

United Nations Global Geodetic Centre of Excellence (UN GGCE)

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Knowledge Exchange, EuroGeographics General Assembly, Riga, Latvia

Presented by

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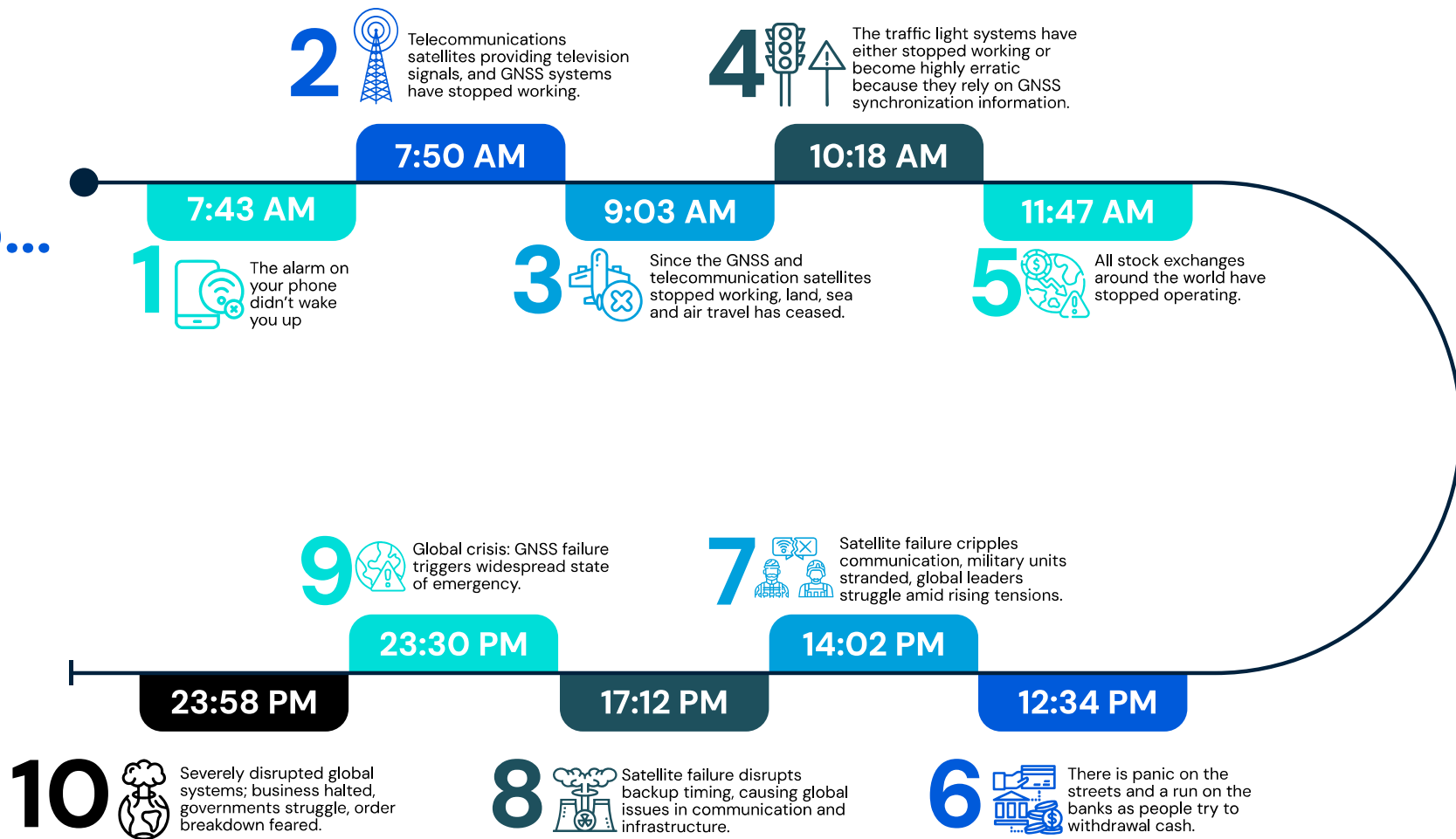
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Imagine
this
scenario...



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Reliance on Satellites

We have an ever-increasing reliance on satellites

‘A single point of failure’ for some national economies and operation of critical infrastructure

Critical infrastructure operation:

A 2012 report from the U.S. Department of Homeland Security found that 15 of 18 critical infrastructure and key resources sectors relied on the global positioning system (GPS).

Economic benefits:

Over the next decade, revenue from GNSS, Earth Observation and satellite telecommunications (80% of the space industry market revenue) has growth rate of ~9%

Reaching a total of almost €800 billion.

This is why countries are investing in GNSS, Earth Observation and satellite telecommunications and want sovereign capability.



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UN Global Geodetic Centre of Excellence (UN GGCE)

Our Vision

All countries have **strong political support** for geodesy.

