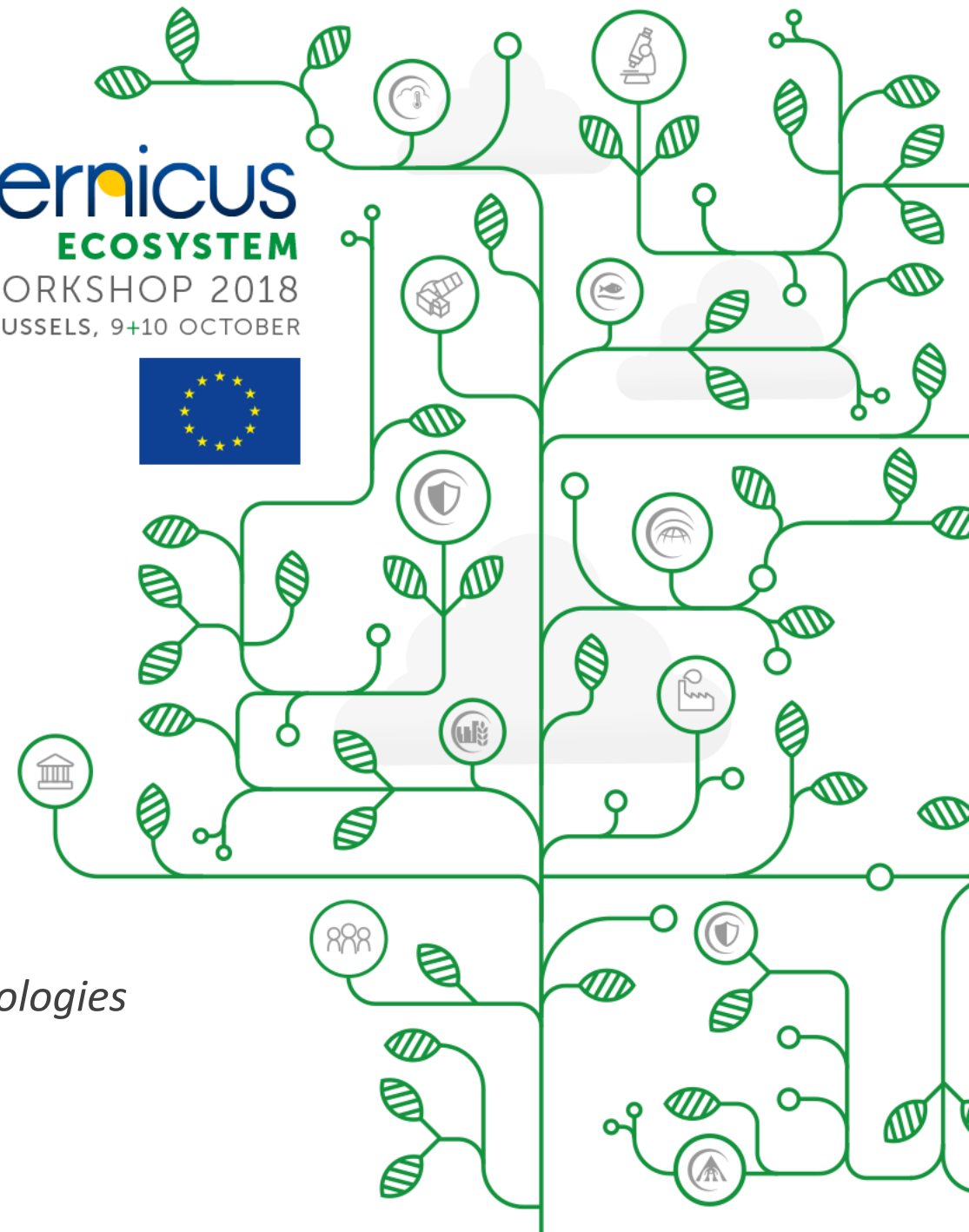


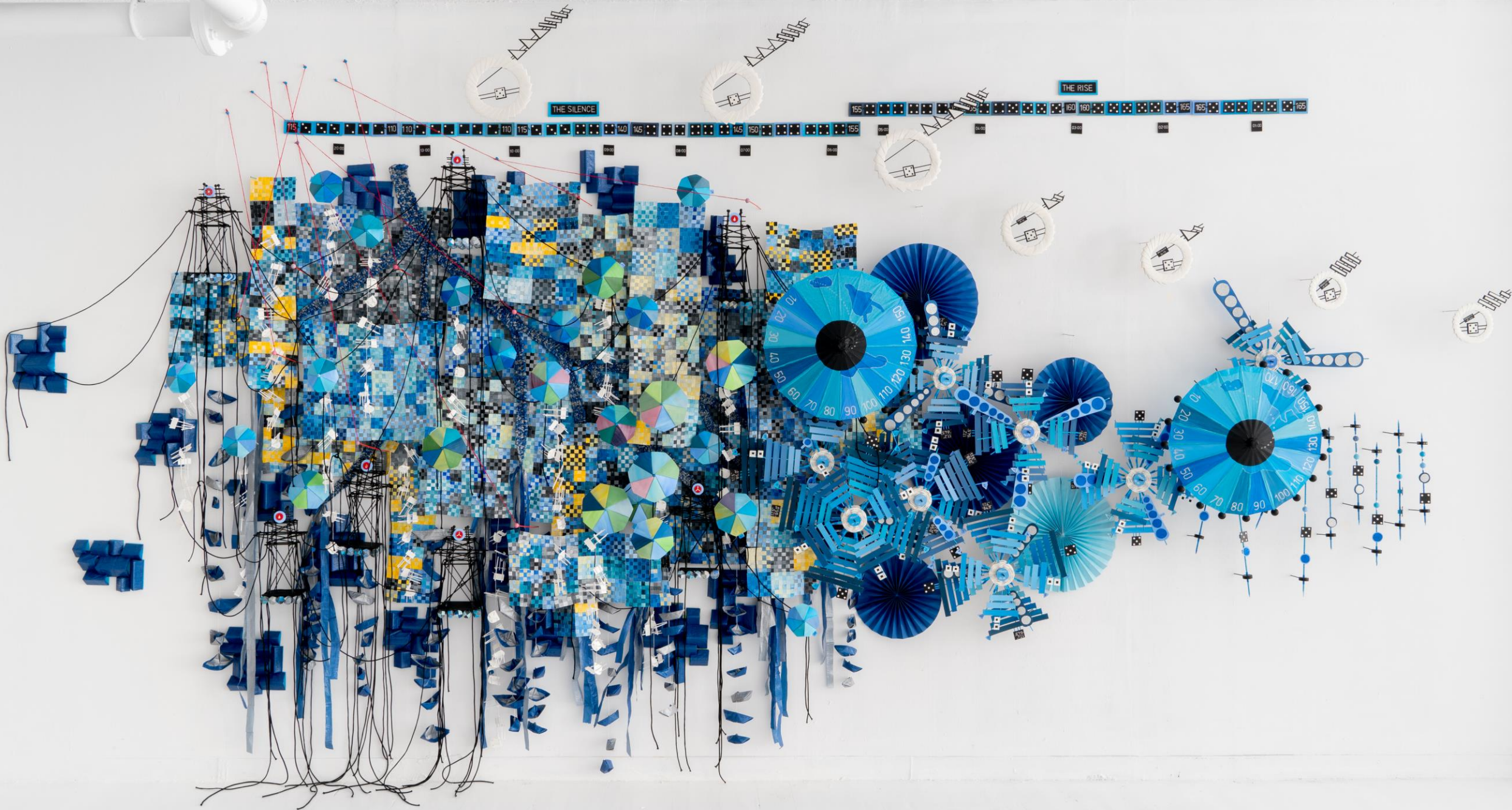
**Skills challenges,
innovative educational
trends and investigated
solutions in the frame
of EO4GEO.**

