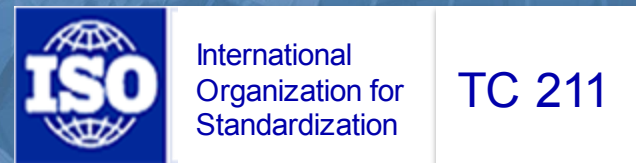


Joint Group: Standards Side Event

Tuesday: 4:30pm – 6:00pm



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Agenda

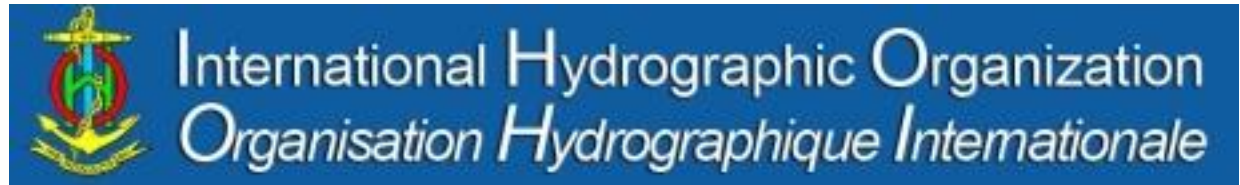
- **Introductory Remarks and Welcome**
- **Changes to the Guide & Companion Document**
- **Understanding the Survey Data**
- **Standards work with the UN**
- **How to be engaged with Standards?**
- **What is going to happen over the next 12 months that you should know about**



International Hydrographic Organization (IHO)

- Intergovernmental consultative and technical organization
- Established in 1921
- To support safety of navigation and the protection of the marine environment
- One of the IHO objectives
 - to bring about the greatest possible uniformity in nautical charts and documents (i.e. standardization)

www.iho.int



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International Organization for Standardization (ISO)

- World's largest developer of standards
 - Network of national standards institutes from 163 countries
 - 19 500 standards published
- Established in 1946-1947
- Recognized by the UN
- Principal activity is developing technical standards
- Technical Committees (TCs)
 - From *From food safety to computers, and agriculture to healthcare*, ISO International Standards impact all our lives
 - ISO/TC 211, *Geographic information/geomatics*
 - Lawrence D. Eicher Leadership Award in 2010

www.iso.org

<https://committee.iso.org/home/tc211>



International
Organization for
Standardization



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Open Geospatial Consortium

- Industry consortium of around 500 members
- 2000+ implementations of standards and specifications, some certified to be compliant
- Focus
 - to define, document and test implementation standards for use with geospatial content and services
 - integration of geospatial content and services into applications for the benefit of mankind

www.opengeospatial.org



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Co-operation

ISO/TC 211, OGC and IHO have been formally – and practically - co-operating since 1994.

They also benefit from a range of people working actively in across organizations.



Version 2

A Guide to the Role of Standards in Geospatial Information Management



A Guide to the Role of Standards in Geospatial Information Management

Companion document on Standards Recommendations by Tier



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“Guide to the Role of Geospatial Standards” & “Standards Recommendations by Tier”

- Version 2 of the Guide & Tier
- The survey assisted with the revision
- New topics have been included in the new version
 - Spatial Data on the Web
 - Geopackage
 - Discrete Global Grid System
 - Marine Boundaries



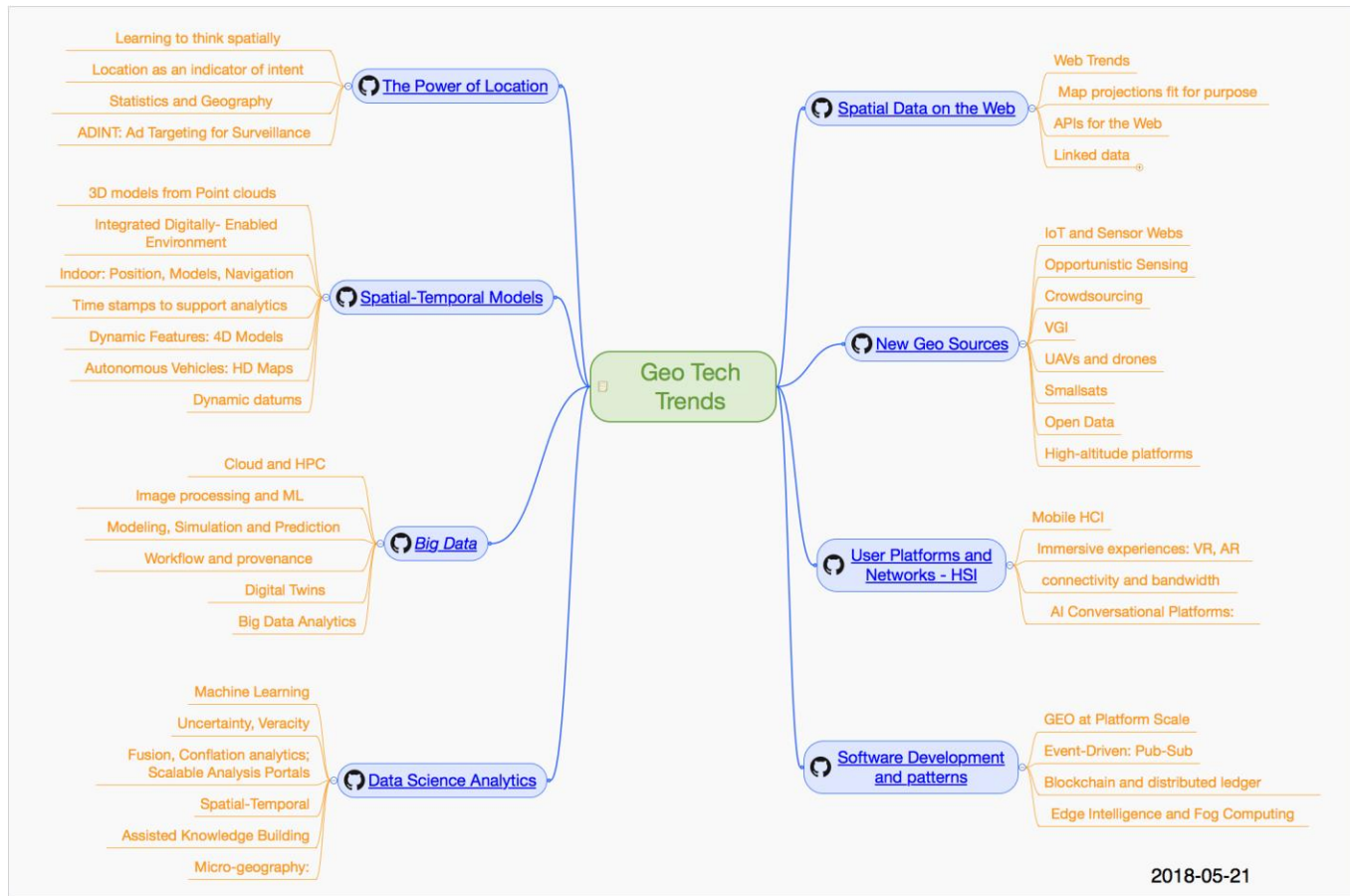
“Guide to the Role of Geospatial Standards” & “Standards Recommendations by Tier”

