Employability and job opportunities

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The Academic Network Americas is a forum oriented to universities and educational centers involved in research and development around geospatial information and related topics

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Canada	University of Waterloo www.uwaterloo.ca	Dr. Saied Pirasteh
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USA	University of California, Berkeley sph.berkeley.edu	Dr. Charlotte Smith
USA	University of Maine www.umaine.edu	Prof. Harlan Onsrud
USA	Harvard University www.harvard.edu	Prof. Wendy Guan
USA	Texas A&M University-Corpus Christi www.tamucc.edu	Prof. Gary Jeffress

Objectives ANA:

- To support the goals of UN-GGIM Americas.
- To serve as subsidiary of the UN-GGIM Academic Network.

http://redacademica.org

Employability and job opportunities

Survey of the **offer and the potential demand of** training courses – UN-GGIM Americas´ Members

The survey should be focused on those Institutions involved in either Cartography or Spatial Data Infrastructure:

***Are there national academic centers currently providing training in:**

- -cartography?
- -geographical data capture methods?
- -quality standards of geographic information?
- -methods to assess the quality of geographic information?
- -geoservices?
- -integration of statistics with geospatial information?

*** Agency/Company Name, Thematic area addressed.**

*** What thematic areas or specific concepts are needed to expand knowledge?**

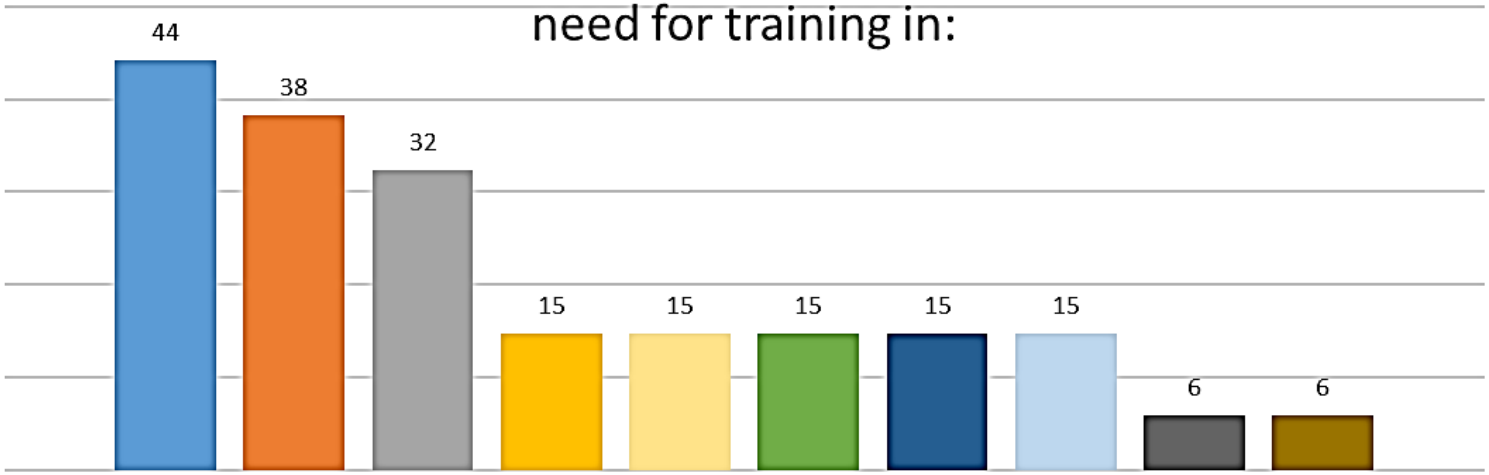
34 responses

Thus, from ANA:

