Sovereignty.
Economy.
Society.

Scan for Photos

Produced by
GEOSPATIAL WORLD
ADVANCING KNOWLEDGE FOR SUSTAINABILITY

GWF

GEOSPATIAL WORLD FORUM
CONFERENCE & TECH SHOW

RAI Amsterdam, The Netherlands / 27 April - 1 May 2026

2026 Conference Proceedings

CONTENT


GWF


esri
GWF
GWF

The Geospatial World Forum 2026, held from 27 April to 1 May at RAI Amsterdam, unfolded as a landmark global gathering of intellect, innovation, and collaboration.

Anchored by the theme "Sovereignty, Economy and Society," the Forum captured the evolving role of geospatial and space technologies in strengthening national sovereignty, driving economic growth, and creating meaningful societal impact across the globe.

Senior executives, policymakers, and leading technologists came together to explore transformative ideas and cross-sector collaborations. Moving beyond mere conversations, GWF 2026 served as a catalyst accelerating innovation, deepening global partnerships, and reaffirming the indispensable role of geospatial intelligence in an increasingly interconnected world.

1,000+ DELEGATES

550+ ORGANIZATIONS

350+ SPEAKERS

90+ COUNTRIES

65+ EXHIBITORS


GWF
GWF


Sovereignty.
Economy.
Society.
vereignty.
onomy.
iety.
WORLD

Delegates

GWF 2026 welcomed **1,042 delegates** from across the world, including policymakers, industry leaders, researchers, and innovators representing **94 countries.**

Exhibitors

The exhibitors represented a highly diverse geospatial and space ecosystem.

Including:

Earth Observation companies

GIS & Location Intelligence Platforms

AI, Data Analytics & Digital Twin Solution Providers

Drone & LiDAR Tech Firms

Survey & Mapping Equipment Manufacturers

Defence & Aeropace Innovators

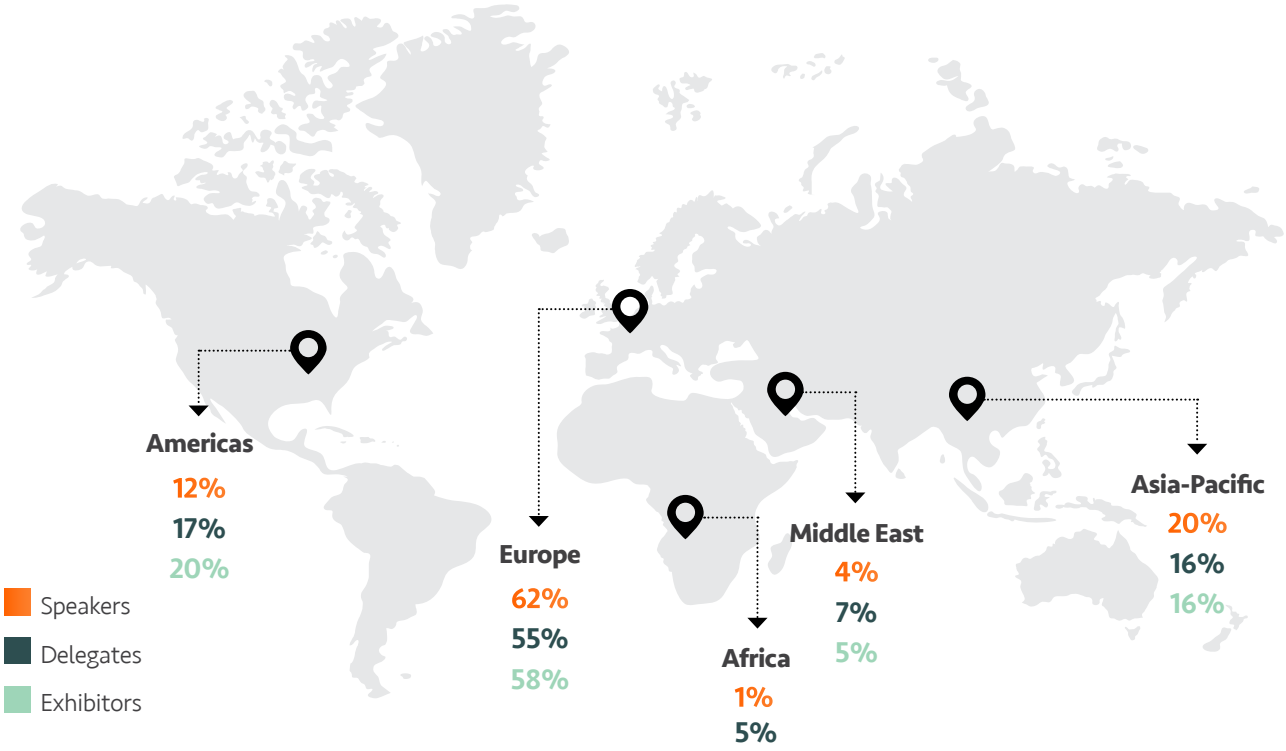
In addition, participation from government agencies, research institutions, and universities rounded off the full suite of geospatial ecosystem.

Sponsors & Partners

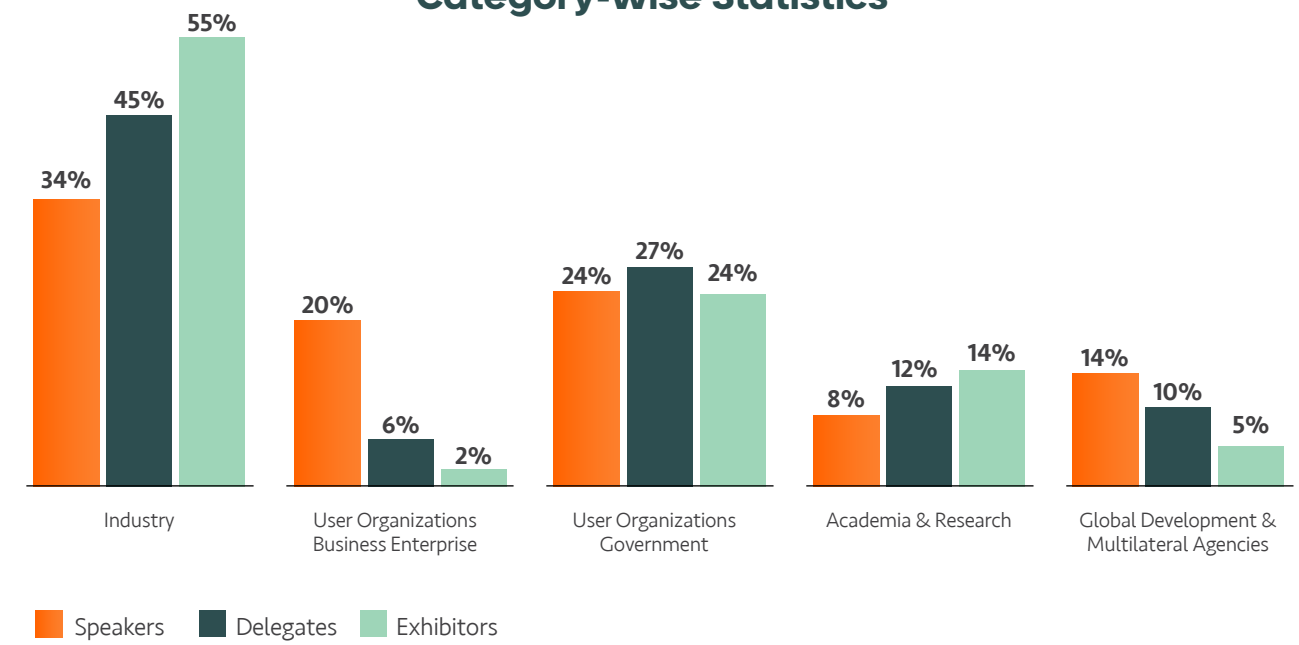
Sponsors & Partners represented the expansive geospatial representation, marking major technology companies, national mapping agencies, research institutions, academic entities, AI-forward firms, manufacturers, and startups. In total, our 40+ partners & sponsors reflected a deeply engaged and integrated ecosystem that was bound to drive innovation across the full spectrum of geospatial and space sector worldwide.

Geospatial World Forum 2026 in Numbers

Region-wise Statistics



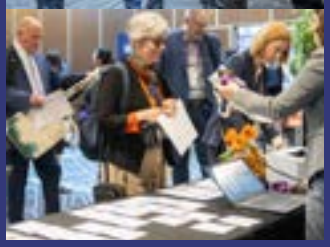
Category-wise Statistics



CXO Summit

Theme: Space and Geospatial Industry Growth Forecast and Business Directions

The CXO Summit at the Geospatial World Forum 2026 convened global industry leaders, policymakers, technology innovators, and strategic decision-makers to discuss the future trajectory of the space and geospatial economy. Focused on industry growth forecasts and business directions, the Summit explored critical themes including geopolitical transitions, sovereign geospatial infrastructure, Earth observation, GeoAI, digital twins, high-definition mapping, autonomous systems, and public-private collaboration. The discussions highlighted the accelerating convergence of space, geospatial, engineering, and digital technologies, reinforcing the industry's growing role in enabling resilience, economic competitiveness, infrastructure modernization, and data-driven governance in an increasingly interconnected world.

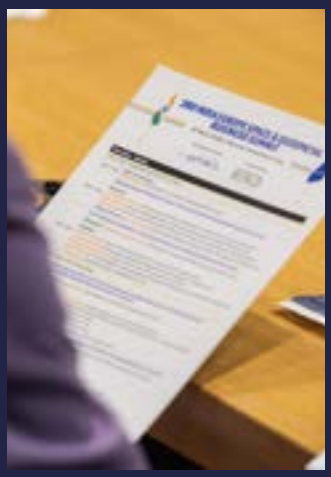


India Europe Space and Geospatial Business Summit

Theme: Co-Innovate. Co-Commercialise. Co-Own: Building the India–Europe Space and Geospatial Economy

The India Europe Space and Geospatial Business Summit, organized in collaboration with IN-SPACe as Strategic Partner, emerged as a defining platform for advancing strategic cooperation between India and Europe across space and geospatial sectors.

Bringing together senior government officials, space agencies, national mapping organizations, industry leaders, and technology innovators, the Summit catalyzed dialogue on cross-border partnerships with investment and innovation as the focal point. High-level discussions focused on plethora of applications, including GeoAI, digital twins, satellite applications, resilient infrastructure, as well as, geospatial governance, reinforcing the critical role of space and geospatial intelligence in shaping sustainable economies through a digitally-empowered strategy.



Opening Plenary

"Geography is never neutral; it carries history and, in many cases, deep inequality. In South Africa and across much of the Global South, space was shaped by systems of dispossession and exclusion. Democracy marked an important turning point, but not an endpoint—because political freedom alone does not resolve spatial injustice. Land reform is therefore not just administrative; it is a programme of redress rooted in spatial justice and constitutional responsibility. Geospatial capability is fundamental to this transformation, enabling us to rebuild systems that restore access, opportunity, and inclusion. True governance begins with knowing our territory—spatially, socially, and economically."

Mzwanele Nyhontso
Minister of Land Reforms and Rural Development, Republic of South Africa

"Geospatial industry is projected to reach $1.3 trillion by 2030, growing at 14–15% annually, driven largely by sovereign infrastructure,"Geography has always shaped civilization, and today it has evolved into a powerful geospatial ecosystem at the core of geoeconomics and geopolitics. In the Fourth Industrial Revolution, geospatial is no longer an enabler but fundamental infrastructure. The future of autonomy and robotics will rely on real-time 3D and 4D systems where maps are continuously created and consumed. Governments are shifting from regulators to facilitators, as digital twins and sovereign capabilities define competitiveness."

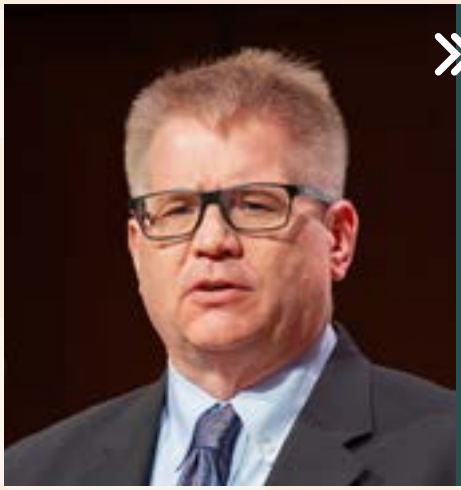
Sanjay Kumar
Chief Executive Officer, Geospatial World

"Digital sovereignty is no longer an abstract concept but a practical necessity in today's real-time world. Continuous, reliable and high-quality geospatial information is the backbone of evidence-based policymaking, shaping everything from real estate to public services and economic activity. As custodians of public registers, our responsibility goes beyond access; it is about trust, transparency and accuracy. Sovereignty means having control over data and reducing critical dependencies while safeguarding public trust and the rule of law. It does not mean isolation, but smarter collaboration built on shared values, resilience, and ethical innovation anchored in privacy, transparency and accountability."

