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| ANNEX C1: Twinning Fiche**Project title:** Improving Spatial Data Services in the Republic of Moldova following EU standards**Beneficiary administration:** Agency for Land Relations and Cadastre of Republic of Moldova**Twinning Reference:** MD 16 ENI OT 01 19 (MD/35)**Publication notice reference:** EuropeAid/[167521](https://webgate.ec.europa.eu/europeaid/online-services/index.cfm?do=publi.welcome&nbPubliList=15&orderby=upd&orderbyad=Desc&searchtype=RS&apply=N&aofr=167521&userlanguage=en)/DD/ACT/MD |

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| **EU funded project*****TWINNING INSTRUMENT*** |

**Abbreviations**

AA Association Agreement

AIC Agriculture Information Centre

A-D Analogue – Digital (Conversion)

AIPA Agriculture Intervention and Payment Agency (to Moldova)

ALRC Agency of Land Relations and Cadastre

BC Beneficiary Country

BVC Business Value Chain

CBA Cost Benefit Analysis

CSF’s Critical Success Factors

CIB Comprehensive Institution Building Programme

DCFTA Deep and Comprehensive Free Trade Area

DIGIT EC Directorate General for Informatics

EC European Commission

EIF European Interoperability Network

ELF European Location Framework

ELISE EU Location Interoperability Solution for E-government

ENP European Neighbourhood Policy

ENPI European Neighbourhood Policy Instrument

EuropeAid European Commission Aid Programme

EU European Union

EUD Delegation of the European Union (to Moldova)

GIS Geographic Information System

GoM Government of Moldova

GPS Global Positioning System

GSDI Global Spatial Data Infrastructure

INGEOCAD Întreprinderea de Stat Institutul de Geodezie, Prospecţiuni Tehnice şi Cadastru

INSPIRE Infrastructure for spatial information in Europe

IOS International Organization for Standardization

IPOT (State Enterprise) Planning Institute of Land Management

IR Implementing Rules

LIS Land Information System

MoU Memorandum of Understanding

MS Member State

MSPL Member State Project Leader

MAFI Ministry of Agriculture and Food Industry (of Moldova)

MARDE Ministry of Agriculture, Regional Development and Environment (of Moldova)

NCP National Contact Point

NGIS National Geographic Information System

NIP National Indicative Programme (2011 - 2013)

NSDI National Spatial Data Infrastructure

OGC Open Geospatial Consortium

PAO Programme Administration Office

PAR Public Administration Reform

PCA Partnership and Cooperation Agreement

PPA Public Property Agency

PPP Public Private Partnership

PSC Project Steering Committee

RTA Resident Twinning Adviser

SMART Specific, Measurable, Attainable, Relevant, Time-based

SE State Enterprise

SSF Single Support Framework (2014 - 2017)

STE Short-Term Experts

TNA Training Needs Analysis

ToR Terms of Reference

TTSIB Twinning, TAIEX, SIGMA, Institution Building

W3C World Wide Web Consortium

**1. Basic Information**

# 1.1 Programme: ENI/2016/039-553 / Technical Cooperation Facility 2016

 (Direct management)

**1.2** **Twinning Sector**: Others

**1.3** **EU funded budget**: EUR 1,800,000

*For British applicants: Please be aware that eligibility criteria must be complied with for the entire duration of the grant. If the United Kingdom withdraws from the EU during the grant period without concluding an agreement with the EU ensuring in particular that British applicants continue to be eligible, you will cease to receive EU funding (while continuing, where possible, to participate) or be required to leave the project on the basis of Article 12.2 of the General Conditions1 to the grant agreement.*

**2. Objectives**

**2.1 Overall Objective(s):**

To further strengthen the capacity of the Government of Moldova (GoM) in the context of the implementation of the Association Agreement (AA) and European Union (EU) approximation process.

**2.2 Specific objective:**

To enhance e-government through improved spatial data sharing and cooperation among authorities in line with EU standards and best international practices.

 **2.3 The elements targeted in strategic documents i.e. National Development Plan/Cooperation agreement/Association Agreement/Sector reform strategy and related Action Plans**

The EU-Moldova Association Agreement highlights the need for key priority reforms in democracy, the rule of law, human rights and fundamental freedoms, good governance, a functioning market economy and sustainable development.

Relations between the EU and the Republic of Moldova (hereafter referred as Moldova) are guided by the EU-Moldova Association Agreement (AA), including a Deep and Comprehensive Free Trade Area (DCFTA), an Association Agenda, and the Visa Liberation Action Plan (VLAP). In line with the AA, the Republic of Moldova has committed to gradually harmonize its legislation with the *acquis communautaire* and international instruments, including the areas of gender equality and anti-discrimination

The implementation of the National Spatial Data Infrastructure (NSDI) based on INSPIRE directive 2007/2 precedes the development of the e-Government of Moldova. Making spatial data more accessible will contribute to the development of more sustainable and smart society of the Republic of Moldova. NSDI cooperation among state authorities under coordination by the Agency for Land Relations and Cadastre (ALRC) is a novelty within the field of e-Government. The implementation of the Law on NSDI and establishment of the NSDI require cooperation among different government stakeholders.

The present Twinning project will enable the Agency for Land Relations and Cadastre (ALRC) to assess constraints in managing geospatial data in a more efficient and sustainable way and take corrective measures towards achieving this. The support to be provided is based mainly on the EU INSPIRE Directive and was developed to address various challenges such as the ones the ALRC and other stakeholders in Moldova are facing as listed below.

The lack of a cost recovery model, digital availability, and harmonisation of spatial data, is limiting the Government of Moldova (GoM) in its goal to strive towards sustainable development and good Governance. Moldova, and in particular the ALRC, together with the support of experts from the EU MS will now have a unique opportunity to continue earlier made steps in establishing a sound and well-functioning NSDI in a more sustainable and operational way. At the end of the project, the National Spatial Data Infrastructure should be a functional tool for citizens and economic operators in order to check relevant information regarding properties, infrastructures and environmental issues on any particular zone of the country. Furthermore, NSDI will provide reliable tool to the authorities for better planning capabilities in a broad range of sectorial policies, namely transport, environment and agriculture among others.

Next, the EU-Moldova Action Plan describes in Capt. 2.6 Information Society the need to:

* *Accelerate progress in electronic communications policy and regulation, Adoption of regulatory framework incl. licensing*, access and Interconnection, numbering, cost-orientation of tariffs, Universal Service and users’ rights, privacy protection and data security. *(68);*
* *Accelerate progress in the development of Information Society services and in the integration of Moldova into the ICT Research Programme;*

Additionally „Digital Moldova 2020”, aims at creating conditions through minimum state intervention but with maximum effect for information society development, focusing efforts on three pillars: *I. Access and infrastructure; II. Digital content and electronic services; and, III. Capacities and utilization of Governance*, which shall improve their performances and shall provide services to the citizens anytime, anywhere and on any terminal equipment.

With regards to NSDI, the Law No. 254 and six governmental decisions (ref. the next chapter) were adopted with a draft strategy on NSDI 2017-2027 prepared together with an Action Plan for its implementation; This will require to be reviewed and updated.

The whole legislation related to the NSDI in Moldova is part of a larger concept of e-Government that is strongly accented through the E-governance Agency (*Agenția de Guvernare Electronica*) conform the European legislation 2003/98/ES on re-use of information in public sector that was transposed into the Moldavian law.

**3. Description**

**3.1 Background and justification**

The main Beneficiary institution of this Twinning project is the Agency for Land Relations and Cadastre (ALRC), which was founded on 27 June 1994 by the Decree No. 230 of the President of the Republic of Moldova. The institution was established for the purpose of development and promotion of state policy and strategy in the field of land administration and regulation of land relations, erosion protection, cadastre and real estate valuation, geodesy, mapping and geo-information and currently is in charge of further NSDI implementation in the country. The institution is directly subordinated to the Government of the Republic of Moldova. Moreover, the ALRC carries out execution, control, supervision, and other functions in the field of land relations, geodesy, mapping, cadastre and Geographic Information System (GIS) activities, and to some extent Land Information System (LIS) activities in addition to activities for setting up the country’s NSDI.

