



UN-GGIM Private Sector Network

Dr Michael Gould

Esri Inc. On behalf of Dr Zaffar Sadiq MOHAMED GHOUSE (chair)

Geneva, 09/July/2025



LEADERSHIP

OF

UN-GGIM PSN

2023-2025

NADINE ALAMEH, PH.D CEO, Open Geospatial Consortium, USA

in

Region: UN-GGIM Americas



ANAMIKA DAS

Vice President - Product Management, Geospatial World, India

in

Region: UN-GGIM Asia Pacific



DEVLEENA BHATTACHARJEE

CEO, Numer8 Analytics Pvt. Ltd, India

Region: UN-GGIM Asia Pacific

in

WILLY GOVENDER CED TERRA ANALYTICS, South Africa

Region: UN-GGIM Africa in

Ter Haar Geoinnovation United Kingdom



PETER TER HAAR

VALRIE GRANT

Founder/Chairwoman, GeoTechVision, Jamaica

Region: UN-GGIM Americas

in

Region: UN-GGIM Europe



BEN ADDOU IDRISSI KAMAL

Morneco Region: UN-GGIM Arab States



Managing Director, Orbital Africa

Region: UN-GGIM Africa



PRIVATE SECTOR NETWORK BOARD

Chair of the Board:



DR. ZAFFAR SADIQ MOHAMED-GHOUSE

Director, Advisory & Innovation AAM, a Woolpert Company Australia

Region: UN-GGIM Asia Pacific

in

UN-GGIM PSN Secretariat:



DR. SHIVANGI SOMVANSHI

Director - Geospatial Knowledge Infrastructure, Geospatial World, India

Region: UN-GGIM Asia Pacific

Former Chairs:





STEVEN HAGEN

Vice President Development, Oracle USA

Region: UN-GGIM Americas [∠] in



Sr. Director, Global Industry Business Development, Maxar

Technologies, USA Region: UN-GGIM Americas

in



PETER BAUMANN CED, Rasdaman GmbH

Bremen

Region: UN-GGIM Europe

in

in

Region: UN-GGIM Arab States





DR. SAAD ALHAMLAN CED, Gravity Geospatial Services Saudi Arabia

















CEO, Geospatial World

India Region: UN-GGIM Asia Pacific

in









Regional Activities of UN-GGIM PSN in 2023-24



DR. ZAFFAR SADIQ MOHAMED-GHOUSE

Director, Advisory & Innovation AAM, a Woolpert Company Australia

Region: UN-GGIM Asia Pacific

UN GGIM Asia Pacific – Thirteen Plenary Meeting, 26-29 November 2024, New Delhi, India

- Conducted the UN-GGIM AP regional consultation with private sector to gather inputs for the paper.
- Contribution to Working Group 4 on IGIF
- Established the operation of a regional PSN committee for Asia Pacific
- EB Meeting Sydney , May 2024



VALRIE GRANT Founder/Chairwoman, GeoTechVision, Jamaica

Region: UN-GGIM Americas

UN GGIM Americas – Eleventh Plenary Meeting, October 2024, Mexico City, Mexico

- Conducted the UN-GGIM Americas regional consultation with private sector to gather inputs for the paper.
- Industry and academia bridge the gap, Organized by Private Sector Network Americas (PSNA) and the Academic Network Americas (ANA)
- Organization of Carigeo
- Podcast of geospatial leadership



PETER TER HAAR Ter Haar Geoinnovation United Kingdom

Region: UN-GGIM Europe

UN GGIM Americas – Eleventh Plenary Meeting, November 2024, Belgium.

Conducted the UN-GGIM Europe regional consultation with private sector to gather inputs for the paper. Participation in the plenary and present plan on the PSN activities for Europe.