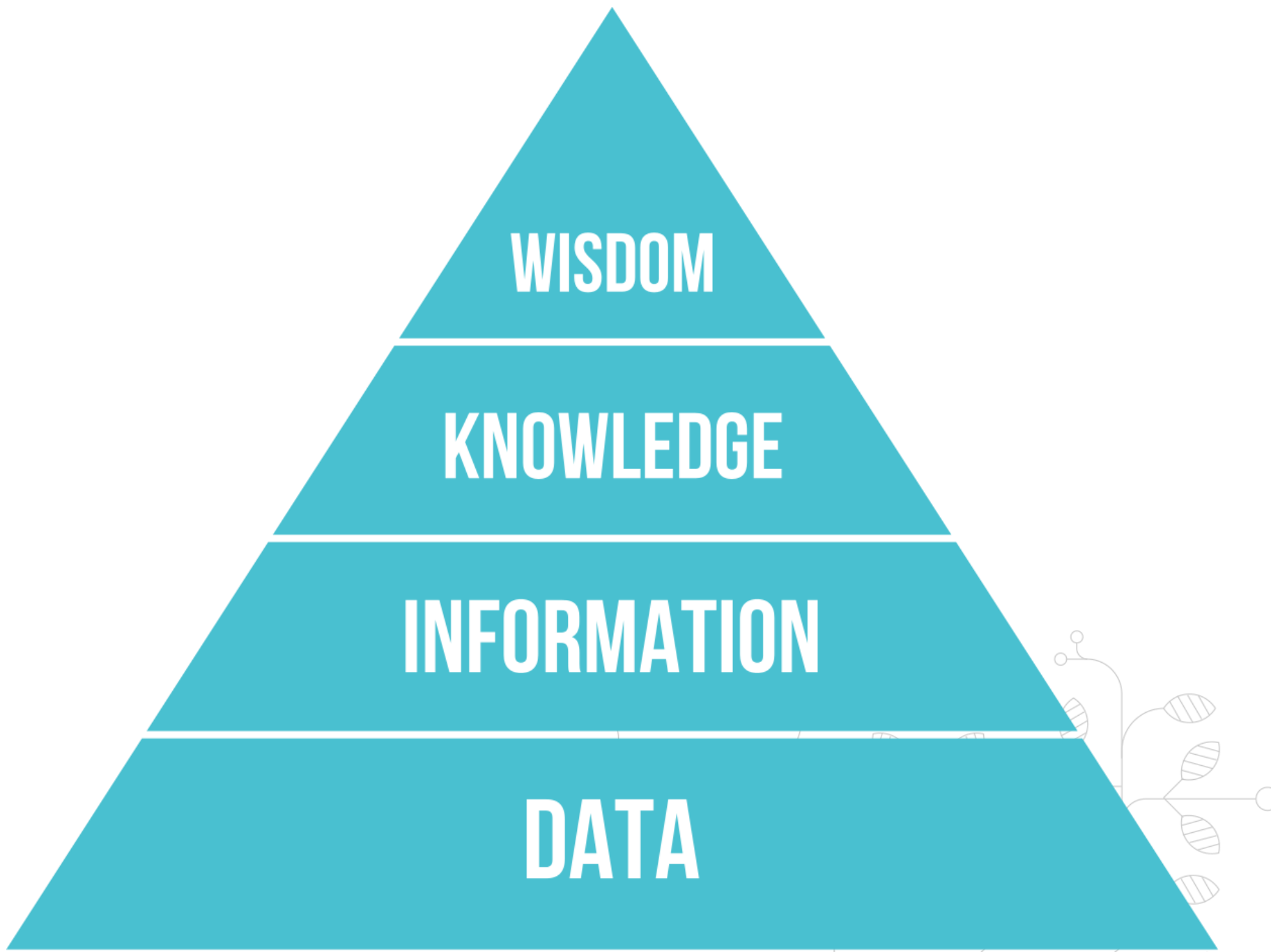
Ilaria d'Auria | Communication / Project Officer

