

The International Cartographic Association

Tim Trainor
President, ICA



International Cartographic Association
Association Cartographique Internationale



ICA Members

Celebrating 60 years in 2019

- National Mapping and Geospatial Agency
 - National Geographical Institute
 - Department of Surveys and Mapping
 - Geographical Military Institute
- National Cartographic Association
- National Committee for Cartography

ICA Collaborations

- One of the founding organizations of the UN-GGIM Geospatial Societies Network
- Member of the International Science Council
- MOUs with many organizations

The Strength of the ICA

- People
 - 28 Commissions focused on specific cartographic and geospatial topics
- Conferences
 - International Cartographic Conferences (ICCs)
 - 2019 Tokyo, Japan
 - 2021 Florence, Italy
 - 2023 Cape Town, South Africa
- Publications
 - International Journal of Cartography (peer reviewed)
 - ICA News
 - eCARTO News
 - ICA website – www.icaci.org
 - ICC Proceedings

ICA Publications



International Cartographic Association
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News Calendar Publications The Association Members Commissions Research Agenda ICC Conferences ?

Advancing the disciplines of
cartography and GIScience
in an international context

Welcome to the website of the International Cartographic Association

President's Blog: New Working group – Cartographic Body of Knowledge (CartoBoK)

Education and Research go hand in hand. Research is necessary to make sure our discipline remains relevant. Education disseminates this new knowledge and trains future generations. Each domain has common or basic knowledge, sometimes typified as a domain's Body of Knowledge. Wikipedia says: "A body of knowledge (BoK or BoX) is the complete set of concepts, terms and activities that make up a professional domain, as defined by the relevant learned society or professional association".

In this context ICA sees it as its duty to help educators by defining such BoK for cartography. To do so the **Executive Committee** has decided to establish a **new working group Cartographic Body of Knowledge (CartoBoK)**, to be chaired by vice-president Lynn Usery, supported by past President Georg Gruttmann. Both are in the process to add a few more members. The working group will report in Tokyo.

Based on the terms of reference the working group will start with an inventory of existing Bodies of Knowledge (BoKs) from UGGS, AGILE, NGA/USGS, ACM, and others that have cartographic elements and extract those parts relevant to CartoBoK. The next step will

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About ICA

The mission of the International Cartographic Association (ICA) is to promote the disciplines and professions of cartography and GIScience in an international context. More about ICA ...

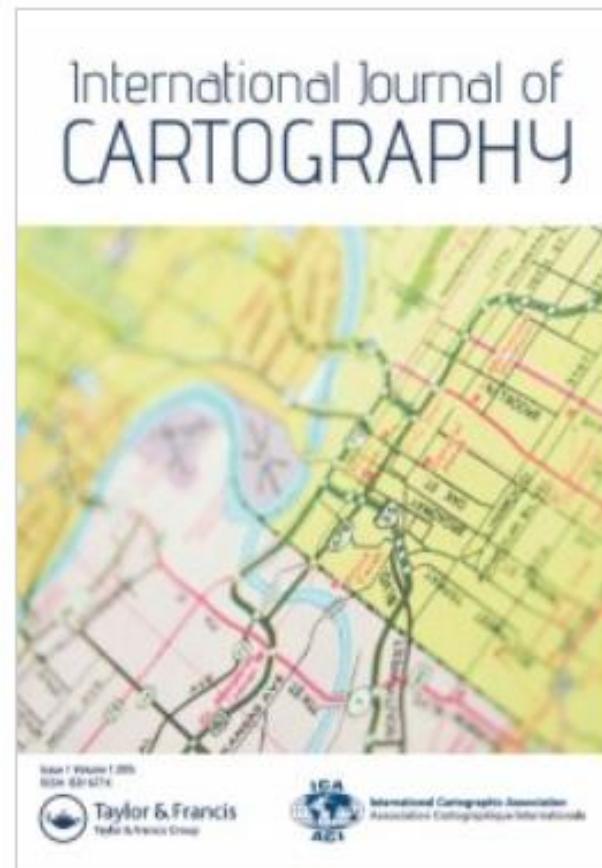
International Map Year

WE ARE MAPS
INTERNATIONAL MAP YEAR 2015-2016
For more details visit mapyear.org

International Journal of
CARTOGRAPHY

International Journal of Cartography

International Journal of Cartograph



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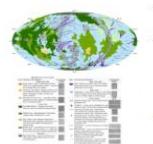


Web page announcements...

Communication and engagement SP9

Updates from the commissions

 3D Printed Small Bodies on Your Desk
A new set of small and mid sized planetary body [...] [Planetary Cartography](#)

 The First Global Geologic Map of Europa
The global geologic map of Europa will provide the first insight into [...] [Planetary Cartography](#)

 Big in Japan!
Commission Chair Kenneth Field and Vice-Chair Ian Muehlenhaus attended the [...] [Map Design](#)

New venue for pre-ICC workshop SDI-Open 2019
We are very glad the SDI-Open 2019, which is going [...] [SDI and Standards](#)

 Pre-ICC Workshop on Cartography as a Cultural Encounter: How East and West have Mapped and Influenced Each Other
The ICA Commission on the History of Cartography and ICA Commission on Topographic [...] [Topographic Mapping](#)

 Invitation: 3rd International Workshop on Spatial Data Quality
Following previous successful workshops in 2015 and 2018, EuroGeographics and [...] [SDI and Standards](#)

eCARTO News (Quarterly)



eCARTO News September 2019

eCARTO News captures the latest cartographic news and developments from around the world. If you have any general cartography items of interest then please email them to David Fraser, [editor of eCARTO News](#).

