

Transforming our world -
The 2030 Agenda for
Sustainable Development



FIG WORKING WEEK 2023
28 May - 1 June, 2023, Orlando, Florida, USA



Protecting Our World, Conquering New Frontiers

FIG Director General's Forum 2023

UN-GGIM PERSPECTIVES ON GEOSPATIAL INFORMATION TRENDS

Greg Scott, UN-GGIM Secretariat

Environmental Statistics and Geospatial Information Branch
United Nations Statistics Division
Department of Economic and Social Affairs
United Nations, New York



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United Nations Secretariat
Global Geospatial Information Management

Positioning geospatial information to address global challenges

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FIG Director General's Forum 2023

TASK FORCE: THE ROLE OF FIG IN INTERNATIONAL TRENDS AND FUTURE GEOSPATIAL INFORMATION ECOSYSTEMS

How can FIG support the implementation of our UN-GGIM agenda and the implementation of the UN-IGIF?



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Global Development Frameworks

2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Sendai Framework for Disaster Risk Reduction 2015-2030

Paris Agreement on Climate Change

SAMOA Pathway for SIDS
Addis Ababa Action Agenda
Habitat III New Urban Agenda
Our Ocean, Our Future: Call for Action



The transformative nature of the 2030 Agenda requires new and innovative data sources and integration approaches to implement the SDGs and to 'leave no one behind'.

The SDGs are highly dependent on geospatial information and enabling technologies as the primary data and tools for relating people to their location, place and environment, and to measure 'where' progress is, or is not, being made, especially at local levels.



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Global Geodetic Reference Frame



Addresses



Buildings and Settlements



Elevation and Depth



Land Cover and Use



Land Parcels



Orthoimagery



Physical Infrastructure



Functional Areas



Geographical Names



Geology and Soils



Population Distribution



Transport Networks



Water

UN-GGIM Global Geospatial Frameworks

INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK (IGIF)



Strategic Framework on Geospatial Information and Services for Disasters

Global Statistical Geospatial Framework (GSGF)

Framework for Effective Land Administration (FELA)

Global Fundamental Geospatial Data Themes

Global Geodetic Reference Frame (GGRF)

