



DEPARTMENT OF SURVEY, MAPPING
AND GEO-INFORMATION OF VIETNAM

BUILDING NSDI IN VIETNAM: RESULTS AND CHALLENGES

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CONTENT

- 1. History of Legal frame of NSDI;**
- 2. Current situation: Core data, Standard, partnerships, capacity...**
- 3. NSDI Development plan.**

LEGAL FRAME

STT	Year	Legal document	Content
1	Jan.2 002	Degree on Survey and Mapping	Regulations on management of geodesic and cartographic activities nationwide
2	May.2 015	Revision of Degree on Survey and Mapping	Add content “Development, updating and exploitation of SDI”. But there is no specific provision for the implementation of this task
3	Jun. 2018	Law on Survey and Mapping	<p>NSDI Chapter in new Law defines the legal basis, responsibilities, infrastructure and core datasets for NSDI development</p> <ul style="list-style-type: none"><input type="checkbox"/> Regulations on responsibility of the agencies under the Government in building NSDI.<input type="checkbox"/> Components of NSDI.<input type="checkbox"/> Geographic data services.<input type="checkbox"/> National geo-portal.

LEGAL FRAME

STT	Year	Legal document	Content
4	Mar. 2019	Degree on Survey and Mapping	<p>Define detail activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Develop a 10-year period strategy for NSDI development. <input type="checkbox"/> MONRE presided over and coordinated with relevant ministries to develop plans to implement the objectives and tasks of the strategy. <input type="checkbox"/> Data components in NSDI are built on the principle that each type is built by only one agency, not duplicated.
5	Apr. 2019	Government Decision	<p>Approve main tasks: MONRE chaired and coordinated with ministries to develop NSDI strategies and plans; Integrating data into the national geographic portal. Other ministries and provinces develop the specialized data</p>
6	Aug. 2018	Government Decision	Established E-Gov

STANDARD

ISO TC 211

NATIONAL TECHNICAL REGULATION ON STANDARD OF GEO-SPATIAL DATA (2012)

Technical regulations on geographic database at 1:2.000; 1:5.000; 1:10.000 scale

Technical regulations on updating of geographic database

Technical regulations on establishment of national topographic map at 1:2.000; 1:5.000; 1:10.000 scale

