating to supporting sectors, e.g. tourism, ICT, education, employment should be included only from the point of strengthening synergies with the sectors B-E. Large investments in physical infrastructure, which are traditionally planned in appropriate sectoral strategies, can be in the context of related activities and diversification of industrial production in the medium term. Investments in physical infrastructure for the purpose of industrial transformation have been identified as the basic "preconditions" of an existing IP, and should only be subject to the IP 2023 co-ordination in this integrative context. It is necessary to increase the focus within the IP 2023 on the so-called "output factors" (innovations, strengthening of entrepreneurship, integration of trade and growth of productivity). In accordance with the Methodology for developing policies, creating and monitoring the implementation of strategic documents, performance indicators need to be revised in a renewed Industrial Policy document."

Bearing in mind the mid-term review of the Industrial policy for the period 2016-2018, the above recommendations and taking into account the specificities of the Economy of Montenegro, the IP 2023 is directed towards the **framework of an industrial policy developed by the EU** in the context of integrating new areas (primarily measures related to the digitization of society and economy, fostering green and resource-efficient economy, i.e. measures of circular economy, etc.)

In addition, **the revitalization of industrial sectors**, especially the manufacturing industry, has been recognized in the forthcoming period as the primary objective to enable production processes based on modern technical and technological achievements.

One of the key challenges that Montenegro needs to resolve in order to improve industrial competitiveness in the following period is to create more efficient usage of input factors and improve basic **infrastructural** prerequisites for development, which is in line with the EU industrial policy framework. In terms of preconditions "input factors", the following **challenges in the field of physical capital** (development of energy and transport infrastructure, better usage of raw materials/natural resources, application of information and communication technologies and implementation of a framework for the development of new digital technologies), **human capital** (education and professional training), improvements in the **business environment** (establishing a clear/predictable regulatory framework and online access to public services). Challenges in the areas of **finances and investments** are related to improving access to finances, improving capital markets and stimulating direct investment).

At the same time, the focus is enhanced on providing better "output" performance at the enterprise level through **strengthening innovation and technology transfer** (development of innovative infrastructure to support innovation, enhancing innovation potential for companies and co-operation with scientific and research institutions, the concept of smart specialization), as well as improvement of **institutional infrastructure and promotion of entrepreneurship and development of SME sector** (increase in the number of SMEs and employment). Solving the challenges of a renewed EU Policy, such as the issue of **sustainable development and the adoption of key digital technologies, industrial development with the concept of circular and low carbon economy** is an additional stimulus for the development of new products of high added value, business processes, absorption of new technologies in industrial sectors, preservation of the environment. In addition, the challenges that affect the output of the companies are related to **trade procedures** (reducing technical barriers, strengthening export performance, linking businesses) and should contribute to greater export promotion in order to integrate into international chains of value.

Bearing in mind the above, it is concluded that industrial policy requires a focus on **increasing efficiency and productivity**, together with more efficient and sustainable use of available natural resources, moving towards processes of higher added value as well as to the needs of companies that will have the greatest impact on the international competitiveness of the economy of Montenegro. Only in that way, through the support of enterprises and increasing their competitiveness, enabling better access to financial resources, improving the business environment and better harmonization of the education system with the needs of the labor market, it is possible to achieve long-term sustainable growth.

Starting from the given recommendations and challenges, as well as possible models for their overcoming, as an assumption of the strategic document IP 2023, a **matrix of logic intervention** is defined which identifies the overall objective, key problems and areas of intervention and presents the basis for a further detailed elaboration of strategic goals and operational objectives, with results in conducting activities that are measured by appropriate performance indicators.

Table 11. Matrix of logic intervention

GENERAL GOAL: CREATING CONDITIONS FOR THE GROWTH OF COMPETITIVENESS OF THE ECONOMY OF MONTENEGRO AND ITS INDUSTRY			
<p>SG1. IMPROVING INFRASTRUCTURE AND BUSINESS ENVIRONMENT FOR EFFICIENT INDUSTRIAL DEVELOPMENT: Better business environment and conditions for industrial competitiveness and sustainability, including strengthening of the industrial sector as a support to other sectors with higher value added.</p>	<p>SG2. IMPROVING INVESTMENTS AND FINANCES FOR MODERNIZATION OF THE INDUSTRY: The improved investment framework for modernizing the industry through better approach, availability and accessibility to finance.</p>	<p>SG3. STIMULATING INNOVATION, TECHNOLOGY TRANSFER, AND DEVELOPMENT OF ENTREPRENEURSHIP: Improved co-operation between companies and the academy for the development of innovation, more dynamic development of entrepreneurship, improvement of the development of green economy, promotion of diversification, and digitization of society and economy.</p>	<p>SG4. IMPROVING ACCESS TO THE MARKET: Simplifying the procedures for trade and business access to domestic and international markets.</p>
<p>Key problems linked to the SG1:</p> <ul style="list-style-type: none"> • Transport infrastructure, partially energy infrastructure and to a certain extent the ICT infrastructure, represent relative restrictions to accessing the international market • Insufficient level of international competitiveness resulting in a high deficit in trade • Insufficient level of efficient valorization of available raw materials • Low level of resource efficiency • Insufficient harmonisation between the labor market and education market, the need to strengthen new skills and competencies • The need for further improvement of the regulatory framework and overall business environment, especially for SMEs 	<p>Key problems linked to the SG2:</p> <ul style="list-style-type: none"> • Existing available financial means and instruments are not fully in line with the existing and potential demand of the enterprises • The need to improve the regulatory framework in order to implement new financial instruments • Inadequate level of direct investment in priority sectors for modernization of industry 	<p>Key problems linked to the SG3:</p> <ul style="list-style-type: none"> • A small number of companies that are based on development of innovations and new technologies • Existing co-operation between business and science has not reached an appropriate level that provides significant innovation results • Capabilities for withdrawal of EU funds are not sufficiently developed • The existing model of non-financial support to entrepreneurship is not fully in line with the development needs of companies • The significance of the green economy development concept is not sufficiently recognized • Insufficient diversification of the industry in the regional context • Insufficient level of digitalization in business operations at the enterprise level 	<p>Key problems linked to the SG4:</p> <ul style="list-style-type: none"> • High external trade deficit (low coverage of import by export, there is no adequate supply of domestic commodities on the Montenegrin market or its prices are not competitive with the prices of imported commodities) • Inadequate organization of companies and lack of co-operation for joint performance in foreign markets • Insufficient level of promotion, co-operation and internationalization of the companies
<p>AREAS OF INTERVENTION:</p> <ol style="list-style-type: none"> 1.1. Improvement and further development of energy and transport infrastructure 1.2. Improvement of the ICT infrastructure for the growth of competitiveness of companies 1.3. Stimulate the sustainable 	<p>AREAS OF INTERVENTION:</p> <ol style="list-style-type: none"> 2.1. Improving access to finance for competitive and innovative companies 2.2. Creating regulatory framework and implementation of new 	<p>AREAS OF INTERVENTION:</p> <ol style="list-style-type: none"> 3.1. Development of innovative infrastructure in accordance with the requirements of the companies 3.2. Improvement of innovative activities through 	<p>AREAS OF INTERVENTION:</p> <ol style="list-style-type: none"> 4.1. Simplifying trade procedures and reducing technical barriers in trading 4.2. Improvement of the enterprise organization into clusters and global value chains

<p>resource management 1.4. Development of human capital through education and acquiring skills for the competitiveness of industry in accordance with the requirements of the labor market 1.5. Improving the regulatory framework and business environment</p>	<p>financial instruments 2.3. Investment of investments in the modernization of the manufacturing industry</p>	<p>co-operation between scientific and research institutions and business and potential for accessing EU funds 3.3. Development of institutional infrastructure and supporting services for development of entrepreneurship 3.4. Stimulating development of green economy 3.5. Support diversification of supply of industrial sector in the regional context 3.6. Stimulating digital transformation of business</p>	<p>4.3. Strengthening enterprise export performance</p>
<p>Results measured by indicators</p>	<p>Results measured by indicators</p>	<p>Results measured by indicators</p>	<p>Results measured by indicators</p>

III. STRATEGIC GOALS OF THE INDUSTRIAL POLICY 2019-2023

The activities carried out in the previous period in Montenegro, with an objective of increasing the competitiveness of the economy, were mainly focused on improving the regulatory framework and business environment, stimulating investments for modernization of the industry, supporting innovation and developing entrepreneurship, as well as better access to the market, which was also the main point of the strategic document Industrial Policy by 2020. After three years of implementation, as indicated, further improvement is needed in certain segments, in the time coverage until 2023.

In terms of an innovative approach in the industrial policy, in order to increase industrial productivity, stimulate entrepreneurship and enhance innovation and digital economy, the following „VISION“ is defined:

„Industrial policy of Montenegro will through further improvement of the business improvement, supporting companies and entrepreneurship, stimulating the application of modern technologies with an objective of creating new and better quality of jobs, create conditions for a sustainable revitalization and modernization of industry, based on knowledge, development of digital economy and innovations and enable greater integration on the international market“.

In order to create the conditions for increasing the overall competitiveness of the economy of Montenegro, **the industrial policy** tend to eliminate structural and sectoral imbalances, as well as to overcome the problem of an insufficiently diversified of production base. An innovative approach to industrial development is aimed at better valorization of existing resources in the industrial sector (primarily in the manufacturing and energy sectors), enhancing the development of products with higher value added, efficiency of resources and creation of additional sources of sustainable economic growth, encouraging the development of tourism and service industries and attracting foreign investment.

The main objective of IP 2023 is to improve infrastructure and business environment for efficient industrial development, increase in investments for modernization of industry, stimulating innovation, technology transfer and development of entrepreneurship, as well as improving access to the market.

The basic priorities of the Industrial Policy are defined hereby:

- Establishing preconditions for further improvement of physical infrastructure for development as well as more efficient use of available resources in order to reduce the cost of input components;
- Enhancing the growth and development of companies, based on efficiency, productivity and innovation.

In order to achieve the planned priorities, in the long term, industrial development should be oriented towards the challenges of industrial transition and smart specialization that will increase the competitiveness of Montenegrin economy through investments in innovative projects in priority sectors, encourage sustainable industrial modernization, human capacity development, digitalization and enable integration into international markets.

Based on the above, **the strategic goals of the Industrial Policy 2019-2023** were formulated as follows:

- **SG1: IMPROVING INFRASTRUCTURE AND BUSINESS ENVIRONMENT FOR EFFICIENT INDUSTRIAL DEVELOPMENT:** further development of the energy and transport sectors (improved physical capital), strengthening of ICT infrastructure, enhancing sustainable resource management, development of human capital and improving the regulatory framework and business environment.

- **SG2: IMPROVING INVESTMENTS AND FINANCES FOR MODERNIZATION OF THE INDUSTRY:** Improved investment and regulatory framework for industry modernization through better approach, availability and accessibility to financing, improving access to financing for competitive and innovative enterprises with the growth of investments in the manufacturing sector.
- **SG3: STIMULATING INNOVATION, TECHNOLOGY TRANSFER AND ENTREPRENEURSHIP DEVELOPMENT:** enhanced infrastructure for innovation and co-operation between scientific and research institutions and companies, strengthened capacities for accessing the EU funds, development of institutional infrastructure and supporting services for entrepreneurship development; development of the green economy, supporting diversification of the industrial offer in the regional context, and dynamic digitalization of society and economy;
- **SG4: IMPROVING ACCESS TO THE MARKET:** simplified trade procedures and reduced technical barriers to trade, improved clustering and linking to international value chains, and strengthening the export performance of companies.

Instruments of the policy that will be used to achieve the above stated goals include the construction and improvement of physical infrastructure including the model of public private partnerships, the improvement of the legislative framework, including the introduction of incentive measures in the field of financial and fiscal policy, public procurements, educational programs, trainings, preferential loans, programme lines for enhancement of competitiveness, grants, investments of risky capital, guarantees, strengthening of innovation infrastructure, digitalization, trade allowances, adoption of international standards in production and trade, investments in quality of infrastructure and various other activities and instruments.

1. STRATEGIC GOAL 1: IMPROVING INFRASTRUCTURE AND BUSINESS ENVIRONMENT FOR EFFICIENT INDUSTRIAL DEVELOPMENT

Increasing the level of competitiveness and productivity of the industry as well as the overall economy necessarily requires first of all the improvement of conditions such as physical infrastructure, reducing energy costs, transport, improved use of information communication technologies, efficient use of potentials of material and non-material resources, as well as stimulating of the business environment. In order to increase the competitiveness of companies operating in the industrial sector, strengthening the position on the domestic market is a precondition to direct its business to the markets of the region and the EU, with the production of goods and the providing of related services that meet the demands of global markets, along with the improvement of the foreign trade balance.

Analyzing the indicators of international competitiveness, it is noted that the transport infrastructure, partially the energy infrastructure²⁸, and to the minor extent the ICT infrastructure are identified as relative barriers for the access to the market and for the greater involvement of local companies in overall international economic relations at a more significant level.

Bearing in mind the significant potential of mineral resources²⁹, mineral resource management on the principles of sustainable development and protection of environment through rational exploitation is very important, and on the basis of strategic planning of its usage. Also, the potential of Montenegrin forest resources is a very important basis for creating added value in the field of wood processing,

²⁸ Technical potential of the main water streams in Montenegro for building hydroelectric plants is up to 4, 6 TWh and the level of usage is under 20% (Strategy of development of energy by 2020, 2014, page 12.)

²⁹ A great number of mineral resources is registered on the territory of Montenegro (energy, metal, non-metal and techno gene minerals, sea salt and underground water), 15 of which are exploited, while 23 mineral resources are designated as having an economic significance which need to be valorized in the further period.

renewable energy sources, food production and tourism, which should contribute to greater added value in the wood industry chain.

In human resources management, education and skills acquisition are of key importance to the competitiveness of industry in line with labor market and economy needs, with the further development of lifelong entrepreneurial learning.

Key issues in the field of improving infrastructure and business environment for efficient industrial development:

- Improvement and further development of energy and transport infrastructure in the function of better quality of electricity supply and safer transport;
- It is necessary to invest in the valorization of important resources of mineral raw material for the revitalization of industrial production;
- Enabling the growth of investments in forestry and wood processing, increasing competitiveness and employment, especially in the Northern region, increasing the level of finalization in the processing of raw materials, reducing exports of low finalization grade wood products and its consumption in Montenegro through finalization in domestic wood processing capacities.
- Effective use of human resources potential through activities that are being carried out on the modernization of educational programs of vocational education and study programs and creation of the necessary knowledge and skills in accordance with the needs of the economy;
- There is a need for improvement in the field of regulation and general business environment (based on selected international indicators of competitiveness)³⁰.

