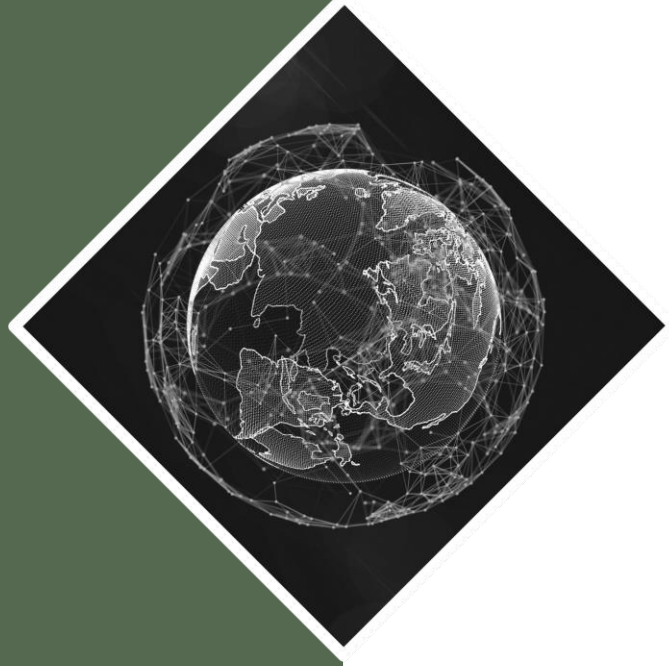

GROUP ON
EARTH OBSERVATIONS
OPEN DATA
& OPEN KNOWLEDGE
Workshop

CAPACITY DEVELOPMENT AND OPEN DATA / OPEN KNOWLEDGE



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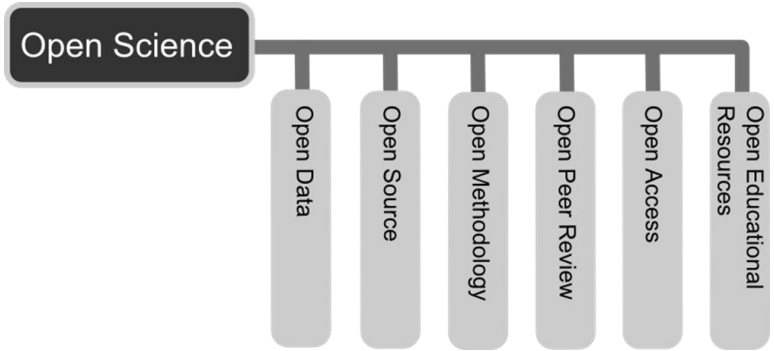
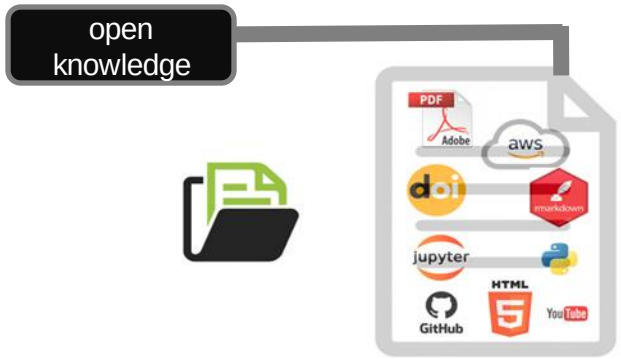
THE MAIN QUESTIONS

HOW TO MOVE THE GEO COMMUNITY TO ADOPT OPEN DATA AND OPEN KNOWLEDGE?

HOW TO BRING KNOWLEDGE TO A WIDER COMMUNITY FOR GREATER IMPACT THROUGH THE GEO KNOWLEDGE HUB ?





IMPLICATIONS FOR CAPACITY DEVELOPMENT: NEW SKILLS

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Everything will be digital and open, new skills are needed:

- Ability to manage large amounts of geo data
- New technologies (big data, data analytics, cloud computing, machine learning, etc.)
- Open access publishing
- Communication with stakeholders
- Research data production, management, analysis/use/reuse, dissemination
- Legal, integrity and ethics

** Providing Researchers with the skills and competencies they need to practice Open Science; OS working Group of the European Commission, 2017*

IMPLICATIONS: ATTITUDE CHANGE

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Changes in attitude are needed:

- A change of paradigm from “protected data by default” to “open data by default”, respecting legal, and other constraints
- Acting in and beyond one’s own scholarly and disciplinary community
- Sharing of knowledge and best practices within community platforms of practitioners, scientists and interested civilians
- (Citizen science) expertise to interact with the general public to enhance the impact of science and research (collecting data and doing collaborative research with non-scientists).

EXAMPLE: CAPACITY DEVELOPMENT NEEDS FOR RESEARCHERS

Open Science Career Assessment Matrix (OS-CAM)	
Open Science activities	*Possible evaluation criteria*
RESEARCH OUTPUT	
Research activity	Pushing forward the boundaries of open science as a research topic
Publications	Publishing in open access journals Self-archiving in open access repositories
Datasets and research results	Using the FAIR data principles Adopting quality standards in open data management and open datasets Making use of open data from other researchers
Open source	Using open source software and other open tools Developing new software and tools that are open to other users
Funding	Securing funding for open science activities
RESEARCH PROCESS	
Stakeholder engagement / citizen science	Actively engaging society and research users in the research process Sharing provisional research results with stakeholders through open platforms (e.g. Arxiv, Figshare) Involving stakeholders in peer review processes
Collaboration and Interdisciplinarity	Widening participation in research through open collaborative projects Engaging in team science through diverse cross-disciplinary teams
Research integrity	Being aware of the ethical and legal issues relating to data sharing, confidentiality, attribution and environmental impact of open science activities Fully recognizing the contribution of others in research projects, including collaborators, co-authors, citizens, open data providers
Risk management	Taking account of the risks involved in open science

