

# Project Application Form

## Under the Recovery and Resilience Facility

<b>1. Project name</b>
<b>DIGITISATION OF MUSEUM, LIBRARY AND AUDIOVISUAL FONDS</b>
<b>2. Description of the project (objectives, main activities)</b>
<p>The main objective of the project proposal is to carry out a comprehensive reform of the country's policies on digitisation, protection and preservation of cultural heritage and to ensure that all stakeholders have free access to the country's cultural wealth, on an equal and unrestricted basis.</p> <p>The project also has the following specific objectives:</p> <ul style="list-style-type: none"> <li>- Introducement of uniform standards for the digitisation of the fonds of museums, libraries, the Bulgarian National Film Archive (BNFA), the Bulgarian National Television (BNT) and the Bulgarian National Radio (BNR);</li> <li>- Establishment of a uniform methodology for the implementation of the digitisation process at national level in order to introduce a single coordinated approach with centralised control;</li> <li>- Creating a single electronic platform to store the country's cultural heritage in digital form and to be installed on the State Hybrid Private Cloud (SHPC);</li> <li>- To encourage the work of stakeholders in a digital environment to enhance their skills. To improve access to work and distance learning materials for employees in the field of culture, education, researchers, learners, as well as access to information and education for disadvantaged people and people from vulnerable groups.</li> </ul> <p>The COVID-19 pandemic highlighted the great importance of digital technologies for the development of the country's economy and the need to take urgent measures to accelerate the digitisation process in all economic and social sectors, including culture. Central efforts to harness the potential of digital technologies are not only necessary but also mandatory.</p> <p>A strategic document "Bulgaria's Digital Transformation 2020-2030" was adopted in 2020, according to which the development of digital technologies and their uptake in all spheres of economic and social life makes it necessary to rethink the approach in terms of harnessing their outstanding potential for improving the competitiveness of the Bulgarian economy, strengthening supply and demand and the efficiency of public services and successfully addressing major social challenges by 2030.</p> <p>The country still faces several challenges in terms of social indicators identified in support of the European Pillar of Social Rights. The level of digital skills of the population remains incredibly low, with only 29% of the population (16-74 years) indicating that they have basic or more in-depth digital skills. By comparison, this value at EU level is 57%. The use of ICT in schools is not optimal and the overall results in digital education remain weak. Innovative teaching methods using ICT need to be introduced. The project will increase the possibility to use ICT in the educational process by using digitalized content for some of the curriculum subjects. At the same time, it will indirectly contribute to complementing the state's measures to increase the digital skills of the population.</p> <p>In addition, inequality of opportunity remains a challenge, with educational outcomes and poverty intricately linked. Children of low-skilled parents continue to be at higher risk of</p>

poverty than children of high-skilled parents. The platform will ensure free and equal access for all to the cultural heritage. It will provide an additional opportunity for people with low income and no opportunities to invest in education, tourism, and culture, to gain access to educational information, and touch the cultural values of the state. By providing wide access to digitized content, the project will help develop the inclusive nature of the educational process, improve knowledge and training in less developed regions of the country, and reduce the number of early school leavers. This way it will indirectly improve the employment prospects of young people.

Free and equal access to information to support the educational process will indirectly contribute to the reduction of major regional and spatial differences in the country. It will also indirectly contribute to decreasing the level of inactivity of specific groups by expanding the tools for providing additional opportunities for education and training.

On the other hand, the introduction of digital technologies is progressing slowly in both the public and private sectors.

According to the European Commission's Digital Economy and Society Index 2020 (DESI), although Bulgaria performs relatively well in connectivity and has made significant improvements in the e-government dimension, which reports an increasing number of users, Bulgaria still ranks 28th and has not performed particularly well on some DESI indicators compared to other Member States.

The implementation of this project will promote the overall process of preserving and promoting different types of cultural value items nationally and globally. This is also one of the main long-term priorities of the Ministry of Culture. This priority also reflects the main objectives set out in the National Development Programme "Bulgaria 2030", namely to develop and preserve cultural wealth and exploit its potential as a tool for social cohesion, to stimulate creative and innovative thinking, and to generate economic benefits. These objectives in turn correspond to the priority areas defined by the European Commission (in particular 'Modernise' and 'Reskill and Upskill') of the Recovery and Resilience Facility to address the COVID-19 crisis.

It is undeniable that digital technologies will play a key role in restoring the cultural sector, which was one of the hardest hit by the crisis. A key reform of state policy on the preservation of cultural heritage, as well as making it accessible to all stakeholders, on an equal and unrestricted basis, will be crucial for the recovery of the sector, given that a key function of the state in this direction is the preservation of cultural heritage. It is necessary to centralise the process of digitising cultural heritage in order to fully cover conservation and preservation activities and to provide universal access at national, European and global level. Basic rights for citizens in the educational, cultural and social spheres will be ensured.

It is envisaged to establish uniform standards for the digitisation of tangible and intangible cultural heritage and a uniform methodology through which the digitisation process will be carried out. The standards established by the project will subsequently be reflected in the regulatory framework in this area and will be binding for all stakeholders involved in the process of digitising the country's cultural heritage.

The project activities will be implemented in the national and regional museums, the National Library, regional libraries, as well as in the Bulgarian National Film Archive (BNFA), the Bulgarian National Radio (BNR) and the Bulgarian National Television (BNT), which are one of the most important cultural institutions that preserve and represent the cultural, historical, literary and audiovisual heritage of our country.

In order to ensure uniform access at national and European level to the digitised content, it is also envisaged to set up a single electronic platform providing online access to the outputs of the digitisation process for citizens, businesses, science and education. There

will also be an automatic exchange of data between different administrations for the exchange of information in the field of cultural heritage protection. The effects of this project will reach different circles of the population, providing not only a direct opportunity to learn about the Bulgarian cultural heritage and diversity, but also contribute to raising its level of awareness, general culture and improving educational outcomes at national level. It will also enable people from vulnerable and disadvantaged groups to access the country's cultural heritage on an equal basis.

