

East and West, Science and Society – Revisiting the Interactive Mediation of Earth Observation Data Literacy with EO College

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Outline

- EO College – addressing all educational levels
- Available material
- Challenges and solutions
- Conclusions and Outlook

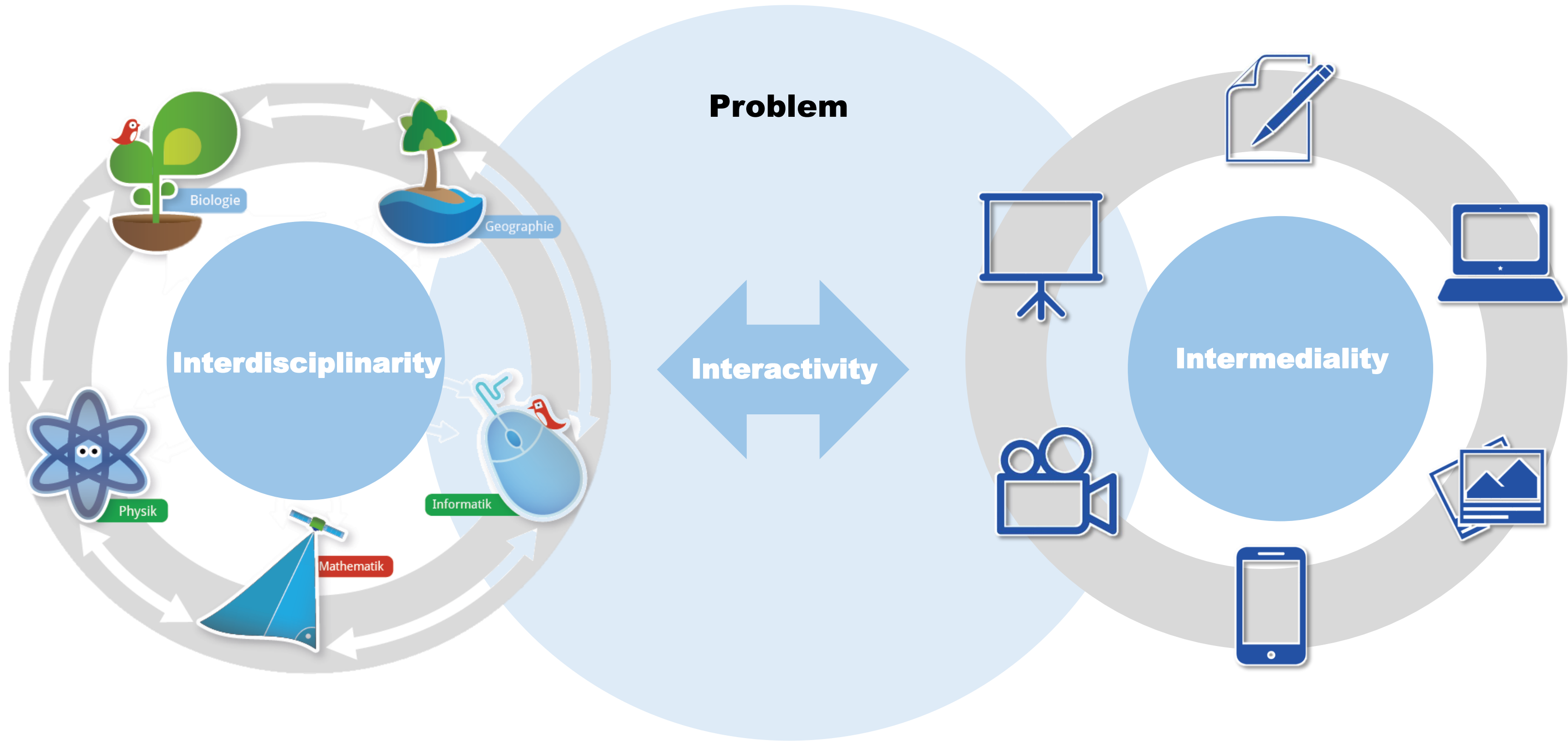
EO College / FIS – Educational resources on two levels

University / Advanced level

Schools / Entry level

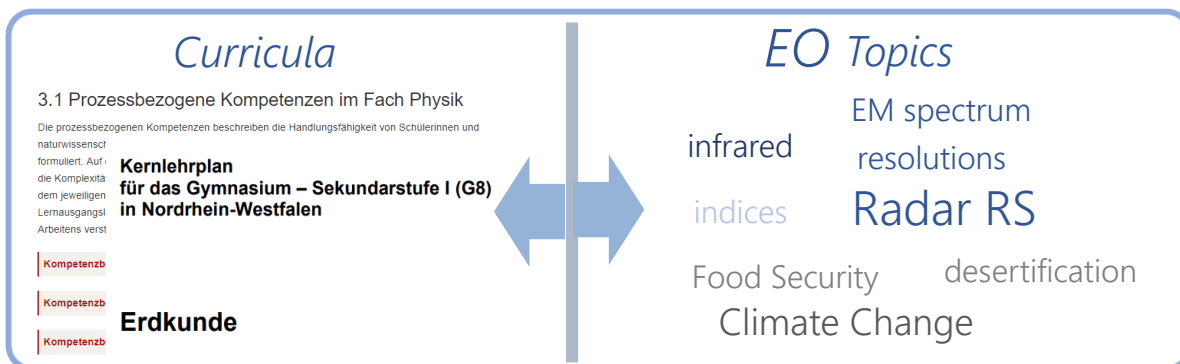
The image displays two side-by-side screenshots of the EO College website, connected by a large white double-headed arrow. The left screenshot shows the 'University / Advanced level' interface, featuring a video player for 'Beyond the Visible: An Introduction to Hyperspectral Remote Sensing'. The right screenshot shows the 'Schools / Entry level' interface, featuring a 'Herzlich Willkommen...' message and the 'Fernerkundung in Schulen' (FIS) logo. Below the screenshots, the text 'unified experience' is written in a bold, white font.