Participate in webinar series of the UN-GGIM Europe



CEO TERRA ANALYTICS, South Africa

Region: UN-GGIM Africa

UN GGIM Africas– Ninth Plenary Meeting, November 2024, Addis Ababa

- Conducted the UN-GGIM Africa regional consultation with private sector to gather inputs for the paper.
- Participation in the Plenary and providing a plan of work of PSN in Africa



DR. SAAD ALHAMLAN

CEO, Gravity Geospatial Services Saudi Arabia

Region: UN-GGIM Arab States

UN GGIM Arab States – Eleventh Plenary, February 2024, Doha

- Conducted the UN-GGIM Arab States regional consultation with private sector to gather inputs for the paper.
- Web session pre-planning meeting of the 10th Plenary by PSN Arab States
- Participation in the Plenary and providing a plan of work of PSN in Arab States
- Dedicated UN-GGIM PSN Arab States Workshop was successfully conducted in Doha Feb 2024.



Global Activities of UN-GGIM PSN

1) The UN-GGIM: Private Sector Network (PSN) actively engaged in various initiatives,

notably contributing to the UN-GGIM sessions focusing on the Future of Geospatial

Ecosystem during the 14th session at New York, August 2024.

2) The PSN involvement extends to the drafting committee for the Future of Geospatial Information Ecosystem, a document presented at the the 14th session of UN-GGIM.

3) Additionally, the PSN made significant contributions to Working Group 4 on Integrated Geospatial Information Framework (IGIF), providing invaluable insights

from the private sector to aid in IGIF implementation including the IGIF HLG on Financing pathway.

4) With a commitment to furthering IGIF, the PSN developed a

position paper delineating its role in IGIF development and enhancement at the

14th session of UN-GGIM.

5) A jointly authored paper on GeoAI, co-authored by PSN and the Academic Network, is scheduled for publication.





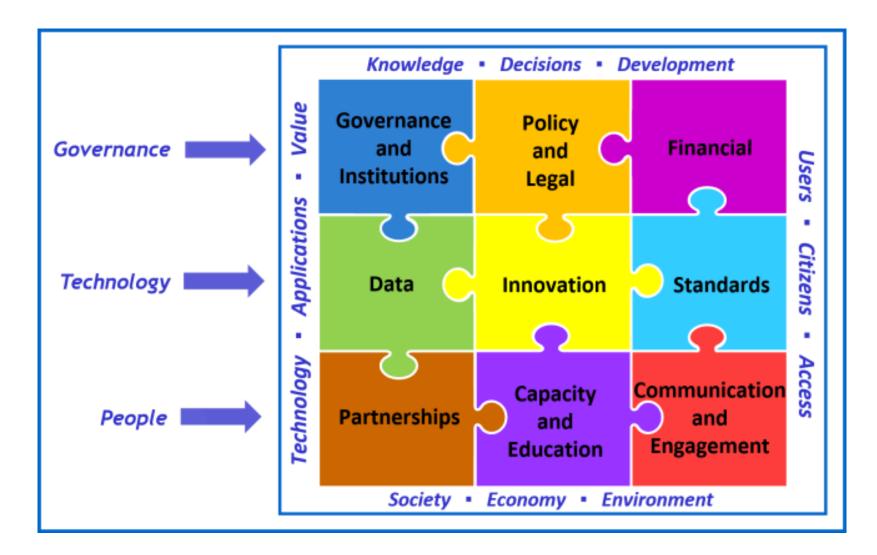


Role of the Private Sector in Strengthening the United Nations Integrated Geospatial Information Framework (UN-IGIF)

The Group of Experts to the United Nations Global Geospatial Information Management – Private Sector Network (UN-GGIM: PSN)