The digitised content, which will be accessible through the single electronic platform created under the project, will enable virtual tours and virtual expositions (where applicable) as well as 2D, 3D and VR images for the benefit of the public, tourism, as well as for scientific and educational purposes.

At the same time, the project will further build up institutional expertise by increasing the number of qualified professionals in the cultural sector in the field of digitisation of tangible and intangible cultural heritage.

The project is planned to be implemented through three components, with three beneficiaries, as follows:

### **COMPONENT 1**

**Beneficiary: Ministry of Culture of the Republic of Bulgaria**

**Total budget for Component 1: BGN 55,146,000**

#### **ACTIVITY 1. Introdacement of uniform standards and methodology for digitisation of museum, library and audiovisual content.**

##### **- Uniform standards for digitisation.**

Defining a common framework of standards consisting of five units reflecting the specificities of the content for digitisation and the related activities and equipment for: museums, libraries, Bulgarian National Film Archive, Bulgarian National Radio and Bulgarian National Television. This work will follow a study of the existing national and European regulatory framework in the field, a study of good practices and compatibility criteria for digitised content in this field in the EU and worldwide.

##### **- Uniform methodology for coordinated digitisation.**

The project envisages the development of a uniform methodology to define the following:

- the criteria and approach for determining which institutions will be coordinators of the digitisation process at national level;
- The criteria and approach for determining which existing digitisation centres<sup>1</sup> in the museum and library network will be further developed by the project and which area they will serve as coordinators of the digitisation process at regional level;
- the criteria and approach for prioritising content to be digitised in museums, libraries, BNFA, BNR and BNT
- the criteria for conducting an internal audit of the available digital content in museums, libraries, the Bulgarian National Film Archive, the Bulgarian National Radio, and the Bulgarian National Television at the collection level;
- collections that can be further developed in the spirit of modern digital transformation (big data search methods in digital content and visualization).

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<sup>1</sup>The unified methodology will determine which museums and libraries are eligible to be digital hubs of the project and which area they will serve, and which institution will be the coordinator of the digitisation process at national level.

## **ACTIVITY 2: Acquisition of a single electronic platform for digitisation and access as well as a data storage centre for the digitised content.**

### **- Single electronic platform for access.**

The project foresees the acquisition of an electronic platform for aggregation of the digitized content from **museums, libraries, BNFA, BNR and BNT**, and the digitised content will be made publicly and securely accessible from anywhere in the world for the purposes of education, science, tourism, institutions and others.

This electronic platform will be managed centrally by the Ministry of Culture and will have a public and official part. The platform will be installed and operated on the State Hybrid Private Cloud (SHPC) infrastructure supported by the State e-Government Agency (SEGA).

The platform will provide online access to digitised content from museums, libraries, BNFA, BNR and BNT located in the public domain, as well as access to protected content.

Secure access will be granted for official purposes to state administration and law enforcement authorities for the preservation and preservation of cultural heritage.

It is also envisaged that the platform will be integrated with the single portal for access to e-government services hosted by the SEGA, as well as the upcoming e-Culture portal of the Ministry of Culture, thus allowing for easy application of e-services.

The platform and uniform standards will make it possible to connect to similar platforms operating in different countries.

- Training staff from museum, libraries and BNFA, BNT, BNR to work with the platform.

### **- Data storage centre.**

For the purpose of storing the content digitised under the project, technological means will be purchased to absorb big amounts of digitised content in order to build on the storage facility maintained by the SEGA. The project foresees to build on SEGA's existing database storage centre with the necessary levels of security and access for citizens and institutions, together with the SEGA.

The data storage centre will provide state-of-the-art technological tools for the secure and reliable storage of digitised information as well as access to it of the required quality.

## **ACTIVITY 3: Technological provision of digital hubs.**

**Sub-activity 3.1.** Providing high-tech means and a mobile digital hub, as well as providing highly qualified staff to digitise the main volumes of cultural goods in museums. *This activity may also be carried out by an external contractor selected under the Public Procurement Act.*

**Sub-activity 3.2.** Providing supplementary/equipment with means for digitisation and for maintaining the necessary climate conditions at 28 existing **museum digitisation centres**. These digital hubs can also serve other museums. The digital hubs will ensure the sustainability of the project as they would digitise newly acquired cultural value items.

**Sub-activity 3.3.** Providing supplementary/equipment with means for digitisation and for maintaining the necessary climate conditions at 10 existing **library digitisation centres**. These digital hubs can also serve other libraries.

**Sub-activity 3.4.** Equipment with means for digitization of the **Bulgarian National**

#### **Film Archive.**

- The complete technical system consists of: a scanner (with options) that must be able to generate high resolution output files as well as low-speed files, input, storage and processing capability. The storage, access and processing of digitised information must be carried out by modern technological means.

#### **ACTIVITY 4: Building expert capacity for digitisation.**

**Sub-activity 4.1.** Establishment of a national expert advisory council, which will monitor the implementation of project activities - the council will consist of experts from the Ministry of Culture, Bulgarian National Library, National History Museum, representatives of regional libraries, regional museums, BNFA, BNT, BNR, Bulgarian Library and Information Association, the Association of Museums, and other stakeholders.

**Sub-activity 4.2.** Training of museum specialists at the **museum digital hubs** that will also serve other museums in the area. Museum professionals will be trained to create metadata, digital transformation and use of big data in the field of digitized cultural heritage. Training of 280 professionals is foreseen.

**Sub-activity 4.3.** Training of staff for digitisation in **library digitisation hubs** to serve other libraries in the area. Staff will be trained will be trained to create metadata, digital transformation and use of big data in the field of digitized cultural heritage. Training of 100 professionals is foreseen.

**Sub-activity 4.4.** Provision and training of 11 specialists to carry out the preparatory and digitisation processes in the **Bulgarian National Film Archive**. The staff also be trained will be trained on digital transformation and use of big data in the field of digitized cultural heritage.

