Integrated Geospatial Policy Framework

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World Geospatial Industry Council (WGIC)

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GEOSPATIAL WORLD — ADVANCING KNOWLEDGE FOR SUSTAINABILITY

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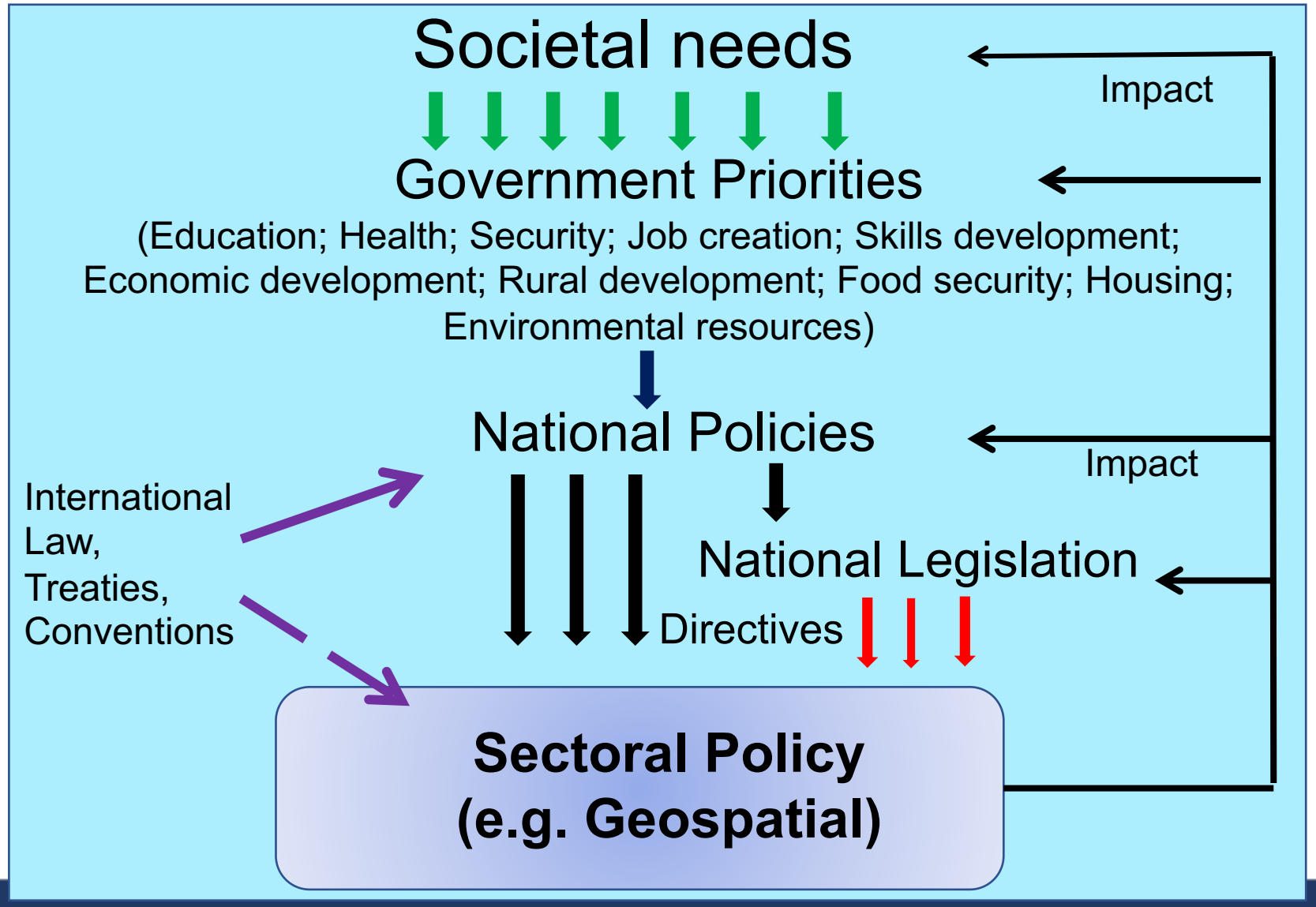
Policy Environment Overview



Policy Formulation

- Different approaches:

1. **Greenfields** – No policy currently exists.
2. **Tinkering** (change)

   - Policy exists and must be amended. Only minor changes effected.