National Institutional Arrangements in Geospatial Information Management

Role of Standards in Geospatial Information Management

Compendium on Licensing of Geospatial Information

Statement of Shared Guiding Principles for Geospatial Information Management

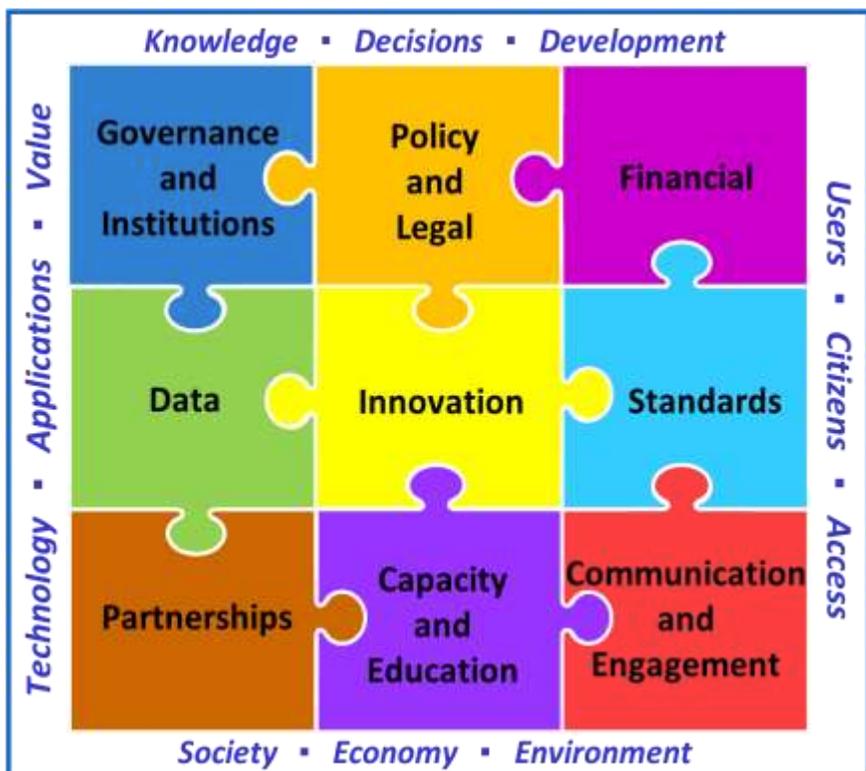


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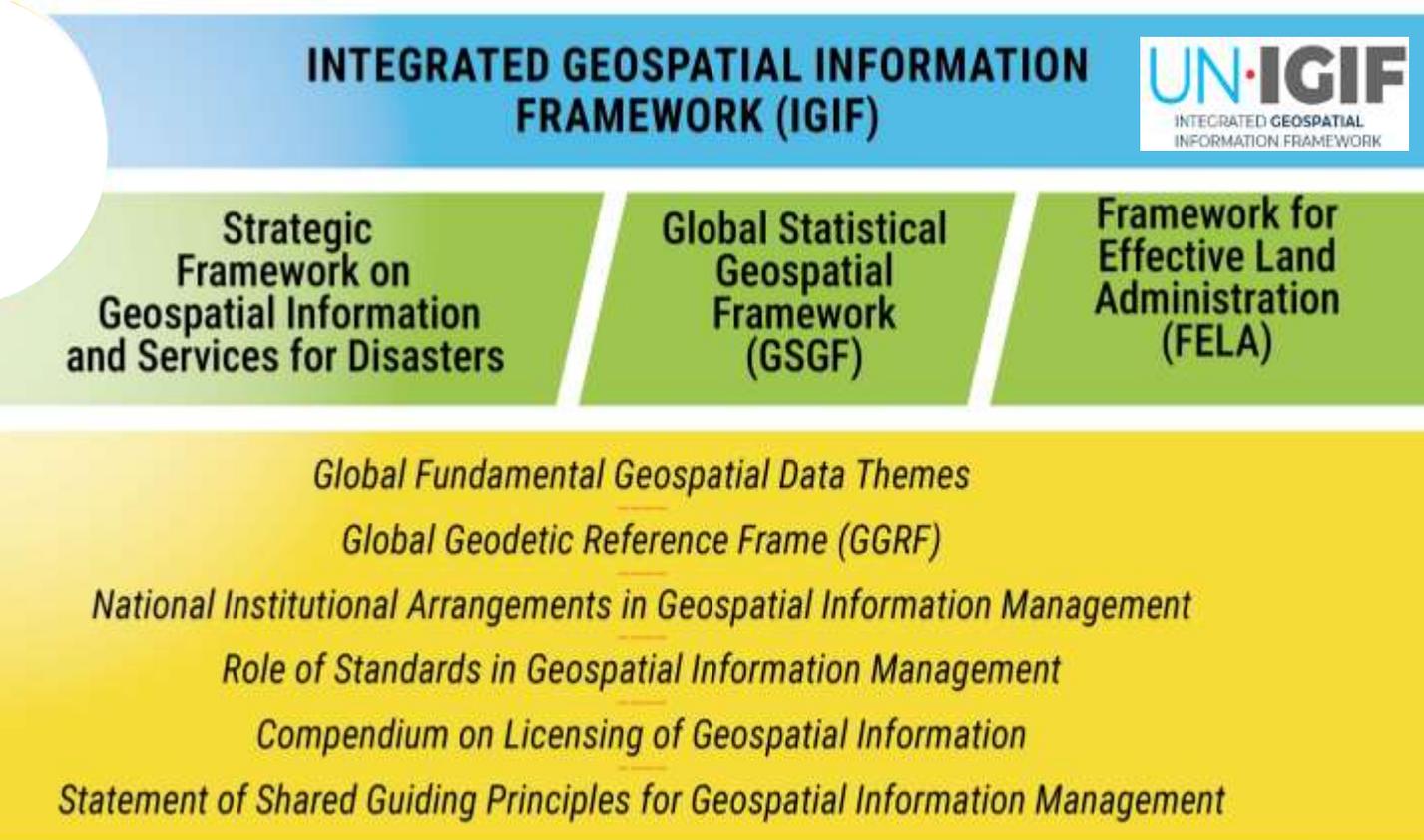
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The UN-IGIF acts as a catalyst for economic growth and opportunity, and stimulates improved understanding and decision-making for national development priorities and the SDGs.