#### **ACTIVITY 5: Digitisation of museum, library and film fonds.**

It is envisaged under this activity, and in parallel with the process of digitisation and creation of new digital content, to integrate with the already existing digital content created by previous projects, which will also be accessible through the single platform that will be acquired under Activity 2.

The project is foreseen to digitalise 1 million movable cultural assets.

#### **Sub-activity 5.1. Digitisation of museum fonds.**

- Creation of metadata on cultural goods by transcribing the information about the relevant movable cultural assets (MCAs) from the relevant inventory book, updating and completing (where necessary) attributes such as description, weight, dimensions, etc. Data relating to the participation of the movable cultural value items in exhibitions and possible restoration, if any, shall also be recorded.

*Method of implementation: Due to the nature of these operations, they can only be carried out by museum professionals, who also determines the large human and time resources that will be needed to carry out the activity.*

- Creation of respectively one-dimensional, two-dimensional or three-dimensional images according to the type of objects.

*Method of implementation: the activity will be carried out by an external contractor selected under the Public Procurement Act.*

- Photography of virtual tours for museums in the country to be uploaded to the electronic platform acquired under the project to showcase museums and/or their collections, which will be digitised by the project.

*Method of implementation: the activity will be carried out by an external contractor selected under the Public Procurement Act.*

### **Sub-activity 5.2. Digitisation of library collections.**

Creating new resources and pooling existing resources. This activity will produce high quality digital copies in a uniform format. The project is intended to digitise or further enriched for improved full-text search: **periodicals** going to the Second World War in Bulgaria, as **well as book registrations**, all protected by copyright, totalling approximately 1,000,000 pages.

- **Generation** of standardised metadata: The creation of metadata on digitalised titles and for the presentation of articles in a database;
- All already digitised library resources produced to the required standards will be able to be integrated into the new platform for electronic access;
- Digital documents will be accessible via European and international digital libraries.

### **Sub-activity 5.3. Digitisation of the BNFA fonds.**

- **Preparing and cleaning** films for digitisation by high-tech devices. The process involves checking the condition of each film copy or interpositional and cleaning it (time will depend on the condition of the bands, the number of labels and stickers and the synchronisation of sound and image).

For this purpose, equipment purchased under Activity 3 will be used to allow a faster process in the selection and preparation of the copies. Cleaning will be carried out using automatic devices with a moisture compartment. The cleaning device must be installed in a controlled environment with ventilation and air conditioning as they use materials such as chlorethylene which are hazardous.

- **Film digitisation**, which involves the following steps:
  - Recovery or preparation: inspection, repair and cleaning;
  - Digitisation of image and sound;
  - Post-treatment: colour corrections and transcoding;
  - Digital archiving: save copies of files in the digital archive and make backup;
  - Quality check.

It is important that the pace of operation of the preparation units coincides with that of the digitisation units. Given the volume of digitisation, efficiency of the process will be achieved by rotation of several technicians in the operation of the scanner. The selection of a scanner fully determines the speed and quality of the digitisation and format of the digital files generated. The post-processing system may be used before and after storage, depending on the need: (a) Enhancement of digital quality or (b) Creation of file formats by re-recording.

### **ACTIVITY 6: Providing a safe environment for the long-term preservation of BNFA fonds.**

For the purposes of preserving the physical film tapes of the BNFA, storage facilities need to be equipped to maintain optimal climate conditions for the storage of acetate and nitrate film parts. Means must be purchased for repackaging the strips into pH-neutral, ventilated plastic containers (certified plastic boxes) and sorting and separating originals and copies in a suitable storage place. An air-conditioning system that maintains a constant relative humidity below 40 % without direct exposure to light as well as air ventilation is necessary to prevent the accumulation of dust and to eliminate acidity in the air. To slow down hydrolysis and decomposition in which acids are released in storage facilities (acetic syndrome), films affected by acetic syndrome must be separated from others and film tapes separated from audio recordings and placed in different areas of storage.

## **COMPONENT 2**

**Beneficiary: Bulgarian National Radio**

## **Total budget for Component 2: BGN 2,443,738**

The 'Golden Fund' of BNR consists of more than 1 500 000 sound units and has been built and maintained systematically since January 1935. It is the oldest and richest documentary audio fund of Bulgaria. It has significant historical and cultural value, not only for Bulgaria, but also for Europe. This fund is actively used by BAS, universities, community centers, the National Film Center, research institutes, the State Archives, etc. Construction of a high-capacity optical connection to the BNR tape storage facility in Borovets to provide a direct internet connection with the BNR headquarters and the newly established tape storage facility in Sofia. This communication link will allow the creation of jobs for digitization in the tape storage facility in Borovets, where the Golden Fund of the Bulgarian National Radio is stored.

Purchase and installation of a tape library for digital storage of audio files.

Component 2 will build on the digitalization process for the preservation of the sound cultural heritage in the archival fund of the Bulgarian National Radio by performing the following activities:

### **ACTIVITY 1. Equipment with means for digitisation of the Bulgarian National Radio.**

- Purchase of equipment to form separate booths for the digitisation of bands, CDs and DAT-cassettes and the subsequent storage of the digitised content on the platform acquired under Component 1.
- Purchase of a strip library for digital storage of audio files.
- Provision of technological means for digitising audio data and its subsequent storage and access via the platform acquired under Component 1.

### **ACTIVITY 2. Building on expert capacity in digitisation with BNR**

- BNR experts will be trained to create metadata, digital transformation and the use of big data in the field of digitized cultural heritage.

### **ACTIVITY 3: Digitisation of the BNR fonds.**

The digitisation process will start with all tapes of the meetings of the Bulgarian National Assembly that have been recorded since 1935. Some of the tapes in the archive are unique and do not have back-up copies. It is envisaged that all recordings of National Assembly meetings will be digitised within the project.

