Global Geospatial Frameworks enabling the geospatial ecosystem development in Ukraine

Dmytro Makarenko
State Service of Ukraine for Geodesy, Cartography and Cadastre

4th of May 2023, Rotterdam, the Netherlands

Ukraine – general information

Whole area 603 549 km²

5.7% of the European territory

~ 20 % (123.2 km²)
is occupied by russia

~ 5000 missile rockets during

435 days of military aggression of russia

Ukraine

ДЕРЖГЕОКАДАСТР
ДЕРЕГУЛЯЦІЯ ▪ ДІДЖИТАЛІЗАЦІЯ ▪ ДЕТІНІЗАЦІЯ

18 years
NSDI initiatives development

The first fundamental concepts on NSDI had been developed even before the INSPIRE directive was adopted

4 attempts
of draft law adoption

"Nothing personal". Mostly due to political instability on the highest level

Low awareness
about NSDI topic on the high political level

"Social" initiatives clearly were more sensitive to the potential electorate

No political drivers
to take the NSDI initiative on the top priority

Absence of the political will for the Land Reform finalization. The initiation of the decentralization reform in 2015

ДЕРЖГЕОКАДАСТР
ДЕРЕГУЛЯЦІЯ ▪ ДІДЖИТАЛІЗАЦІЯ ▪ ДЕТІНІЗАЦІЯ

Well received by the Ukrainian geospatial community, but with no clear vision, knowledge and expectation of the final goal

2019 – the first, trial or "internal" IGIF assessment done, but with limited stakeholders
2021 – a complex IGIF assessment supported by the Norwegian Government

Kartverket

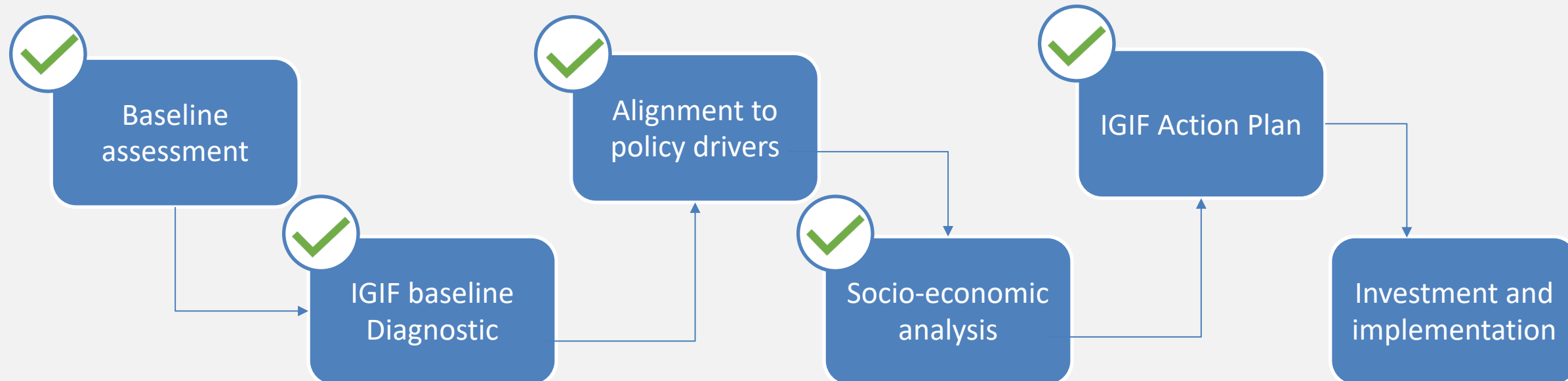## The most frequent objections:

"Why do we need that IGIF methodology?"

"We have everything (strategy, legal drafts , etc) in place"

"Who will do that?"

"Let's put the score higher"

"Why you are trying to blame me?"

"Why should I care if that is not in place?"