Starting from the key issues identified within the strategic goal of improving infrastructure and business environment for efficient industrial development, the **scope of planned interventions** includes the activities of the necessary more efficient use of physical and human capital, the improvement of ICT infrastructure for the growth of enterprise competitiveness, sustainable resource management in the context of diversification and systematic expansion of the production and export base of the economy. Priority activities within this strategic goal will be put into full function, with further improving the regulatory framework and creating a stimulating business environment. The realization of these activities is a precondition for the development of competitiveness of the Montenegrin industry at the level of companies and sectors, and strongly contributes to the development of the economy as a whole, and in the same time respecting the priorities of smart specialization, especially when it comes to the use of energy from renewable sources and the development of networks to improve the delivery of digital services.

Realization of the strategic goal 1. Improving infrastructure and business environment for efficient industrial development will be monitored by the level of completion of impact indicators, by improving the economic performance expressed by international competitiveness indicator (GCI) and by increasing the participation of industrial sectors in GVA.

Table 12. Indicators of impact for SG 1. Improving infrastructure and business environment for efficient industrial development

IMPACT	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
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³⁰ The competitiveness pillars in the GCI indicators, as well as indicators of the ease of doing business of the World Bank „Doing business“.

Improved international economic competitiveness	Global competitiveness index (GCI ³¹ , WEF)	73/141 (2019)	67	63
Increase of share of industry in the GVA (B-E)	Industry in Gross Value Added, GVA (Monstat)	12,4% ³²	13%	13,5%

On the basis of the identified key issues and requirements the following **operational objectives** are defined:

Operational objective 1.1.	Improvement and further development of energy and transport infrastructure
Operational objective 1.2.	Improvement of the ICT infrastructure for the growth of competitiveness of companies
Operational objective 1.3.	Stimulate the sustainable management of resources
Operational objective 1.4.	Development of human capital through education and acquiring skills for the competitiveness of industry in accordance with the requirements of the labor market
Operational objective 1.5.	Improving the regulatory framework and the business environment

In the Annex of IP 2023 it is provided an overview with key outcome indicators that follow the realization of activities at the level of operational objectives within all strategic goals and present measurable short-term and mid-term effects of the implementation of activities.

1.1 OG.1.1. Improvement and further development of energy and transport infrastructure

The energy sector is one of the main strategic branches of the Montenegrin industry and economy, so special attention is given to its development, reform activities, and inclusion in the regional and European energy markets. Montenegro has significant and underutilized hydro-potential, coal reserves, as well as renewable energy sources (sun, wind and biomass). Valorization of these potentials can completely be sufficient for domestic energy needs. Improving the characteristics and increasing production capacities in energy supply, along with the achieved savings in consumption, should contribute to the reduction of energy prices as well as increasing the competitiveness of Montenegrin companies. Increasing the energy efficiency of existing productive, transitive and distributive facilities, investing in renewable energy sources, cleaner and more efficient production from fossil sources, increasing efficiency of energy on the demand side, developing the energy sector through the prism of climatic changes, and improving the regulatory framework are key segments of the strategic framework for energy policy.

The transport sector³³ of Montenegro is characterized by an underdeveloped road network, poor condition of railway infrastructure, inadequate utilization of airports and capacities of Port of Bar as well as inadequate connection with the surrounding countries. Some attractive locations for attracting direct foreign investments are not valorized enough due to inadequate road connectivity and difficult flow of

³¹ (Global Competitiveness Index, GCI, which is published by the World economic forum (WEF), as a reference evaluation of the global competitiveness of a single economy, is being evaluated in 140 countries of the world, based on a large number of indicators which influence the business environment, grouped in 3 pillars of competitiveness which include 12 factors/subgroups of competitiveness (4 of basic factors, 6 of efficiency factors and 2 of innovative factors). Data source for 2018-19: <http://reports.weforum.org/global-competitiveness-report-2018/country-economy-profiles/#economy=MNE>

³² Gross domestic product Montenegro, 2018, Public release Monstat, September 2019

³³ The long term strategy of development of transport in Montenegro by 2035 is being creating at the moment, it will include key legislative, institutional and investment activities in all fields of transport.

commodities. The development of an efficient transport system is an important prerequisite for the industrial development of the country and main development activities in the country.

In order to increase the accessibility and energy security in Montenegro, activities are undertaken to create strategic assumptions for stronger entry of investments in physical infrastructure (completion of the first section of the highway), planned improvement of airport operations, completion of the project of the underwater energy cable, as well as conducting research on oil and gas. Additionally, in the context of IP 2023, investments were treated through the Western Balkans Investment Framework (WBIF), in which investments and the so called soft measures primarily relate to transport and energy, but also to the environment and other investments of importance for a more efficient development of the industry.

Key issues in the area of physical capital improvement in the fields of energy and transport:

- In the context of supporting industrial development, it is important to revitalize existing ones and build new energy capacities, as the physical capital representing the sector as well as the assumption and support for the development of other industrial sectors.
- Improvement of transport connectivity and investments in transport infrastructure, which is secure, safe, efficient and well maintained, and increases the integration of Montenegro into trans-European transport networks.

Activities within this operational objective include specific activities of revitalization of the existing energy infrastructural capacities (efficient valorization of energy potentials in the fields of hydroelectric plants, small hydroelectric plants and thermal power plants), building a new energy infrastructure in the areas of hydro, wind and solar energy, as well as preparing and conducting priority infrastructure projects through the West Balkans Investment Framework, with the support of European banks (EIB, EBRD, KfW etc.).

Realization of the planned activities will improve the physical capital in the fields of energy and transport, as an important incentive for the revitalization of other industrial sectors in Montenegro. More efficient valorization of energy potentials and reduction of operating costs through further development of infrastructure for sustainable energy supply will provide safe supply and development of competitive, liberalized and open energy market, while investments in physical capital in the transport sector will stimulate economic growth through more secure and cheaper transport.

1.2 OG.1.2. Improvement of the ICT infrastructure for the growth of competitiveness of companies

The development and application of information and communication technologies is of great importance for the development of the Montenegrin industry and the overall economy and the growth of its competitiveness. High-quality digital infrastructure is the basis of almost all sectors of a modern and innovative society, and ICT technologies, as areas with strong research potential, contributes to the industrial modernization also through the connection with "key enabling technologies".³⁴ The ICT sector has a significant potential for growth through the implementation of projects in the field of information

³⁴ Key enabling technologies - (KET) include Nano technology, micro and Nano electronics, including modern materials, biotechnology and photonic technology.

society, electronic communications and broadband infrastructure³⁵, which further positively influences the development of other sectors of the industry and contributes to reducing the costs of industrial production, improving the business and labor productivity, and developing new markets.

In addition, the strengthening of institutional and administrative capacities, with a strong reliance on ICT technology and the achievement of a greater degree of automation of business processes, contributes to the strengthening of competitiveness of the companies. It is necessary to ensure compatibility of software and data exchange, both within the public sector and in communication with the economy, where significant savings can be achieved together with an increase in efficiency of the business.

Key issues in the field of improving the ICT infrastructure for increasing the competitiveness of enterprises:

- It is necessary to further develop and strengthen the national broadband network and reduce the costs of setting up high-speed electronic communications networks;
- Improving the open data portal³⁶ by integrating a large number of databases and accessible registers for the needs of the economy and citizens, and easier performing of business and communication with the economy.

Activities within this operational objective include specific activities of developing of the national broadband network, improving of regulatory and legislative framework with an objective to reduce the costs of installing high speed electronic communication networks, improving the open data portal (www.data.gov.me) through establishing new functions in regard to accessibility and integration with the EU portal (www.europeandataportal.eu), as well as creating the national framework of interoperability in the function of ensuring the compatibility of the software and data exchange.

Implementation of the planned activities will additionally complete the ICT infrastructure, as one of the key assumptions for the development of the industrial sector in the era of digital development of the society. Strengthening the ICT infrastructure and establishing an open data portal will additionally improve the business environment, strengthening the eGovernment portal and the number of services provided, engineers and developers will be linked into the larger IT systems, increasing the possibilities of introducing full service in international e-payments and the establishment of a competitive e-commerce, all of which increases the interest of large ICT companies to be present in Montenegro.

1.3. OG.1.3. Stimulate the sustainable management of resources

One of the key priorities of the **National Sustainable Development Strategy by 2030** is the sustainable management of limited resources for future development, especially with regard to available forest resources, agricultural land and mineral resources.

The wood industry has significant unutilized forest resources and potential for sustainable economic growth and development in which Montenegro has comparative advantages (forest coverage of 59.5%

³⁵ When referring to the technological infrastructure of the digital economy, it is mainly referred to the broadband access. Broadband access assumes access to the internet which enables download speeds from 2Mb/s. Dependent on the technology through which internet providers offer services in Montenegro different internet speeds are available. Through WiMAX the users are offered maximum speeds of up to 20 Mb/s, through xDSL up to 40 Mb/s, while through connection with optical fibers (FTTx) and cable distributive systems (KDS-HFC) internet access speeds are currently up to 120 Mb/s. Internet can be accessed in almost any place by using the mobile broadband access.

(“Broadband internet access”, EKIP, <http://www.ekip2.me/download/brosure/Sirokopijasni%20pristup.pdf>)

³⁶ There are 10 thematic databases at the moment and this number is constantly increasing.

of the total territory or 826 782 ha)³⁷. While sectors based on forestry have a great potential for growth, the share of forestry and wood processing in national income is below 1%, which is insufficient given the potential and added value in the industrial production of this input. Despite comparative advantages in terms of the availability of wood raw materials and export opportunities, the potential of the wood industry has not been sufficiently valorized.

In addition, the situation is similar in mining sector³⁸, the field of mineral resources, where the comparative advantages of resources are not sufficiently valorized and there is a significant space for increasing the usable value in accordance with the principles of sustainable development and resource efficiency.

Key Issues in the sustainable resource management:

- Valorization of potentials and the need for full implementation of regulatory mechanisms in the field of wood market with the final objective of increasing the level of final processing.
- In the field of mining, through the implementation of the concession contracts for the exploitation of mineral resources, it is necessary to enable further increase in production volumes and increased utilization of mineral resources in related industrial subsectors, in particular metal industry, construction and the global industrial chain of value.

Activities within this operational objective include specific activities of improving the offer of wooden resources with an objective of it being more available for wood processing companies, as well as the activities referring to more efficient management of mineral resources (mainly the activities of concession users which exploit coal, red bauxite, lead and zinc ores)

Realization of these activities creates the conditions for companies in the industrial sector to introduce and use technologies that enables the creation of higher added value, higher productivity, reduced exports of low-grade finalized wood products, i.e. the increase in their consumption in Montenegro, the greater share of wood processing and the total processing industry in gross value added. The usage of available raw materials in the manufacturing industry is much improved through production in higher processing phases, further exploitation of mineral resources and others.

1.4. OG.1.4. Development of human capital through education and acquiring skills for the competitiveness of industry in accordance with the requirements of the labor market

As one of the structural problems of our economy, a **structural misbalance between supply and demand for knowledge, competencies and skills** has been identified (the gap between the supply of the education market and the demand from the labor market³⁹). The unemployment structure, which is

³⁷ The total abundant volume of wood is estimated at 122 million m³, with a current volume increase of 2.9 million m³. By surface, state ownership is 52.3%, and private ownership is 47.7% forest. Wood cutting at the annual level is 804.821 m³, which ensures the sustainability and development of this natural resource (Annual Forest Management Program for 2018).

³⁸ The most important solid mineral resources in Montenegro are metallic (red bauxite and lead-zinc ore), energy (dark lignite coal and dark coal) and non-metallic (architectural-constructional (decorative) stone, technical-construction stone, white bauxite), while as very important mining potential is recognized: copper ore, cement marl, brick clay, dolomites, quartz sand, barite, oil and gas

³⁹ The key challenges in the labor market of Montenegro today are: low labor force activity and high unemployment rates; insufficient involvement of young people, women and other sensible groups on the labor market; regional disparities in employment and unemployment; high level of informal employment; insufficient balance of supply and demand; low citizen participation in lifelong learning programs; insufficient interaction between activation and social assistance measures; low inclusion of persons with disabilities and vulnerable groups on the labor market (Action Plan for employment and human resources development in 2019, Ministry of Labor and Social Welfare, XII 2018).

dominated by workers holding a high school degree, is a reflection of the structural disparity in supply with demand for work. Labor market misbalance needs to be overcome by creating the conditions for opening new jobs and investing in human capital. Additionally, one of the causes of structural imbalances in the labor market is the insufficient involvement of all interested parties in the creation of reform activities and the identification of the deficient professions, skills and competences that are necessary for the labor market, which is always dynamically changing.

While skills are observed within several indicators of competitiveness as a relative advantage relative to other economies (e.g. index of competitiveness of global talents and index of network literacy), the education and training have been identified as one of the relative weaknesses in the global competitiveness report.

In the further **reform of the education system** in accordance with the needs of the labor market and industry, the participation of key partners is necessary in order that the measures taken will give their full effect which will be reflected in the creation of conditions for the modernization of educational programs in which **knowledge and skills** that are better aligned with the needs of the economy. Modern industrial policy development requires the development of a mechanism for anticipating the needs for specific types of qualifications and knowledge in line with sectoral development and training and entrepreneurship training for employment in the industry sector.

Key issues in the field of human capital development through education and acquisition of skills for competitiveness of industry in line with demands of the labor market:

- Further harmonization of the education system with the requirements of modern industrial⁴⁰ and overall economic development
- Improving and acquiring the necessary knowledges and skills that should contribute to the development of a competitive and dynamic economy, which generates new and high quality jobs.

Activities within this operational objective include specific activities for the development of occupational standards and standards of qualifications in accordance with the needs of the labor market in the fields of various industrial areas, modernization of professional education levels III and IV in the field of industry, practical teaching (learning through work) in certain industrial areas, realization of education and training programs for job seekers in accordance with the needs of industry development; modernization and promotion of study programs in accordance with labor market needs, with special emphasis on natural and technical sciences. Within these activities, it is necessary to implement programs for the development of entrepreneurship and various trainings, in order to strengthen the competitiveness of Montenegrin companies and entrepreneurs within a variety of program activities, as well as to organize various training programs and thematic events in order to further develop entrepreneurship and harmonize education supply with needs of the labor market in co-operation of economy, business associations, academic community, civil sector, and Government departments.

