



WEBINAR on 19.06.2023 - CONCEPT NOTE

WEBINAR COORDINATOR | UNGGIM-Europe Data Integration Working Group

PARTICIPATING PARTIES: GeoSpatial World, EuroSDR, , Swisstopo

WEBINAR TITLE

The way towards a Geospatial Knowledge Infrastructure

FRAMEWORK / INTRODUCTION

The main aim of this new Line of Work 'Data Integration' (LoW DI)' for the upcoming two years is to maintain the active contribution on data methods and on **showcasing the added value of integrating geospatial data with other data**, and further exploring requirements and practices on the use and integration of Earth Observation data, digital twins and **enabling a common geospatial knowledge infrastructure**.

In the past 2 years, we concluded that **migrating from SDI to Geospatial Knowledge infrastructure was a key element for enabling the integration of the geospatial data into European Data spaces and business spaces**. (stated in the document [Data Integration Methods \(un-ggim-europe.org\)](https://un-ggim-europe.org/Data_Integration_Methods)) However, very little of the data owners know what it means and what are the needs and recommendations in that matter.

The webinar is considered and an introducing/overview webinar whose main aim is to collect concerns, needs and requirements by different groups, initiatives or stakeholders in Europe and **from the webinar audience**. The findings and conclusions might lead to more specific topics in second phase.

OBJECTIVES

1. To gain a greater understanding of the geospatial knowledge value-chain and how sustainable development is being driven by knowledge applications.
2. To understand that Geospatial Knowledge Infrastructure (GKI) offers a series of recommendations to take nations up the value chain towards knowledge as they embark on their digital transformation. These will also support the development of IGIF country-level action plans.
3. To provide use cases and best practices examples of GKI applications within international organisations like GeoSpatial World, EuroSDR, and NMCAs.
4. The final outcome is to get a feedback of the audience by mean of a series of questions, in order to highlight the concerns and needs related to a possible migration to a GKI. Findings and conclusions might lead to more specific topics in second phase.

The audience will be extended to participants from other data spaces than geospatial and statistics like: land, agriculture, transport, climate change, and the UN-GGIM global organisation.

AGENDA / OVERVIEW OF PRESENTATIONS

- Welcome – by Pier-Giorgio Zaccheddu (Chair of the UNGGIM-Europe Working Group on data integration- BKG Germany)

Presentations:

- Introducing the webinar “Why this webinar” – by Nathalie Delattre (Co-chair of the UNGGIM-Europe Working Group on data integration- NGI Belgium)



- Opening presentation on GKI “GKI supporting National Development” – by John Kedar (Strategic Advisor Geospatial Infrastructure and Agencies Geospatial World-UK)
- Case Study on GKI in Action – by Ruban Jacob (Associate Director – Geospatial World India)
- Use case from EuroSDR “Solutions to engage with the national education community and synergies across countries” – by Bénédicte Bucher (Senior Scientist-IGN France)
- Use case from a NMCA: “Towards a Next Generation of Swiss Maps” – by Karsten Pippig (Project Coordinator – Swisstopo Switzerland)

Interactive session – moderated by Nathalie Delattre

Conclusions and path forward – by Markus Jobst (Co-chair of the UNGGIM-Europe Working Group on data integration- BEV Austria) and Pier-Giorgio Zaccheddu

BIOGRAPHIES AND PRESENTATION SUMMARIES

John Kedar



John Kedar served a career in the UK armed forces including leading its geospatial capabilities. Subsequently he was Director International Engagement for UK’s national mapping agency, Ordnance Survey, for six years, opening new international markets and building long-term intergovernmental relationships. John now works independently, supporting nations prepare and deliver their national geospatial information strategies and action plans. This includes guiding developing nations through the SDG Data Alliance and advising Geospatial World.

