

Senior Executive Training Program on Geospatial Knowledge Infrastructure (GKI)

VENUE

13 – 15 December 2026
India International Centre, New Delhi

16 – 18 December 2026
Bharat Mandapam, New Delhi

GKI Training Program Partners



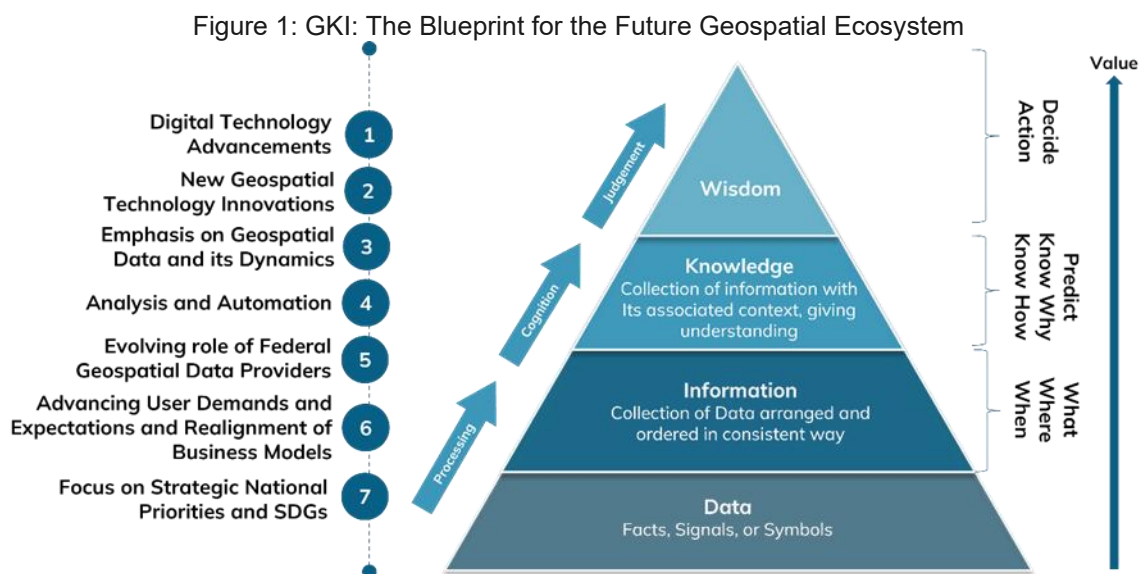
Introduction to GKI

The global geospatial landscape is undergoing a foundational shift—from **legacy Spatial Data Infrastructures (SDIs)** to a more advanced, integrated paradigm known as **Geospatial Knowledge Infrastructure (GKI)**. This transformation is not merely technical; it marks a strategic evolution in how nations and institutions mobilize geospatial assets to derive actionable intelligence in an increasingly data-driven world.

GKI represents a next-generation framework that transcends the conventional mandates of data collection, storage, and dissemination. Anchored in the principles of the Fourth Industrial Revolution (4IR), it integrates geospatial technologies with AI, cloud computing, and IoT to enable real-time, predictive, and context-aware insights. In doing so, it moves the value chain decisively from data to decision—placing geospatial intelligence at the core of national digital infrastructure.

This evolution is propelled by the imperative to embed geospatial capabilities across public governance, industrial ecosystems, and the global digital economy. Whether enabling smart cities, climate resilience, or digital twin technologies, GKI offers a cohesive architecture for aligning policy, infrastructure, and innovation. It equips governments and enterprises alike to respond with agility to complex challenges—making decision-making not only smarter and faster but also more sustainable and systemically informed.

In an era where digital competitiveness is increasingly geospatial in nature, GKI is not just a technological upgrade; it is a strategic enabler of national resilience, economic opportunity, and global leadership.

