

Project Application Form

Under the Recovery and Resilience Facility

1. Project name.
<p>Support for a pilot phase of the introduction of building information modeling (BIM) in the investment design and construction as a basis for digital reform of the construction sector in Bulgaria</p>
2. Description of the project (objectives, main activities).
<p>2.1 Purpose of the project</p> <p>Introduction of building information modeling (BIM) in the investment design and construction to implement a digital reform of the construction sector in Bulgaria in order to increase the competitiveness, productivity, sustainable growth and attractiveness of the construction sector in Bulgaria and create conditions for attracting foreign investments.</p> <p>2.2. Specific objectives:</p> <p>2.2.1. Creation of regulatory conditions and IT infrastructure in order to introduce BIM in the design, approval, implementation, control and operation of construction and modernization of the construction sector in accordance with the European priorities (application of the principles of circular economy, sustainable construction, energy efficiency, reduction of carbon emissions, etc.) and current European standards.</p> <p>2.2.2. Optimizing the design process, increasing the quality of construction, reducing the cost of construction products, reducing energy consumption, protecting the environment and improving the quality of life.</p> <p>2.2.3. Improving the efficiency of public administration and the quality of public services in the field of construction.</p> <p>2.2.4. Preparing the administration at national and regional level for carrying out the reform in the construction sector, increasing the capacity of the participants in the design and construction processes.</p> <p>2.3. Activities</p> <p>For the introduction of BIM and the implementation of the digital reform of the construction sector, some key tasks should be performed through the activities defined, as follows:</p> <ul style="list-style-type: none"> ✓ <u>Stage "Capacity building for the BIM community in Bulgaria in order to provide knowledge and experience related to the implementation of BIM - in a pilot phase":</u> ✓ Activity 1 „ Conducting specialized trainings in accordance with the common framework of standards for BIM implementation and European good practices " Specialized trainings shall be provided for: <ul style="list-style-type: none"> - municipal, regional and state administration, engaged in approving investment projects and issuing building permits - 150 experts; - architects and engineers engaged in investment design, approval, control and implementation of projects - 300 specialists;

- ✓ **Activity 2** „ Providing hardware and software (3-year license) for the experts from the municipal, regional and state administration in 28 district administrations, 6 large municipalities (Sofia, Varna, Plovdiv, Burgas, Stara Zagora and Ruse) and 3 ministries (Ministry of Regional Development, Ministry of Interior and Ministry of Culture) “. The activity shall provide for 100 jobs places / on average $2 \div 3$ jobs in the administrations listed above.

- the ministries included in the activity participate in the process of approving the investment projects,
- 6 of the largest municipalities were selected due to the greater likelihood of large public procurement contracts requiring BIM, as initially the obligation to implement BIM will be introduced only for large public procurement contracts for design and construction. All 28 district administrations are covered, given that by the order of art. 145, para. 1, item 2 of the Teritorial Development Act, the technical or detailed investment designs shall be coordinated and approved by the regional governor - for sites of the technical infrastructure with a scope of more than one municipality or for sites of regional importance.

- ✓ **Activity 3** „ Logistical support for small and medium enterprises (SMEs) for the implementation of BIM “:

- design offices;
- construction companies;
- consulting companies.

The envisaged logistical support for SMEs consists of providing training, which is covered by Activity 1, and providing 1 year of paid license for combined software - 300 job places. The purpose of this support is to enable SMEs to acquire competence in BIM implementation and to encourage them to utilize BIM, despite the large initial investment they would need to make.

- ✓ **Stage “Creation of a national digital platform for construction “:**

- ✓ **Activity 4** „Development of legislation and guidelines for collection, management and sharing of information, security and control of access to information based on ISO and CEN standards “- acquiring specialized legal services and developing regulatory requirements necessary for the digital reform in the construction sector, as well as producing at least 2 manuals - for designers and for the administration approving the investment projects;

- ✓ **Activity 5** „Development of 2 BIM-related curricula to be introduced to university curricula. The introduction of the programs will require training for the teaching staff and will affect the accreditation of the universities;

- ✓ **Activity 6** „ Creating an IT infrastructure and databases for data sharing and information exchange between suppliers and contracting authorities at public procurement “.

The architecture of the Platform and all software components (both system and application wise) shall be selected and / or developed to ensure the operability and resiliency of the system, as well as non-discriminatory installation and operation in productive mode, on virtual infrastructure, respectively on the State hybrid private cloud. (SHPC). All components of the Platform will be located on the SHPC as an environment for the information system. Integration with the horizontal e - government systems and connection to the inter registry exchange environment will be provided. The activity should ensure the maintenance, publication and storage of information on:

- ✓ requirements for documentation of construction products;
- ✓ requirements for the characteristics of construction products;
- ✓ documents with regulatory requirements for the investment projects;
- ✓ similar requirements as the above mentioned, the need for which may arise in the future;

- ✓ enable the categorization of requirements and search by relevant categories;
- ✓ enable the categorization of construction products and search by relevant categories;
- ✓ enable users to search, view, download and use the requirements of their projects;
- ✓ maintain contact with other e-government systems;
- ✓ support the creation of information requirements with accordance to BDS EN ISO 19650-1;
- ✓ information on requirements must be stored and provided in a structured form (tables, digital formats) or unstructured form (documents);
- ✓ digital formats must comply with open standards with broad application (PNG, PDF, XML, JSON, IFC, etc.).

