SDI Capacity Building Model for Developing Countries
Case Study: Colombia

Dora Inés REY
Agustin Codazzi Geographic Institute
IGAC
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Capacity Building - Definition

- Creation and development of capabilities and capacities, individual and institutional, to solve problems on geographic information management and to accomplish the institutional mission in a long term form

Relationships

Individual
Education and training
Culture - thinking
Organization
Investigation

Research and Development

Science and Technological National System
- Strengthen CIAF as R&D Center on Geographic information oriented to:
  - Innovation technology to solve specific problems related to adoption of new technology, development of new methodologies, creation of new geographic services and improvement of processes
  - Research of territory, redeeming the role of geography as fundamental knowledge for development
 Transfer of knowledge

• Upgrade and Creation of advanced programs including SDI issues (Academic and data producer institutions)
  – Master’s Degree in Geography
  – Master’s Degree in Geomatics
  – Graduate studies in Land valuation
  – Graduate studies in GIS
• Short Courses: new themes such as: spatial data infrastructures, standards, metadata, data quality, maps on-line

 Need to generate a workforce model
• Roles: Coordination, data management, marketing, project management, analysis, system administration, teaching, visualization

 Transfer of knowledge - Workforce Model

• Technical Competencies
  • Manage of ICT-GI
  • GIS
  • Programming skills
  • Cartography
  • Photogrammetry
  • Remote Sensing
  • Processing
  • Technical writing

• Business Competencies
  • Broad and integral vision
  • Change management
  • Cost benefit analysis
  • Ethics Modeling
  • Business understanding
  • Performance assessment
  • Visioning
  • Information sharing

 Transfer of knowledge - Competence Model

• Analytical Competencies
  • Creative thinking
  • Knowledge management
  • Model building skills
  • Problem solving skills
  • Research skills
  • Systems thinking

• Interpersonal Competencies
  • Leadership
  • Communication skills
  • Conflict management
  • Feedback skills
  • Learning processes
  • Questioning
  • Relationship building skills
  • Self-learning and self-management

 Technical cooperation

 United Nations, 2002
• Acquisition of interactive knowledge/Learning
• Institutional commitment/Sustainability
• Institutional scope and alliances: diverse players and levels
• Policies scope
• Leadership
• Outcome and self-evaluation

 Technical cooperation - Paradigm
### Organizational structure

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<th>Institution</th>
<th>Relationships</th>
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<td>• Vision/Mission</td>
<td>• Other institutions</td>
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<td>• Strategies</td>
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<td>• Organizational culture</td>
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<td>• Resources</td>
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### Conclusion

- SDI development can be achieved if persons, organizations and developing countries acquire appropriate capabilities to assimilate and to incorporate new technologies to enable them to face the new challenges imposed by the information society.

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**Thank you!**

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