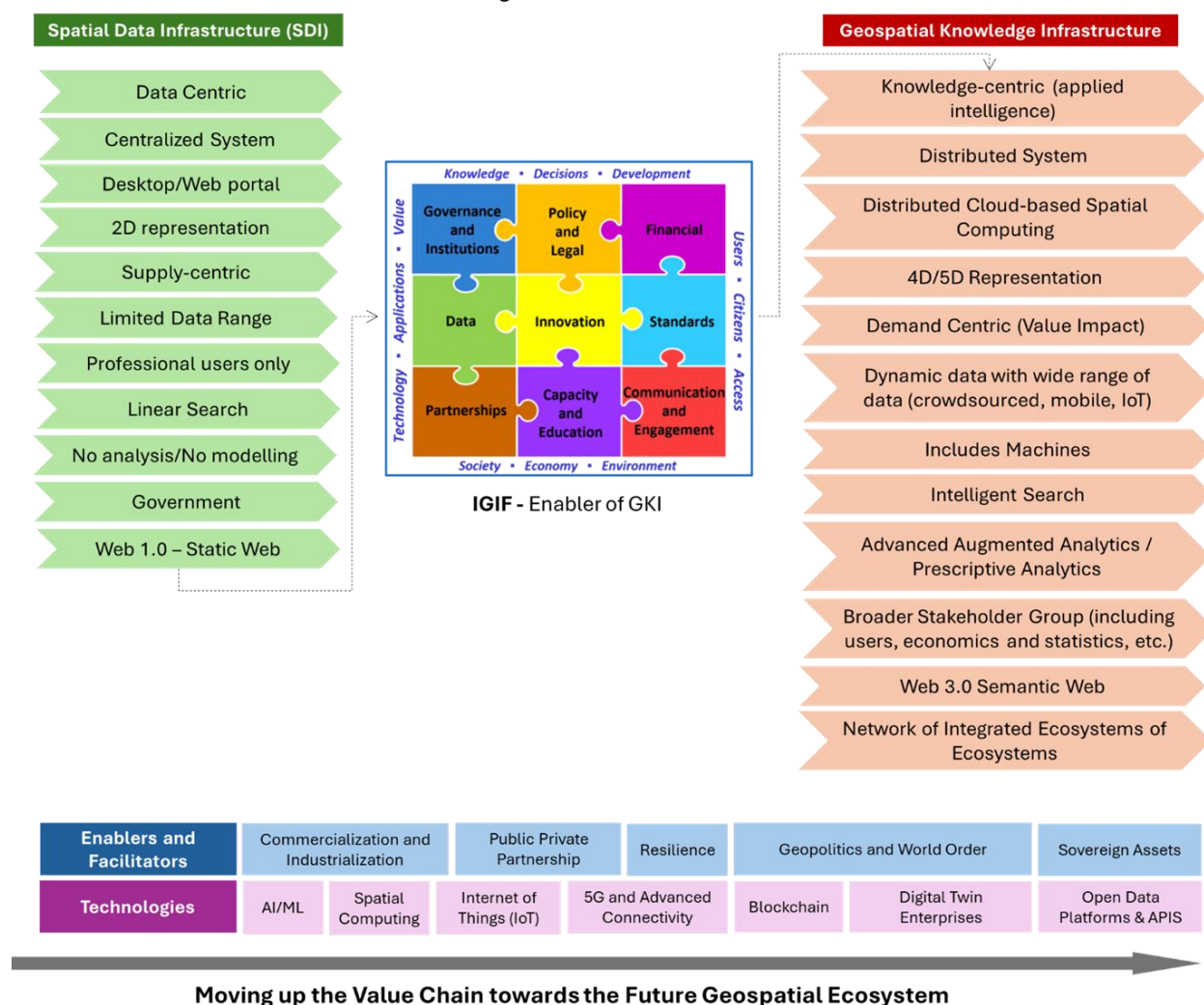


Source: Geospatial World Consulting

The transition to **Geospatial Knowledge Infrastructure (GKI)** signals the emergence of a third generation in the evolution of geospatial systems. The first generation was data-centric, focused on building the foundational capacity to collect, manage, and store spatial data. This was followed by the second generation, characterized by process-driven frameworks that integrated geospatial data into specific workflows, enhancing decision-making within siloed applications.