Baseline assessment

IGIF baseline Diagnostic

Alignment to policy drivers

Socio-economic analysis

IGIF Action Plan

Investment and implementation

ДЕРЖГЕОКАДАСТР
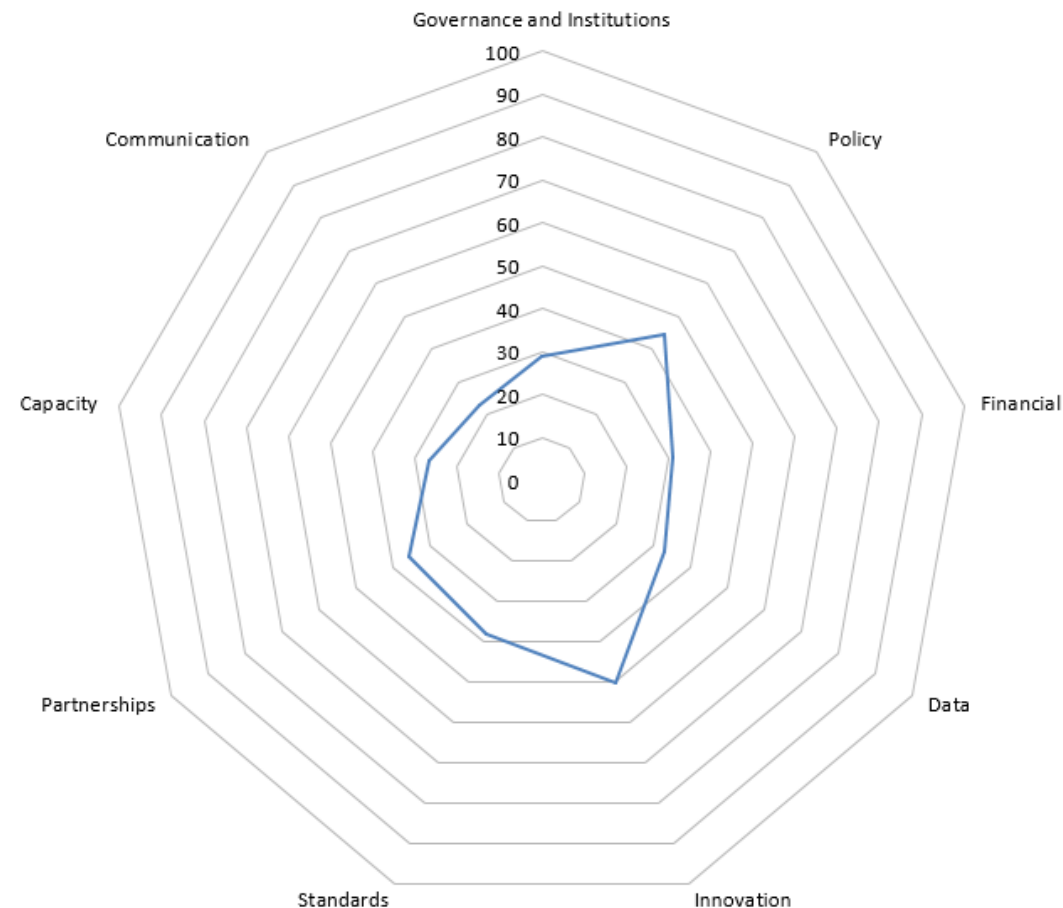ДЕРЕГУЛЯЦІЯ ▪ ДІДЖИТАЛІЗАЦІЯ ▪ ДЕТІНІЗАЦІЯ

Total score 35

Level of the stakeholders to
authorize release of requested information

Mistrust of how the information would be used.

Low belief in the study results implementation

Limited data on governmental performance
(necessary reports, research, and analysis incomplete or unavailable)

Governance

- ❑ Create an **effective coordination group**
- ❑ Harmonize **the legislative framework**, missing sub-laws and regulations
- ❑ Agreement of Geospatial **data sharing protocols** to reduce costly data duplication
- ❑ Define and implement a **sustainable business model** for the NSDI

Technology

- ❑ **Enhancement of the geodetic framework including CORS** with public and private sector network operators
- ❑ Build a **Scalable National Geoportal providing online access** to fundamental geospatial data
- ❑ **Review the market requirements for National Topographic Base mapping.** Continuation with the current approach of universal 1:10,000 scale maps with larger scales in urban areas, is likely to be unaffordable Alternative "fit for purpose" approaches leveraging global best practice need to be urgently investigated
- ❑ **Completion and verification of the Land Cadastre** for all parcels and make it openly available
- ❑ Create a **single National Georeferenced Street Address database**
- ❑ Sponsoring innovation in the development of **new applications using geospatial data**
- ❑ **Adoption of international data specifications**