The following expert capacity will be needed to carry out the process of digitisation of the fonds:

- Tape digitisation experts — 12 part-time workers;
- Experts to fill in metadata — 10 part-time workers;
- Tape maintenance experts — 5 part-time workers;
- Coordinator of the process of digitisation of the BNR fonds — 1 person;
- Project manager/Supervisor – 1 person;
- Additional technical staff for maintenance of analog media - 5 people;
- IT Specialists – 2 workers;
- Ensuring copyright – 1 person.

Digitised records will be sent automatically for subsequent storage to the platform acquired under Component 1.

### **ACTIVITY 4: Providing a safe environment for the long-term preservation of BNR fonds.**

- Renovation and fitting-out of the two buildings of BNR in Sofia and Borovets, which

are intended to preserve the BNR fonds in order to meet the requirements for the protection of sound records;

- Construction of a high-capacity optical connection from the BNR Tape Storage Facility in Borovets, to provide a direct internet connection with the BNR headquarters and the newly established Tape Storage Facility in Sofia.

### **COMPONENT 3**

**Beneficiary: Bulgarian National Television**

**Total budget for Component 3: BGN 10,250,000**

The content of the BNT archive is an enormous national treasure. Since the creation of the TV broadcaster in 1959 to the present day, either as a motion picture, sound band or photo material, BNT is storing: theatrical productions, documentaries and feature films; journalism, entertainment and music programs of various genres; successes of Bulgarian athletes; materials about the socio-political, economic and cultural life of the country, and last but not least materials about the everyday life of ordinary Bulgarians reflected in information objects and magazine broadcasts. The images preserved are part of the cultural heritage of Bulgaria. They are our living memory, but also non-durable memory, stored in images and sound. The bulk is not duplicated with other information in the country.

In addition to its own production, BNT keeps materials of Bulgarian movie houses and studios from the beginning of the 20th century to the present day. Some of which are lost or damaged in the archives of their creators.

The BNT archive is an integral part of the National Archives Fonds recognised by Bulgarian law.

BNT has the largest audiovisual archive in Bulgaria — 93,000 archival units of film programs and objects, 85,000 media with video archive (most of them with more than one title), 376,000 titles audio archive, 620,000 frames photo archive, over 1,700 TB digital archive.

BNT keeps the most diverse archives in Bulgaria from the point of view of the information medium. Over the years, television has worked with all the technical media used in the country — 16- and 35-mm film tape, two-inch rolls, single-inch rolls, Umatik cassettes, Betacam cassettes, VHS and SVHS cassettes, DVC PRO cassettes, digital LTO4 cassettes, DVDs, hard discs, magnetic sound tape, gramophone records, sound DAT cassettes, photo negatives, slides, digital files. This highly diverse archive in terms of media involves means, people and equipment for its maintenance and reproduction.

#### **ACTIVITY 1. Equipment with means for digitisation of the Bulgarian National Television.**

A Media Asset Management System will be acquired to ensure:

- Broadband access to all users in BNT;
- Access to the archive catalogue;
- Recording of video, audio and photographic material;
- Quality control;
- Installation and putting into service;

For the functioning of the system, it is necessary to set up an IT infrastructure that meets the requirements for rapid transfer and access to information, as well as to acquire workstations through which the staff involved in the digitisation process can operate.

It is also necessary to provide cleaning equipment for the different types of audio and



video media used in BNT.

It is necessary to provide technological equipment for the digitisation of audio and video content stored on various media such as audio and video tapes, etc., as well as the physical digitisation of available audio and video information.

For the operational storage of digitised information, it is necessary to provide means for its storage.

The scope of the activity also covers migration and transformation of data, which currently exist in different formats and structures.

*The physical digitisation of the available audio and video information will be outsourced under the Public Procurement Act;*

#### **ACTIVITY 2. Building on expert capacity in digitization with BNT:**

- BNT experts will be trained to create metadata, digital transformation and the use of big data in the field of digitized cultural heritage.

#### **ACTIVITY 3: Digitisation of the BNT fonds.**

- 20 specialists are needed to carry out the digitisation activities of the project: recording, maintaining inventory, cleaning and digitizing.

- **Preparing and cleaning** records for digitisation by high-tech devices (time will depend on the condition of the bands, the number of labels and stickers and the synchronisation of sound and image).

For this purpose, equipment purchased under Activity 1 will be used to allow a faster process in the selection and preparation of the copies. Cleaning will be carried out using automatic devices with a moisture compartment. The cleaning device must be installed in a controlled environment with ventilation and air conditioning as they use materials such as chlorethylene which are hazardous.

- **Digitisation** involves the following steps:
    - Recovery or preparation: inspection, repair and cleaning;
    - Digitisation of image and sound;
    - Post-treatment: colour corrections and transcoding;
    - Digital archiving: save copies of files in the digital archive and make backup;
- Quality check.

It is important that the pace of operation of the preparation units coincides with that of the digitisation units. Given the volume of digitisation, efficiency of the process will be achieved by rotation of technicians in the operation of the scanner. The selection of a scanner fully determines the speed and quality of the digitisation and format of the digital files generated. The post-processing system may be used before and after storage, depending on the need: (a) Enhancement of digital quality or (b) Creation of file formats by re-recording.

#### **ACTIVITY 4. Ensuring a safe environment for the long-term preservation of BNT collections.**

In order to preserve physical records, storage rooms need to have equipment to maintain optimal climate conditions for the storage of acetate and nitrate film parts. An air-conditioning system that maintains a constant relative humidity below 40 % without direct exposure to light as well as air ventilation is necessary to prevent the accumulation of dust and to eliminate acidity in the air.

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In the new pandemic environment, the results of the digitisation process will also help overcome the consequences of imposed social exclusion by enabling digital communication, sharing and exploitation of the created data.

The digitised content, which will be accessible through the single electronic platform created by the project, will include virtual costs and virtual exposures (where applicable) for the benefit of the public, tourism, as well as scientific and educational purposes.