Today, the shift toward a knowledge-powered paradigm reflects a broader imperative: to generate actionable insights that inform real-time, system-level decisions. GKI embodies this transformation by leveraging advanced analytics, AI, and interoperability to convert data into strategic knowledge. It positions geospatial systems not merely as repositories or tools, but as critical infrastructure for national resilience, digital governance, and economic competitiveness.

Figure 2: SDI to GKI



Source: Geospatial World Consulting

A knowledge-powered geospatial paradigm enables the transition from merely observing patterns to actively shaping outcomes—through prescriptive analytics, adaptive systems, and autonomous decision-making. Yet, this shift requires more than technological innovation; it calls for the holistic integration of people, processes, policies, and platforms. Only by building such an ecosystem can geospatial knowledge be transformed into operational wisdom capable of addressing complex, interlinked global challenges.

As the geospatial ecosystem advances and GKI reshapes the dynamics between data, algorithms, and human insight, national sovereignty and resilience are becoming critical pillars of this evolution. By linking geospatial intelligence with sovereign capabilities across the full technology stack—from satellites and GNSS to cloud and real-time analytics—GKI now serves not just as a value-creation roadmap but as a tactical readiness framework that empowers nations to operationalize geospatial and space infrastructure for autonomy, security, and future-ready growth.

Training outline & Learning Objectives

Geospatial World, in collaboration with USC Dornsife, will organise a Senior Executive Training Program on GKI during GeoSmart India 2026. This will be a 6-day immersive Geospatial Knowledge Infrastructure (GKI) capacity-building program, comprising structured executive learning expert-led sessions, strategic dialogues, and industry and ecosystem engagements. The program is carefully curated to support national and regional institutions, particularly National Mapping Agencies and geospatial authorities, in building future-ready geospatial systems.

On completion of the programme, participants will be able to:

- Understand how GKI enables smarter governance, digital transformation, and national development.
- Gain insights into building future-ready geospatial ecosystems through effective strategy, governance, and collaboration.
- Learn how to transform geospatial data into actionable intelligence for policy and decision-making.
- Explore the role of AI, cloud, digital twins, and emerging technologies in shaping next-generation spatial systems.
- Discover global best practices and practical approaches to implement GKI at national scale.
- Develop strategies to strengthen geospatial readiness, innovation, and sustainable growth through GKI.

Program Structure

- Icebreaking sessions addressing country-specific problems and local challenges, enabling peer learning
- Expert-led sessions delivering insights on operationalizing GKI for national, state, and sectoral planning
- Real-world case studies from developed and developing countries illustrating diverse implementation pathways
- Interactive formats fostering peer exchange, collaboration, and actionable takeaways
- Completion certificates endorsed by leading international universities and expert trainers

Program Agenda

DAY 1 | Saturday, 13 December 2026

Venue: India International Centre, New Delhi

Time	Session & Key Topics	Trainer
08:00 – 9:30	Registration and Tea / Coffee	
9:30 – 9:45	Welcome and Introduction	
9:45 – 10:00	Opening Remarks	
10:00 – 11:30	Lesson 1: Geospatial Knowledge Infrastructure – The Future Geospatial Ecosystem • Introduction to Geospatial Knowledge Infrastructure: core principles and concepts • Significance of GKI for national development, digital transformation and socio-economic growth • Role of national geospatial agencies and institutional ecosystems in the digital age • Navigating challenges and unlocking opportunities for implementing GKI • Strategic pathways and frameworks for strengthening GKI to support national and regional development	Ananyaa Narain Vice President – Consulting, Geospatial World
11:30 – 12:00	Coffee Break	
12:00 – 13:00	Lesson 2: Communicating the Value Proposition of Geospatial Knowledge Infrastructure • Articulating the strategic importance of GKI for evidence-based decision-making, with global best practices • Highlighting the socio-economic impact of GKI in driving growth and prosperity • Methodology to communicate the Return on Investment of GKI	Ananyaa Narain Vice President – Consulting, Geospatial World
13:00 – 14:00	Lunch Break	
14:00 – 15:00	Lesson 3: IGIF as an Enabling Mechanism for GKI • Enabling role of IGIF's Strategic Pathways to operationalize Geospatial Knowledge Infrastructure (GKI) at • Leveraging IGIF to transform fragmented geospatial data into a coherent national knowledge infrastructure. • Country-level implementation, capacity, and financing mechanisms to enable scalable adoption, partnerships, and long-term value delivery (supported by case studies).	Greg Scott Executive Director, SDG Data Alliance, PVBLIC Foundation
15:00 – 15:30	Coffee Break	
15:30 – 17:00	Lesson 4: Building the Future of GKI – Infrastructure, Innovation, and Integration • Designing intelligent national spatial ecosystems for the autonomous digital era • Transforming geospatial systems from data repositories to knowledge engines • Building living spatial infrastructure that evolves with real-world change	Greg Scott Executive Director, SDG Data Alliance, PVBLIC Foundation