Network of European Regions Using Space Technologies

 **Copernicus**
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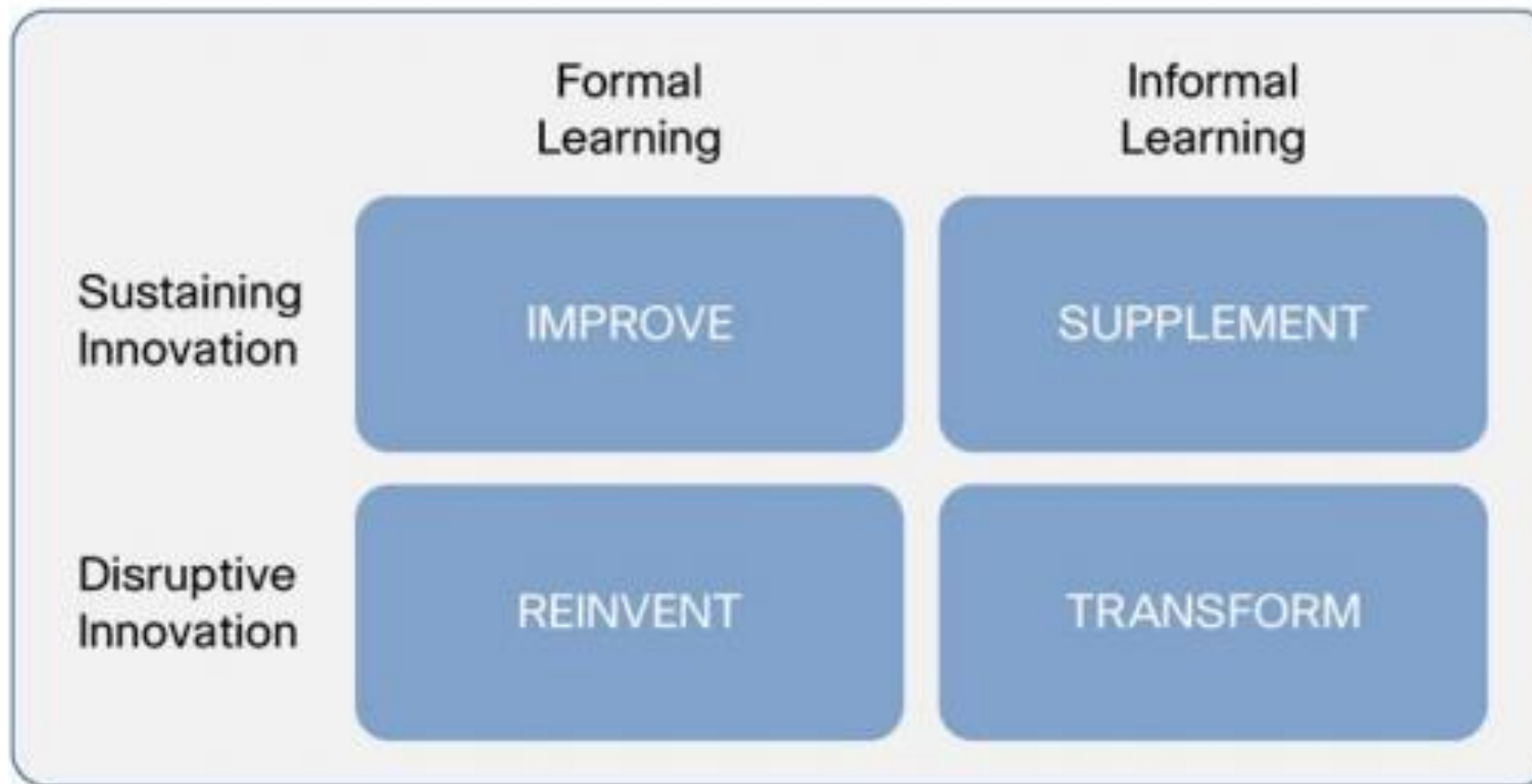
MY WISH

Help me design the future of learning. Help me help the children of the world to tap into their innate sense of wonder and curiosity. Help me build the School in the Cloud where every child can embark on intellectual adventures, learning with information and mentoring online. Help me, wherever you are, to create your own miniature learning environments and share your discoveries.