Abstract: GKI supporting National Development

This is the age in which humans and machines come together. We call it the Fourth Industrial Revolution (4IR); it is characterized by knowledge derived from data, network and powerful tools. This 4IR is merging human, physical and digital environments and leading to unprecedented societal changes that embrace living, health, leisure, work, wealth, industry and our social selves. The 4IR enables use of machine knowledge for making critical decisions, thereby leading to increased autonomy. Automation is increasingly seeing changes that exclude humans from final decisions. The geospatial industry needs to ensure they can do so geospatially; the same 4IR technologies give this opportunity. We need to move beyond current human-in-the-loop data-centric geospatial infrastructures, as data is not the endpoint. Knowledge, decisions, services, satisfaction are the value chain that data feeds. Whilst we call data ‘the new oil’, knowledge is perhaps ‘the new capital’. Therefore we developed the **Geospatial Knowledge Infrastructure (GKI)** concept with a vision for ‘geospatial knowledge at the heart of tomorrow’s sustainable digital society’, where knowledge, rather than data, is the focus. This transition from data to knowledge is enabled by 4IR technology, these 4IR technology increasingly enable knowledge to be generated ‘automatically’ improving decision making and adding value. GKI leverages many new opportunities enabled by 4IR. It accelerates automation and knowledge-on-demand. It supports the United Nation’s Vision – the 2030 Agenda for Sustainable Development.

Ruban Jacob

Ruban Jacob is the Associate Director – GKI at Geospatial World. He has over 6 years of experience in the policy and governance domain, and around 4 years of experience in geospatial governance. He has been part of the collaborative partner alliance project on GKI since its inception, and has been actively involved in the development of the GKI concept and its elements. He is also actively involved in the development of the GKI readiness index which ranks countries around the world based on the



maturity of their national geospatial infrastructures. Through the GKI project, he is striving to expand geospatial beyond the traditional geospatial stakeholders by reaching out to the digital and user domains and enhancing workflow integration to better contribute to sustainable national development.

Abstract: Case Study on GKI in Action

The presentation will focus on the value proposition of GKI integration in sectoral workflows. The value proposition will be demonstrated using case studies from 2 sectors – Agriculture and Land Administration. The case studies will try to define the specific challenges, and how the integration of GKI elements into the workflow helped in solving the said challenges, along with other associated benefits.

Bénédicte Bucher

Bénédicte Bucher is a senior scientist at the French national institute for geographical and forest information (IGN) and University Gustave Eiffel, studying spatial data infrastructures. She is the French prime delegate at EuroSDR (eurosdr.net) where she chaired for 6 years the commission on Information usage and led the activity on linked data, historical data, education. She graduated as an engineer from French Ecole Polytechnique, survey engineer from French 'Ecole Nationale des Sciences Géographiques' and holds a master degree in mathematics, computer sciences and application to humanities. Her PhD and enabling were on the application of knowledge representation to on-line access to geographical data.

Abstract: Solutions to engage with the national education community and synergies across countries

Geographical data are a useful asset in several domains of education including geography, history, urbanism or environmental science, from primary school to higher education and life-long learning. In Europe, some national mapping agencies have designed different solutions to engage with their national education community. An activity has developed at EuroSDR to study possible synergies across countries in that domain, as well as to consider perspectives to improve the evolution of teaching to address the challenges of ecological transition.

Karsten Pippig



Karsten Pippig studied cartography at the Technical University of Dresden (Germany) and subsequently completed his PhD at the same university. After completing his doctorate in 2014, he joined the Federal Office of Topography (swisstopo) as a specialist for geodata management. He is currently project coordinator in the division of cartography at swisstopo and leads the "NextGenerationMap" project, among others.

Abstract: Towards a Next Generation of Swiss Maps

The rapidly increasing usage of mobile devices in the digital and mobile society has led to a wide variety of mobile map applications and a large number of map users. Today, mobile map applications are ubiquitous. In particular, the map applications of the major players in this field have fundamentally influenced and changed user requirements. This necessarily leads to a rethinking and reorientation in official cartography to meet the changing user requirements of a mobile society. In view of these challenges and based on internal studies, swisstopo has launched the "NextGenerationMap" project to provide maps optimised for mobile use - in addition to the existing national map in digital and printed form. The NextGenerationMap is consistently oriented towards users and their needs in the context of mobile use and aims to provide a positive user experience. It



aims to generate geo-knowledge from geoinformation. In cooperation with various stakeholders, swisstopo's own reference data is integrated with data from other actors in the map application and/or linked with information from third parties in order to satisfy the users' information needs. Real-time information plays an increasingly important role in mobile use. Among other things, real-time information services on natural hazards are linked to topic-relevant points of interest and contribute to prevention. We show how official (map) reference data can be used to achieve added value by combining different information.