Survey of needs for training courses – UN-GGIM Americas´ Members

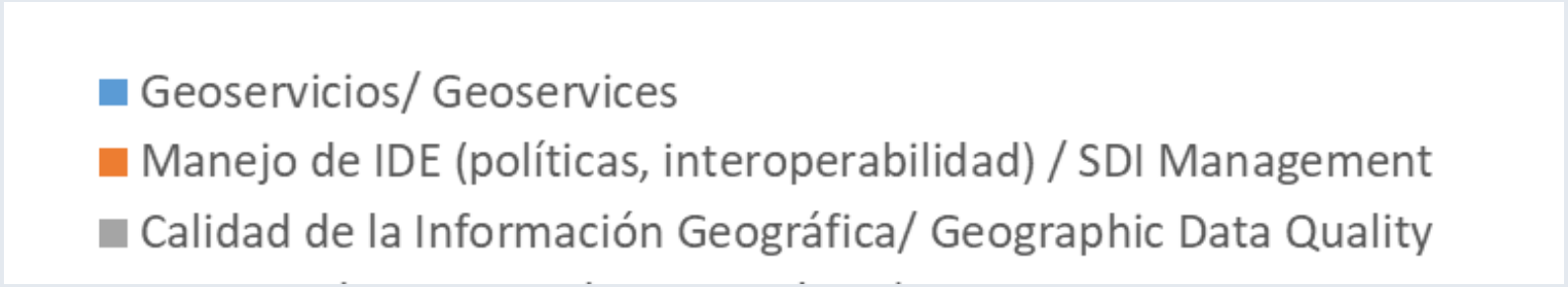
Survey of available courses & graduate and postgraduate programs

Porcentaje de países que identifican necesidad de capacitación en/ Percentage of countries that identify need for training in:



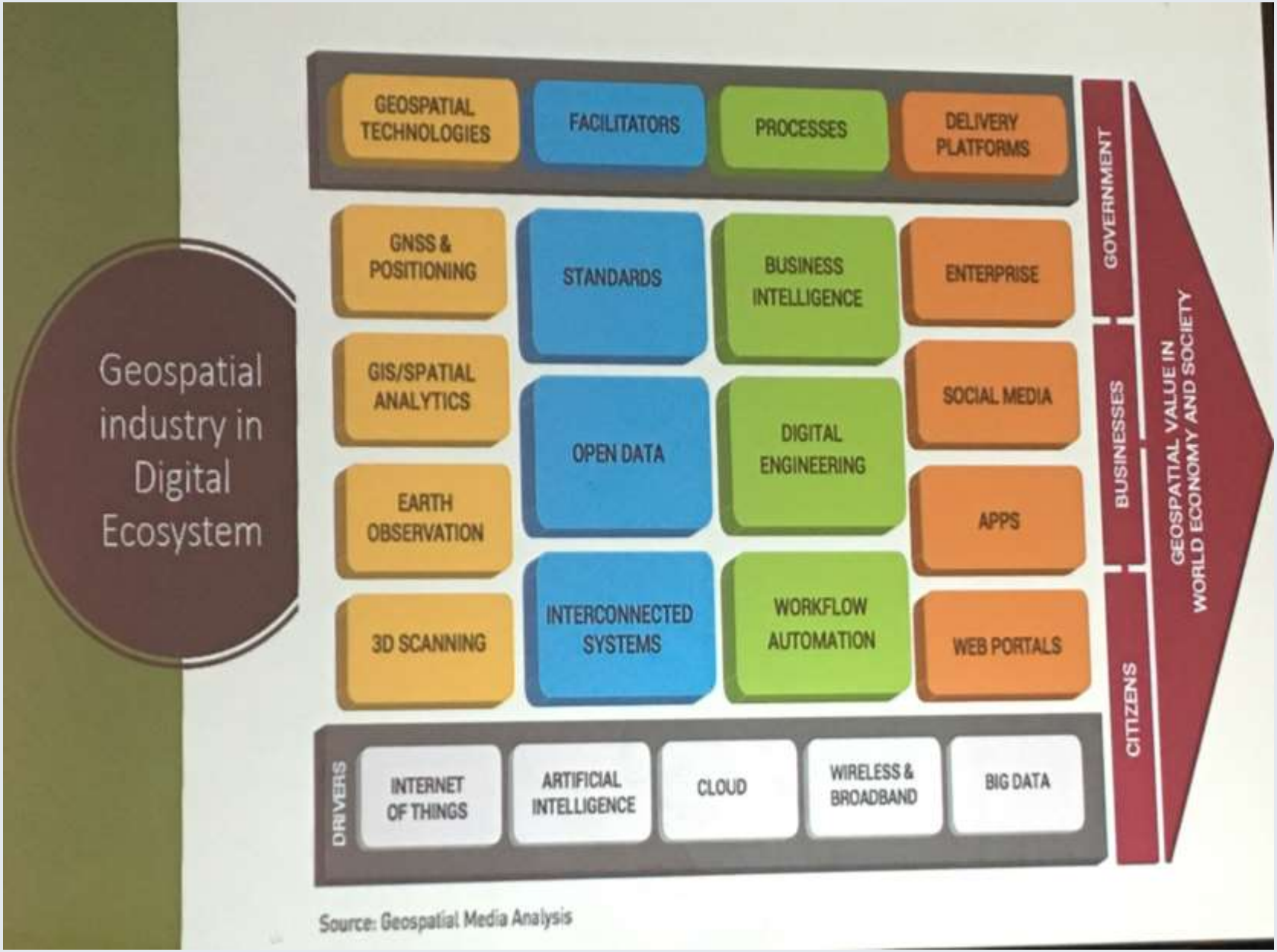
- Geoservicios/ Geoservices
- Manejo de IDE (políticas, interoperabilidad) / SDI Management
- Calidad de la Información Geográfica/ Geographic Data Quality
- Cartografía, Producción cartográfica/ Cartography
- Percepción remota (Fotogrametría, UAV) / Remote Sensing
- Vinculación datos geográficos y estadísticos/ Integration of statistics with geospatial information
- Big Data
- Aplicaciones específicas (modelados, hidrografía)/ Specific Apps
- IoT
- Uso de Datos colaborativos/ Voluntary Geographic Information (VGI)