➤ **Stage “Project organization and management, information and publicity “**

- ✓ **Activity 7** „ Project management “;
The activity shall be carried out for the entire duration of the project - indicatively five years by an indicative team of 9 experts.
- ✓ **Activity 8** „ Information and publicity “
The activity shall be carried out for the entire duration of the project - indicatively five years.
Given the importance of the project for implementing the reform of the construction sector, it is intended the public procurement contract to include services and activities concerning the media service and publicity of the project, incl.:
 1. Conducting a study of the communication needs and opinions of stakeholders and conducting a media campaign by publishing image boxes in printed publications and advertising in online media and platforms;
 2. Production of a minimum of 500 sets of advertising materials to be used during the course of the project;
 3. Organizing and conducting at least 2 press conferences in the 6 regions in Bulgaria included in the project, respectively for the beginning and end of the project. Broadcasting of events via internet communication channels.
- ✓ **Activity 9** „ Consulting during the development of the documentation for awarding the public procurements under the project, as well as in accepting the results of their completion “.

The link of the project with the use of new IT technologies requires specialized consulting assistance in the development of the Technical Specifications for the public procurements under the project, as well as in the acceptance of the results of their completion.

2.4. Justification for the project proposal

The project prepared by the Ministry of Regional Development and Public Works is developed in accordance with Council Recommendations 2, 3 and 4 of June 8, 2020 on the National Reform Program of Bulgaria for 2020. The intended activities of the project are focused on overcoming the main challenges identified by the Council:

- Improving access to remote work and promoting digital skills;
- Providing effective support to SMEs and the self-employed, concentrating investments in the field of environmental and digital transition;
- Minimize the administrative burden on businesses by improving the efficiency of public administration.

Given that one of the European Union's (EU) policies is to transform the EU economy into a digital one, the construction sector, as an important integral part of the European economy, must also be transformed to enable the EU's priorities to be achieved in this

sector: higher quality of construction, faster rates of design and construction, efficient and controlled energy consumption, affordable homes, protected environment and higher quality of life. The reform of the construction sector is closely linked to the implementation of other EU policies: sustainable building, digital economy, energy efficiency, circular economy, climate change, demographic change, health and safety, jobs, education, training.

The European priorities for the digitalisation of the economy as a whole, and of the construction sector in particular, are presented in the EU Digital Single Market Strategy, the 2020 Strategy for the Construction Sector and the European Green Deal, respectively. In this regard, EU MS are intensively reforming or preparing the digitalisation of their construction sectors.

Bulgaria, as part of the EU, has made the digitalization of its economy a priority, developing a Strategy for Bulgaria's participation in the fourth industrial revolution. At the same time, the Bulgarian construction sector is lagging behind in this process. Construction is one of the sectors driving the Bulgarian economy. As of the end of June 2019 the individuals with labour and service relationships, employed in the sector are 131.5 thousand, or a 5.6% share of the total number of employed persons in the country. There are 5,531 registered construction companies, 3,270 consulting and design companies, in which 20,520 architects and engineers are employed, more than 100 construction waste recycling companies. No statistics are kept on manufacturers of construction materials.

Most of the design bureaus and construction companies are SMEs. The activities foreseen by the project for training and provision of licensed software for 1 year will increase their qualification and will stimulate the transition to 3D design, remote work and reforming the sector. The project activities are also developed in accordance with the Council's recommendations for improving access to remote work, promoting digital skills, providing effective support to SMEs and the self-employed, focusing investment in the field of environmental and digital transition;

The digitalisation of the construction sector should cover the entire life cycle of constructions: planning / investment research, design, creation of digital databases for the construction products characteristics, 3D models of structures, construction, digital passports of buildings and facilities and relevant databases, management of the operating costs of the buildings and facilities, their repairs, renovations and demolition. It will optimize the design process, reduce the cost of construction, increase the attractiveness and competitiveness of the sector and create conditions for attracting foreign investments.

The reform of the construction sector will also lead to an increase in the qualification of the administration approving investment projects, the digitalization and efficiency of public administration and the quality of public services in the field of construction. The project is directly related to the Council's recommendations on the National Reform Program of Bulgaria for 2020 in terms of improving the efficiency of public administration and strengthening the e-government.

The digitalization of the construction sector is one of the main tools that will enable the application of principles such as circular economy, sustainable building, energy efficiency, reduction of carbon emissions. It will contribute to a more balanced energy system through the faster deployment of renewable energy sources and smart grids to manage energy consumption in buildings and facilities, to reduce greenhouse gases and is an important factor in achieving the objectives of the European Green Deal, including increased energy efficiency in the production of construction products, improving information on product characteristics by introducing digital passports for buildings and facilities.