When it comes to land relations, the corresponding group of tasks of the ALRC includes land management with special reference to updating of land records, proper recording of land rights and speedy resolution of conflicts and disputes relating to land. The concept of land relations is therefore closely linked to land cadastre. The latter tool includes cartographic details of the ownership, the tenure, the precise location, the dimensions the cultivation (if rural), and the rule of individual parcel of land.

In terms of mapping, the following achievements have been realized: Chisinau city electronic maps, 1:200000 scale digital topographic map of Moldova; Moldova administrative map; outlines of the towns Chisinau, Balti, Orhei, Comrat, road map of the Moldova; 1:250000 general map of Moldova, etc. In cooperation with the European Association of Mapping and Cadastre Agencies EuroGeographics, and through the ALRC, INGEOCAD takes part in the development and updating of certain European digital maps.

Recently, and as a result of an ongoing public administration reform in Moldova, 3 formerly subordinated ALRC bodies, have been moved to other governmental institutions/agencies. It regards *State Enterprise “Cadastru”, State Enterprise Planning Institute of Land Management “IPOT*” and also *State Enterprise “Soil Protection and Land Improvement”.* However, these bodies are still important NSDI stakeholders.

Spatial data and especially the fully operational NSDI itself should play an essential role in making the public administration in Moldova more efficient. This is already reflected in several (legal) documents: beginning with the Constitution, then the Law 254 of NSDI and Law 778 on Geodesy and Mapping. The Act No. 254 of 17 November 2016 (in original: *Parlamentul Lege Nr. 254 din 17/11/2016 cu privire la Infrastructura Naţională de date spaţiale*) represents the transposition of EU INSPIRE directive in Moldova. This law is accompanied by six governmental decisions that specify the responsible authorities, metadata, and standards for spatial data or network services:

* *Governmental Decision no. 737* from 15 September 2017 to approve the Regulation on the rules for setting up network services and the deadline for their implementation;
* *Governmental Decision no. 738* from 15 September 2017 for the approval of the Regulation on the rules for the creation and updating of metadata for spatial data sets and services;
* *Governmental Decision No. 459* from 22 June 2017 for the approval of the Regulation on the organization and functioning of the National Space Infrastructure Council, as well as its composition ;
* *Governmental Decision no. 458* from 22 June 2017 to approve the responsibilities of public entities for spatial data sets;
* *Governmental Decision no 254* from 27 March 2017 for the approval of the Regulation on the rules for the sharing of spatial data sets and related services between public entities and third parties;
* *Governmental Decision no. 683* from 11 June 2018 for the approval of the Regulation regarding the implementing rules of technical arrangements for the interoperability and harmonization of spatial data sets and services and the implementation deadline.

Before the introduction of the NSDI concept based on the basic principles of INSPIRE, the ALRC had several bilateral agreements with other institutions concerning the use of spatial data. These agreements were mainly focused on data exchange between the different institutions involved. There were also several efforts to bring these institutions together and to intensify collaboration between them, but this was not done in a formalized nor coordinated manner.

Awareness and understanding of the NSDI-concept within the institutions are still too low and there has not been a systematic approach in place when it comes to capacity building in the spatial data domain.

The initial introduction of the NSDI, initiated at ALRC during the 1st EU Twinning project (2014-2016) based on the basic principles of INSPIRE has resulted in a more standardized way but only for the small pilot area, in order to demonstrate the benefit of sharing and having easily accessible spatial data available for mapping purposes, but also for new ideas and innovation in which spatial data are combined for different types of analysis.

Although the ALRC has been making special efforts to administrate, generate, update, and distribute spatial information, there are still issues such as an unclear data sharing policy, cost recovery, redundancy of spatial data, and lack of spatial data for decision making and crisis management, and lower awareness of spatial information.

The concept of describing spatial data by metadata was not much recognised and used. Only for some of the available spatial data the metadata was created. In cases where a kind of metadata was created, it was done mainly to meet the internal needs of the involved institutions. There was no national document describing this kind of standards in the domain of spatial data. The exchange of data between the institutions generally was based on transfer via CD/DVD’s. There were only two initiatives defined by the legal framework that directly could be seen as predecessors of the NSDI in the Republic of Moldova, i.e. the establishment of the National Geospatial Data Fund and the idea of a National Geographical Information System.

The Republic of Moldova does not have any real national geoportal, except the Prototype Geoportal which was established with the help of previous Twinning project. The Prototype Geoportal could act as an interface to a national metadata catalogue that enables users to the limited extend to search for and find what existing spatial data exist in the country that could be used for their purposes. Basic spatial data, such as orthophoto and base maps, and some other spatial data have been made available in digital format but did not follow any international standard and much of the data were still in the formats that were not suitable for digital web dissemination.

The Prototype Geoportal which aims at being consistent with the objectives laid downin the EU INSPIRE strategy based on the EU INSPIRE Directive 2007/2 can be found on [www.geoportal.md](http://www.geoportal.md) and was based on the Decree No 731 dated 5 August 1997.

However, the Moldovan Prototype Geoportal does not function yet as a common database for the storage and dissemination of all national base themes of spatial data such as roads, administrative boundaries, geographical names, land use, cadastre, and topography, although most agencies have unofficially obtained copies of these data.[[1]](#footnote-1) On the contrary, the users of geographic data, either professional or casual, would expect the Moldovan Geoportal or its NSDI to search and access the data they need.

The data, which are accessible in the framework of the Geoportal must be produced by the users themselves and put at the disposal of other potential groups of users, which is currently not yet the case. This situation prevents Moldova from relying upon a tool that can avoid duplicated efforts in geographical data, inconsistencies, delays, confusion and wasted resources. Since there is no national policy for uniform coordination of system adaption, different agencies manage their data in different reference systems.

The ALRC is positioned as a national coordinating organization of spatial data use, production, and management. However, there is still much room for improvement for the ALRC to enhance its coordination with other relevant bodies and users concerning the sharing and use of spatial data. Multiple agencies are using unauthorized spatial data through mutual data sharing. Accordingly, the quality of the spatial data becomes much less reliable than the ALRC wishes. An appropriate spatial data distribution system has not been constructed between Ministries, even among departments within the same Ministries.

In response, the National NSDI Committee (a kind of NSDI Council), a coordination mechanism to improve the communication between the institutions involved in NSDI was established in 2017. However, its activity has been very limited until today.

Accessibility to spatial data for users across the government, donors, supporting agencies, is still insufficient. There are no concrete national policies or standards for the use, production and management of spatial data. Despite the situation, many users need spatial data in areas including agriculture, land administration, land management, land use planning, forestry, and water resource management. Ministries, donor agencies and NGOs are eager to use aerial photos, orthophotos, topographic maps and existing thematic maps for these purposes.

This Twinning project should respond to the needs by providing support to the ALRC so that it may *develop, manage, and maintain a geospatial data and access to it in a secure, unique, integrated, cost effective and sustainable way via NSDI.*

These fourfold expected characteristics of management of geospatial data of the country are very close to the methods used within the EU INSPIRE Directives[[2]](#footnote-2). Although Moldova is not an official candidate country for EU accession, the INSPIRE mechanism is considered by the ALRC as an appealing instrument for ensuring sound and cost-effective conditions of management and dissemination of geographic data nationwide. Its methods may facilitate establishing a cost-effective and user driven national geospatial data.

**Besides the ALRC, the main stakeholders that will be involved in the Twinning project are:**

State Enterprise “Cadastru”, previously subordinated to ALRC, butnow to the governmental Agency of Public Services.This State Enterprise was founded on 1 April 2006 and it has approximately 950 employees working in 39 territorial subdivisions. Its main activities are the creation and the maintenance of the cadastre of real estate property, the implementation of the State Programme for valuation of real estate property objects for fiscal purposes, and the maintenance and administration of real property Central Data Base.