- Tier 4
 - Internet of Things
 - Linked Data
 - Smart Cities
 - Intelligent Transport Systems
 - Unmanned Aerial Systems



OGC Technology Trends

- <https://github.com/opengeospatial/OGC-Technology-Trends>



Case Study - highlight

www.opengeospatial.org/pub/ArcticSDP/index.html

OGC
Arctic Spatial Data Pilot
Value of Standards **ARCTIC**

- OVERVIEW
- VIDEOS
- INTERVIEWS
- REPORTS
- INITIATIVE
- TEAM
- CONTACT

UN-GGIM Standar...ppt GeoBig5 AGI Panel.jpg OGC-UNGGIM_v2.pptx UN-GGIM Standar...ppt GGIM-8 Overviewpdf

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14:36
31/07/2018



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2018 UN-GGIM Geospatial Standards Survey

- Decision 7/113 (d) of the 7th Session of UNGGIM
“The Committee of Experts on Global Geospatial Information Management welcomed the proposed survey on considering a review and update of the standards guide and companion documents, and urged Member States to contribute and to provide feedback on their use of the standards guide and implementing standards within their national frameworks; “



Results from the Survey



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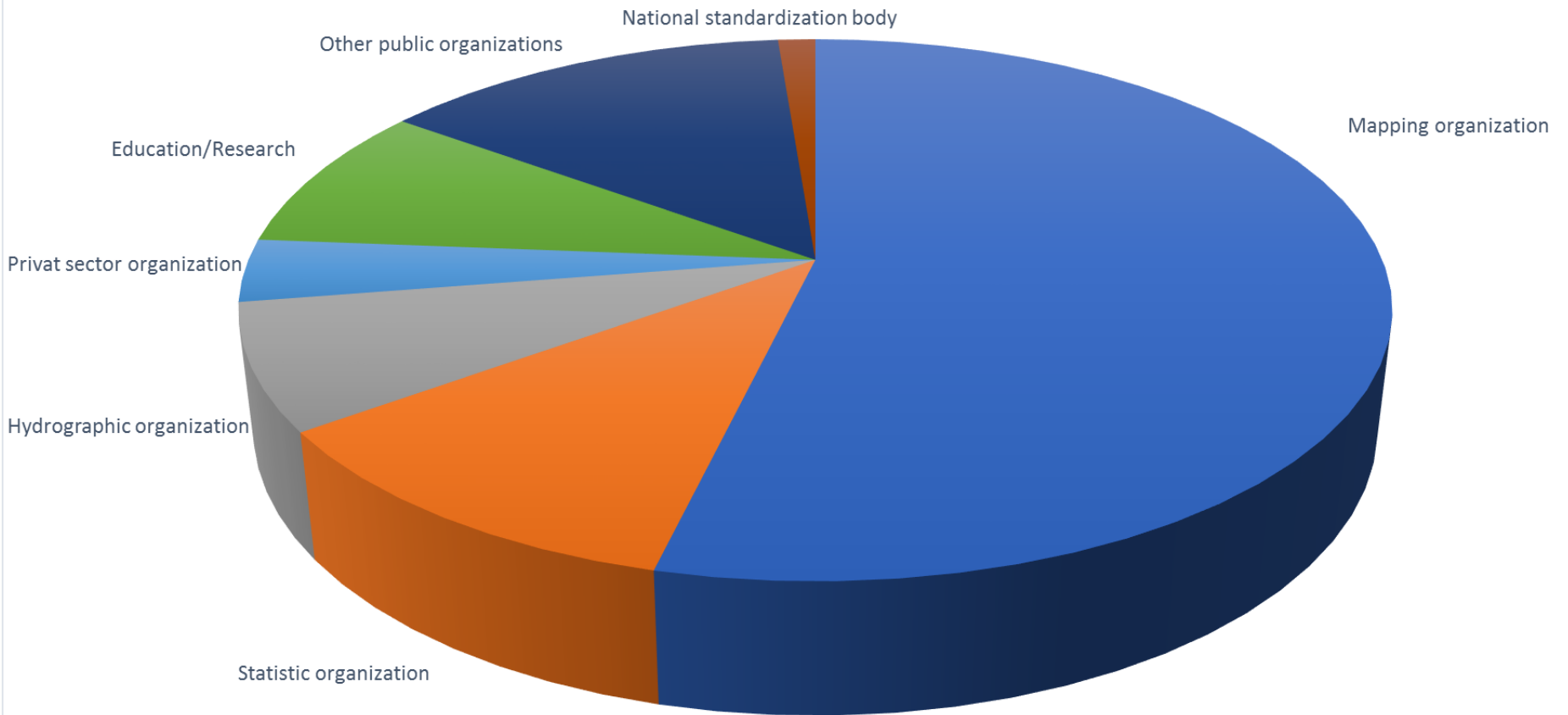
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The Questions