Cora Smelik
Member of the Executive Board, Kadaster, The Netherlands

"I emphasized that geospatial infrastructure is no longer a supporting layer but core national infrastructure—on par with energy, finance, and connectivity. Nations that take ownership of their geospatial foundations, data, systems, and platforms gain an advantage that extends beyond technology into governance, resilience, and national capability. For the UAE, our focus has been on building coherence through trusted national reference data, unified platforms, and strong governance ensuring interoperability and accountability. When geospatial systems are integrated and reliable, they transform how governments plan, respond, and serve citizens—strengthening long-term national vision through continuity and commitment."

H.E. Gen Khalifa Al Romaithi
Chairman, FGIC, United Arab Emirates



"GIS is no longer just about maps. It is about understanding how the world works and how decisions are made within it. We have moved from building maps from scratch to working in a world where data already exists globally and is constantly evolving. GIS now scales from local projects to enterprise systems and into integrated spatial ecosystems that drive decisions across domains. Whether sovereign systems focused on control or cloud-native, AI-driven platforms, the direction is the same—more dynamic, more intelligent, more connected. At its core, GIS remains what it has always been: a way to help humans understand the world."

Damian Spangrud
Managing Director at Esri, USA

"Despite thousands of satellites orbiting Earth and generating vast amounts of data, the benefits of space infrastructure remain deeply uneven. We are not facing a scarcity of information, but an imbalance in how it is used—this is a governance gap, a capacity gap, and ultimately a sovereignty gap. Governments are surrounded by data yet often unable to convert it into decisions. The future depends on three shifts: trusted data with integrity and provenance, inclusive capability that turns technology into public value, and a mindset that embraces collaboration and shared responsibility. The true measure is not ownership, but resilience and lives protected."

Aarti Holla-Maini
Director, United Nations Office for Outer Space Affairs (UNOOSA), Austria

MAINSTAGE PLENARY SESSION 2

Spatial Computing and Digital Twins: Augmenting Space and Geospatial Value Chain

"Geospatial systems are no longer about isolated datasets; they are becoming integrated intelligence ecosystems serving multiple end users—from crisis management to food security and urban resilience."

Jeroen Zanen
CEO, AI InfraSolutions
The Netherlands

"Spatial computing is rapidly evolving through the convergence of AI, simulation, and physical systems—now actively applied in climate modelling, robotics, and generative environments."

Eng. Hasan AlHosani
CEO, Smart Solutions, Space42, United Arab Emirates

"The space and geospatial value chain transformation to driving simulation, visualization, and digital twin workflows at scale, where physical accuracy is becoming foundational."

Carlo Ruiz
Vice President, Enterprise Solutions & Operations, EMEA, NVIDIA, The Netherlands

"Across Europe, collaboration is growing, but interoperability remains uneven. The challenge is not intent, but execution at scale, where systems still evolve in parallel instead of in sync."

Jaan Saar
COO, European Digital Infrastructure Consortium for Networked Local Digital Twins towards the Citiverse, The Netherlands

Moderator

Ananyaa Narain
Vice President - Consulting, Geospatial World, India

MAINSTAGE PLENARY SESSION 3

Optimizing GeoAI and Digital Twins Towards Utilities and Network Management

"We are now surrounded by a data deluge. With sensors, satellites, and multiple acquisition platforms, data is no longer the constraint. The real challenge is making sense of it, fast enough, and at scale. This is where GeoAI becomes indispensable, as we scale research into national capability."

Nicolas Paparoditis
Dy Director General, National Institute of Geographic and Forest Information (IGN), France

"Governments didn't become the first computer manufacturers—and that lesson matters today. GeoAI and digital twins are at the peak of the hype curve, and leadership must stay realistic in the short term while recognizing long-term transformation potential. GeoAI is overhyped short term and underhyped long term."

Bhupinder Singh
Co-founder, EIRIS & Board Member, Magnasoft, India

"As AI, digital twins, and adaptive data move beyond experimentation, the focus is now on scale, execution, and real-world impact. These systems are already being deployed across global operations, not just conceptualized."

Mats Hultin
Former CIO at Ericson and Board Member, JSAN Consulting Group

"We need checks to ensure data is high quality, usable, and fresh. The real challenge is not just collecting data, but broadcasting, validating, and sustaining it at speed. As we move from strategy to execution in GeoAI, infrastructure and operational discipline become critical."

Garrett Synnott
Senior Director, Cognizant, USA

"The constraint is no longer technology; it is execution. As infrastructure becomes more complex and expectations around resilience, sustainability, and reliability increase, the real challenge is aligning systems, data, and stakeholders at scale."

Krishna Bodanapu
Executive Vice Chairman and Managing Director, Cyient

Moderator

Akanksha Tyagi
Senior Director, EMEA
Geospatial World

MAINSTAGE PLENARY SESSION 4

Space Infrastructure as a Service: Enriching Geospatial Platforms and Spatial Intelligence

"Space is shifting from launching satellites to building a resilient, service-driven infrastructure for Earth. Because no single nation controls the full space value chain, interoperability is essential. The future rests on continuity, resilience, and interoperability—creating a connected, intelligent orbital network that improves decisions and helps sustain our planet."

Dr. Motoyuki Arai
CEO, Synspective Inc. Japan

"India is reimagining its space sector as a driver of socio-economic development, not just a technological frontier. With an end-to-end ecosystem enabling Satellite-as-a-Service and Ground Station-as-a-Service, alongside private participation since 2020, India is scaling its space economy and opening it to innovation and investment under a balanced model of sovereignty and collaboration."

Anupam Anand
Joint Secretary, IN-SPACe, Department of Space (DoS), Government of India

"Space is moving beyond satellites and datasets into actionable, decision-ready intelligence that supports emergency response, infrastructure monitoring, and disaster management. With faster processing, in-orbit computing, and interconnected constellations, space is becoming on-demand and service-driven. The future is not about where data comes from, but how quickly it can be used."

C. Milena A. Lerario
CEO, e-GEOS, Italy

"Global systems, from navigation to emergency services, depend on satellite precision, which relies on the geodesy supply chain measuring Earth's shape, gravity, and rotation. Without it, satellite accuracy degrades and critical infrastructure suffers. Strengthening governance, capacity, and awareness is essential to sustaining the future of space."

Nicholas Brown
Head of Office, United Nations Global Geodetic Centre of Excellence, Germany

"From pixels to decisions, we are building Earth intelligence by integrating satellite constellations, multi-source data, and AI into a full-stack ecosystem powered by 'Earth Memory'—a living model of the planet that transforms data into actionable, automated decisions at scale for businesses, governments, sustainability, and resilient global operations."

Vishal Thiruvedula
Vice President, Product SatSure, India

Moderator

Vaishali Dixit
VP – Americas
Geospatial World

MAINSTAGE PLENARY SESSION 5

High-Definition Mapping and Visual Positioning Systems: NextGen Geospatial Platforms for Business Enterprises and Location Intelligence

"Mapping data is no longer just technical infrastructure. It is strategic national infrastructure that underpins sovereignty, trust, and interoperability. National mapping agencies are becoming foundational trust anchors in a real-time, AI-driven geospatial world."

Nick Bolton
CEO, Ordnance Survey, United Kingdom

"AI is transforming maps from static representations into intelligent, immersive systems, where spatial data, imagery, and real-world context converge to power navigation, mobility, and enterprise intelligence."

Miriam Daniel
VP & GM, Google Maps, USA

"In applications from micro-lending to utilities, the true value of HD maps and VPS lies in precision and not approximation."

Birendra Sen
President, Business Process Services, Tech Mahindra, USA

"We need common frameworks and shared schemas that reduce duplication and enable a truly connected mapping ecosystem through interoperable geospatial standards and unique identifiers."

Will Mortenson
EdD , Executive Director, Overture Maps Foundation, USA

"The shift is not about removing HD maps. It is about changing the economics of how maps are created, maintained, and scaled."

Mike Gilbert
VP Product Management, TomTom, Netherlands

"Maps are no longer standalone products—they are part of a broader data infrastructure layer. With AI and agents, spatial data usage is expanding rapidly."

Javier de la Torre
CSO, CARTO, Spain

Moderator

Archita Shaktawat
Director - Consulting
Geospatial World, India

MAINSTAGE PLENARY SESSION 6

Digital and Geospatial Infrastructure: Backbone for Resilient and Sustainable Development in Digital and Autonomous Age

"Measuring AI is as important as building it. As digital and geospatial technologies reshape economies, the real challenge is accurately capturing their impact on productivity, jobs, wages, and transformation in real time. Like past technology waves, true gains come later, but only if measurement systems evolve with them."

Ron Jarmin
Deputy Director
U.S. Census Bureau, USA

"We are increasingly faced with competing societal demands for the same scarce physical space—housing, agriculture, infrastructure, and nature. Geospatial intelligence is powerful, but its impact is limited when delivered as fragmented data rather than integrated solutions."

Friso Penninga
Director, Geonovum
The Netherlands

"Geospatial technologies and AI are no longer just mapping tools. They are becoming decision-making systems that enable faster, smarter, and more precise action across agriculture, industry, and global supply chains."

Christophe Yvetot
Representative to European Union, UNIDO, Belgium

"Countries do not lack innovation; they lack frameworks that turn ambition into execution and data into transformative leadership, enabling governments to move at the speed of private-sector innovation."

Sergio Fernandez de Cordova
Chairman, PVBLIC Foundation, USA

"The real challenge is not designing long-term spatial visions, but execution. Governance is what converts geospatial strategy into measurable impact on the ground."

Clinton Heimann
Director General, Department of Land Reforms and Rural Development, South Africa
& Co-Chair - UN-GGIM

"The real value of data is not in collecting it, but in using it meaningfully, through sharing, interoperability, and enabling AI to interpret it at scale."

Dejan Jakovljevic
CIO and Director, Digital FAO and Agroinformatics
& Chair - UN Geospatial Network, Italy

Moderator

Mark Reichardt
Senior Consultant
Geospatial World LLC

MAINSTAGE PLENARY SESSION 7

National Mapping Agencies: Anchoring Geospatial Industry Ecosystem and its Value Impact in National Development Priorities through Public-Private Partnership

The session was an innovative approach to a normal session, where twelve panellists representing the full spectrum of the geospatial and space ecosystem were divided into four groups of three. Each group elected a spokesperson per round (topic), who presented their collective perspectives to the wider panel and the audience. The session ran across multiple rounds, with each rotation tackling a distinct set of topics.

"Geospatial is no longer a support function—it is becoming central to governance, development, and economic value creation. We are at a critical inflection point where data, technology, and governance must evolve together."

Moderator

Sanjay Kumar
CEO, Geospatial World, India

Group 1 : Policy Makers

As geospatial data grows central to governance and security, policy makers are racing to build regulatory frameworks that balance data sovereignty and cross-border cooperation. The panellists brought high-level administrative perspectives, offering candid insights into how governments are aligning geospatial policy with rapidly evolving national priorities.

“Mapping agencies must place data at the core. The surge in geospatial and space data demands stronger capabilities, deeper collaboration, and new public–private monetization models to unlock real value.”

Srikant Sastri
Chairman, Geospatial Data Promotion and Development Committee, Dept of Science and Technology

“Geospatial directly drives national outcomes in dense urban environments through integrated systems like the ‘living asset map’, connecting citizens, services, and public good.”

Wenshan Yeo
Deputy Chief Executive (Development), Singapore Land Authority (SLA), Singapore

“AI, digital twins, and data spaces are enabling integrated decision-making across housing, energy, agriculture, and governance at national scale.”

Bob van Graft
MCM CGEIT CDPSE CCISO, Director - Spatial Information, Ministry of Housing and Spatial Planning, The Netherlands

Group 2: National Mapping Agencies

The custodians of national geographic truth are modernising fast while reimagining their mandate around real-time data and open framework assisted cartography while preserving accuracy and public trust. Panellists shared firsthand experience of steering legacy institutions through digital transformation without compromising the authoritative standards industries and governments rely upon.

“We are moving from geospatial infrastructure to intelligence. The UAE is building a fully integrated national geospatial ecosystem rooted in connectivity, trust, and real-time data to support a unified and reliable national framework.”