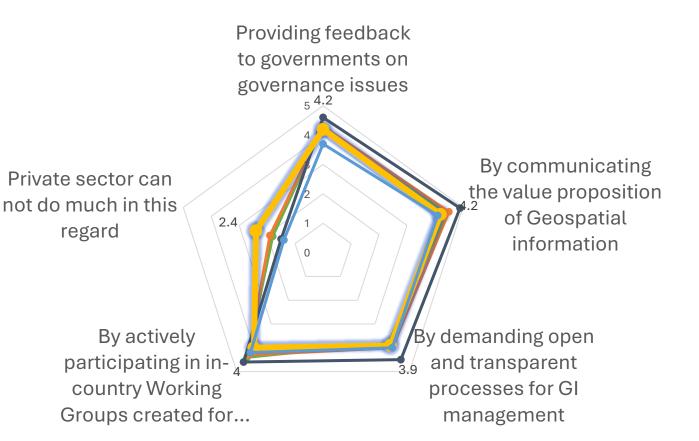


IGIF: 9 Strategic Pathways

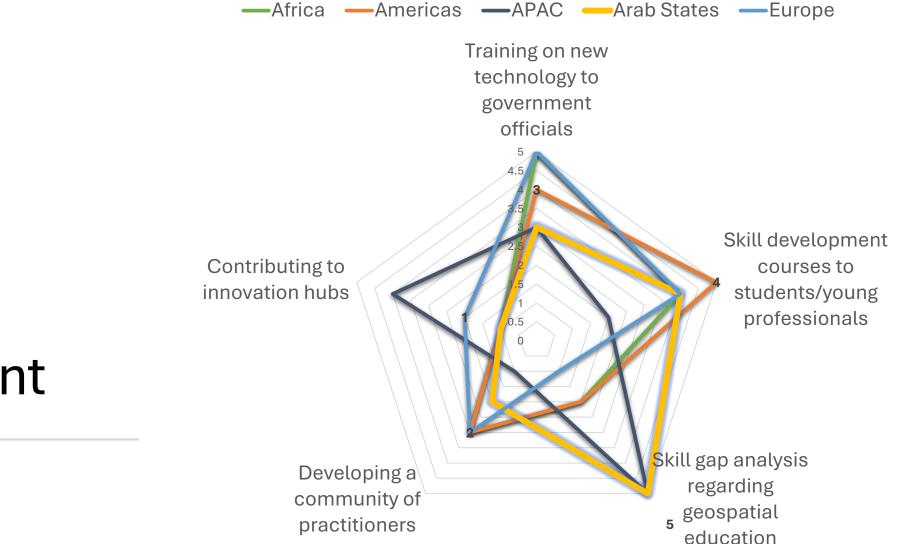


-Africa -Americas -APAC -Arab States -Europe

Stronger PS Role in Geospatial Governance



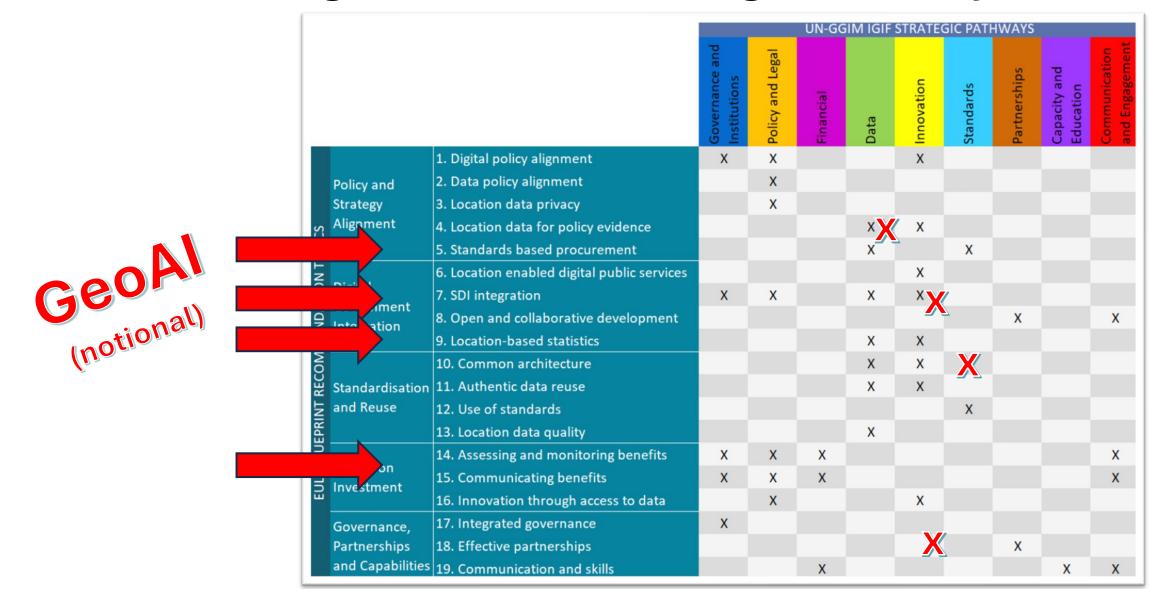




PS Role in Capacity Development



Connecting activities to Strategic Pathways



GeoAI empowers UN-GGIM from academia, industry and state members' perspective

Saied Pirasteh¹, Songnian Li, Maria Antonia Brovelli, Georg Gartner, Zaffar Sadiq Mohamed Ghouse, Ivana Ivanova, Abbas Rajabifard, Michael Starek, Christy Claudill, Lokendra Chauhan, Paloma Merodio, Andrea Manara, Mahdieh Shirmohammadi¹

¹ Institute of Artificial Intelligence, Shaoxing University, 508 West Huancheng Road, Yuecheng District, Shaoxing, Zhejiang Province, Postal Code 312000, China. Email: <u>spirasteh71@gmail.com</u>

Abstract