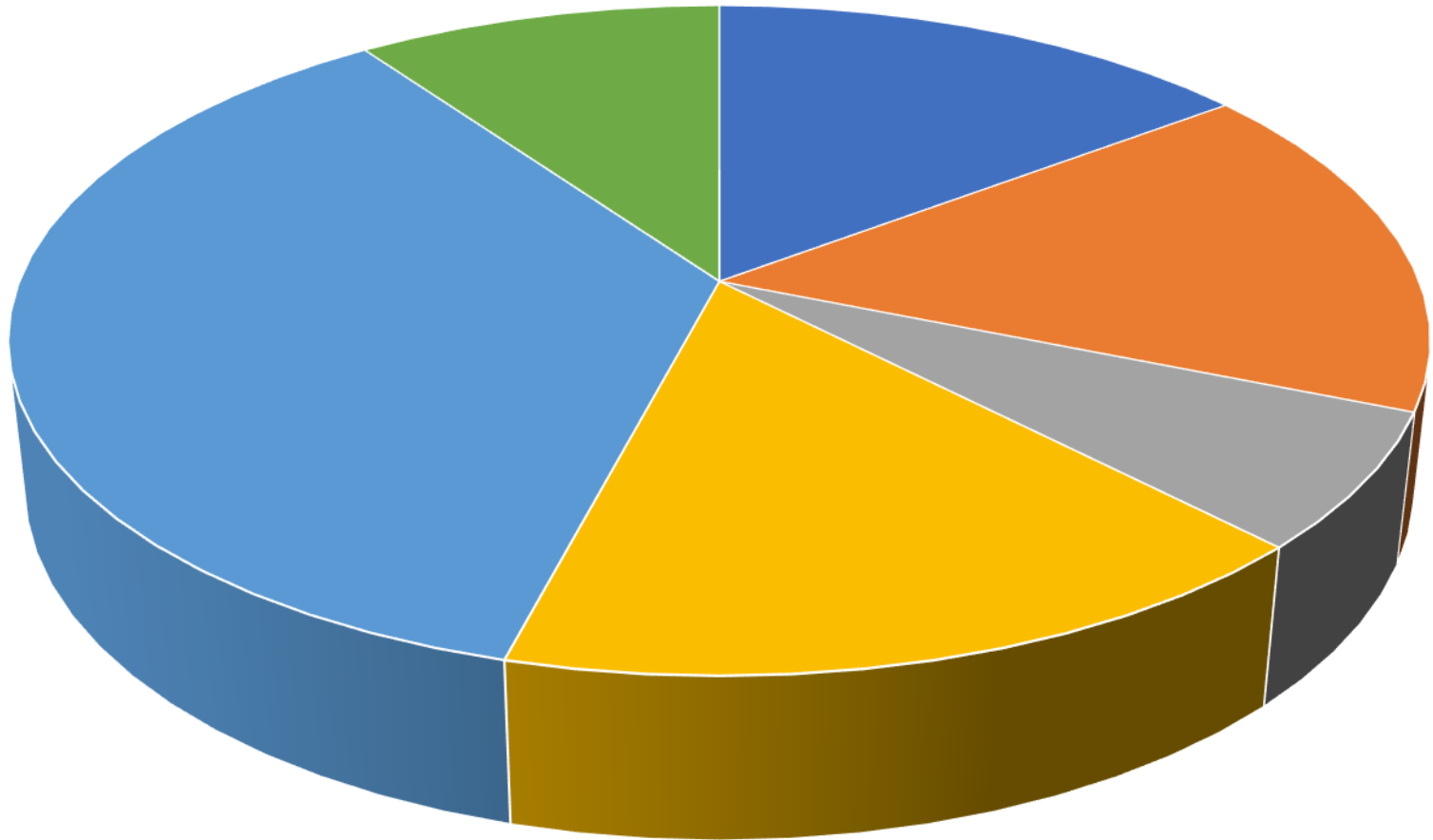
1. About the responder (Kind of organization, in which countries the organization most active, In which UN-GGIM Region the organization is based)
2. If the responder was aware of the two guides prepared by the international standards organizations (ISO/TC 211, OGC and IHO) and published by the UN GGIM (A Guide to the Role of Standards in Geospatial Information Management and Guide to the Role of Standards in Geospatial Information Management Companion document on Standards Recommendations by Tier)
3. Which group of staff in your organization used the guide and companion document?
4. To what level did the standards guide and companion document influence your organization's decision regarding the use of standards?
5. Which of the following organizations' geospatial standards does your organization currently implement?
6. Do you believe there are barriers to your organization's ability to implement geospatial standards?
7. Does your organization participate in the development of geospatial standards in any of the following organizations?
8. Do you believe there are barriers to your organization participating in the development of international geospatial standards?
9. Do the countries in which your organization is active reference any geospatial standards in legislation and/or policy frameworks?
10. Thinking about your organization, at which level is training regarding geospatial standards most needed
11. Do you have any suggestions for how the international standards organizations could provide improved training and/or communication regarding the development and use of Geospatial Standards?



Type of organization



UN-GGIM Region



- UN-GGIM Africa
- UN-GGIM Americas
- UN-GGIM Arab States
- UN-GGIM Asia-Pacific
- UN-GGIM Europe
- Multiply regions