Significant support will be added to these activities which will be realized in the period 2019-2020 through the implementation of the **Sectoral operational program for employment, education and social policy 2015-2017** (IPA 2015).

By realizing the stated activities, a flexible and sustainable system of creating the necessary knowledge, competencies and skills in accordance with the needs of the economy is established, while promoting the concept of lifelong learning. Conditions will be created for the improvement of the labor market, which enables the strengthening of competences and skills, greater labor mobility, employment and job

⁴⁰ According to the EC analysis, every 100 open positions in industry entail the creation of 60 to 200 jobs in industry-related industries ("A stronger European industry for growth and economic recovery" (COM / 2012/582 final), p.3.

creation. Finally, creating more attractive job opportunities in the country reduces the risk of excessive migration of skilled labor to other markets, especially the migration of young people.

1.5. OG.1.5. Improving the regulatory framework and the business environment

A favorable business environment presents one of the basic preconditions for the development of a stable and strong economy, a growth of living standard, a reduction of unemployment and an increased inflow of foreign and domestic investments.

Previous efforts in the area of improvement and creation of an attractive business environment have resulted in numerous mechanisms of support to the economic sector and progressive increase in investments. While reforms in the field of business environment improvement are continually implemented, it is necessary to further improve the work of regulatory bodies and institutions in order to further simplify the administrative procedures, reducing the costs that the regulatory framework creates for businesses in their operations, not only through the full implementation of online companies registration and the introduction electronic business in the process of issuing a building permit, but also in aspects of business related to registration of real estate, administrative taxes and other fees.

Key issues in the area of improvement of the regulatory framework and business environment:

- Further simplifying and reducing the time and costs of administrative procedures
- Improving the electronic availability of public services for the needs of the economy.

Activities within this operational objective include specific activities aimed at reducing the costs of operating the economy through the adoption and implementation of the Law on administrative fees and the establishment of a system for electronic payment of administrative taxes, the adoption of the Law on electronic fiscal system in the market of products and services and its implementation by phases, full adoption of the Directive on late payments by adopting regulations that regulate the deadlines for settlement of monetary obligations, further simplifying the procedure for establishing a business or registration of enterprises, simplifying the process of issuing business licenses by state authorities and state administration bodies (e-licenses), shortening the deadlines for registering real estate in the cadaster by increasing the working efficiency of cadastral services, the introduction of a unique information system in the field of building planning and construction.

These activities will receive additional support in the period 2020-2021 through the implementation of IPA 2016 on establishing a Single point of contact for services (SPOC). All information on the procedures and conditions for access / providing of services will be provided through the SPOC, which will function in accordance with the Law on Services regulating electronic administration. In this way, simplification of the process of issuing business licenses by state authorities and further improvement of the registry of licenses⁴¹ on the eGovernment portal will be facilitated, as one of the already functional preparatory activities for the establishment of the ICT.

Realization of these activities will further improve the business environment through the creation of a clear and predictable regulatory framework, with reduced operating costs, shortening of deadlines and simplification of administrative procedures, as well as improving the registration of companies - starting business, cadastral services, issuing building permits, registering real estate and others.

⁴¹ The license registry currently contains 282 licenses for legal entities and all interested entities can obtain the necessary information, and for 23 licenses an electronic request can be launched on the e-License eGovernment page <http://www.euprava.me/elicence1>

2. STRATEGIC GOAL 2: IMPROVING INVESTMENTS AND FINANCES FOR MODERNIZATION OF THE INDUSTRY

The development of the modern industry in Montenegro requires providing of financing from domestic as well as from various foreign sources. The demand of companies for external sources of financing, primarily loans, is growing, and banks are still the biggest source of financing for growth and development of companies. However, financing opportunities for starting a business, given the unfavorable offer of loans of the banking sector, are limited. In some cases, there is also lack of good project proposals and quality plans for their implementation, insufficient loan capability and lack of adequate collateral.

In order to improve the supply of financial resources, the Investment and Development Fund of Montenegro provides funds under more favorable conditions in comparison to the market, and provides additional funds by concluding financial arrangements with international financial institutions (EIB, EIF, EBRD, CEB, World Bank, etc.). Conditions for providing of guarantees for specific target groups have been created in order to facilitate access to credit and support for the establishment of companies.

In addition to public sector incentives, specific EU programs (WB EDIF, COSME, IPA, etc.), which are used by financial institutions, are also an important source of support for the development of companies in directing their greater innovation and efficiency. The possibility of using financial instruments based on investment in risk capital to ensure long-term competitiveness of innovative companies in certain market segments (digital technology and ICT) is especially emphasized.

Moreover, the existing production technologies and processes require technical, technological and organizational improvements with the application of innovations primarily in the manufacturing sector (metal processing, food processing), aiming to create new innovative products, enable the application of new technologies and efficient and smart management of production. Financial incentives for investments in priority areas of industry available from the relevant ministries should be in the function of modernization of industrial capacities and new employment.

Key issues in the field of improving investment and finance for modernization of industry:

- Facilitating access to financial instruments for the development of industry and sectors that support industrial development;
- The need to improve the regulatory framework for the implementation of new financial instruments;
- Improvement of the environment for attracting investments and technological modernization through stimulating measures and realization of investments in the manufacturing sector.

Starting from the key issues identified within the strategic goal of investment and finance for the modernization of the industry, **the scope of planned interventions** include activities related to the need to improve access to finance for companies from the industrial sector through diversification and the offer of favorable financial instruments of loans and factoring, microloans, the development of a legislative framework for the introduction new instruments especially for innovative enterprises, implementation of instruments for investing into risk capital, inclusion in the EU financial initiatives for support of enterprises and implementation of guarantee models, improvement of investments for the development of metal processing industry and support to production capacities for technological modernization of the manufacturing industry.

These activities should also add significant support that will be available in the period 2019-2021 through the implementation of the Sectoral operational program for competitiveness and innovation (IPA 2014 and IPA 2016).

Realization of strategic goal 2. Improving investments and finances for modernization of the industry will be monitored by the degree of achievement of the following indicators:

Table 13. Indicators of impact for SG 2. Improving investments and finances for modernization of the industry

IMPACT	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Better availability, and access to finances through financial institutions in Montenegro	Borrowing of financial institutions in Montenegro from financial institutions within EU for placement in the industry sector	100 million (04.07.2018.) IDFMN loan from EIB for SMEs & priority projects, first installment ⁴²	20% growth in regard to 2018.	30% growth in regard to 2018.
An increase of investments in fixed assets in the industry sector	Investments in fixed assets (B-E)	121 million euro (industry 2018, Monstat)	10% growth in regard to 2018.	20% growth in regard to 2018.

On the basis of identified key issues and requirements the following **operational objectives** are defined:

Operational objective 2.1.	Improving access to finance for competitive and innovative companies
Operational objective 2.2.	Creating regulatory framework and implementation of new financial instruments
Operational objective 2.3.	Stimulating investments in the modernization of the manufacturing industry

2.1. OG.2.1. Improving access to finance for competitive and innovative companies

In the field of improving **access to financing** for companies from the industry sector, various loan support mechanisms and support for liquidity are available from the Investment and Development Fund of Montenegro, which should contribute to the opening of new companies, to the growth and development of existing companies and new employment opportunities. Long-term and short-term loans under favorable conditions are intended for investment projects for modernization of the industry, strengthening of performances in international markets and securing and maintaining the solvency of companies. A special segment relates to support for entrepreneurship and certain categories of potential and existing entrepreneurs, startup businesses, women, young people, etc. In order to stimulate the establishment of companies and employment in the industry sector and sectors that support industrial development, loan support in the form of microloans for self-employment has been additionally provided, as well as appropriate training for establishment and growth of companies.

At the same time, the planning and development of financial support instruments under IPA II (Sector of competitiveness and innovation) in form of **grant schemes** for the MSME sector and clusters in the industry is an additional stimulus for strengthening the competitiveness of the industry sector and their usage should be enhanced by enhancing capacities through training and advisory support for the implementation of financial schemes from EU funds.

⁴² <https://www.irfcg.me/me/2014-03-18-14-49-28/535-irf-i-eib-potpisali-danas-novi-kreditni-aranzman>

Key issues in the field of access to finances for competitive and innovative enterprises:

- Creating and implementing measures and financial support instruments that promote industrial development, from domestic and foreign sources;
- Providing support to specific target groups in accordance to the demand.

Activities within this operational objective include specific loan securing activities for development of companies in the industry sector and related sectors that support industrial development provided by Investment and Development Fund of Montenegro, including related investments in strategic service sectors, the implementation of financial support to improve liquidity in industry sectors through factoring arrangements, securing microloans for opening new businesses and self-employment, preparing and implementing grant schemes for MSMEs and clusters through IPA funds.

Realization of the above mentioned activities will significantly improve access to finances for the MSME sector in the field of industry, increase of production and productivity and creating new jobs, access to foreign markets.

2.2. OG.2.2. Creating regulatory framework and implementation of new financial instruments

In order to facilitate access to the sources of funding, it is important to improve the regulatory framework along with development and implementation of new financial instruments that will be targeted at enhancing the innovative potentials of companies and increasing their competitiveness.

By creating legal solutions for establishing **funds of entrepreneurial capital**, which do not currently exist in Montenegro, opportunities will be created for the development and functioning of the model of new financial instruments for investing into equity capital, with appropriate transfer of knowledge and expertise, which is of particular importance for innovative enterprises in the field of industry such as ICT, telecommunications, biotechnology, etc.

The offer of new financial instruments for **equity investments** is currently available under international programs (WB EDIF program), through the “ENIF Fund” for innovative enterprises and the Investment and Development Fund of Montenegro as the investor. Investments in seed and startup companies, which require capital and professional skills to start a business, are not at a sufficient level. Therefore, the creation, promotion and implementation of this model of financing and training in the form of investment readiness for the use instruments of risk capital should provide additional contribution to the establishment and development of startups and innovative enterprises.

A particular aspect of financial instruments relates to **guarantees** intended for companies that do not have sufficient or attractive collaterals for obtaining loans, which is one of the most common obstacles to getting a loan. Opportunities for the use of guarantees by companies, especially for riskier categories, were created by a signed contract between the Investment and Development Fund of Montenegro and the EIF within the COSME program and its future implementation.

Access of financial institutions to EaSI and other EU programs that support businesses and facilitate access to new financial instruments are important for extending corporate financing instruments.

Key issues in the field of creating a regulatory framework and implementing new financial instruments:

- The need to improve the regulatory framework for the implementation of new financial instruments and the development of alternative sources of financing (risk / venture capital)
- Improving the availability of financial means and instruments for different categories of companies (guarantees, microloans) using the EU funding sources.

Activities within this operational objective include specific activities for the adoption and implementation of the Law on alternative investment funds, the implementation of financial support instruments for innovative and fast-growing companies through investments into equity capital, the implementation of the instrument for loan guarantees from the COSME program.

Realization of the above mentioned activities will create the systematic preconditions for investing in startup companies by the instrument of risky capital, financing of specific target groups will be facilitated by providing collaterals for parts of the loan, the possibilities of the companies for absorption of financial resources (investment readiness and training for the usage of EU financial instruments) will be improved.

2.3. OG.2.3. Stimulating investments in the modernization of the manufacturing industry

Investment support in priority sectors of the industry is conducted by measures that enhance the environment for investments of domestic and foreign investors in order to promote modern technologies and their application in priority industrial sectors, especially manufacturing, which increases the efficiency of investments and stimulates production to higher processing phases.

In many sectors of the manufacturing industry, the technologies used are largely outdated and intended to lower processing phases. Therefore, it is necessary to promote the adoption of modern technologies and their application in priority industrial sectors, which will increase the efficiency of investment and stimulates productive diversification.

Within the manufacturing industry, in the metal processing industry, primarily aluminum, which is still a key export sector in Montenegro, the sectoral development is focused on stimulating aluminum processing, the development of other subsectors of metal, with necessary investments in new production technologies through new investments in the metal sector with mandatory monitoring of the impact of these investments in the metal sector on the environment. In the process of development of the **metal processing industry** of Montenegro, special attention is given to investments in production capacities, and in the next two-year period significant investments⁴³ are planned, which will be directed, apart from eliminating bottlenecks in production, to increasing productivity and production volumes, and investing in new capacities which will provide products with more value added.

The food processing industry has significant space for the growth and production of food products of higher stages of processing. When it comes to the inputs of this industry, Montenegro has significant comparative advantages, especially in view of the existing significant and under-utilized agricultural land resources. In order to increase the competitiveness of this sector, measures of the IPARD program enables improvement of the development of the food industry through modernization and strengthening of the processing capacities, introduction of new technologies, improvement of the quality of products with the adoption of standards in the field of food safety and investment in the expansion of product assortments.

Stimulation measures, from national sources, in the form of grants for new employment, also include financial incentives within the program line for **stimulating direct investments** that enable the building of new or expanding of existing industrial capacities in order to increase the quality and quantity of production, improve the performance of business, diversifying the product range and new employment opportunities.

⁴³ Investments of companies “Uniprom KAP Podgorica” and “Tosčelik Special Steel Nikšić”

In addition, the technological modernization of production capacities for companies in the manufacturing sector is also enabled through a loan arrangement, with support for procurement of equipment in the form of grants from national sources.

Key issues in the field of investment promotion in the modernization of the manufacturing industry:

- Improvement of the environment for attracting investments in the manufacturing sector;
- Technological modernization through stimulation measures and realization of investments for new employment opportunities.

Activities within this operational objective relate to the implementation of specific program activities for the improvement of the metal processing sector through investments in the construction of new production and processing capacities (Uniprom KAP, Toscelik Special Steel), stimulating investments in higher stages of processing and marketing of food products through grants (IPARD like public calls, IPARD II program, as well as preparation for project programming through the future IPA III scheme in the field of agriculture and rural development), modernization of the processing industry by implementing various program activities for stimulating direct investments within the framework of a unified Program for improving the competitiveness of the economy and development of new capacities and modernization of the existing capacities of the manufacturing industry.