   - Policy currently does not exist but ‘borrow’ from other policies and adjust to own situation.

3. **Radical** (change) – policy exists and must be amended. Take radical change approach.

- In all cases consultation with stakeholders is essential for buy-in and legitimacy.
- Policy can be **restrictive** or **enabling**

Policy challenges facing nations

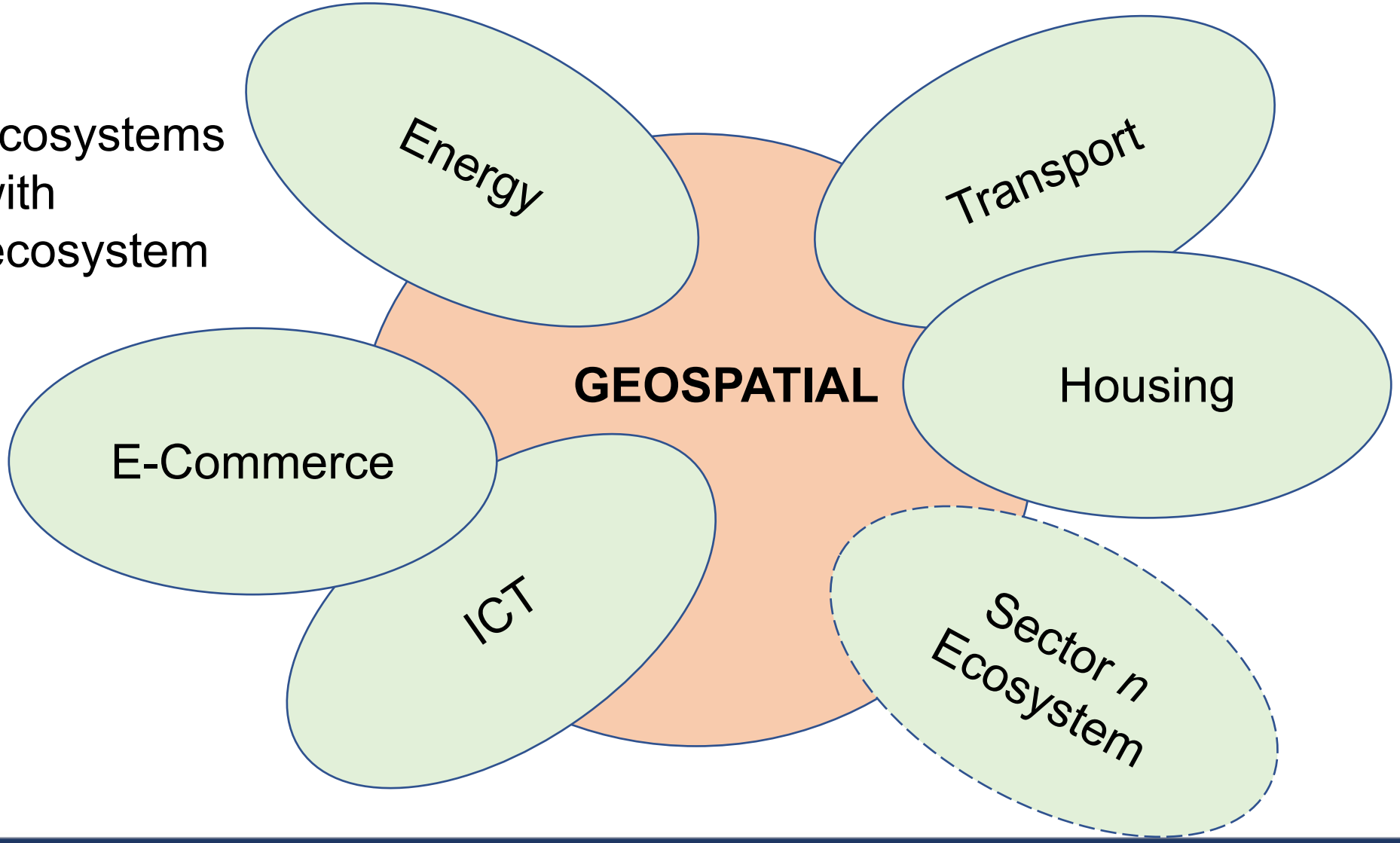
- Lack of recognition of geospatial information and technologies leads to lack of key consideration of geospatial in sector policies.
- Lack of political support for geospatial information and technologies leads to absence of effective geospatial policy.
- Lack of good governance, and mandated institutions do not identify policy issues and drive policy formulation.
- Lack of proper consultations on policy issues and formulation.
- Fear that policy will diminish current responsibilities and threaten institutional existence.
- Poor communication and socialisation of policy.
- Lack of implementation and adherence to policy – ineffective.
- Lack of an *integrated* geospatial information policy.
- Lack of an enabling environment for innovation, agility and entrepreneurship.