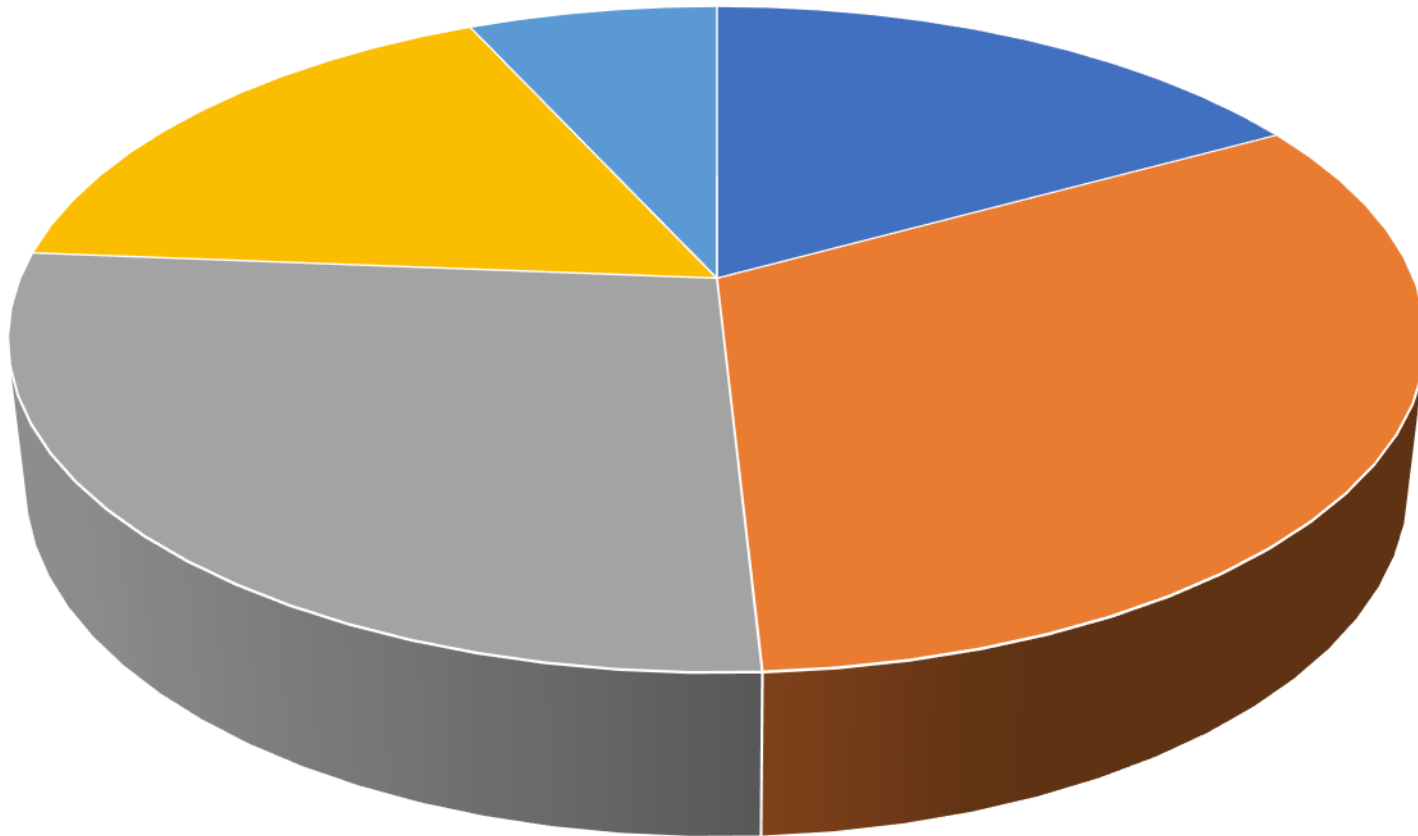
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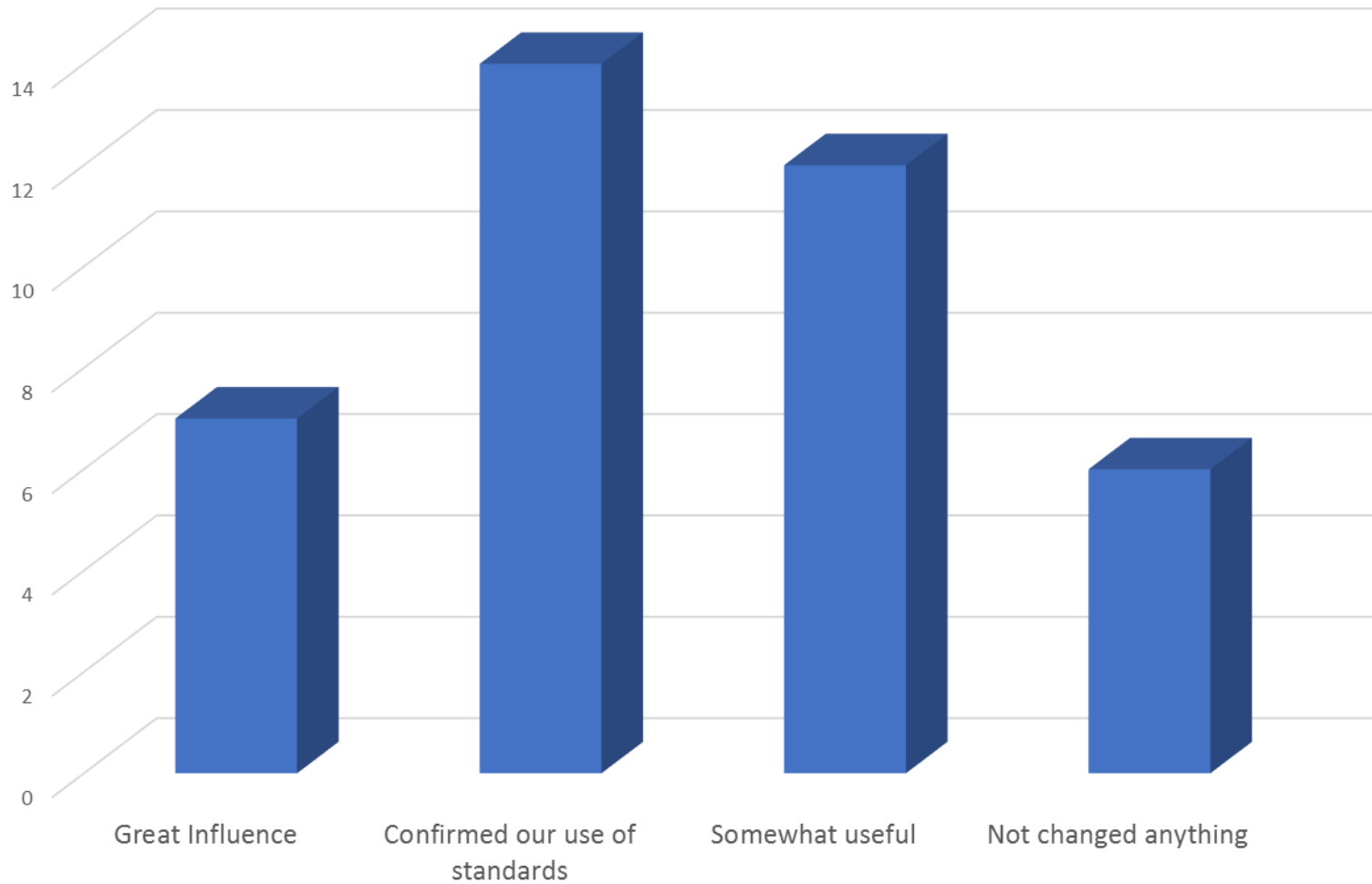
Who uses the Guidelines?