People in Cartography

- o Reddit's Papertowns puts cartography firmly on the map – [irishtimes.com](#) ↗
- o Persuasive Cartography: An Interview with Map Collector PJ Mode – [daily.jstor.org](#) ↗
- o Mapping My Life Through a Changing Tel Aviv – [citylab.com](#) ↗
- o The ecologist who wants to map everything – [nature.com](#) ↗
- o He's Trying To Fill In The Gaps On Google Street View — Starting With Zimbabwe – [npr.org](#) ↗

Manipulated maps content

- o MapLab: Trump's 'Mutilated' Storm Map – [citylab.com](#) ↗
- o City of Women Map Renames NYC Subway Stations After Famous Women – [untappedcities.com](#) ↗
- o Against the 'How to Lie with Data' Classification – [gim-international.com](#) ↗
- o How Did Lake Travis' Sometimes Islands Get Their Name? – [kut.org](#) ↗
- o Start with the Map – [newyorker.com](#) ↗
- o Why Germany is a blank spot on Google's Street View – [bigthink.com](#) ↗
- o The Renaissance Map That Filled My Childhood With Monsters – [citylab.com](#) ↗
- o Drink Map of Oxford – [bodleianshop.co.uk](#) ↗

Special Mapping

- o "Streets of Gold" map wins two British Cartographic Society Awards – [gisuser.com](#) ↗

David Fraser



David is the editor of eCARTO news. He is the former Chair of the ICA Commission on Education and a retired professor of

RMIT University Melbourne.

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More about ICA ...

ICC2019



International Journal of Cartography

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ICA Commissions

- Workshops
- Research
- Publications
- Websites
- International collaboration

April 27 – 30, 2018

ICA COMMISSIONS JOINT WORKSHOP

ATLASES, COGNITION, USABILITY

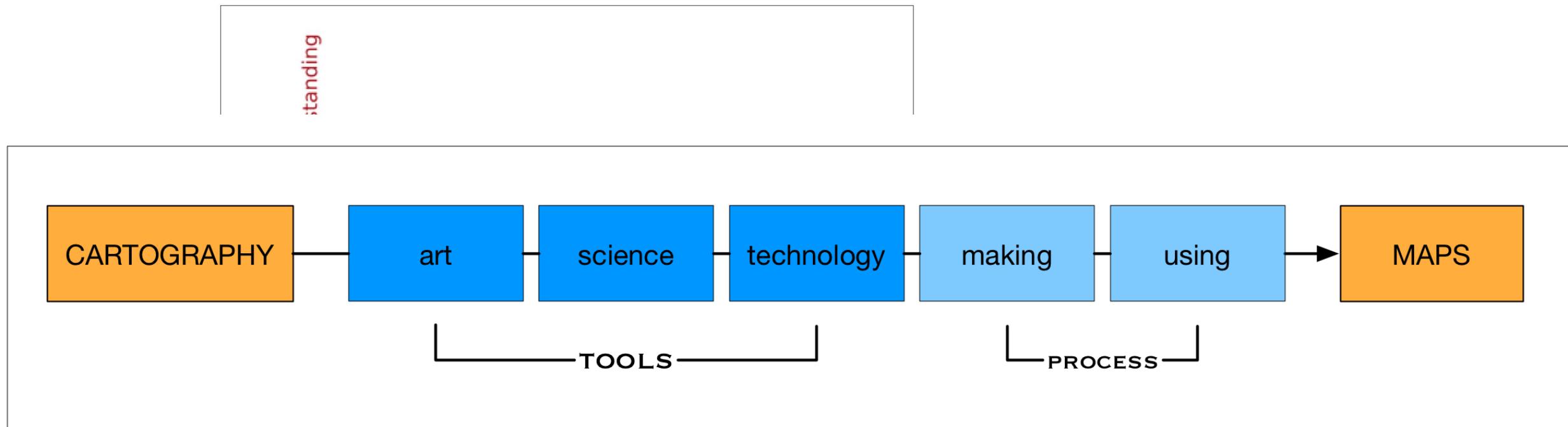
ICA Commission on Atlases in co-operation with

ICA Commission on Cognitive Issues in Geographic Information Visualization and

ICA Commission on Use, User and Usability Issues

do cordially invite **Papers and Attendance for the Joint Workshop** in Olomouc,
Czech Republic on April 27 – 30, 2018

