

CONCEPT NOTE

Webinar “Quo Vadis Geodesy?”

Introduction

Modern society relies heavily on satellite services for various critical functions, including economic development, the operation of critical infrastructure, and defence applications. Despite their clear and proven significance, these satellite services are at risk of degradation or failure due to the lack of resources provided to the global geodesy supply chain. It is crucial for decision-makers to understand the far-reaching implications of not strengthening this supply chain, which impacts societal, economic and environmental applications. Additionally, these decision makers need clear pathways to address these vulnerabilities effectively.

The Community of Interest on Geodetic Reference Frames – Europe, established by UN-GGIM: Europe, is dedicated to supporting the sustainment and growth of the geodetic profession. To address current knowledge gaps, we have organized this webinar featuring two insightful presentations. The first presentation will discuss the risks associated with weak geodetic foundations and their potential to compromise satellite services. The second presentation will introduce an initiative to launch an international Master of Science in Geodesy, emphasizing the importance of formal geodesy education in building robust geodetic foundations.

Attendees will have the opportunity to engage in discussions, ask questions, and explore collaborative solutions to the challenges facing the global geodesy supply chain.

By the end of this webinar, participants will have a clearer understanding of the vital importance of geodesy in supporting modern satellite services and the urgent need for enhanced geodetic education and resource allocation. We invite all stakeholders, including policymakers, industry leaders, and academic professionals, to join us in this conversation and contribute to strengthening the global geodesy supply chain.

Objectives

- 1) Provide geo-experts resources to help them convincingly communicate and advocate for a strong global geodesy supply chain.
- 2) Inform decision makers on the risks associated with not strengthening the global geodesy supply chain.
- 3) Find support for the initiative of the IDEA-league universities to establish an international Master of Science in Geodesy.

References to consider

[Documents published by the United Nations Global Geodetic Centre of Excellence](#)

[Hidden Risk Policy Brief by the United Nations Global Geodetic Centre of Excellence](#)

[Website of the IDEA league, a strategic alliance between five leading European universities](#)

[Questionnaire published by the IDEA league universities to get input from the professional field on setting up an appropriate curriculum for a MSc in Geodesy](#)

[EuroGeographics](#)



UN-GGIM: EUROPE

Line of work on Geodetic Reference Frames: Europe

Agenda

Date: Tuesday 20/08/2024 14:00 CEST

Registration: [GoToWebinar](#)

1. Welcome and Introduction

Jeffrey Verbeurgt, NGI Belgium [1']

Johannes Bouman, BKG [4']

2. You, Me and Geodesy

Nicholas Brown, UN-GGCE [15' + 5' Q&A]

We live in a world where people like to focus on growth. People often like to discuss new things they would like to build, or new technology they would like to apply. In this presentation I will be discussing how sustainable and resilient the geodetic foundations are that we are building on. In 2022, the revenue generated from Global Navigation Satellite Systems (GNSS) Position, Navigation and Timing, Earth Observation and satellite telecommunications services was over US\$450 billion and is expected to be over US\$737 billion / yr within a decade. These satellites and the industries they support, including land tenure, resources management and mining, among many others, depend on geodetic products to ensure satellites operate reliably and accurately. In this presentation, instead of focusing on growth, or new things, or new technology, I would like to focus on the foundations on which this growth and development is built. I would like to discuss weaknesses in these foundations, like a lack of formal geodesy education and highlight the potential impacts of not strengthening those foundations on societal, economic and environmental applications.

3. Initiative for an International Master Program in Geodesy: IDEA League

Ramon Hanssen & Peter Teunissen, TU Delft [20' + 10' Q&A]

It is well known that the steady decline in the number of academically trained geodesists, particularly in western countries, starts to affect society on many different levels. From the perspective of Geodesy as a foundational discipline for many fields of science and engineering, the lack of experts is already critical, and both industry and governmental organizations fail to attract new talent, as we have concluded from a recent questionnaire. Yet, compared to other fields, geodesy remains a small, modest, and relatively unknown discipline for the wider public. Moreover, in terms of visibility, geodesy failed to benefit from its own technological accomplishments, e.g. related to satellite positioning and earth observation. Finally, universities, who should be the cradles of new geodetic academic talent, are struggling with upholding a sustainable training program in Geodesy, for various reasons.

For this reason, four universities united in the so-called IDEA-league decided to investigate the possibility of establishing an International Master in Geodesy. Delft University of Technology, ETH Zurich, Politecnico di Milano, and Chalmers University of Technology are currently designing a joint curriculum, which will be proposed to the boards of the universities later this year.

In this presentation we will present the background and scope of the idea. We are actively searching for support, collaboration, and ideas to make this endeavour successful.

4. Closing Remarks

Jeffrey Verbeurgt, NGI Belgium [5']

