

National Geospatial Policy 2022

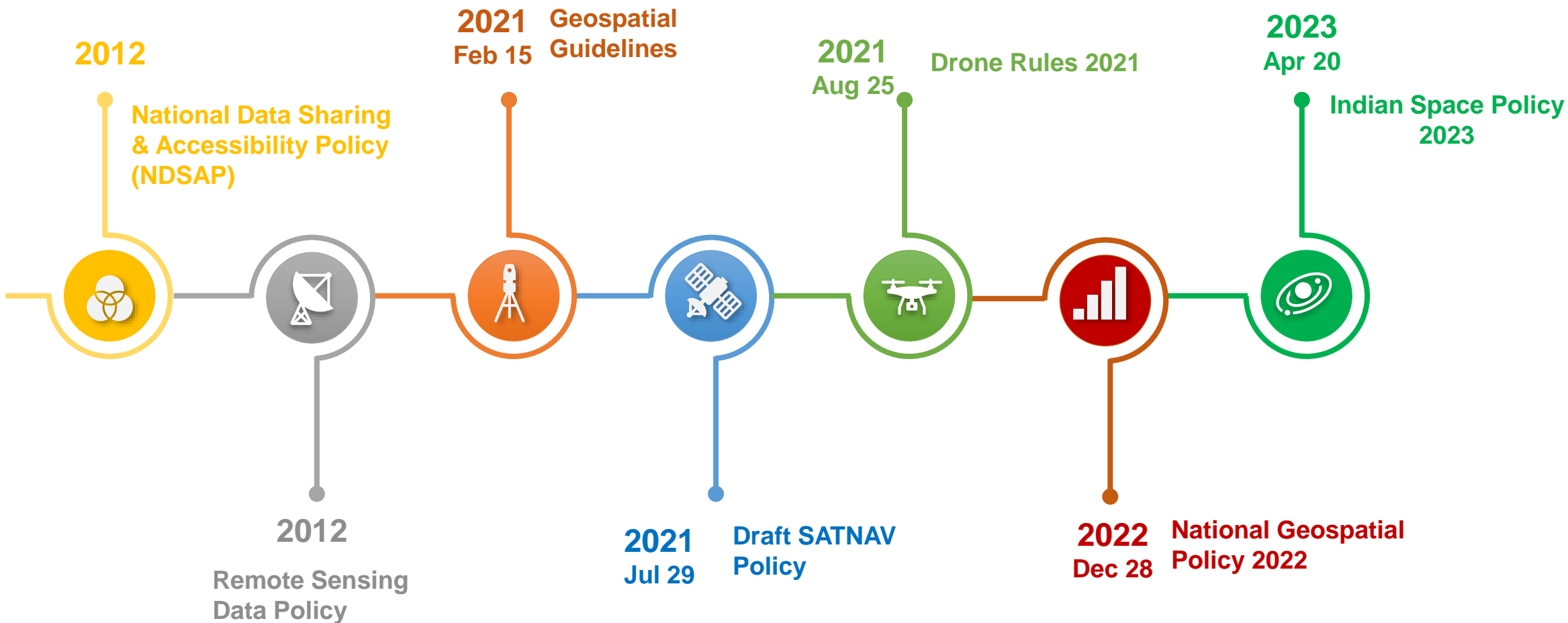
Presentation on National Geospatial Policy of India

GEOSMART INDIA 2023

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Background

Policy Landscape for Evolving Geospatial Ecosystem in the Country



How NGP 2022 is Different from Earlier Policies ?

- Previous Policies in geospatial Sector were all about **RESTRICTIONS, LICENSING, Protocols for Map Making and Security Vetting**

Geospatial Guidelines 2021 was a true Game Changer that liberalized and Democratized Geospatial Sector.

NGP 2022 :

- Built upon **conducive changes** created by Geospatial Guidelines
- Laid down an overarching framework for holistic development of the **Geospatial ecosystem**

Vision & Goals of NGP 2022

01



**World Leader in
Global Geospatial
Space**

To make India a world leader in Global Geospatial space with **best-in-class ecosystem for innovation**

02



**Develop Coherent
National Framework**

To develop a coherent national framework in the country for **integrating data** of various sectors in **Distributed Environment**

03



**Enable Availability of
Geospatial Data**

To enable easy availability of valuable Geospatial data **collected utilizing public funds**, to businesses and general public

04



**Thriving Geospatial
Industry**

To have a thriving Geospatial industry in the country **involving private enterprise**

Milestones Envisaged

01

2025 (Infrastructure)

Enabling **Policy and Legal** Framework

Redefinition of National **Geodetic** Framework

Develop a High Accuracy **Geoid** for the entire country

Improving availability and access to Geospatial data

Establishing an **integrative interface** for all Geospatial data for easy access and open sharing

Strengthen National and Sub-national Arrangements in **Geospatial Information Management**

03

2035 (Application)

High resolution Bathymetric Geospatial Data of inland waters and sea surface to support **Blue Economy**.