The National Strategic Document "Digital Transformation of Bulgaria for the period 2020-2030" identifies 16 priority directions of development related to the digital transformation of

the country, one of which is "Territorial Development", identified in item 14. This area of impact includes the digitization of the construction sector.

In this regard, the Minister of Regional Development and Public Works **established a National Working Group (NWG) for the introduction of BIM for the entire life cycle of construction, with Order № RD-02-14-165_20.02.2020**. The main tasks of the NWG are advisory and expert functions regarding the following tasks:

- ✓ **Development** of a draft for a Long-term strategy for introducing BIM in the design, execution and maintenance of constructions, as a basis for the digital transformation of the construction sector and
- ✓ **Creating** a draft Action Plan for the implementation of the Long-Term Strategy under item 1, that shall specify the implementation of the strategy, organize and plan its application, monitoring, evaluation and the need for updating, defining the operational objectives to each strategic goal, the activities and deadlines for their implementation, the expected results, the performance indicators, the necessary resources, sources of funding and the responsible institutions.

In order to complete these tasks, the NWG will work together with the team responsible for the execution of project REFORM / SC2020 / 089 "Preparation and launch of digital reform of the Bulgarian construction sector", funded by the Program for Support of Structural Reform 2017-2020 of the European Union, as the opinions expressed and the comments made will be of an advisory expert nature and will serve as an indicator regarding the quality assessment of the project implementation.

Project REFORM / SC2020 / 089 is the result of a request for support from the Ministry of Regional Development and Public Works for the Preparation and launch of digital reform of the Bulgarian construction sector under the Structural Reform Support Program 2017-2020. The request was assessed as a high priority of the list of priority claims approved by the Council of Ministers and approved for funding by the European Commission (EC). Project REFORM / SC2020 / 089 "Preparation and launch of digital reform of the Bulgarian construction sector" is currently in progress, starting on 22.9.2020 and is expected to be completed by 22.1.2022 at the latest.

The approval and implementation of the strategic documents require the provision of the human and financial resources needed for the specific measures. The current project aims to provide the financial framework for the main tasks of the reform pilot phase, which should be performed in view of the implementation and sustainability of the sectoral policy and the strategic goals set in the Long-Term Strategy for the Implementation of BIM.

3. Beneficiary.

Ministry of Regional Development and Public Works – Technical Rules and Regulations Directorate

4. Time schedule for project Implementation, including activities, stages ¹.

Stage "Capacity building for the BIM community in Bulgaria in order to provide knowledge and experience related to the implementation of BIM - in a pilot phase" - 01.04.2022 - 31.03.2025.:

¹ Графикът ще е релевантен за определянето на междинни цели в рамките на Плана за възстановяване и устойчивост и има пряко отношение към освобождаване на траншове от финансовата подкрепа по линия на Фонда за възстановяване и устойчивост.

- ✓ **Activity 1** „ Conducting specialized trainings in accordance with the common framework of standards for BIM implementation and European good practices " Specialized trainings are provided for:
 - municipal, regional and state administration, engaged in approving investment projects and issuing building permits - 150 experts;
 - architects and engineers engaged in investment design, approval, control and implementation of projects - 300 specialists;
- ✓ **Activity 2** „ Hardware and software support of the municipal, regional and state administration in 28 districts, 6 large municipalities and 3 ministries (Ministry of Regional Development and Public Works, Ministry of Interior and Ministry of Culture)“;
- ✓ **Activity 3** „ Logistic support for small and medium enterprises (design bureaus, construction and consulting companies) for the implementation of BIM “;

Stage "Creation of a national digital platform for construction" - 1.01.2023 - 31.12.2025.:

- ✓ **Activity 4** „ Development of legislation and guidelines for the collection, management and sharing of information, security and control of access to information based on ISO and CEN standards “;
- ✓ **Activity 5** „ Development of programs for the inclusion of BIM-related disciplines in university curricula “;
- ✓ **Activity 6** „ Creation of IT infrastructure and databases for data sharing and information exchange between suppliers and contracting authorities at public procurement “;

Stage Project organization and management, information and publicity - 1.08.2021 - 30.06.2026.

- ✓ **Activity 7** “Project Management” shall be implemented for the entire project period of August 1. 2021 - June 30. 2026. - indicative five years;
- ✓ **Activity 8** „Information and publicity” shall be implemented for the entire project period of 1.08.2021 - 30.06.2026 - indicatively five years. The activity shall be performed by the project management team before and until the selection of a contractor, and in the last two quarters of the project.
- ✓ **Activity 9** „ Consulting during the development of the documentation for awarding the public procurements under the project, as well as in accepting the results of their completion ”- shall be performed as a preparation for awarding the public procurements under the PPL and during the implementation of the first and second stage in the period of 1.04.2022 - 31.12.2025, indicatively three years and eight months.

The time schedule for the project implementation, incl. activities and stages is presented in Table 1.