EDUCATION INNOVATION GRID



Source: [*Learning from the extremes*](#)
(Charles Leadbeater and Annika Wong)



SKILLS [MIS]MATCH



OVEREDUCATION

UNDEREDUCATION

OVERQUALIFICATION

UNDERQUALIFICATION

VERTICAL MISMATCH

SKILLS GAP

CREDENTIALISM

SKILLS SURPLUS

OVERSKILLING

SKILLS SHORTAGE

HORIZONTAL MISMATCH

UNDERSKILLING

SKILLS OBSOLESCENCE

Source: [CEDEFOP](#)



EUROPEAN SKILLS SYSTEM

SKILLS
DEVELOPMENT

SKILLS
ACTIVATION

SKILLS
MATCHING



Source: [CEDEFOP](#)



EO4GEO – SECTORS SKILLS ALLIANCE



GISIG



KU Leuven



PLUS



UJI



GEOF



UPAT



FSU-EO



UT-ITC



UNIBAS



IGiK



Planetek



EPSIT



NOVOGIT



GIB



Spatial Services



CLIMATE-KIC



EARS



ROSA



UNEP-GRID



NEREUS



VITO



CNR-IREA



VRIIES



ISPRA



ALFA



EO4GEO – WHAT TO EXPECT?

SECTOR SKILLS STRATEGY

BODY OF KNOWLEDGE

SERIES OF CURRICULA

TRAINING ACTIONS

Smart Cities

Integrated Applications

Climate change

LONG-TERM ACTION PLAN



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Medium Channel

Twitter





San Francisco in ruins, George Lawrence (1906)



[GEOSPATIAL] DATA, MARKETPLACE, TRENDS



- VARIETY OF GEOSPATIAL TECHNOLOGIES
- DATA ECONOMY AND TECHNOLOGY TRENDS
- USES OF GEOSPATIAL DATA IN NEW SECTORS
- CAREERS IN GEOSPATIAL TECHNOLOGY

Source: *EO4GEO – Trends and challenges in the space / geospatial sector*




[GEOSPATIAL] CAREERS – FUTURE PROFILE[S]?

MODERN DATA SCIENTIST

Data Scientist, the sexiest job of the 21st century, requires a mixture of multidisciplinary skills ranging from an intersection of mathematics, statistics, computer science, communication and business. Finding a data scientist is hard. Finding people who understand who a data scientist is, is equally hard. So here is a little cheat sheet on who the modern data scientist really is.

MATH & STATISTICS

- ☆ Machine learning
- ☆ Statistical modeling
- ☆ Experiment design
- ☆ Bayesian inference
- ☆ Supervised learning: decision trees, random forests, logistic regression
- ☆ Unsupervised learning: clustering, dimensionality reduction
- ☆ Optimization: gradient descent and variants



PROGRAMMING & DATABASE

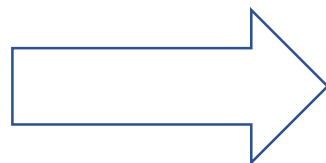
- ☆ Computer science fundamentals
- ☆ Scripting language e.g. Python
- ☆ Statistical computing packages, e.g. R
- ☆ Databases: SQL and NoSQL
- ☆ Relational algebra
- ☆ Parallel databases and parallel query processing
- ☆ MapReduce concepts
- ☆ Hadoop and Hive/Pig
- ☆ Custom reducers
- ☆ Experience with xaaS like AWS