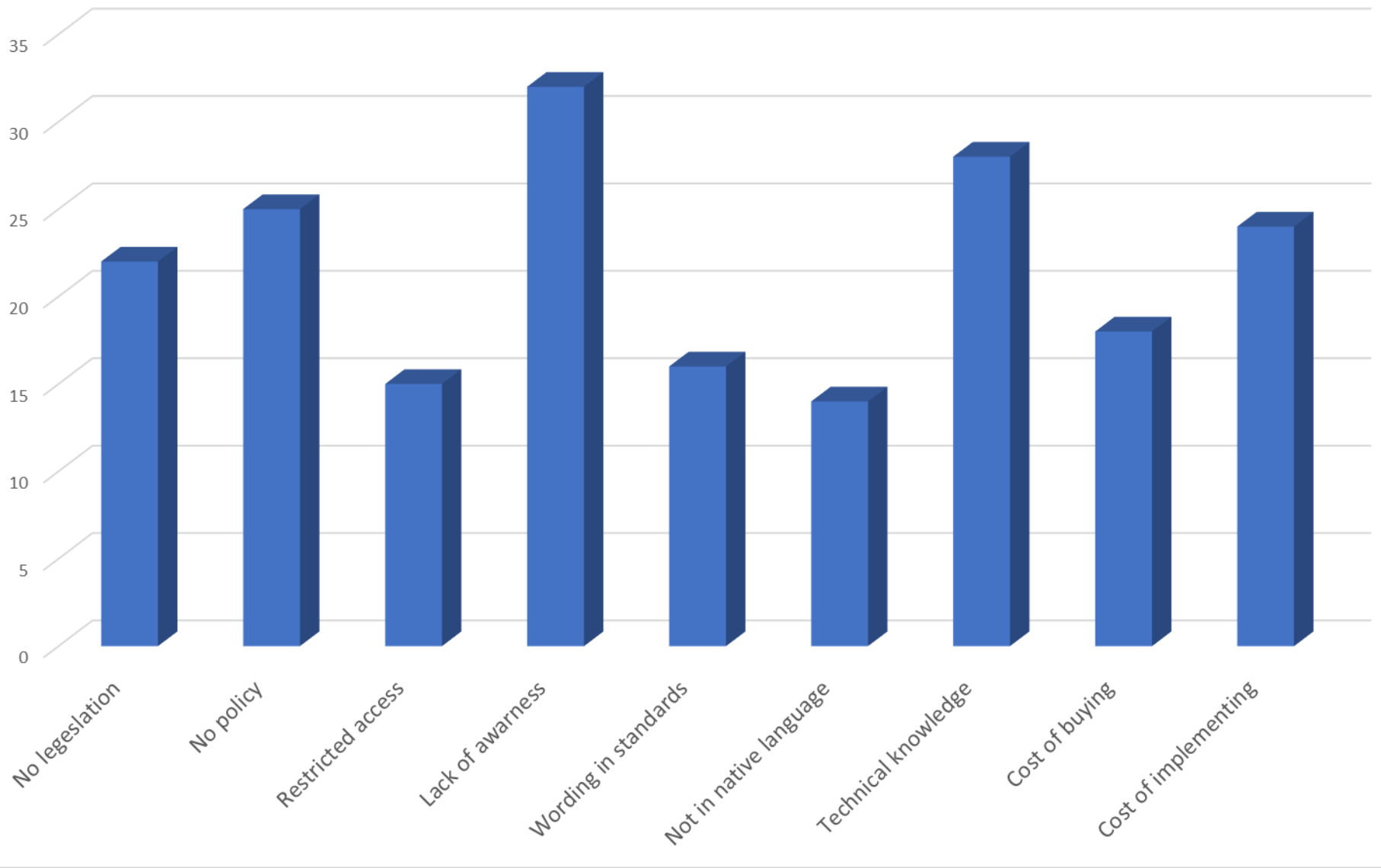
■ Executives ■ Managers ■ Implementers ■ Users ■ Others



The guide influence in organizations



Organizations barriers to implement standards



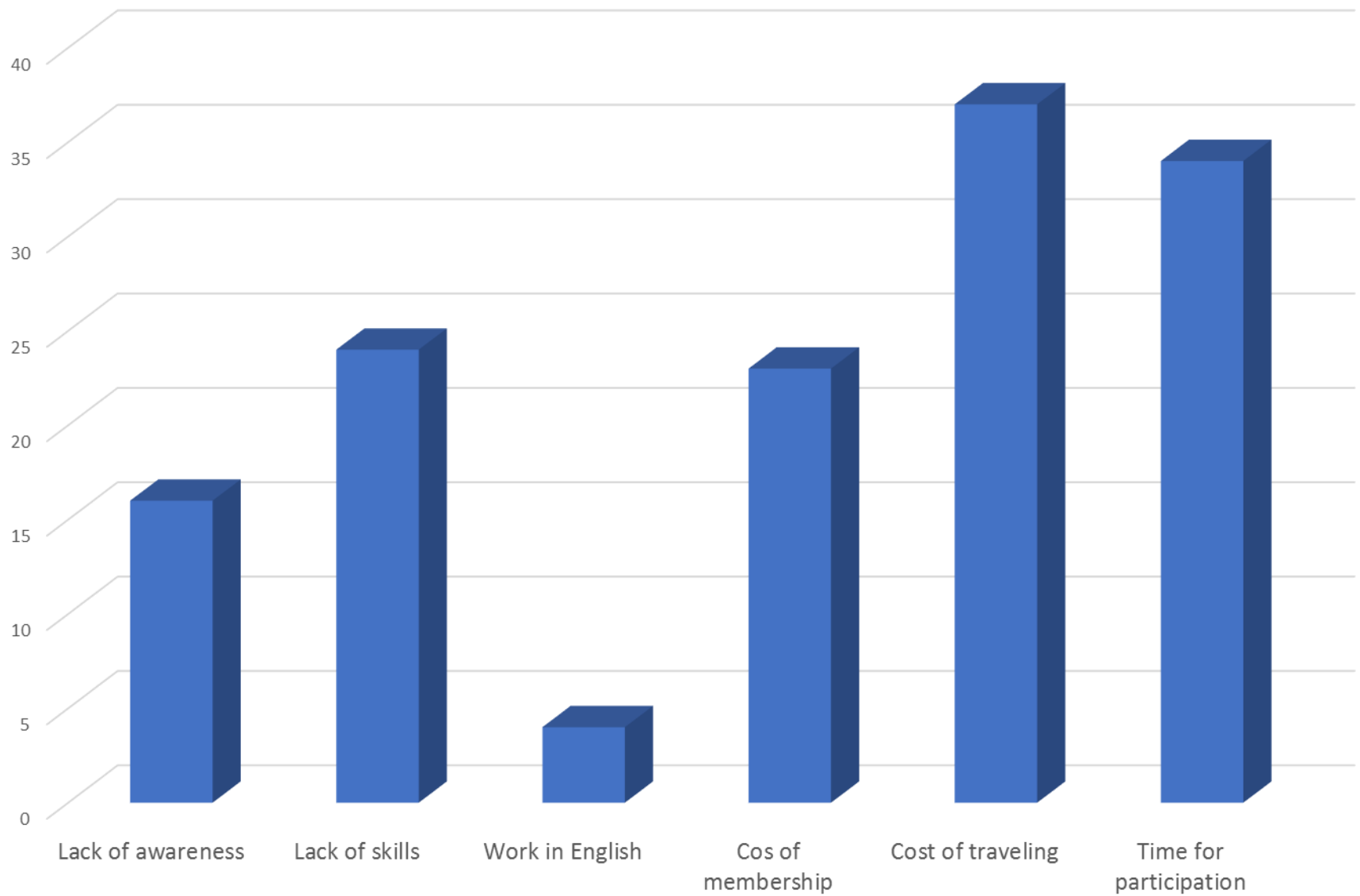
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Barriers to participate in standardization