Schools / Entry level



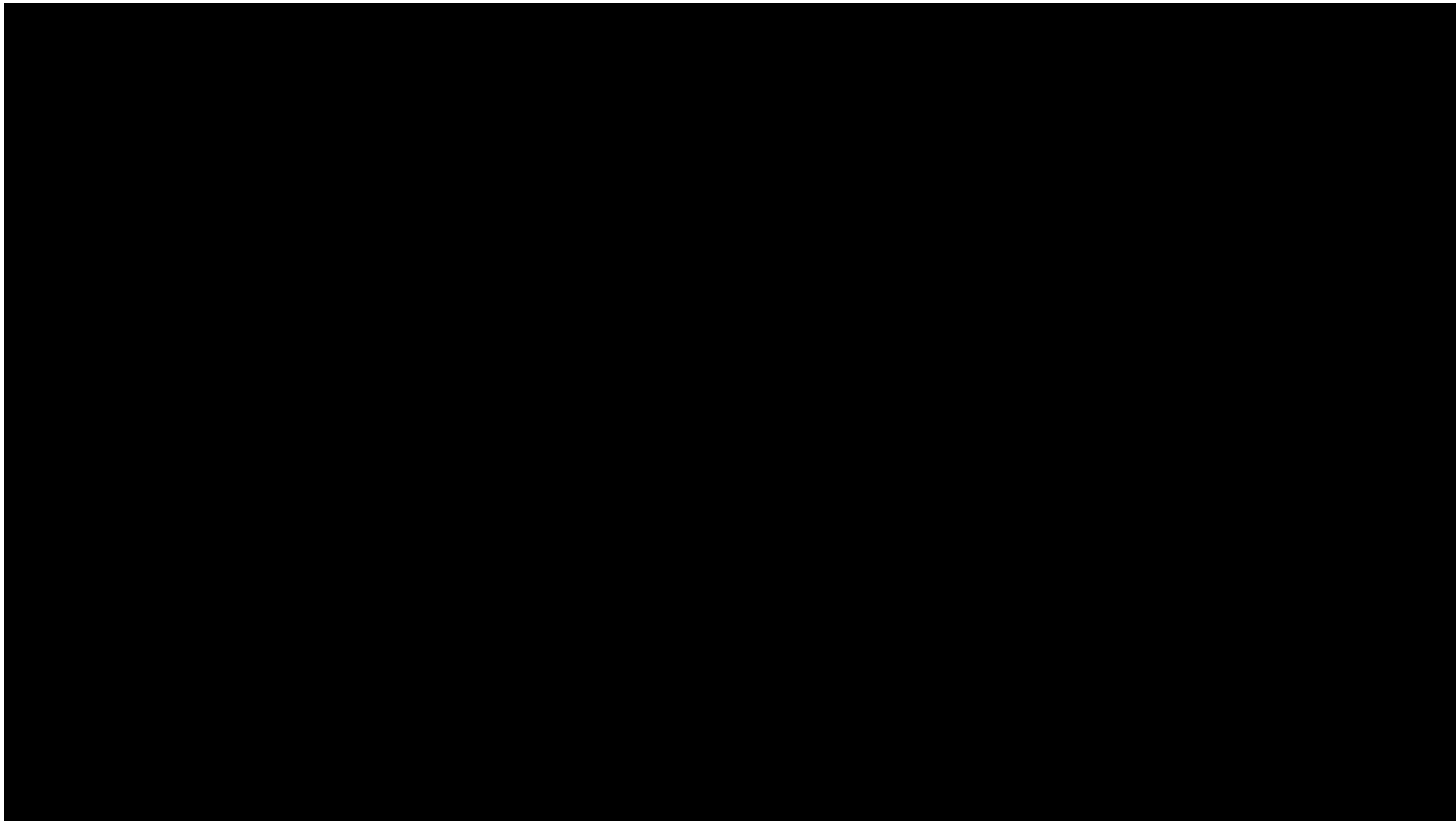
Schools / Entry level - Explainer Videos on the Basics of EO