UN-GGIM Global Geospatial Frameworks



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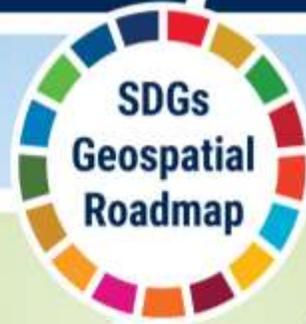
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UN-GGIM Global Geospatial Frameworks

INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK (IGIF)



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THIRD (2020) FUTURE TRENDS REPORT: KEY CHALLENGES

We fell victim to “the tyranny of the urgent,” the problem that occurs when the “urgent” replaces the “important.”

We will do good for the Earth by doing well in our businesses.

Today, there’s nothing more important than sustainability.

Ola Rollen, President and CEO of Hexagon, 20 April 2021



- Expanding urbanisation, concerns about food production, climate change, the need for sustainable land management and development, and growing inequality are putting our global ‘resilience’ under stress.
- The way in which our society is organised amplifies the structural threats that climate change and the emergence of new infectious diseases have upon the world.
- Many global development challenges, particularly pertaining to socio-economic development and equity, are intrinsically tied to what happens where at the local level - cities, communities, citizens.
- Governments, institutions and industry can make the necessary investments in the many components of preparedness and resilience - of which geospatial information is key.
- The Future Trends Report complements the UN-IGIF, helping to ensure that the Framework integrates and takes advantage of the latest innovations and trends.

Link: [Future Trends Report](#)



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DEVELOPMENT, FUNDAMENTAL DATA, AND INDUSTRY SECTORS



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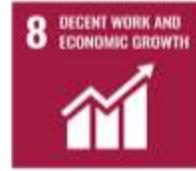
Population Distribution



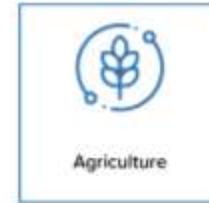
Transport Networks



Water



SUSTAINABLE DEVELOPMENT GOALS



Agriculture



Construction and Infrastructure



Logistics and Supply Chain



Cities



Public Safety and Security



Autonomous Driving



Land Administration



Energy Transition



MINING



OIL & GAS



RENEWABLES



WATER



TRANSPORTATION



BUILDINGS



Energy



Land use



Industry



Urban



Buildings



Transport



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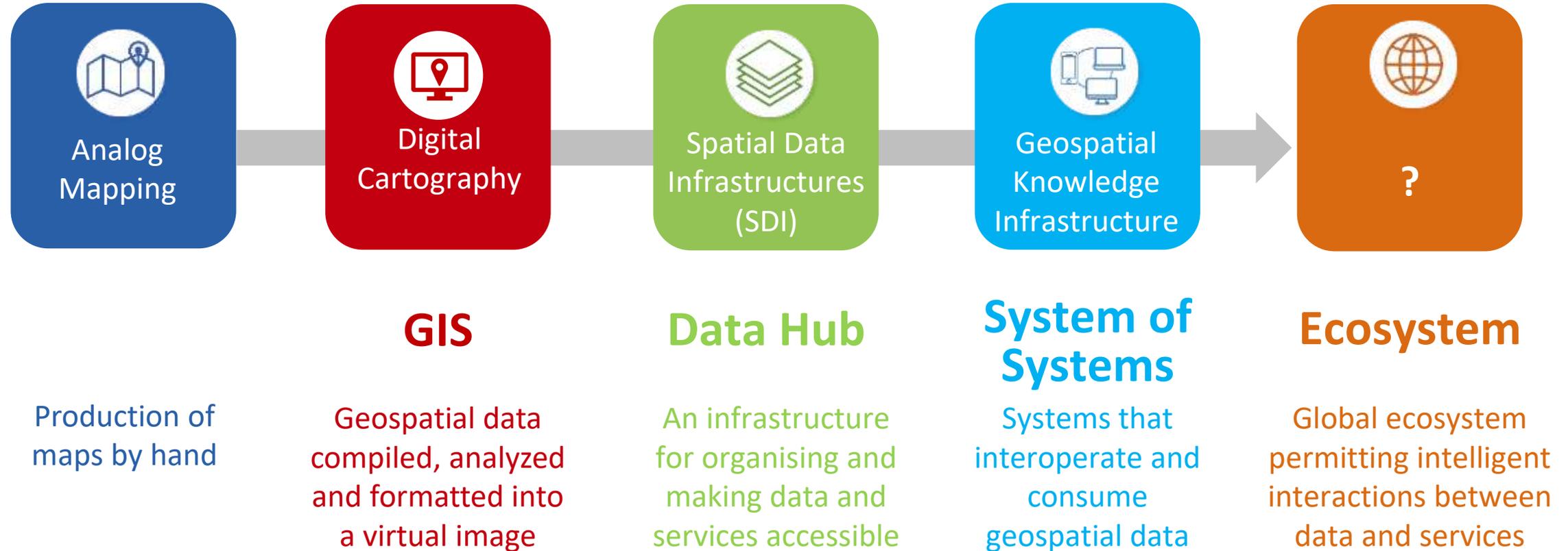
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THE “EVOLVING” GEOSPATIAL ECOSYSTEM