Table 1

PROJECT ACTIVITIES	2021		2022					2023					2024					2025					2026	
Months	VIII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI
Stage "Capacity building for the BIM community in Bulgaria in order to provide knowledge and experience related to the implementation of BIM - in a pilot phase". 01.04.2022 г. – 31.03.2025 г.:																								
Activity 1 „Conducting specialized trainings in accordance with the common framework of standards for BIM implementation and European good practices“																								
Activity 2 „Providing hardware and software (3-year license) for the experts from the municipal, regional and state administration in 28 district administrations, 6 large municipalities (Sofia, Varna, Plovdiv, Burgas, Stara Zagora and Ruse) and 3 ministries (Ministry of Regional Development, Ministry of Interior and Ministry of																								
Activity 3 „Logistical support for small and medium enterprises (SMEs) for the implementation of BIM “: - design offices; - construction companies; - consulting companies																								
Stage "Creation of a national digital platform for construction " – 1.01.2023 г. – 31.12.2025 г.:																								
Activity 4 „Development of legislation and guidelines for collection, management and sharing of information, security and control of access to information based on ISO and CEN standards “																								
PROJECT ACTIVITIES	2021		2022					2023					2024					2025					2026	
Months	VIII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI	VII - IX	X - XII	I - III	IV - VI
Activity 5 „Development of 2 BIM-related curricula to be introduced to university curricula“.																								
Activity 6 „Creating an IT infrastructure and databases for data sharing and information exchange between suppliers and contracting authorities“																								
Stage "Project organization and management, information and publicity " – 1.08.2021 г. – 30.06.2026 г.																								
Activity 7 „Project management “																								
Activity 8 „Information and publicity “																								
Activity 9 „Consulting during the development of the documentation for awarding the public procurements under the project, as well as in accepting the results of their completion“																								
Legend:																								
Procedures under the Public Procurement Act are being carried out																								
Performed by an external contractor																								
Implemented by the project team																								

4.1. When can the project implementation start at the earliest after its approval?

01.08.2021 г.

5. Indicative financial resource by activity, including sources of financing (national budget, European funding, private funding, IFIs).

Total indicative financial resource for project proposal implementation is BGN 7 934 560 without VAT

The total financial resource for Stage "Capacity building for the BIM community in Bulgaria, in order to provide knowledge and experience related to the implementation of BIM - in a pilot phase" - 01.04.2022 - 31.03.2025 is BGN 3 700 000 from the EU

Instrument for Recovery and Resilience, broken down by activities as follows:

- ✓ **BGN 525 000 without VAT** for implementation of Activity 1 (incl. BGN 225 000 for conducting trainings for the municipal, regional and state administration and BGN 300 000 for conducting trainings for the architects and engineers engaged in the investment design, control and implementation of investment projects);
- ✓ **BGN 850 000 without VAT** for the completion of Activity 2;
- ✓ **BGN 2 325 000 without VAT** for the implementation of Activity 3;

The total financial resource for Stage "Creation of a national digital platform for construction" - 1.01.2023 - 31.12.2025 is BGN 3 400 000 without VAT from the EU

Instrument for Recovery and Resilience, broken down by activities as follows:

- ✓ **BGN 1 050 000 without VAT** for implementation of Activity 4 (BGN 700 000 for development of legislation and BGN 350 000 without VAT for guides) ;
- ✓ **BGN 400 000 without VAT** for the implementation of the Activity 5;
- ✓ **BGN 1 950 000 without VAT** for the completion of Activity 6;

The total financial resource for Stage "Project organization and management, information and publicity" is BGN 834 560 without VAT

- ✓ **BGN 303 460 without VAT** from the EU Instrument for Recovery and Resilience for implementation of Activity 7
- ✓ **BGN 331 100 without VAT** from the EU Instrument for Recovery and Resilience for implementation of Activity 8
- ✓ **BGN 200 000 without VAT** from the EU Instrument for Recovery and Resilience for implementation of Activity 9

5.1. Indicative allocation of the financial resource, depending on the type of expense:

- Construction / rehabilitation of infrastructure (construction and installation works) - 0%
- Physical capital (purchase of machinery and equipment) – 6 %
- Human capital (increasing qualification, retraining ...) – 17 %
- Labour (costs for wages, consulting services ...) – 37 %
- Technology (costs for acquisition of NMDA - patents, software ...) – 40 %

6. Indicators²

6.1. Result indicator/s

1. Number of trained representatives of the target groups
Initial value - 0. [2021]
Intermediate value - 150 – second quarter 2024 .
Final value - 450. - second quarter 2025

² Периодът за постигане на индикаторите е планиран при старт на проекта от м. август 2021 г.