People

- ❑ **Upskilling Government Agencies**, including but not limited to SGC, to be able to provide leadership and coordination more effectively
- ❑ Growing the geospatial ecosystem by **partnering more effectively with a wider range of users**, particularly in the commercial sector
- ❑ **Raising the profile of NSDI based on a wide ranging communications strategy**, stressing messages of its role in digital transformation and positive impacts it brings to many sectors of the economy

NSDI creation an development plan of Ukraine

NSDI development plan for Ukraine was adopted by the NSDI council in October 2021:

Actions were grouped according to the IGIF pathways and gap analysis

No single budget foreseen for the overall Plan implementation
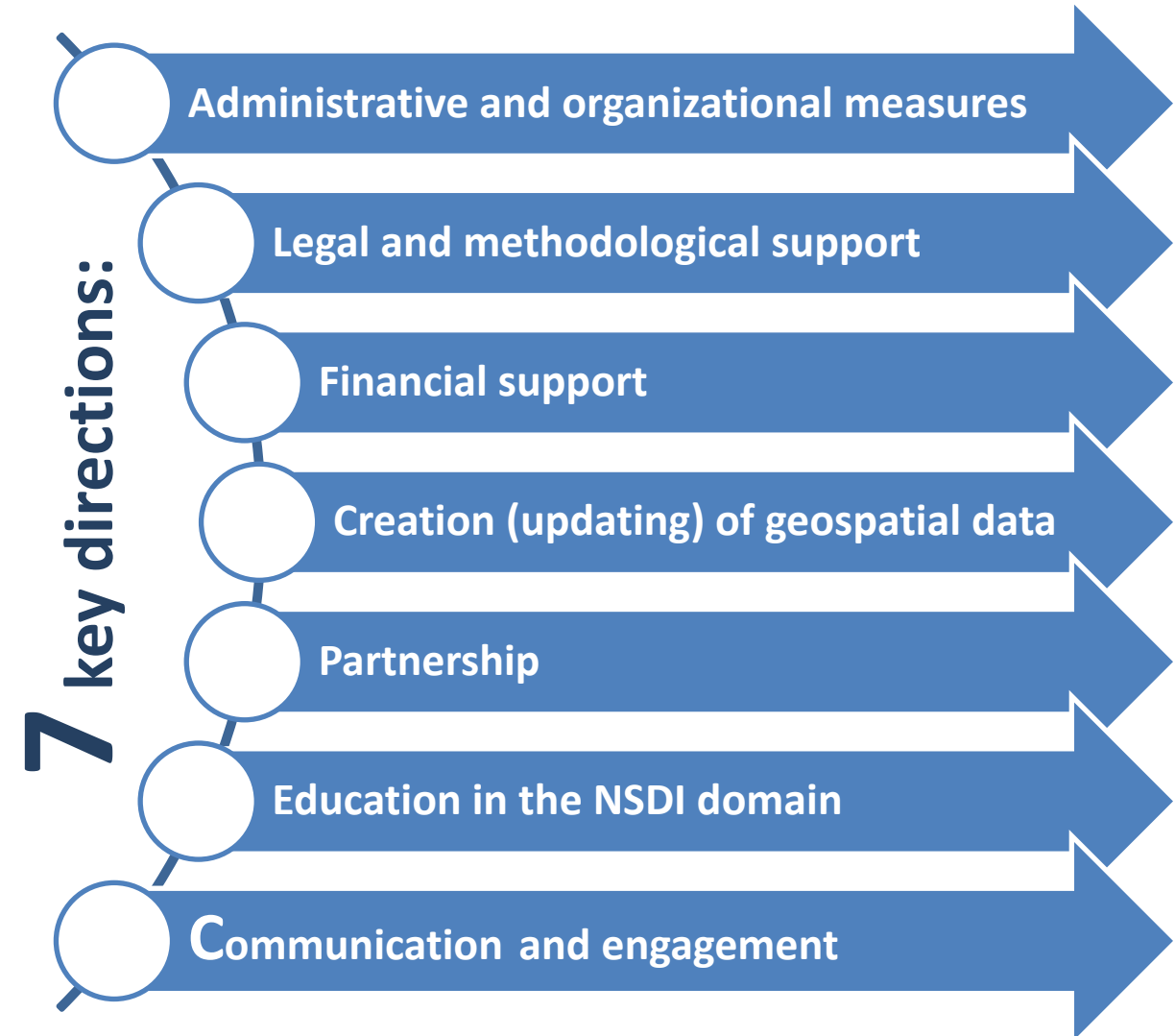
"Advisory" formal status of the plan