On the same journey, just unique starting points



Slide courtesy of Lesley Arnold, Geospatial Frameworks

Positioning geospatial information to address global challenges

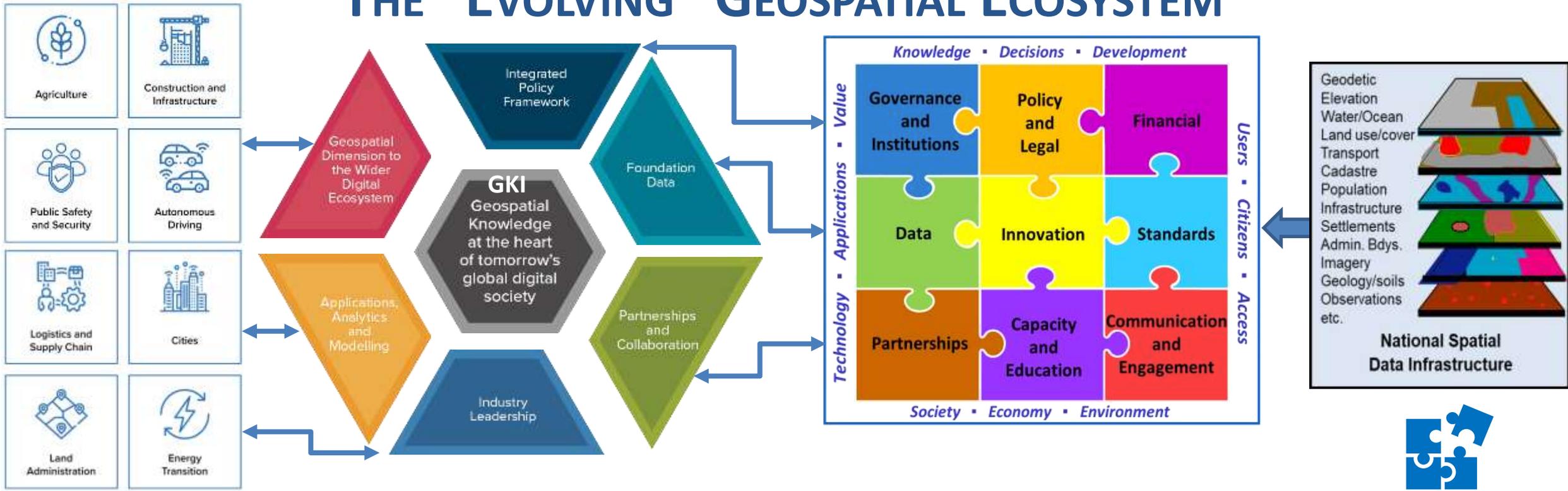
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THE "EVOLVING" GEOSPATIAL ECOSYSTEM



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THE "UNSTRUCTURED" GEOSPATIAL ECOSYSTEM

GEINT COMMUNITY FORUM MARCH 9-10 virtual event

TITLE SPONSOR PRESAGIS MAKE IT REAL

The Geospatial Metaverse – Infrastructure, Tradecraft and Applications



GeoCubes Universe

Explore the Real World with your mobile phone or through geolocated positions and discover Gates to multiple VRE (Virtual Reality Experiences), three-dimensional spaces owned by users, where you can live or show different realities.



Making the web an exploratory place for geospatial data



A Semantic Web- Geo System

November 2008

Conference: 3rd International Conference On Advanced Computing & Communication Technologies · At: ASIA PACIFIC INSTITUTE OF INFORMATION TECHNOLOGY [First International Engineering College Approved by AICTE, MHRD, Government of India and Department of Technical Education Govt. of Haryana]



Browsing the Geo Web Metaverse: Weekly Update #21

March 23, 2021

What is geo metaverse?