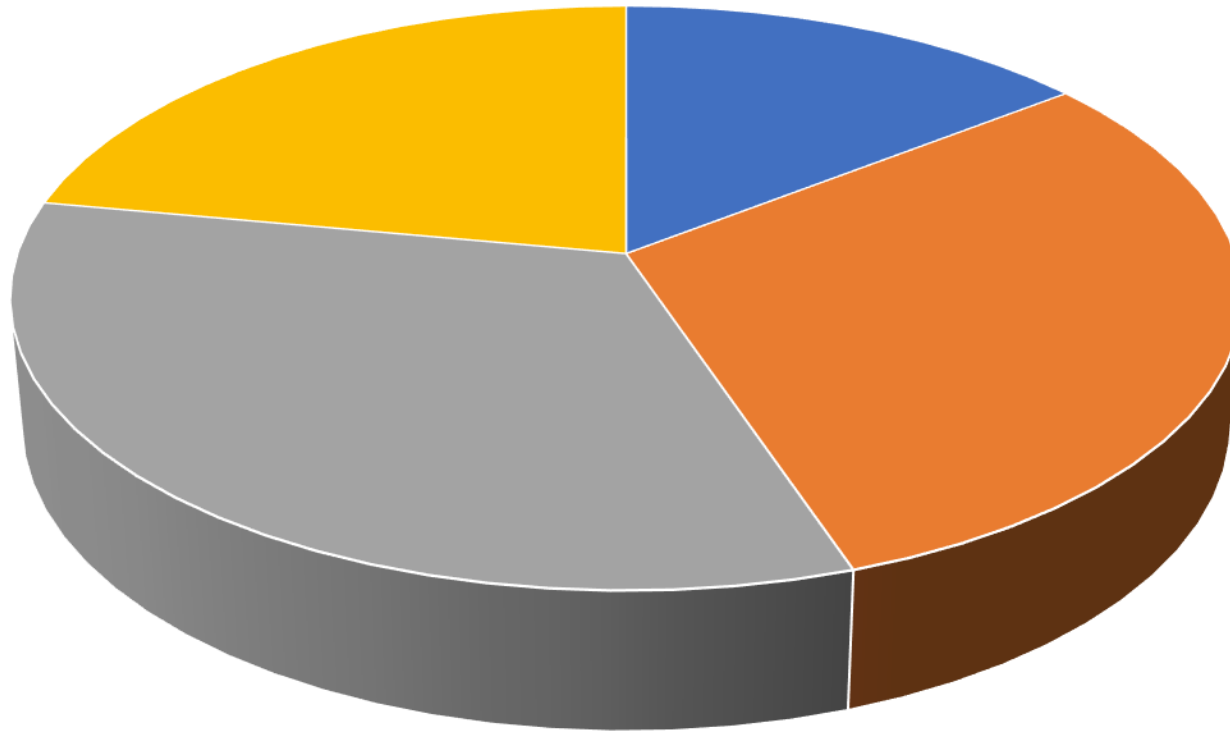
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Training needs



■ Executives ■ Managers ■ Implementers ■ Users



Need of support - training

(from international standards organisations)

- Awareness for policy makers
- By training the members of organization
- Organizing workshop or special training courses
- Structured on line courses (e.g. *coursera*)
- Set up platforms on the web: forums, courses, workshops, webinars, etc.
- Study the extent of training insufficiency globally, and work with the UN-GGIM Academic Network to enhance the provision of training for standards comprehension and implementation.



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Need of support – support

(from international standards organisations)

- Some arrangements for "dummies" and showing examples of practical use/implementations, and "selling" and showing examples of use more like buildingSMART.
- Simple 'get started' guides addressed to different common use cases - some may be domain specific, others more general. That is, a set of papers on 'how to use geospatial standards to solve this problem'.
- Use-case demonstrators that illustrate the value and opportunity of using a standard.