EXPERIENCED PEOPLE IS NEEDED IN AREAS SUCH AS



JOB OPPORTUNITIES

Source: Dean Angelides, 2019



Source: Anna Wellenstein, 2019

AREAS TO WORK ON:

Proper use of satellite images to monitor ODS

Monitoring SDI

Core data/ Inspire

Metadata quality information/ geospatial data quality

Big Data

Data quality/ Standards Iso

Data Cube

Global framework to all countries??

MACHINE LEARNING

Internet access vs Cloud GIS

Access to data, and resources for actions

Simply vs Complete?

Open Mins / Colaborate

Job opportunities "The Science of Where"

Different sites

Haley & Aldrich ★★★★☆ 16 evaluaciones
Oakland, CA 94612 (Northgate area)
Is seeking an Environmental Data Analyst to join our Data Management Services Group. Experience exporting data for spatial analysis such as ARCGIS, SURFER, Web...
hace 30+ días guardar oferta más...

GIS Analyst
Herrera Environmental Consultants
Seattle, WA
Strong knowledge of ArcGIS extensions, including Spatial Analyst and 3D Analyst. Familiarity with compiling local and regional environmental data from a variety...
hace 10 horas guardar oferta más...

Spatial Data Analyst
Unisys ★★★★☆ 1.927 evaluaciones
Philadelphia, PA
Streamline and transform their data centers; Familiar with SDM (Spatial Data Management) policies and principles...
hace 30+ días guardar oferta más...

GIS Analyst
Colliers International ★★★★☆ 412 evaluaciones
Atlanta, GA
Strong experience with ESRI ArcGIS for Desktop/ArcGIS Pro and the Network and Spatial Analyst extensions required...
hace 7 horas guardar oferta más...

Urban Analyst

Localize.city - Chicago, IL 60290

Ver empleo

- You have proven experience in researching urban issues
- You have at least 2 years non-academic work experience
- You enjoy writing and have very strong written and communication skills
- Bachelors or Masters degree in Urban Planning, Geography, Public Policy, Sociology, or a related field
- You are comfortable working with Excel (PivotTables, Vlookup, IF formulas).
- You are excited about working in a startup

Strongly preferred qualifications:

- Experience working with big data
- Professional experience working with GIS software
- Experience in writing content for blogs or journals

Selected candidates will be asked to do a written assignment that will test their content-writing and communication skills.

- **Job location:** Chicago, Los Angeles, New York City, Washington DC, San Francisco

GlassDoor - hace 17 días - guardar empleo - empleo original

Geographic Information Spatial Analyst I
Fairfax County Government ★★★★☆ 141 evaluaciones
Fairfax, VA
$55,647 - $92,746 al año
Performs updates to tabular data. Assigns data keys for geographic layers. Recommends database enhancements for GIS data layers...
hace 4 horas guardar oferta más...