It is the responsibility of the project beneficiaries to carry out the relevant activities in accordance with the Uniform Standards and Methodology developed under Component 1, Activity 1, and to use for this purpose the specialised platform (software) acquired under Component 1, Activity 2 to access the digitised content and to forward it for storage to the centralised storage centre with the SEGA and SHPC. In addition, the metadata created within the digitisation process will be made available to the Open Data Portal of the SEGA.

### 3. Beneficiary

Component 1 — Ministry of Culture

Component 2 — BNR

Component 3 — BNT

### 4. Time schedule for project Implementation, including activities, stages<sup>2</sup>

	Activity	Result
2021	Component 1, Activity 1	Prepared documentation and published procedure under the Public Procurement Act. Selected external contractor.
	Component 1, Activity 3	Prepared documentation and published procedure under the Public Procurement Act.
	Component 1, Activity 6	Prepared documentation and published procedure under the Public Procurement Act.
	Component 1, Sub-Activity 4.1.	Establishment of a national expert advisory council
	Component 2, Activity 1	Prepared documentation and published procedure under the Public Procurement Act. Selected external contractor.
	Component 2, Activity 4	Prepared documentation and published procedure under the Public Procurement Act. Selected external contractor.
	Component 3, Activity 1	Prepared documentation and published procedure under the Public Procurement Act. Selected external contractor.
	Component 3, Activity 4	Prepared documentation and published procedure under the Public Procurement Act. Selected external contractor.
1 <sup>st</sup> half-year 2022	Component 1, Activity 1	Unified standards for digitalization and Unified methodology for coordinated digitalization of archives have been prepared.
	Component 1, Activity 2	Prepared documentation and published procedure under the Public Procurement Act.

<sup>2</sup> The time schedule shall be relevant for determining interim targets within the framework of the Recovery and Resilience Plan and is directly related to the disbursement of grant instalments from the Recovery and Resilience Fund.

	Component 1, Activity 3	Selected external contractors.
	Component 1, Activity 6	Selected external contractor.
	Component 2, Activity 1	Delivered technological means for digitization of the BNR archive.
	Component 3, Activity 1	Delivered technological means for digitization of the BNT archive.
2 <sup>nd</sup> half-year 2022	Component 1, Activity 2	Selected external contractors.
	Component 1, Activity 3	Sub-Activity 3.1. - Starting the digitalization process within a mobile digitalization center. Sub-Activities 3.2. и 3.3. - Delivered technological means for digitization of museum, library and film archives.
	Component 1, Activity 6	Provided a safe environment for long-term storage of BNFA collections.
	Component 2, Activity 4	Provided a safe environment for long-term storage of the BNR archive.
	Component 2, Activity 2	Trained BNR employees to create metadata and work with digitalization tools.
	Component 3, Activity 4	Provided a safe environment for long-term storage of the BNT archive.
	Component 3, Activity 2	Trained BNT employees to create metadata and work with digitalization tools.
1 <sup>st</sup> half-year 2023	Component 1, Activity 2	Delivered technological means for storage of the digitized content.
	Component 1, Activity 5	Digitization of museum, library and film collections by the mobile center - 5% of the indicator.
	Component 2, Activity 3	Digitization of the BNR archive - 10% of the indicator.
	Component 3, Activity 3	Digitization of the BNT archive - 10% of the indicator.
2 <sup>nd</sup> half-year 2023	Component 1, Activity 2	Developed Unified electronic access platform.
	Component 1, Activity 5	Digitization of museum, library and film collections by the mobile center - 10% of the indicator.
	Component 2, Activity 3	Digitization of the BNR archive - 20% of the indicator.
	Component 3, Activity 3	Digitization of the BNT archive - 20% of the indicator.
1 <sup>st</sup> half-year 2024	Component 1, Activity 2	Migration and testing of the Unified electronic platform for access on SHPC.
	Component 1, Activity 4	Prepared documentation and published procedure under the Public Procurement Act. Selected external contractor.
	Component 1, Activity 5	Digitization of museum, library and film collections by the mobile center - 15% of the indicator.
	Component 2, Activity 3	Digitization of the BNR archive - 30% of the indicator.
	Component 3,	Digitization of the BNT archive - 30% of the indicator.

	Activity 3	
2 <sup>nd</sup> half-year 2024	Component 1, Activity 4	Trained museum, library and film staff to create metadata. Working with the single platform.
	Component 1, Activity 5	Digitization of museum, library and film collections by the mobile center - 25% of the indicator.
	Component 2, Activity 2	BNR employees trained to work with the platform.
	Component 3, Activity 2	BNT employees trained to work with the platform.
	Component 2, Activity 3	Digitization and storage of the BNR archive platform - 40% of the indicator.
	Component 3, Activity 3	Digitization and storage of the BNT archive platform - 40% of the indicator.
1 <sup>st</sup> half-year 2025	Component 1, Activity 5	Digitization and storage of the platform of museum, library and film collections - 40% of the indicator.
	Component 2, Activity 3	Digitization and storage of the BNR archive platform - 55% of the indicator.
	Component 3, Activity 3	Digitization and storage of the BNR archive platform - 55% of the indicator.
2 <sup>nd</sup> half-year 2025	Component 1, Activity 5	Digitization and storage of the platform of museum, library and film collections - 60% of the indicator.
	Component 2, Activity 3	Digitization and storage of the BNR archive platform - 70% of the indicator.
	Component 3, Activity 3	Digitization and storage of the BNT archive platform - 70% of the indicator.
1 <sup>st</sup> half-year 2026	Component 1, Activity 5	Digitization and storage of the platform of museum, library and film collections - 80% of the indicator.
	Component 2, Activity 3	Digitization and storage of the BNR archive platform - 85% of the indicator.
	Component 3, Activity 3	Digitization and storage of the BNT archive platform - 85% of the indicator.
2 <sup>nd</sup> half-year 2026	Component 1, Activity 5	Digitization and storage of the platform of museum, library and film collections - 100% of the indicator.
	Component 2, Activity 3	Digitization and storage of the BNR archive platform - 100% of the indicator.
	Component 3, Activity 3	Digitization and storage of the BNT archive platform - 100% of the indicator.
<b>4.1. When can the project implementation start at the earliest after its approval?</b>		
Up to 1 month after project approval.		
<b>5. Indicative financial resource by activity, including sources of financing (national budget, European funding, private funding, IFIs)</b>		
The indicative financial resources for the implementation of this project are <b>BGN 66,742,000</b> , with an estimated European funding of 100 % from the Recovery and		

Resilience Facility.