Cartography

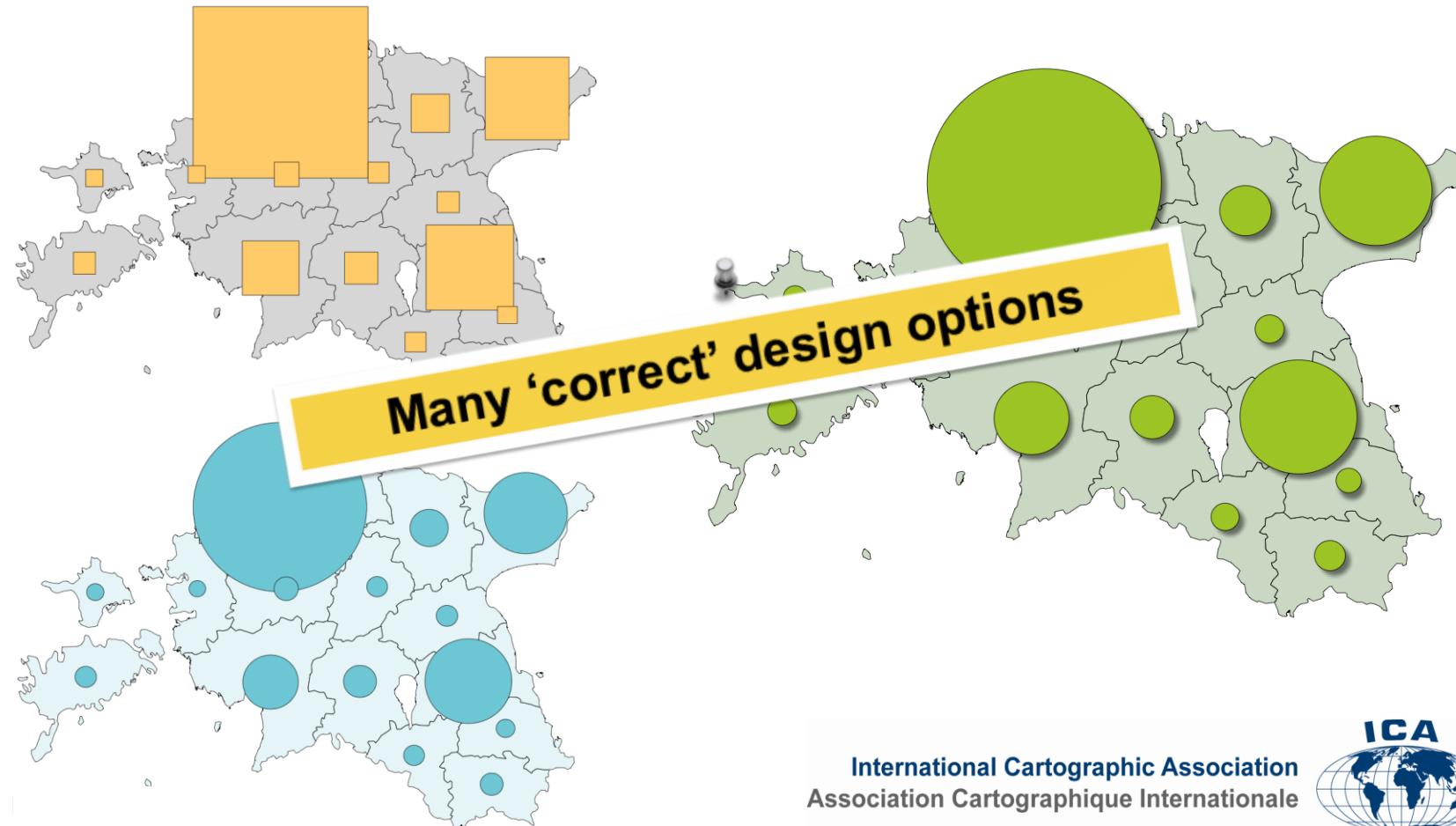


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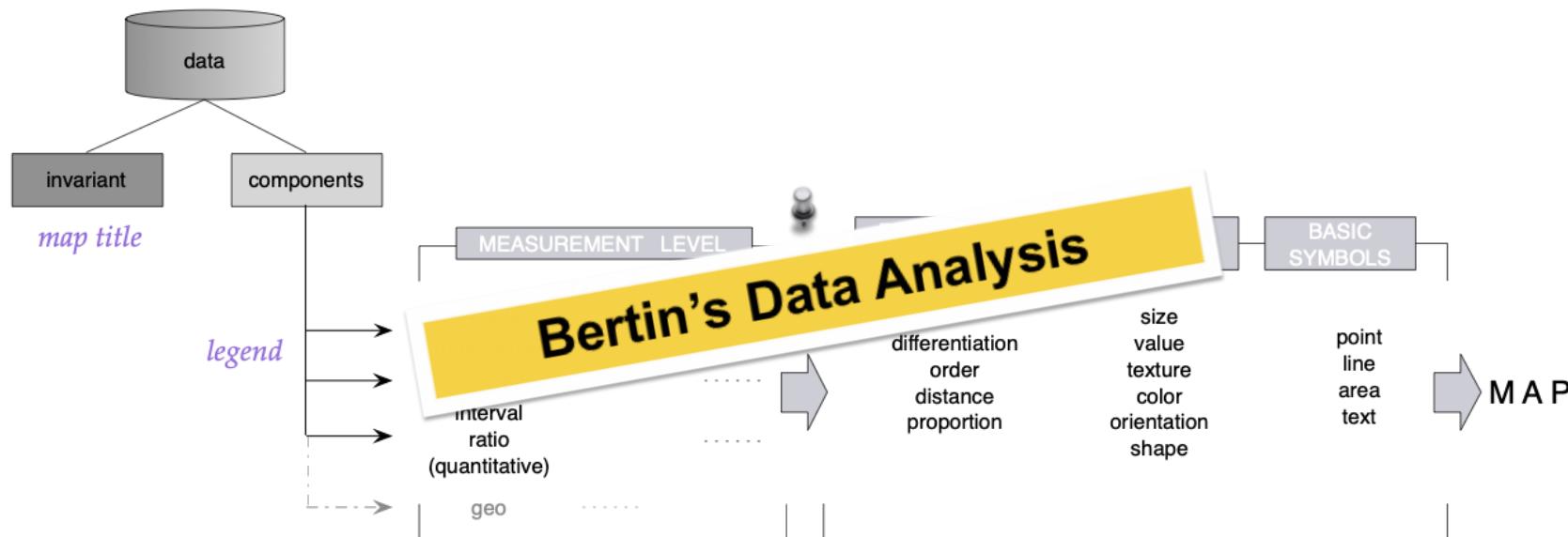
About Cartography (tools)