State Enterprise Planning Institute of Land Management “IPOT”, previously subordinated to ALRC, butnow to governmental Agency of Public Properties. Founded in 1961, it is the oldest enterprise in the branch with approximately 180 employees. Today, IPOT is the leading organization in Moldova in the field of land management. In the area of planning, IPOT carries out *i.e.* the following activities: soil mapping, agricultural land consolidation schemes; public property land delimitation means; identification, inventory of state property agricultural land stocktaking for registration purposes; public property land delimitation and their registration in the register of real property; etc.

State Enterprise “Soil Protection and Land Improvement”, previously subordinated to ALRC, butnow to the governmental Agency of Public Properties*.* Founded on 23 June 1997, working in 12 state territorial units with a total staff of around 400 employees, this State Enterprise aims at organizing and coordinating works in the field of soil protection and restoration, and their production increase. Each of the 12-state territorial subordinated bodies has its own equipment, machines and special mechanisms, which are necessary for the construction of the hydro technical tools that are needed for the construction of erosion-preventive places.

Ministry of Agriculture, Regional Development and Environment (MARDE), among others also the specialized central administration for development and promotion of the state policy in the field of environmental protection and rational use of natural resources, waste management, biodiversity conservation, geological research, use and protection of subsoil, hydrology, management of water resources, water supply and sanitation, regulation of nuclear and radiological state ecological control, hydrometeorology and monitoring of the environment.

MARDE is still in a state of transformation after merger and tasks and responsibilities related to management and control, like planning and reporting, need to be realigned and harmonized for the three different sectors. With the ongoing reforms, the Agricultural Information Centre (AIC) is incorporated in the information centre under the government. AIC was responsible for coordination and maintenance of agricultural management information systems within the MAFI (Ministry of Agriculture and Food Industry – the previous name/structure). Current information sources of MARDE are the facilities at central level and data/information collected by own departments. Though, the departments not always store data/information systematically. MARDE does not have own branches in the regions that could contribute to needed data collection from the beneficiaries for policy development. MARDE has the possibility to make agreements, memoranda of understanding to cooperate with organisations that have branches or networks in the regions and/or contract organisations for data provision.

Ministry of Economy and Infrastructure. The mission of the Ministry is to achieve the constitutional prerogatives of the Government on development, promotion and implementation of the state policy on transport and road administration.

Agency MOLDSILVA is the central public administration body on the state policy concerning forestry and hunting in the country. The general task of the Agency is to implement the constitutional prerogatives and international ratified obligations of the Republic of Moldova on development, promotion and implementation of its policy concerning forestry and hunting, directed on the international trends of socio-economic sustainable development, rural development, rural employment, sustainable forestry, development, guarding, forests and wildlife protection, maintenance and conservation of biodiversity, professional training, access to environmental benefits and forestry research and education.

Agency “ApaleMoldovie”. The Agency is responsible for water management and resource allocation (including abstraction permits but also certain quality aspects). The Agency is a unit of the Ministry of Environment and is responsible for the implementation of the state policy in the field of water resources, flood protection and irrigation.

Agency for Energy Efficiency. The Agency’s mission is to oversee development of the situation in the field of energy efficiency and renewable energy sources, to ensure preparation and submission of summaries of programs, investment evaluation of projects in the field, the development projects on normative acts, as well as the development of information system in its field of activities.

Civil Protection and Emergency Situation Service. The main task of the Service is protection of people and property in emergency situation.

Institute of Ecology and Geography. It is an institute of the Academy of Sciences of the Republic of Moldova with following general objectives: - Studying of dynamics and emphasizing of tendencies of modifications of geo- and ecosystems components under natural and anthropogenic factors’ influence; Evaluation of factors, which can cause appearance of geo-ecological disasters; Optimization of geosystems structure to ensure their stable functionality; Implementation of environmental and natural resources’ Geographical Informational System; Creation of informational database for integrated monitoring; Training of scientific personnel of high qualification in specialties: ecology, environmental protection and rational utilization of natural resources; meteorology, climatology and agrometeorology; radiobiology; tourism.

National Bureau of Statistics. The National Bureau of Statistics is the central administrative authority which, as the central statistical body, manages and coordinates the activity in the field of statistics from the country.

Agriculture Information Centre S.E. A State Enterprise, under the Ministry of Agriculture and Food Industry of the Republic of Moldova (MAFI), in charge of implementing the electronic transformation of the agro-industrial sector through the e-agriculture principle, storage and maintenance of all information systems in the agribusiness sector, the integration of agricultural information resource to the state information resource, managing and providing necessary information of all existing records in order to improve the design and implementation of policies promoted by MAFI.

Agriculture Intervention and Payment Agency (AIPA). The Agency is responsible for managing the financial resources aimed at supporting farmers, their distribution, monitoring and evaluating quantitative and qualitative impacts of state support measures.

**3.2 Ongoing reforms**

The most important reform is the Public Administration Reform (PAR) based on the Public Administration Reform Strategy 2016-2020[[3]](#footnote-3).

In June 2014, the Republic of Moldova and the European Union signed the Moldova EU Association Agreement (AA). By signing this document, the Republic of Moldova committed itself to develop democratic institutions, in line with the EU standards and rules. Thus, the reform of the public administration system is part of a complex process of approximation of Moldova to the EU standards. Therefore, at the request of the GoM and with the support of the EU, a baseline assessment of the Moldovan Public Administration was launched in October 2015, which is a complete picture of the Public Administration of the Republic of Moldova from the perspective of principles of this administration.

The reform proposed by the Strategy is focused on the following components:

* *Accountability of public administration*- streamlining the Government structure, strengthening of public administration, transparency of the decision-making process, institutional responsibility;
* *Drafting of public policies* - strategic and operational planning, policy analysis and consultation, policy coordination, monitoring and assessment;
* *Modernisation of public services* **-** citizens’ satisfaction and quality management, re-engineering processes and establishment of one-stop shops, e-governance;
* *Public finance management* - macro-economic forecasting, revenue collection, budget planning and execution, public procurement, public internal financial control, financial reporting;
* *Human resources management* - job description, classification and gradation, recruitment and selection, performance management, remuneration, professional ethics, human resources development.

As described above in the components of the reform, it deals with many areas of Public Administration. Below, only a few items that are directly related to this Twinning project’s objectivities and its expected results are mentioned, e.g.:

* The PAR is to strengthen the public administration by applying EU standards and rules;
* It has to reflect the good governance principles which are recognised and applied at the level of the EU (White Paper on Governance, the Toolbox on Quality of Public Administration, the Principles of Good Governance, etc.);
* Prepare amendments and addenda to the Law on Access to Information, incl. ensuring compliance with the minimum mandatory requirements on official websites of public authorities and institutions and update the information materials on their official websites, and publish up-to-date registers;
* Establishing one-stop shops in some public authorities, as well as by organising and operating joint information and services bureaus;
* Digitising the public services provided by central public administration authorities until 2020.

***The focus, priorities and interventions of this NSDI Twinning Project have been designed to be fully synergic with and addressing the principles and objectives as defined in the Strategy for the Public Administration Reform (PAR) in Moldova, especially for the Spatial data sector.***

**3.3 Linked activities:**

The ARLC has benefited or will benefit from the following assistance projects.