Spatial Data Administrator - US Onshore Support
Anadarko Petroleum Corporation ★★★★☆ 262 evaluaciones
Denver, CO 80202 (Lodo area)
Data analyze / spatial analyze. Loads and edits data in the appropriate corporate spatial data stores (SDE)...
hace 30+ días guardar oferta más...

Data Visualization/Mapping Engineer - Spatial Computing
Facebook ★★★★☆ 388 evaluaciones
Menlo Park, CA
Implement web user interface, mapping, data visualizations and features to power data products. Facebook is in search of the world's most creative and...
hace 21 días guardar oferta más...

Space Data Assistant
The University of Chicago ★★★★☆ 392 evaluaciones
Chicago, IL
Digitizing, conversion, attribution, and quality control with spatial accuracy. Verify spatial information through field inspections and comparison of...
hace 1 día guardar oferta más...

Chicago, IL
Digitizing, conversion, attribution, and quality control with spatial accuracy. Verify spatial information through field inspections and comparison of...
hace 1 día guardar oferta más...

Geospatial Data Scientist
New York City DEPARTMENT OF FINANCE
★★★★☆ 30 evaluaciones
Manhattan, NY
$73,305 - $84,301 al año
The Property Valuation & Mapping Unit in the Department of Finance is seeking a Geospatial Data Scientist or Analyst to provide imagery and GIS processing...
NYC Careers hace 7 días guardar oferta más...

GIS Analyst
Herrera Environmental Consultants
Seattle, WA
Familiarity with compiling local and regional environmental data from a variety of sources, including field data and online data...
hace 10 horas guardar oferta más...

☆ Empleos recomendados para ti

Dir - Policy, Advocacy, Legislative Affairs
Safer Foundation ★★★★☆ 56 evaluaciones
Chicago, IL
General Summary: The Director of Policy, Advocacy and Legislative Affairs is responsible for the planning, implementation, directing and management of all...
hace 15 días guardar oferta más...

Geospatial Data Scientist
New York City DEPARTMENT OF FINANCE ★★★★☆ 30 valoraciones - Manhattan, NY
$73,305 - $84,301 al año

Ver o postular al empleo | Guardar este empleo

Preferred Skills

? A minimum of 2 years of experience and a Masters in geography/GIS, remote sensing, or similar engineering/science field ? Demonstrated experience in image processing and scientific analysis of LIDAR imagery? Knowledge of remote sensing and PhotogrammetryAnd some combination of the following: ? Knowledge of commercial imagery data, products, processes, and sensors? Experience with 3D GIS? Proficiency using image processing software and knowledge of programming languages such as R and Python to facilitate automation of geoprocessing work-flows.? Familiarity with commercial data sources and integration into ArcGIS ? Database and SQL experience? Some prior knowledge or experience of the urban or built environments? Experience working with cloud computing or AWS based ? stacks?? Machine learning experience

Additional Information

In compliance with federal law, all persons hired will be required to verify identity and eligibility to work in the United States and to complete the required

Work Activities

Work Activities:

1. Supervises subordinate staff working with Geographic Information Systems (GIS); establishes quality guidelines and key milestones for each project based on project goals outlined in the work plan; performs independent quality assurance reviews of GIS projects by testing source code, checking system performance, ensuring project is operating within established budget, and monitoring activities of project team; identifies types of application tests which will be required based on nature of the project; maintains official project archives and documentation by securing electronic storage of data and properly cataloguing materials; provides periodic progress reports to management or supervision; assigns performance rating for subordinate staff according to established criteria; reviews results of performance evaluation with management and respective employee; may monitor schedule and attendance of staff.

2. Develops customized GIS software applications; creates GIS applications which provide decision-making tools for complex issues such as demographics, transportation, and the potential impact of construction, conservation initiatives, and other regional activities; makes formal requests to management for project approval, funding, human resources, and additional hardware or software needs; assigns projects and tasks according to work plan, available resources, and individual area of expertise; develops detailed work plan according to project objectives, available resources, and required technical approach; writes source code using state-approved programming languages; makes corrections to source code based on test simulations and feedback from other analysts and staff; writes formal documentation regarding project goals, changes in source code, storage of data and materials, and project completion.