-the **art**, science, and technology of making and using maps



About Cartography (tools)

-the art, **science**, and technology of making and using maps



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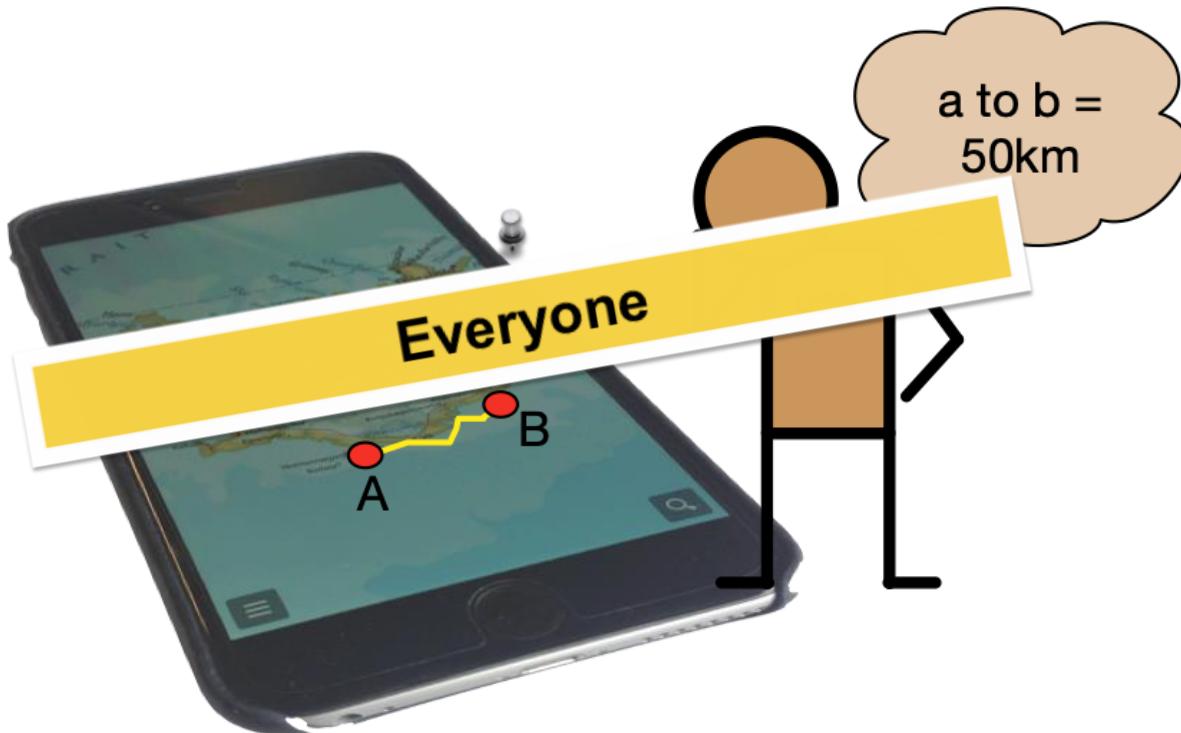
About Cartography (process)