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Geospatial Artificial Intelligence (GeoAI) is set to transform academia and industry by offering new research and application opportunities. Here, we design a quantitative survey to explore and understand the current state of GeoAI and discern avenues for strengthening capacity and fostering a collaborative environment. We also develop and enhance GeoAI and ethical guidelines and best practices frameworks. This study's insights were from 120 participants





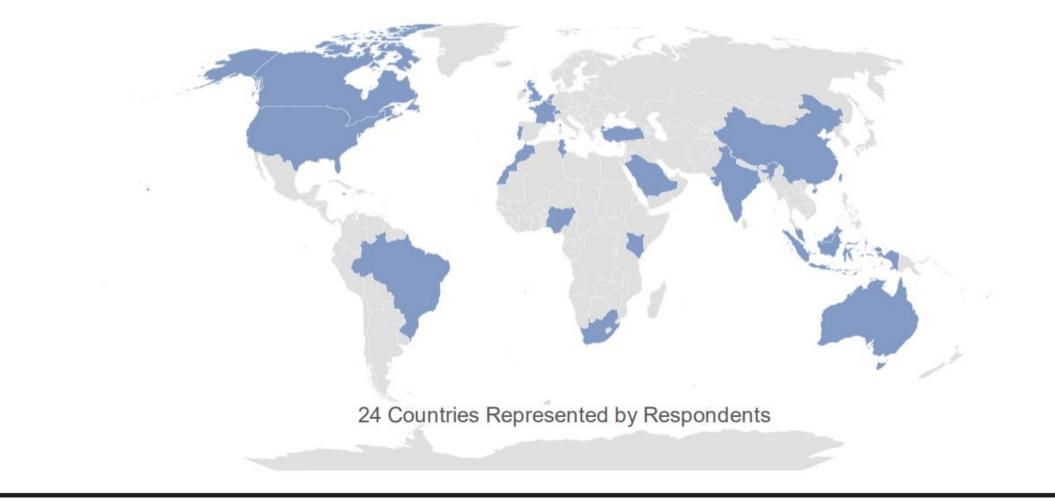


GEOAI Skill Needs Survey – Private Sector

- By Lokendra Chauhan

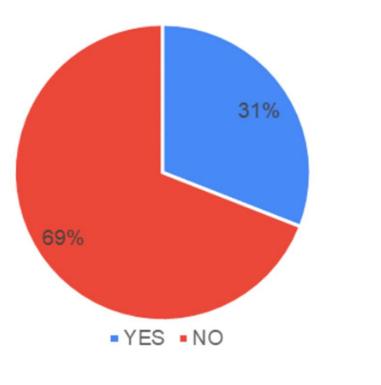
Founder, Qen Labs Inc.

Geographical Representation

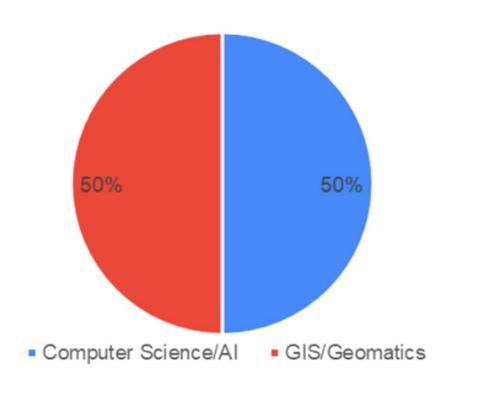


Findings from Private Sector Survey

Do University Graduates have Required Skills for GeoAl Jobs?