Challenges:

Budget constrains due to russian military aggression

Changing of the top priorities at the government and ministries

Lack of political pleasure to the key stakeholders

NSDI development plan for Ukraine ≠ IGIF Action plan.

But it reflects main IGIF recommendation and structure

7 key directions:

- Administrative and organizational measures
- Legal and methodological support
- Financial support
- Creation (updating) of geospatial data
- Partnership
- Education in the NSDI domain
- Communication and engagement

NSDI of Ukraine in 2022 – 2023

ДЕРЖГЕОКАДАСТР
ДЕРЕГУЛЯЦІЯ • ДІДЖИТАЛІЗАЦІЯ • ДЕТІНІЗАЦІЯ

Development of user registration and verification tool at the geoportal

NSDI technical WG re-established

Facilitation the registration of the data holders from central and local level

Geoportal ToR developed

Feb 2022	July – August 2022	September 2022	Oct - Dec 2022

Suspension of the pilot NSDI geoportal and all cartographic resources of Ukraine

Relaunching of the geoportal in restricted mode

Digital data sets from the 50k Topographic Data base available from the geoportal

January 2023	February 2023	March …. 2023

Negotiations on the budget allocations ongoing

Implementation of the practical use cases for state and local authorities Hardware for NSDI operation received

NSDI Council Meeting

1st training for data holders completed

Implementation of the industrial version of geoportal

USERS OF THE GEOPORTAL:

16 Central Executive Authorities (66%) *NATIONAL LEVEL*

15 Oblast State Administrations (60%) *REGIONAL LEVEL*

986 Territorial communities (67%) *LOCAL LEVEL*

**66 %**   **60 %**   **67 %**
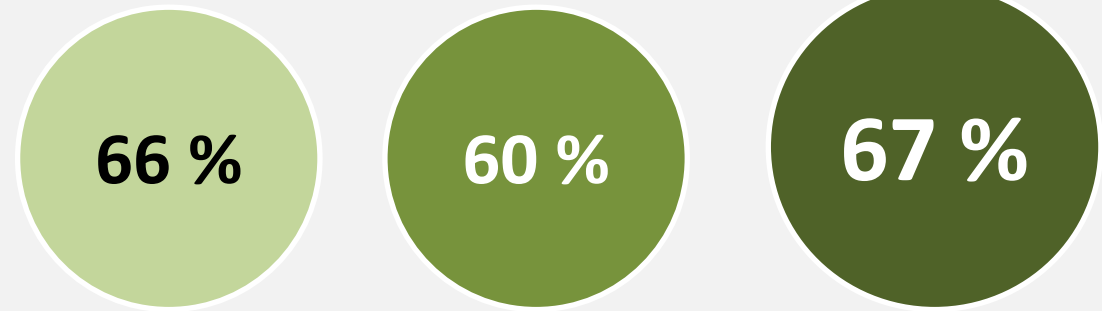
DATA OF THE GEOPORTAL:

20 national wide data sets

(available from the updated Main state topographic 50k map)

Geoportals of the data holders **are restricted** for the public use

PRACTICAL USE CASED WITH THE DATA:

Technical capabilities for making management decisions using NSDI data have been introduced by the principle:

❑ nationwide data for the entire territory of the country

(territorial units, occupied or blocked areas, points of invincibility, land boundaries)

❑ spatial analysis of information in a point

(community passport, soils, buffer zone for invincibility points, land parcel check, buffer zone for social objects, damages)