NATIONAL GEO-SPATIAL DATA INFRASTRUCTURE

Fundamental Data

M
O
N
I
T
O
R
I
N
G

National Geodetic network

National geo-spatial, topographic map

Air-photo, satellite image,

National boundary map

Administrative map

Geographical names

Specialized Data

O
T
H
E
R

M
I
N
I
T
R
I
E
S

Cadastral

Land use
Water resources

Geological, mineral

Soil

Forest

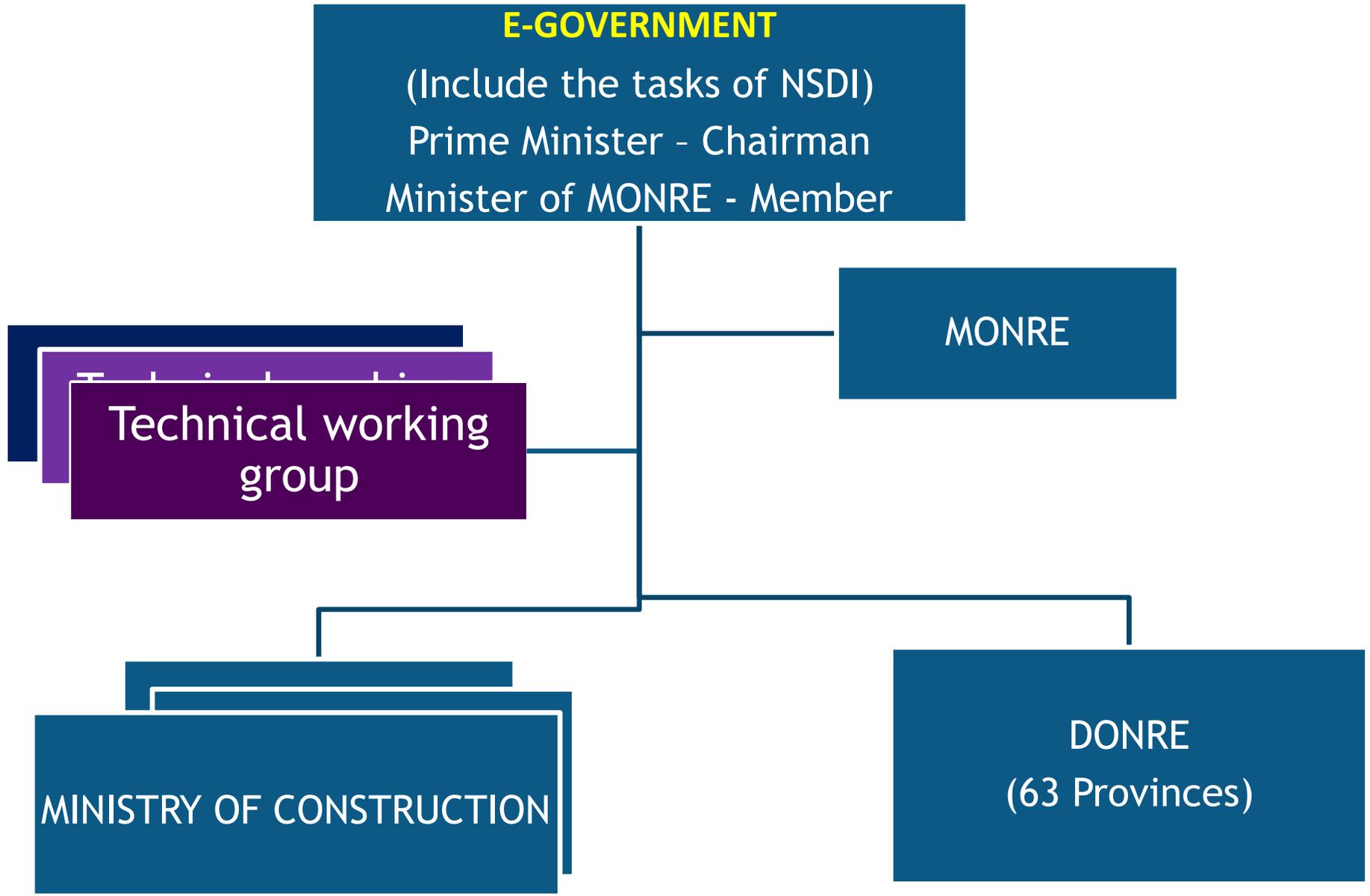
Underground structure, Province, Urban Planning...

maritime routes, sea

Disaster

Transportation

.....