**The numbers break down as follows:**

**Component 1 (Museums, libraries, BNFA): BGN 54,048,262**

Activity 1 (Uniform standards and methodology):	BGN 80,000
Activity 2 (Single Platform and Storage Centre):	BGN 24,846,393.00
Activity 3 (Technology for Digital Hubs):	BGN 3,105,799
Activity 4 (Expert capacity):	BGN 195,000
Activity 5 (Digitisation):	BGN 25,481,070
Activity 6 (Safe storage environment):	BGN 340,000

**Component 2 (BNR): BGN 2,443,738**

Activity 1 (Equipment for digitisation):	BGN 370,000
Activity 2 (Upgrading of expertise):	BGN 10,000
Activity 3 (Digitisation):	BGN 1,243,258
Activity 4 (Safe storage environment):	BGN 820,480

**Component 3 (BNT): BGN 10,250,000**

Activity 1 (Equipment with means of digitisation):	BGN 7,550,000
Activity 2 (Upgrading of expertise):	BGN 10,000
Activity 3 (Digitisation):	BGN 2,540,000
Activity 4 (Safe storage environment):	BGN 150,000

The budget was prepared by the Ministry of Culture together with representatives of museums, libraries, BNF, BNR, BNT.

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

- Physical capital (purchase of plant and equipment) - **46.5%**
- Engineering (design, construction, author 's supervision) - **1.7%**
- Labour (wage costs, consultancy services...) – **44.1%**
- Technology (acquisition costs of NMDs - patents, platform software, etc.) – **7.4%**.
- Human capital (upskilling, reskilling...) - **0.3%**

**6. Indicators**

**6.1. Result indicator/s**

1. Unified standards for digitalization of the funds of museums, libraries, the Bulgarian National Film Archive (BNFA), the Bulgarian National Television (BNT) and the Bulgarian National Radio (BNR) (Milestone)  
Initial Value — 0 % [2021]  
Final value — 100 % [2022]
2. Unified methodology for implementation of the process of digitalization of new and enrichment of available content at the national level, which introduced a single coordinated approach with centralized control (Milestone)  
Initial Value — 0 % [2021]  
Final value — 100 % [2022]
3. Created and acquired Unified electronic platform to store in digital form the cultural heritage of the country and to be installed on the State hybrid private cloud

(Milestone) Starting value — 0 % [2021] Intermediate value — 70 % [2022] Final value — 100 % [2023]	
4. Equipped Storage Centre for Digital Content	Starting value — 0 % [2021] Intermediate value — 40 % [2022] Final value — 100 % [2023]
5. Technologically supported digital hubs	Starting value — 0 [2021] Final value — 400 [2024]
6. Trained specialists for working with metadata and the created platform for the project	Starting value — 0 [2021] Final value — 41 [2022]
7. 1 million cultural assets have been digitised or enriched in museums;	Starting value — 0 % [2021] Intermediate value — 10 % [2023] Final value — 100 % [2026]
8. Digitalised 1 million pages, including periodicals and book registries.	Initial value 0 % [2021]. Intermediate value — 10 % [2023] Final value — 100 % [2026]
9. 3 300 hours of BNFA collections digitised (including feature films (feature-length and short films), animations, documentaries and film screenings).	Starting value — 0 % [2021] Intermediate value — 10 % [2023] Final value — 100 % [2026]
10. The content digitised by museums, libraries, BNFA, BNR and BNT shall be accessible online on the electronic platform set up under the project.	Initial value 0 % [2021] Intermediate value — 70 % [2023] Final value — 100 % [2026]
11. 3 000 hours of the BNR fonds are digitised.	Initial value 0 % [2021] Intermediate value — 20 % [2023] Final value — 100 % [2026]
12. 3 000 hours of the BNT fonds are digitised.	Initial value 0 % [2021] Intermediate value — 20 % [2023] Final value — 100 % [2026]
<b>6.2. Effect indicator/s</b>	
<b>1. Increasing public interest in cultural, book and audiovisual heritage sites</b>	

<p>Initial value – n % [2021] Final value — n + 10% [2026]</p> <p>2. Raising awareness of cultural, book and audiovisual heritage Initial value – n % [2021] Final value — n + 50% [2026]</p> <p>3. Providing access to freely accessible data through the content digitized by museums, libraries, BNFA, BNR and BNT for public, scientific, educational and business purposes Initial value – 0 % [2021] Final value — 10% [2026]</p> <p>4. Improving the basic digital skills of people aged 16 to 74 as a result of working with the platform Initial value – 29 % [2020] Final value — 33% [2026]</p>
<p><b>7. Does the project require the opening of a procedure pursuant to the Public Procurement Act (PPA)?</b></p>
<p>Yes.</p>
<p><b>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?</b></p>
<p>55.9 %</p>
<p><b>7.2. If a procedure under the Public Procurement Act is required, what is the indicative schedule for its implementation?</b></p>
<p>Component 1:</p> <p>Activity 1: The preparation of the documentation for conducting a public procurement can start up to 1 month after the start of the project implementation. It is envisaged that the implementation of the public procurement until the conclusion of a contract with a contractor will be 180 days.</p> <p>Activity 2: The preparation of the documentation for conducting the public procurement can start up to 7 months after the start of the project implementation. It is envisaged that the implementation of the public procurement until the conclusion of a contract with a contractor will be 270 days.</p> <p>Activity 3: The preparation of the documentation for conducting the public procurement can start up to 3 months after the start of the project implementation. It is envisaged that the implementation of the public procurement until the conclusion of a contract with a contractor will be 270 days.</p> <p>Activity 4: The initiation of a procedure under the Public Procurement Act for this activity directly depends on Activity 1, Activity 2 and Activity 3.</p> <p>Activity 6: The preparation of the documentation for conducting the public procurement can start up to 5 months after the start of the project implementation. It is envisaged that the implementation of the public procurement until the conclusion of a contract with a contractor will be 270 days.</p> <p>Component 2:</p> <p>It is envisaged that the procedures under the Public Procurement Act, which will be conducted by the Bulgarian National Radio, will be carried out in the period 2021-2022.</p>