Research

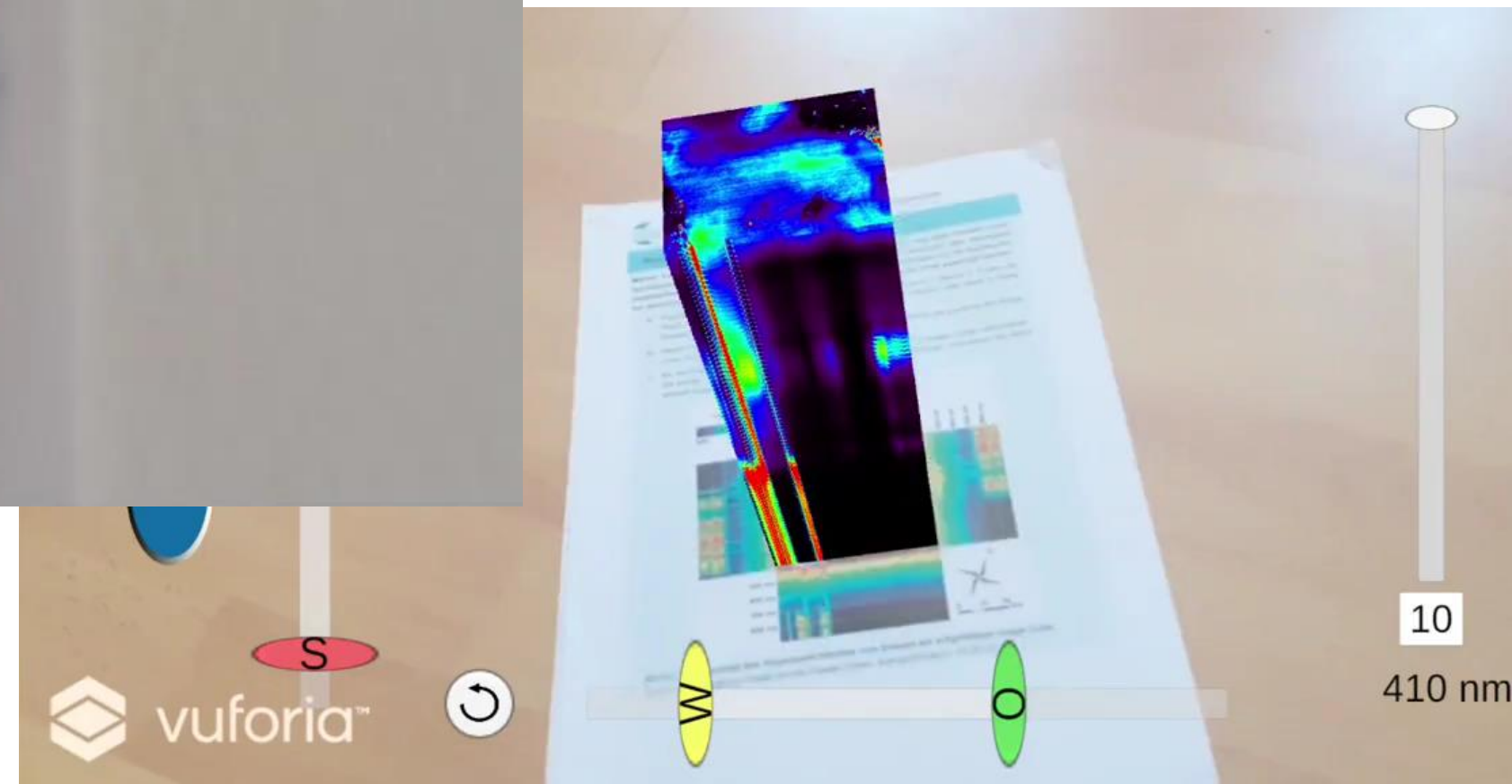
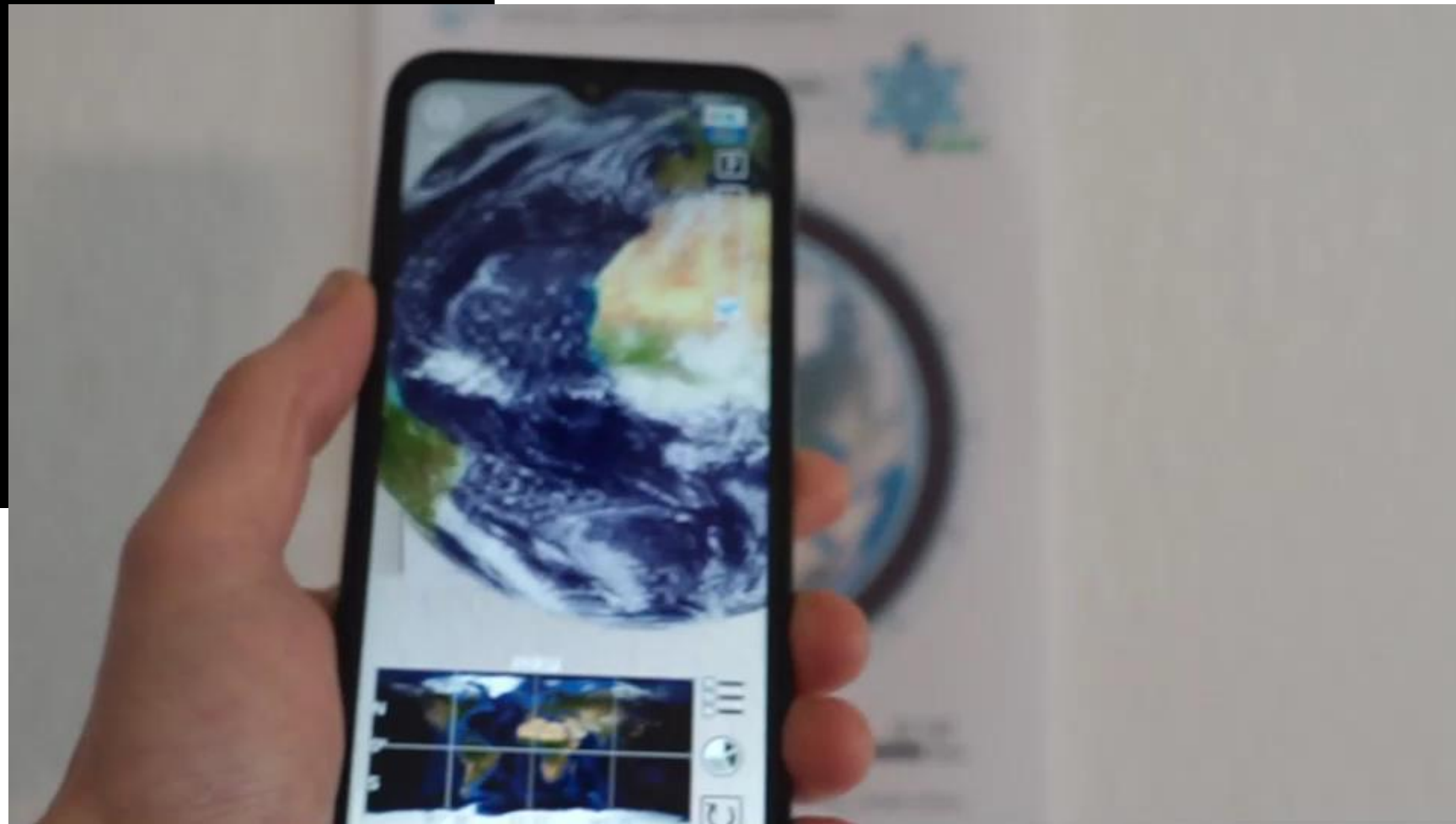
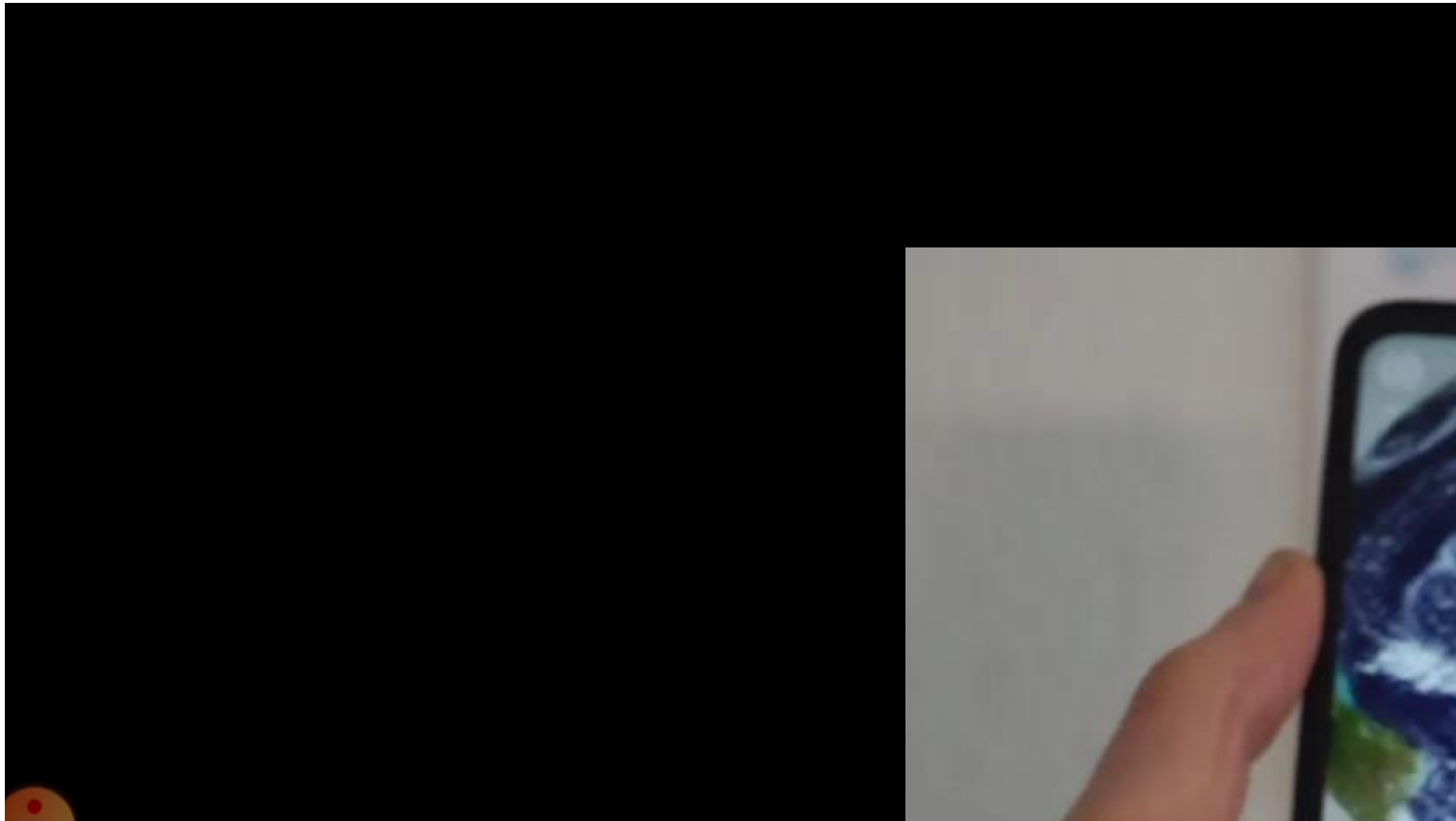