GEO METAVERSE is a mobile app. It uses a geo reality user interface on your mobile device. It does not require any additional hardware.

Open the app and discover treasures and Meta Malls in the augmented reality near you.

Public comment requested: OGC Geo for Open Metaverse Domain Working Group Draft Charter

Chapter 13: Geo-Semantic Web

By: Peter L. Publifer & Glenn Brauen

In: [Understanding Spatial Media](#)

Chapter DOI: <https://dx.doi.org/10.4135/9781526425850.n13>

Subject: [Communication and Media Studies](#), [Geography](#), [Engineering](#)

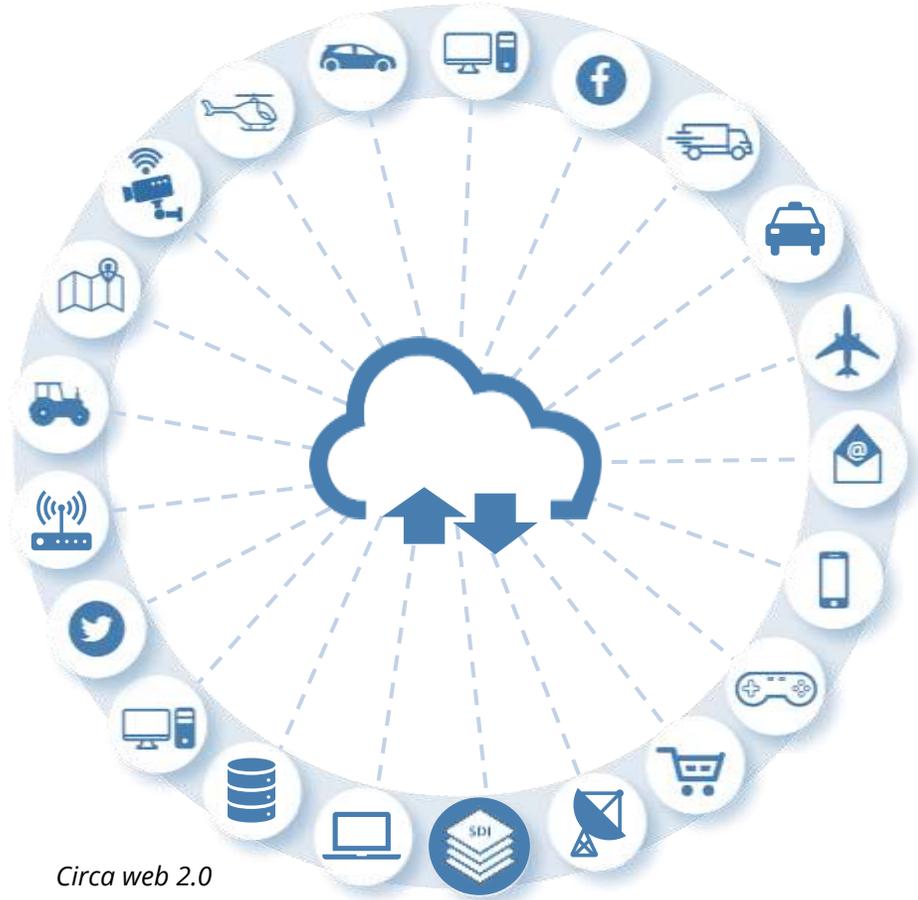
Keywords: [interoperability](#), [ontologies](#), [semantic web](#)