Need of support – other

(from international standards organisations)

- Skills gaps evaluation
- Need to have translations of standards
- Case studies / examples from member states adoption/implementation
- Road maps for adoption/implementation
- Partnerships with private sector for local level workshops
- It is important to strengthen the dissemination of the standards free of charge and if is possible in different languages.
- Support materials available for interpretation and implementation of regulations and standards



Need of support – other

(from international standards organisations)

- I think by attending more of such conferences and/or meetings where Geospatial standards will be shared, and ultimately end up being at par with the ISO regarding our geospatial information. "Standards in Action" sessions should be encouraged at conferences and meetings
- The international standardization organization may consider future thinking through university of the concern country



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Survey Results – Next Step

- Publicly release Survey results
- Engage with the legal and policy working group to develop guidance on improving Policy Development for use of Geospatial Standards
- Engage with the Academic Network Improve skills and education for standards implementation



Standards work with the UN



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IHO

- New Draft Publications
 - S-100 Edition 4.0.0 – Universal Hydrographic Data Model
 - S-102 Edition 2.0.0 – Bathymetric Surface Product Specification
- Revising a number of Technical Standards
- S-121 Maritime Limits and Boundaries



IHO

- S-121 purpose is to allow States to communicate official digital representations of their maritime limits and boundaries to public and international community. The United Nations Division for Ocean Affairs and the Law of the Sea is contributing to this work and the new version of ISO 19152 LADM.



OGC

- New Domain Working Group to support the collaboration work of Geospatial & Statistical communities
- Land Administration DWG & Smart Cities: SCIRA & MUDDI Underground Pilot
- International Interoperability Projects:
 - Maritime boundaries
 - Disasters Interoperability Study



ISO/TC 211

- Land Administration Domain Model (LADM) Revision
- Addressing
- ISO and SDGs



LADM

- Land Administration Domain Model (ISO-19152) is being revised to meet new requirements from different domains
- Possible topics
 - Taxation and Validation
 - 3D & 4D
 - Land Management Processes
 - Volunteered Land Administration and Crowdsourcing
 - Legal Space to Physical Objects
 - Blockchain Technology



LADM

- Inputs from FIG, OGC, IHO, UN-DOALOS, World Bank, UNGGIM, FAO, UN-HABITAT and Royal Institution of Chartered Surveyors (RICS)
- 12 Month gathering of use cases and submissions
- Project Managed – Chris Body



✓ ISO 19160-1
Conceptual
model

What is an address?

Classes or types: *street address, box address...*

Components: *street number, street name, place name...*

Values or names

Street number=*392*

Street name=*Church Street*

Place name=*Pretoria*

Street number=*392*

Street name=*Kerkstraat*

Place name=*Pretoria*

Street number=*392*

Street name=*Stanza Bopape Street*

Place name=*Tshwane*

ISO 19160-3
Address data
quality

Rendering on mail items

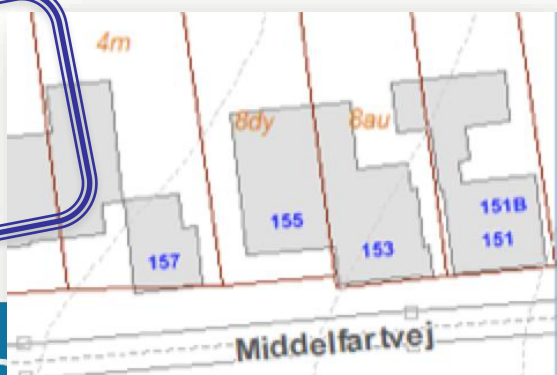
Mr Joe Soap
392 Nelson Mandela Drive
Polokwane
0087
South Africa

Mr Joe Soap
392 Nelson Mandela Dr
ZA-0087 Polokwane

ISO 19160-4
Rendering on
mail items

Rendering on maps

ISO 19160-5
Address
labels on
maps

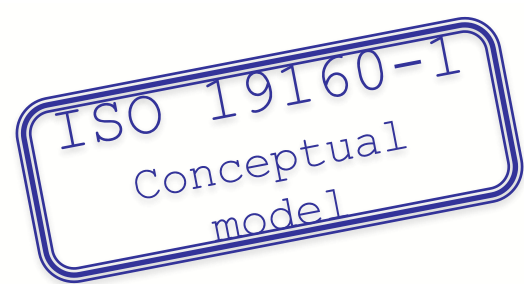


Signposts



ISO 19160-2
Address
Assignment





Standardized terminology

- address
 - structured information that uniquely references an object for purposes of identification and location
- address component
 - constituent part of the address
- address class
 - addresses combined from the same list of address components according to the same address reference system
- address reference system
 - system that defines how address components are combined to form an address
- addressable object
 - object that may be referenced by an address
- address alias
 - one of a set of addresses referencing the same addressable object





How to assign addresses

Similar to ISO 9000, specifies good practice
Useful as tender or funding requirement





How to measure quality of address data

- **Rules**

- Each cadastral land parcel shall be associated with at least one address.

Quality requirements

- Max 200 items can be missing.
- Max 200 items can be in excess.
- Max 200 items can have incorrect suburb names

Data quality element	Data quality measure	Data quality requirement	Data quality measured	Pass?
Commission	Number of excess items	200	50	Yes
Omission	Number of missing items	200	300	No