DOMAIN KNOWLEDGE & SOFT SKILLS

- ☆ Passionate about the business
- ☆ Curious about data
- ☆ Influence without authority
- ☆ Hacker mindset
- ☆ Problem solver
- ☆ Strategic, proactive, creative, innovative and collaborative

COMMUNICATION & VISUALIZATION

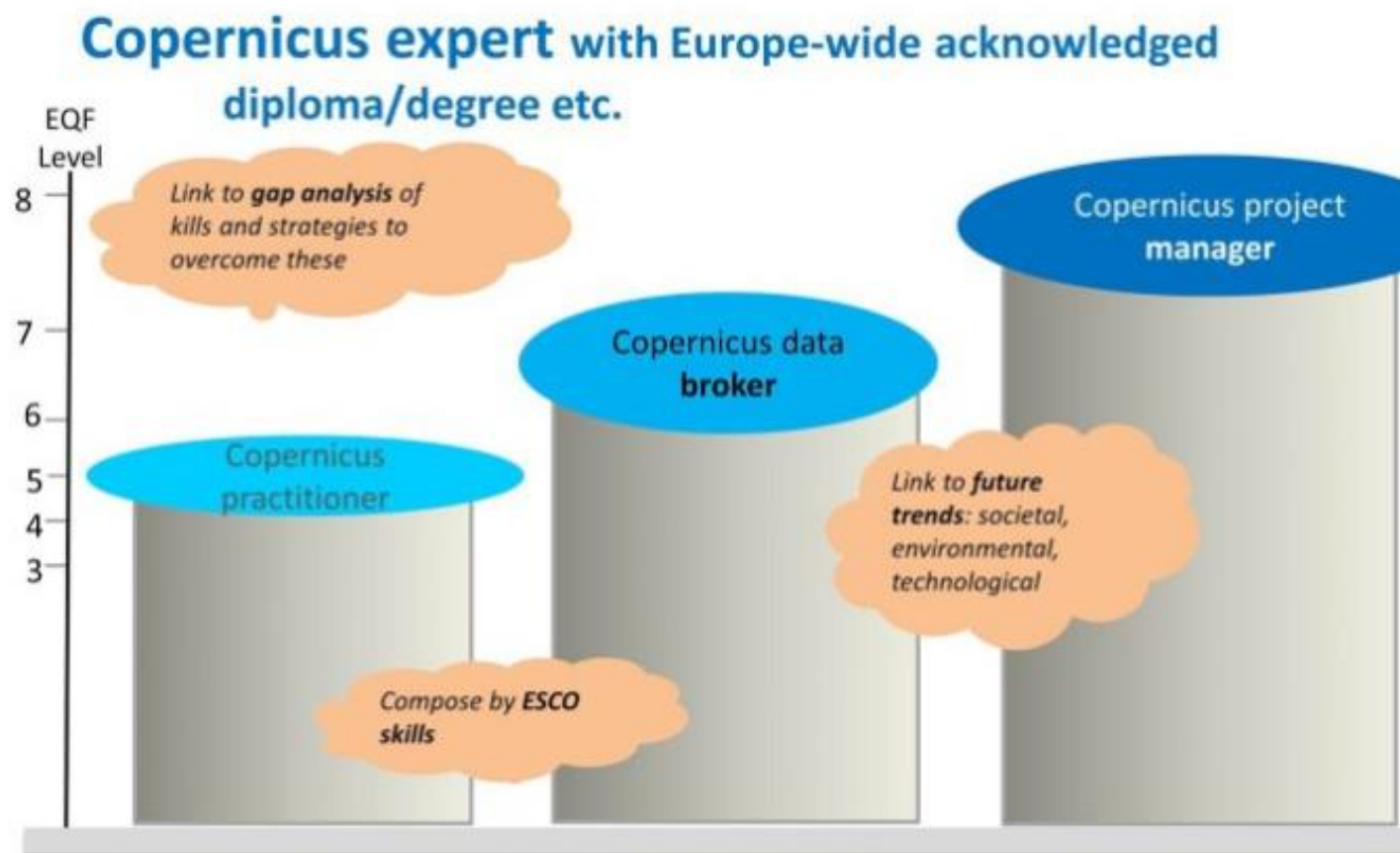
- ☆ Able to engage with senior management
- ☆ Story telling skills
- ☆ Translate data-driven insights into decisions and actions
- ☆ Visual art design
- ☆ R packages like ggplot or lattice
- ☆ Knowledge of any of visualization tools e.g. Flare, D3.js, Tableau