Geolocal AR: The Metavearth Materializes

Slide courtesy of Lesley Arnold, Geospatial Frameworks

THE EMERGING ECOSYSTEM

Slide courtesy of Lesley Arnold,
Geospatial Frameworks



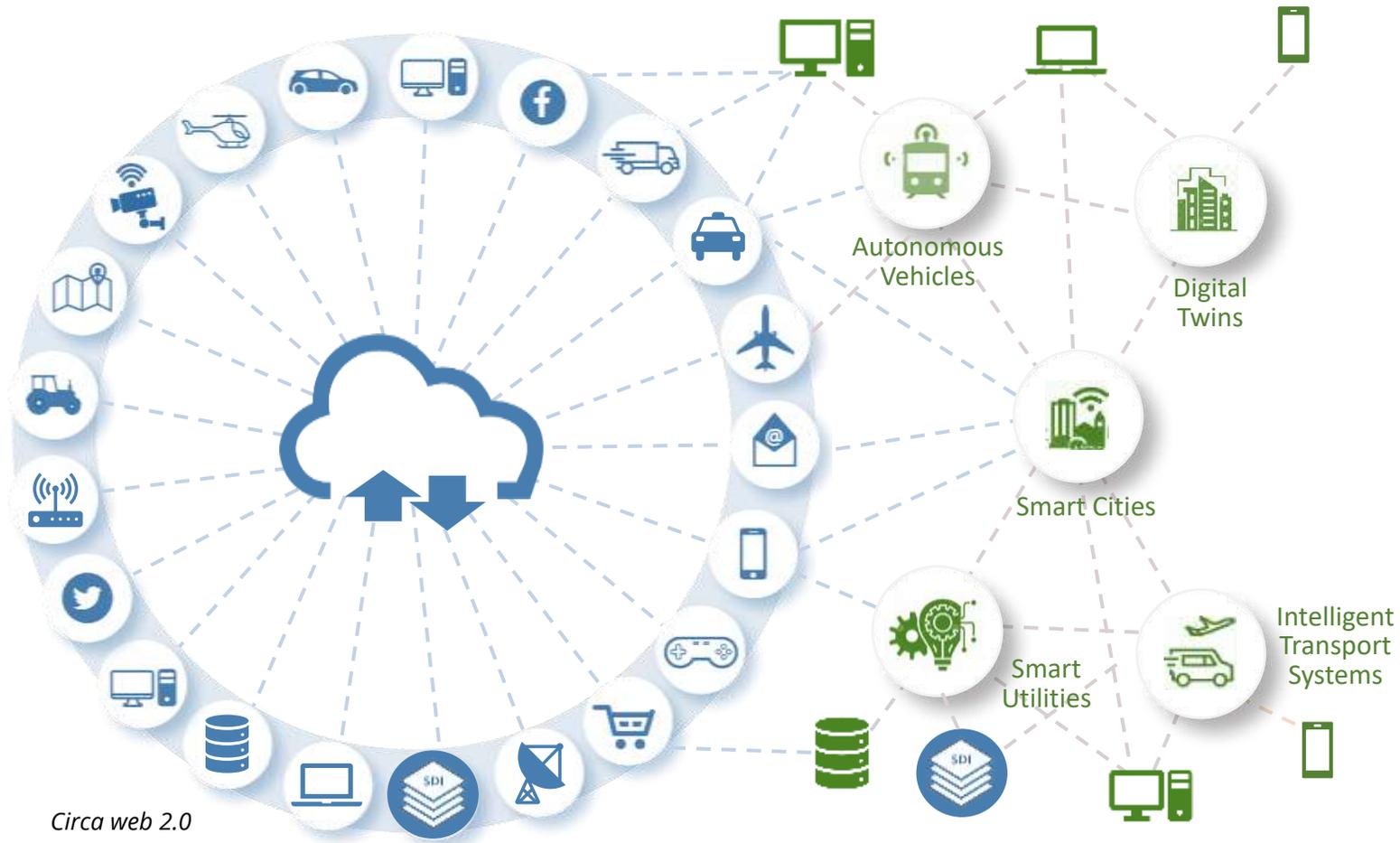
Circa web 2.0

Spatial Data Infrastructures

Human centered – A person searches, retrieves, processes and analyses data via a web catalogue to obtain knowledge.

THE EMERGING ECOSYSTEM

Slide courtesy of Lesley Arnold,
Geospatial Frameworks



Spatial Data Infrastructures

Human centered Data Hubs – A person searches, retrieves, processes and analyses data via a web catalogue to obtain knowledge.