Realization of the above mentioned activities will enhance promotion and communication for attracting investments in targeted sectors, technological and modernization of production capacities and processes, improvement of quality and quantity of production, expansion of assortments of products in higher stages of processing, opening of new jobs.

3. STRATEGIC GOAL 3: STIMULATING INNOVATION, TECHNOLOGY TRANSFER AND DEVELOPMENT OF ENTREPRENEURSHIP

Enhancing innovation, technology transfer and further development of entrepreneurship in Montenegro significantly contributes not only to the industrial but also to the overall economic development of the country based on knowledge, enhancing research and innovation potential, creating new products, business activities and new employment jobs.

The environment for the development of innovation and innovative culture, which has reached a significant level of development in recent years (IPC Tehnopolis, BIO ICT Center of excellence, preparations for the establishment of the Scientific and Technological Park in Podgorica), is stimulated by the development of innovation infrastructure through the establishment of new innovative organizations supporting scientific research and excellence in science, improving the level of equipment and developing human capacities for creating innovative ideas and checking innovations on the market.

The co-operation segment between the scientific research community and the businesses is characterized by insufficient connectivity, but also different approaches to scientific research and innovation. Potentials for research, and therefore investment in innovation, are recognized in a small number of companies, while scientific research institutions do not direct their research to enterprises and applying innovation sufficiently. The existing co-operation between business and science has not reached an appropriate level that would provide significant innovation results. Therefore, the stimulation of scientific research work, primarily in the field of development research, is in the function of the actual needs of companies and should be stimulated by financial schemes of collaborative co-

operation. Creating of startup of ecosystems and investing in innovative start-ups leads to an increase in employment, higher productivity and the growth of innovation and innovative solutions.

An additional contribution to the development of innovation, technology transfer, exchange of knowledge and expertise in this field is stimulated by the enhancement of the capacity to participate in EU innovation programs and creating partnerships between science and business in order to succeed in the preparation and implementation of concrete projects.

Entrepreneurship, especially in small economic systems, is the main driver of economic growth, job creation, innovation, knowledge transfer and technology. Enhancing entrepreneurship implies a long-term process of improving the overall environment for its development, not only by doing business, but also by the environment, infrastructure, support services and business practices. Today, the future of entrepreneurship in developed economies is seen in the context of advanced technologies, innovation management, knowledge transfer and new business models (openness, supply channels and transport, IV Industrial Revolution).

In line with the strategic goals of sustainable development and taking into account the priorities of smart specialization, the issue of the development of the green economy should be realized with the provision of resource efficiency that implies sustainable management and use of resources and preserving the quality of the environment by introducing the principles of circular economy and focusing on sustainable production and consumption, minimizing the pollution and the amount of waste.

In addition, significant potential for further economic development of the country can be ensured through the diversification of activities in rural areas and the strengthening of so called "emerging industry", which would contribute to the activation and development of specific local natural and economic resources, which, consequently, contributes to the increase in added value and the development of new products.

Support to digital platforms in the industry for the application of key digital technologies, primarily ICT, within business processes, products and services is a requirement and a trend which needs to be developed in Montenegro, in line with the concept of smart specialization and Industry 4.0.

Key issues in the field of stimulating innovation, technology transfer and further development of entrepreneurship:

- Development of infrastructure in order to stimulate the development of innovations, transfer of technology and strengthening of human and material capacities for research and development;
- Strengthening of the innovative potentials and cooperation between enterprises and science for the development of innovative products and services and their application in the market and the enhancement of the capacity to use EU funds;
- Stimulating the development of entrepreneurship for founding, developing, increasing productivity and competitiveness of enterprises;
- Further development of the green economy through the introduction of measures of the circular economy;
- Support to the diversification of the supply of the industrial sector in the regional context;
- Stimulating the environment for the introduction of digitalization and the development of digital transformation of enterprises.

Starting from the key issues identified within the strategic goal of stimulating innovation, technology transfer and further development of entrepreneurship, **the scope of planned interventions** includes activities related to the need to improve infrastructure and capacity for research and development of innovations through services of "IPC Tehnopolis Niksic, the establishment of the new Center for excellence and the Office for Technological transfer, implementation of programs for innovative

collaborative grants from national and IPA funds; improving investment in startup companies; realization of programs of training for key actors in creating project proposals within the framework of EU programs (COSME, EUREKA, H2020), further development of business infrastructure (business zones, business centers, incubators and competence centers), providing of supporting services and mentoring services and other activities of non-financial support to entrepreneurship, improvement of the legislative framework in the field of industrial pollution, repairing and remediation of industrial waste dumps in Montenegro, diversification of tourist offer, creation of incentive measures in the field of tourism and food processing; the development of creative industries, the improvement of business by using digitalization.

Significant support should be added to these activities in the period 2019-2021 through the implementation of the Sectoral operational program for competitiveness and innovation (IPA 2014 and IPA 2016).

Realization of strategic goal 3. Stimulating innovation, technology transfer and entrepreneurship development will be measured by the position of Montenegro on the referent international competitiveness lists in these aspects.

Table 14. Indicators of impact for SG 3. Stimulating innovation, technology transfer and development of entrepreneurship

IMPACT	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Improved innovative capacity of companies in the sectors of industry and economy overall	Global innovation Index, GII	37,7 (rank 45 on the list of 126 countries) ⁴⁴	Rank 42	Rank 40
Effective support to business activities of companies and entrepreneurs in all development phases	Global Entrepreneurship Index, GEI	31,2 (rank 60 on the list of 137 countries) ⁴⁵	Rank 58	Rank 54

On the basis of identified key issues and requirements the following **operational objectives** are defined:

Operational objective 3.1.	Development of innovative infrastructure in accordance with the requirements of companies
Operational objective 3.2.	Improving innovation through cooperation between scientific research institutions and enterprises and potential for access to EU funds
Operational objective 3.3.	Development of institutional infrastructure supporting services for development of entrepreneurship
Operational objective 3.4.	Stimulating development of green economy
Operational objective 3.5.	Support diversification of supply of the industrial sector in the regional context
Operational objective 3.6.	Stimulating digital transformation of business

⁴⁴ <https://www.globalinnovationindex.org/gii-2019-report#>

⁴⁵ https://thegedi.org/wp-content/uploads/dlm_uploads/2017/11/GEI-2018-1.pdf

3.1. OG.3.1. Development of innovative infrastructure in accordance with the requirements of companies

The established **system of innovative infrastructure** significantly supports the improvement of scientific research potential, stimulating innovation, co-operation between science and economy, and technological transfer. The first Information Business Center "Tehnopolis" was established in Nisic, as a part of the **Science and Technology Park** in Montenegro, which contributes to linking of science and business sectors, promotion of entrepreneurship and scientific research results. In order to further develop the science and technology parks, prerequisites have been created for the construction of a central unit of the Science and technology park Podgorica by concluding a contract on the establishment and adaptation of the facility, in cooperation with the University of Montenegro (UCG).

The first **Center of excellence** "BIO ICT" was established, which has achieved results in the field of scientific research in the area of ICT application in agriculture and now operates as the Institute for "Excellence Center for Research and Innovation" within the University of Montenegro. The call for funding of new centers of excellence was also announced as an incentive for further progress of research in certain scientific areas and commercialization of research results. There is an active work performed on establishing the South East Europe International institute for Sustainable Technologies (SEIIST) as a regional project.

In order to support research and commercial projects and innovations, for the efficient application of scientific research results for the purpose of further development of the economy and society, networking and co-operation in support of the transfer of new technologies and innovations, it is necessary to establish an **office for technology transfer** within the University of Montenegro.

Despite significant progress in the development of innovation infrastructure, it is still necessary to work on its improvement through the establishment of new innovation support centers and to strengthen the infrastructural equipment of existing laboratories with modern laboratories and equipment in order to achieve a satisfactory level of innovation and technology development that will enable more efficient implementation of innovative activities.

It is necessary to intensify **activities at the international level** related to the infrastructure to supporting innovations (e.g. the development of the Open innovation system for the Adriatic-Ionian region, joining to similar activities for the Danube Region, etc.).

Key issues in the field of development of innovation infrastructure in accordance with the requirements of companies:

- Further strengthening of the institutional infrastructure to support innovation;
- Improving infrastructural capacities (space and equipment), including relevant knowledge and resources.

Activities within this operational objective include specific activities of establishing of the Scientific and technologic park in Montenegro, further enhancement of innovations through services of Information Business Centers, especially through the Information Business Center „Tehnopolis Nikšić, establishing centers of excellence and establishing an Office for technological transfer within the University of Montenegro“.

Realization of the aforementioned activities significantly improves innovation infrastructure in accordance with the needs of enterprises, in particular the MSME sector, enabling the development of human potential with knowledge and skills to create innovative ideas and concepts, stimulate scientific

excellence and specialization, stimulate innovation and technology absorption, which will directly contribute to strengthening the competitiveness of the economy.

3.2. OG.3.2. Improving innovation through cooperation between scientific research institutions and enterprises and potential for access to EU funds

Through the co-operation of the academic, research and business sectors, coordination and creation of synergy for exchange of knowledge, skills and infrastructure capacities necessary for innovation is possible. This area is characterized by insufficiently developed co-operation between the academic and business sectors in the field of innovation, and therefore the results in the field of innovation and technological development are modest at the moment. Scientific research institutions are more oriented towards basic research that does not result in the creation of new or improvement of existing technologies, products or services, as the research community in Montenegro is not sufficiently engaged in developing and commercial projects needed for industrial sectors in Montenegro. On the other hand, a small number of companies are recognized in the research and innovation system to lead their business on innovations and new technologies, resulting in a low level of productivity and competitiveness. The projects of co-operation between science and economy through **collaborative innovation grants** involving the co-operation of key parties in science and business, enhance the relevance of scientific research on one hand and enable the development of innovative market-oriented products, services and technologies that have great potential for commercialization and market application.

In addition, the market-oriented culture of innovation in Montenegrin companies is insufficiently developed, the lack of planning of research and innovation activities is evident, and also the unwillingness of the companies to take the risk of introducing innovative products and services. Directing the business entities to research and innovation activities and financing innovative startups can also be stimulated through the introduction of various financial and fiscal instruments. In this way, increase in the number of business entities engaged in research and innovation, as well as those which are willing to invest in startups is enabled.

Implementation of programs and projects related to the creation and implementation of new or improvement of existing products, technologies, procedures and processes is an incentive for the development of innovation activities through **financial schemes** encouraging the co-operation of the business and the research sector, in accordance with the needs of the market.

Encouraging and directing the research community and the business sector to the use of EU funds and a range of programs that provide networking opportunities by engaging in EU projects through partnership, is important for strengthening the company's innovation potentials, the volume of investment in research and development, and the creation of innovative products and services for the market.

Montenegro participates in several EU programs that promote entrepreneurship, innovation and technological development such as HORIZON 2020, COSME, EUREKA, whereby companies can participate independently or as part of a consortium. In order to improve the capacity of users for the use of EU programs, which are still insufficient, it is necessary to improve the promotion of the programs themselves and the benefits that can be achieved by participating in individual projects by organizing various events such as education, trainings, good practice analyzes, in order to convey essential knowledge necessary for completing demanding applications for EU funds, as well as looking for partners across borders of the country. In this sense it is very important to strengthen the administrative capacities of relevant ministries, specifically the role of NCPs in H2020 area of Industrial leadership with

additional nomination and capacity building of NCPs in order to facilitate access to available EU programs and funds.

Key issues in the field of promotion of innovation activities through the co-operation of scientific and research institutions and companies:

- Promoting greater usage of research and innovation in order to create an innovative environment favorable for creating of new products and services through the co-operation of scientific research institutions with business entities and the improvement of the culture of innovation in enterprises;
- Strengthen the capacity to access EU programs and initiatives through promotion, training and partnership creation.

Activities within this operational objective include specific activities for conducting national programs for innovative grants, implementation of IPA collaborative grant schemes for innovative project ideas, improving investments in startup companies conducting program activities for improving innovations implementation of various training and counseling programs for key stakeholders in the creation of project proposals within the EU program, participation in EU programs COSME, EUREKA, H2020 and other related activities.

Realization of these activities enables more intensive directing of research and development activities towards innovations and the application of new technologies, thereby increasing the capacities of Montenegrin companies for development and growth in the priority sectors of the industry, stimulating the creation of sustainable partnerships with an objective of creating commercial innovations, opening new companies / spin-off companies, the volume of investment in research and development capacities and cooperation for participation in EU programs, efficiency of using available funds for innovation.

3.3. OG.3.3. Development of institutional infrastructure supporting services for development of entrepreneurship

Support for the development of entrepreneurship through the development of institutional infrastructure and the provision of various support services to entrepreneurs is continuously implemented in Montenegro. In the previous period, a significant number of activities were carried out to create an environment for the development of business infrastructure. Three business incubators and three local and regional business centers and the impulsive entrepreneurship center “Tehnopolis” have been established, which support the development of entrepreneurship through providing information, advice, organization of training cycles and education, providing support in preparing and implementing projects in order to improve the development of entrepreneurship. The development of the system of establishment and operation of the business zone is being promoted with the objective of attracting new investments and further development of MSMEs with the increase of employment in less developed municipalities. The first center for competencies has been established which will contribute to the development of institutional infrastructure and services for improving competencies for business entities and unemployed persons.

In the part of the provision of services for direct work with enterprises, a mentoring system in co-operation with the Japanese International Cooperation Agency (JICA) was introduced to provide support in analyzing the business situation and solving problems in business operations, preparing development plans and their implementation and establishing business co-operation.

Industrial policy measures need to provide further improvements to the framework for the development of infrastructure to support entrepreneurship and through investment in strengthening

the capacity of human resources, that is, providing business and advisory services and other forms of non-financial support, in order to stimulate the growth of competitiveness of the MSME sector.

Key issues in the area of building capacity for accessing EU funds are:

- Further development of institutional infrastructure to support the development of entrepreneurship;
- Improving the offer and quality of services to support business and acquire entrepreneurial knowledge and skills.

Activities within this operational objective include specific activities of promoting of establishing business zones, improving the capacities of business centers, incubators and competency centers for providing services to enterprises, conducting program activities for providing mentoring services, ensuring business support services to enterprises in the field of protection of the intellectual property rights (information, consulting, promotive campaigns) and other connected activities of non-financial support to the MSME sector.