Texting and Storyboarding

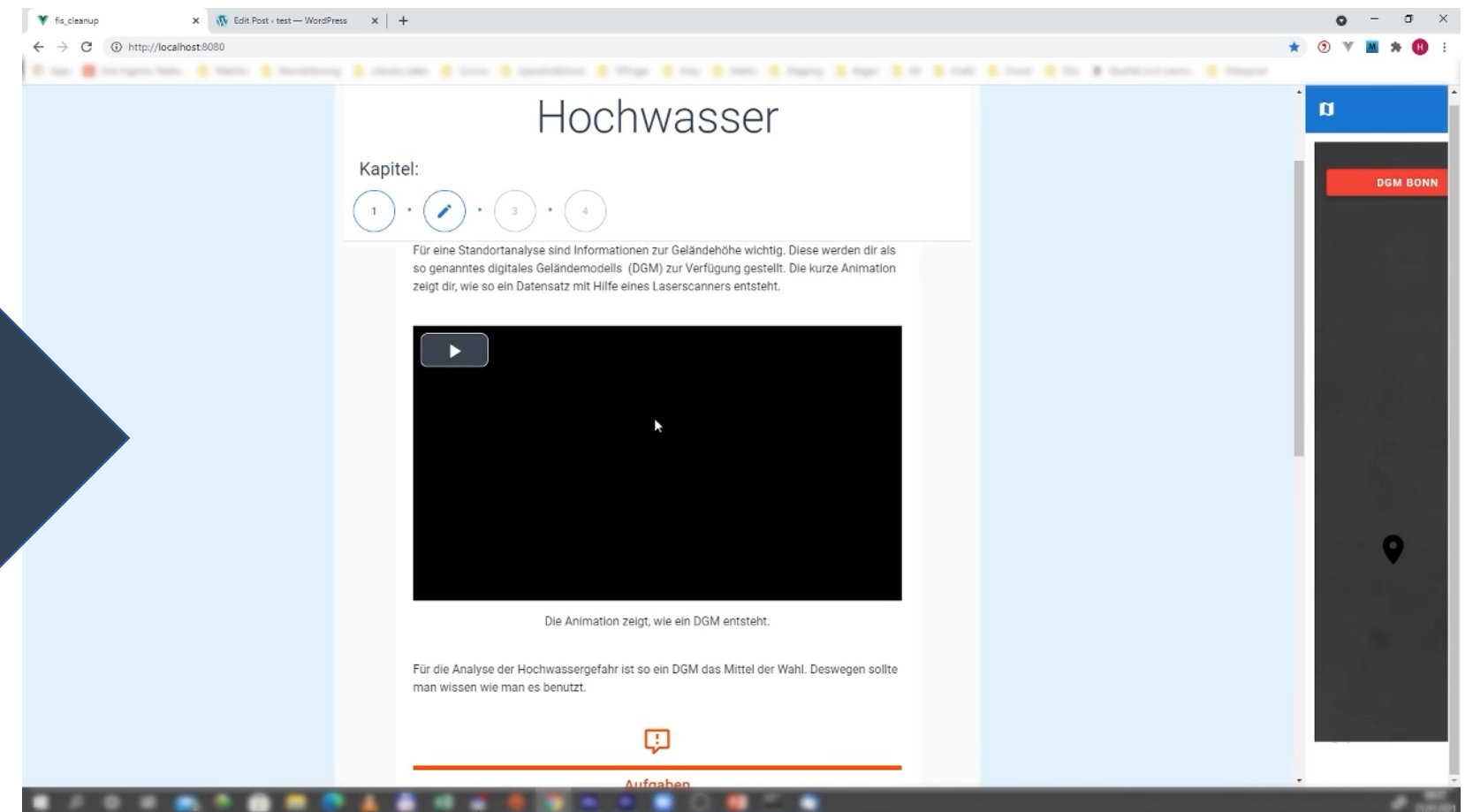
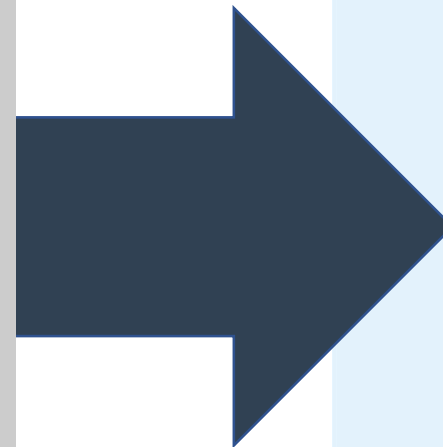
Production



Schools / Entry level – Augmented Reality Apps



Schools / Entry level – Interactive Teaching Material



University / Advanced level – MOOCs offered on EO-College



UNDER CONSTRUCTION

Land in Focus
Basics of Remote Sensing

6 Lessons

Land in Focus – Basics of Remote Sensing

START COURSE

Land in Focus
Agriculture & Food

3 Lessons

Land in Focus – Agriculture & Food

START COURSE

Land in Focus
Hazards & Disasters

3 Lessons

Land in Focus – Hazards & Disasters

START COURSE

Land in Focus
People, Land, Sustainability

4 Lessons

Land in Focus – People, Land, Sustainability

START COURSE

Land in Focus
Urban Spaces

2 Lessons

Land in Focus – Urban Spaces

START COURSE

Land in Focus
Dry Ecosystems

2 Lessons

Land in Focus – Dry Ecosystems

START COURSE

Land in Focus
Wet Ecosystems

2 Lessons

Land in Focus – Wet Ecosystems

START COURSE

Land in Focus
Forest Ecosystems

2 Lessons

Land in Focus – Forest Ecosystems

University / Advanced level – MOOCs offered on EO-College

ECHOES IN SPACE
Introduction to Radar Remote Sensing

5 Lessons

Echoes in space
Introduction to Radar Remote Sensing.