H.E. Eng. Eng. Anwaar Alshimmari
Executive Director, The Federal Geographic Information Center (FGIC), UAE

“In a vast landmass like Australia, the key role of national mapping agencies is to bridge commercial satellite data with policy needs, turning geospatial information into actionable intelligence for governance.”

Maree Wilson GAICD
Chief of Place & Communities Division Geoscience Australia

“With over 50 years of Landsat Earth observation, we are shifting from simple mapping to deep temporal analysis of planetary change, powered by AI, automation, and advanced geospatial platforms.”

Michael Tischler
Associate Director for Core Science Systems USGS, USA

Group 3: IT, Earth Observation & Geospatial Platforms

Converging satellite technology and AI is democratising geospatial intelligence, shifting earth observation from specialist tool to scalable, real-time backbone of global decision-making. The panellists offered sharp technical perspectives on building platforms that are not only powerful, but interoperable and accessible that is ready for deploying at scale.

"The industry is entering a new phase driven by AI agents and autonomous systems, where the key governance challenge is ensuring human oversight and accountability as geospatial operations become increasingly automated."

Siva Ravada
Vice President, Oracle, USA

"In today's interconnected world, sovereignty cannot be achieved in isolation. It requires deliberate and sustained strategic alignment between all the stakeholders."

Joao Bentes
Head of Institutional Affairs
GEOSAT, Portugal

"National mapping agencies must clearly demonstrate their value and ensure robust, structured geospatial datasets that serve as trusted foundations for AI and machine-driven systems."

Erik Jorgensen
Chairman, Vexcel Data Program, USA

Group 4: System Integration & Solutions

Translating geospatial ambition into operational reality means confronting legacy infrastructure. The integrators on this panel were aware that execution is where innovation is truly tested. Panellists drew on real-world deployment experience to highlight what it genuinely takes to deliver integrated geospatial solutions across demanding, large-scale environments.

"The rise of platform-driven geospatial ecosystems, where interoperable digital architectures and integrated software systems are essential to operationalize geospatial intelligence at scale across sectors."

Avinash M.V.
Senior Vice President, DSM Soft, India

"Geospatial industry is a global ecosystem and our work as an industry is foundational and important to society, national security, and economy. We cannot work at scale without universal alignment and collaboration."

Neil Churman
CEO, Woolpert, USA

"The industry's evolution within the $1.2 tn opportunity space requires the understanding of bridging the population divide through partnerships and new business models. Land is a transformative asset, central to economic empowerment and social impact."

Willy Govender
CEO, Vast Point, South Africa

MAINSTAGE PLENARY SESSION 8

Hydrospatial Infrastructure and Blue Economy

"We are investing billions to understand the moon while we still know remarkably little about our oceans, which regulate climate, generate oxygen, absorb excess heat, and sustain life on Earth. Without large-scale ocean data, governments are making critical infrastructure and climate decisions without the baseline intelligence required for resilience and sustainability."

Mark Heine
CEO, Fugro, The Netherlands

"Hydrospatial infrastructure cannot be treated as an isolated technical system because oceans transcend national borders. True progress depends on globally harmonized standards, interoperable data models, and international cooperation. A navigator anywhere in the world must rely on consistent, trusted marine information regardless of jurisdiction or geography."

Jonathon Pritchard
Senior Technical Manager, IIC Technologies

"The challenge facing ocean governance is no longer a standards problem; it is fundamentally a data infrastructure problem. The frameworks already exist, but countries must recognize marine data collection as a national economic investment because safe navigation, offshore energy, fisheries, and climate resilience all depend on reliable ocean intelligence."

John Nyberg
Director, International Hydrographic Organization (IHO), Monaco

"The ocean is not static—it is dynamic, interconnected, and constantly evolving. Building effective hydrospatial infrastructure requires integrating bathymetry, environmental conditions, marine ecosystems, and human activity into a unified geospatial knowledge framework that enables informed, sustainable, and data-driven global decision-making."

Dean Angelides
Managing Director, International, Esri, USA

Moderator

Greg Scott
Executive Director, SDG Data Alliance, PVBLIC Foundation Australia

MAINSTAGE PLENARY SESSION 9

Geo-Technical Engineering and GeoBIM: Advancing Resilient and Sustainable Infrastructure

"Geospatial intelligence combined with AI is transforming urban governance in Saudi Arabia by improving service delivery, enhancing parcel accuracy, enabling digital citizen services, and supporting data-driven planning for smarter and more sustainable cities."

Faisal Al-Foriah
General Manager Of Geographic Information Systems Department, Eastern Province Municipality, Kingdom of Saudi Arabia

"Integrating GeoBIM and geospatial intelligence into engineering standards is essential for future-ready infrastructure. These technologies accelerate project delivery, improve coordination, strengthen subsurface risk management, and enable more resilient, efficient, and climate-responsive infrastructure design and operations."

Seng-Chuan Tan
President, World Federation of Engineering Organization, Singapore

"Knowing what infrastructure exists is not enough; we must also know precisely where it exists and how accurately it is mapped. BIM and geospatial systems are individually intelligent, but without interoperability and trusted integration, cities risk making critical planning and operational decisions on fragmented or unreliable information."

Digvijay Singh
President & GM- Geospatial Business GCC, NeoGeoinfo Technologies, India

"High-resolution reality capture is becoming foundational for resilient infrastructure planning because it connects real-world conditions with digital models. As climate risks intensify, governments and infrastructure operators increasingly rely on precise geospatial intelligence to improve asset management, enhance situational awareness, and build reliable digital twin ecosystems."

Piers Dormeyer
CEO, Eagleview, USA

"Cities do not begin with technology; they begin with real urban challenges such as mobility, climate resilience, air quality, and infrastructure management. Geospatial data becomes valuable when it supports collaborative governance, interoperable systems, and inclusive decision-making that ensures all stakeholders participate from the beginning of the process."

André Sobczak
Secretary General Eurocities, Belgium

Moderator

Titas Roy
Industry Manager - Infrastructure Geospatial World, India

MAINSTAGE PLENARY SESSION 10

Sovereign Space and Geospatial Infrastructure for National and Regional Security

"Infrastructure sovereignty is built through a unified European space ecosystem that combines science, Earth observation, meteorology, and commercial and national missions to strengthen autonomy, resilience, and secure data sharing."

Nicolaus Hanowski
Head of the European Space Agency's (ESA) Earth observation satellite missions, European Space Research Institute (ESRIN), Italy

"Without integrating provincial, municipal, national, and international data, people make decisions on stitched-together data rather than on quality-assured authentic sources."

Ingrid Vanden Berghe
Administrator General, National Institute of Geography, Belgium

"Sovereignty includes the economic component, resilience, and also taking a collaborative approach regionally and globally. It's not anymore just about a system built, a satellite launched, or geospatial data produced."

Ali Al Shehhi
Director General, National Space Science and Technology Centre, UAE

"Countries want to have their entire end-to-end solution within their organization. If I want to be sovereign, I need to own the source code. I need to own the satellite."

Abhay Mittal
CEO, Aetosky, Singapore

"A few years ago, some people still saw space as an expensive toy. In the Netherlands, that has changed. It is now seen as a strategic asset."

Coco Antonissen
Director Space Applications, Netherlands Space Agency, The Netherlands

Moderator

Aravind Ravichandran
Founder & CEO
TerraWatch Space
France

MAINSTAGE PLENARY SESSION 11

Policies and Legal Framework: Realigning National Strategies and Business Models in times of Geo-political Transition and Trade Practices

"National mapping agencies may have a national remit, but to address today's challenges we need to work at a regional and global level, relying on sovereign, trusted, and authoritative data across boundaries."

Sallie Payne
Secretary General, EuroGeographhics, Belgium

"Geo-information is no longer a niche. It has become part of critical workflows, digital twins, machine-driven systems, and national decision-making infrastructures."

Paul Becker
President (Retd.), Federal Agency for Cartography and Geodesy, Germany

"What we saw evolving over the last years was this appetite, this almost needing countries to get that data stack and to operate that data stack."

Martin Langer
CEO, OroraTech, Germany

"We're very fortunate in the United States that we do have the Geospatial Data Act of 2018 because it does help anchor us, especially within the federal government, in our production of geospatial information management."

Deirdre Bishop
Associate Director - Economic Programs, US Census Bureau, USA & Co-Chair - UNGGIM

"One of the things that we are struggling more with is all related with airspace fragmentation in Europe because we have common rules for space, but we do not have homogeneous implementation of those rules."

Marcos Martinez
Secretary General, European Association of Aerial Surveying Industries (EAASI), Spain

Moderator

Ananya Narain
Vice President – Consulting, Geospatial World, India

AEC (Architecture, Engineering, and Construction) Summit

The AEC Summit focused on redefining infrastructure through the integration of geospatial data, BIM, and digital twins. The summit moved beyond digital adoption toward scalable implementation and measurable value creation across urban and transport sectors. Global leaders established a roadmap for resilient, future-ready infrastructure built on standardized data governance and integrated digital ecosystems.

KEY TAKEAWAYS

Evolution from Physical Assets to Data Ecosystems: The summit opened with a call to shift infrastructure from static physical entities into intelligent, data-driven ecosystems. This involves a "Decision Intelligence Loop" where a continuous cycle of Data → Intelligence → Decision → Action creates national-scale resilience.

The Transition from AEC to AECG: A core strategic thesis presented was the elevation of geospatial data to a co-equal discipline alongside architecture, engineering and construction. By integrating these domains, infrastructure design is "born" into a living digital context, ensuring continuity from planning through the entire asset lifecycle.

Converged Intelligence via GeoAI and Physics-AI: Innovation in next-gen infrastructure now relies on the convergence of four domains: geospatial, BIM, IoT, and operational systems. While GeoAI provides the spatial context, Physics-AI enables real-time behavioural simulations that replace traditional, slow modelling processes.

Standardizing a Digital Twin Hierarchy: Discussions established a three-level framework for digital twins: Level 0 (Geospatial/Terrain), Level 1 (Infrastructure/BIM assets), and Level 2 (Operational/IoT sensors). This hierarchy serves as a foundational "operating system" for managing both the built and natural environments.

Predictive Resilience and National Sovereignty: Resilience was reframed


CASPAR DE JONGE


KETI KAPANADZE


NITIN PANDE


DAN LITTLE


HENK SCHOLTEN


SENG-CHUAN TAN


WEIYI DING


ANWAAR AL SHIMMARI

from reactive protection to predictive adaptation, focusing on forecasting disruptions such as climate risks before they occur. Furthermore, digital sovereignty was highlighted as an inseparable component of physical and national security.

Digital Transformation Roadmap: Technical sessions focused on the transition from traditional, siloed project delivery to integrated, lifecycle-oriented development. This workshop explored practical applications of reality capture, AI, and advanced analytics in improving project safety and performance.

The Criticality of openBIM and Interoperability: A dedicated session on international standards emphasized that scaling digital infrastructure requires openBIM to ensure long-term data usability. Interoperability is viewed as a strategic necessity to reduce vendor lock-in and maintain reliable data flow from construction into decades of maintenance.

Agentic AI and Natural Language Data Access: New agentic AI architectures are lowering the technical barriers for urban planning. By utilizing planning and execution agents, non-technical users can now query complex urban datasets—such as infrastructure density or environmental factors—using natural language.

Organizational Change as the Primary Enabler: A recurring technical takeaway was that the success of digital transformation is 75% dependent on organizational and cultural change and only 25% on technology. Effective ecosystem-wide governance and trust are the final prerequisites for moving from static data to dynamic "living" urban systems.


JULIEN HOFER


ROLAND VAN DER HEIJDEN


(L-R) AIDAN MERCER, ANOUK VAN OTTERLO, BART BRINK


JAMES CK TAN


RAJ KUMAR KHATRI

Urban Infrastructure

The second day Summit commenced with specialized thematic presentations across dual halls to address distinct infrastructure domains. The sessions were dedicated to the digital transformation of urban infrastructure and the built environment.

L-R ASMAA ABOULEISH, LINDA TER HEERDT, DMITRI GARBUZENKO

VICKI REYNOLDS

GUILLERMO CORRAL COMERAS

MILA KOEVA

LIM WEE BENG

MOHAMAD ALNASSER

TAREQ LATAYFEH

KEY TAKEAWAYS

Mitigating Information Decay at Handover: Technical discussions highlighted that nearly 30% of capital project effort is lost finding or recreating information that often "dies" at the point of handover.