The realization of these activities will significantly improve the institutional infrastructure and the availability of different services that are necessary for entrepreneurs and MSMEs, establishment and survival of enterprises, strengthening the capacities of MSMEs and increasing the level of competitiveness.

3.4. OG.3.4. Stimulating development of green economy

Although it may be of particular importance for the sustainable development of Montenegro which has been declared as an ecological state, the principle of "green economy" has not been sufficiently developed. Its importance is particularly reflected in the creation of new jobs through investments in renewable energy sources, organic production, introduction of international environmental standards, waste management and recycling, the development of low carbon tourism, sustainable forest and water management, and others. In practical terms, according to the NSSD by 2030, the green economy is often referred to as an economy based on investments that: reduce greenhouse gas emissions and pollution, improve efficiency in the use of energy and other resources, prevent the loss of biodiversity and services provided by ecosystems.

In order to respond to the growing challenges in the area of sustainable development in a more efficient way, further work needs to be done to improve the use of available resources based on the principles of green economy and environmental protection. In this direction, it is necessary to ensure the development of economy as a low carbon, resource-efficient and inclusive economy, which, in addition to the concept of resource efficiency, through the introduction of the principle of circular economy, will give a special focus on sustainable consumption and production. The above can significantly contribute to the improvement of general social well-being, which will promote social equity, and significantly contribute to the reduction of ecological risks and shortcomings.⁴⁶

Key issues in the field of stimulating development of green economy:

- Efficient use of resources and sustainability, with a particular emphasis on the energy efficiency of the industry and the transition to a low-carbon economy;
- Reducing greenhouse gas emissions from waste, and stimulating the use of biotic materials with recycled waste, and the use of waste instead of fossil fuels for energy production.⁴⁷

⁴⁶ UN environment program, <https://sustainabledevelopment.un.org/index.php?menu=1446>

⁴⁷ Large ecological problems include industrial waste dumps, such as: red mud basin and industrial waste landfill within "KAP", ash dumpsite "Maljevac" in Pljevlja and flotation pit of lead and zinc "Gradac" - mine "Šuplja stijena" in Pljevlja, and the location at which the "Nikšić Steel Plant" disposes waste. Disposal of industrial waste - grit in the "Adriatic shipyard Bijela" is the first

Activities within this operational objective include specific activities of improving the legislation framework in the field of industrial pollution, identification of facilities which fall under provisions of the Law on industrial emissions, establishing the fund for the protection of environment and realization of dedicated projects from those sources, conducting program activities for realising measures of energy efficiency and increasing the share of renewable energy sources (RES), supporting innovative investment projects – application of solar systems for heating water and efficient energy systems, stimulating the introduction of international ecological standards, remediation of industrial waste dumps, environmentally friendly waste management in Montenegro and other activities.

The realization of these activities stimulates the development of green economy and environmental protection in Montenegro in a very important segment of waste management, especially industrial waste management, which moves the economy of Montenegro closer to the model of low carbon, resource-efficient and inclusive development.

3.5. OG.3.5. Support diversification of supply of the industrial sector in the regional context

In order to stimulate **local development through the diversification of economic activities in rural areas**, special attention should be paid to investments in the valorization of resources in the function of development of agriculture, primarily food processing and related services. Therefore, it is necessary to stimulate those activities that contribute to the activation and development of specific local natural and economic resources, which consequently contributes to the increase in added value, the preservation of existing and the creation of new (green) jobs in the rural area, especially in the Northern region of the country. In addition, focusing on production that is more environmentally friendly and involving farmers in quality schemes can be an attractive market opportunity for agricultural farmsteads as a precondition for further investment in manufacturing capacities for food processing and the introduction of new technologies.

In order to improve market orientation and connectivity in industrial sectors, further work needs to be done particularly on knowledge transfer, skills development, as well as stimulating the development of local markets and short supply chains.

Additionally, from the particular importance is the continuously improvement of the connection with agro and mountain tourism, as well as the diversification of tourism offer and the improvement of hotel and accommodation capacities and quality of services. Along with investments in infrastructure and **tourism** which include the valorization of the unutilized natural and economic resources of the country up to date, a special space for economic development is also emerging through the strengthening of the so-called "**emerging industries**", in particular **industries based on experience and creative industries**. The emergence of emerging industries can significantly contribute to the improvement of the quality of service and experience of tourist visitors, as well as the expansion of tourism and recreational activities, thus allowing access to project financing and stimulating better use of available programs. Therefore, in addition to the sectors in which Montenegro already has certain comparative advantages, it is important to identify industrial sectors for development in the following period. In this way, it will significantly contribute to the development of new products and the diversification of the industry.

Key issues in support of the diversification of the supply of the industrial sector:

part of a large project for remediation of hot spot locations in Montenegro. With the support of the World Bank (loan), which is being implemented by the French company "Valgo", the project includes research of the aquatorium and the area of the former shipyard. Treatment and elimination of this industrial waste will enable the soil to be revitalized for future use. The total contracted work of this (first) phase will cost EURO 22.9 million, and will be completed by March 2020. (Report on the implementation of Action Plan National strategy for integrated coastal zone management of Montenegro by 2030, for the period 2016-2018).

- Valorization of resources and diversification of industry development in rural areas through further enhancement of support for development of agro-industry and tourism as well as realization of measures for improvement of tourism capacities, offer and quality of services;
- Further improvement of tourist offer through investments in new tourist locations and infrastructure and creation of support measures for the development of industry based on experience (connection between tourism and culture) and creative industries (culture and art, design, crafts, etc.).

Activities within this operational objective include specific activities for creating conditions for the diversification of the economic activities in rural areas through the realization of different support programs, creation of stimulation measures in the field of tourism, development of innovative tourism products that improves the tourist offer, stimulating development in rural areas through organizing various events and other promotive activities, realization of projects that encourage the integration of industry products with tourism and accommodation facilities, realization of projects which stimulate the diversification of the tourist offer in the North, development of creative industries through the realization of different program activities including support for development of craft and other related activities.

Realization of these activities will stimulate investments in basic infrastructure and food processing equipment, new tourist locations and variety of tourist offer, ensure greater support for the development of rural areas and local products, contribute to the reduction of regional disparities, and enable the creation of new and better recognition of Montenegrin traditional products in the country and beyond.

3.6. OG.3.6. Stimulating digital transformation of business

Digital transformation is synonymous for modern business and strategic business transformation of a company that implies multi-layered organizational and process changes based on the application of information and communication technologies. Digitization has put pressure on companies to continually review their current business strategy and systematically explore new business opportunities. Digital transformation is the way in which companies use new technologies, knowledge and innovation to create and customize their products and services, optimize business processes and redefine the business model, all in order to increase competitiveness and create new value for users. The company can initiate a series of digitalization projects, from the automation of business processes and the development of digital skills among employees, to the modernization of the logistic, manufacturing, marketing or sales segment of its business.

The readiness of the company's management in Montenegro to adopt new digital solutions and change traditional business models are not at a satisfactory level. The reason for this is the more erroneous perception that digitalisation is just the use and application of technology, rather than a fundamental redefinition of business; insufficient digital literacy and skills in all company structures; insufficient expert knowledge to guide the digitization process in certain systems; general fear of change; lack of experience in solving current development problems in an innovative way, etc. The trend of adopting digital technologies in SMEs in the EU is also at a low level.

The ICT segment in Montenegro is characterized by a well-developed communication infrastructure and modern electronic communications networks, while certain disproportion in the level of development and the size of the IT sector is noticeable. The basic characteristics of the IT sector are relatively few employees and limited financial and development potentials of IT companies, which is mainly a consequence of the work on the small IT market. In recent years, an increasing number of small

companies involved in the development of software and software products have appeared in the IT market in Montenegro, and information systems in public administration, education and health have been developed and improved, in accordance with modern technological trends and concepts Industry 4.0⁴⁸ and ICT as a horizontal priority of smart specialization. There are various incentive programs in the form of grants in order to enhance competitiveness, which can be used to a large extent in support of digitization and introduction of innovative solutions for the development of new business processes, organization models, implementation of standards for information technology, etc., in SME sector.

Bearing in mind the above, a significant shift in the transformation of consciousness and the improvement of the company's business model is expected with the use of modern technologies. Additionally, activities are under consideration of justification of introducing measures of stimulative tax incentives with a focus on companies investing in digitization of business, research and development, etc.

Key issues in the field of stimulating digital transformation of companies:

- Developing awareness of the significance of digitization in company business;
- Incentive measures to start the implementation of digital transformation in enterprises.

Activities within this operational objective include specific different measures and activities of the digitalization of Montenegrin companies with a focus on companies in the industrial sector in the segment of counselling support for improving business by applying digital transformation, organization of different events with an goal of support to the startup businesses in the direction of digitalization, preparation of different analytical and strategic documents in the field of digitalization of the economy of Montenegro and other related activities.

Realization of these activities will contribute to increasing the degree of automation in business, improving connections and communication, reduce the time for the data processing and strengthening the internal capacity of the companies in the direction of digital business.

4. STRATEGIC GOAL 4: IMPROVING ACCESS TO THE MARKET

As it was previously identified, the existing export structure of the **Montenegrin industry** indicates on production in which the products in the lower processing phase, raw materials and intermediate goods mainly dominates within the industry. On the other hand, the structure of import is dominated by consumer goods, primarily products from the food industry. As a result of the low competitiveness of the Montenegrin economy and high dependence on import, the Montenegrin economy is at the moment characterized by a high foreign trade deficit. The above mentioned indicates the necessity for transition of the Montenegrin industry towards more efficient use of all resource, which is the precondition for greater participation in domestic market that is becoming more and more competitive, as well as greater orientation to the export of industrial products where comparative advantages should be turned into competitive advantages. This particularly refers to the agro-food industry, which can significantly replace imports and satisfy the needs of the tourism sector, but also with significant development of export-oriented capacities.

Having in mind the size and structure of Montenegrin enterprises, a key challenge is the need for introduction of new technologies, increased capacities, and meeting standards and certificates, which is in line with sustainable agriculture and food value chain as an S3 priority. This would ensure stable

⁴⁸ Source: Smart Specialisation Strategy 2018-2024, pg. 69.

production quality in the long term and provide greater participation in the domestic and foreign markets. This particularly refers to the process of organizing enterprises into clusters in order to make individual stages of business operations more efficient and less costly, especially in preparing for production, foreign market appearance as well as integration into global value chains⁴⁹. Consequently, companies should recognize export as their business priority, as well as to provide the necessary conditions and responses to the competition in domestic market and at the same time to the challenges of the European Union markets and NATO.

In the following period it is necessary to provide further institutional support in order to provide better information regarding to the markets, potential customers and partners, as well as to simplify the procedure of foreign trade operations and harmonization with technical regulations and standards in export markets.

Key issues in improving market access:

- Simplification of trade procedures and reducing the costs of international business for exporters, together with compliance with the requirements of international business standards;
- Increasing international competitiveness through clustering and integration into global value chains;
- Further support for better access and internationalization of enterprises and their increased involvement into the regional and EU markets.

Starting from the key issues identified within this strategic goal for improving market access, the **scope of planned interventions** includes activities related to the simplification of trade procedures, the improvement of the introduction of international business standards, incentive measures in the field of introduction and certification of quality and food safety management systems, as well as the inclusion of agricultural producers in registered quality schemes. Also, further improvement of the quality infrastructure system and acceptance of EU standards and the adoption of eurocodes will be done, as well as the creation of preconditions for participation into the NATO market. Additionally, further support will be provided for improving the concept of organization of enterprises in clusters and their integration in global value chains. In order to further strengthen the export performance of enterprises, activities will be carried out in the framework of strengthening economic diplomacy through establishing contacts with potential business partners, providing information, organizing trainings, business meetings and fairs.

These activities should also be provided with significant support that will be available in the period 2019-2020 through the implementation of the Sectoral operational program for Competitiveness and Innovation (IPA 2014 and IPA 2016).

Realization of the strategic goal 4. Improving access to the market will be monitored by the degree of realization of the following indicators:

Table 15. Indicators of impact for SG 4. Improving access to the market

IMPACT	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Growth of goods export in industry (B-E)	Share of industrial export in the total export of goods (Monstat)	91,7%	Increase of the share of industrial export at 92%	Increase of the share of industrial export at 92,5%

⁴⁹ An industrial value chain can be defined as the stages of value creation by enterprises and other organisations as part of the process of design and production of goods and services for intermediary and end users.

Growth of foreign trade exchange with EU and CEFTA through economic integration	Greater volume of trade with EU and CEFTA countries in the structure of total trade	€2,3 mil foreign trade exchange with EU and CEFTA (77,9% of the total foreign trade exchange) ⁵⁰	3% greater volume of trade with EU and CEFTA countries	5% greater volume of trade with EU and CEFTA countries
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On the basis of the identified issues and requirements the following **operational objectives** are defined:

Operational objective 4.1.	Simplifying trade procedures and reducing technical barriers in trade
Operational objective 4.2.	Improvement of the enterprises organization into clusters and global value chains
Operational objective 4.3.	Strengthening enterprise export performance

4.1. OG.4.1. Simplifying trade procedures and reducing technical barriers in trade

Accession to the European Union and integration into multilateral and regional trade flows represent a strategic commitment for Montenegro, which implies acceptance and implementation of adopted values and standards across a range of areas. This includes **cross-border trade**, both agricultural as well as non-agricultural, i.e. **industrial products**. This commitment was confirmed by Montenegro's membership in the World Trade Organization (**WTO**), as well as the Free Trade Agreement (**CEFTA**) that Montenegro applies in order to create favorable conditions for the export of Montenegrin products and services, through the reduction of tariff and non-tariff barriers in trade. It is important to mention that with the latest amendments on the Agreement in 2015, trading with goods has been completely liberalized. In addition, in order to promote investment and trade at the regional level, it has been concluded **Additional Protocol 5 (AP5)**, which regulates inspection and customs procedures. In addition, in order to eliminate the administrative barriers in cross-border trade of goods that affect the competitiveness of the country, activities under the Strategy of trade facilitation of Montenegro for the period 2018-2022 are continuously realized⁵¹. The full membership of Montenegro in NATO opens up new business opportunities for Montenegrin enterprises, where they can significantly increase their revenues and profits, as well as improve competitiveness through participation in tenders and with higher investments in growth and development.