3. Creates specialized data sets, reports, maps, graphics, and other requested materials by analyzing data using GIS; researches pre-existing data sets and data resources to gain familiarity with issues surrounding request; identifies appropriate spatial data model to apply to complex problems based on agency needs and available GIS applications and resources; selects the appropriate data collection, integration, and storage methods based on project objectives and current research; acquires data by submitting requests to appropriate agencies and physically collecting data from raw sources such as libraries, networks, or related media; defines output parameters by loading data, graphics, and geography into database or system; performs spatial analysis using appropriate GIS application tools and commands; presents the results of spatial data analysis and recommendations to agencies in the appropriate format.

4. Integrates GIS into existing agency or departmental applications of greater scope and complexity to improve quality and cost effectiveness of state services; examines existing business processes to determine what data sets are involved, how the data is obtained and stored, and current business needs; identifies requirements necessary for GIS integration through consultations with clients, vendors, and other application developers based on request and agency needs; writes source code using state-approved programming languages to create a digital map-interface allowing access to business data in a spatial environment; determines if system problems are related to hardware compatibility issues, software errors, or user operation based on the performance of GIS components.

5. Oversees the maintenance of GIS applications, hardware, and software to ensure performance needs are met; defines the cost effectiveness, compatibility of software components, and application performance to determine impact of system modifications on the agency; assesses needs for software or hardware upgrades through interaction with users and vendors; examines new technologies and product specifications at user conferences to determine potential for incorporation into current GIS systems; evaluates industry standards, emerging technologies, and agency goals to determine if system improvements are necessary.

6. Provides training and technical assistance to users of GIS throughout state agencies; develops curriculum and training standards for classes on the functionality of GIS based on agency requirements and industry standards; trains users regarding the functionality of advanced GIS software and custom-designed applications through individual or class instruction.

Requirements

Competencies:

1. Creativity
2. Learning on the Fly
3. Decision Quality
4. Functional/Technical Competencies
5. Directing Others
6. Informing
7. Customer Focus
8. Self-Development
9. Self-Knowledge

Knowledge:

1. Knowledge of Geo spatial software to support enterprise GIS functions
2. Knowledge of Relational Databases to effectively manage geospatial vector data
3. Knowledge of Computer software and hardware installation
4. Knowledge of Design Software to create complex spatial systems and data structures
5. Knowledge of Location and Navigation Systems to integrate GPS devices and data with enterprise GIS
6. Knowledge of Programming Language to effectively develop GIS web applications
7. Knowledge of Spatial Analysis to support independent quality assurance reviews of GIS projects
8. Knowledge of Geographic Principles, such as map projections and coordinating systems
9. Knowledge of Communication and Media to present spatial data analysis recommendations
10. Customer and Personal Service to obtain project proposal approval
11. Education and Training to develop user training
12. Mathematics
13. Knowledge of GIS System Architecture to maintain and support enterprise GIS infrastructure
14. Knowledge of GIS Web Development Software to effectively develop GIS web applications
15. Knowledge of GIS scripting language(s) to streamline geoprocessing functions and tasks

Skills:

1. Creating effective maps through the use of cartographic skills
2. Skill in developing robust GIS applications
3. Active Learning
4. Active Listening
5. Critical Thinking
6. Learning Strategies develop effective
7. Mathematics
8. Reading Comprehension
9. Writing formal project documentation
10. Speaking
11. Science
12. Instructing
13. Complex Business Problem Solving t
14. Social Perceptiveness

- Knowledge
- Competencies
- Skills

• SOFT SKILLS

Skills:

1. Creating effective maps through the use of cartographic skills
2. Skill in developing robust GIS applications
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8. Reading Comprehension
9. Writing formal project documentation
10. Speaking
11. Science
12. Instructing
13. Complex Business Problem Solving through the use of GIS applications and resources
14. Social Perceptiveness

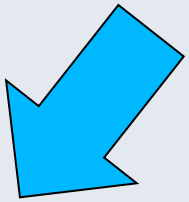
SHOULD BE INCLUDED

ARE WE PREPARING FOR THE FUTURE TO

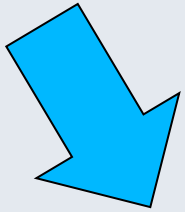
USE SPATIAL DATA?