Easier to upskill Geo degree holders or Computer Science



Skills and Competencies Required

GEO AI Solutions

Geospatial Science

- ➢ GIS e.g. ArcGIS, QGIS, etc.
- Spatial Databases e.g.
 PostGIS, Oracle Spatial, H3
- Spatial data science
- Remote sensing (raster), vector & point cloud data analysis

Artificial Intelligence

- Machine learning: SVM, regression, clustering, PCA
- Deep learning: CNNs, Transformers
- Graph analysis: GNN
- Math: linear algebra, stats, probability, calculus, etc.

Domain Knowledge

- Data structure and data selection
- Model architecture design
- Loss function design to ensure models learn the right thing

Computational Skills

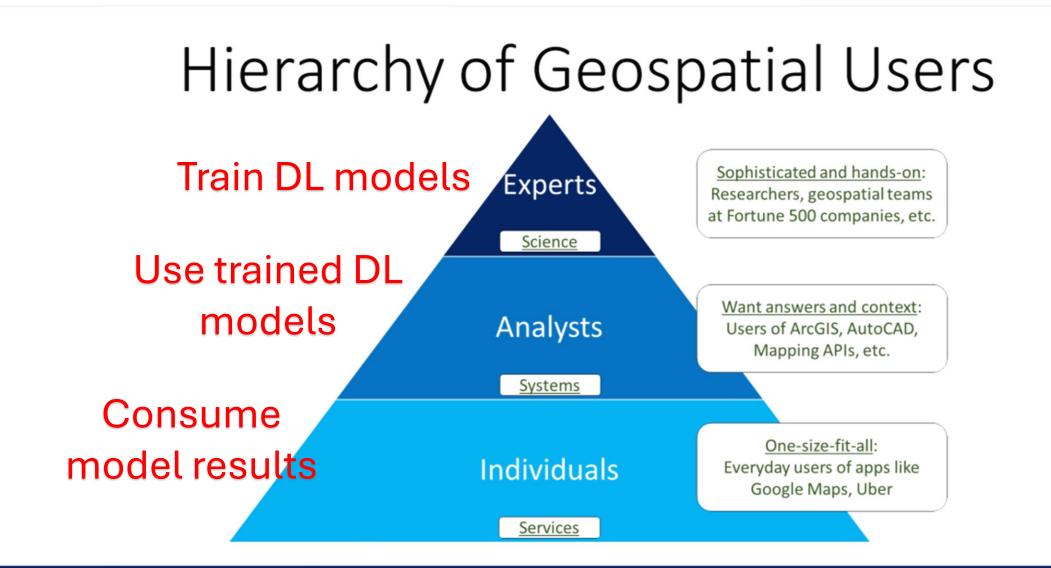
Python, JavaScript, PyTorch, API development, container management and cloud deployment skills

Data engineering and management: Querying, processing, fusion/harmonization,

Ethics and Safety Considerations

Know and tackle biases due to geographical data availability (or lack), scale, problem selection, etc.

Manage data privacy issues through consent, self-determination and subsidiarity in data governance



<u>Next phase</u>: Multimodal GeoAI foundation models (FM) for answering spatiotemporal and retrieval queries in natural language. <u>Question</u>: When everyone becomes a GeoAI FM user, what kind curriculums would be required?

Summary of Conclusions

- AI will affect the work of UN-GGIM and IGIF.
- GeoAl is in widespread demand.
 - Traditional GeoAI (data capture) and Assistants (LLMs)
- Industry Upskilling is Common: Academia can do more.
- Greater collaboration needed btw Public (incl. Univs) & Private Sectors, Governments, UN.
 - Communication of the importance
 - Capacity Development
 - Agreements on Ethics, Policy





Let's develop a positive and enduring impact on a sustainable world using geospatial information, leaving no one behind