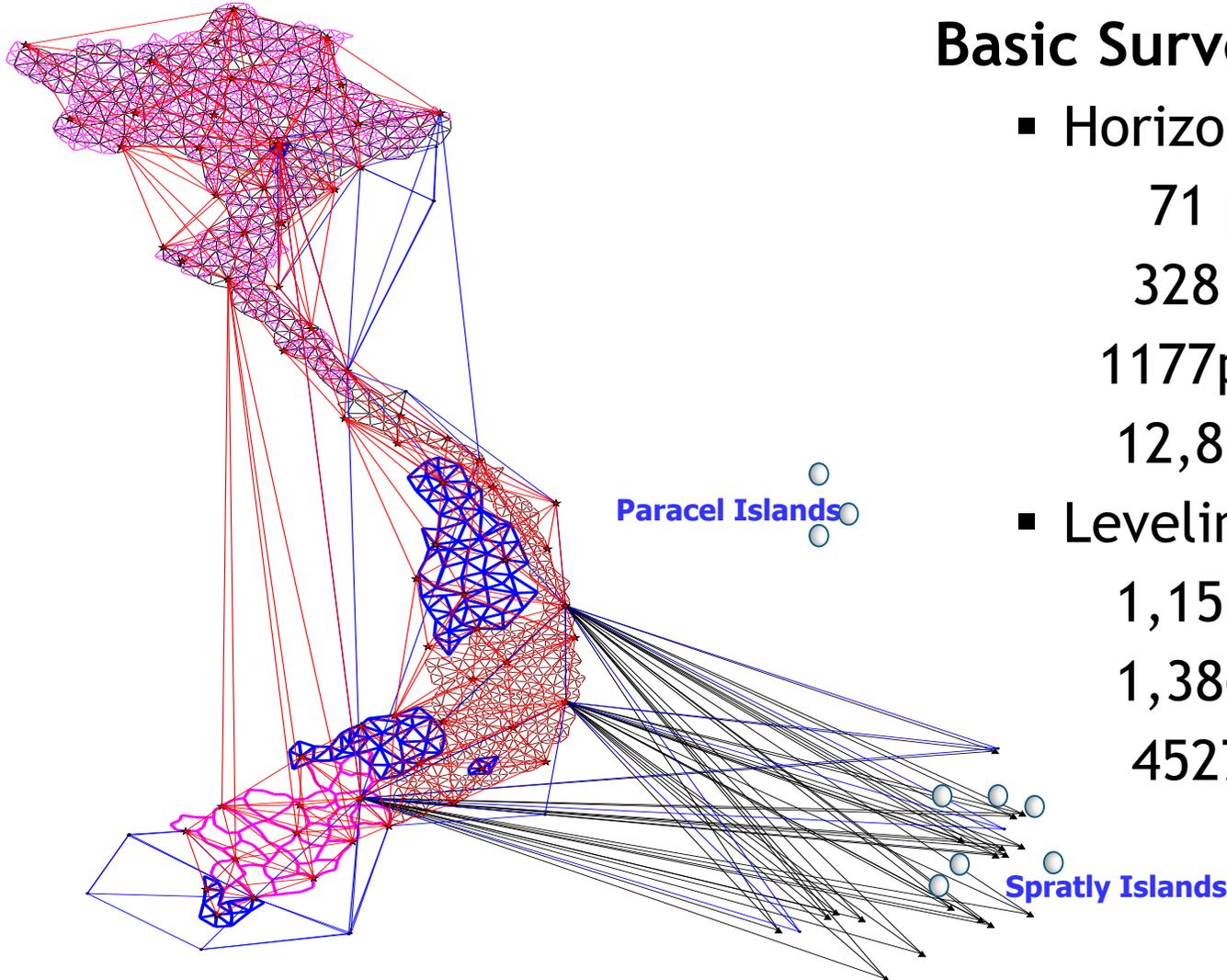


All most Ministries

CORE DATA

Basic Surveys

- Horizontal control network:
 - 71 points of class 0;
 - 328 points of class I;
 - 1177 points of class II;
 - 12,818 points of class III.
- Leveling network including:
 - 1,153 points of class I;
 - 1,386 points of class II;
 - 4527 points of class III.



CORE DATA

CORS network

Step 1: 2017-2019: Build up NRTK CORDS in the Middle area, completed GEODETIC CORDS and up graded DGPS CORDS (65 stations).

Up to now completed 17 stations in the northern provinces.

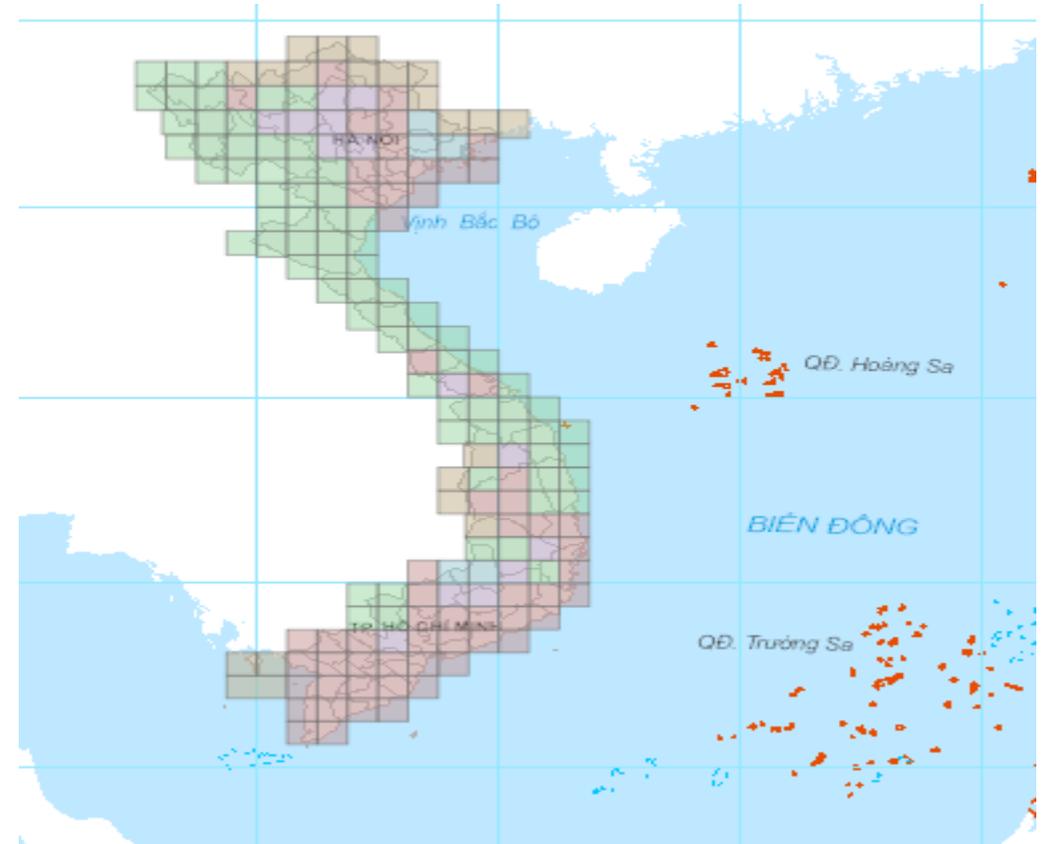
Step 2: 2020-2025: Expand area covered with NRTK CORDS