Unified Digital Asset Frameworks: Experts proposed a four-layer technical architecture consisting of a robust data foundation, a live federated digital twin, an intelligence layer for simulation, and a dashboard for autonomous action.

Transition to Predictive Operations: The crux of the discussion centred on using AI to identify failure signatures and demand patterns, which can lead to a 40% reduction in unplanned downtime and a 25% cut in maintenance costs.

Data as a Strategic Capital Asset: On mega-scale projects, information requirements must be embedded in procurement from day one, treating the digital twin as the asset itself.

Trustworthy and Explainable Frameworks: The panel shared perspectives on the necessity of moving beyond technical innovation toward AI models that are accountable, explainable, and aligned with the public interest.

Balancing Innovation with Governance: Dialogue focused on the requirement for strict data governance to address inherent risks such as data bias, safety, and regulatory compliance in automated urban decision-making.

Evolution to Generative Spatial Reasoning: This session explored the shift from reactive mapping toward AI-empowered digital twins capable of dynamic scenario generation and proactive "opportunity finding".

Multi-Domain Analytical Engines: Technical highlights included the development of architectures that support simultaneous simulations across domains like energy, transport, and air quality to reveal cross-sectoral trade-offs.

Quantifying Human Perceptual Qualities: Through semantic segmentation of street-view imagery, urban environments are being analysed using calculated metrics for "Enclosure," "Complexity," and "Human Scale" to drive evidence-based design.

Digital Sovereignty and Data Spaces: The concluding crux of the discussion focused on the importance of secure, sovereign data spaces to ensure interoperability and standardized governance across international urban ecosystems.


ATAKAN GUVEN


MANI DHINGRA


DESSISLAVA PETROVA ANTONOVA


ELLIOT HARTLEY


KARINA AMALBERT


ABDELRAHMAN ABOUHADID


DENNIS DOKTER

Transport Infrastructure

The second day of the AEC Summit transitioned into the specific operational realities of "Transport" infrastructure, focusing on the technical integration of maritime, road, subsurface, and rail systems.


CHRISTIAN SCHLOSSER


FILIPE PINTO


CEDRIC MARCHAND


ADRIEN FRIESEN


INDAH NURCAHYANI


PETER HELLINCKX


GARETH BARKER


SHERVIN YOUSEFZADEH


CHERYL WHEELER


DIMI PIRONKOVA


ELWYN VAN ZANTEN


MARCUS RADEMAKER

KEY TAKEAWAYS

Transition from Single-Transaction to Continuous Value Models: A major technical shift was proposed where data is no longer treated as a one-time project deliverable but as a reusable asset that must be governed, disseminated, and repeated across the entire infrastructure lifecycle to maximize ROI.

Ports as Intelligent "Neural" Substrates: Discussions centred on transforming ports from static gateways into smart hubs by using GIS as a "neural substrate" and knowledge graphs as structured memory, enabling cross-organizational intelligence for energy transition and spatial scarcity.

Mitigating the Subsurface "Blind Spot": Experts identified a broken "data-to-wisdom" pipeline in geotechnical engineering, advocating for structured workflows and national registers to convert late-stage data into proactive knowledge before it becomes a liability in the energy transition.

Standardized Identity as the Digital Backbone: For massive rail and transport upgrades, the crux of the discussion was that spatial twins are incomplete without vendor-neutral, persistent global identifiers that can survive organizational changes over decades.

360° Data-Driven Lifecycle Integration: The summit highlighted the need to replace fragmented lifecycles with a unified ecosystem where design data flows seamlessly into construction sensors, which then feed real-time digital twins for predictive maintenance.

Operationalizing Trusted Digital Practices: A recurring theme from a contractor's perspective was that sustainable transformation is not defined by pilot success but by the ability to move away from isolated innovation toward scalable, organization-wide workflow integration.

Unified Digital Investment Portals: Flagship national platforms demonstrated how integrating live 3D maps and infrastructure visualization can replace fragmented, paper-based processes to support an investor's entire journey in a single digital environment.

Predictive Maintenance through Reality Capture: The use of computer vision for automated asset inventory and linking defects directly to 3D models (such as on the King Fahd Causeway) was proven to save up to 20% in engineering time and 25% in future inspection costs.

Geospatial Knowledge Infrastructure Summit

The GKI Summit empowered geospatial data and technology users to enable broader economic use by representing a new paradigm in how nations collect, manage, and use geospatial data to drive informed decision-making. The discussions to strengthen the integration of data governance, digital platforms, policy frameworks, and human capital through GKI took place. The goal was to create an ecosystem that supports innovation and resilience for economic development as well as national security.


ANANYA NARAIN


MARKUS JOBST


NICHOLAS JAMES BROWN


JAMES NORRIS


SARVADANAND BARNWAL


MAROALE MIMI MARTHA CHAUKE

KEY TAKEAWAYS

Tokenization of Geospatial Data Assets: Tokenization introduces secure, traceable digital ownership of geospatial datasets, enabling fractional access, controlled sharing, and new revenue streams while ensuring transparency, provenance tracking, and trust in increasingly decentralized data ecosystems.

Resilient IT Architectures for Data Security: Future geospatial platforms require resilient, scalable IT infrastructures designed to withstand bot attacks, bandwidth surges, and cyber threats, ensuring continuous availability, data integrity, and reliable performance for mission-critical applications.

Data Licensing Frameworks for AI Integration: As AI systems increasingly rely on geospatial data, flexible licensing frameworks are needed to regulate access, ensure compliance, protect ownership rights, and enable responsible, scalable use of spatial data by autonomous agents.

Future-Ready Geospatial Business Models: The evolution of geospatial ecosystems demands innovative business models centered on data-as-a-service, subscription platforms, and value-added analytics, enabling sustainable growth while aligning with rapidly changing user demands and digital transformation trends.

Cross-Disciplinary Governance Dialogues: Developing sustainable geospatial ecosystems requires collaboration between legal experts, economists, and financial professionals to design governance structures, funding strategies, and regulatory frameworks that balance innovation, risk, and long-term societal value.

Geospatial as a Strategic Decision Support System: Geospatial technologies are becoming essential decision-support tools, enabling governments and organizations to integrate spatial intelligence into planning, policy-making, and real-time operations for improved efficiency, responsiveness, and evidence-based outcomes.

Geospatial Data as a National Economic Asset: Governments increasingly view geospatial data as strategic national infrastructure, supporting economic growth, innovation, and resilience, while strengthening competitiveness through informed decision-making, infrastructure planning, and resource optimization.

Interoperable and Connected Data Ecosystems: Building interoperable geospatial ecosystems through standardized frameworks enhances data sharing across institutions, improves coordination, reduces duplication, and ensures that spatial information is accessible, reliable, and usable for diverse applications.

Transformation of National Mapping Agencies: National Mapping Agencies are evolving into digital service providers, offering dynamic data platforms, real-time information services, and advanced analytics, significantly expanding the adoption and impact of geospatial technologies across sectors.

Foundational Role of Geodesy and Positioning Infrastructure: Geodesy and positioning systems form the backbone of digital economies, enabling accurate navigation, telecommunications, transportation, and scientific monitoring, while supporting emerging technologies that rely on precise spatial referencing.

Defence & Intelligence Summit

The Defence & Intelligence Summit highlighted the transformation of modern warfare into an intelligence-driven, multi-domain ecosystem powered by GEOINT and the full suite of modern technologies such as AI, upgraded cyber capabilities, and sovereign space infrastructure. The discussions underscored how structure resilience and interoperability are redefining defence strategies, accelerating the shift toward autonomous systems across battlespaces.

(L-R) JOSHUA CAMPBELL, COLIN WELLBORN, JARA VILLANUEVA, AURELIEN DEBIEVRE, MICHAL BYLICKI

KEY TAKEAWAYS

GEOINT is Now Central to Modern Warfare: Geospatial intelligence is no longer a supporting capability, it now powers the entire decision cycle of multi-domain operations by integrating location, time, events and operational intent into a unified operational scenario.

Future Conflicts Will Be Won Through Information Superiority, Not Just Firepower: The summit reinforced that strategic advantage increasingly depends on the ability to sense, process, analyze, and act on data faster than adversaries across contested and highly dynamic operational environments.

Ukraine Has Become the Global Laboratory for Modern Warfare: The Russia–Ukraine conflict demonstrated how drones, commercial satellite imagery, electronic warfare, AI-enabled targeting, and software-driven adaptation can redefine battlefield economics and operational doctrines in real time.

Multi-Domain Operations Require Seamless GEOINT Integration Across All Domains: Land, air, sea, cyber and space operations are becoming deeply interconnected, making shared spatial-temporal awareness and real-time interoperability essential for coordinated mission execution.

Interoperability is No Longer a Technical Challenge, it is a Strategic Necessity: Coalition warfare depends on trusted data exchange, common standards, secure architectures, and continuous operational synchronization between allied militaries, governments, NATO structures, and private-sector providers.

The Battlespace is Expanding Beyond Physical Terrain into Digital and Cognitive Domains: Hybrid warfare, cyber operations, disinformation, signal denial, spoofing, and AI-enabled influence campaigns are increasingly

VICE ADMIRAL BEN BEKKERING

MARTIN CAUCHI INGLOTT

PIETER DECKER

V. S. SUBRAHMANIAN

COL (DR) ANUPAM TIWARI

shaping geopolitical outcomes alongside conventional military capabilities.

Space is Transitioning from a Support Layer to an Active Warfighting Domain: The emergence of the "Fourth Space Age" reflects how orbital infrastructure, ISR constellations, positioning systems, and satellite communications are now critical strategic assets requiring protection, resilience, and sovereign control.

Sovereign Space and Geospatial Capabilities Are Becoming Strategic Priorities for Nations: Countries are accelerating investments in indigenous GNSS, Earth Observation, ISR, secure communication networks, and sovereign data ecosystems to reduce dependence on foreign infrastructure and intelligence pipelines.

AI is Driving the Shift Toward Predictive, Autonomous, and Adaptive Warfare: Defence systems are rapidly evolving from reactive models to AI-enabled architectures capable of predictive analytics, autonomous targeting, conversational intelligence, and accelerated operational decision-making.

Drone Warfare Has Permanently Altered Military Doctrine: Unmanned systems have evolved from support assets into primary strike platforms, enabling mass precision, persistent surveillance, distributed attacks, and low-cost battlefield dominance at unprecedented scale.

Counter-UAS Strategies Are Moving Toward Layered and AI-Driven Defence Architectures: Modern C-UAS ecosystems now combine radar, RF intelligence, EO/IR sensors, cyber capabilities, directed energy systems, interceptor drones, and AI-powered engagement systems into integrated defence networks.

The Electromagnetic Spectrum Has Become a Critical Battlefield: Electronic warfare, GPS denial, RF jamming, spoofing, and signal disruption are shaping operational effectiveness, forcing militaries to develop resilient navigation, communication, and targeting architectures.

COL PATRICK BOLDER

IAN SPENCER, EMLYN HAGEN, MICHAEL ZINKANELL-SUSS, M.A., JURAJ MAJCIN

COL (DR) ANUPAM TIWARI, LT COL AMANDEEP SINGH, SANJAY KUMAR, V. S. SUBRAHMANIAN

COL HARINDERJIT SINGH

LT GEN CORNELIS JOHANNES (KEES) MATTHIJSSEN , LT COL AMANDEEP SINGH, ROBERT KERBY, MARTIN PENTIER

Commercial Space and Private Industry Are Reshaping Defence Innovation Cycles: Commercial EO constellations, SAR systems, hyperspectral imaging, AI analytics, and integrated ground infrastructures are enabling faster deployment, scalable intelligence access, and more resilient operational architectures.

Cyber-Geospatial Convergence is Redefining National Security: The integration of cyber defence, geospatial intelligence, positioning systems, AI, and digital infrastructure is creating a new security paradigm where protecting digital borders becomes as critical as defending physical territory.

Resilience Has Become the Central Principle of Future Defence Architectures: From proliferated satellite constellations and distributed ISR systems to decentralized command structures and adaptive networks, resilience and continuity are now foundational requirements for modern military operations.

Hydrospatial Infrastructure & Blue Economy Seminar

The Hydrospatial & Blue Economy seminar explored how hydrospatial intelligence and interoperable maritime ecosystems are reshaping ocean governance by building resilient trade systems and sustainable marine development. The discussions focused on the growing role of standardized hydrographic frameworks, real-time ocean observation networks, and geospatial intelligence in enabling climate-resilient ports, through adaptive coastal planning, and data-driven stewardship of the blue economy.