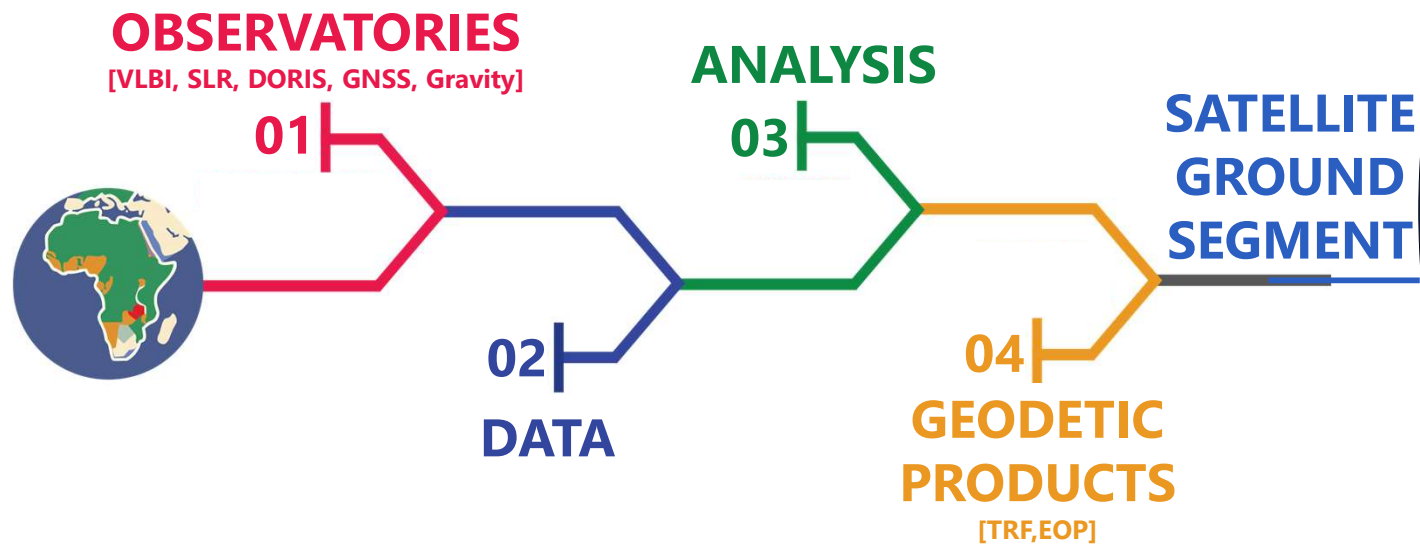
Implement UN General Assembly resolution 69/266, *Global Geodetic Reference Frame*, to strengthen the global geodesy supply chain.



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Global Geodesy Supply Chain



1st Joint Development Plan for Global Geodesy

Version 1.0



Action plan (linked with a strategy) to address weaknesses in the global geodesy supply chain

1. Avoid further degradation

- support current operational requirements

2. Robust

- improve reliability

3. Next generation

- meet more ambitious requirements

Available in 6 UN languages at
<https://ggim.un.org/UNGGCE/#documents>

Activities for UN-GGCE, Member States and partners



13 objectives
109 activities for Members States, UN-GGCE, partners

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Phase 1: Avoid further degradation of the global geodesy supply chain

- 1.1 Member States are engaged in geodesy **governance**
- 1.2 Maintain current accuracy and reliability of **geodetic products**
- 1.3 Decision-makers are convinced of **importance of geodesy**
- 1.4 Develop and retain a talented and diverse **workforce** in areas it is urgently needed
- 1.5 The **value of geodesy** is understood by other science organizations, industry sectors and society



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Phase 1: Avoid further degradation of the global geodesy supply chain

Objective 1.1

1.1 Member States are engaged in geodesy governance

Outcomes

1.1.1 Member States have **improved governance arrangements** within their country including a workplan to manage strategic, operational, and technical geodetic risks.

1.1.2 Governments, science organizations, industry, and universities **understand their roles** in the global geodesy supply chain, as well as how they relate to other elements of the chain.

1.1.3 Member States **understand their dependency on, and contribution to**, the global geodesy supply chain, as well as the impact of loss due to failure or degradation of the global geodesy supply chain.

1.1.4 **Risks** associated with weaknesses in the global geodesy supply chain are beginning to be mitigated.



Proposed Activities of Member States:

1. Establish, or strengthen an existing, **country level geodesy working group** which includes representatives from government (science, policy, defence), industry and academia.
2. Lead the development and implementation of a **country level strategy and action plan** to:
 - *Assess risks* to their country's economy and environment, and social impacts associated with weaknesses in the global geodesy supply chain.
 - *Increase awareness* of the global geodesy supply chain within government, industry and the broader public.
 - *Address risks* that, if realised, would have significant economic, social, and environmental consequences.

Proposed Activities of UN-GGCE

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Proposed Activities of partners

...

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Phase 2: A robust global geodesy supply chain

- 2.1 Geodetic products **meet Member State accuracy, reliability and integrity standards** to deliver on operational requirements
- 2.2 Global geodesy supply chain governance is **commensurate with risk**
- 2.3 Decision-makers are convinced of the **importance of a robust supply chain**
- 2.4 Implement **open data sharing** and protect radio frequency spectrum
- 2.5 Member States have a **modern Geospatial Reference System**



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Phase 3: A next-generation global geodesy supply chain

- 3.1 Decision-makers are convinced of the **importance of a next-generation supply chain**
- 3.2 Availability of **higher accuracy and stability geodetic products**



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