After 2025: VN Geo-Net has more than 160 stations.



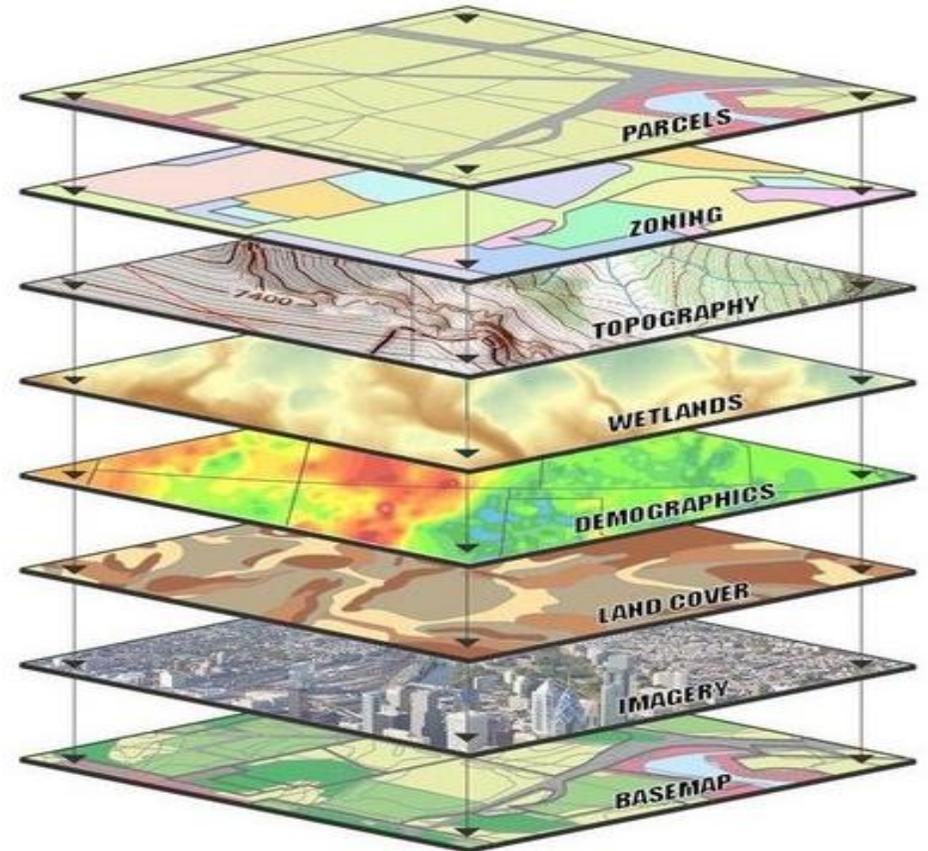
CORE DATA

- Topographical map in smaller scale at 1:25.000;1:100.000; 1:250.000; 1:500.000 and 1:1.000.000 (long time ago 1966-2000)



CORE DATA

- Geo-database and topographical map at scale 1:2,000 and 1:5,000 on urban areas and focal economic zones (Completed 2005-2008)
- Geo-database and topographical map at scale 1:10,000 covered whole country (Completed 2005-2008)
- Geo-database at scale 1:10,000 covered whole country (Generated from Geo-database at scale 1:50,000 in 2015)