Component 3:

It is envisaged that the procedures under the Public Procurement Act, which will be conducted by BNT, will be conducted in the period 2021-2022.

## **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.**

The project is innovative for Bulgaria in several aspects: the introduction of national criteria for digitization, the creation of infrastructure for storage and access to aggregate digital heritage, and the creation of a critical mass of digital content, especially in the field of audio-visual heritage, which lags far behind.

No similar activities were carried out at national and centralised level, although many institutions are working on the digitization of content and the first professional center for digitalization of cultural heritage in Bulgaria was established in 2006, and experience has been gained in the participation of projects funded by the EC efforts. This project proposal will complement the efforts started within the digitisation measures under the Operational Programme "Science and Education for Smart Growth" and projects funded by other national and European funds, as well as projects funded under the European Economic Area Facility and the Norwegian Financial Mechanism.

In order to ensure synergy between the activities under this project and the activities carried out under previous projects, work will be done to integrate already digitized content into the platform built on the project, in order to ensure wide access by all stakeholders and to it.

### **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.**

At the level of already implemented projects, care will be taken to avoid double funding for the implementation of activities for digitalization of objects, as well as for equipment and provision of expert capacity.

The project will not support activities funded under another project, programme or any other financing scheme deriving from the national budget, the budget of the European Union or any other donor programme.

## **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 contributes directly to the implementation of several of the Council's Specific Recommendations addressed to Bulgaria in the framework of the European Semester 2017-2020. The activities to digitise the valuable fonds of museums and libraries in Bulgaria, as well as those of the Bulgarian National Film Archive, the Bulgarian National Television and the Bulgarian National Radio, are directly linked to the recommendations to Bulgaria, especially when if we consider how the project activities will further develop the key cultural, social and communication functions of these media. Given the constraints imposed by the pandemic, the provision of easy access to information stored in museums, libraries, BNFA, BNT and BNR will make a significant contribution to the educational



development of the population, especially in small settlements, of persons from vulnerable groups and disadvantaged people, and will be essential to implement the recommendations to increase the employability of disadvantaged groups and strengthen activation measures, as well as to strengthen digital skills.

In line with the preamble to the Bulgaria Specific Recommendation for 2020, enhanced education and training services and a better-skilled workforce will also strongly support recovery and promote inclusive and sustainable growth in the medium term. Improving digital skills could help to adapt to the changes in the labor market resulting from digitization and the need to work remotely in a digital environment. Improving digital skills would have a positive long-term impact on access to education, especially for vulnerable groups, and thus contribute to reducing the high drop-out rate. With the implementation of this project and the creation of an online platform providing access to cultural values and, educational content, will indirectly contribute to increasing the digital skills of the population.

Also, the crisis has underlined the strategic importance of an efficient public administration and of a well-functioning digital governance. In this regard, the project responds to recommendation number 2, namely: "To improve access to teleworking and promote digital skills and equal access to education". The project also partially responds to recommendation number 4: "Minimise administrative burden for businesses by improving the efficiency of public administration and strengthening e-government".

At present, several challenges remain, in particular those related to education and social inclusion. The inclusive nature of education should also be improved, with limited progress on the implementation of Recommendation № 4 for 2019, in line with the Assessment of the Implementation of the Council Specific Recommendations for 2019. There has also been some progress on the implementation of the same recommendation on improving employability by strengthening skills, including digital skills.

In this regard, the project will contribute to a higher level of implementation of the CSR for 2019 by providing an additional tool that can be used by stakeholders to enhance their digital competencies. The creation of the Unified Platform under the project will provide wide public access to a digital tool containing a large amount of information about the cultural heritage of the country. Using this tool and its set of features will also contribute to enhancing skills in the digital environment. The functions that the Platform will provide and the activities that individuals can perform on it, will in fact help to promote the five main areas of digital competence identified in the Digital Competence Framework adopted by the European Commission in 2017. It will help to develop skills for digital literacy, formulation of information needs, finding and retrieving digital data, information, and content; assessment of the relevance of the content source; storage, management, and organization of data, information, and content. The communication skills of individuals will be improved through their participation in public digital services, as well as the ability to create and edit digital content, the application of copyright and licenses, the ability to provide understandable instructions to systems. Problem-solving skills will be enhanced by identifying needs and problems in the digital environment, using tools and products.

Also, the use of information and communication technologies (ICT) in schools in the country is still not optimal, and it is necessary to strengthen the introduction of innovative teaching methods using ICT. The implementation of the activities under this project will

also contribute to the development of this area by providing access to teachers and students to data related to the cultural heritage of the country, virtual tours of museums, and others. Inequality of opportunities for children in the education system will also be reduced by providing wide access to cultural heritage data that can be used in their educational process. This also supports the implementation of the above-mentioned specific recommendations for 2019.

The project also contributes to the implementation of Recommendation № 2 and Recommendation № 4 of the SCR for 2020 in the part:

- "Improve access to distance working and promote digital skills and equal access to education";
- "Minimise administrative burden to companies by improving the effectiveness of public administration and reinforcing digital government".