Similar to the EU, Montenegro sees **facilitation of trade** as a combination of simplification, harmonization and standardization of the export and import process to facilitate the movement of goods across the borders. Facilitation of trade focuses on improving procedures and controls that regulate the movement of goods across national borders in order to reduce cost associated burdens and increase efficiency while preserving legitimate regulatory objectives. In addition, in order to reduce technical barriers in trade, it is necessary for enterprises to carry out their business activities in accordance with technical regulations and international business and quality standards, in order to ensure greater inclusion in both the domestic and international markets.

Key issues in the area of simplifying trade procedures and reducing technical barriers in trade:

⁵⁰ <https://www.monstat.org/cg/page.php?id=1520&pageid=172>

⁵¹ This Strategy foresees that administrative inefficiencies in cross-border transport of goods affecting the competitiveness of the country will be eliminated by 31 December 2022, and that the time needed to move goods across the Montenegrin borders will be reduced by 50% over the 2016 baseline, the Time Release Study, while the accompanying costs will be reduced by 20%.

- Reducing costs and simplifying procedures in domestic and international transport, as well as increasing the degree of connection of customs and inspection services into a single information system;
- Further compliance of technical regulations and acceptance of EU standards in order to improve the competitiveness of enterprises and their participation into the NATO market.

Activities within this operational objective include specific activities of implementation of procedures of simplified and more efficient release of goods through the implementation of the authorized economic operator program (AEO); digitalization of export and import transactions through implementation of the new computerized transit system (NCTS); implementation of program activities for introducing international standards; stimulating implementation and certification of the system of quality management and food safety, as well as the inclusion of agricultural producers into registered quality schemes through the agricultural budget; realization of the activities in the plan of Forest Stewardship Council certification (FSC); development of the information system in forestry; further strengthening the system of the quality infrastructure aiming to further improve competitiveness of the enterprises; acceptance of the EU standards; adoption of eurocodes; creation and adoption of rulebooks and action plans in the fields of codification and quality assurance of products for defense; providing advisory services for enterprises in the field of codification aiming to create preconditions for participating in the NATO market/tenders.

Realization of these activities will ensure continuation of the activities for creating a better environment for trade through improvement of logistics, increase in the number of enterprises with the introduced necessary standards and certificates, increase in the value added of the manufacturing industry in total industrial production and export, securing better valorization and resource management, especially in forestry, as well as providing greater opportunities for participation in the NATO market.

4.2. OG.4.2. Improvement of the enterprises organization into clusters and global value chains

The presence of social and economic differences among the regions in Montenegro defined the necessity for the **creation of a policy for regional development**, as well as mechanisms for overcoming these differences. Although Montenegro records a positive trend in the number of small and medium-sized enterprises, it is evident that a significant number of enterprises have fairly limited capacities, insufficiently developed level of co-operation, which indicates that there is a strong competition among enterprises in the domestic market. As such, small and medium-sized enterprises can hardly respond to the requirements and standards at the EU market, and **clusters** represent the way to overcome individual limitations by joining capacities. Additionally, clusters are recognized as the right mechanisms that would positively affect the accelerated development of less developed parts of the country and enhance the co-operation of between businesses from all the regions.

Having in mind that it takes a longer period of time for the establishment of clusters and their successful functioning, a several number of activities in the part of clusters mapping have been realized in the previous period, when the priority sectors were defined such as agriculture/food production, tourism and wood processing, as well as existing financial support for cluster development has been significantly improved. In order to respond to increasing market demands and competition in a more efficient way, further work is necessary on stimulating the organization of enterprises into clusters, as well as the

establishment of vertical clusters and co-operation with scientific-research institutions. As a continuation of the activities that were implemented in the previous period, significant support should be provided in the period 2019-2020 through the implementation of the IPA 2014 Action document "Enhancement of the business environment and competitiveness of the private sector", more precisely developing a new Strategy for cluster development and defining instruments for the future financial support.

Key issues in the field of improvement of the enterprises organization into clusters and global value chains:

- Stimulating the co-operation of enterprises through clusters in order to improve production, development of new products and access in the new markets;
- Creating conditions for establishment of vertical clusters and inclusion in the EU cluster initiative.

Activities within this operational objective includes specific activities of conducting program activities for cluster development, support to development of clusters through enhancing capacities for cluster management and promotion of development of new clusters, as well as their inclusion into value chains, realization of various projects aiming to improve level of organization of enterprises into clusters, as well as regional networking.

Realization of the above activities will provide continuous financial and technical support for development of clusters, improvement of their capacities (especially in terms of marketing and procurement of equipment), and as well as achievement of greater cluster visibility, creating conditions for acquiring new partnerships and strengthening the capacities of supporting institutions.

4.3. OG.4.3. Strengthening enterprise export performance

In order to stimulate a stronger market access of Montenegrin companies and increase of their competitiveness, an important part of the activities also relates to strengthening the export performances of the enterprises.

Namely, in order for Montenegrin companies to be able to significantly increase their competitiveness in the domestic market and to obtain a better position for themselves in the foreign market, it is necessary to provide continuous presence of companies at international fairs, to provide advisory services for establishing potential co-operation with business partners, as well as for placement of products or services to the new market. Also, the participation of companies in various domestic and international events, conferences and business meetings will contribute to improving their capacities, increasing competitiveness and, in particular, better access to the market. Additionally, significant support to the internationalization of MSMEs is achieved through the activities carried out by the European Entrepreneurship Network (EEN Montenegro), especially in the part of the MSME, public and private sector institutions on EU topics, as well as the conditions and criteria for applying for finances from the EU funds.

In addition, further enhancement of export capacities and increasing the competitiveness of domestic exporters in foreign markets will contribute to the adoption of regulations which define the procedure and manner of performing tasks of securing export with the objective of support to stimulating competitiveness and internalization of the export oriented legal entities, in accordance with the internationally accepted rules and conditions.

Key issues in the field of strengthening enterprise export performance:

- Ensuring that companies are better informed and supported towards business partnership with foreign partners;
- Increasing the competitive ability of domestic products and services, and their better position in the foreign market.

Activities within this operational objective include specific activities of enhancing economic diplomacy aiming to establish contacts with potential business partners and related activities for stimulating export, stimulating the internalization of domestic companies through providing information, organization of business meetings, fairs, further development of activities of the European Entrepreneurship Network (EEN), ensuring support to companies with an objective of promoting domestic products and services, along with stimulating their usage and other related activities.

Realization of these activities will enable greater connectivity, by signing business co-operation agreements and thereby the higher turnover within industrial enterprises will be achieved, creating value added, achieving greater labour productivity in industrial sectors, which leads to the growth of export of industrial products.

IV. IMPLEMENTATION OF THE INDUSTRIAL POLICY 2019-2023

The implementation of the IP 2023 will be based through two action plans where the first action plan is covering the period 2019-2020 which is an integral part of this document, while the second action plan will refer to the period 2021-2023.

The Industrial Policy implementation is specific in its complex and multi-dimensional nature, which imposes a need for observing the principle of division of responsibilities amongst the competent institutions and their coordination. Also, the implementation process implies the necessity of ongoing dialogue and co-operation between the public and the private sector and experts in the field.

The basic principles for efficient and effective policy implementation are:

- **Importance of industry:** Industry must be the focus of relevant policy implementation
- **Industrial Policy direction:** Integrated Industrial Policy should be fully linked with the national policies and EU policies having an impact on competitiveness of industry
- **Need for coordination and cooperation:** The Industrial Policy implementation planning should be supported within the framework of coordination between Montenegro and the European Commission
- **Industrial revitalization and modernization:** Identification of the policy measures that should point to the need for technological modernization of industry and stimulation of development of new sectors with growth potential, including areas such as digitalization, circular and low carbon economy
- **Linkages:** The Industrial Policy should support the development of interlinked economic sectors that have an impact on industrial competitiveness, such as financial market, energy, transport and ICT.

1. Coordination structure for the implementation of Industrial policy

The process of creation and implementation of the Industrial Policy required the co-operation and coordination of the activities of different institutions and actors, the public and private sectors, as well as the necessity of establishing the institutional basis and framework for its efficient development. From the aspect the scope of implementation of the policy, effective coordination on the realization of all established activities is from the key importance for achieving the expected results defined by the policies. From the beginning of the process of coordination of implementation of IP 2020, the Ministry of Economy, in accordance with the Conclusion made by the Government of Montenegro no. 08-1808 from July 7, 2016, formed the **Coordination body for the implementation of the Industrial policy of Montenegro by 2020**. In order to ensure the appropriate decision-making, as well as the necessary level of co-operation between the relevant institutions with the private sector, the structure of the Coordination body at the level of strategic management and decision-making was established within participation of the members of the Cabinet of the Prime Minister, the Deputy Prime Minister, relevant ministries and representatives of private sector associations (Chamber of Commerce of Montenegro, Montenegro Business Alliance, Montenegrin Employers Federation).

For the adoption, implementation and reporting on the annual IP 2020 Action Plans, within the Coordination body itself, a functional model of the institutional structure on two levels, **management and operational structures** has been established, for the coordination of the entire process. During the implementation of the three annual IP 2020 plans, for the years 2016, 2017 and 2018, continuous work was performed on strengthening the capacity and role of the Coordination body, which had the mandate to adopt the annual Action Plans, and to prepare reports to the Government on monitoring and on the evaluation of the achievement of the Industrial Policy, and on these grounds, to propose its revision for the following period.

During the entire process of implementation, monitoring and evaluation of the Industrial Policy, the Ministry of Economy had a key role in coordinating the implementation of the Industrial Policy and co-operation with the competent ministries, institutions, for establishing the principles of **directing the Industrial Policy into other relevant policies**. The Ministry of Economy coordinated its operational activities within the Coordination body, which ensured the establishment of new and strengthening of the existing connections between all parties in the process, from the competence of realization of the concrete measures and activities established by the Action Plans for the continuous and efficient implementation of the Industrial Policy.

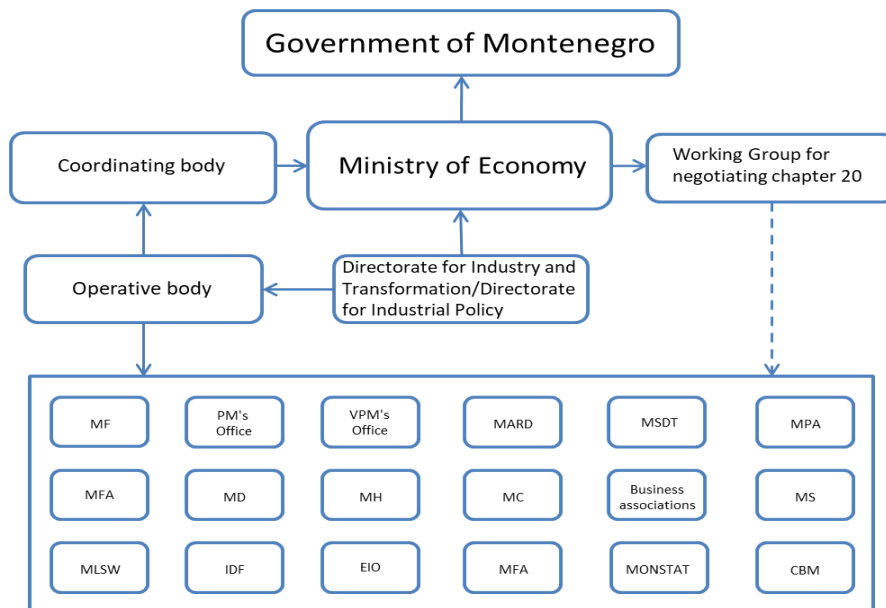
The involvement of **business associations** into the work of the Coordination body, during the whole process of implementation, the measures for realization were developed in close co-operation with the private sector and other key partners important for continuous and efficient implementation of the policy.

Having in mind the complexity of the implementation of the Industrial Policy, the functioning of the interministerial Coordination body with the task of ensuring effective coordination on the creation and implementation of all identified activities is from great importance for achieving the expected results defined within the Industrial Policy of Montenegro 2019-2023 in the context of creating the preconditions for the temporary closing of the Negotiation chapter 20.

As the proposed coordination model proved to be very effective, **the same coordination structure was proposed for monitoring of the Industrial Policy 2019-2023** (Coordinating body for the drafting and implementation of the Industrial Policy of Montenegro 2019-2023, at the managerial and operational level).

In order to effectively address the industrial policy challenges, actors involved in each phase of the policy-making and implementation cycle must be clearly defined, as well as target groups of the key operational objectives and activities, as outlined in the following schemes.

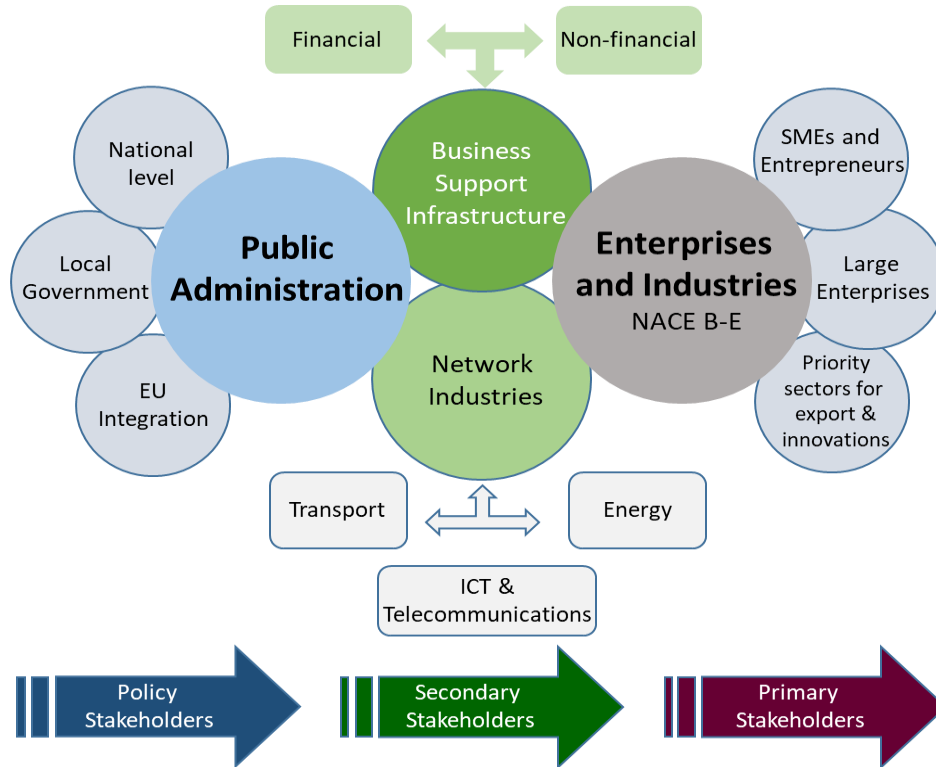
Graph 9. Coordination structure for the implementation of the IP 2019-2023



Another important institute for coordination and monitoring the implementation of the IP 2020, as well as the IP 2023, are all institutions involved in the activities within the **Working Group for Negotiating Chapter 20**.