SPATIALLY ENABLE SOCIETY

FIG, Comission 3
Rajabifard & Coleman, 2012

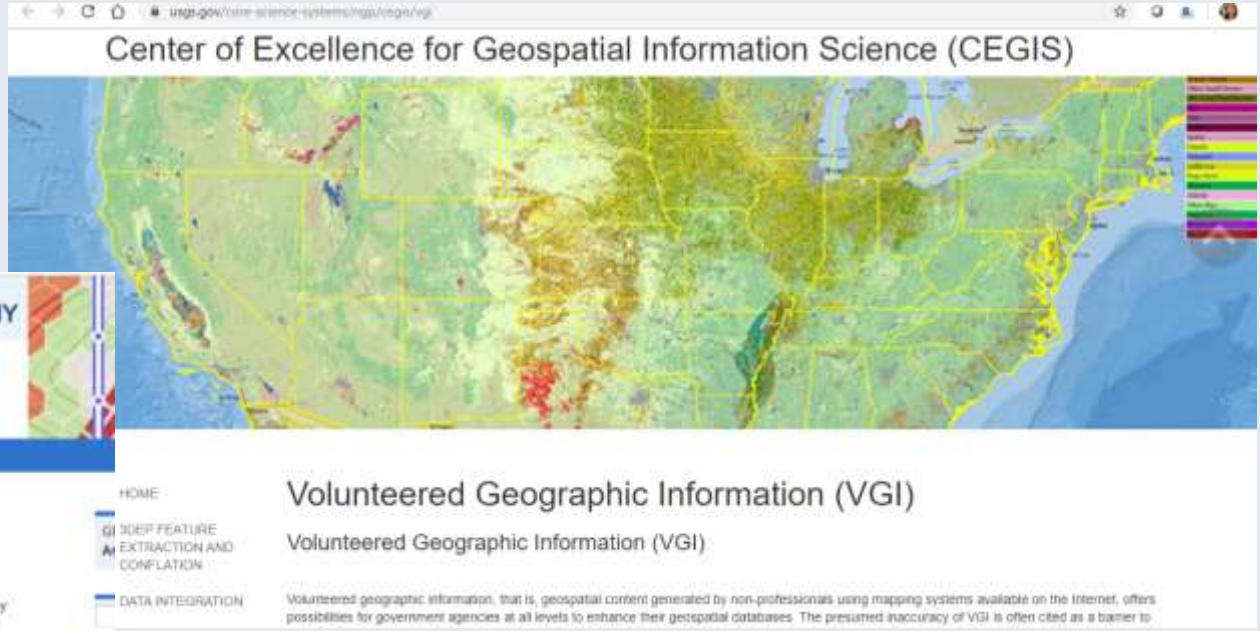


POLICY MAKING



INTEROPERABILITY

Volunteered Geographic Information



SOCIETY USING GEOGRAPHIC DATA BUT IS THAT ENOUGH?

Se procura conformar una sociedad civil empoderada de la información geográfica, que la aproveche y utilice para su propio beneficio. Lo que implica que se la capacite para que comprenda el concepto de espacialidad y pueda interactuar y decidir sobre los aspectos territoriales que la involucran

(Williamson *et al*., 2012).

Keep moving to empower society

NEW NEEDS - SOCIETY

- BASIC KNOWLEDGE MISSING
- RESPONSIBILITY ABOUT DATA
- METADATA – DATA QUALITY

WE NEED TO :

- PREPARE SOCIETY TO USE/ COLLECT PROPERLY GEOGRAPHIC INFORMATION
- COMMUNICATE ABOUT THE RELEVANCE OF CARTOGRAPHY
- USE INTERNET TO EMPOWER COMMUNITIES

CARTOGRAPHERS

COMMUNICATORS

COMPUTER SCIENCIE

BIG DATA MANAGERS

GEOGRAPHERS

DATA ANALYSTICS

Thank you and join us

http://redacademica.org

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