Time	Session & Key Topics	Trainer
	- Enabling seamless spatial intelligence flows across national decision systems - Strengthening capacity and governance for sustainable GKI growth	
17:00 – 18:00	<i>Networking Reception</i>	

DAY 2 | Sunday, 14 December 2026

Venue: India International Centre, New Delhi

Time	Session & Key Topics	Trainer
09:00 – 09:30	<i>Tea / Coffee</i>	
09:30 – 10:30	Lesson 5: Information Technology as Critical Enabler of GKI Ecosystem – Role of AI, Big Data, Cloud Computing and IoT - Establishing digital infrastructure as the foundation for geospatial systems - Moving from siloed GIS systems to state-governed, cloud-native spatial platforms to enable GKI - AI / ML applications needed for building established state data infrastructure - Big Data & IoT-enabled real-time geospatial services	Siva Ravada Vice President of Development, Oracle
10:30 – 11:00	<i>Coffee Break</i>	
11:00 – 12:30	Lesson 6: Integrated Platform Architecture for Governance and Service Delivery - From data-centric to knowledge-centric: what changes in a GKI platform? - Designing a distributed, cloud-based geospatial platform - Integrating dynamic data streams and multi-source inputs for decision-making – a core of GKI - Embedding intelligent search, analytics and decision support - Enabling sectoral service / application delivery through an ecosystem-centric platform governance model for sustained GKI	Dean Angelides Corporate Director, Esri
12:30 – 14:00	<i>Lunch Break</i>	
14:00 – 15:00	Lesson 7: Leveraging Public and Open Data for Advancing Geospatial Platform - Introduction to the Overture Maps Foundation (OMF) - The Role of Public and Open Data in Geospatial Platforms - Collaborative Approaches to Developing Open Geospatial Platforms - Open Data Governance and Standards for Geospatial Platforms - Challenges and Opportunities in Scaling Open Geospatial Platforms - The Future of Open Geospatial Platforms	Will Mortenson Executive Director Overture Maps Foundation

Time	Session & Key Topics	Trainer
15:00 – 15:30	<i>Coffee Break</i>	
15:30 – 16:30	Lesson 8: Interoperability and Integration – Advancing Geospatial Data Infrastructure through Standards and Collaboration • Role of open standards in enabling interoperability and seamless data exchange across geospatial platforms and systems • Standards and strategies for aligning national, regional, and local GKI ecosystems • Addressing data duplication and fragmentation while strengthening metadata, data quality, and discoverability protocols • Developing federated geospatial data infrastructures to enable seamless data sharing and integration across institutions and jurisdictions	Harsha Madiraju Associate Director, Open Geospatial Consortium (OGC)