L-R AKAASH S, GREGORY HAY, NIRDESH KUMAR SHARMA, THOMAS CHENWORTH, FRIEDHELM MOGGERT KAGELER, DANA J. CACCAMISE, JOHN NYBERG, MICHAEL TISCHLER, JEFFREY LENARD, JON PYE

KEY TAKEAWAYS

Hydrographic Sovereignty & Hydrospatial Standards as Governance Backbone: The seminar reinforced that sovereign control of marine data, nautical charting, and bathymetric intelligence remains foundational for national maritime governance, while IHO S-100 and related standards enable interoperability, scalability, and expansion of hydrospatial systems beyond navigation into offshore energy, marine spatial planning, and disaster response.

Integrated Ocean Observation Networks as the Real-Time Intelligence Layer: Large-scale Ocean tracking systems, autonomous monitoring networks, and cross-border observation platforms demonstrated how continuous, multi-source marine data streams support evidence-based policy, ecosystem monitoring, and operational decision-making across scientific, environmental, and governance domains.

The development of ocean digital twins highlighted a shift from static data repositories to dynamic simulation environments where satellite, sensor, vessel, and model-based inputs are fused to enable forecasting, scenario testing, disaster response planning, and adaptive ocean governance.

Interoperable Maritime Data Ecosystems for Crisis and Operational Resilience: Enterprise GIS and maritime operational systems showed that unified common operating pictures, real-time data integration, and interoperable architectures can transform routine maritime management into mission-critical response capability during high-impact events and emergencies.

Standardized Port Data Exchange as a Foundation for Global Shipping Efficiency: Port call optimization frameworks and harmonized data standards underscored the necessity of consistent terminal, berth, and vessel movement data

HERMEN M. WESTERBEEKE

CAPT BEN VAN SCHERPENZEEL

JOHN NYBERG

MARTIN CAUCHI INGLOTT

HERMEN M. WESTERBEEKE, NUNO RODRIGO SILVA, CAROLINE LEVEY, RAJESH ASATI, CAPT BEN VAN SCHERPENZEEL

across ports, enabling synchronized communication, reduced fragmentation, and improved coordination across global maritime supply chains.

S-100 Hydrospatial Architecture and Next-Generation Digital Harbour Systems: The evolution of S-100 based systems and API-driven marine infrastructure demonstrated how standardized hydrospatial frameworks and digital harbour models are enabling interoperable marine data exchange, supporting e-navigation, and strengthening global maritime digital transformation.

Geospatial Intelligence as Core Infrastructure for Smart Ports and Trade Systems: Modern port ecosystems are increasingly dependent on integrated geospatial intelligence that merges hydrography, infrastructure, navigation, and environmental data, enabling predictive maintenance, dredging optimization, risk reduction, and climate-resilient port planning.

Climate Risk, Flood Adaptation, and Scenario-Based Infrastructure Planning: Advanced modeling platforms highlighted the growing complexity of coastal flood risk under non-stationary climate conditions, where scenario-based decision systems are becoming essential for evaluating long-term infrastructure resilience, investment strategies, and adaptive coastal planning.

POOJA MAHAPATRA, PRATAP SINHA, FLAVIA CAVALIERE, JYOTI ROHODIA, MEGHNA SENGUPTA, BJORN BACKEBERG

Blue Economy Transition Through Sustainable Aquaculture and Ecosystem Management: Sustainable aquaculture systems and coastal resource management frameworks emphasized the need to balance productivity with ecological constraints, integrating scientific management, water quality monitoring, and agroecological practices to improve resilience, livelihoods, and food security.

Earth Observation and Coastal Intelligence for Ecosystem and Resource Sustainability: High-resolution satellite systems and geospatial analytics are increasingly critical for monitoring coastal degradation, blue carbon ecosystems, and water quality dynamics, enabling continuous environmental intelligence for conservation, compliance, and sustainable marine development.

Utilities & Networks Seminar

The Utilities & Networks seminar positioned geospatial intelligence at the heart of digital energy transformation, and climate imperatives, enabling real-time visibility, predictive control, and strategic planning across power generation, transmission, and distribution. From securing critical infrastructure to optimizing smart grid performance and advancing global grid cooperation, the summit provided a collaborative platform for all who participated in the summit to architect the next-generation energy systems.

KEY TAKEAWAYS

Spatial Intelligence is Becoming the Foundation of Critical Infrastructure Resilience Utilities and network operators must move beyond static asset mapping toward dynamic, real-time spatial intelligence systems that enable predictive decision-making, risk anticipation, and faster response to disruptions caused by climate events, urban expansion, and ageing infrastructure.

Digital Twins are Transitioning from Pilot Projects to Strategic Operational Platforms: Across power, water, and telecom sectors, digital twins are rapidly evolving into enterprise-wide operational systems that support scenario modelling, infrastructure planning, resilience testing, and lifecycle asset management.

Resilience Planning Requires Integrated Geospatial and Operational Data Ecosystems: The future of resilient infrastructure lies in the convergence of GIS, SCADA, IoT, BIM, AI, and enterprise systems into unified data environments that enable utilities to operate with greater situational awareness and coordination.

Sovereign Infrastructure and Trusted Data Ecosystems are Emerging as National Priorities: As utilities and communication networks become increasingly digital, nations must strengthen sovereign control over critical infrastructure data, network security, interoperability standards, and governance frameworks to ensure long-term operational trust and resilience.

AI-Driven Predictive Intelligence Will Redefine Utility Operations: Artificial intelligence is shifting utility management from reactive maintenance to predictive operations through automated outage forecasting, asset health monitoring, anomaly detection, and demand prediction capabilities.

Energy Transition Demands Geospatially Enabled Grid

VATTEM NARENDRA BABU

TIES DAMMERS

HARRY VAN ZEIJTS

SUVI-TUULIA HAAKANA


ABDOURAHMANE TAHIR


ELISABETH LICTEVOUT


ERWIN VONK


ELOISE THAISEN


ALEXANDER WORP


RAMAKRISHNA MULUKUTLA


JOHANNES WEIGEL


SUKANTA JENA


ANIL RAWAL

Modernisation: The integration of renewable energy sources, distributed energy resources, and decentralized grids requires advanced geospatial planning tools to manage transmission constraints, optimize network capacity, and address grid congestion challenges.

Digital Power Twins are Critical to Managing Future Grid Complexity: Power utilities must adopt digital power twins to simulate grid behaviour, evaluate resilience scenarios, improve renewable integration, and support real-time operational optimization in increasingly volatile energy ecosystems.

Water Utilities Must Shift from Asset Visibility to Intelligent Network Management: Future-ready water systems will rely on GIS-enabled digital water twins, smart metering, IoT sensors, and AI-based analytics to reduce non-revenue water, strengthen climate resilience, and improve service delivery efficiency.

Climate Resilience Must be Embedded into Infrastructure Planning from the Start: Utilities can no longer treat climate adaptation as a separate agenda. Infrastructure planning, expansion strategies, and investment decisions must integrate climate risk intelligence, urban growth modelling, and long-term sustainability metrics.

Telecom Networks are Becoming a Strategic Layer of National Infrastructure: With the expansion of 5G, edge computing, and future 6G ecosystems, telecom infrastructure requires advanced spatial planning, predictive maintenance, and resilient network design to support digital economies and national security objectives.

Interoperability and Data Sharing Will Determine the Success of Digital Transformation Initiatives: The seminar highlighted the urgent need for open standards, interoperable platforms, and collaborative governance models that enable seamless integration and secure sharing of geospatial and operational data across agencies and infrastructure sectors.


AMAN CHAUDHARY

Scaling Digital Transformation Requires Leadership, Policy Alignment, and Capacity Building: Technology adoption alone is not sufficient. Successful digital transformation in utilities and networks will depend on institutional readiness, skilled workforce development, cross-sector collaboration, and policy frameworks that support innovation at scale.

Agriculture Seminar

The Agriculture Seminar explored how geospatial AI, Earth Observation, and multimodal analytics are reshaping agriculture into a predictive and resilient ecosystem. The discussions emphasized the emergence of integrated "soil-to-supply-chain" intelligence systems that combine precision agriculture and collaborative digital ecosystems to strengthen the entire supply chain of agriculture, as well as, giving deeper insights for better agri-governance.

DANIEL LEVELT, SEBASTIEN GIORDANO, MARK NOORT, HARSH SHAH, KIRK M STUEVE, PHD, TAMME VAN DER WAL, BERT VAN DER HEIDE, EMILY CHIH

KEY TAKEAWAYS

Geospatial AI is rapidly transforming agriculture from reactive to predictive decision-making: Across the seminar, speakers emphasized that satellite imagery, AI, and spatial analytics are enabling real-time monitoring of crops, soils, water, and environmental risks. The shift is moving agriculture from "guesswork" and periodic inspections toward continuous, data-driven intelligence.

The focus is shifting from productivity alone to resilience and sustainability: Multiple presenters highlighted that the future of agriculture must balance productivity with climate resilience, biodiversity protection, regenerative farming, soil health, water efficiency, and long-term sustainability. Digital agriculture is increasingly viewed as a tool for enabling sustainable food systems.

Trusted, explainable, and actionable intelligence matters more than simply generating more data: A recurring discussion point was that farmers and institutions do not need more maps or datasets; they need reliable, explainable insights delivered at the right time to support operational and strategic decisions across the agricultural value chain.

Remote sensing and AI are becoming essential tools for large-scale agricultural monitoring: Presentations demonstrated how Earth Observation technologies can monitor crop health, growth stages, irrigation, soil moisture, pest risks, harvest readiness, and land-use changes across vast geographies with high accuracy and reduced dependency on field inspections.

Multimodal AI models are significantly improving agricultural analytics and forecasting accuracy: Speakers showcased advanced AI architectures that integrate optical imagery, SAR, weather, climate, topography, and field-level datasets. These multimodal approaches improve crop classification, yield

TAMME VAN DER WAL

ANDY SHAW

SEBASTIEN GIORDANO


MARK NOORT


HARSH SHAHA

estimation, cloud removal, disease detection, and agricultural practice monitoring.

Digital agriculture can directly strengthen food security and reduce post-harvest losses: Several case studies highlighted how AI-driven crop intelligence can help address food insecurity by optimizing production, improving storage planning, reducing crop disease impacts, and minimizing post-harvest losses in crops such as potatoes, sugarcane, rice, bananas, and cereals.

Precision agriculture is delivering measurable operational and economic benefits: Real-world deployments presented during the seminar demonstrated outcomes such as:

- Increased crop yields
- Reduced water and pesticide usage
- Faster crop surveys and inspections
- Improved harvest planning
- Lower operational costs
- Better grower engagement and trust

Climate adaptation is emerging as a core application of geospatial technologies in agriculture: Climate-related risks including drought, flooding, heat stress, pests, and crop disease were identified as major threats to agriculture. Solutions such as ADAPTA-IF demonstrated how integrated climate and EO systems can support early warning, climate advisories, and long-term adaptation planning.

Government policy, public-private collaboration, and ecosystem partnerships are critical for scaling digital agriculture: Discussions highlighted the importance of innovation ecosystems involving governments, research institutions, startups, agribusinesses, and farmers. Examples such as the Netherlands' "Dutch Diamond" model showed how collaborative frameworks accelerate adoption, reduce risk, and build trust.

The future of agriculture will depend on integrated "soil-to-supply-chain" intelligence systems: The seminar collectively emphasized that the next phase of agricultural transformation will involve linking farm-level geospatial intelligence with logistics, market systems, insurance, sustainability reporting, and supply-chain management. Spatial intelligence is increasingly becoming a foundational layer for future agri-food systems and governance.

Climate Resilience and Disaster Management Seminar

The Climate Resilience and Disaster Management seminar convened global stakeholders to advance solutions for climate adaptation and disaster response. Leveraging the full suite of geospatial and allied technologies, including AI, and IoT, it discussed bridging forecasts to action, aligning crucial goals with sustainable infrastructure and energy management for resilient urban ecosystems.

JENNIFER MARLON

ELENA FIELD

KEY TAKEAWAYS

Financial health and social vulnerability are critical metrics for resilience: Resilience is built by people rather than just physical assets, and social vulnerability must be recognized as a significant climate risk. Currently, approximately 47% of households struggle financially, yet choosing "green" options can actually strengthen a household's financial health. Measuring financial health is a missing but essential metric to ensure that the transition to a low-carbon economy does not leave vulnerable populations behind.

Integrated Intelligence for Predictive Risk Modeling: Effective disaster management requires transforming complex environmental data—such as satellite imagery, terrain analysis, and climate inputs—into actionable risk intelligence. AI-driven models can combine these diverse data streams to generate predictive risk outputs for hazards like landslides, ensuring that information remains spatially consistent and reliable even when applied outside of initial training areas.