ДЕРЖГЕОКАДАСТР
ДЕРЕГУЛЯЦІЯ • ДІДЖИТАЛІЗАЦІЯ • ДЕТІНІЗАЦІЯ
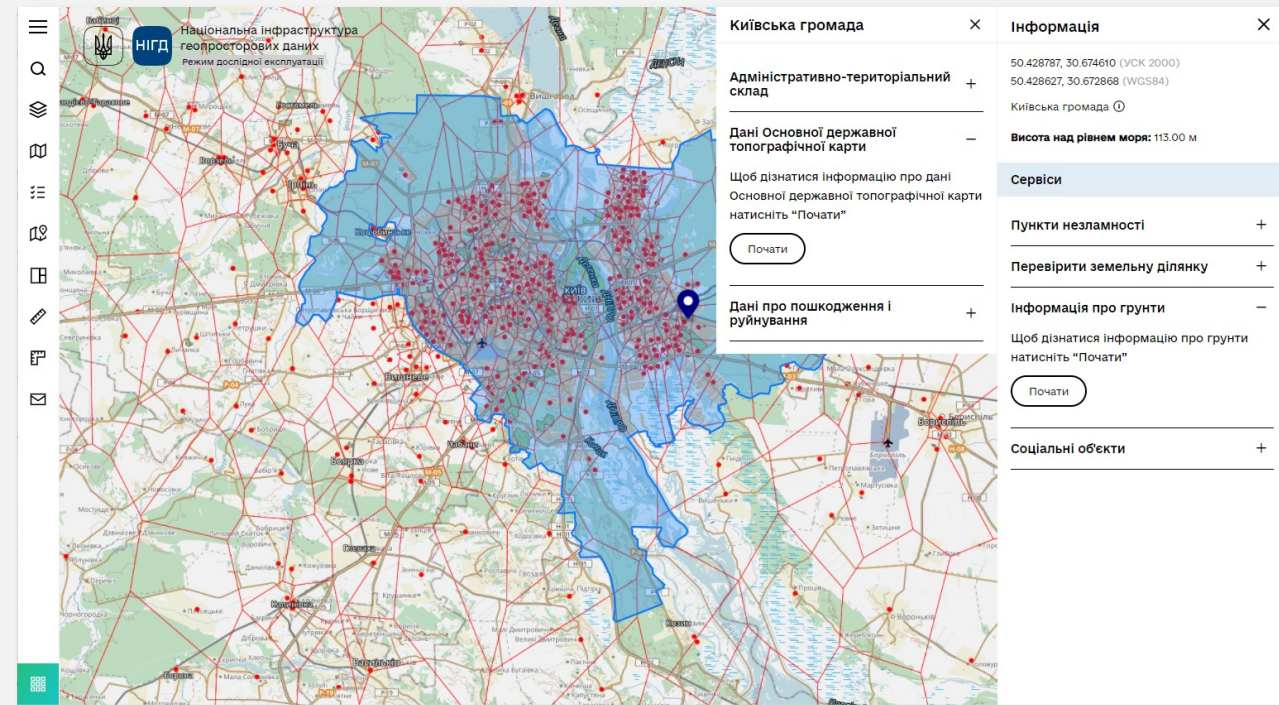
Geodata of high quality
for authorities and territorial communities

Sustainability
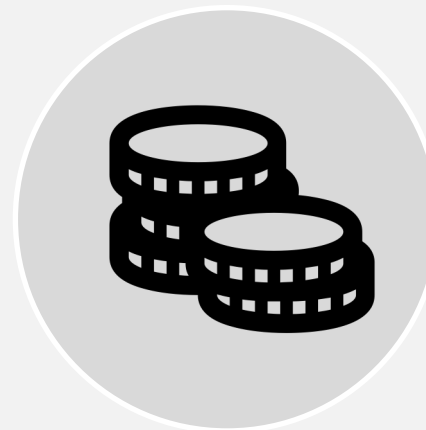of the activities not to lose the achieved progress

Secured financing
for the creation and operation of NSDI

Practical use-cases
for the creation and operation of NSDI

Education and learning
for data holders to understand the benefits of the geodata utilization

THANK YOU FOR ATTENTION!

Dmytro Makarenko,

Deputy Chairman of the StateGeoCadastre

📞 +380634669827

✉ makarenko@land.gov.ua
d.makarenko89@gmail.com

in linkedin.com/in/dmytromakarenko