Participant discussion:

What are the key policy challenges in your country/ organisation for effective geospatial information management?

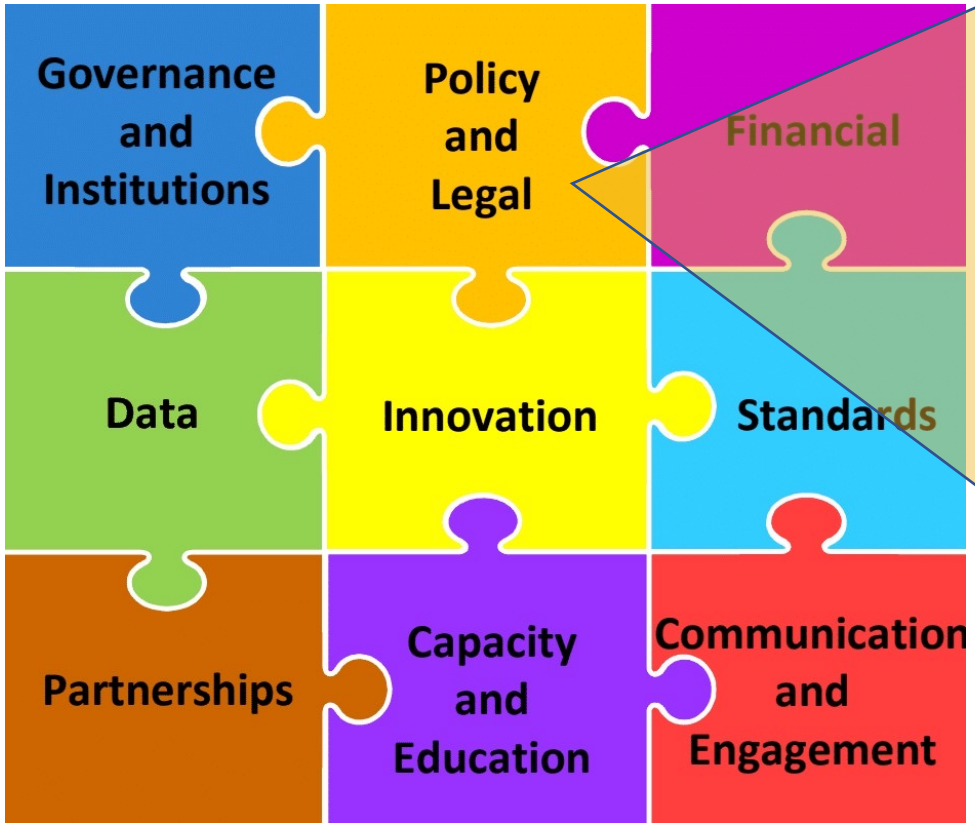
Integrated Geospatial Policy Environment

Applicable ecosystems interacting with Geospatial ecosystem



Integrated Geospatial Information Framework (IGIF) (UN-GGIM)