Mapping of sub-surface infrastructure & creation of **National Digital twin** for major cities and towns

02

2030 (Strengthening)

High Resolution Topographical Survey & Mapping including **ORI**

High Accuracy Digital Elevation Model (**DEM**) for the entire country

Develop a Geospatial **Knowledge Infrastructure** (GKI)

Enhance **capabilities, skills and awareness** to meet future needs of the country

Strategy & Approach

Make Geospatial Data & Technology transformational agents to achieve **SDG's**

Bring **efficiency** in all sectors of economic

Instil **transparency & accountability** at all levels of Governance



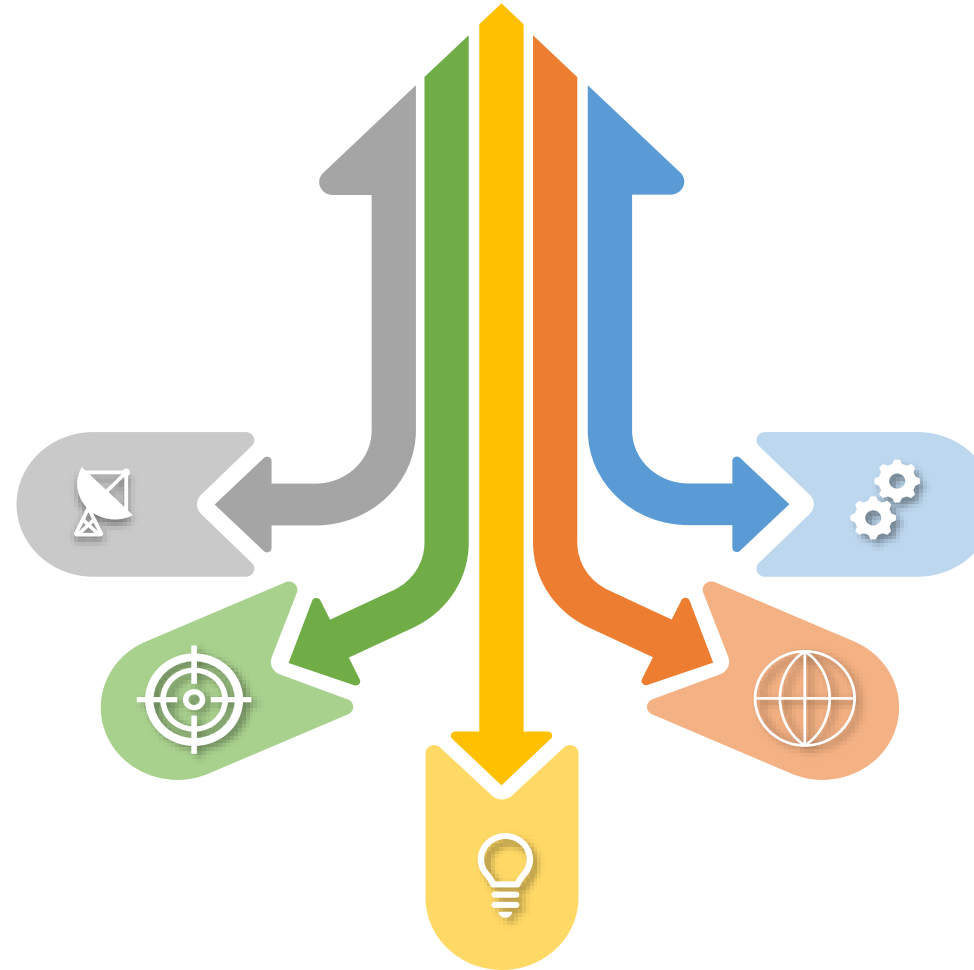
Fit for Future Infrastructure

Geospatial Data Infrastructure

- Policy mandates development of National **Fundamental and Sectoral** Geospatial Data Themes for various sectors
- NGDR and UGI will enable access to National Geospatial Data Infrastructure using FAIR Principles

Mapping Infrastructure

- Map making has been deregulated to spur innovation in the country



Subsurface Infrastructure

- Clear plan for collection of sub-surface utilities in cities - water supply, energy and communication networks, sewerage and drainage networks

National Digital Twin

- Geospatially aware Digital Twins to create virtual replica of a physical assets, processes or services

Geospatial Knowledge Infrastructure

GKI will be enabled by integration of Geospatial data/technology/concepts with Fourth Industrial Revolution (4th Industrial Revolution) technologies and the growing digital infrastructure (Web, Cloud, Networks, etc.)