CORE DATA

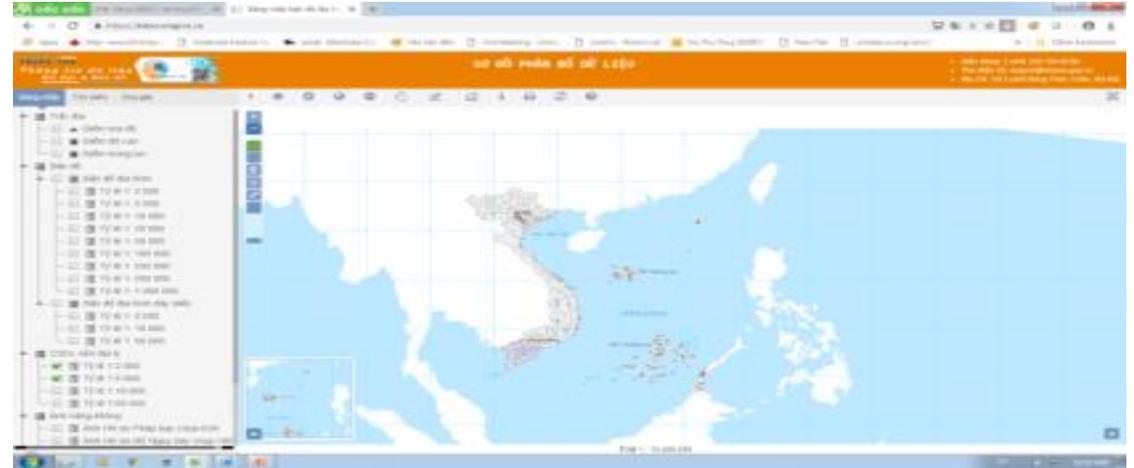
- DEM covered whole country with accuracy: 0.8 m – 7 m.
- DEM covered coastal delta with accuracy: 0.2m to 0.4m.



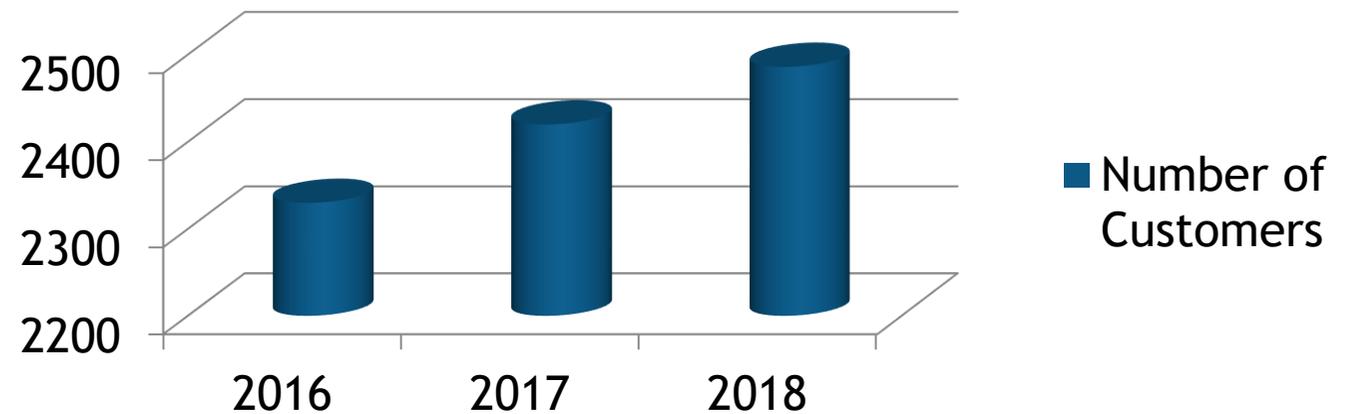
GEO-PORTAL

<https://bdvn.mapvn.vn/>

- Managed by DOSMVN,
- Maintain Core data,
- Look up data in catalog, Metadata,
- Allow pay and download data.