2. Hardware and software provided for job places in municipal, regional and state administration
Initial value - 0. [2021]
Intermediate value - 25 job places - second quarter 2024
Final value - 100 job places - second quarter 2025
3. Logistically supported job places in small and medium enterprises including 1 year paid license for software
Initial value – 0. [2021]
Intermediate value – 50 job places – second quarter 2024
Final value – 300 job places – second quarter 2025
4. Proposal for regulatory changes and regulatory requirements necessary for the implementation of the digital reform in the construction sector
Initial value – 0 pcs. [2021]
Final value – 1 proposal – first quarter 2026.
5. Number of developed guides
Initial value – 0. [2021]
Final value – 2 guides – first quarter 2026
6. Number of developed university curricula
Initial value – 0. [2021]
Final value – 2 University curricula – first quarter 2026.
7. Developed database for data sharing
Initial value – 0. [2021]
Final value – 1 database for data sharing – first quarter 2026

6.2. Effect indicator/s

1. Provided support (training and 1 year with paid license for software) to small and medium enterprises for implementation of BIM
Initial value – 0 [2021]
Final value – 300 small and medium enterprises supported - second quarter 2025
2. Increased level of competence and efficiency of the public administration
Initial value – 0 [2021]
Final value – 100 job places, provided with hardware and software and with trained BIM experts in 28 district administrations, 6 large municipalities (Sofia, Varna, Plovdiv, Burgas, Stara Zagora and Ruse) and 3 ministries (Ministry of Regional Development, Ministry of Interior and Ministry of Culture) - second quarter 2025
3. Providing the basis for the regulatory changes and the universities curricula, necessary for the implementation of the digital reform of the construction sector in Bulgaria
Initial value – 0. [2021]
Final value – proposal for regulatory changes, two universities curricula– first quarter 2026 r.
4. Functioning database for data sharing for the implementation of the digital reform of the construction sector in Bulgaria

Initial value – 0. [2021] Final value – functional database for data sharing– first quarter 2026.
7. Does the project require the opening of a procedure pursuant to the Public Procurement Act (PPA)?
Procedures under the Public Procurement Act are required for eight out of the nine activities included in the project.
7.1. If a procedure under the Public Procurement Act is required, what part of the activities and financial resources will be subject of the public procurement?
The subject of procedures under the Public Procurement Act will be eight out of a total of nine specific activities included in the project proposal and respectively the financial resource determined for them.
7.2. If a procedure under the Public Procurement Act is required, what is the indicative schedule for its implementation?
<p><u>Stage "Capacity building for the BIM community in Bulgaria in order to provide knowledge and experience related to the implementation of BIM - in a pilot phase" - 01.04.2022 - 31.03.2025.</u></p> <p>Carrying out the procedures under the Public Procurement Act for the activities for this stage and preparation of conditions for application of SMEs 1.04.2022 - 31.03.2023 Implementation of the activities 01.04. 2023 - 31.03.2025.</p> <p><u>Stage "Creation of a national digital platform for construction" - 1.01.2023 - 31.12.2025.</u></p> <p>Carrying out the procedures under the Public Procurement Act for the activities for this stage: 01.01.2023 - 31.12.2023. Implementation of the activities 01.01.2024 - 31.12. 2025.</p> <p><u>Stage "Project organization and management, information and publicity “</u></p> <ul style="list-style-type: none"> ✓ Carrying out a procedure under the Public Procurement Act for Activity 8 “Information and publicity”: 01.08.2021 - 31.03.2022, which will be implemented for the period - 01.04.2022 - 31.12.2025. ✓ Carrying out a procedure under the Public Procurement Act for Activity 9 - 1.8.2021 - 31.03.2022. The activity is to be implemented in the period 1.4.2022 - 31.12.2025.
8. Demarcation and complementarity.
8.1. If similar projects have been implemented (regardless of their source of funding), describe how this project builds on/complements what has been achieved with previous projects.
At present, the financing and implementation of the request submitted by the Ministry of Regional Development and Public Works in support of the Preparation and launch of digital reform of the Bulgarian construction sector under the Structural Reform Support Program 2017-2020 is in progress. The project started in September 2020 after a procedure for a consultant selection, which was conducted by the EC. It is expected to end 16 months later in January 2022. The financial resource approved for the project is 300 000

EURO.

The support requested by the Ministry of Regional Development and Public Works consists of increasing the administrative capacity for the wording, development and implementation of policy and strategy for the reform of the construction sector, preparation of the administration at national and regional levels, as well as that of the participants in the construction branch and their involvement in the drafting of the strategic document and implementation of the reform. The implementation of the digital reform of the construction sector will lead to an increase in the quality and efficiency of the processes of design and execution of constructions, as well as the creation of opportunities for their better maintenance, extension of their life and better management of energy resources.