System of Systems

Distributed/federated interconnected systems managed under the control of humans and include advanced machine analytics and AI

THE EMERGING ECOSYSTEM

Slide courtesy of Lesley Arnold,
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Circa web 2.0

Circa web 3.0+

Spatial Data Infrastructures

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System of Systems

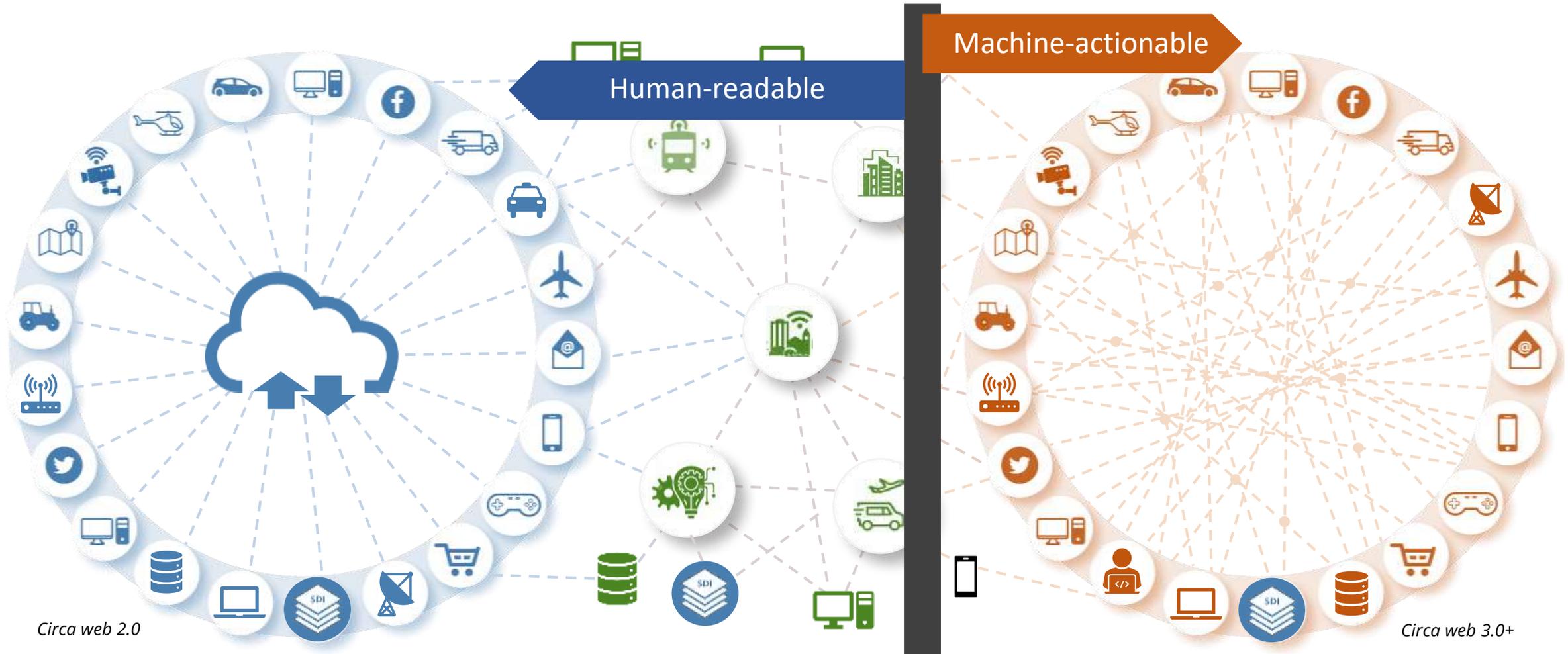
Distributed/federated interconnected systems managed under the control of humans and include advanced machine analytics and AI

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Machined centered – AI searches, retrieves, processes and analyses data to deliver knowledge direct to a person's device or another machine.

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THE FUTURE GEOSPATIAL ECOSYSTEM: WHAT IS THE ROLE OF UN-GGIM?

Since its establishment, UN-GGIM has kept abreast of future trends and opportunities in the application and use of geospatial information technologies and has developed the necessary global policy to facilitate change where it will benefit most.

With rapid technological developments and innovations, combined with the experiences derived from the implementation of the United Nations Integrated Geospatial Information Framework (UN-IGIF), considering the future geospatial ecosystem, and the role that UN-GGIM plays within it, is a current topic of discussion.

Aspirations to move the geospatial landscape beyond ‘data’ as a focal point of activity, to processing and synthesizing data into contextualized information, so that it can be readily used to gain new knowledge, insights, and impact.

The geospatial community is not alone here; the data revolution and digital transformation are disrupting traditional methods of data delivery and dissemination, and with users now demanding integrated geospatial information to expand and improve ‘actionable’ decision-making capabilities.

A Global Webinar: Monday 12 June 2023, 9:00-10:30am (EDT/UTC-4)



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