* + First WB Cadastre Project has been implemented in Moldova between 1998 and 2007. Due to the cooperation of the World Bank and of donor States, the Republic of Moldova is now fitted with a unified system of real estate registration. The project was also sustained by a number of grants given by bilateral donors, such as Japan (1996-1997), Sweden (1998-2009), Norway (1998; 2007-2008), Switzerland (1997-2002) and USAID (1997-2002).
	+ The ALRC has also cooperated with the International Federation of Surveyors (FIG); International Institution for the History of Surveying and Measurements and geodetic Services of Norway, Sweden, Finland, Russia, Estonia, Lithuania, Latvia, Byelorussia and Ukraine in the framework of “Struve Geodetic Arc - UNESCO World heritage” Project. As a consequence of this cooperation in 2005 “RUDY” geodetic station of Struve Arc was included in the UNESCO World Heritage List (see for more details: [www.unesco.org](http://www.unesco.org).
	+ As regarding the construction of its National Spatial Data Infrastructure (NSDI), one should note that the ALRC is cooperating with the **TAIEX assistance** programme. Several study visits to the EU member states have taken place (for instance with Denmark from November 15 to 19, 2010 or with the European Commission in 2011 on the occasion of a joint meeting EU - ALRC that took place in Chisinau (14 to 19 February) in order to determine which are the missing elements needed for defining the framework for establishing the NSDI on the basis of completed analysis, and also to propose ways of acquiring these missing elements.
	+ ALRC is also in a process of cooperation with Norway and the Norwegian Mapping and Cadastre Agency “*Statens Kartverk*”. Since 2006 Moldova and its ALRC Agency is receiving support from the Norwegian government to develop its land mapping and spatial data, e.g. in the process of production of orthophotos and line maps in the overall framework of the grant given in 2009 towards the Project “Moldova - Line maps for Development”, which had the following objectives: (i) Providing access to reliable and up-to-date line maps for public and private sector, and (ii) Establishment of a system for cost-effective utilisation of satellite based GPS.

As a result of this cooperation, the following was carried out: the aerial photography of the national territory and created orthophoto maps that serve as up-to-date cartographic base for national economy branches development. The orthophotos that were produced to date (for approximately 5,000 km², i.e. 20 % of the national territory) represent a useful cartographic basis for production of cadastral maps and for improving quality in cadastre.

* + Since 2000, Moldova through the ALRC is full member of the following international organisations in the field of cartography: (i) Global Spatial Data Infrastructure (GSDI), which financed the technical components for GSDI / Global Mapping Project; (ii) European Association of national Mapping and Cadastre Agencies EuroGeographics, which financed the technical assistance for the first Permanent Station in the Republic of Moldova Igeo Chișinău.
	+ Bilateral cooperation with Japan (2010). This assistance goal was to create a digital base mapping for all the territory of Moldova at the scale of 1:50,000. It will help the creation of input to NSDI with 10 layers representing administrative boundaries, geographical names, elevation, transport network, hydrographical networks and river basins, elevation, etc.
	+ EU Twinning project for the ALRC, having as MS partners Sweden and Croatia (2014- 2016). In the framework of the project, the ALRC initiated the further development of the NSDI of Moldova. In the realization of the EU Twinning Project 23 public institutions were involved (Ministries, agencies, central and public authorities). In 2017, the ALRC drafted (above listed) six Government Decisions related to NSDI policy and its implementation.
	+ **EU4Moldova: Focal Regions**
	+ Twinning ''Support to promote cultural heritage in the Republic of Moldova through its preservation and protection''

Based on the above list of international assistance schemes, it is clear that the future Twinning project is expected to support ALRC in its efforts to further approximate towards the EU INSPIRE Directive and best practices.

**3.4 List of applicable *Union acquis*/standards/norms:**

The Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) that was published in the official Journal on the 25th April 2007 and entered into force on the 15th May 2007.

The INSPIRE Implementing Rules (IR) on interoperability of spatial data sets and services and [Technical Guidelines](https://inspire.ec.europa.eu/Technical-Guidelines/Data-Specifications/2892) (Data Specifications) specify common data models, code lists, map layers and additional metadata on the interoperability to be used when exchanging spatial datasets. Also, implementation tools such as the INSPIRE Geoportal are provided.[[4]](#footnote-4)

Datasets in scope of INSPIRE cover one or more of the 34 spatial data themes, which are set out in the [INSPIRE Directive](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX%3A32007L0002%3AEN%3ANOT). Interoperability in INSPIRE means the possibility to combine spatial data and services from different sources across the European Community in a consistent way without involving specific efforts of humans or machines.

While the Implementing Rules specify what must be implemented at an abstract and generic level, the non-binding [Technical Guidelines](https://inspire.ec.europa.eu/Technical-Guidelines/Data-Specifications/2892) specify how legal obligations could be implemented, making reference to existing geospatial standards where appropriate. Implementing these Technical Guidelines will maximise the cross-border and cross-thematic interoperability of INSPIRE spatial data sets and services as well as guaranteeing interoperability with other sectors.

Besides INSPIRE the Decision (EU) 2015/2240 of the European Parliament and of the Council of 25 November 2015 establishing a programme on interoperability solutions and common frameworks for European public administrations, businesses and citizens (ISA) as a means for modernising the public sector is relevant. As part of this EC Directorate-General for Informatics (DIGIT) programme, the following actions support the implementation of INSPIRE:

* European Location Interoperability Solutions for e-Government (ELISE)[[5]](#footnote-5) promotes a coherent and consistent approach to the sharing and reuse of location enabled information across borders and sectors;
* European Interoperability Framework (EIF) gives specific guidance on how to set up interoperable digital public services;
* European Location Framework (ELF) delivers a pan-European cloud platform and web services to build on the existing work of the INSPIRE Directive and enable access to harmonised data in cross border applications.

In a broader sense, Directive 2003/4/EC on public access to environmental information and Directive 2003/98/EC, revised by Directive 2013/37/EU on sharing and re-using public sector information, referred to as PSI Directive, are relevant for their general information scope.

**3.5 Components and results per Component**

The Project activities are divided into 5 main Components that should deliver the Mandatory results

**Mandatory Result 1 (Component 1) –Sustainable NSDI Governance established**

Create a sustainable NSDI Governance model in Moldova as a set-up of an effective governance structure with a balanced representation of government organizations and other stakeholders for collective decision making, also engaging the private and academic sectors, making sure that the (future) needs and requirements of all users and stakeholders are heard and dealt with.

***Result 1.1 –Current Status of NSDI development in Moldova analysed and conclusions drawn***

The analysis should give a full overview of the current state of NSDI implementation, maintenance and development in Moldova and all of its aspects related to NSDI, including the legal, institutional, technical/technological, financial, and organisational frameworks, and coordination, human resources, data, procedures, sharing agreements, achievements, lessons learned, etc.

Indicators(s) of Achievement:

* The current state of NSDI implementation, maintenance and development in Moldova incl. including legal, institutional, technical/technological, financial, organisation, coordination, human resources, data, procedures, sharing agreements, achievements, lessons learned, etc. aspects identified and presented in current situation Report;

***Result 1.2 – Strategy, Strategic Plan and Roadmap developed***

The NSDI Strategy should be developed and have to be market/user oriented and to be worked out into direction/parts, namely the NSDI Strategy and the NSDI Strategic Plan, including strategic goals, CSF’s, etc.

The operational goals should be consistent with the industry’s popular “SMART” criteria that an operational goal should be **S**pecific, **M**easurable, **A**ttainable, **R**elevant and **T**ime-Based.

The implementation Roadmap will include the associated roles/responsibilities for each of the stakeholders, available budgets, and performance monitoring and risk management should be developed, all in connection to other Project components.

Indicators(s) of Achievement:

* NSDI Strategy developed and delivered and validated by the Beneficiary and main Stakeholders;
* NSDI Strategic Plan incl. Strategic goals, conform SMART approach and implementation Roadmap developed and discussed with, and positively accepted by the Beneficiary and Stakeholders during the Workshop;
* NSDI Strategy, Strategic Plan and Roadmap published and promoted by the national media (TV, Radio, News websites, web-media means, etc.).

***Result 1.3 –Enhanced Institutional Framework Established***

In principle 2 levels of the institutional framework should be considered, namely the NSDI Committee/Council and the NSDI Working Groups, plus the National Contact Point (NCP) defined.

Indicators(s) of Achievement:

* The existing NSDI Committee/Council, Working Groups, etc. roles, tasks and responsibilities defined and described in adequate Charters;
* The Charters confirmed/approved by the GoM;

***Result 1.4 –Existing and potential Stakeholders/Users incl. their spatial data/service needs identified***

In principle it could be the data providers/producers and data users (or a combination of them), all called Target Group. The size of the target group could be hundreds of organizations, however now are only a few.