9 Strategic Pathways



SP 2: Policy and Legal

Legislation	Policies, Norms and Guides
Governance and Accountability	Data protection, Licensing and Sharing

Elements of IGIF SP2: Policy and Legal

- Legislation
- Policies, Norms and Guides
- Data Protection, Licensing and Sharing
- Governance and Accountability

Key Actions (IGIF):

- Providing leadership
- Assessing needs – reviews and assessments; gaps and opportunity analysis
- Addressing opportunities
- Future-proofing policy
- Addressing coherence
- Delivering compliance

Geospatial Knowledge Infrastructure (GKI)

Taken from: “The Power of Where: A Geospatial Knowledge Infrastructure to Enhance the World Economy, Society and Environment”

Integrated geospatial policy framework is a key element of GKI:

- **Integrated Digital Governance**

Recommendations:

- Central Government creates, aligns and eventually combines geospatial and digital policy and strategy functions.
- Liberalise the market for geospatial data and knowledge companies and wider digital divide barriers such as building and operating networks.

GKI: Integrated geospatial policy framework (cont.)

- **Core Geospatial Policies**:

Recommendations:

- Governments create and maintain a set of core geospatial policies integrated within the wider government policy framework, aimed at driving increasing social, economic and environmental value from geolocation, data integration and knowledge.
- Governments set public foundation data geospatial standards on content, access, quality, coverage and timeliness of data and services provided by national agencies.
- Governments liberalise restrictions on the creation and use of geospatial data and information to strengthen national innovation.

GKI: Integrated geospatial policy framework (cont.)

- **Global Policy Alignment**:

Recommendations:

- Geospatial crosses borders and governments should support, contribute to and where possible align with global and regional geospatial and wider data policies and frameworks.
- Governments collecting global data should look at opportunities to release this and provide commensurate development support to developing nations to increase the role of data and knowledge in government decision making, sustainable development and business growth.

GKI: Integrated geospatial policy framework (cont.)

- **Open Data**:

Recommendations:

- Governments adopt a common ‘open data’ policy that includes foundation geospatial data.
- Governments mandate and create standard registers to assist knowledge creation and their use be made available as open data.

GKI: Integrated geospatial policy framework (cont.)

- **Knowledge Legislation**:

Recommendation:

Legislators will increasingly focus on the capabilities of digital technologies but the convergence of geospatial data, data integration, analytics and geolocation technologies add complexity to an already complex multinational set of privacy issues. National geospatial leaders should seek to influence developing legislation to protect the justifiable benefits of geospatial knowledge from the unintended consequences of legislation.

GKI: Integrated geospatial policy framework (cont.)

- **Government Research, Development and Innovation**

Recommendations:

- Governments should support digital innovation in a manner that is inclusive to maximising the potential of geolocation.
- Governments should establish the means to accelerate the transfer of geospatial ideas to solutions, bringing academia, business and innovators, often from different sectors or disciplines, together.

GKI: Integrated geospatial policy framework (cont.)

- **Digital Education**

Recommendations:

- Geospatial knowledge, as part of wider digital education, should be integrated with data and analytics education throughout the curriculum and arm students with tools to solve problems.
- Universities should move from GIS specific courses to broader analytical education bringing geospatial knowledge, AI, data science, sensor technologies, software development and business information systems together in differing degrees.

Current Geospatial Policy Issues:

- Geospatial data sharing.
- Geospatial data custodianship.
- Intellectual Property Rights, copyright and licencing of geospatial data.
- Geospatial data preservation and curation.
- Protection of restricted/sensitive data and personal information.
- Access to geospatial data, including cost of data and services and interconnection.
- Improper use of geospatial data, including misinformation.
- Authoritativeness of geospatial data and data quality.
- Geospatial data integration and interoperability, and with other data.
- Geospatial data acquisition platforms – space use, air safety (incl. drones).
- Liability.

Policy on Protection of Personal Information

Based on Universal Declaration of Human Rights:

> "No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to protection of the law against such interference or attacks."