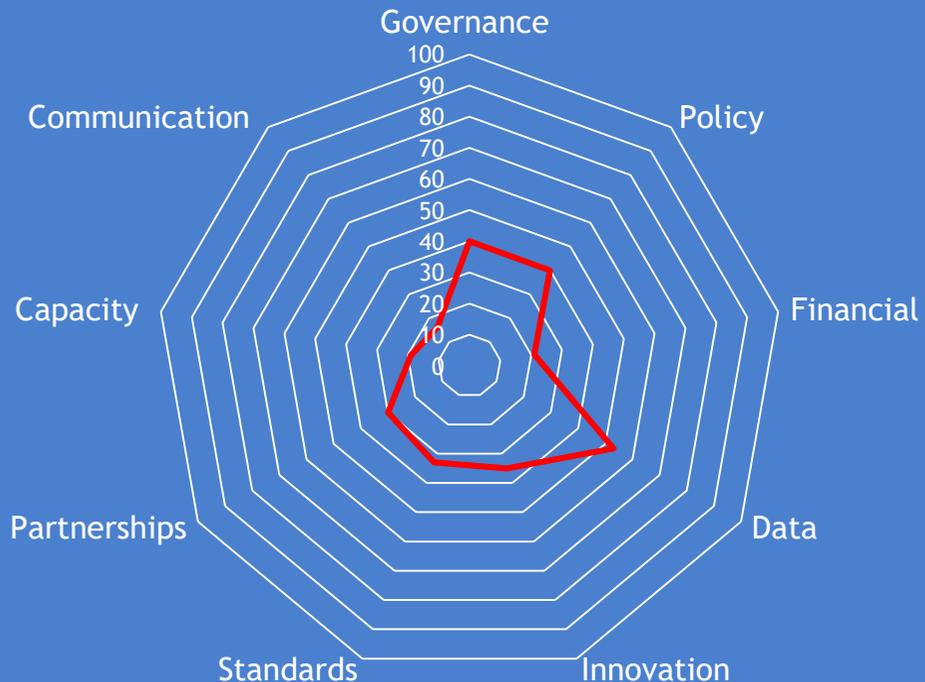
Number of Customers



IGIF - Vietnam Diagnostic

Current Status

Overall Score: 32



IGIF Diagnostic Tool was conducted to evaluate the current status of Vietnam's Geospatial Information Management (GIM)

➤ Advantages:

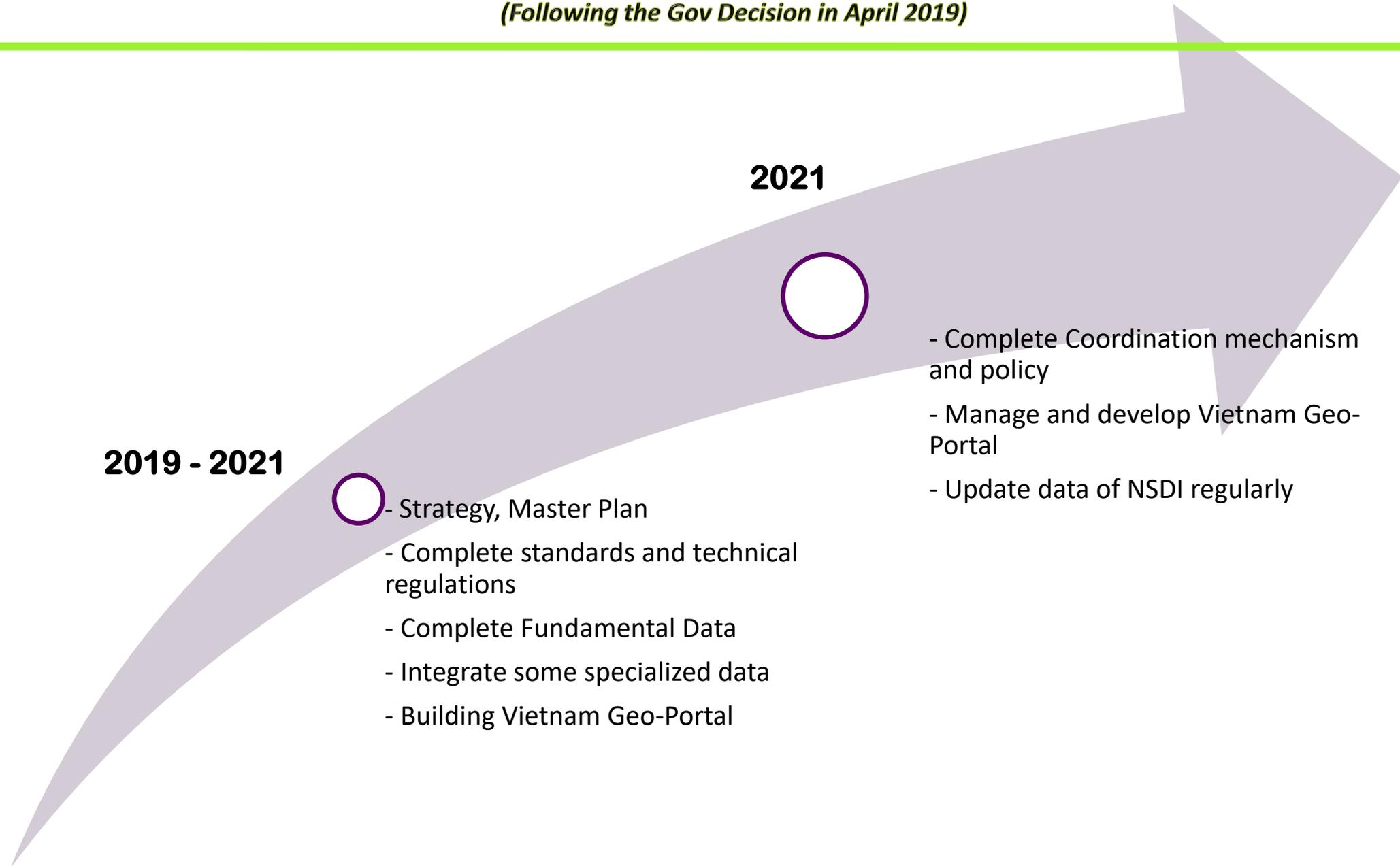
- Vietnam Government is promoting E-Gov, Smart City, Industry 4.0.
- New Law, Degree, Decision set up the frame for coordinating and establishing NSDI.