-the art, science, and technology of **making** and using maps

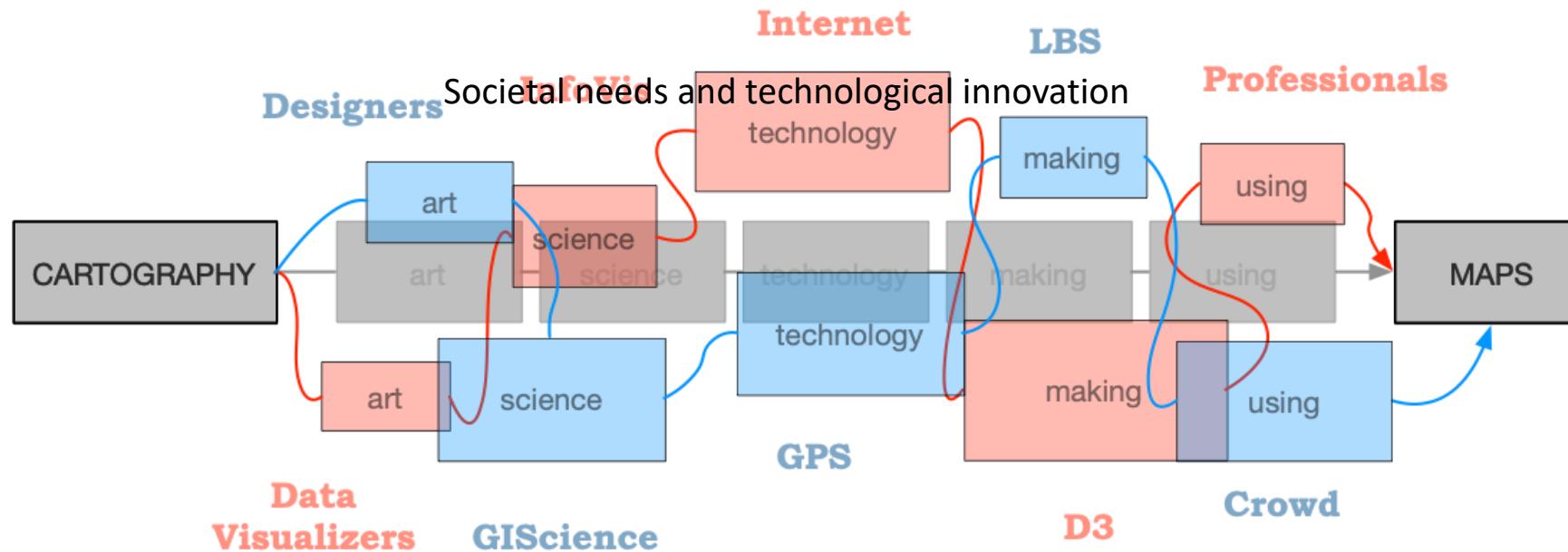


About Cartography (process)

-the art, science, and technology of making and **using** maps



Sustainability of the definition



ICA Commission Alignment to Current Needs: The IGIF

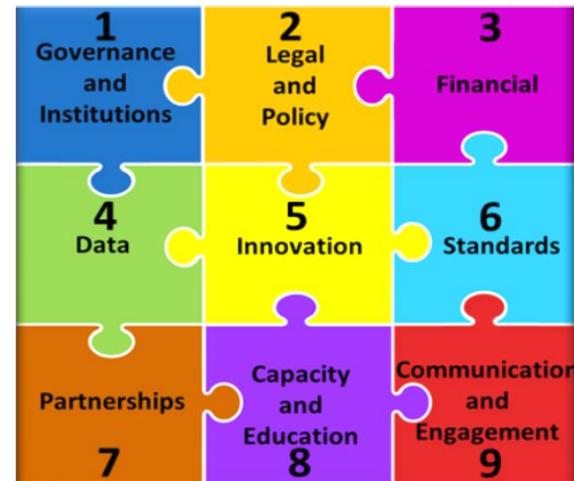
1. Cartography in Early Warning And Crisis Management

4. Topographic Mapping

4. Atlases

4. Map Production and
Geoinformation Management

4. Marine Cartography



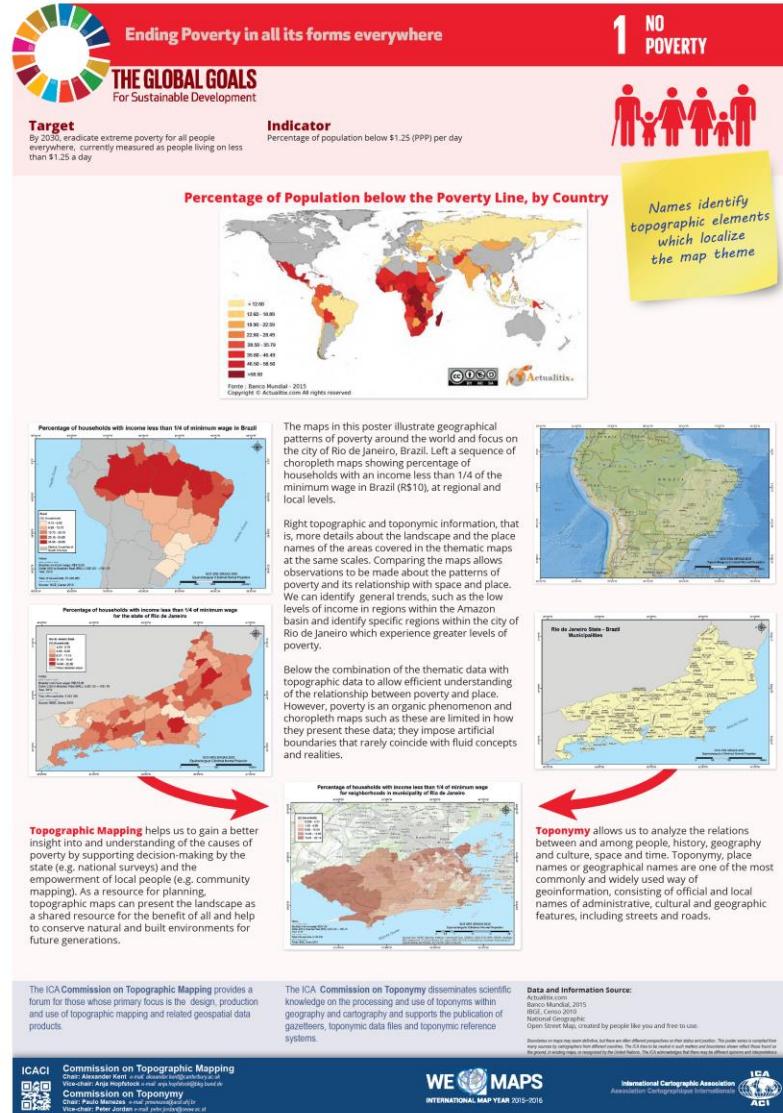
8. Education and Training
8. Cartography and Children

- 5. Geospatial Analysis and Modeling
- 5. Location Based Services
- 5. Open Source Geospatial Technologies
- 5. Sensor Driven Mapping
- 5. Ubiquitous Mapping
- 6. SDI and Standards

ICA Commission Alignment to Current Needs: The SDGs



ICA and SDG Goal 1 – No Poverty



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ICA and SDG Goal 2 – End Hunger

THE GLOBAL GOALS For Sustainable Development

2 ZERO HUNGER

Target
End hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants to safe, nutritious and sufficient food all year round. Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production.