The activities that will be funded under the project are as follows:

- Analysis of the current state of the construction sector in Bulgaria:
 - ✓ level of readiness of the private and public sector for introduction of BIM;
 - ✓ availability of resources - administrative, financial, technical and academic;
 - ✓ conditions for the implementation of the reform - legislative framework, public procurement, introduced standards, educational system, availability of knowledge and skills of the stakeholders;
 - ✓ accompanying conditions - government readiness to maintain and finance the reform of the construction sector.
- Preparation of a draft strategy for reform in the construction sector and implementation of BIM:
 - ✓ concept for development of the construction sector and the introduction of BIM;
 - ✓ sectoral policy and strategic goals to achieve the defined concept;
 - ✓ proposals for amendments to the national regulatory framework in line with the European one, introduction of standards, drafting of guidelines;
 - ✓ defining the role of public procurement for the introduction of BIM;
 - ✓ defining measures to support SMEs for the introduction of BIM;
 - ✓ defining the role of the National Work Group for introduction of BIM;
 - ✓ strategy for achieving the necessary level of competence for the municipal and state structures, of the industry and the academic community, of all stakeholders in the introduction of BIM;
 - ✓ benefits-costs from the implementation of the strategy or the effect of the possible lag of the Bulgarian construction sector behind the European digitalization processes
- Development of a draft roadmap for reform of the construction sector and implementation of BIM, which will determine:
 - ✓ main steps for the gradual introduction of BIM and timeline;
 - ✓ the financial, human and institutional resources needed for each of the steps of the roadmap;
 - ✓ the responsibilities of each of the participants in the process of reforming the construction sector, their roles and relationships;
 - ✓ criteria for identifying the pilot project for the full implementation of BIM;
 - ✓ international network for exchange of know-how in the field of BIM;
- Plan for a national digital construction platform:
 - ✓ definition of a standardized format of open data for information exchange between suppliers and contracting authorities - necessary standards for implementation of BIM, IT infrastructure, shared databases, their joint implementation in accordance

- with the requirements introduced on the European market;
- ✓ identifying the need to amend legislation and developing guidelines for collecting, managing and sharing information, security and control of access to information based on ISO and CEN standards;
- ✓ broad discussion and consultation with all stakeholders
- Capacity building for the BIM community in Bulgaria in order to provide knowledge and experience related to the implementation of BIM
 - ✓ analysis and determination of the training needs of the administration and the private sector - the architects and engineers engaged in the investment design, approval, control and implementation of the projects;
 - ✓ preparation of programs and training materials for the different groups of participants in the process - compliant with the common framework standards for the introduction of BIM and European good practices;
 - ✓ developing a training schedule with an identified target audience;
 - ✓ proposal for inclusion of BIM-related disciplines in university curricula;
 - ✓ presentation of the strategy and the roadmap for reform of the construction sector;
 - ✓ conducting pilot training with each identified target audience in the case of budget availability for the project.

The expected results from completion of the project are:

- Development of a National Strategy and Roadmap for the introduction of building information modelling (BIM), as a basis for digital transformation of the construction sector;
- Raising awareness and preparation for the building of higher capacity for the implementation of BIM among the Bulgarian architectural, engineering and construction community.

The project "Support of a pilot phase for introduction of building information modelling (BIM) in investment design and construction as a basis for digital reform of the construction sector in Bulgaria", with which we apply for the Instrument for Recovery and Resilience (second project), **definitely complements and builds on** the project funded by the Structural Reform Support Program 2017-2020 (first project)

The first project will determine the main measures that the administration and the private construction sector should comply with in order to implement a digital reform of the Bulgarian construction sector. The second project shall provide initial financial and human resources for beginning a pilot phase designed to implement of the main measures defined by the first project.

The Terms of Reference for the selection of a contractor for the first project, which we developed together with the EC, defines the main steps for compiling a strategic document and a roadmap for its implementation, as well as the preparation of key tasks for the digital reform. The first project will analyse the conditions for the implementation of the reform - legislative framework, public procurement, introduced standards, educational system, availability of knowledge and skills of the stakeholders and will determine:

- ✓ the regulations that should be amended in accordance with the European regulatory framework, standards and guidelines that need to be introduced and drafted in order to create the necessary regulatory environment that will allow the reform of the construction sector;
- ✓ the format of open data for the information exchange between suppliers and contracting authorities - the appropriate standards for this format, IT infrastructure and shared databases;

- ✓ the training needed for the administration and the private sector and preparation of programs and training materials for the different groups of participants in the process;
- ✓ BIM-related disciplines to be introduced in university curricula;
- ✓ appropriate measures to support SMEs while implementing BIM;
- ✓ the criteria for identifying a pilot project that would use and require BIM implementation;

The current second project shall provide the financial opportunity for the beginning of precisely these main tasks needed for the implementation of the reform in a pilot phase:

- Building up the initial capacity of the BIM community in Bulgaria in a pilot phase, in order to provide knowledge and experience related to the implementation of BIM;
- Creation of a national digital platform for construction.

8.2. If similar projects are envisaged to be implemented under the Partnership Agreement programs, the centrally managed facilities of EU or the Just Transition Fund, outline the demarcation with this project.

By Decision № 704 of the Council of Ministers of 05.10.2018 (measure № 30 of Annex №1 - Measures for simplification and adjustment of business services in accordance with the Law on Restriction of Administrative Regulation and Administrative Control over Economic Activity) the Ministry of Regional Development and Public Works has been assigned to implement a measure for the creation of a unified information system, through which it will be possible for the regimes in the investment process to be administered entirely electronically.