➤ Main Challenges:

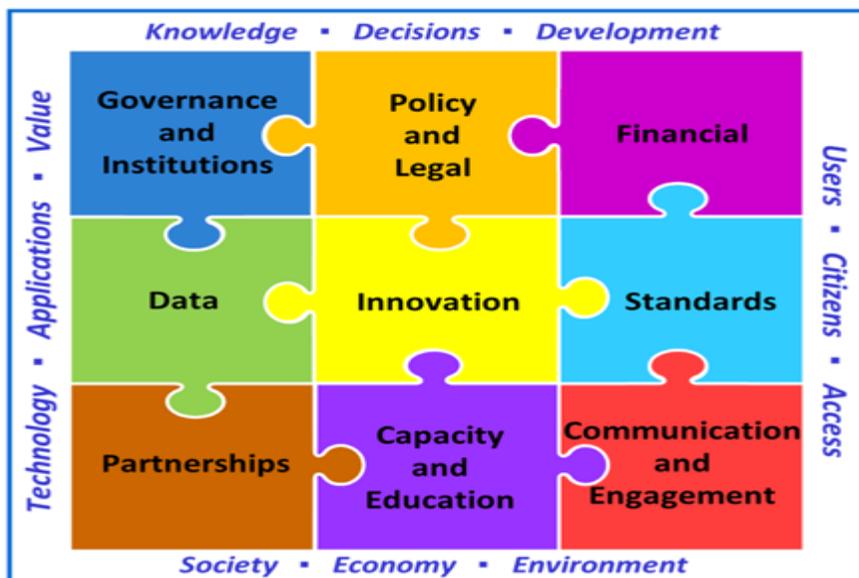
- Difficulty in data exchange and sharing;
- Data sharing policies not available;
- Limited Long-term funding;
- Lack of high quality human resources;
- Partnerships, Capacity, Communication.

NSDI DEVELOPMENT PLAN

(Following the Gov Decision in April 2019)



NSDI DEVELOPMENT PLAN



Within 2019 Conduct:

- IGIF Socio-Economic Assessment to evaluate the benefits of a functional NSDI;
- IGIF Policy Alignment work to enhance the justification of NSDI development;
- Prepare Strategy of NSDI development;
- Review and edit standards and technical regulations;
- Building Vietnam Geo-Portal framework.

**THANK YOU
FOR YOUR ATTENTION!**