PRINCIPIOS BÁSICOS
de la Retrodispersión Radar

eo college

4 Lessons

Principios básicos de la Retrodispersión Radar

GRUNDLAGEN
der Radarrückstreuung

eo college

4 Lessons

Grundlagen der Radarrückstreuung

PRINCIPES FONDAMENTAUX
de la rétrodiffusion radar

eo college

4 Lessons

Principes fondamentaux de la rétrodiffusion radar

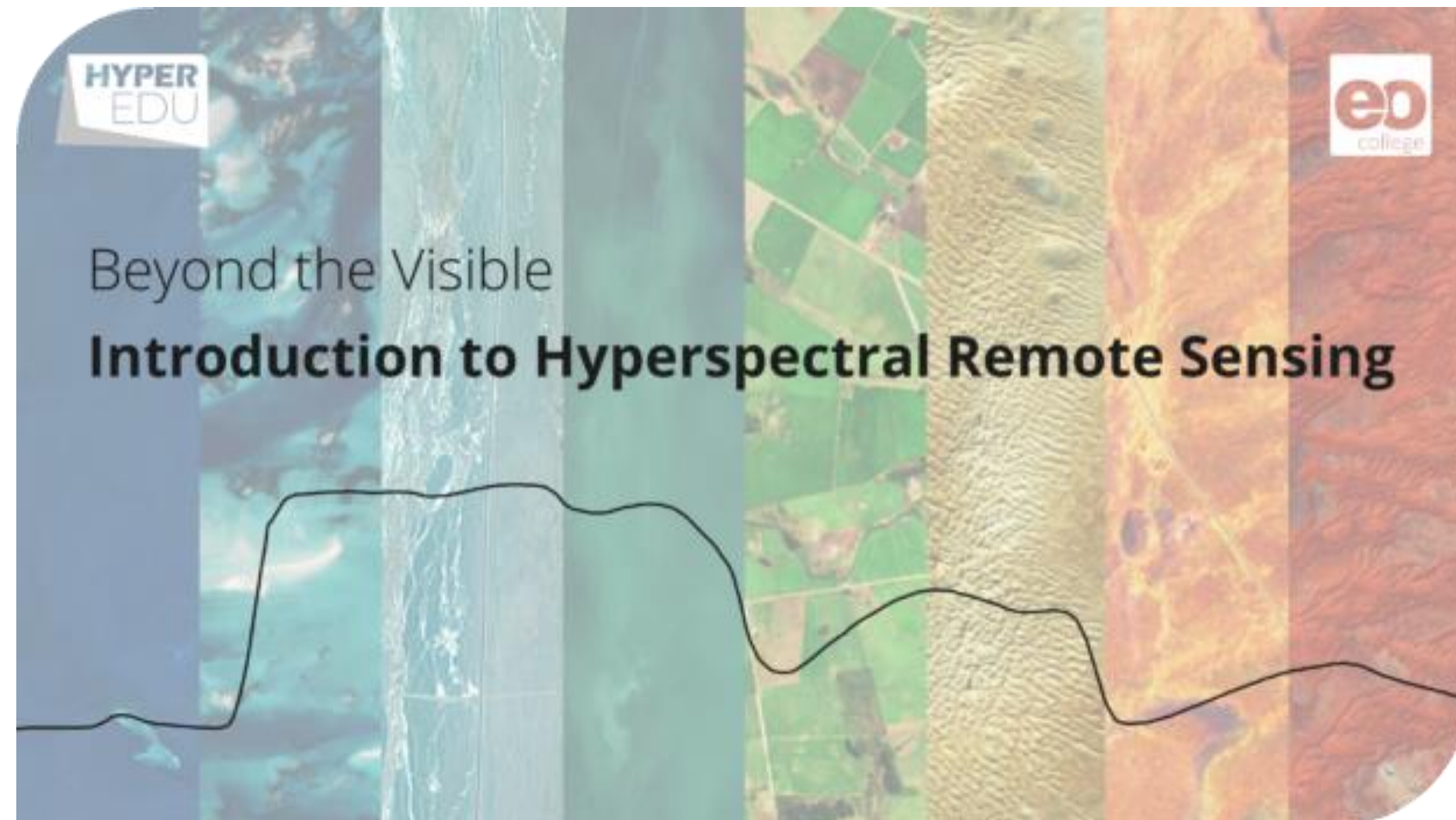
BASIC PRINCIPLES
of Radar Backscatter

eo college

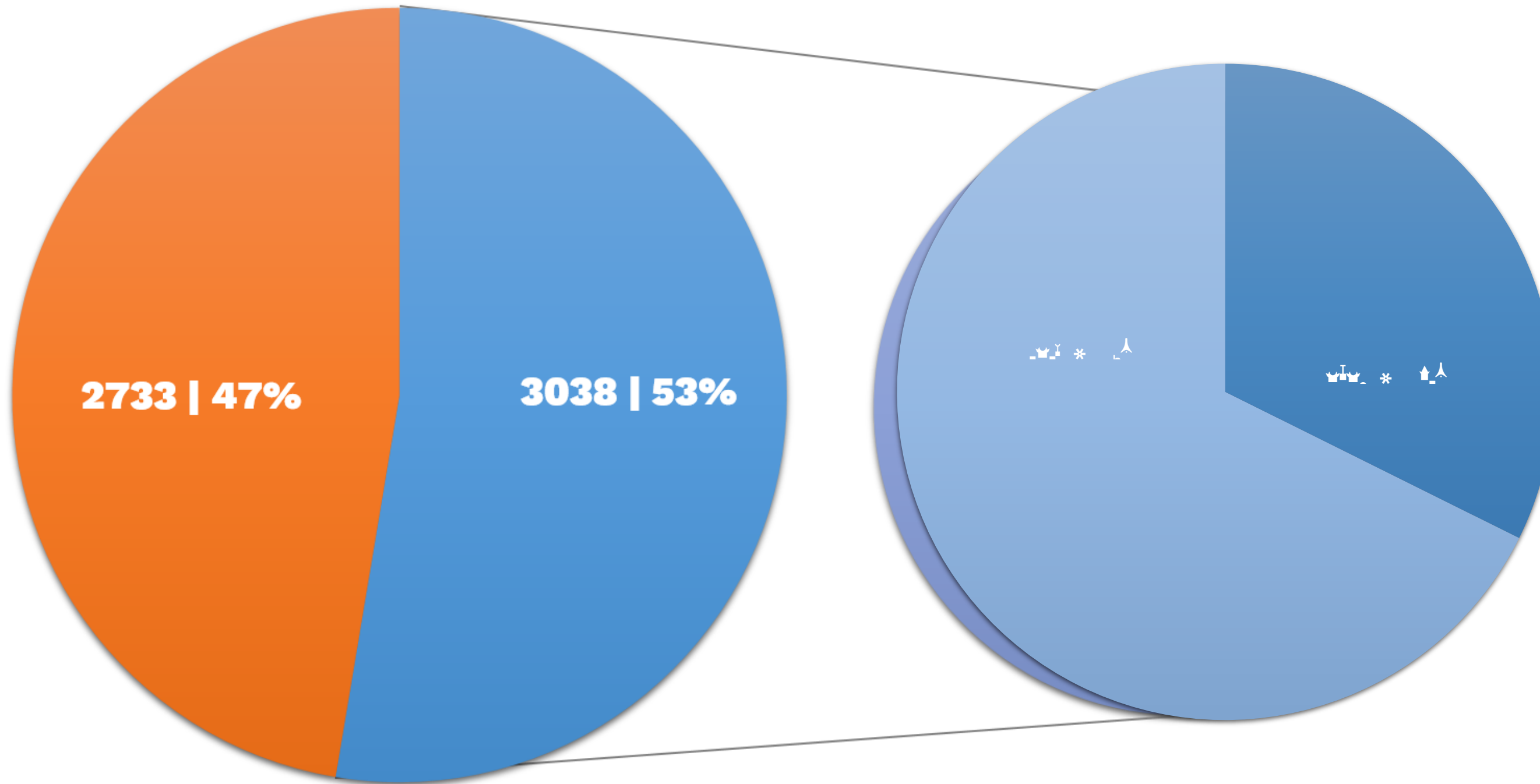
4 Lessons

Basic Principles of Radar Backscatter

University / Advanced level – MOOCs offered on EO-College

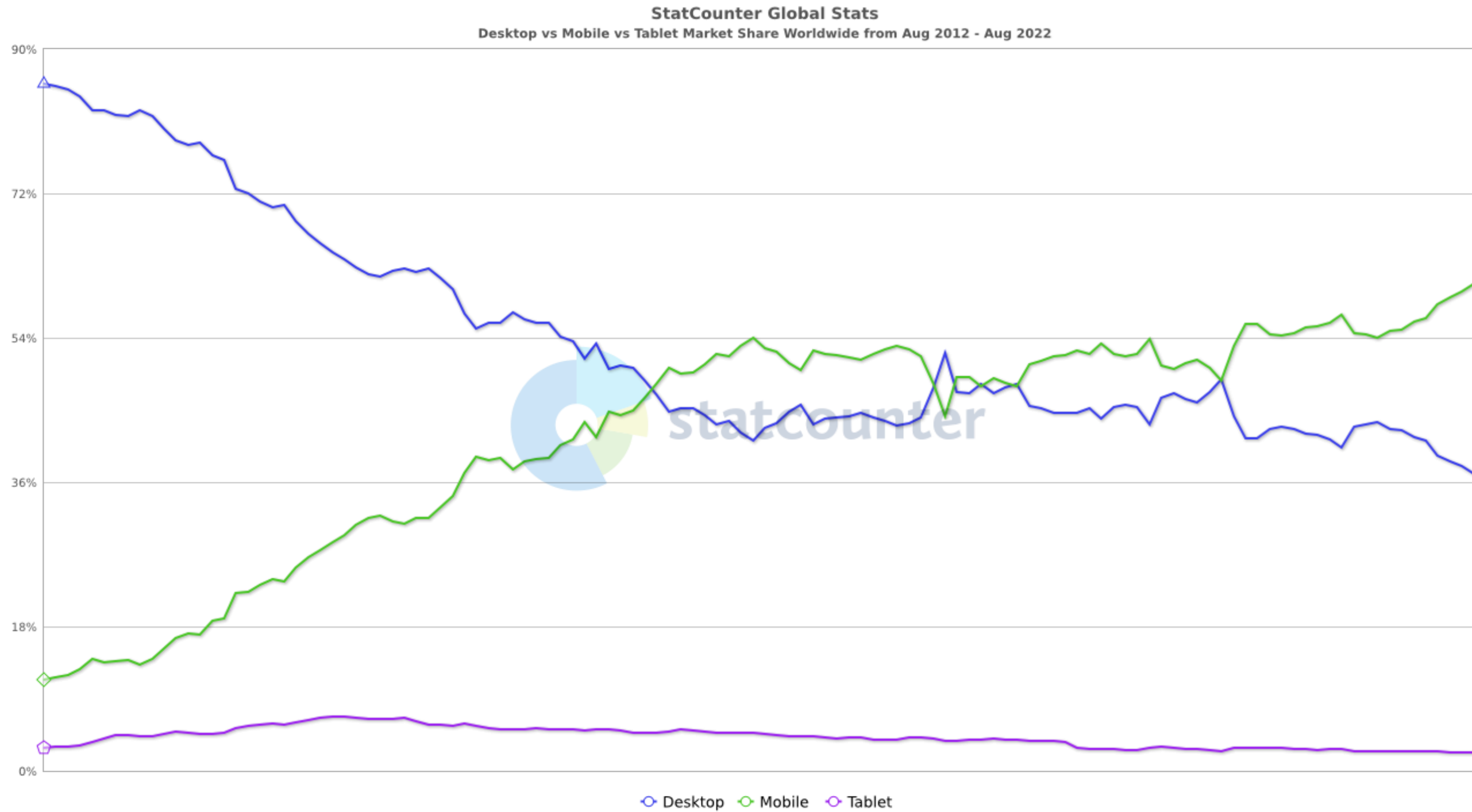


Challenges

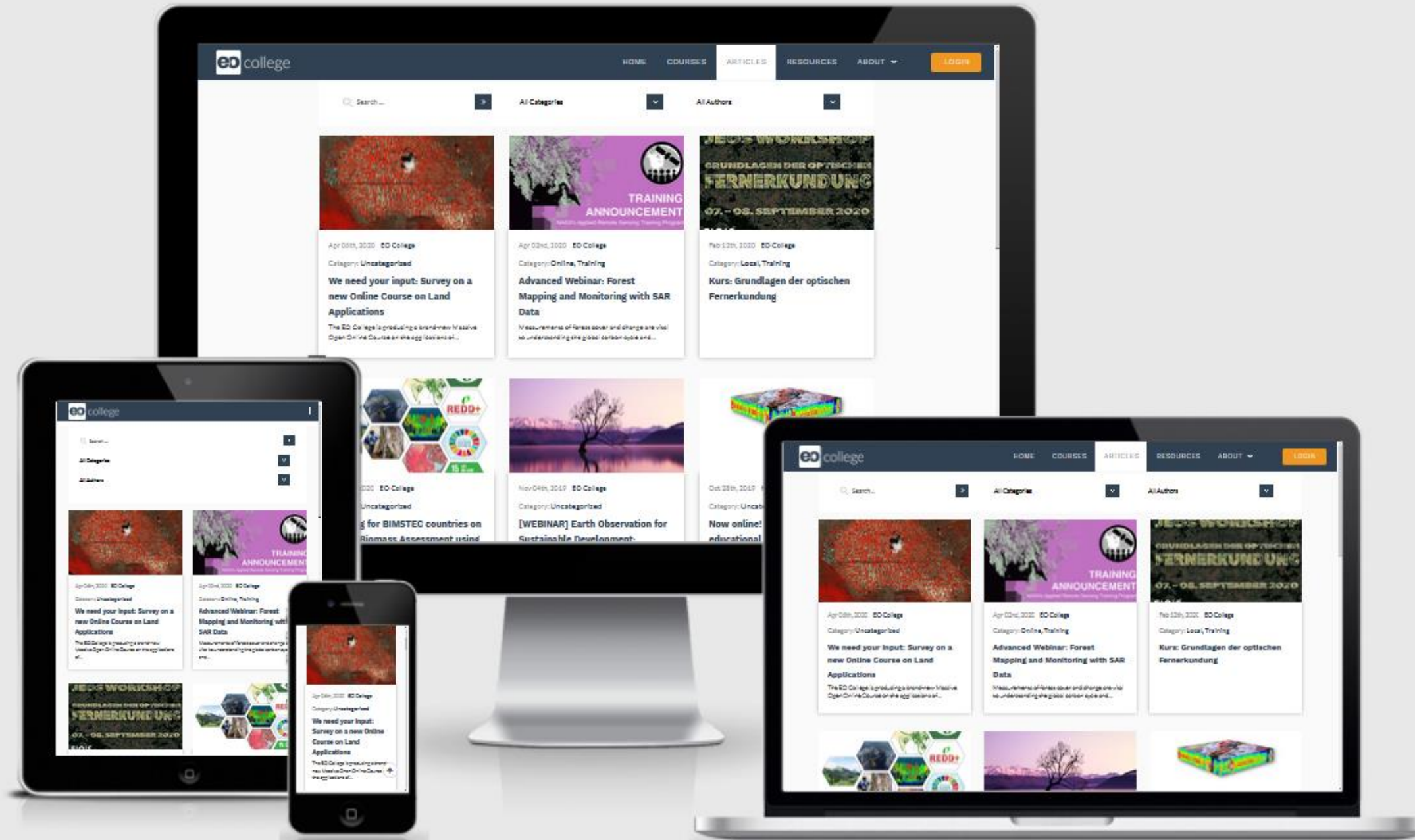


Registered Users	5809
Started Course	3147
Not started Course	2662
Finished Course	1018