Indicator
Prevalence of Undernourishment (PoU)
Insecurity
Emissions of greenhouse gasses in agriculture (per hectare of land and per unit of output).

FAO Hunger Map 2015
Achievement of the Millennium Development Goal Hunger Target

Sustainable agriculture
GIS and mapping have been used as enabling technology for sustainable agriculture and food production. The GIS and GPS-enabled mobile device technologies allow planners, agronomists and farmers to research and devise for resilient agricultural practices and better productivity. For example, emissions of greenhouse gasses per hectare of land and per unit of output can be accurately estimated based on precise geolocation, observation, and measurement.

Prevalence of population with moderate or severe food insecurity at fine urban and regional scales
The prevalence of food insecurity also needs to be studied at the local level. This is often done with special consideration of the income level and people's spatial accessibility to healthy food. The mapping of the analysis results helps to identify areas where improvements are urgently needed. The maps below show such areas in Atlanta, USA.

Map title
Map title

Note: Some of the maps come from publications from official sources.
Data and Information Source Info:
FAO, ESRI, researchers at the University of Georgia, USA

ICA Commission on Geospatial Analysis and Modeling
Focuses on spatial analysis, modeling and data mining, often with links to the geovisualization and visual analytical approaches. The commission encourages concerted efforts on cutting-edge or emerging research directions related to geospatial data and problems.

WE MAPS
INTERNATIONAL MAP YEAR 2015–2016

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ICA and SDG Goal 4 – Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

THE GLOBAL GOALS
For Sustainable Development

Target
By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes. And eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

Indicator
Completion rate primary and secondary / teachers in primary education, school life expectancy, out-of children of primary school age and out-of-school adolescents of lower secondary school age.

4 QUALITY EDUCATION

Maps help children understand our world

Every person - child, young or adult - should be able to benefit from educational opportunities designed to meet his/her basic learning needs.

These needs comprise both essential learning tools (such as literacy, oral expression, numeracy, and problem solving) and essential life skills (knowledge, skills, values, and attitudes), indispensable to human beings to survive, allowing them to fully develop their capacities, living and working with dignity, improving life quality, making well-founded decisions, and continuing to learn.

Higher education institutes offering cartography courses

Cartography can play an important role in the goals proposed by the United Nations. Learning how to guide one's self into the geographic space, read maps and know how to use them as a spatial representation with a specific language is essential for the formation of autonomous citizens.

Children who draw maps nowadays will be more conscious adults about the geographic space!

The main goal of the ICA Commission on Cartography and Children is to promote the use and enjoyment of maps by children and young people.

The Commission on Maps and Graphics for Blind and Partially Sighted People exchanges and disseminates information on the design of and production technologies for maps and graphics for blind and visually impaired people.

The Commission on Education and Training acts as a forum to maintain an overview of cartographic education worldwide.

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WE MAPS
INTERNATIONAL MAP YEAR 2015-2016

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ICA and SDG Goal 9 – Industry, Innovation, and Infrastructure

THE GLOBAL GOALS
For Sustainable Development

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Target
Significantly increase access to information and communications technology and strive to provide universal and affordable access to the internet in least developed countries by 2020.

Indicator
Fixed broadband quality measured by mean download speed. Subscription fixed broadband internet (per 100 people).

Mobile communication technology enables "anywhere, anytime, for anyone and anything" map services

Visualization of broadband & subscriptions
3D extrusion representing the fixed broadband quality measure by the mean download speed. This variable is visualized via a 3D extrusion in the map. The higher the extrusion, the faster is broadband connection speed.
Color - The number of subscription for fixed broadband internet (per 100 people) is visualized by color in the map. Darker color represents a higher number of subscriptions.
The map shows relations of subscriptions and download speed. In France for example there seems to be a high number of subscriptions for fixed broadband internet. The download speed seems slightly lower than in some neighboring countries.

Mobile broadband
With mobile broadband users can access maps on their mobile device. As many devices have build-in Global Navigation Satellite System (GNSS) receivers, it is possible to display the current position of the user. A mobile broadband connection enables the user to utilize Location-Based Services (LBS), for example for navigation or local information, entertainment, or social networking.
Mobile broadband enables public to access (spatial) information on the go. This trend, combined together with the development of information and communications technology (ICT) foster many innovative applications, such as smart cities, intelligent transportation services and urban planning. These innovative applications play a key role in developing a sustainable future.

New devices
All countries have increasing access to the internet, mobile & fixed. Emerging mobile devices (e.g., smart watches and digital glasses) are increasingly being considered for visualizing maps. It is expected to have an increasing diversity of technical systems (including data formats) and an increasing diversity of devices.