Identification of the NSDI Users should be accompanied with mapping their current and potential spatial data and service’s needs.

Indicators(s) of Achievement:

* Shared understanding for spatial data management among external stakeholders is increased;
* Evidence of discussions of potential actions to promote interoperability principles is provided, based on EU MS best practices implementations.

***Result 1.5 –Licencing developed***

In order to reach the possible strategic goal of Cost recovery (See Result 2), the policies need to be drafted for the licensing, fee structure and data sharing agreements.

Consider the EU PSI Directive and the general trend of providing public information free of charge; it is assumed that many NSDI subjects will need to provide their data and network services free of charge as well.

Indicators(s) of Achievement:

* The policy for fees, licencing, for access, view, download, convert, etc. of various spatial data via NSDI based on EU directives and national policies developed, recorded in Licencing Report and communicated with the Stakeholders and public.
1. ***Mandatory Result 2 (Component 2) –NSDI Cost Recovery Model developed***

The objective of this component is to provide a clear model for a sound cost recovery financial framework for the Moldavian NSDI development and maintenance based on corresponding frameworks in other EU countries. Particular attention needs to be paid to financing the NSDI. An additional objective will be to identify weaknesses in the current financial framework that are considered to be addressed in the strategic plan.

A NSDI financial cost recovery model should be defined as the set of ideas, rules and beliefs that identifies the financial resources required to develop, implement and maintain NSDI, as well as schemas for getting hold on these resources. Special attention needs to be given to the NSDI Business Model and its revenue flows and the possibilities of having investments funded.

There is currently no any universal agreed model for funding the establishment of an NSDI. If the future revenues are limited, the data and service providers may find it difficult to justify the necessary investments in the NSDI. On the other hand, if future revenues are sufficient, investments may be covered by internal investment budgets or credits such as bank loans, foreign aid, etc.

***Result 2.1 – Costs identified***

In general, the costs for establishing and maintenance of the NSDI are occurring among the data providers and the NSDI bodies, while benefits are often allocated to the users.

The costs include elements such as preparing and entering metadata, transforming data sets for compliance with the INSPIRE data specifications, making data and services accessible through a discovery service (a national geoportal), viewing and downloading services, developing standard agreements and licenses for using the data sets and services, establishing and developing links with the e-governmental program, implementing technical standards, developing and specifying business models, providing support in data management issues, running and maintaining the NSDI geoportal and improving the skills and knowledge of people working with the NSDI. In addition, costs related to the coordination and management of the NSDI development are also included.

Next to the direct costs, it is necessary to take external funding into account which is supposedly and mainly to be used for investments, and not for operational activities.

Indicators(s) of Achievement:

* The clear financial picture of investments, their annual appreciation and annual running cost is assessed and presented in the Cost Report based on the accountancy procedures;

***Result 2.2 – Benefits identified***

In the Member State Reports, submitted each third year to the European Commission, one chapter is devoted to cost and benefit aspects. Based on these reports, mainly the following division of benefits could be defined:

* Improved efficiency through reduced spending of resources;
* Improved effectiveness, better decisions, and better results;
* Other benefits.

In many countries, ex-ante CBA’s (Cost Benefit Analysis) were performed in order to describe the financial implications of developing the NSDI and to implement the INSPIRE directive/NSDI. These estimates were then used as a motivation for specific investments in the NSDI, often supported by governmental grants.

Indicators(s) of Achievement:

* Methodology document is drafted for benefits identification conform the EU practices and discussed with ALRC staff;
* The survey on benefits performed by the stakeholders;
* The Benefits Report with financial picture of direct and indirect benefits drafted based on developed Methodology (EU experiences and practices);

***Result 2.3 –Business Model and Business Plan developed***

In order to promote the usage of the NSDI, its values and benefits must be known. Such a description may be provided by a Business Model. A Business Model describes the rationale of how an organisation creates, delivers and captures value. The focus of the NSDI Business Model is, as a consequence, on the value that the NSDI creates, how it is delivered and how the revenues are flowing.

Usually, as a first step, a survey of existing financing and pricing models is initiated. Based on this survey, homogenous and simple models for financing and pricing has to be developed. In developing of Business Model and Business Plan the important elements arefees.

It should also be taken into account that according to Article 14 of the INSPIRE directive (EC, 2007), discovery services and view services shall be provided free of charge. Under specific conditions, some view services may however be charged.

Based on the developed Business Model, the Annual Business Plan(s) should be developed (as part of Strategic Plan).

Indicators(s) of Achievement:

* The easy- to- understand for all Stakeholders Business Model related to ALRC e-services and data is developed based on Result 2.1 and 2.2 and international experiences and presented and validated by the majority of Stakeholders;
* Then, based on above, the Business Plan for 1st upcoming budget year is developed and accepted by the NSDI User Council.
1. ***Mandatory Result 3 (Component 3) – Use of the existing data within the NSDI enabled***

There is a lot of useful data in Moldova that could be used within NSDI, but because it is a paper data only and not geo-referenced data, and not prepared according to the new standards (specifications), e.g. without any metadata info, and not harmonized between each other, it is therefore not eligible for the general NSDI data sharing principle. Also, if ready, this data needs to be made accessible via up-to-date technology and web services.

***Result 3.1 – Analogue -Digital (A-D) Conversion conducted***

As a result, there is a strong need to develop a guidance/manual for quick Analogue/Digital (A-D) conversion - how to digitize these data. First, the existing analogue data needs to be classified in the relevant categories and then for each type of data, a guidance should to be developed.

Indicators(s) of Achievement:

* The Catalogue of relevant analogue data/products to be A-D converted inventoried/prepared incl. initial Quality Check is developed;
* The Guidelines for the A-D conversion for each category proposed/developed.

 ***Result 3.2 – Geo-referencing of Spatial data developed***

There is as well a strong need to develop a Guidance/manual for the geo-referencing, per relevant type of data. Therefore, the existing analogue data needs to be classified in the relevant categories regarding references and then for each type of Spatial data a Guidance should to be developed.

Indicators(s) of Achievement:

* Based on the Catalogue as defined in 3.1, the Guidelines for the Geo-referencing for each category from the Catalogue developed.

***Result 3.3 – Data Specification developed***

Any data for NSDI use should be created in conformity with the predefined specifications. Therefore, for each type of variety of existing data, at least a high-level specification is necessary. It is required to develop it.

Indicators(s) of Achievement:

* Based on the Catalogue as defined in 3.1, the Guidelines for the Data Specification for each category from the Catalogue developed;
* Contribution is given to the preparation of a requirements document for a data model of the ALRC as a whole based on INSPIRE Technical Guidelines and EU MS best practices implementations.

***Result 3.4 –Initial Metadata catalogue extended and improved***

The Metadata catalogue in Moldova has not yet been completed. The further enhancing and completing activities on this topic are absolutely necessary, including for any new upcoming data.

Indicators(s) of Achievement:

* The existing initial Metadata profiles/catalogue is reviewed and enhancement/ recommendations provided in the Metadata catalogue Report;
* A methodology document is prepared on the creation and maintenance of standard Metadata for spatial data of the ALRC;
* The initial Metadata catalogue is updated according to the user’s needs (products and e-services) and EU INSPIRE Technical Guidelines describing by metadata the identified type of data;
* Also, the requirements document for the Metadata portal is prepared;
* Contribution is given to testing the Metadata portal prototype developed earlier by the ALRC, based on INSPIRE Technical Guidelines.

***Result 3.5 – Data harmonisation undertaken***

All available data sets in Moldova need to be harmonized. This is a very complicated process, but the first attempt in this direction, next to awareness and sharing aspects, etc. has been given in the last EU Twinning project (2014-2016) in a small pilot area (Orhei). But more specific harmonization directions/guidance for national implementation based on recent MS experiences is required.

