

# DEVELOPMENT OF NATIONAL INFRASTRUCTURE OF GEODATABASE IN UKRAINE

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Briefly about the State Geocadaster - a central executive body whose activities are directed and coordinated by the Cabinet of Ministers of Ukraine through the Minister of Agrarian Policy of Ukraine.

The scope of responsibility of the State Geocadaster belongs to a rather wide range of issues (Fig. 1), in particular:

- topographic and geodetic and cartographic activity, participation in the demarcation and delimitation of the state border;
- maintenance of the State Land Cadastre and the regulation of land relations;
- control over the use of land and protection of soils;
- creation of the National Geospatial Data Infrastructure;
- provision of administrative services.



Fig.1.

Implementing such a number of tasks requires a well thought out and efficient structure. In fig. 2 shows the organogram of the State Service of Ukraine on Geodesy, Cartography and Cadastre

and its state-owned enterprises. There are also structural divisions and enterprises that directly or indirectly participate in the development of NIGH in Ukraine..



Fig.2.

Attempts to create a NIGH in Ukraine (Figure 3) started back in 2007, right after the adoption of the INSPIRE Directive in the EU. It was in 2007 that the Cabinet of Ministers approved the concept of a draft law on NIHD. In 2009, the NIDD ROM was introduced to the Verkhovna Rada of Ukraine, but due to political instability, in 2010 it was returned to revision. In addition, in 2010 the UN Committee of Experts on Global Geospatial Information Management was formed.

Already in 2014, the European department was formed to name the committee. Representatives

of the State Geocadaster took an active part in his work.

Since 2015, the State Geocodist has reached an agreement and has begun the implementation of the project with the Japanese Agency for International Cooperation "Creation of NIDD in Ukraine", which is discussed in detail during the next presentation.

Already in 2017, the NIDD Coordination Committee in Ukraine was formed, and in 2018 an updated bill was registered in the Parliament

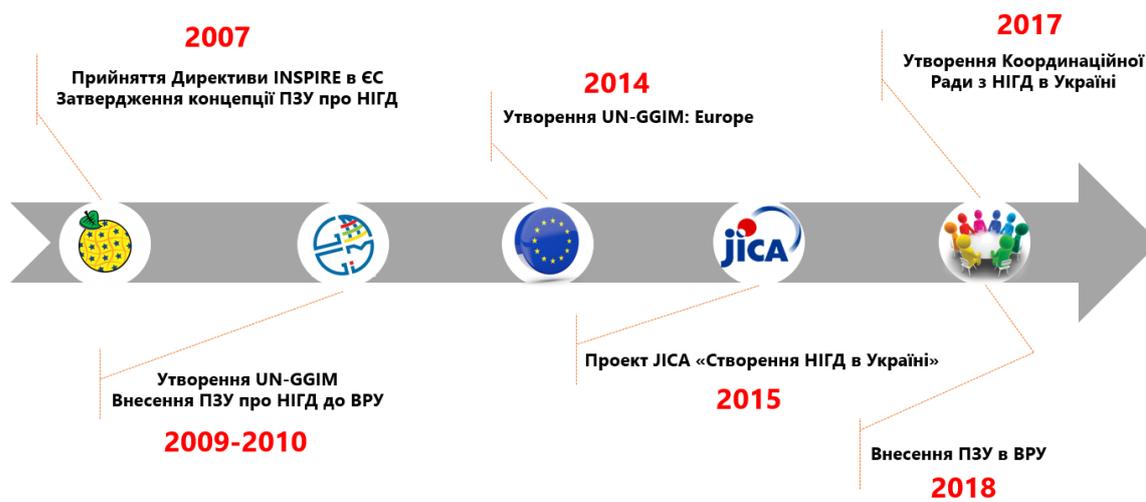


Fig.3.

Therefore, two things are needed for the legislative consolidation and proper functioning of the NIHD in Ukraine (Fig. 4). The law, which establishes the general framework for the functioning of the NIDD, defines the composition of the basic and profile data, the subjects of management of the NIHD and coordination

and the procedure for conducting NIDH, which describes in detail the powers of the NIDM Administrator, defines the conditions for the transfer of basic data and metadata to the Administrator, the types and access to geospatial data, the interaction between different players NIGD, etc



Fig.4.

In fig. 5 shows the proposed model of functioning of NIGD in Ukraine by the State Geocadastr

The national geospatial data infrastructure is a system that includes organizational structure, hardware and software, basic and profile geospatial data, metadata and geospatial data services, technical regulations and standards required for the production, updating, processing, storage, supply and use of geospatial data.

The components of the National Geospatial Data Infrastructure are:



Fig.5.

#### Administrator NIGD

The administrator of the National Geospatial Data Infrastructure is a state enterprise designated by the central executive authority, implementing the state policy in the sphere of topographic and geodetic and cartographic activity, and is assigned to the sphere of its management that is engaged in the creation and implementation of the software of the National Geospatial Data Infrastructure, is responsible for technical and technological support, preservation and protection of the information contained in the system.

The powers of an administrator who carries out their activities in accordance with the procedure for conducting the National Geospatial Data Infrastructure include:

- 1) acceptance and control of metadata for geospatial data and their location on the geoportal of the National Geospatial Data Infrastructure;
- 2) ensuring the reception and control of basic geospatial data and their placement on the geoportal of the National Geospatial Data Infrastructure;
- 3) creation and maintenance of software for the functioning and development of the National Geospatial Data Infrastructure;
- 4) implementation of technical and technological support of the National Geospatial Data Infrastructure;
- 5) implementation of preservation and protection of information of the National Geospatial Data Infrastructure;

1. Organizational structure: Cabinet of Ministers of Ukraine;  
Ministry of Agrarian Policy; State Geocadastr;  
geospatial data holders;  
geospatial data producers;  
Administrator of the National Geospatial Data Infrastructure.

2. Information structure:  
basic geospatial data; profile geospatial data;  
metadata and metadata bases

- 6) ensuring the creation and maintenance of geospatial data services;
- 7) ensuring access of users to geospatial data and metadata.

In addition, with the State Geocadastr it is planned to establish an Interagency Coordination Council on NIGD issues, which will include representatives of state authorities, science and other organizations related to geospatial information.

It is anticipated that the creation of NIGD in Ukraine will be financed at the expense of state and local budgets, as well as at the expense of international assistance.

Full-fledged NIGD will allow data holders to earn revenue, which will allow them to talk about system self-sustainability in the future. Work on the business model of NIGD is still ongoing.

Using NIGD will be extremely important for:

- ensuring environmental protection,
- Emergency and natural disaster response
- receiving comprehensive information during the development of infrastructure projects;
- to attract investments,
- for the rapid adoption of managerial decisions and citizens (social component),
- easier navigation

And this is not a complete list of possible areas of use of IGD in Ukraine.