Three major groups of stakeholders have been identified as key partners for the implementation of industrial policy, as shown in the following graph:

Graph 10. Target groups of the IP 2019-2023



Key partners for the realization of industrial policy:

- **Primary stakeholders** - main beneficiaries of policy measures and actions (enterprises from the priority industry sectors that will directly improve Montenegro's short – and long-term competitiveness).
- **Secondary stakeholders** - industrial networks which provide infrastructural support to companies (energy, transport, ICT) and institutions which provide financial and non-financial support to business for the purpose of innovation, modernization and financial conditions.
- **Policy stakeholders** - policy makers at national and local level, with a role in management of implementation and policy monitoring, delivering improvements in the interaction between business and the state (e.g. through procurement, e-government etc.) and financial and logistical support to primary and secondary stakeholders in implementing industrial policy measures.

2. Monitoring and evaluation

The implementation of industrial policy is based on the following elements:

- Action plans - as the basis for reporting on the implementation of policies
- Management - defined and established management structures and roles
- Responsible institutions - agreed clear division of responsibilities for implementation
- Realistic financing plans - assessment of the overall financial framework and annual budgets for the proposed measures
- Monitoring and evaluation - analysis of the results and effects achieved as the basis for innovation and improvement of the policy.

The system for monitoring the implementation of the Industrial Policy is based on outcome and impact indicators which can be objectively measured. Action plans are based on strategic goals and operational objectives, which are followed by defined indicators of achievement in accordance with the **Regulation on the manner and the procedure for creation, compliance and monitoring the implementation of strategic documents** (Official Gazette of Montenegro number 54/18), as well as with the accompanying **Methodology**. Each operational objective is further elaborated through activities which have a defined scope of activities, responsible institution, the period of implementation, the output indicator, the planned amounts for the realization of the certain activities, as well as the source of funding.

Within the Ministry of Economy in charge of coordination of monitoring the achievement of Industrial Policy, a monitoring mechanism developed within the Coordination Body for Drafting and Implementation at the Operational Level has been developed for regular collection, unification, analysis of all necessary information for the implementation of the Action Plan and preparation of the reports. Institutions within the Coordination Body, each within their competence in the implementation of the action plan, are obliged to prepare data for reporting and planning. The Coordination Body for Drafting and Implementation at the Management Level, as a body responsible for the overall monitoring process, considers and adopts Action Plans and Annual Reports on the implementation of the Industrial Policy Action Plan with all the necessary elements and proposals for implementation in the forthcoming period. According to the established methodology, after adoption by the Government of Montenegro, monitoring reports are available on the website of the Ministry of Economy www.mek.gov.me.

In addition to the annual reports on the implementation of the Action Plan, a final report will also be prepared after the expiration of the validity period of the strategic document.

In order to ensure the necessary continuity in policy implementation, in the final year of implementation, evaluation activities will be launched in order to ensure the timely use of evaluation findings in the policy making process in the coming period of implementation of the next document. The Respective Ministry will be responsible for engaging external expertise in preparing the evaluation of the document, with the provision of funds from the national budget, alternatively donor funds.

The assessment of the success of the implementation of the Industrial Policy, in addition to the information from the report on the implementation of the Action Plan, relies on the official statistics and data contained in the international reports. Timely 'infrastructure for monitoring of information' is a basic tool for implementing an effective industrial strategy/policy. Certain indicators for monitoring the implementation of the Industrial Policy, especially at the sector level, have already been established, but in order to increase analytical capacities for assessing the success of policy implementation and its comparison with adequate results in other countries and at EU level, continuous compliance is needed. A significant part of the indicators should be collected in accordance with the obligations of EU legal principles through chapter 18-Statistics, and it is additionally necessary to make the necessary compliance with the indicators at the level of EU industrial policy, which is adopted and updated by the EC in the framework of negotiation chapter 20. In the context of the above mentioned, the Ministries-leading institutions for the Industrial Policy implementation in co-operation with the responsible statistical office continuously work on strengthening administrative capacities for production and analytics of the statistical indicators needed for evaluation of the progress of implementation and international comparisons.

Bearing in mind the numerous indicators that are necessary for monitoring the success of the realization, further **improvement of the statistical and methodological monitoring of the indicators within the Industrial Policy is needed.**

3. Financial framework for implementation

The financial framework of the Action Plan 2019-2020 includes activities that are implemented within the four strategic goals and 17 operational objectives that include a large number of activities, as it is defined in detail in the Action Plan, which is an integral part of the document Industrial Policy of Montenegro 2019-2023.

Table 16. Financial framework of the Action Plan of the Industrial Policy for the period 2019-2020

Activities	Funds planned for implementation of activities in 2019	Funds planned for implementation of activities in 2020	SOURCE OF FUNDING				
			National budget	Public sector	IPA	Donors	Private sector
SG 1	IMPROVING INFRASTRUCTURE AND BUSINESS ENVIRONMENT FOR EFFICIENT INDUSTRIAL DEVELOPMENT						
OO 1.1	Improvement and further development of energy and transport infrastructure (66% out of SG1)						
OO 1.2	Improvement of the ICT infrastructure for increasing competitiveness of enterprises (21.5%)						
OO 1.3	Stimulate the sustainable management of resources (10%)						
OO 1.4	Development of human capital through education and acquiring skills for the competitiveness of industry in accordance with the requirements of the labor market (1%)						
OO 1.5	Improving the regulatory framework and business environment (1.5%)						
	2019	2020	Nat. budget	Public sector	IPA	Donors	Priv. sector
SG 1	174.631.717.00	161.773.653.00	8.409.964.00	97.793.006.00	325.000.00	27.396.000.00	202.481.400.00
41,5%	336.405.370.00		2%	30%	0%	8%	60%
SG 2	IMPROVING INVESTMENTS AND FINANCE FOR MODERNIZATION OF THE INDUSTRY						
OO 2.1	Improving access to finance for competitive and innovative enterprises (77.5% out of SG2)						
OO 2.2	Creating regulatory framework and implementation of new financial instruments (5%)						
OO 2.3	Stimulating investments in the modernization of manufacturing industry (17.5%)						
	2019	2020	Nat. budget	Public sector	IPA	Donors	Priv. sector
SG 2	186.513.806.24	199.700.000.00	8.235.000.00	318.070.000.00	17.908.806.24	0.00	42.000.000.00
47,5%	386.213.806.24		2%	82%	5%	0%	11%
SG 3	STIMULATING INNOVATION, TECHNOLOGY TRANSFER AND DEVELOPMENT OF ENTREPRENEURSHIP						
OO 3.1	Development of innovative infrastructure in accordance with the requirements of enterprises (11.5% out of SG3)						
OO 3.2	Improving innovation through cooperation between scientific research institutions and enterprises and potentials for access to EU funds (6.4%)						
OO 3.3	Development of institutional infrastructure and supporting services for development of entrepreneurship (1%)						
OO 3.4	Encouraging development of green economy (48%)						
OO 3.5	Support for diversification of industrial sector in the regional context (33%)						
OO 3.6	Enhancement of digital transformation of enterprises (0.1%)						
	2019	2020	Nat. budget	Public sector	IPA	Donors	Priv. sector
SG 3	47.048.438.50	39.328.442.00	79.126.814.00	232.000.00	4.792.000.00	1.922.066.50	304.000.00
10%	86.376.880.50		91%	0%	6%	2%	1%
SG 4	IMPROVING THE MARKET ACCESS						
OO 4.1	Simplifying trade procedures and reducing technical barriers in trade (84% out of SG4)						
OO 4.2	Improvement of the enterprises organization into clusters and global value chains (9%)						
OO 4.3	Strengthening enterprise export performance (7%)						
	2019	2020	Nat. budget	Public sector	IPA	Donors	Priv. sector
SG 4	2.147.307.19	1.613.591.00	2.068.050.00	0.00	1.416.450.00	20.000.00	256.398.19
1%	3.760.898.19		55%	0%	37%	1%	7%

Total	410.341.268.93	402.465.686.00	97.889.828.00	416.095.006.00	24.442.256.24	29.338.066.50	245.041.798.19
Total for 2 years	812.806.954.93	12%	51%	3%	4%	30%	

The aggregated financial framework was proposed at the level of €812,806,954.93 or €410,341,268.93 in 2019 and €402,465,686.00 in 2020. SG1 accounts for 41.5% of total investments, while SG2 represents the largest financial part at the level of 47.5% of total investments. SG3 stands for 10% of total investments, while SG4 covers 1% of total investments. The structure of investment by sources is given for each strategic goal and at the level of the Action Plan for two years, and the largest investments are from the public sector (51%), while the private sector investments account for 30%. Investments from the national budget are projected at 12%. At the same time, donor and IPA II investments are at levels of 4% and 3% respectively.

In the period of implementation of IP 2019-2023, there is no significant growth of investment expected on the annual basis, so that the main projections for the next three years of implementation are at the same level as for the first two years, so the framework budget for IP 2023 could be projected as it is presented in the following table (with indexing of 2%)⁵².

Table 17. Financial framework of the Industrial Policy for the period 2019-2023

	ANNUAL BUDGET
2019	410.341.268.93
2020	402.465.686.00
2021	360.634.747.01
2022	367.847.441.95
2023	375.204.390.79
Total	1.916.493.534.69

The total investment in the implementation of the Industrial Policy activities in the above-mentioned five-year period could be expected at the level of €1,916.49 million. The growth trend of investment can be expected from the private sector, but also from the IPA III funds, which will be known only after adoption of the new EU financial framework for the period 2021-2027.

4. Communication strategy for mainstreaming Industrial policy

The emphasis on communication, which is a key tool in establishing the principles of “mainstreaming” the Industrial Policy to other relevant policies, is an important precondition for a successful implementation of the Industrial Policy. In this respect, an efficient communication system for the establishment of a monitoring system for the policy is an important element for creating the necessary instruments for monitoring the implementation of the policy and evaluation of the effects achieved over all the years of the implementation of the Industrial Policy. The following table provides an implementation plan for Industrial Policy 2019-2023.

⁵² Projection of the budget for the period 2021-2023 does not include the World Bank's credit in activity 1.5.2. - electronic fiscalization and WB loan of 40 mil for industrial waste management, activity 3.5.7, and credit for completion of NTP Podgorica, activity 3.1.1., totaling 52.84 mil. €.

Table 18. Implementation and monitoring plan of the Industrial policy of Montenegro 2019-2023

Implementation and monitoring plan of the Industrial policy of Montenegro 2019-2023		
Year	Activities	Monitoring activities
2019	Adoption of the Industrial Policy of Montenegro 2019-2023 with the two year Action Plan for implementation of the policy in the period 2019-2020	Identified goals, priorities and responsible institutions at the level of areas included in the Industrial Policy Established system for communication and monitoring Periodical meetings of the Coordination body for creating and implementation of the Industrial Policy of Montenegro for the period 2019-2023.
2020	Monitoring of implementation of the Industrial Policy Action Plan for the year 2019.	Report on implementation of the Action Plan for the period 2019-2020 for the year 2019.
2021	Monitoring of implementation of the Industrial Policy Action Plan for the year 2020. Preparation and adoption of the Industrial Policy Action Plan for the period 2021-2023.	Report on the implementation of the Action Plan for the period 2019-2020 for the year 2020.
2022	Monitoring of implementation of the Industrial Policy Action Plan	Report on the implementation of the Action Plan for the period 2021-2023 for the year 2021.
2023	Monitoring of implementation of the Industrial Policy Action Plan and starting evaluation process	Report on the implementation of the Action Plan for the period 2021-2023 for the year 2022.
2024	Monitoring of implementation of the Industrial Policy Action Plan and final evaluation ⁵³	Final report on implementation of the Industrial Policy for the year 2023, with evaluation.

⁵³ In accordance of the Methodology for developing policies, creating and monitoring the implementation of strategic documents, assessment is usually performed after the expiry of the duration of the strategic document and it is stored within the final report on its implementation.

ANNEX 1: Overview of the main outcome indicators at the level of operational objectives within strategic goals

STRATEGIC GOAL 1.	IMPROVING INFRASTRUCTURE AND BUSINESS ENVIRONMENT FOR EFFICIENT INDUSTRIAL DEVELOPMENT			
Operational Objective OO 1.1.	Improvement and further development of energy and transport infrastructure			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
More efficient valorization of energy capacities	Installed capacity power of the energy sector ⁵⁴	884.975 MW	981.675 MW	1.414.675 MW
Improved competitiveness for industrial development	Global Competitiveness Index 2 nd pillar – Infrastructure	Rank 86/140 (GCI, WEF 2018 ⁵⁵)	Rank 80	Rank 75
Operational Objective OO 1.2.	Improvement of the ICT infrastructure for the growth of competitiveness of companies			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Increased contribution of ICT to the growth of industrial competitiveness	Share of ICT in GDP ⁵⁶	3,7% - share in GDP, constant prices (2018, Monstat)	5%	6%
Development of new generation networks NGN	NGN broadband accessibility ⁵⁷	70%	80%	95%
Open portal data highly accessible and functional	Increase in number of data sets on Open data portal	39 data sets ⁵⁸	Growth 150%	200%
Operational Objective OO 1.3.	Stimulate the sustainable management of resources			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Increased scope and level of products finalization in forestry and wood industry	Share of forestry and wood industry in GVA (%)	0,3% share in GVA (2017, Monstat)	0,5% ⁵⁹ share in GVA	0,6% share in GVA
Greater volume of	Number of concession		Increase in the	Increase in the

⁵⁴ Installed power is the sum of the nominal active power of all generators in the plant (Decree on the tariff system for determining the incentive price of electricity from renewable energy sources and high efficiency cogeneration ("Official Gazette of Montenegro" No. 52/11, 28/14 and 79/15)

⁵⁵ GCI is rated in 140 countries worldwide. based on a large number of factors affecting the business environment, grouped into three pillars of competitiveness that comprise 12 factors / subgroup competitiveness. One of the important factors at the pillar Basic factors is the infrastructure. Source for data for 2018-19: <http://reports.weforum.org/global-competitiveness-report-2018/country-economy-profiles/#economy=MNE>

⁵⁶ National accounts, annual data on GDP, Monstat; <https://www.monstat.org/cg/page.php?id=19&pageid=19>

⁵⁷ Percentage of households in the field of NGA availability (30Mbit/s). Source: Strategy for Development of the Information Society of Montenegro until 2020.

