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Geospatial Integration

Real vs Virtual Worlds
Earth vs Model
Across Domains ...

Organize Geospatially ...

- Spatial Literacy
  - Map interfaces / Reference ‘grid’
- Spatial Awareness
  - Orientation / Proximity effects
- Spatial Thinking
  - Concepts / Reasoning / Why? / Scenarios

Spatial literacy is the ability to use the properties and concepts of space to communicate, reason, and solve problems.

Literacies and Competences

1. Spatial referencing – establishing location and place
2. Orientation – connecting (my) place with space, for context
3. Representations of spatial features and phenomena
4. Dimensions and scale – moving between individual and aggregate
5. Spatial relations – towards answering the ‘why?’
6. Geospatial communication – designing interaction
7. Spatial thinking and reasoning – supporting decisions

Spatial literacy and spatial thinking are indispensable prerequisites for using Geographic Information Systems to generate new information
Target Audiences

- CITIZENS
  - Participation
  - Applications
- ANALYSTS
  - Domain expertise
- SYSTEMS
  - MGRS.
  - Spatial Data Infrastructure

UCGIS

The Geographic Information Science & Technology Body of Knowledge 2.0 Project

GI-N2K

Geographic Information : Need to Know

European LLP project
31 Partners from 25 countries
Lead: KU Leuven
Total budget: 780,582.¬ €

http://www.gi-n2k.eu/
Workforce demand survey

Number of respondents: 1081

How can your organisation be best characterised?

- **Academic institution**: 15%
- **Public administration**: 23%
- **Private company**: 19%
- **Other (N/A)**: 5%

How can your role in your organisation best be described?

- **GIS&T user**: 30%
- **GIS&T expert (analyst, researcher, educator)**: 20%
- **GIS&T project manager**: 15%
- **Manager of a GIS&T group (department, company)**: 10%
- **I am not involved with GIS&T in my job**: 15%

Frequently performed tasks

- **Spatial analysis**: Highly important (5-6)
- **Cartography & Visualisation**: Highly important (5-6)
- **Data Manipulation**: Highly important (5-6)
- **Conceptual Foundations**: Highly important (5-6)
- **Data Modeling**: Frequently performed (1-4)
- **Organ & Inst Aspects**: Frequently performed (1-4)
- **Analytical Methods**: Frequently performed (1-4)

Which competences will gain importance in the next 5 years?

- **Highly important (5-6)**
- **GIS&E& Technologies**: Frequently performed (1-4)
- **Data & Information Management**: Frequently performed (1-4)
- **GIS&T and Society**: Frequently performed (1-4)
- **Geocomputation**: Frequently performed (1-4)

* Without keywords “GIS” and “data”
Which GIS&T competences would you personally like to obtain / enhance?

* Without keywords “GIS” and “data”

A streamlined architecture: 3 Key actions

Existing programmes

A single integrated programme

Erasmus+

Specific activities:
- Jean Monnet
- Sport

KA1
Learning mobility of individuals
- Higher Education

- Credit mobility: Erasmus+ credit learning mobility of students and staff between EU – non EU in both directions
- Degree mobility: Erasmus+ degree mobility of students and staff between EU – non EU universities to attract the very best students worldwide
- Master Student Loan Guarantee: Erasmus+ support for non-EU mobility

KA2
Cooperation for innovation
- Higher Education

- HE Strategic Partnerships: Support HEIs in their Modernisation strategy
- Knowledge Alliances: University-business cooperation for more innovation
- Support to Neighbourhood countries (ENP): Partnership between HEIs from EU and ENP universities with a mobility component
- Specific support with Neighbourhood countries: capacity building through partnerships between EU and ENP universities
- Support to Neighbourhood countries (ENP): Curriculum development, modernisation, modern teaching and learning, student HEIs governance, stronger links with the world of work...
- Cooperation with Asia, Latin America and Africa: Mobility linked to HEI staff to achieve projects objectives

Spatially aware Society

geospatial literacy
participation
management
business & life
informed decisions
community interaction
business activities

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www.unigis.net
.. about the trees and the forest

... rabbits eat grass. Grass grows in... wolves eat rabbits... wolves eat rabbits... 

INFORMATION... KNOWLEDGE... WISDOM...