Collaborative Watershed Planning and Impact Analysis: Strengthening community resilience involves inter-agency collaboration to develop comprehensive guidance for pre- and post-fire management. By utilizing GIS and hydrologic modeling, stakeholders can assess susceptibility and impact on specific "Values-at-Risk," including critical infrastructure, water resources, and aquatic ecosystems, to define priority areas for planning and resource allocation.

Geospatial Backbones for Sustainable and Transparent Supply Chains: Moving beyond simple regulatory compliance requires the construction of a trusted geospatial intelligence backbone to ensure deforestation-free and hazard-resilient supply chains. Digital innovation and tailored platforms enable the integration of field insights and satellite data to provide the transparency needed for global commodity tracking and environmental protection.

Dynamic, multi-hazard modeling is essential for navigating


IHWAN RAFINA


PETER VAN DER WERF


JEFF HAMERLINCK


LEON WIJNANDS & JARA VILLANUEVA

interconnected risks: Modern resilience planning must move beyond single-hazard maps toward multi-hazard zoning that combines long-term climate trends with short-term operational risks. Effective systems, such as those used for landmine clearance in Ukraine, utilize dynamic overlays of environmental data—like flood hazards and snow cover—to protect vulnerable infrastructure and personnel from compounding threats.

Geospatial intelligence must be transformed into "actionable risk intelligence" through validation: Simply having Earth observation data is insufficient; it must be processed into predictive outputs that are validated in real-world conditions. Systems like SIBILA for landslide prediction demonstrate that models trained on specific environmental variables—such as terrain dynamics and climate inputs—must prove their "transferability" beyond their initial training areas to be truly reliable for decision-makers.

Data integrity and standardization are the "backbone" of resilient global systems: Scaling resilience requires a trusted geospatial backbone that integrates fragmented data into standardized frameworks. Whether it is using standardized APIs for nature-based solutions or leveraging high-resolution satellite imagery to ensure supply chain traceability and legal compliance (e.g., EUDR), clear data standards allow technology to act as a scalable enabler for both environmental protection and market access.

Overcoming "Data Silos" is critical for actionable decision-making: While a massive amount of data and various policy frameworks exist, disaster management often falls short because information remains siloed, fragmented, and not integrated across different sectors. Transitioning from technical integration alone to modular systems that interweave scientific models—like a "Data Fabric"—is necessary to overcome these technical hurdles and create usable, coordinated information.

Reactive strategies must be replaced by AI-driven, predictive intelligence: Current manual risk assessments and reactive response strategies are no longer viable for maintaining business continuity and public safety. Using AI and machine learning to analyze dozens of parameters (e.g., climate, geological, environmental, and socio-economic) allows for predictive intelligence that offers near real-time assessments and anticipatory "blueprints" for action.

Co-design and community-centric tools bridge the gap between science and practitioners: Effective resilience infrastructure must be co-developed with local users and practitioners to ensure it is both scalable and adaptive to real-world needs. By focusing on intuitive, interactive, and interoperable open-source tools, scientific results can be made accessible to non-GIS experts, empowering stakeholders to test "what-if" scenarios for better land and risk decisions.


BENEDIKT GRÄLER


SAMHITA


PETER VAN DER WERF, PETER SIEGMUND

Business Intelligence Seminar

DARIA FILICHKINA


ALEXEY ANATSKIY


BAS ROELANDS


MUKTI R DEWI


ROSALIE VAN DER MAAS

SIVAKUMAR VENKATESAN


WOUTER GIESEN


REBECCA ASPIN


MELDA SALHAB

The Business Intelligence seminar explored the transformative role of geo-enabled intelligence across mobility, logistics, retail, fintech, hospitality, marketing, and more, while addressing the current geopolitical scenario, emphasizing on digital sovereignty, and emerging technologies.

KEY TAKEAWAYS

Geospatial Intelligence as a Strategic Business Tool: Geospatial technologies are no longer support functions—they are becoming central to business strategy, enabling faster, data-driven decision-making through GIS, EO, and AI integration.

Transforming Mobility & Logistics: Location intelligence is driving efficiency in mobility and supply chains through real-time tracking, predictive analytics, and optimized routing.

Geo-Driven Commerce & Customer Insights: Businesses are leveraging geospatial data for smarter site selection, demand forecasting, and hyper-personalized customer experiences—particularly in sectors like travel, tourism, and digital marketplaces where location context directly influences user behavior.

Financial Services & Risk Intelligence: Banks and insurers are increasingly adopting geospatial analytics for fraud detection, climate risk assessment, and investment decision-making.

Data Governance & Digital Sovereignty: With the growing use of geo-analytics, concerns around data privacy, governance, and regulatory compliance are becoming critical priorities.

Rise of GeoAI & Integrated Intelligence Platforms: The convergence of AI with geospatial data is enabling predictive insights by combining demographic, economic, mobility, and Earth Observation datasets into unified intelligence platforms.

Business Intelligence for Travel & Experience Optimization: A strong industry perspective highlighted how location intelligence is being used to optimize travel experiences, destination planning, and service delivery—through real-time insights, user behavior mapping, and dynamic pricing models. This reflects a broader shift where geospatial data is powering smarter decision-making across tourism ecosystems, marketing strategies, and customer engagement.

Space2Earth Seminar

CHANDRA PRAKASH SINGH


COCO ANTONISSEN


WEIYI DING


FRÉDÉRIC TOURRET


JAVIER ALEXANDER SANTOS WYBENGA

The Space2Earth seminar focused on the growing imperative for nations to assert sovereignty over space-based infrastructure and geospatial data. With increasing reliance on satellite systems and earth observation for security, governance, and economic growth, countries face the challenge of balancing open global cooperation with protecting national interests. The summit explored these topics along with technological, and policy frameworks necessary to build resilient and autonomous geospatial ecosystems.

MARTIN RØYMO SKEDSMO

KEY TAKEAWAYS

Space Infrastructure as Critical National Capability: Earth Observation, GNSS, and satellite communications are increasingly seen as essential infrastructure, supporting governance, security, climate monitoring, and economic growth.

Transition to Service-Based Space Ecosystems: The industry is shifting from standalone satellite missions to integrated, service-driven models—delivering scalable, on-demand geospatial intelligence through cloud-enabled platforms.

Expanding Public–Private Partnerships in Space: Collaboration between governments, commercial space companies, and research institutions is driving innovation, improving accessibility, and unlocking new opportunities across the geospatial value chain.

Focus on Data Sovereignty & Secure Infrastructure: Governments and regional agencies are prioritizing resilient, sovereign geospatial systems to ensure secure access, reduce dependency, and maintain control over critical data assets.

Advancements in Agile Satellite Constellations & Connectivity: Emerging approaches in small satellite constellations and optical communication systems are enabling near real-time data access, improved coverage, and low-latency services.

Trusted Earth Observation for Decision Intelligence: Reliable and high-quality EO data is becoming foundational for applications across agriculture, disaster response, infrastructure monitoring, and environmental management.


LORANT CZARAN


HIROKAZU MORI

COCO ANTONISSEN

Small Island Developing States (SIDS)

KEY TAKEAWAYS

Strengthening Data Foundations for SIDS: The session emphasized the importance of robust national data ecosystems to support evidence-based planning, resilience building, and sustainable development across Small Island Developing States (SIDS).

Advancing the Antigua and Barbuda Agenda (ABAS): Discussions highlighted the Antigua and Barbuda Agenda for SIDS (ABAS) as a key framework for driving innovation, partnerships, and improved access to geospatial and development data.

Showcasing the SIDS Global Data Hub: The seminar demonstrated the role of the SIDS Global Data Hub and Country Data Portfolios in enabling better data visualization, accessibility, and informed decision-making for national governments.

Promoting Data Sovereignty and Capacity Building: Participants underscored the need for strengthening institutional capacity and ensuring data sovereignty so that SIDS can independently manage and utilize their development data effectively.

Importance of Multi-Stakeholder Collaboration: The discussion reinforced that long-term resilience and sustainable development in SIDS require coordinated collaboration among governments, international agencies, private sector partners, and technology providers.

GREG SCOTT

SHERMA BEROO

HYGINUS GENE LEON

Geodesy Supply Chain Summit

KEY TAKEAWAYS

Redefining Geodesy as Strategic Infrastructure: The session emphasized the importance of positioning geodesy as a foundational pillar of national and global infrastructure, enabling accurate positioning, resilience building, and sustainable development across interconnected economies.

Diagnosing Structural Vulnerabilities in the Global Geodesy Domain: Discussions highlighted critical gaps and weaknesses within the global geodetic ecosystem as key areas requiring urgent attention to drive innovation, partnerships, and improved access to precise spatial reference data.

Industry's Strategic Role: From Passive Stakeholder to Co-Architect: The seminar demonstrated how industry players must transition from peripheral participants to active co-designers of geodetic frameworks, enabling better data integration, technical advancement, and informed decision-making for governments and institutions.

Governance, Financing and International Cooperation for a Future-Ready Ecosystem: Participants underscored the need for strengthening governance structures and securing sustainable financing mechanisms so that nations can independently manage and advance their geodetic capabilities effectively.

ANANYA NARAIN & NICHOLAS JAMES BROWN

GREG SCOTT

ASTRID SCHEFFER

Organized in Collaboration with

United Nations Global Geodetic Centre of Excellence

GeoBusiness Nederland

This session highlighted how the Netherlands is advancing a collaborative geospatial innovation ecosystem through GeoBusiness, DMI, and Digital Twin initiatives. Bringing together leaders from government, academia, industry, and technology, discussions focused on scalable geospatial infrastructure, data-sharing frameworks, digital twins, and partnerships enabling resilient, data-driven development.

JOOST DE BRUIJN & CASPAR DE JONGE


JACQUELINE MEERKERK

Leadership Forum

KEY TAKEAWAYS

- AI-driven opportunities to geospatial innovation
- Emerging challenges and ethical considerations
- AI's impact on decision-making and community engagement
- The future of the geospatial workforce in an AI-driven era

Ogranised By

esri
THE SCIENCE OF WHERE®

Technical Track: HD Mapping & Autonomy

The HD Mapping & Autonomy technical track showcased how AI-driven spatial intelligence and real-time HD mapping combined with interoperable digital twin ecosystems are redefining autonomous mobility. The discussions emphasized the convergence of advanced sensing, BIM-GIS integration, and sovereign geospatial architectures to enable machine-readable environments that are continuously evolving for driving next-gen operations and mobility systems.

KEY TAKEAWAYS

AI-Driven Geospatial Processing for HD Mapping: AI-powered workflows are reducing manual effort in road asset extraction, semantic labeling, and infrastructure detection from LiDAR, point-cloud, and spherical imagery datasets.

Few-Shot Learning for Scalable GeoAI: Few-shot and meta-learning approaches demonstrated how reliable object detection can be achieved with limited labeled data, reducing dependency on large annotation pipelines.

Real-Time HD Maps for Autonomous Mobility: Centimeter-level HD maps are becoming essential for autonomous systems by enabling accurate localization, lane-level navigation, and real-time environmental awareness.

Integrated Sensor Ecosystems and Spatial Intelligence: The convergence of LiDAR, GNSS, radar, IoT sensors, 5G, and edge computing is enabling continuously updated mapping ecosystems for dynamic mobility operations.

Semantic Segmentation and Machine-Readable Environments: AI-based semantic and panoptic segmentation technologies are improving machine understanding of roads, traffic assets, and urban infrastructure for autonomous navigation and analytics.

Digital Twins and BIM-GIS Convergence: The integration of BIM, GIS, and volumetric spatial technologies is supporting interoperable digital twins for infrastructure planning, operations, and lifecycle management.

Interoperable and Open Spatial Architectures: The session highlighted growing demand for vendor-neutral, modular, and interoperable geospatial platforms capable of supporting specialized digital twin applications.

Geospatial Governance and Data Sovereignty: Secure geospatial governance, localized processing, and sovereign infrastructure frameworks were identified as critical for scaling national mapping and smart-city ecosystems.

AI-Enhanced 3D Mapping and Visualization: Photorealistic 3D mapping and AI-enhanced reconstruction are advancing navigation systems, immersive geospatial experiences, and infrastructure intelligence applications.

HD Mapping as Core Smart-City Infrastructure: HD mapping is evolving into foundational infrastructure for smart mobility, enabling safer transportation, predictive maintenance, operational efficiency, and resilient urban planning.