- Constitution and/or Bill of Human Rights in many countries.
- The right to privacy also extends to personal information (data protection).
- The European Union's General Data Protection Regulation (GDPR) is often used as the yardstick for policy on protection of personal information.
- GDPR defines personal information as "any information relating to an *identified* or *identifiable* natural person (the data subject)."

Elements of data protection

The following principles are the most important elements of data protection:

1. Personal data processing must be legitimate, fair and transparent (lawfulness, fairness and transparency);
2. Personal data may only be processed for specified purposes (purpose limitation);
3. Only those data that are necessary for the purpose should be processed (data minimisation);
4. Personal data must be accurate (accuracy);
5. Personal data must be kept no longer than necessary (data retention and storage limitation);
6. Personal data must be kept secure (integrity, confidentiality and availability);
7. Where personal data are processed, it must be demonstrated that such processing is in line with the principles above (accountability).

When is processing of personal information allowed?

1. Defined purpose

   A clear goal for processing the data - determine why personal data are actually collected and further processed.

2. Legitimate basis

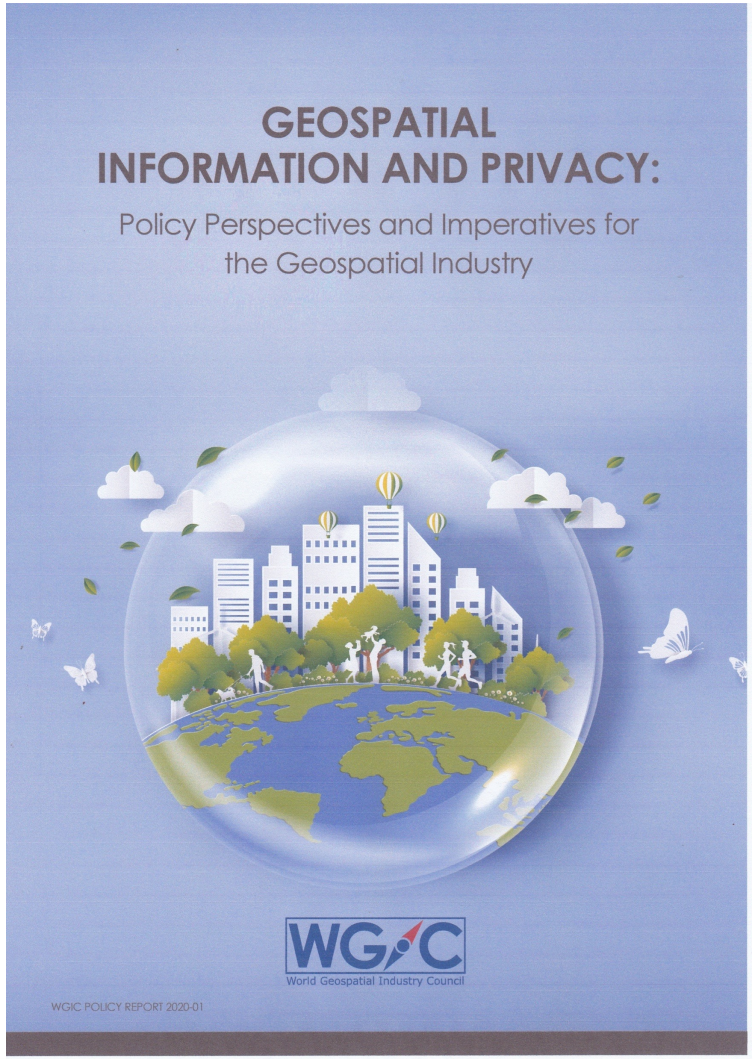
   Determine whether the purpose defined is legitimate

3. Material requirements

   Condition that processing is done in a responsible manner.

   Specific compliance and accountability requirements.