Indicators(s) of Achievement:

* Based on the Catalogue as defined in 3.1 the Guidelines/recommendation for the data harmonisation between various data sets are developed and described in a Data Harmonisation report;
* Additionally, a high-level plan is prepared that will improve the ratio on formation, quality and cost for the implementation of the harmonisation of data throughout the organisation, taking into consideration necessary steps, cost and time based on lessons learned from MSs that have implemented similar processes.

***Result 3.6 –Technological Framework and Infrastructure reviewed and improved***

There is a need to review, expand and improve (if necessary) the existing Technological Framework and Infrastructure (incl. Geo-portal) as it has been established through the help of before-mentioned donors. The objective of a NSDI technological framework is to specify the requirements that the NSDI imposes on metadata, spatial data sets and network services, based on international technical standards or technical industry standards e.g. Open Geospatial Consortium (OGC) and World Wide Web Consortium (W3C).

The Technical Infrastructure is an information infrastructure based on open (geo) standards and adaptable spatial components, making it easy to find, access and reuse the data and services. Items such as the IT system architecture (including cloud computing), use of (inter)national (geo-) standards; specific ICT components; key registries (single source, use multiple times); the Moldavans Geoportal; geodetic reference system; data quality and – security management need to be reviewed and proposed and if exists redefined/confirmed.

Indicators(s) of Achievement:

* Existing Technological Framework reviewed and updated recommendations for spatial data sets and network services, etc. based on international technical standards given in the Tech. and Infra Report;
* The Technical Infrastructure, incl. the Prototype Geo-portal, reviewed and updated with recommendations given in above Report;
* Information flows and data processing is prepared and given in above Report;
* Contribution to the development of online tools to explore spatial data with external stakeholders is given in above Report;

***Result 3.7 –A Pilot project performed, having as objective testing and evaluating the proposed in Components 3 guidelines, specifications, harmonisations and technological improvements.***

Having new guidelines/improvements in place, incl. the Technological part as well as the Infrastructure, as required in this Component, it will be necessary to test their effectiveness and/or discover the weaknesses in a Pilot environment. The selection of the Pilot area based on the adequacy for testing and synergy with other EU supports projects related to pilot regions.

The results (if necessary, after improvements) should form the base for roll-out of the proposed procedures in this Project implementing them in the whole country.

Indicators(s) of Achievement:

* Pilot Project performed;
* Pilot Report with lessons learned, recommendations for changes and improvements developed and discussed with all involved stakeholders;
* A methodology is prepared/improved for quick quality checks of analogue data, including various check for data capture, data update and data maintenance;
* An improved model for the provision of ALRC e-services/data described based on Pilot experiences that involve spatial information to the users defined in Pilot Report.
1. ***Mandatory Result 4 (Component 4) – Capacity Building and Awareness***

There is a huge need to develop/enhance the human capacity by the Stakeholders in relation to the modern ICT technology/concepts, NSDI, e-government, governance, cost recovery, business planning, etc. This capacity building is needed on the technical, management, and on the top decision-making level, also involving in it the local academia institutions.

***Result 4.1 – Training conducted***

In order to develop the technical and non-technical expertise of the key stakeholders, mainly at the ALRC and its main partners, a significant capacity building is necessary. It regards not only the technical issues for the operational staff, but mainly another type of knowledge and training for the higher management and improved business orientation awareness.

It is also necessary to improve the awareness and understanding of geographic/spatial information by the stakeholders; and promote and demonstrate the advantages of spatial data to the public sector for evidence-based decision making and private sector for developing innovations. Various trainings, Study Tours to the MS, and Internships should be considered.

Indicators(s) of Achievement:

* Based on performed needs assessment the Capacity Building Plan (Training programmes and the Training plan) developed;
* The development and providing of dedicated trainings, workshop on above mentioned issues; confirmed by the training programmes, list of participants, the knowledge tests, etc. recorded in the Training Programmes, Training lists of participants;
* The Training Evaluation reports prepared, filled in and trainings and trainers evaluated;
* Evidence is given of enhanced skills and knowledge of ALRC staff and staff from stakeholders, based on Training Plan elaborated with the SPC Training Centre;
* Evidence is given that current input of ALRC staff to educational programs, at Universities offering courses in the field of Project main topics, is discussed and reviewed.

***Result 4.2 – Awareness Campaign on NSDI undertaken***

A lack of understanding of what NSDI is, and what kind of advantages it can provide, also for Moldova, creates a kind of passive behaviour and/or resistance not only by a non-expert level but also often by the important decision makers. Therefore, an awareness campaign based on a Communication Plan is needed. The role of modern web-commination tools, short video presentations, etc. needs to be seriously considered.

The proposed target group consists of governmental ministries, state agencies, county administrations, cities, municipalities, non-governmental organizations (NGO) and private enterprises. It is also requested to train and activate the so called “local NSDI promoters” on local level.

Then to combine the capacity building with internationally expanding awareness, it is proposed to organise international NSDI/INSPIRE conference in Chisinau with focus on regional countries and selected MS countries.

Indicators(s) of Achievement:

* The specific Awareness campaign(s) development of based on a Communication Plan;
* Evidence is given of registration and attendance of ALRC staff (and potentially other stakeholders from collaborating offices) to the INSPIRE/NSDI conference in autumn 2021.
1. ***Mandatory Result 5 (Component 5) – Existing legislation on NSDI and proposed improvements reviewed***

The objective of this activity will be to analyse the current legislative frameworks of Moldova and the EU with respect to NSDI development and maintenance and the needs for improvements and adopting it in new/improved legal documents. In addition, weaknesses, gaps, overlaps, etc. also need to be identified (as initially requested in *Result 1.1 – Analyse of Current Status of NSDI development in Moldova*), in order to address them properly in the Strategic Plan and embed them in the legislation (laws, sub-laws, orders, etc.)

A special attention should be paid in it to new aspects such as the outputs of Results/Components of this Twinning project, like Strategy, Strategy Planning, Cost recovery, Licencing, Business Planning, Fee principles, Cost and Benefits sharing, etc. An additional attention should be paid to the legal responsibilities of the NSDI Subjects (Data Producers), but also to the role (rights, obligations, cost, etc.) of the (new) Spatial Data Users and on agreements on privacy; intellectual property and digital rights management, etc.

With regards to the sharing of public sector information, there is a need to develop a high-level (political) model for multi-partners Data Sharing Agreements (MoU’s), as well as atemplate for the Technical Operational Data Sharing Protocols(to be updated frequently by the involved NSDI partners, due to the new data, new formats, new technology, etc.) without any changes in MoU(s).

Indicators(s) of Achievement:

* The new aspects (like Strategy, Strategy Planning, Cost recovery, Licencing, Business Planning, Fee principles, Cost and Benefits sharing, etc.) if required are taken over as amendments to the current legislation are proposed as draft law amendment(s), sub-laws, governmental orders;
* Model for multi-agency MoU regarding Data Sharing developed, discussed and validated with involved Stakeholders;
* The template for Technical Operational Data Sharing Protocols developed and validated with involved Stakeholders.

* 1. **Means/input from the EU Member State Partner Administration(s):**

 The twinning project will be implemented in the form of a Twinning contract between the MS(s) and the Republic of Moldova. The implementation of the Project requires one Project Leader, responsible for the overall coordination of project activities, one Resident Twinning Adviser, responsible for management and implementation of Project activities foreseen, Component Leaders and a pool of short-term Experts. It is essential that the team has sufficientlybroad expertise to cover all the areas included in the Project description. The interested EU Member State institution(s) shall include in its proposal the CVs of the designated Project Leader, Resident Twinning Adviser, and the proposed Components Leaders and the specific component to which they will be assigned to. The details of implementation of the Twinning Project will be agreed after the signature of the contract during the preparation of the Work Plan.