SULIMAN GARGOUM


ATSUSHI TAKATA


ORI LEFKOVITZ


CHRIS ANDREWS


REPRESENTATIVE FROM AI INFRASOLUTIONS


MAMDOOH AL SHAHRANI

Technical Track: LiDAR & Scanning

The LiDAR & Digital Twin technical track highlighted how national-scale LiDAR programmes and AI-powered geospatial processing are becoming foundational infrastructure for better governance through and spatial decision-making. The discussions focused on developing greater convergence of high-density 3D mapping and automation to enable widespread intelligence for plethora of use-cases, ranging from urban planning, environmental monitoring to infrastructure management.

KEY TAKEAWAYS

National LiDAR and Digital Twin Programmes Are Becoming Strategic National Infrastructure: Countries such as Finland, France, Germany, and Spain are investing heavily in nationwide high-resolution LiDAR acquisition and 3D digital twins to support governance, infrastructure planning, environmental monitoring, and disaster resilience.

Public-Sector Collaboration Maximizes Geospatial Efficiency: Finland's "KALLIO" model demonstrated how multiple government agencies can jointly procure and utilize aerial imagery and LiDAR data, reducing duplication, lowering costs, improving procurement efficiency, and ensuring standardized national datasets.

High-Density LiDAR Is Enabling More Accurate and Actionable Spatial Intelligence: National programmes are rapidly moving toward denser datasets ranging from 5 pts/m^2 to 40+ pts/m^2, significantly improving terrain analysis, urban modelling, forestry management, flood mapping, and infrastructure monitoring capabilities.

AI Is Transforming Point Cloud Classification and Processing: AI-powered platforms such as FlaiNET and Spain's PNOA-LiDAR workflows are automating classification of buildings, vegetation, bridges, wind turbines, power lines, and other assets, dramatically accelerating processing speed and scalability.

Digital Twin Initiatives Are Emerging as Core Decision-Support Platforms: Germany's Digital Twin programme highlighted how large-scale 3D national models are supporting urban planning, crisis management, sustainability analysis, aviation safety, and infrastructure governance.

Open Geospatial Data Strengthens National Innovation Ecosystems: France's LiDAR HD initiative emphasized the value of making high-resolution LiDAR and 3D datasets openly accessible, enabling broader public-sector, research, and commercial innovation.

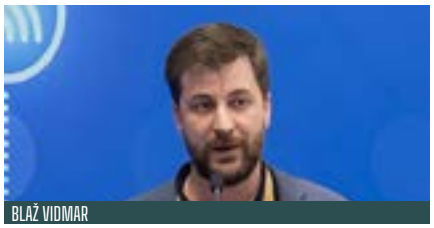
AI and Machine Learning Are Advancing Change Detection and Predictive Analysis: Multi-temporal LiDAR workflows are increasingly supporting ecosystem monitoring, forestry inventories, infrastructure change detection, urban development tracking, and defense-related applications.

Secure and On-Premise AI Workflows Are Critical for Government Adoption: Speakers emphasized that cloud-independent processing, local AI model retraining, and secure enterprise deployments are essential to meet national data sovereignty, compliance, and security requirements.


HELI LAAKSONEN


MARKUS HANDL


BLAŽ VIDMAR


BLAŽ VIDMAR


ANNA SHCHERBACHEVA


BOONYARIT KEAWARAM

Technical Track: Data Science

The Data Science technical track shed light on how AI-powered geospatial analytics are transforming decision-making across governance and socio-economic development. The growing importance of AI, secure digital architectures, and multisource spatial intelligence in evidence-based, responsible data-driven transformation were highlighted throughout the track.

KEY TAKEAWAYS

AI and Geospatial Intelligence Are Transforming Decision-Making: AI-powered geospatial analytics, Agentic GIS, and automation are enabling faster and smarter decisions across governance, infrastructure, urban planning, and resource management.

Secure Digital Infrastructure Is a Strategic Priority: Post-quantum cryptography, blockchain, homomorphic encryption, and cybersecurity are becoming essential to protect critical national and urban infrastructure systems.

Explainable and Trusted AI Is Essential: Speakers emphasized the importance of addressing bias, ensuring transparency, and building accountable AI systems for reliable governance and analytics outcomes.

Automation Is Democratizing Spatial Analytics: AI agents, natural language GIS, and cloud-native platforms are making advanced geospatial analysis accessible beyond traditional GIS experts.

Responsible AI Requires Strong Governance: Privacy, ethics, licensing, data governance, and surveillance concerns must be addressed to ensure secure and responsible AI adoption.

Satellite Intelligence Is Advancing Climate Monitoring: Satellite platforms such as NASA's OCO-2 and ESA's Sentinel-5P are enabling scalable monitoring of carbon and methane emissions to support climate action and low-emission growth strategies.

Geospatial Analytics Is Strengthening Evidence-Based Policymaking: Spatial intelligence is increasingly supporting urban planning, economic analysis, infrastructure prioritization, healthcare accessibility, and disaster preparedness.


SAMUEL ALTER


DARIUSZ TANAJEWSKI

Spatial Modelling Improves Disaster Resilience and Healthcare Access: GIS-based accessibility modelling demonstrated how floods impact healthcare access, reinforcing the role of geospatial tools in emergency response and climate adaptation planning.

Data Quality and Multi-Source Integration Build Trusted Systems: Standardized data governance, AI-enabled validation, multisensor integration, and local knowledge are critical for reliable geospatial intelligence and operational decision-making.


COL (DR) ANUPAM TIWARI


BORJA MUNOZ


BRIAN BLANKESPOOR


TOM PETERKEN


BIBIAN NYAERU ROBERT


EMMANUEL AYODELE JOLAIYA

Technical Track: Spatial Computing & Digital Twin


ROMBOUT VERWIMP


ZAFFAR SADIQ MOHAMED-GHOUSE


OFER AMRAM


ASHLEIGH SIER


EAMONN PROWSE


IVAN BAMWEYANA

The Spatial Computing & Digital Twin technical track explored the possibilities of AI-driven spatial intelligence, interoperable digital twin ecosystems, and real-time 3D computing that can redefining urban transformation and infrastructure governance. The discussions explored the need for scalable architecture practices which can be integrated into larger data ecosystems, and spatial computing frameworks to enable simulation-driven and evidence-based decision-making across the entire infrastructure ecosystem.

KEY TAKEAWAYS

Urban Digital Twins as Complex and Open Urban Ecosystems: Urban Digital Twins (UDTs) were highlighted as fundamentally different from industrial digital twins due to their need to model dynamic urban environments shaped by physical, environmental, and human systems, making scalability and predictability significantly more complex.

Data Interoperability, Governance, and the "Valley of Death" Challenge: Siloed datasets, weak semantic interoperability, limited technological reusability, and high implementation costs continue to hinder long-term UDT deployment, emphasizing the need for stronger governance, shared data infrastructures, and collaborative frameworks.

AI-Driven Automation for Scalable Digital Twin Development: Advancements in AI-assisted photogrammetry, automated segmentation, dynamic object masking, and incremental model updating are accelerating the production of city-scale digital twins while reducing deployment complexity and operational costs.

Modular Architectures and GeoAI-Powered Spatial Intelligence: The emergence of modular, multi-agent, and data-space architectures alongside Large Geospatial Models (LGMs) demonstrated how GeoAI is enabling advanced spatial reasoning, simulation, and interoperable digital twin ecosystems.

Real-Time Spatial Computing and Web-Based Visualization Systems: Technologies such as real-time 3D rendering, pixel streaming, vector tiling, and browser-based digital twin delivery are improving accessibility, scalability, and operational usability across devices and sectors.

Digital Twins for Climate Resilience and Urban Transformation: Urban digital twins are increasingly being positioned as critical infrastructure for climate adaptation, infrastructure planning, demographic analysis, and evidence-based urban policymaking through integrated simulation and predictive analytics capabilities.

Spatial Computing as the Backbone of Integrated Digital Transformation: Spatial computing technologies are increasingly enabling unified decision-making across infrastructure, governance, utilities, transportation, and public services by connecting fragmented systems through location-based intelligence and digital twin ecosystems.

Digital Twins as Operational Decision-Support Platforms: Modern digital twins are evolving beyond visualization into real-time operational systems that support scenario simulation, regulatory compliance, sustainability analysis, infrastructure monitoring, and multi-agency coordination across the asset lifecycle.

Technical Track: GeoAI


KWONHO LEE


GENNADII DONCHYTS


RYAN BANK


IWONA KACZMAREK


FLORIAN TWAROCH

The GeoAI seminar explored how spatially anchored AI with agentic geospatial systems that are redefining the future of spatial intelligence and autonomous decision-making.The emphasis was on the importance of sovereignty through context-aware AI that can be integrated GeoAI pipelines in transforming massive geospatial data streams into operational intelligence for governance and upgraded infrastructure planning.

KEY TAKEAWAYS

Spatial Anchoring as a Core Requirement for Reliable AI: General large language models (LLMs) often exhibit "spatial blindness," particularly when dealing with micro-toponyms or local geographic details not well-represented in general training data. To prevent hallucinations and "attention collapse," AI systems must be anchored with deterministic spatial data, such as administrative hierarchies and topological relations. This anchoring ensures that even small edge-AI models can perform with high accuracy in specialized geographic contexts.

Bridging the Gap Between Data Analytics and Urban Reasoning: There is a fundamental difference between data-driven urban AI and planning-oriented reasoning. While modern analytics can explain model outputs, they often fail to interpret "urban meaning" or regulatory context. Effective urban planning requires a framework that moves beyond statistical similarity to incorporate explicit concepts, spatial relations, and institutional logic that govern land-use decisions.

Neuro-Symbolic Spatial Reasoning in Urban Knowledge Graphs: A new paradigm in urban AI involves integrating formal and semantic dimensions through Neuro-Symbolic reasoning. By combining structural metrics (like the sequence and scale of investment) with natural language descriptions of investment intent, planners can create Urban Knowledge Graphs. This allows for rule-based inference that goes beyond simple data layers to ask whether a proposed transformation is contextually appropriate and compliant with planning logic.

The Necessity of Geographic Sovereignty and Edge AI: For public authorities and national surveying offices, "geographic sovereignty" is a critical concern. Utilizing specialized geospatial data science on local infrastructure (Edge AI) allows for the evaluation of LLMs without relying on external internet-based search engines. This approach optimizes hardware use while ensuring that sensitive geographic information remains secure and governed by local legal and metrological standards.

Intensifying Wildfire-Climate Feedback Loops in the Arctic: Wildfire clusters in the Northern Hemisphere are increasing in frequency and range, with fire counts in the Arctic growing at an annual rate of over 5%. These fires release significant aerosol anomalies, reaching up to five times historical averages, which creates a radiative forcing feedback loop that further accelerates Arctic warming and future wildfire intensification.

Bridging the "Meaning Gap" in Geospatial Data: While there is a massive volume of geospatial data available, a significant gap exists between raw physical signals measured by sensors and the human concepts needed for decision-making, such as "urban growth" or "infrastructure change".