World Geospatial Industry Council (WGIC) Report (2020)



Available on WGIC website:
https://wgicouncil.org/publication/reports/policy-reports/

Summary of WGIC Report

- “Privacy and data protection legislation are highly relevant to the geospatial industry, and may have a significant impact on geospatial information providers throughout the world. Geospatial information providers should determine, based on their business model and service offerings, what their exposure to data protection legislation is. Based on this assessment, the provider can take the necessary steps to become compliant.
- Data protection legislation is only relevant for the geospatial industry if data regarding individuals is being processed (i.e. ‘personal data’). When geospatial data cannot be attributed to an individual it will not be considered ‘personal data’. As such, it will generally not be subject to privacy and data protection legislation.

Summary of WGIC Report (cont.)

- Whether geospatial data should be considered personal data is very much dependent on the circumstances of the case. If the information attributed to the geospatial information is about individuals, or if the geospatial data itself allows individuals to be identified, the geospatial information automatically becomes personal data, and data protection legislation applies.
- Geospatial information providers may use geospatial data in a number of ways. The actual use will determine whether data protection legislation applies and if so, which rules the geospatial information provider should follow.
- When processing personal data, geospatial information providers qualify either as ‘data controllers’ or ‘data processors’. A data controller determines the purposes and means for the processing, while a data processor acts on the instructions of the data controller. The data controller is the main norm addressee of data protection legislation.

Summary of WGIC Report (cont.)

- Personal data may only be processed for legitimate purposes. When processing personal data in the capacity of a data controller, geospatial information providers should specify a clear goal for the processing and determine its legitimacy.
- Privacy and data protection legislation has been enacted throughout the world. The jurisdictions reviewed for this report show varying levels of alignment with the EU General Data Protection Regulation (GDPR). Requirements seen throughout the world are data security, purpose specification, and notification. Requirements that are less common are the need to do data protection impact assessments, providing data portability and rules on third party processing.
- Geospatial information providers, especially those acting as data controllers, should implement technical and organisational measures to enable compliance. These include implementing privacy policies and governance, security measures, agreements with third parties (processors), privacy by design, data subject rights, and awareness raising."

Rights relating to geospatial ecosystem

- Intellectual Property Rights

  Protection of the intellectual property of methods, information and technology
- Copyright
  - Protection from unauthorised copying of works and art – includes geospatial information.
  - Authorisation to copy must be obtained from copyright holder.
  - Most copyright is based on Berne Convention for the Protection of Literary and Artistic Works
- Creative Commons (CC)
  - Regarded as an alternative to copyright – specific authorisation not required.
  - Promotes sharing.
  - Various types of CC licence – most common being ‘by attribution’ – CC BY.

Rights relating to geospatial ecosystem (cont.)

- Licencing
  - Legal instrument whereby one party grants to another party certain rights, such as use of geospatial information.
  - Usually to protect interests of the licensor.
- Contracts and Agreements
  - Less formal, but legally enforceable, between two parties.
  - The responsibility and obligation of each party is detailed.
  - Usually has a termination clause.
  - Can be used effectively for geospatial data sharing.

Open Geospatial Information

- Key principles:
  - Geospatial information only achieves value when it is used.
  - Geospatial information that cannot be accessed cannot be used.
- Open geospatial information promotes democracy and self-development.
- Open geospatial information promotes transparency and exposes corruption.
- Affordability is a determining factor in use of geospatial information – if considered unaffordable it will not be used.
- One government entity charging another government entity for geospatial information is a false economy – it does not add money to the fiscus
- Open geospatial information supports rapid decision making, because of reduction in ‘red tape’.
- Open geospatial information promotes data sharing, reduces duplication of effort and cost, and improves efficiencies.

Open Geospatial Information (cont.)

- Clear policy is required to enable open geospatial information:
  - Good data governance, including data curation and preservation, with clear roles and responsibilities of key institutions;
  - Promote data sharing;
  - Standardised data agreements;
  - Open pricing model (if any);
  - Restricted and sensitive geospatial information, and rules for access to and use of restricted/sensitive geospatial information;
  - Metadata for discoverability, access and fitness for purpose (data quality);
  - Compliance with standards;
  - Enabling innovation and entrepreneurship.

Q&A

Any questions?

Wrap up

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Thank You

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