IMPLICATIONS: A HOLISTIC APPROACH

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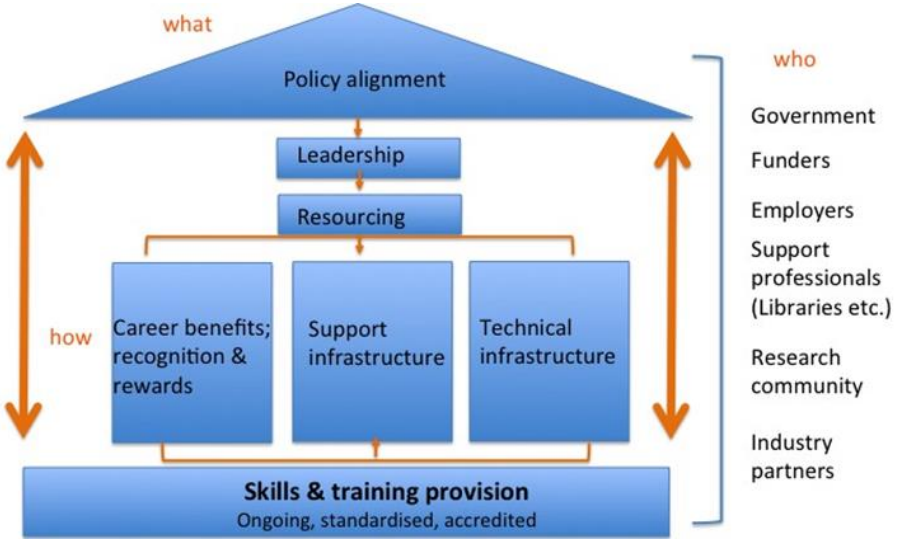
Individual, organizational and institutional capacity development efforts are needed:

- Institutional policies on ODOK
- Support for ODOK: infrastructure, legal, technical
- Rewarding systems and career guidelines
- Funding guidelines / crowdfunding
- Networking and collaboration



"Providing Researchers with the skills and competencies they need to practice Open Science"; OS working Group of the European Commission, 2017

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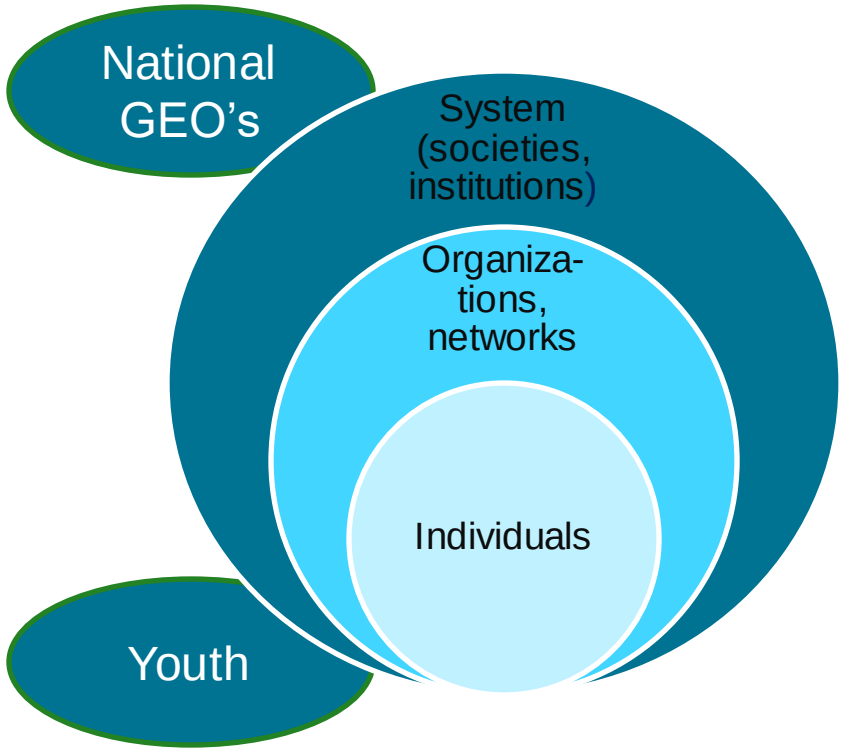

FACILITATING COOPERATION AND COLLABORATION ACROSS DOMAINS, SECORS AND BORDERS, ENABLING SOCIETAL IMPACT

PROVIDING TOOLS, SERVICES, INFORMATION AND RESOURCES THAT ENABLE BETTER DECISION-MAKING AND ORGANIZATIONAL STRENGTHENING

PROVIDING ACCESS TO TRAINING AND COACHING FOR INCREASED SKILLS AND KNOWLEDGE

IMPLICATIONS: THE DESIGN PROCESS

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CONDUCT A NEEDS ASSESSMENTS

Each target group requires a **fit-for-purpose** set of CD interventions.

DEFINE THE REQUIRED COMPETENCES (skills, knowledge, attitude)

DEFINE THE BEST CD APPROACHES

- Awareness training
- On-line technical courses / e-learning platform **(e.g. ITC's GEOversity platform)**
- MOOC's (Massive Open Online Courses)
- Peer learning / sharing platform
- Coaching
- Tools, guidance docs, templates

DEFINE THE MONITORING AND ASSESSMENT PROCEDURE

CONTACT DETAILS

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