With the outbreak of the coronavirus pandemic, the work process had to be reorganized and mass employees began to work from home, with this type of organization emerging as the norm for much of the industry and people in the labor market. The establishment of the Single Platform will support the implementation of remote work processes for cultural workers, as well as researchers, educational workers, and other stakeholders. The learning process of learners from all levels of education will also be supported, as well as access to information and education for disadvantaged people and people from vulnerable groups.

The creation of the Single Platform for Access under the project will also contribute to reducing the administrative burden and improving the efficiency of public administration and strengthening e-government. Through the provided electronic platform for digitalization of content from museums, libraries, BNFA, BNR, and BNT, the digitized content will be provided public and secure access from anywhere in the world for the purposes of culture, education, science, tourism, institutions and others. The platform will have a public and administrative part and will be installed and operate on the infrastructure of the State Hybrid Private Cloud (State Cloud), maintained by the State e-Government Agency. Protected access will be provided for official purposes to the state administration and law enforcement agencies to preserve and protect cultural heritage. The platform will be integrated with the single portal for access to electronic administrative services, maintained by the State e-Government Agency, as well as for the forthcoming portal of the Ministry of Culture "e-Culture", thus providing an opportunity for easy application of electronic services.

In this way, the implementation of the project will indirectly contribute not only to addressing the challenges associated with the crisis but will also address the challenges facing the Twin transition.

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

A comprehensive reform of the state's policies for digitization, protection and preservation of cultural heritage will be carried out to ensure free access of all stakeholders to the country's cultural plenty, on an equal footing and without restriction. At present, the digitization of cultural values is carried out partially and independently by the institutions.

The implementation of the project will centralize and unify the whole process of digitalization through the creation (within Activity 1) of Unified standards for digitalization of the funds of museums, libraries, the Bulgarian National Film Archive (BNFA), the Bulgarian National Television (BNT) and the Bulgarian National Radio (BNR).

The digitalization process itself, as well as the institutions responsible at the national level for the respective areas, will be determined by the Methodology for implementation of the digitalization process at the national level, which will introduce a unified coordinated approach with centralized control. It will also define the criteria and approach for prioritizing the content to be digitized in museums, libraries, BNFA, BNR, and BNT.

Finally, the provision of unity of information and easy access of citizens, businesses, and institutions to the cultural heritage of the country will be ensured through the Unified electronic platform created within Activity 2, which will preserve in digital form the cultural heritage of the country and to be installed on the SHPC.

Due to the educational nature of the activities carried out by museums and libraries in the country, the improvement of conditions and accessibility to their services is directly linked to the implementation of the National Cultural Policy as well as to the National Education Objective defined in the 2020 National Reform Programme, namely to reduce the share of early leavers from education. Making the values of cultural, literary and audiovisual heritage held in museums, libraries, BNFA, BNT and BNR accessible online through new technologies will mitigate the economic and social impact of the crisis in the name of social cohesion and the reduction of territorial and demographic inequalities.

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

The digitisation of the cultural value items preserved in libraries and museums, as well as the valuable fonds of the Bulgarian National Film Archive, the Bulgarian National Television and the Bulgarian National Radio, is a continuation of efforts to develop and preserve cultural wealth and exploit its potential as a tool for social cohesion, stimulate creative and innovative thinking and generate economic benefits. It is also mentioned as an important element in the developing National Strategy for the Development of Culture.

These measures will lead to increased interest in the activities of these cultural and educational institutions, which will ultimately increase interest in cultural heritage, education and digital technologies, reduce drop-out rates and increase employment. Such a trend will inevitably contribute to sustainable development, especially in economically difficult areas of the country where there is high unemployment and no easy access to educational and cultural activities.

The ultimate objective of the project is to build an effectively functioning system with a distributed structure, network connectivity between the so-called 'memory' institutions, with alternative communication channels, mainly electronic at local, national and European level, with favourable conditions for creation and distribution of digital content contributing to economy, social sphere and environment.

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

Yes, the digitisation of museum, library, film, radio and television fonds is linked to the objective of sustainable cities and communities as well as contributing to all three objectives of the National Programme, namely:

- 1. For Accelerated Economic Development** — Providing access to the literary, cultural and audiovisual heritage held in libraries, museums, BNFA, BNR and BNT, will contribute both in large cities and particularly relevant in small and medium-sized towns to achieving the Digital Economy and Society Index (DESI) indicator set out in the programme. The project enables digital connectivity between cultural, educational and information institutions such as BNFA, BNT, BNR, libraries, museums and archives and will allow them to transform their activities into a digital environment.
- 2. For the demographic rise, the activities** of museums and libraries will help to strengthen cultural knowledge and develop lifelong education, retrain and improve the computer skills of people of all ages, thus increasing their competitiveness on the labour market and reducing migration caused by unemployment or age discrimination.
- 3. Reducing disparities** — cultural and educational institutions such as museums and libraries are a key hub for access to culture, education, information services and social contacts. Supporting their activities will inevitably lead to the achievement of objective III of the Programme, namely “more inclusive and sustainable growth, reducing social and territorial disparities and fostering shared prosperity”.

**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 establishment of a single platform for the provision of digital content and the implementation of the project will ensure consistency with the adopted Integrated Energy and Climate Plan of the Republic of Bulgaria, contributing to the reduction of the country's carbon emissions and above all to the implementation of the research, innovation and competitiveness dimension by promoting digitisation and developing clean technologies, which do not require large physical spaces for their configuration. This will ensure lower energy costs and preserve nature.

In addition, the implementation of the project will not violate the environmental principles and objectives of Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, thus avoiding significant damage to the environmental objectives. Digitization is a process that qualifies as an environmentally sustainable activity and the implementation of the project will contribute to the achievement of the environmental objectives set out in Article 9 of Regulation (EU) 2020/852. The introduction of digital technologies in the process of preservation of the country's cultural heritage will contribute to achieving the main goals for a cleaner and more competitive Europe; it will make a full contribution to climate neutrality and exploit the potential of innovation and digitization.