GEOGRAPHER
CARTOGRAPHER
PHYSICAL SCIENTIST
COMPUTER SCIENTIST
GIS ANALYST
DATABASE ADMINISTRATOR
APPLICATIONS SPECIALIST
REMOTE SENSING SCIENTIST
PROJECT MANAGER
EARTH OBSERVATION SCIENTIST
SURVEYOR
PHOTOGRAMMETRIST



[EO4GEO] FIRST INSIGHTS ON DEMAND SURVEY



Source: EO4GEO – [A vision of trans-level Copernicus expert profiles](#) | N. Ferber, P. Jenewein, B. Hofer, S. Lang



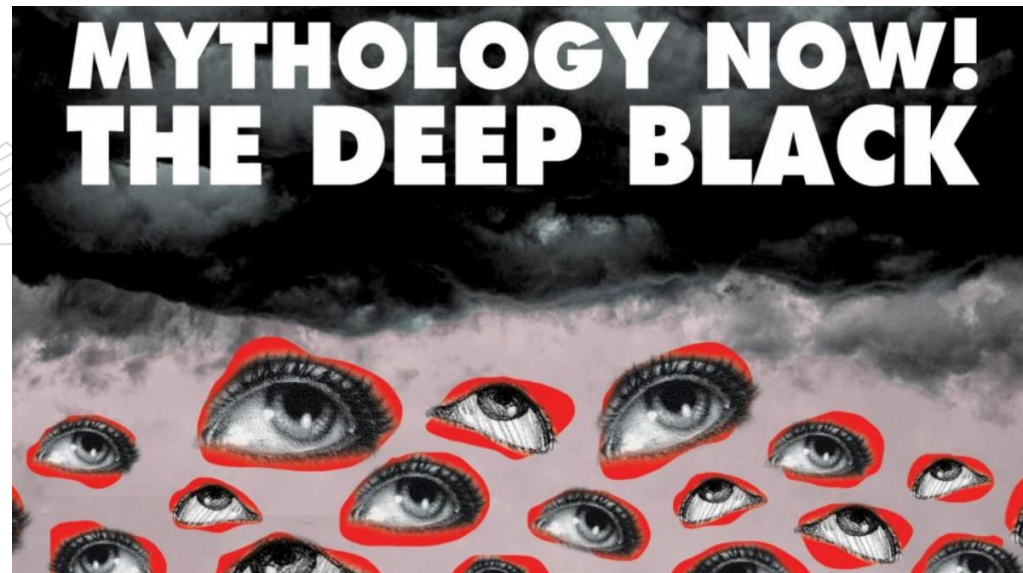
[SPACE] ARTISTIC INTERVENTIONS



25th January 2016, ISU



24th January 2018, ISU



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KEY TAKEAWAYS

- PRESSURES ON EDUCATION - OPPORTUNITIES
- PARADIGM SHIFT: ENGAGING WITH LEARNING
- MAPPING INNOVATION IN EDUCATION: LEARNING ECOSYSTEM
- ARTISTIC INTERVENTIONS FOR INNOVATION
- EO4GEO – JOIN THE SECTOR SKILLS ALLIANCE!



Thank you!

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#EO4GEO



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