ISO
19160-4
Rendering on
mail items

How to write addresses on mail items

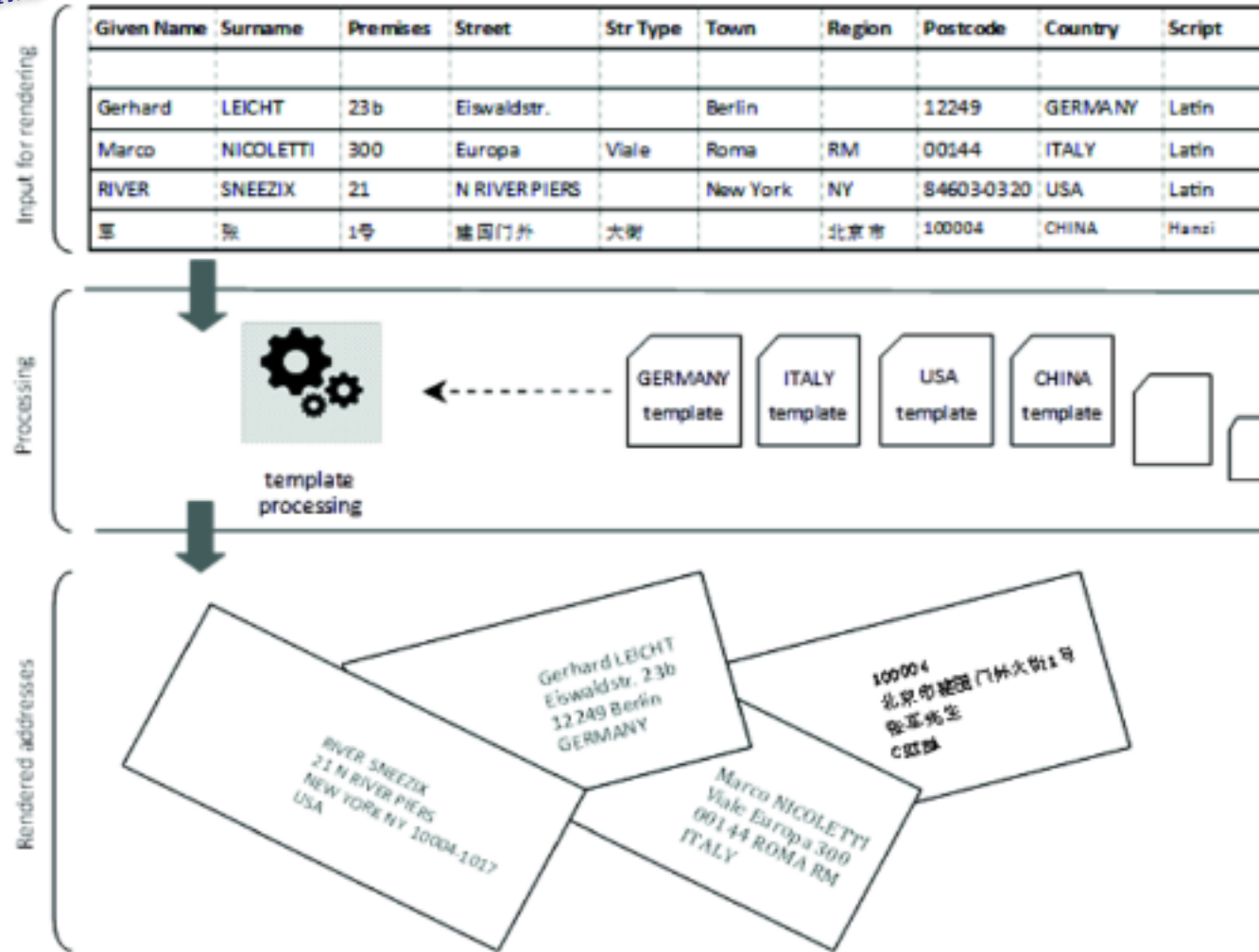
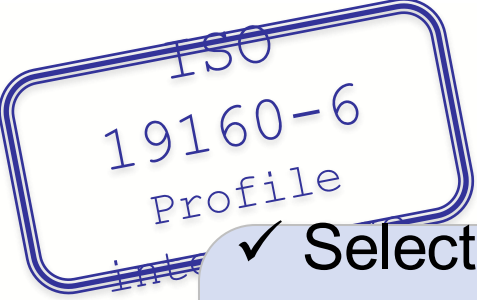


Figure 6 — Automation of postal address rendering with templates



Profile interchange



- ✓ Select an address type from a dropdown
- ✓ Depending on the address type, different text boxes appear
- ✓ Address verification before delivery is sent

Profile of ISO 19160-1 describes addresses of specific country (e.g. SA), region (e.g. EU) or application (e.g. postal)

The screenshot shows a web browser window titled "Edit an Address". At the top, there are navigation links: "Your Account >", "Edit an Address", and "Account Settings >". Below the links is a paragraph of text: "Future mailing labels will be generated exactly as you enter them below. This change will not affect orders already being processed. To change the address on an open order, select the order from your [Order History](#)." Below this text is the heading "Edit your address". The form contains several fields: "Full Name:" with the value "Serena Coetzee"; "Address Line1:" with the value "Dept Geography, Geoinformatics and Meteorology Street address, P.O. box, company name, c/o"; "Address Line2:" with the value "Geography Building 3-5, University of Pretoria Apartment, suite, unit, building, floor, etc."; "City:" with the value "Pretoria"; "State/Province/Region:" with the value "Gauteng"; "ZIP:" with the value "0002"; and "Country:" with a dropdown menu showing "South Africa".



SDGs in the World of Standards

Approved Date: 2015-12-01

Publication Date: 2015-01-22

External identifier of this OGC® document: <http://www.opengis.net/doc/WP/stds-sustainable-devel>

Internal reference number of this OGC® document: 14-095

Category: OGC® White Paper

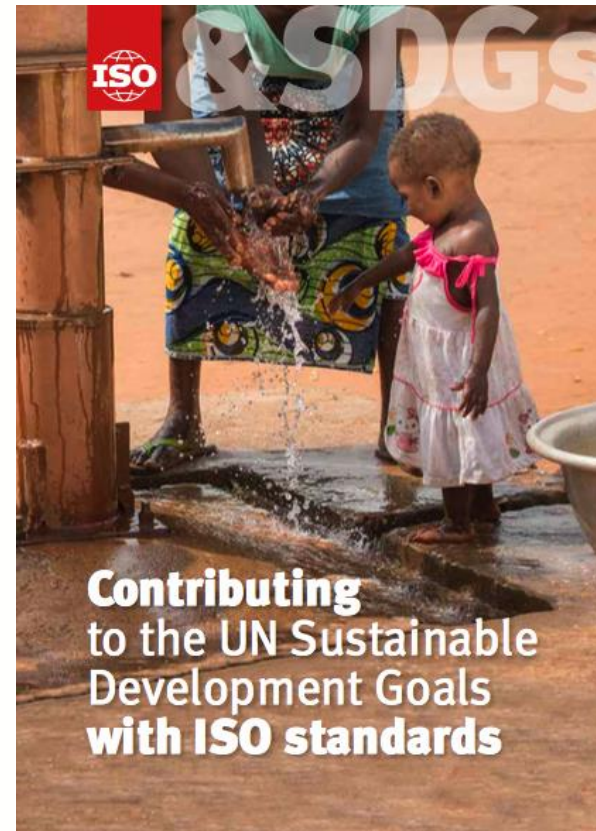
Editor: Lance McKee

OGC Information Technology Standards for Sustainable Development

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How to get involved

- ISO/TC 211
 - National Standards Bodies
 - Liaison
 - Invited experts
- OGC
 - Open Membership (fee)
 - Domain Working Group (public open)
 - Innovation Programs
- IHO
 - Intergovernmental consultative & technical organisation
 - Liaison





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GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Thank you



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