**3.6.1 Profile and tasks of the Project Leader (PL):**

The Member State Project Leader (MSPL) is expected to be an official or assimilated agent with a sufficient rank to ensure an operational dialogue at political level. The MS PL shall coordinate the Twinning activities. This includes the dissemination of project information, participation in discussions with high level officials, presentation and oversight of project input and expected outputs, managing the project team, drafting high level project management reports, helping to overcome project-related problems with assistance of the RTA. S/he will devote a minimum of 3 days per month to the project in the MS dealing with NSDI and/or Spatial Data. S/he will also coordinate, from the MS side, participate in the Project Steering Committee, which will meet in the Republic of Moldova every three months. He/ she will involve other relevant entities, taking into account on-going horizontal public administration reform efforts and sectorial activities that could have an impact on the project, and bear - together with the Beneficiary Country Project Leader - the final responsibility for an efficient and effective implementation of the Twinning project.

 Requirements:

* University degree/education in Surveying and Mapping Science, Geospatial engineering, Geodesy, Geo-informatics, Geography or related field, or equivalent professional experience of 8 years in the absence of the required degree;
* Senior civil servant or equivalent staff of the MS institution;
* At least 3 years of professional experience, preferably in the field of cadastre, spatial data ,property (land) management real estate property management and/or geospatial data;
* Experience of working with INSPIRE and/or NSDI implementation will be an asset;
* A very good command of written and spoken English (minimum C1 level);

Tasks:

* Overall coordination, guidance and monitoring of the project;
* Preparation of project progress reports with support of RTA;
* Timely achievement of the project mandatory results;
* Timely input of resources on the MS side;
* Co-chairing of project Steering Committees;
* Provision of legal and technical advice and analysis whenever needed.

**3.6.2 Profile and tasks of the RTA:**

The Resident Twinning Advisor (RTA) will be based in the Republic of Moldova to provide full-time input and advice to the project for its 30-months duration. S/he will be the main liaison partner for the Beneficiary, will be responsible for the day-to-day management and will support the implementation of the activities. The RTA will be responsible for the selection and supervision of the RTA Assistant and the management of the short-term experts input. S/he will brief, guide and support the STEs seconded to the project and participants of study visits. S/he will provide continued guidance and support in the organisation of workshops and roundtable discussions.

Requirements:

* University degree/education in Surveying and Mapping Science, Geospatial engineering, Geodesy, Geoinformatics, Geography or related fields, or relevant equivalent professional experience of 8 years in the absence of the required degree;
* Senior civil servant or equivalent staff of the MS;
* At least 3 years of professional experience, preferably in the field of cadastre, spatial data, property (land) management, real estate property management;
* Experience of working with INSPIRE and/or NSDI implementation will be an asset;
* Experience in project management;
* A very good command of written and spoken English (minimum C1 level);

Tasks:

* Support and coordinate all Twinning project activities in the Beneficiary Country (BC);
* Manage the day-to-day coordination and implementation of project activities, including STEs activities;
* Provide technical inputs to project activities and implementation, focussing on RTA’s area of expertise if appropriate;
* Liaise with in-country Twinning counterparts;
* Liaise with and report to the MS Project Leader;
* Draft ToRs for Short Term Experts (STEs) and coordinate their activities;
* Supervise and monitor project implementation and propose adaptations if required;
* Prepare project reports;
* Organise kick-off and project closure events and activity related workshops, roundtable meetings and training sessions;
* Organise study visits;
* Network with stakeholders of the project in Moldova and in MS;
* Promote harmonization of project activities with other existing initiatives in the same domain;
* Ensure visibility of EU support provided through the Twinning and establish communication strategy.

**3.6.3 Profile and tasks of Component Leaders**

 For each of the five mandatory results, the Member State(s) and ALRC will identify and assign Component Leader with appropriate skills and knowledge. The BC Component Leader for a Mandatory Result will be in charge of planning and executing the work plan for activities defined to achieve the Mandatory Result together with the respective MS Component Leader. The initial rolling workplan and successive workplans will be consolidated by the RTA and approved during the Project Steering Committee (PSC) meetings. The Component Leaders of each Mandatory Result will work in close collaboration with the RTA. They will report to the RTA and Project Leader and their counterparts inside ALRC at the PSC meetings.

Requirements:

* University degree/education in the field related to component that she/he is proposed for, or relevant equivalent professional experience of 8 years in the absence of the required degree;
* Senior civil servant or equivalent staff of the MS and BC;
* At least 3 years of professional experience, preferably in the field of cadastre, spatial data, property (land) management, real estate property management;
* A very good command of written and spoken English (minimum C1 level);

**3.6.4 Profile and tasks of short-term experts (STEs):**

The project will require specialist expertise that will be provided from a number of STEs who will complement each other in their work. These experts will be suitably qualified and capable of providing the necessary skills and experience to support the achievement of the results described in section 3.5 above. The profiles of STE experts indicated below are indicative.

General requirements:

* University degree in a relevant subject related to the activity s/he is proposed for or equivalent professional experience of 8 years in a related area in the absence of the required degree;
* Minimum of 3 years of experience in relevant specialist area related to the activity s/he is proposed for.
* Geospatial and Interoperability expertise;
* Analogue-Digital conversion and Geo-referencing expertise
* Strategic Planning, Good Governance and Cost Recovery and Business Planning expertise;
* IT/e-government expertise;
* Legal related to the Spatial Data, Data Sharing protocols/agreements, etc. expertise;
* Training and capacity building / Communication expertise;
* Experience with technical interoperability principles and standards implementation;
* Working experience with INSPIRE implementing rules (metadata, interoperability of spatial data sets and services, data and service sharing);
* Expert experience of Geospatial data management and analysis;
* Good command of written and spoken English (minimum C1 level);
* Experience of working internationally.

Tasks:

* Provide technical inputs in specific areas of implementing Twinning activities, including:
	+ Carrying out needs assessments and compiling and drafting of assessment reports and requirements documents;
	+ Drafting of methodological materials, technical documents and work plans, in support of the Component Leaders;
	+ Preparation of workshop material and specialist presentations;
	+ Assisting and / or facilitating workshops, roundtable meetings and training sessions organisation, meetings with officials of the Beneficiary administration, joint drafting sessions, etc, as per the terms of reference provided by the RTA prior to each mission;
* Liaise with the RTA, the RTA Twinning counterparts and ALRC Component Leaders;
* Report to the RTA

**4. Budget**

 **Maximum Budget available for the Grant**

The total budget amounts to € 1,800,000

**5. Implementation Arrangements**

**5.1 Implementing Agency / Contracting Authority:**

The European Union Delegation to Moldova will be responsible for operational management, payments and financial reporting, and will work in close cooperation with the Beneficiary.

**The person in charge of this project is:**

Ms. Iva STAMENOVA, Project Manager

Delegation of the EU to the Republic of Moldova

12, Kogalniceanu Str

MD 2001 Chisinau, Moldova

Tel.: + 373 22 505210; Fax: +373 22 545421,

E-mail: iva.stamenova@eeas.europa.eu

**5.2 Institutional framework**

The main Beneficiary will be:

**Agency for Land Relations and Cadastre (ALRC)** of Moldova

48 Serghei Lazo str,

Chisinau, MD 2004

Tel.: +373-22-881255; Fax: +373-22-226373

[www.arfc.gov.md](http://www.arfc.gov.md)

* 1. **Counterparts in the Beneficiary Administration**

### 5.3.1 Contact person

**Agency for Land Relations and Cadastre (ALRC)**

48 Serghei Lazo str,

Chisinau, MD 2004

Tel. +373-22-881255; Fax+373-22-226373

Website: [www.arfc.gov.md](http://www.arfc.gov.md)

### Project Leader counterpart

Maria OVDII, Ph. D, Head Department GCG of ALRC,

48 Serghei Lazo str,

Chisinau, MD 2004

* + 1. **RTA Counterpart**

Mr. Ivan DANII, Vice Chief Department GCG of ALRC,

48 Serghei Lazo str,

Chisinau, MD 2004

**6. Duration of the project**

Duration of the project implementation is 26 months. The execution period is 29 months (i.e. activities implementation period plus three months).