In this regard, the Ministry of Regional Development and Public Works is preparing a project for the creation of "Unified information system for territorial development, investment design and construction permits" for funding from The EU's Instrument for Recovery and Resilience, which would make it possible for the regimes in the investment process, incl. approval of investment projects and issuance of construction permits, to be administered entirely electronically on a national level.

The aim of the project is to create a unified information system as a platform for providing electronic administrative services for territorial development and construction permits.

The establishment of the system shall result in the applicant submitting a one-time request for administration of the regime (provision of the relevant package of services), the affected administrations shall provide conciliatory opinions as an internal administrative service and subsequently the competent authority would issue and serve a final act electronically. This will create an opportunity for digital submission of documents, applications and projects, permitting the development and approval of development plans, approval of investment projects, issuance of construction permits and commissioning.

The planned project will create an opportunity for modernization and facilitation of the administrative services provided by the Ministry of Regional Development and Public Works based on the current Territorial Development Act. It aims to facilitate the functions of the existing investment process and does not include the introduction of BIM, on the basis of which the digital reform in the construction sector shall be carried out.

Building information modelling will change the way of public procurement contracts are awarded in the construction sector, the methods for design, evaluation and approval of

investment projects, the compiling and storing construction documentation, will allow the creation of digital passports and digital models of construction, which will allow the effective management of their exploitation and maintenance and is a technological prerequisite in the process of network integration of "smart buildings ".

The two projects have different goals and do not duplicate activities. The established administrative services for coordination and approval of investment projects and construction permits under the project for the creation of "Unified information system for territorial development, investment design and construction permits" will be upgraded qualitatively by the project for "Support for introduction of building information modelling (BIM) in Investment Design and Construction as a Basis for Digital Reform of the Construction Sector in Bulgaria " by creating a new format for providing the service.

9. Does the project directly contribute to the implementation of any of the Council's Specific Recommendations addressed to Bulgaria in the framework of the European Semester in the period 2017-2020? Please describe how.

The project prepared by the Ministry of Regional Development and Public Works is developed in accordance with Council Recommendations 2, 3 and 4 of June 8, 2020 on the National Reform Program of Bulgaria for 2020. The activities included in the project are directed at supporting the implementation of the following challenges:

Under Recommendation 2: improve access to remote work and promote digital skills;

Under Recommendation 3: providing effective support to SMEs and the self-employed, concentrating investments in the field of environmental and digital transition;

Under Recommendation 4: minimize the administrative burden on businesses by improving the efficiency of public administration.

This project aims to support the pilot phase of digital reform of the construction sector. The reform definitely requires an increase in digital skills in terms of employability on a large scale: administration, education, entrepreneurs and construction business, monitoring and management of buildings in operation.

Many of the design bureaus and entrepreneurs in the construction business are SMEs. The activities in the project that incorporate the training and provision of licensed software for 1 year are definitely aimed at improving access to remote work, promoting digital skills, providing effective support to SMEs and the self-employed, concentrating investments in the field of environmental and digital transition;

One of the main goals of the digitalization of the construction sector is better management of the energy resources used in construction. The creation of digital models allows the rapid and efficient determination of the energy consumption of the building, the necessary thermal insulation and opportunities for the use of renewable energy sources. They are used not only in the process of design and execution of the construction, but also during its overall exploitation for monitoring and management of energy consumption. The implementation of the reform will definitely change the attitudes of foreign investors, will increase productivity, sustainable growth of jobs and investments in the sector, will allow the sector to maintain its competitiveness and improve the business environment.

The reform of the construction sector will also lead to an increase in the qualification of the administration approving investment projects, the digitalization and efficiency of public

administration and the quality of public services in the field of construction. The project is directly related to the Council's recommendations on the National Reform Program of Bulgaria for 2020 in terms of improving the efficiency of public administration and strengthening the e-government.

10. Does the project contribute to the implementation of a reform in a given sector? Please describe how.

The project is developed as a support for the implementation of the Digital Reform of the Bulgarian construction sector. The implementation of the pilot phase envisioned by the project provides the necessary regulatory framework, supporting guides, shared databases, trained specialists, prepared administration, and that shall create the conditions needed for beginning the processes required for digital transformation of the sector. The implementation of the reform will also contribute to the achievement of the main goal 1 of the National Development Program: Bulgaria 2030, related to the technological transformation of the economy, increasing resource efficiency and catching up with its digitalization.

The project is aimed at implementing priority 14 of the "Digital Transformation of Bulgaria for the period 2020-2030", the National Strategy and Roadmap for the introduction of BIM, as a basis for the **implementation of digital reform of the construction sector**. It will secure financially and enable the implementation of key regulatory, administrative, socio-economic tasks for the implementation of the reform of the construction sector, as well as relieve the state budget from the commitment of financing these necessary activities that meet the requirements of the world digital economy and will change the attitudes of foreign investors.