DAY 3 | Monday, 15 December 2026

Venue: India International Centre, New Delhi

Time	Session & Key Topics	Trainer
09:00 – 09:30	<i>Tea / Coffee</i>	
09:30 – 11:00	Lesson 9: Fundamentals of Positioning, Navigation and Timing and Relevance in the GKI Ecosystem • Fundamentals of PNT systems and geodetic positioning principles • Structure of national geodetic reference frameworks and control networks • CORS networks and real-time high-precision positioning services • Multi-GNSS integration for accuracy, reliability, and redundancy • Sectoral applications and economic value of PNT services • Positioning sovereignty, data governance, and dependency risks • Emerging PNT technologies and future integration pathways	Major General (Dr.) B Nagarajan Professor, Department of Civil Engineering, IIT Kanpur
11:00 – 11:30	<i>Coffee Break</i>	
11:30 – 13:00	Lesson 10: GKI Workflow Integration Across AEC / Infrastructure Sector • Leveraging GKI for smarter infrastructure design and development • Digital Twins in AEC: GKI's role in real-time data and simulation • Integration of GKI with BIM for streamlined project management • Enhancing sustainability in AEC projects through geospatial analysis • Case studies: GKI implementation in large-scale construction and urban projects	Prof. John P. Wilson Professor & Founding Director, Spatial Sciences Institute, University of Southern California
13:00 – 14:00	<i>Lunch Break</i>	

Time	Session & Key Topics	Trainer
14:00 – 15:30	Lesson 11: GKI Workflow Integration for Natural Resource Management and Ecological Restoration • Leveraging GKI for sustainable natural resource management at the national level • Integrating geospatial intelligence into environmental monitoring systems • Using GKI to support community-driven decision-making processes • Building early-warning systems through geospatial-enabled insights • India Observatory case study	Chiranjit Guha General Manager, Foundation for Ecological Security (FES)
15:30 – 16:00	<i>Coffee Break</i>	
16:00 – 17:30	Lesson 12: GKI for Climate Resilience and Disaster Risk Reduction: Lessons from Nepal's "Mountain Tsunami" • Examining lessons from Nepal's disaster to understand climate vulnerability, cascading hazards and gaps in disaster preparedness • Demonstrating how science, geospatial data and technology can strengthen hazard assessment, early warning and disaster preparedness • Exploring the role of satellite observations, ground-based monitoring and AI-driven analytics in understanding disaster impacts and emerging risks • Identifying opportunities to strengthen disaster risk reduction through integrated geospatial intelligence, institutional coordination and evidence-based planning • Translating disaster experiences into actionable knowledge to build climate resilience and strengthen community and infrastructure preparedness	Basantha Shreshta Former Director, ICIMOD

DAY 4 | Tuesday, 16 December 2026

Venue: Bharat Mandapam, New Delhi

Time	Session & Key Topics
09:30 – 13:00	Conference Program – Thought-Leadership Plenary Sessions • Participation in plenary sessions • Networking with policymakers, innovators and industry leaders driving APAC region's geospatial agenda
13:00 – 14:00	<i>Lunch Break</i>
14:00 – 17:00	Conference Program – Plenary Sessions (continued) • Continued thought-leadership sessions and panel discussions • Industry interactions and structured networking with delegates

DAY 5 | Wednesday, 17 December 2026

Venue: Bharat Mandapam, New Delhi

Time	Session & Key Topics
09:30 – 13:00	Technology Demonstrations (part of Senior Executive Training) 45-minute immersive technology tracks: • Geospatial Analytics & Platform Infrastructure • Positioning, GNSS and Precision Infrastructure • High-Resolution Aerial and 3D Imaging
13:00 – 14:00	<i>Lunch Break</i>
14:00 – 17:00	Technology Demonstrations (continued) GKI Summit

DAY 6 | Thursday, 18 December 2026

Venue: Bharat Mandapam, New Delhi

Time	Session & Key Topics
09:30 – 11:00	GKI Summit
11:00 – 11:30	<i>Coffee Break</i>
11:30 – 12:30	Assessment Workshop • Key takeaways and outcomes
12:30 – 13:00	Closing Ceremony • Presentation of certificates and group photograph
13:00 – 14:00	<i>Lunch & Networking</i>

Note: Attendance at the Assessment Workshop and the Closing Ceremony is mandatory. A completion certificate will be awarded to all trainees, certified by USC Dornsife and Geospatial World