GEOSPATIAL WORLD LEADERSHIP AWARDS

Hall of Fame

Harold Goddijn & Corinne Vigreux

Lifetime Achievement Award

Prof. Dr. Paul Becker

Geospatial Ambassdor of the Year Award

Ingrid Vanden Berghe

Geospatial World Leadership Awards Jury Members

Chair

Greg Scott
Executive Director, SDG Data Alliance, PVBLIC Foundation, USA

Sallie Payne
Secretary General, Eurogeographics
Belgium

Rajesh Alla
CEO, IIC Technologies
India

Willy Govender
CEO, Vast Point
South Africa

H.E. Eng. Anwaar Al Shimmari
Executive Director, FGIC, UAE

David Henderson
Chief Geospatial Officer
Ordnance Survey, UK

Prateep Basu
CEO
SatSure, India

Paola Salman
Esri
Mexico

Startup of the Year

OroraTech

Solution Company of the Year

NV5 Global

Business Leader of the Year

Dan Smoot Vantor

System Integration Company of the Year

Accenture Global

Business Model Transformation of the Year

Vexcel Imaging

Partnerships of the Year

Google

Integrated Sovereign Space and Geospatial Infrastructure

Department of Science & Technology (DST) & IN-SPACe, India

Enabling Public Policy of the Year

National Space Strategy 2025-2040 France, SGDSN

National Mapping Agency of the Year Award

Ordnance Survey, UK

GEOSPATIAL WORLD EXCELLENCE AWARD

Excellence in Generative Business Intelligence

Cognizant: Geospatial Data Intelligence Solution

Excellence in GEOAI

Singapore Land Authority: Singapore Solar & Green Cover GeoAI Mapping Initiative

Excellence in HD Mapping

Department of Transport (DOT) USA: High-Definition Urban Mapping for AVs

Excellence in Maritime

Florida Department of Environmental Protection (FDEP) & Woolpert: Florida Seafloor Mapping Initiative (FSMI)

Policy Implementation

Federal Geographic Information Center (FGIC): UAE's National Geospatial Information Policy

Excellence in Spatial Computing and Digital Twin

Windover Construction: AI-Driven Automated Plan Review Platform (UAE)

Excellence in Agriculture

Haryana Space Application Centre (HARSAC)

Excellence in Utilities

Tech Mahindra: Altavec AIMS Platform

Excellence in Architecture, Engineering & Construction

Dublin City Council (Ireland) Dublin Digital Twin Ecosystem

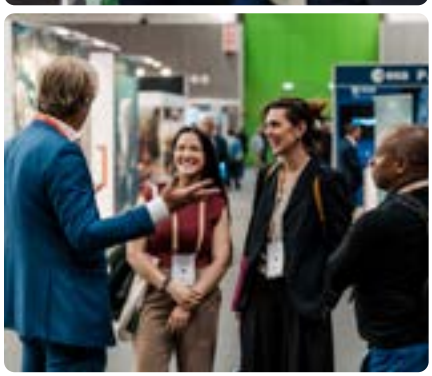
Excellence in Smart City and Urban Planning

Urban Redevelopment Authority (URA): ePlanner – 2D/3D Integrated Planning Platform, Singapore

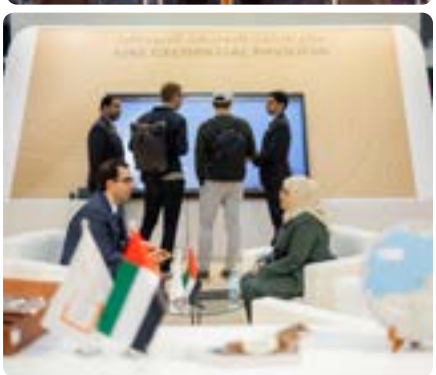
HONORING THE TOP 50 RISING STARS AT GEOSPATIAL WORLD FORUM 2026

The 6th edition of the Geospatial World 50 Rising Stars was celebrated on 30th April, bringing together a dynamic cohort of young professionals shaping the future of geospatial. The 50 Rising Stars reflect a powerful cross-section of the industry, from AI and Earth observation to climate resilience, smart cities, land administration, and conservation. Representing startups, governments, academia, and global organizations across continents, these innovators are redefining how geospatial intelligence drives real-world impact. Their stories collectively signal a shift toward a more connected, data-driven, and sustainable geospatial ecosystem led by the next generation.

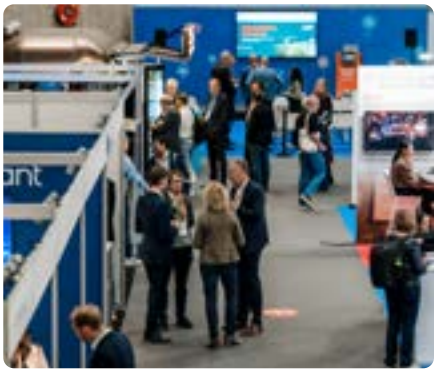
Moments from the Tech Show



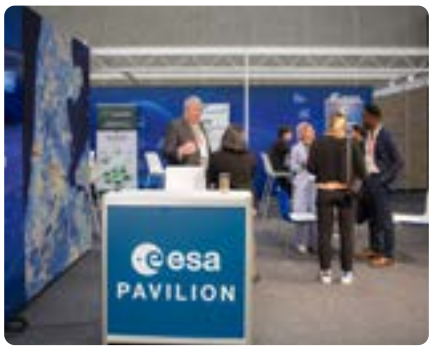
Moments from the Tech Show

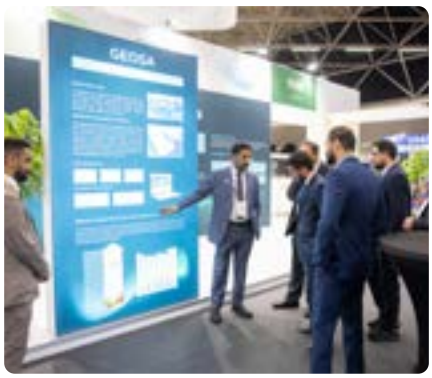


Moments from the Tech Show



Moments from the Tech Show



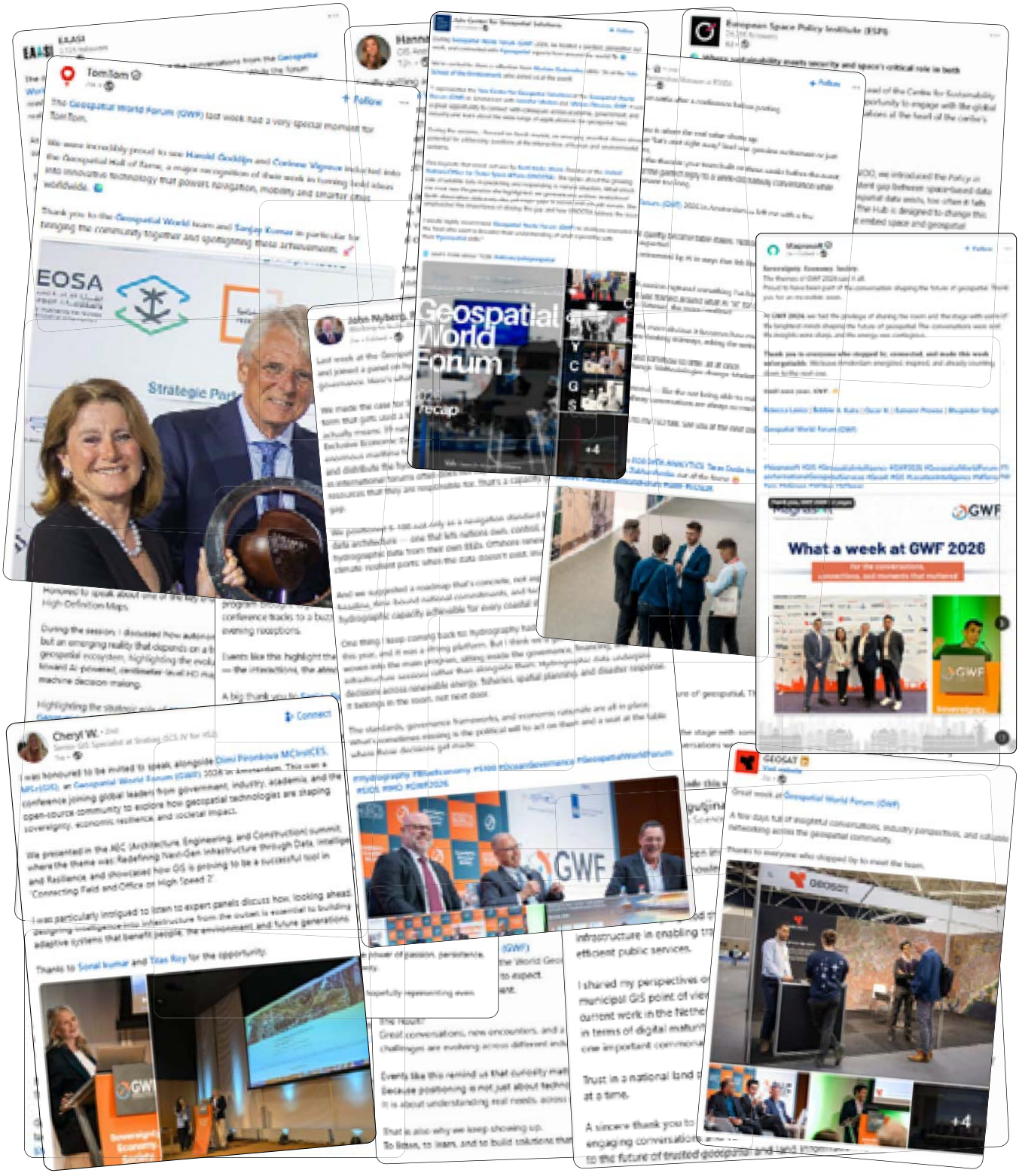


Moments from the Tech Show






Social Media Buzz!



Social Media Buzz!

GWF 2026 Sponsors and Partners

Strategic Sponsors

GEOSA
الهيئة العامة للمساحة والمعلومات الجيومكانية
General Authority for Survey and Geospatial Information

المركز الإتحادي للمعلومات الجغرافية
FEDERAL GEOGRAPHIC INFORMATION CENTER

esri
THE SCIENCE OF WHERE

Platinum Sponsors

SATSURE

AI-INFRA SOLUTIONS

Country Partners

دولة قطر
State of Qatar

United States of America

Strategic Partners

IN-SPACe
Government of India

विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF SCIENCE & TECHNOLOGY
Government of India

Netherlands Space Agency

Ministry of the Interior and Kingdom Relations

Corporate Sponsors

ORACLE

Merkator
MERKATOR GROUP

Geospatial Agency Partners

CGIS

وزارة البلدية
Ministry of Municipality
State of Qatar

USGS

Ordnance Survey

Associate Sponsors

Synspective

TECH mahindra

Google

OVERTURE MAPS FOUNDATION

tomtom

cognizant

geosat

Co-Sponsors

GEONOVUM

JSAN

WOOLPERT

VEXCEL
DATA PROGRAM

FUGRO

NeoGeo
NeoGeoInfo Technologies Limited

SPACE42

CARTO

SkyServe

IIC TECHNOLOGIES

Kingdom of Saudi Arabia
Eastern Province Municipality

Aetosky

VASTPOINT

Magnasoft

Institutional Partners

isprs

UNIVERSITY OF TWENTE

EARSC

ESPI
European Space Policy Institute

UN GEOSPATIAL NETWORK

NOVASPACE

eurogeographics

GIN

GEOSPATIAL WORLD
CHAMBER OF COMMERCE

Indoor Map Partner

Pointr

Development Partner

SDG DATA ALLIANCE

Co-Host

kadaster
The Netherlands

Produced By

GEOSPATIAL WORLD
ADVANCING KNOWLEDGE FOR SUSTAINABILITY

GWF 2026 Exhibitors

AIRBUS
BLUE MARBLE GEOGRAPHICS
BAPS
CARTO
CloudFerro
cognizant
esri
THE SCIENCE OF WHERE
FlyPix AI · Geospatial AI Platform
GEODESIGN HUB
geosat
GEOSPATIAL WORLD
Google
IIC TECHNOLOGIES
ICV INSTITUT CARTOGRÀFIC VALENCIÀ
JSAN CONSULTING GROUP
LAStools LiDAR processing rapidlasso
LEANSEGS
marble imaging
Merkator
MipMap TECHNOLOGIES
NeoGeo —NeoGeoInfo Technologies Limited—
NV5
OPEN COSMOS
OVERTURE MAPS FOUNDATION
FME by Safe Software
SATSURE
SkyServe
دولة قطر State of Qatar
TECH mahindra
TechnoGIS
tomtom
VEXCEL DATA PROGRAM
WOOLPERT

KSA PAVILION

GEOSA الهيئة العامة للمساحة والمعلومات الجيومكانية General Authority for Survey and Geospatial Information

UAE PAVILION

NSSTC
المركز الاتحادي للمعلومات الجغرافية FEDERAL GEOGRAPHIC INFORMATION CENTER

SIDS PAVILION

PVBLIC FOUNDATION
SDG DATA ALLIANCE

DUTCH PAVILION

AI-INFRA SOLUTIONS
DMI ECOSYSTEEM
GEOCAT
Netherlands Space Agency

ESA PAVILION

Assimila
a Sopra Steria company
CropOM
€LIPSIS DRIVE
FACTIVEN
SPATIALISE

USA PAVILION

CLARK UNIVERSITY
EAGLEVIEW
IST
USGS science for a changing world
UNIVERSITY OF MINNESOTA
USC University of Southern California
United States Census Bureau
Yale

INDIA PAVILION

esri India
IN-SPACe
nav
PFEPL
भारतीय सर्वेक्षण विभाग SURVEY OF INDIA
TAKEME2SPACE
XOLINX SPACE LABS

GWF

GEOSPATIAL WORLD FORUM
CONFERENCE & TECH SHOW

THEME

5TH INDUSTRIAL REVOLUTION:
TOWARDS A SENTIENT ECONOMY

SAVE THE DATES

20-22 APRIL 2027

AMSTERDAM, THE NETHERLANDS

Website