The 14 Geospatial Fundamental Themes



1. Geodetic Reference Frame



2. Orthoimagery



3. Functional Areas (Boundaries)



4. Geographical Names



5. Elevation & Depth



6. Water



7. Transportation Network



8. Buildings & Settlement



9. Land Cover & Land Use



10. Physical Infrastructure



11. Land Parcels



12. Addresses



13. Geology & Soils



14. Population Distribution

Geospatial Data Themes

01

Fundamental Data Themes UN-GGIM are adopted as National Fundamental Data Themes

02

Concerted effort by all agencies to Develop various Themes

03

Nodal Ministries / Departments to act as Lead agencies in creation and maintenance of Data of respective themes

04

Nodal Ministries / Departments to increasingly engage with private sector to meet requirements

05

Nodal Ministries / Departments to bear the cost for creation and development of Geospatial data pertaining to respective Themes

06

Data to be collected conforming to Geodetic Reference Framework so that they can be seamlessly integrated/harmonized

National Geospatial Data Registry (NGDR)

01

Efficient access to the National Fundamental and Sectoral Geospatial Data will be provided via a National Geospatial Data Registry (NGDR) acting as **common set of registers/ catalogue** for access of data sets and services on **FAIR** principles.

02

Unified Geospatial Interface (UGI) to provide **an interface for exchange of data** amongst multiple Data Producers and Data Users through APIs based on standards

03

Survey of India in collaboration with **BISAG-N** and others shall develop and operate the NGDR and the UGI. Support from educational institutes and private sector will be taken under guidance from the apex body GDPDC

STANDARDS

Standards related to **National Fundamental and Sectoral Geospatial Data Themes and Geospatial Technology & Processes** would be developed and promulgated after consultation with a broad range of data users and providers.

Institutional Framework

**Geospatial Data Promotion and
Development Committee (GDPDC)**
Apex body at the National level

Department of Science & Technology (DST)
Nodal Agency under guidance from GDPDC

GDPDC is the apex body for formulating and implementing guidelines, strategies and programs for promotion & development of Geospatial sector

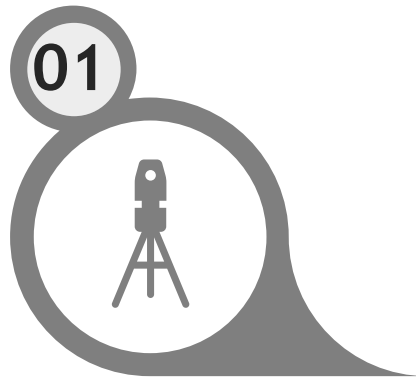
GDPDC to appropriately **modify** the concept and functioning of **National Spatial Data Infrastructure** to make it more robust, efficient and effective

DST to be the **nodal Department** for enacting the policy
DST to constitute Sub-Committees and/or Working Groups to aid and support GDPDC in its objectives

The **Sub-committees/Working Groups** to have appropriate representation from **industry, academia**

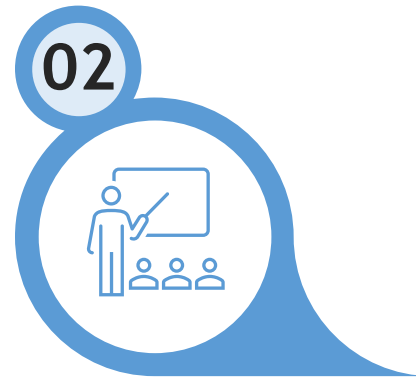


Focus on Education, Skill & Capacity Building



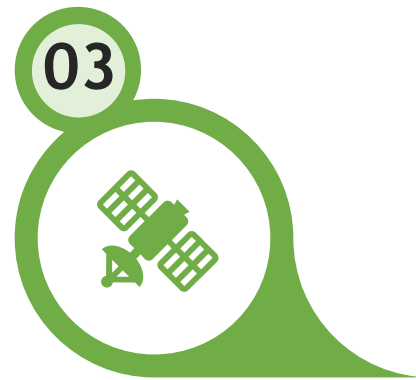
01 Geospatial Skill Council

Creation of **Geospatial Skill Council** to fill resource gap by joint effort of DST, SOI, Academia, Industry, NSDC



02 Geospatial Education

Development of quality **Geospatial Science & Tech programs** at all levels from schools to universities



03 Centres of Excellence

Centres of Excellence to be developed . NIGST and IIRS and others will be developed into CoE



04 Capacity Training

Online courses via platforms like **iGOT-Karmayogi** . Tie-ups with industry will be encouraged



05 Surveyors' Certification

Surveyor Certification to be based on **industry benchmarks** and in-line with global practices

Impetus to Geospatial Enterprise

Promoting Technology Innovation & Adoption

GIDB. Assist and advise GDPDC and DST on matters related to Geospatial industry.

GDPDC, Ministry of Commerce & Industry, DST, Dep of Revenue & Industry Rep

Incubation Centers/ Industry Accelerators

Geospatial Technology Parks

Opening up of the Domestic Geospatial Market



Thankyou