Data and Information Source:
ITU, global ICT statistics, 2014. Subscription to fixed broadband internet (per 100 people)
<http://www.itu.int/ITU-D/ict/statistics/>
Akamai, State of the Internet, 2014. <http://www.stateoftheinternet.com/>
Authors: Jaka M. Krop, Hancheng Huang, Andreas Keler, Julian Bischoff
Bios: Jaka M. Krop is a geospatial engineer and researcher at the University of Regensburg, Germany. His research interests include mobile location-based services, mobile mapping, and mobile sensors. He is currently working on the development of mobile location-based services for the tourism industry.
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ICACI ICA Commission on Location Based Services (LBS)
Vice-chair - Jaka M. Krop - j.krop@regensburg.de

WE MAPS
INTERNATIONAL MAP YEAR 2015-2016

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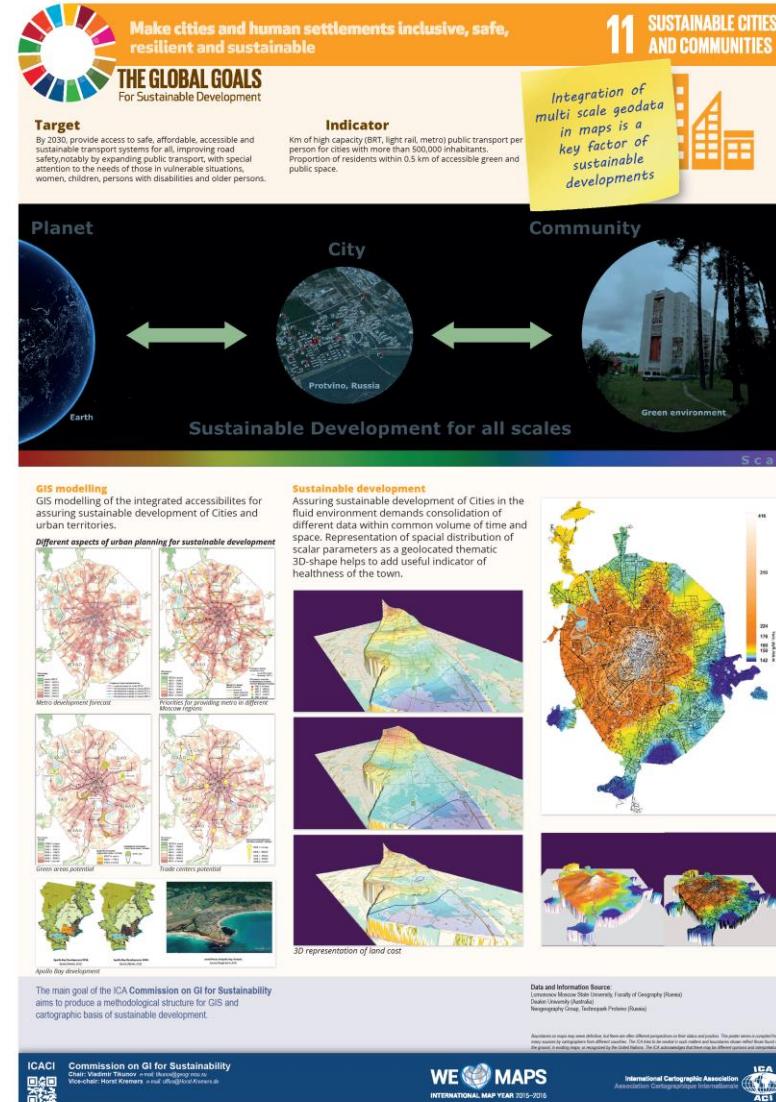
The main goal of the ICA Commission on Location Based Services (LBS) is to advance the research on LBS in all its interdisciplinary fields, with the aims to enable "anywhere, anytime, for anyone and anything" LBS services.