The reform of the construction sector is large-scale - it covers regulations, national and regional administrations, the field of education, entrepreneurs and construction business, the IT sector.

The implementation of the digital reform of the construction sector will lead to an increase in the quality and efficiency of the processes of design and execution of constructions, to the creation of opportunities for their better maintenance, extension of their life period and better management of energy resources. The reform aims to modernize the conservative construction sector and attract young people to it, increase their skills and competitiveness, stimulate high-tech innovation in the sector, sustainable building, reduce its negative impact on the environment and create favourable conditions for international investments.

11. Does the project contribute to the development of any aspect of sustainable economic development? Please describe how.

According to the new Action Plan on the circular economy "For a cleaner and more competitive Europe" COM (2020)98final, construction has a significant impact on a number of sectors of the economy, local employment and quality of life. It requires huge amounts of resources and uses about 50% of all extracted materials. The construction sector generates over 35% of the total amount of waste in the EU. Estimates show that greenhouse gas emissions from raw materials extraction, construction products,

construction works and building renovations account for 5-12% of total national greenhouse gas emissions and that these emissions can be reduced by 80%.

In order to utilize the potential for more efficient construction and climate impact reduction, the European Commission plans to introduce a new comprehensive strategy for sustainable building. The aim of this strategy is to ensure coherence between relevant policy areas, such as climate, energy and resource efficiency, construction and demolition waste management, accessibility, digitization and skills.

In addition to the significant economic share of the construction sector and its great potential for reducing the negative impact on the environment, the digitalization of the construction sector should ensure the application of the principles of the circular economy, sustainable building, energy efficiency, carbon emissions reduction. It will contribute to the balance of the energy system through the faster deployment of renewable energy sources and smart grids that manage energy consumption in buildings and facilities, to reduce greenhouse gases and is an important factor in achieving the objectives of the European Green Deal, including increasing energy efficiency in the production of construction products, improving information on product characteristics by introducing digital passports for buildings and facilities.

Sustainable building plays a key role in improving the environment and the impact on climate, resource and energy efficiency, reducing and managing construction waste, more efficient use of resources and the transition to a circular economy. Digitization will increase the attractiveness and competitiveness of the construction sector and create conditions for attracting foreign investment. It will increase the efficiency of public administration and the quality of public services in the field of construction.

12. Does the project contribute to the implementation of the objectives of the National Development Program BULGARIA 2030? Please describe how.

The project will be implemented in contribution to the Axis of Development "Innovative and Intelligent Bulgaria "

The project has a direct contribution to the implementation of Priority P8. Digital connectivity, as it is an element of a modern and secure digital infrastructure, the creation of which is the main focus for policies until the year 2030, as a basis for offering more services through digital management and cooperation.

The project directly contributes to the implementation of Priority P3. Intelligent industry, the purpose of which is to stimulate the process of digitalization of the real economy.

The project supports the timely technological transformation in the construction sector in a pilot phase, which is characterized by a high-energy intensity. The implementation of the project will support the reform process into accelerate the digital development of the sector, a key result of which is the implementation of a model of production and consumption, limiting construction waste to a minimum with opportunities for recycling and reuse. This model is at the heart of the circular economy, so the project will support the improvement of the resource efficiency of the construction sector (euro / unit of production or service). In general, digitalisation in the construction sector will contribute to improving the index for the inclusion of digital technologies in the Digital Economy and Society Index (DESI).

With the pilot phase of high-tech training for architects, engineers and builders, the project supports the launch of digital reform in the construction sector by improving the quality of human capital to form highly educated, innovative and active individuals capable of success as professionals and citizens. This is the main goal of Priority P1. Education and skills from the National Development Program Bulgaria 2030.

The project supports the implementation of P9. Local development by ensuring the design and implementation of technologically secured, energy efficient, safe and affordable construction in all regions of the country.

13. Does the project contribute to the implementation of the objectives and priorities set out in the National Integrated Energy and Climate Plan? If yes, please describe how.

The project will contribute to the implementation of the following policies set out in the Integrated Energy and Climate Plan 2021 - 2030:

In item 3 "Policies and measures, item 3.2 under Dimension" Energy efficiency ", in sub-item iv. *„Other planned policies, measures and programs towards achieving indicative national contributions to energy efficiency for 2030, as well as other objectives set out in point 2.2 (such as measures to encourage public buildings to serve as an example of energy-efficient public procurement , measures to promote energy audits and energy management systems, measures for informing and educating consumers, and other measures to promote energy efficiency)*, the implementation of the following policy is envisioned:

• Preparation and launch of digital reform of the Bulgarian construction sector in the period 2021 - 2030. in three measures on a national level:

- Development and implementation of a strategy and a national plan with measures for digitalization of the construction sector;
- Development of standards and regulations for application of digitalization and building information modelling (BIM) in the construction sector, incl. accompanying analyses;
- Implementation of the digital reform of the construction sector.

Through the implementation of the project, this specific policy set out in the Integrated Plan for Energy and Climate 2021- 2030 shall be supported.