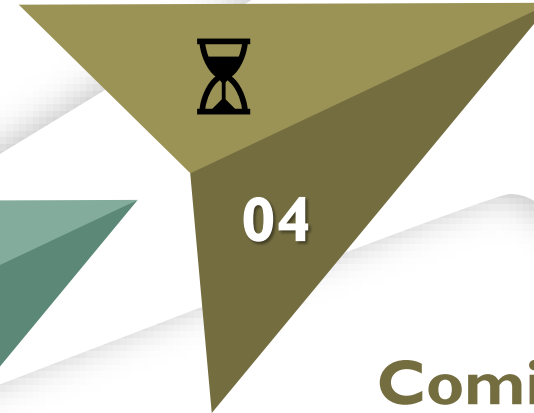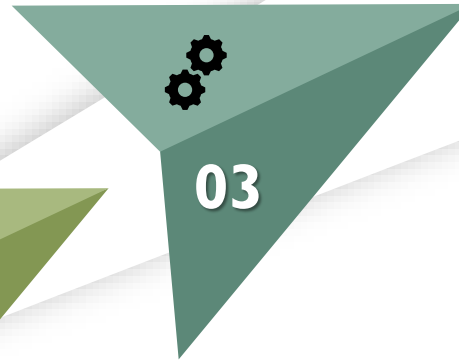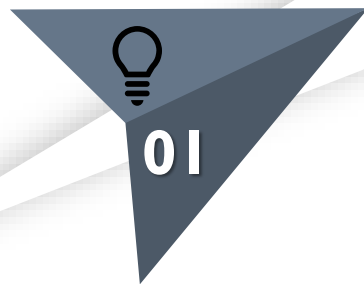# Evolving Geospatial Ecosystem: Evolution of Geospatial Technology in India

Conducive Environment

✓ Better suited policies - Geospatial + IT + Industrial
✓ Openness in the govt to partner with the private sector
✓ Impetus on the use of Geospatial technologies

Evolving Ecosystem

✓ Geospatial spectrum available in India
✓ More product companies - drones, space tech or Geospatial
✓ Thriving start-up ecosystem

01

02

03

04

Coming Up

✓ 5G technology
✓ Policies on Geospatial + RS + Positioning
✓ Investments in the sector - startup incubation centres, incentivising industry

Political Push

✓ Geospatial seeping its way into Union Budget
✓ Endoresment by the highest-level political leadership
✓ Several initiatives with a specific emphasis on its use, eg, GATI Shakti, SVAMITVA, Smart Cities, AMRUT Cities, Clean Ganga, etc.

AGI
ASSOCIATION OF GEOSPATIAL INDUSTRIES

Evolution and Adoption of Geospatial Technology In India

Early Adopters | Technology Evolution | Growth Drivers | Road Ahead

Early Adopters

National Mapping Agencies
- Survey of India
- Geological Survey of India
- NATMO
- Remote Sensing centres - NRSC

Under-Utilized
- Lack of awareness of GIS
- Unavailability of manpower
- Spatial data availability
- Limited access to solution providers

Initiatives Taken
- Several universities-built GIS and Remote sensing labs

Technology Evolution

New Technologies
- IOT
- AI/ML/DL
- Augmented reality/ virtual reality
- Big Data
- Digital Twin
- Web/Cloud

Open standards and Geospatial Infrastructure
- Users can access content from multiple data servers and consume it as a service using any device, anytime anywhere.
- State GIS integrating data from various departments to become a single source of truth and geo-enable various state government processes and workflows

Growth Drivers

Geospatial data guidelines 2021 - democratization of geospatial content
- Major boost to use of Geospatial Data
- Boost to start ups and MSMEs
- Creation of employment
- Enhancement of economic activity

Increased adoption due to
- Increased awareness
- Deployment of GIS in mission critical projects - Smart Cities, AMRUT, RAPDRP, DINLRMP, SVAMITVA
- Technological advancements
- Integration of GIS with other enterprise platforms like ERP, CRM
- Location intelligent devices leading to availability of real-time geospatial information.

Road Ahead

Location Enablement of Digital Transformation
- Pandemic fast-tracked digital transformation
- Location information integral part of most business processes and for business analytics – BFSI, Retail, Manufacturing, Travel

5G Technology
- GIS companies providing both unique and existing data to the telecom industry to implement 5G

Digital India Program
- Under the Digital India Program, MeitY has implemented several advanced enterprise platforms like UIDAI, DBT, UPI

GIS for Sustainable Development
- Helps to achieve 17 SDGs like Clean water and sanitation goals, Sustainable cities and communities, Climate action, No poverty, zero hunger

Skill Development
- Align with industry needs