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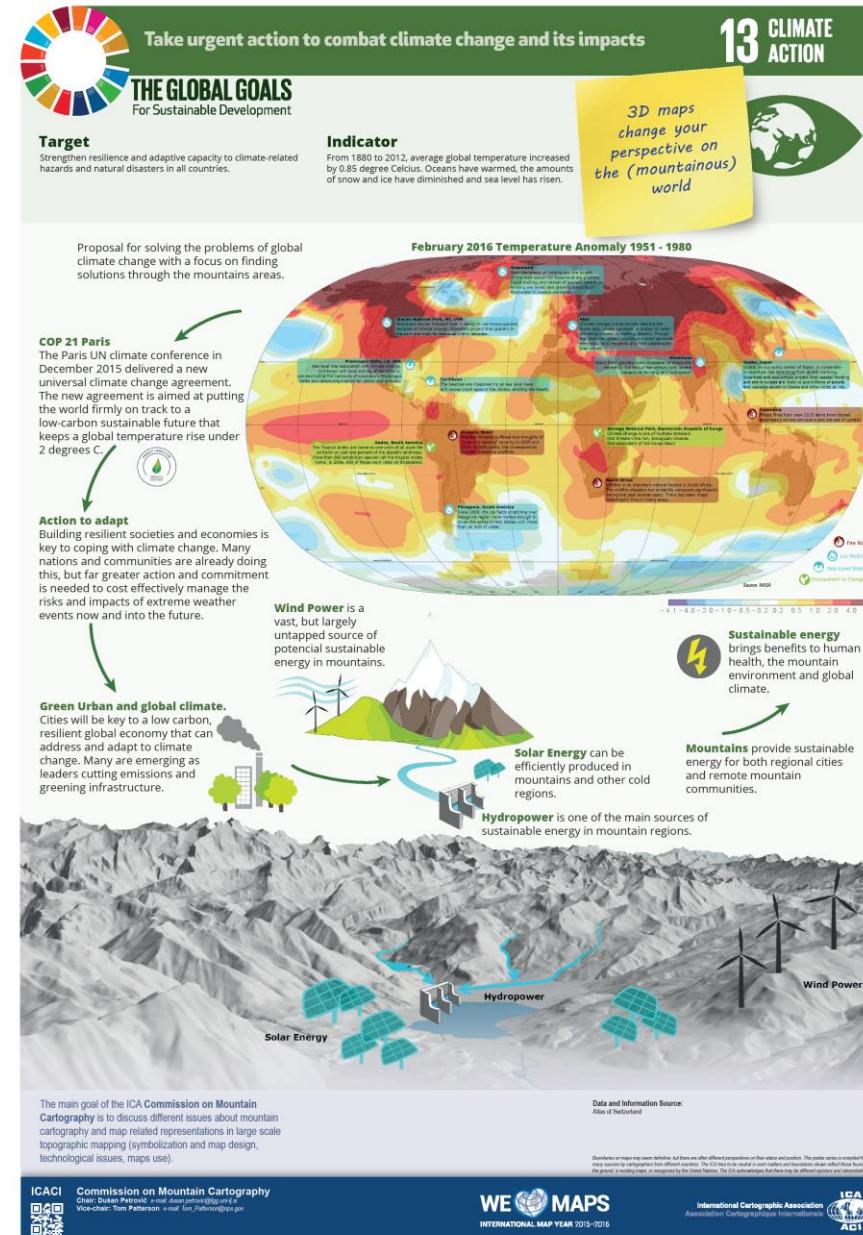
ICA and SDG Goal 11 – Sustainable Cities and Communities



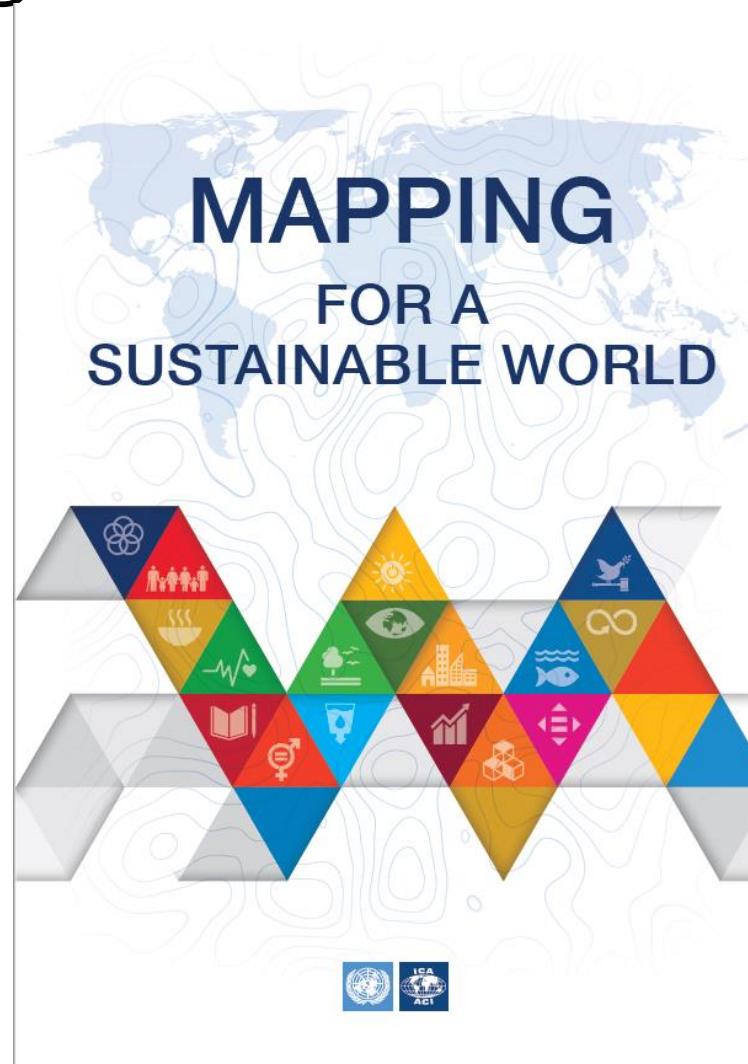
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ICA and SDG Goal 13 – Climate Action



Forthcoming ICA Publication with the UN



International Cartographic Association
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Regional Cartographic Conferences



International Cartographic Association
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Future International Cartographic Conferences

2021
Sponsored by the
Cartographic Association of Italy



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Future International Cartographic Conferences

2023
South Africa National
Committee for the ICA

19th General Assembly and 31st International Cartographic Conference



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Mosaic World Atlas Wiki – SP9



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What can you do?

- Check if you are one of 70 countries who are members of ICA
- Participate in the work of the ICA Commissions to learn and influence new developments in cartography and geospatial science and applications
- Sponsor young professionals to partake in ICA Commissions and International Cartographic Conferences
- Display your accomplished works at the International Map Exhibition
- Support a developing country to participate in the ICA



Let's make the world a better place with maps