Not finished course	2129

Solutions - Accessibility



Solutions - Accessibility



Solutions - creating concise engaging content



Length (min)

Solutions – reduce data intensity

Provision of digestible data packages

- Using subsets
- Provision of data prior to the exercise to keep flow

The screenshot shows the 'eo college' interface. On the left is a sidebar with a course progress list:

- 100% Complete (Last activity on April 19, 2021)
- History: 11 Topics | 5 Quizzes ✓
- Geometry: 7 Topics | 4 Quizzes ✓
- Land: 10 Topics | 4 Quizzes ✓
 - Quiz: Repetition-Lesson I+II ✓
 - Repetition Lesson I+II ✓
 - Introduction to Interferometry ✓
 - Introduction to Polarimetry ✓
 - Introduction to Time Series ✓
 - Forest-applications ✓
 - Forest-Tutorial** ✓
 - forest ✓
 - Urban-applications ✓
 - Urban-Tutorial ✓
 - urban ✓
 - Agriculture applications ✓
 - Agriculture-Tutorial ✓
 - Final Quiz-Week-3 ✓
- Water: 8 Topics | 3 Quizzes ✓
- Hazard: 10 Topics | 2 Quizzes ✓
- Quizzes:
 - Final-Test ✓

The main content area displays a tutorial titled 'Forest-Tutorial' with a background image of a forest path. The text explains that the tutorial teaches how to map forest areas using ALOS PALSAR data and SNAP software. It mentions that according to WWF, over 17% of forest has been lost in the Amazon in the past 50 years. The tutorial involves deriving a forest/non-forest map using two time steps and two radar polarisations (HH/HV).

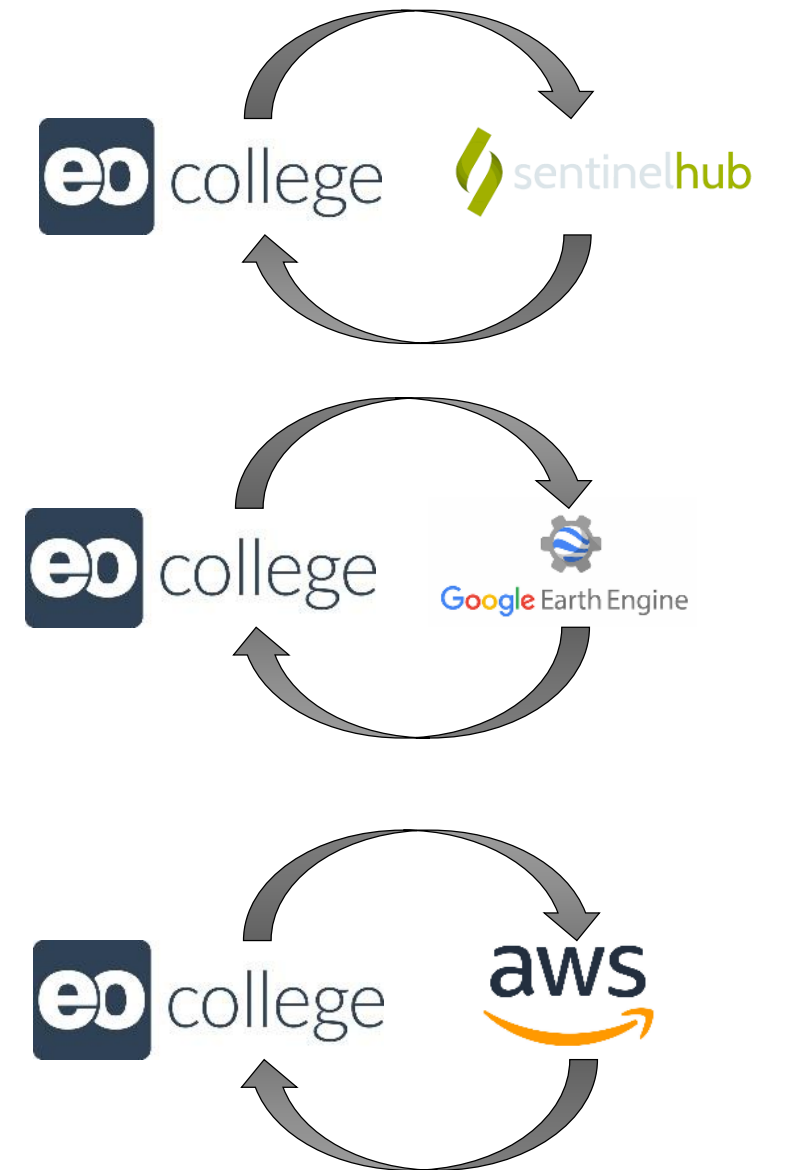
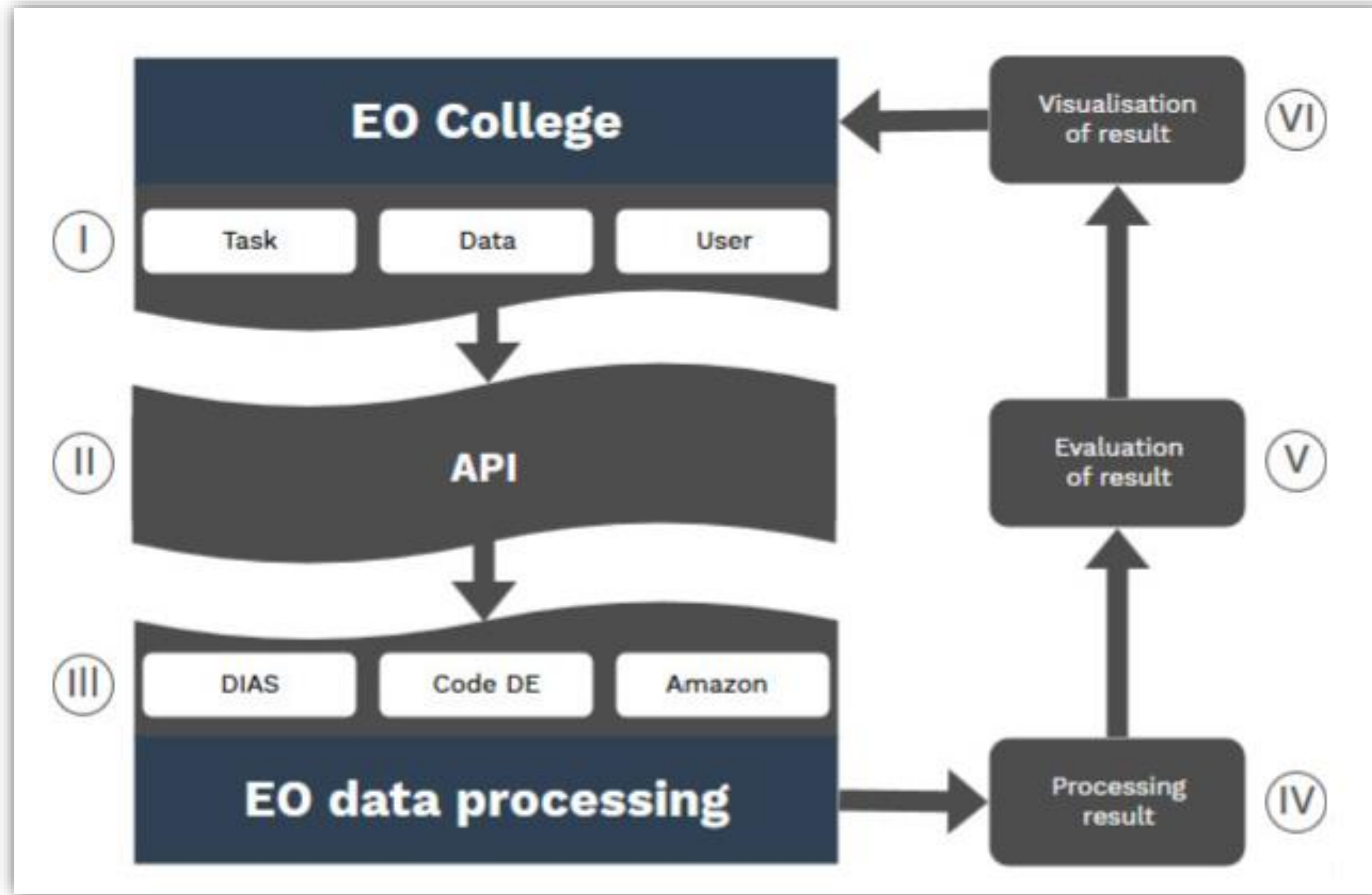
Two sections are highlighted:

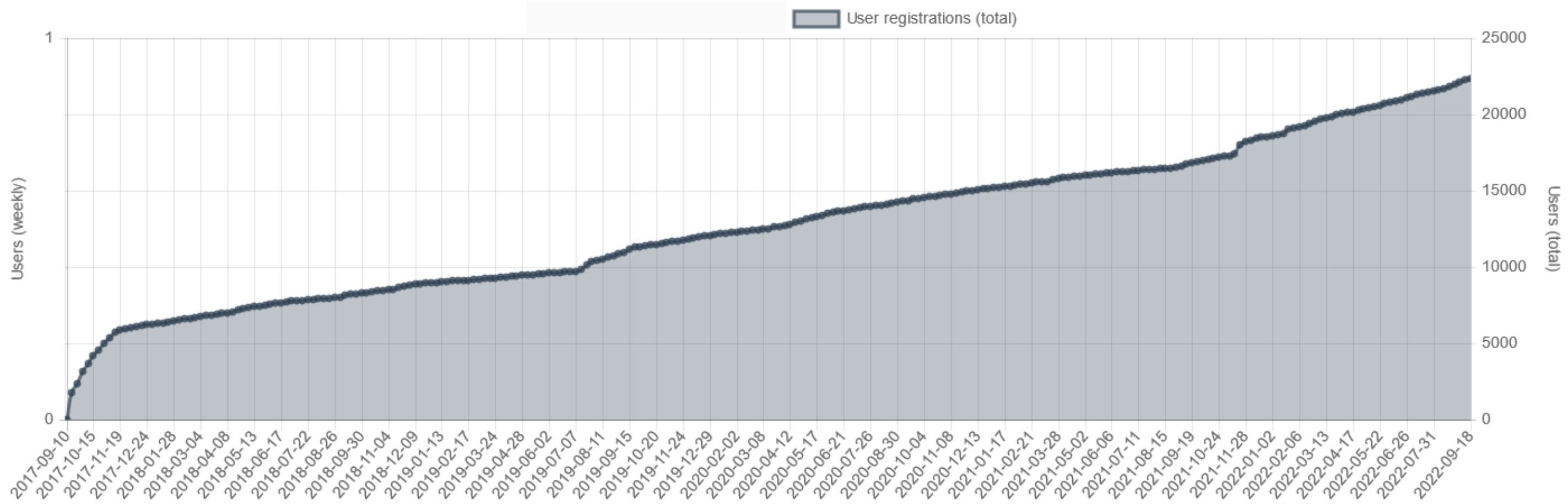
- Preparation:** In order to do this tutorial, you have to make sure you've installed SNAP. If you did not, please go back to lesson 2 and follow the instructions in the topic [Introduction to SNAP](#).
- Get the data:** For this tutorial you can download a prepared data set here. The data is packed in one ZIP archive and already subsetted for you.

There are two buttons: 'DOWNLOAD ALOS PALSAR DATA' and 'USE SUBSET'. The 'USE SUBSET' button is highlighted with a red box. Below it, text states: 'In case you have a slow internet connection, you can alternatively download a subset of the above mentioned data here.'

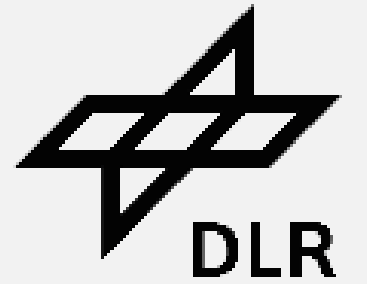
At the bottom, it says 'Data provided by:' followed by the JAXA logo and a link: 'You can obtain global ALOS PALSAR mosaics and global forest/non-forest maps here. (After

Solutions – connectivity





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Conclusion & Outlook

- EO-College and FIS (Remote Sensing in Schools) are beeing „merged“.
- As a result educational resources for different education levels are going to be available from one source while respecting both unique approaches.
- As more material is produced challenges are adressed and solutions tested.

Have fun learning & teaching EO!

 eo-college.org

 ignite-education.io

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