⁵⁸ <https://www.data.gov.me/> Open data is based on the availability of data held or collected by the authorities in a machine-readable format, for the purpose of further use and re-publication and use in any form.

⁵⁹ According to the Revision of Forest Development Strategy, MARD, 2018, page 7. At the same time, only 20% of production in this area are final and semi-final products in 2018. Projections are that this could significantly increase the level of utilization of wood raw materials for several stages of processing, so that until 2020, the participation of final and semi-final products could be up to 30% in the total exploitation of wood raw materials.

mineral resource exploitation	contracts for detailed geological exploration and exploitation of solid mineral resources	37 ⁶⁰	number of contracts by 10% compared to the baseline value	number of contracts by 15% compared to the baseline value
Operational Objective OO 1.4.	Development of human capital through education and acquiring skills for the competitiveness of industry in accordance with the requirements of the labor market			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Improvement of entrepreneurial learning and skills	SME Policy index, Entrepreneurial learning – Sub-dimension 1.1	4,08 (2019) ⁶¹	4,2	4,4
Employment growth in industrial sector (B,C,D,E) ⁶²	Number of employees in industrial sector and share in total employment (Monstat)	21.584 (11,4% in total employment)	2% increase	4% increase
Operational Objective OO 1.5.	Improving the regulatory framework and the business environment			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Improved business environment for all enterprises and entrepreneurs	Doing business Index (Doing Business, World Bank)	50/190 (Doing business Report 2019) ⁶³	45 (Doing business Report 2021)	32 (Doing business Report 2024)
Increased transparency and simplification of the licensing process	Number of e-license on e-government portal ⁶⁴	282 licenses	Increase for 20%	Increase for 30%
STRATEGIC GOAL2.	IMPROVING INVESTMENTS AND FINANCES FOR MODERNIZATION OF THE INDUSTRY			
Operational Objective OO 2.1.	Improving access to finance for competitive and innovative companies			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Better financing of SMEs	GCI Index (pillar 9.02 Financing of SMEs) ⁶⁵	Rank 48/140	Rank 46/140	Rank 43/140
Improved access to finance for competitive and innovative enterprises	Total value of loans granted to the private owned enterprises (CBMNE)	1.004.162 ⁶⁶ thousand €	5% growth compared to 2018	10% growth compared 2018

⁶⁰ Report on the work of the Ministry of Economy for 2018, p. 46, Podgorica, February 2019. http://www.mek.gov.me/ministarstvo/slobodan_pristup/197071/lzviestaj-o-radu-Ministarstva-ekonomije-za-2018-godinu.html

⁶¹ OECD SME Policy Index 2019, <https://www.oecd-ilibrary.org/docserver/g2g9fa9a-en.pdf?expires=1570609300&id=id&accname=guest&checksum=A1F5656ACC2C231456C1C9BD7A100FCE>

⁶² <https://www.monstat.org/cg/>

⁶³ https://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2019-report_web-version.pdf The "doing business" project provides objective measures of business regulations and their application in 190 countries at sub-national and regional level.

⁶⁴ Database of business licence, <https://www.euprava.me/elicence1>

⁶⁵ GCI is rated in 140 countries worldwide. based on a large number of factors affecting the business environment, grouped into three pillars of competitiveness that comprise 12 factors / subgroup competitiveness. One of the important factors in the pillar Financial system is financing of small and medium enterprises. Source for data for 2018-19: <http://reports.weforum.org/global-competitiveness-report-2018/country-economy-profiles/#economy=MNE>

⁶⁶ CBMNE, Bank Statistics, Table 1.6 – Sectoral loan structure (<https://www.cbcg.me/me/statistika/statisticki-podaci/monetarna-i-finansijska-statistika/monetarne-finansijske-institucije>)

Operational Objective OO 2.2.	Creating regulatory framework and implementation of new financial instruments			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Increased attractiveness of investors investments, especially risk capital	VCPE ⁶⁷ Index, Investment attractiveness Index, rank	85/125 ⁶⁸ (2018)	Improvement of 5% in IESE VCPE Index rank	Improvement of 10% in IESE VCPE Index rank
Improved access to EU programs and financial instruments for support to the SMEs	Number of EU programs and financial instruments accessed ⁶⁹	3/3 (COSME, WB EDIF, H2020)	3/4	4/5
Operational Objective OO 2.3.	Stimulating investments in the modernization of the manufacturing industry			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Increased share of manufacturing industry in GVA	Share of manufacturing industry in GVA (constant prices, Monstat) ⁷⁰	4,83% share in GVA (2018, Monstat)	4,9% share in GVA	5,2% share in GVA
Increase of labour productivity in manufacturing industry	Labour productivity in manufacturing industry	15,109 € (2018, Monstat) ⁷¹	3% growth	5% growth
STRATEGIC GOAL 3.	STIMULATING INNOVATION, TECHNOLOGY TRANSFER AND DEVELOPMENT OF ENTREPRENEURSHIP			
Operational Objective OO 3.1.	Development of innovative infrastructure in accordance with the requirements of companies			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Improved level of innovation infrastructure	Number of innovative organizations registered ⁷²	33 innovative organizations	100 innovative organizations	120 innovative organizations
Improved innovation capacities	GCI Index (stub 12) ⁷³	Rank 74/140	Rank 70	Rank 67
Operational Objective OO 3.2.	Improving innovation through cooperation between scientific research institutions and enterprises and potentials for access to EU funds			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Increased total expenditure on research and development (% of GDP – GERD ⁷⁴ , or absolute amount ⁷⁵)	Total domestic expenditure on research and development GERD as % of GDP	0,37% GDP (2017)	0,45% GDP	0,55% GDP

⁶⁷ Venture Capital & Private Equity Country Attractiveness Index - index, that measures investors investments, especially risk capital.

⁶⁸ <https://blog.iese.edu/vcpeindex/>

⁶⁹ Data from European Integration Office within Prime Minister of Montenegro Office.

⁷⁰ Data on the participation of the manufacturing industry sector in the GAV are available on the Monstat website. More information on published data, methodology and releases can be found at the link: <https://monstat.org/cg/page.php?id=542&pageid=542>.

⁷¹ Monstat Data. GVA of manufacturing industry in constant prices/average employment in manufacturing industry, in 2018.

⁷² <http://www.mna.gov.me/ministarstvo> (Register of innovative organizations)

⁷³ GCI is rated in 140 countries worldwide. based on a large number of factors affecting the business environment, grouped into three pillars of competitiveness that comprise 12 factors / subgroup competitiveness. An important factor to be tracked within this indicator is pillar 12. Innovation capabilities. Source for data for 2018-19: <http://reports.weforum.org/global-competitiveness-report-2018/country-economy-profiles/#economy=MNE>

⁷⁴ Gross domestic expenditure on research and development.

Growth of investments in research and development, through cooperation between scientific and research institutions and business	The amount of investments in research and development from business sector	Business sector 2,8 mil € (2017, Ministry of Science, 18%) ⁷⁶	Investment growth by 10% compared to baseline	Investment growth by 20% compared to baseline
Increased number of researchers engaged	Number of researchers engaged in research and development activities	1528 researchers, 695 researchers (FTE) (in 2017) ⁷⁷	Increase by 10% compared to baseline	Increase by 15% compared to baseline
Operational Objective OO 3.3.	Development of institutional infrastructure supporting services for development of entrepreneurship			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Improvement of entrepreneurial skills	SME Policy index – Entrepreneurial skills (8a)	2,35 (2019) ⁷⁸	2,8	3,0
Increased availability and quality of business support services for SMEs	SME Policy index – Business support services for SMEs (5a2)	3,83 (2019) ⁷⁹	4,0	4,2
Operational Objective OO 3.4.	Stimulating development of green economy			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Reducing the amount of waste generated at the territory of Montenegro	Percentage of internal removed industrial waste ⁸⁰	3,4% (Monstat, 2017)	3,6%	3,8%
Reduction of GHG emissions from industrial plants and total	Level of GHG emissions	3.494 Gg CO2 eq (industry 411 Gg CO2 eq) ⁸¹ (2015)	Reduction of GHG emissions by 3%	Reduction of GHG emissions by 5%
Operational Objective OO 3.5.	Support diversification of supply of the industrial sector in the regional context			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Increased number of manifestations that promotes development of entrepreneurship in rural areas	Number of supported manifestations through different stimulating programs for development of	331 manifestation (2018)	Increase by 20%	Increase by 30%

⁷⁵ Structure for 2015: Business sector 30%, Government 58%, Higher education 6%, Private non-profit sector 0% and foreign countries 6%. EUROSTAT, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=rd_e_gerdfund&lang=en

⁷⁶ Data from Ministry of Science, Statement on research and development statistics for 2017.

⁷⁷ Data from Ministry of Science, Statement on research and development statistics for 2017.

⁷⁸ OECD SME Policy Index 2019, <https://www.oecd-ilibrary.org/docserver/g2g9fa9a-en.pdf?expires=1570609300&id=id&accname=guest&checksum=A1F5656ACC2C231456C1C9BD7A100FCE>

⁷⁹ OECD SME Policy Index 2019, <https://www.oecd-ilibrary.org/docserver/g2g9fa9a-en.pdf?expires=1570609300&id=id&accname=guest&checksum=A1F5656ACC2C231456C1C9BD7A100FCE>

⁸⁰ The purpose of the research on industrial waste (OT-IND) is to provide information on the type and quantity of waste generated, processed and disposed of by business entities from the industrial sector (B, C, D and E). Source: Monstat https://www.monstat.org/cg/prikazi_metapodatke.php?id=1001&pageid=1001&name=Godi%9Anje%20istra%9Eivanje%20o%20industrijskom%20otpadu#Statistical%20presentation

⁸¹ Under the obligation of Montenegro to report on the effects of climate change under the United Nations Framework Convention on Climate Change (UNFCCC), a calculation of the new GHG emissions inventory for 2015 was made. This indicator represents the total emissions expressed in CO2 equivalent without sinks (Source: Second updated biennial report of Montenegro on climate change, Government of Montenegro, April 4, 2019, page 50).

	entrepreneurship in rural areas ⁸²			
Operational Objective OO 3.6.	Stimulating digital transformation of business			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Increased level of digitalization	Online Service Index (OSI ⁸³)	0,6667 score (2018, 0-1, 1 is the best)	Increase by 15%	Increase by 20%
Increased number of enterprises that use e-commerce for selling their products and services	Percentage of enterprises that use e-commerce for selling their products and services line	26,9% (2017) ⁸⁴	30%	40%
STRATEGIC GOAL 4.	IMPROVING ACCESS TO THE MARKET			
Operational Objective OO 4.1.	Simplifying trade procedures and reducing technical barriers in trade			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Improved customs and inspection procedures at the borders ⁸⁵	Average time for export of goods in road transport (h)	8 hours 7 minutes (2016) ⁸⁶	Reduce time needed for conducting export procedures for at least 20%	Reduce time needed for conducting export procedures for at least 30%
	Percentage of accepted electronic customs declarations without obligation for submitting copy in paper	40%	60%	80%
Improved market access	Global Enabling Trade Index, rank, WEF	62 nd position/out of 136 countries (2016) ⁸⁷	60 th position	58 th position
Improved quality of trade logistics services	World Bank Trade Logistics Index, rank	77 th position/out of 160 countries (2018) ⁸⁸	75 th position	73 rd position
Operational Objective OO 4.2.	Improvement of the enterprises organization into clusters and global value chains			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023

⁸² Data from the Ministry of Sustainable Development and Tourism

⁸³ EGD composite index, online services, telecommunication connectivity and human capacity (On-line service index - OSI, Telecommunication Infrastructure Index and Human capital Index). <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/114-Montenegro> <https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/114-Montenegro>

⁸⁴ <https://www.monstat.org/cg/page.php?id=459&pageid=457>

⁸⁵ Data from Strategy for trade facilitation of Montenegro for the period 2018-2022, with Action plan.

⁸⁶ Including time for transit from internal terminal in Podgorica to the border Dobrakovo, which presents in average 5 hours and 28 minutes and it participate with 67% in total time needed for export of goods on the measured route (Study on measurement of average time for releasing of goods, UCCG, 2016).

⁸⁷ The report contains the Trade Exchange Index that evaluates 136 countries and is based on their capacity to facilitate the flow of goods across borders and to their destination. Source http://www3.weforum.org/docs/WEF_GETR_2016_report.pdf

⁸⁸ The Logistics Performance Index is an interactive benchmarking tool designed to help countries identify challenges and opportunities they face in their logistics business operations and what they can do to improve their performance. The LPI 2018 allows comparisons in 160 countries. <https://lpi.worldbank.org/about>

Improved framework for establishment of vertical clusters and cooperation with scientific and research institutions	Number of established vertical clusters ⁸⁹	/	1	2
Operational Objective OO 4.3.	Strengthening enterprise export performance			
OUTCOME	INDICATOR	BASELINE 2018	TARGET VALUE 2020	TARGET VALUE 2023
Increased integration of enterprises within global value chains	SME Policy index – Integration of SMEs into global value chains (10.2)	3,09 (2019) ⁹⁰	3,3	3,6
Improved internationalization of enterprises	Number of enterprises that have established business cooperation ⁹¹	21	Increase of number of enterprises for 20%	Increase of number of enterprises for 30%

⁸⁹ Data from Ministry of Economy

⁹⁰ OECD SME Policy Index 2019, <https://www.oecd-ilibrary.org/docserver/g2g9fa9a-en.pdf?expires=1570609300&id=id&accname=guest&checksum=A1F5656ACC2C231456C1C9BD7A100FCE>

⁹¹ Data from Ministry of Economy and Chamber of Commerce.

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