**7. Management and reporting**

**7.1 Language**

The official language of the project is the one used as contract language under the instrument (English / French). All formal communications regarding the project, including interim and final reports, shall be produced in the language of the contract.

**7.2 Project Steering Committee**

A project steering committee (PSC) shall oversee the implementation of the project. The main duties of the PSC include verification of the progress and achievements via-à-vis the mandatory results/outputs chain (from mandatory results/outputs per component to impact), ensuring good coordination among the actors, finalising the interim reports and discuss the updated work plan. Other details concerning the establishment and functioning of the PSC are described in the Twinning Manual.

**7.3 Reporting**

All reports shall have a narrative section and a financial section. They shall include as a minimum the information detailed in section 5.5.2 (interim reports) and 5.5.3 (final report) of the Twinning Manual. Reports need to go beyond activities and inputs. Two types of reports are foreseen in the framework of Twining: interim quarterly reports and final report. An interim quarterly report shall be presented for discussion at each meeting of the PSC. The narrative part shall primarily take stock of the progress and achievements via-à-vis the mandatory results and provide precise recommendations and corrective measures to be decided by in order to ensure the further progress.

**8. Sustainability**

Most of the project interventions, required activities and expected results are in their core containing a sustainable approach. They have been designed just to deliver and embed the sustainable results during and especially after the project completion. For example, the project does not require only enhancing of the NSDI in Moldova, but is focusing on NSDI’s good governance, cost recovery, embedding of proposed changes in legislation, etc. All these are essential elements for the long-term sustainability. Also, it has been designed that any new proposals/changes (institutional, organisational, technological, financial, legal, etc.) resulting from the Project must be accompanied with the stakeholder consultation (via the NSDI Council) and by the awareness campaign for the broader public.

It is obvious that all mandatory results spelled out for the Twinning will be achieved through activities that have been designed in close cooperation with the Beneficiary. They are based on an understanding of the ALRC’s potential to embrace the support offered, to use it appropriately and to realise the benefits that result from the Twinning for their own staff, stakeholders and users of their services and products.

Through the Twinning activities the ALRC will be enabled to become more efficient but mainly more effective in their way of working. At the same time, they will be equipped with capabilities to be flexible and adapt over time to changing (legal) requirements, technology and collaboration models with other stakeholders in the country and internationally – ultimately achieving a benefit on a much larger scale and becoming fit for emerging opportunities in future.

The continuity of reliable and high quality, yet cost- and time-effective work that the NSDI platform will provide to private and public alike will be enabled through the strong established good governance, business/cost recovery strategy incl. business planning and capacity building component in the project. Study visits, internship(s) and workshops will furthermore provide the opportunity to benefit from lessons learned by other institutions that have undergone similar operational changes.

It is expected that performing as it has been designed for this Twinning project, once the project is fully implemented and the mandatory results/outputs achieved, the achievements should be maintained and further developed by the beneficiary administration. This means that the beneficiary must pay adequate attention to further improving the public administration, in particular human resources management, coordination structures (governance) and accountability structures incl. cost recovery aspects.

**9. Crosscutting issues**

The Twinning project will implicitly be coherent with a variety of cross-cutting issues. These are:

* *Public Administration Reform* – The Twinning is delivering added value to this PAR reform addressing the principles and objectives as defined in the Strategy for the Public Administration Reform in Moldova for the Spatial sector.
* *Good Governance* – The Twinning will improve the administrative capacity that is related to the services of the ALRC and other stakeholders.
* *Open Access and Data Management* – The Twinning will support the development of findable, accessible, interoperable and reusable data.
* *Climate action and sustainable development* – Through participating in the discussion on data sharing potentials among spatial data producing stakeholders in the country, there is the opportunity to inform climate change mitigation and environmental protection analyses and projects with integrated, high quality information from different sources. This can also support the formulation of recommendations and strategies for sustainable development in Moldova, in line with the Sustainable Development Goals (SGO’s) identified by the United Nations (UN)[[6]](#footnote-6).

**10. Conditionality and sequencing**

The ALRC will provide strong commitment at all levels and cooperation and coordination with the MS team in order to enable the successful implementation of the project. The ALRC will contribute the following:

* Committing and involving of ALRC staff at all levels, including at the district and regional offices where applicable;
* Appointing Component Leaders for the implementation of each Mandatory Result;
* Designating a qualified ALRC counterpart for each MS expert (i.e. MS Component Leaders and STEs). Counterparts for the PL and the RTA have already been designated (see section 5.2);
* Assigning/employing the necessary personnel responsible for activities connected with the project;
* Providing feedback mechanisms and briefings to the SPC;
* Ensuring coordination between institutions connected with the project and newly formed stakeholder groups;
* Ensuring access to all parties directly involved in the project to all necessary information and documents in accordance with legislation in force.

**11. Indicators for performance measurement**

A number of direct performance indicators are already defined – see chapter 3.5, like for the Strategy, Strategy Planning, Cost recovery, Licencing, Business Planning, Fee principles, Cost and Benefits sharing, then for enabling the existing data and enhancing in the technological framework and Infrastructure, etc. - all to be used within NSDI, and as well the need for the capacity building and awareness campaign, etc.

Besides the direct performance indicators, it is also worth mentioning some of the indirect performance indicators:

* Relevant staff from the ALRC at all levels, including higher management is identified and appointed to carry out the activities and take the roles specified in the Twinning and is involved in the project implementation;
* SPC is regularly informed about project activities and initiatives, especially with external stakeholders, and their feedback/recommendations discussed and taken on board;
* Information and documents regarding the national regulatory basis applicable are provided, and relevant informative meetings are arranged;
* Appropriate facilities are prepared and provided by ALRC during the project implementation process, including for training sessions and meetings (see section 12);
* Meetings with other stakeholder organisations are coordinated;
* Action plans of intentions and work plans for implementation activities are prepared, provided to all parties directly involved in the project and updated;
* Actions identified in Action plans / Work plans are executed and Mandatory Results and Sub-Results described under section 3.5 are achieved.

**12. Facilities available**

The beneficiaries (ALRC) commit themselves to deliver the following facilities and logistics:

* Adequately equipped office space for the RTA and the RTA assistant(s) for the entire duration of their secondment;
* Supply of office space including access to telephone, internet, printer, photocopier, scanner to MS in-country staff and visiting experts;
* Adequate conditions for the STEs to perform their work while on mission to the BC;
* Suitable venues for the training sessions and meetings that will be held under the Project;
* Transport to local and regional collaborator offices as and when needed.
* Security related issues will be addressed according to the standards and practices applicable for public institutions in Moldova.

**ANNEXES TO PROJECT FICHE**

1. The Simplified Logical framework matrix as per Annex C1a (compulsory)

1. See for Geoportal the following decree: *Hotarire Nr 731 din 5.8.1997 cu privire la aprobrea Regulamentului Fondului Caryografo-Geodezic de Stat al Republicii Moldova* (published in the Official Gazette of the Republic of Moldova No 66, 9 October 1997. [↑](#footnote-ref-1)
2. INSPIRE is an EU initiative, originally based on the EU Directive 2007 / 2 of establishing an Infrastructure for Spatial Information in the EU (INSPIRE) with a view to ensuring an infrastructure for spatial information that helps make spatial or geographical data more accessible and interoperable for a wide range of purposes supporting economic development. [↑](#footnote-ref-2)
3. <https://cancelaria.gov.md/sites/default/files/document/attachments/strategie_actualizata_par_strategy_2016-2020_30jun16.pdf> [↑](#footnote-ref-3)
4. http://inspire-geoportal.ec.europa.eu/ [↑](#footnote-ref-4)
5. https://ec.europa.eu/isa2/publications/european-location-interoperability-solutions-e-government-elise-leaflet\_en [↑](#footnote-ref-5)
6. <https://sustainabledevelopment.un.org/sdgs> [↑](#footnote-ref-6)