



## F.A.I.R. information cube

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Learn more here:





## Overview

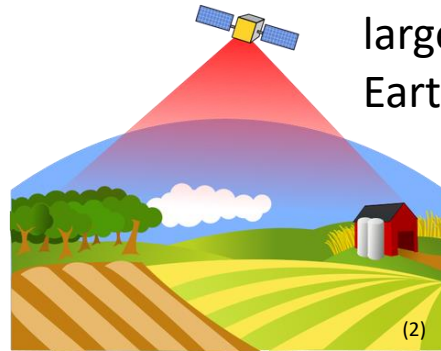
- Motivation
- FAIRiCUBE Objectives
- Use cases

«Deliver the power of **data cubes and ML** to decision/policy makers and data scientists»

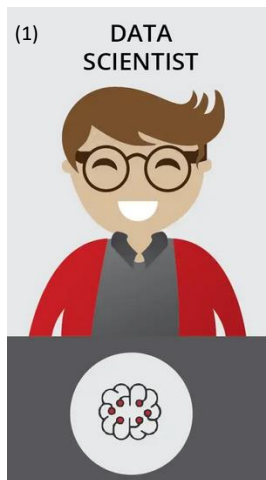




## Motivation



large regular, gridded  
Earth Observation  
(EO) data

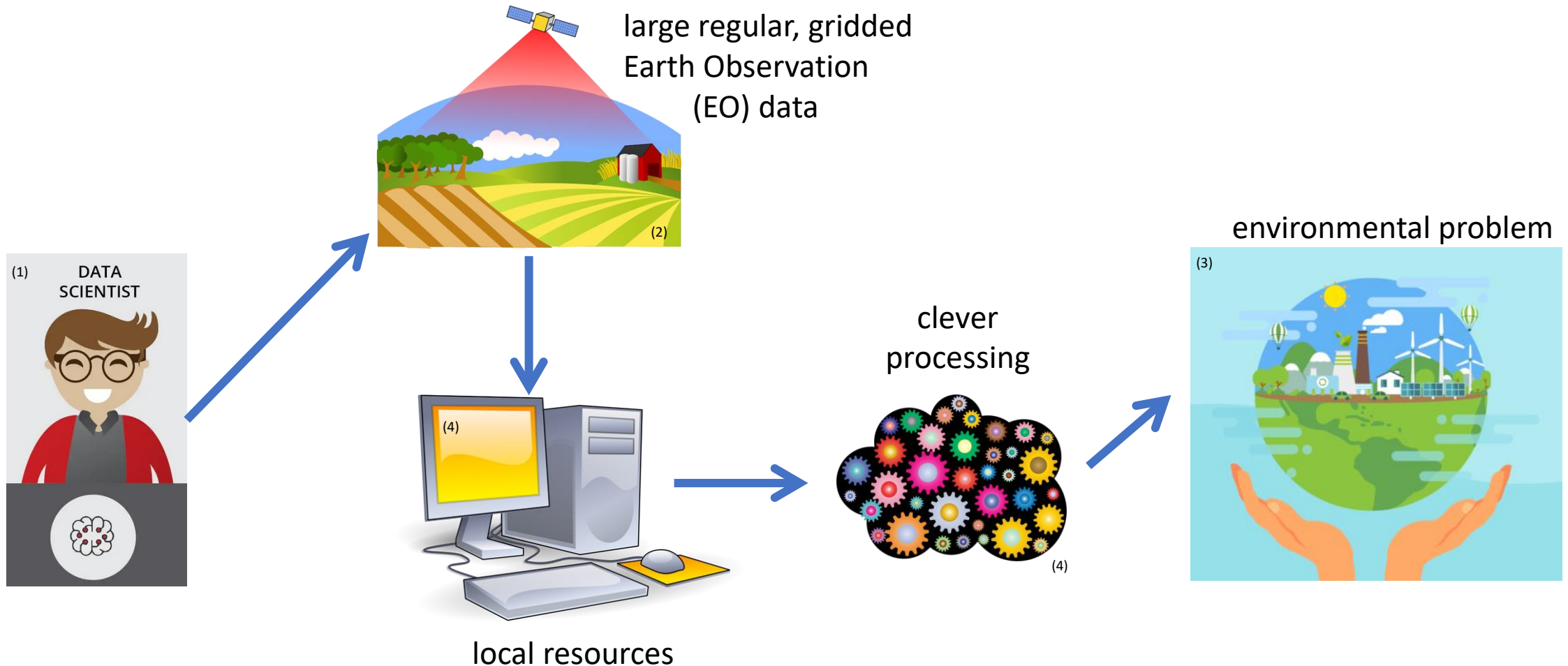


environmental problem





## Motivation – Ideal case

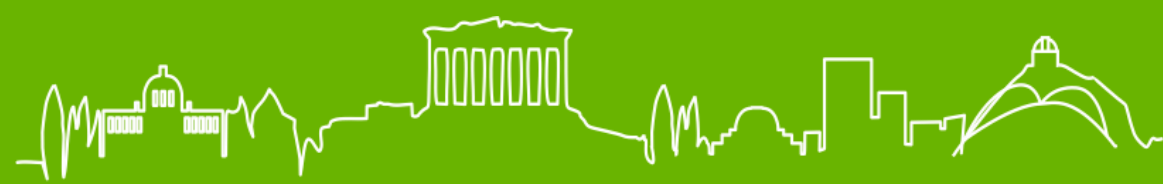


<sup>1</sup> [medium.com/dataseries/what-does-a-data-scientist-do-a6553dc720f](https://medium.com/dataseries/what-does-a-data-scientist-do-a6553dc720f)

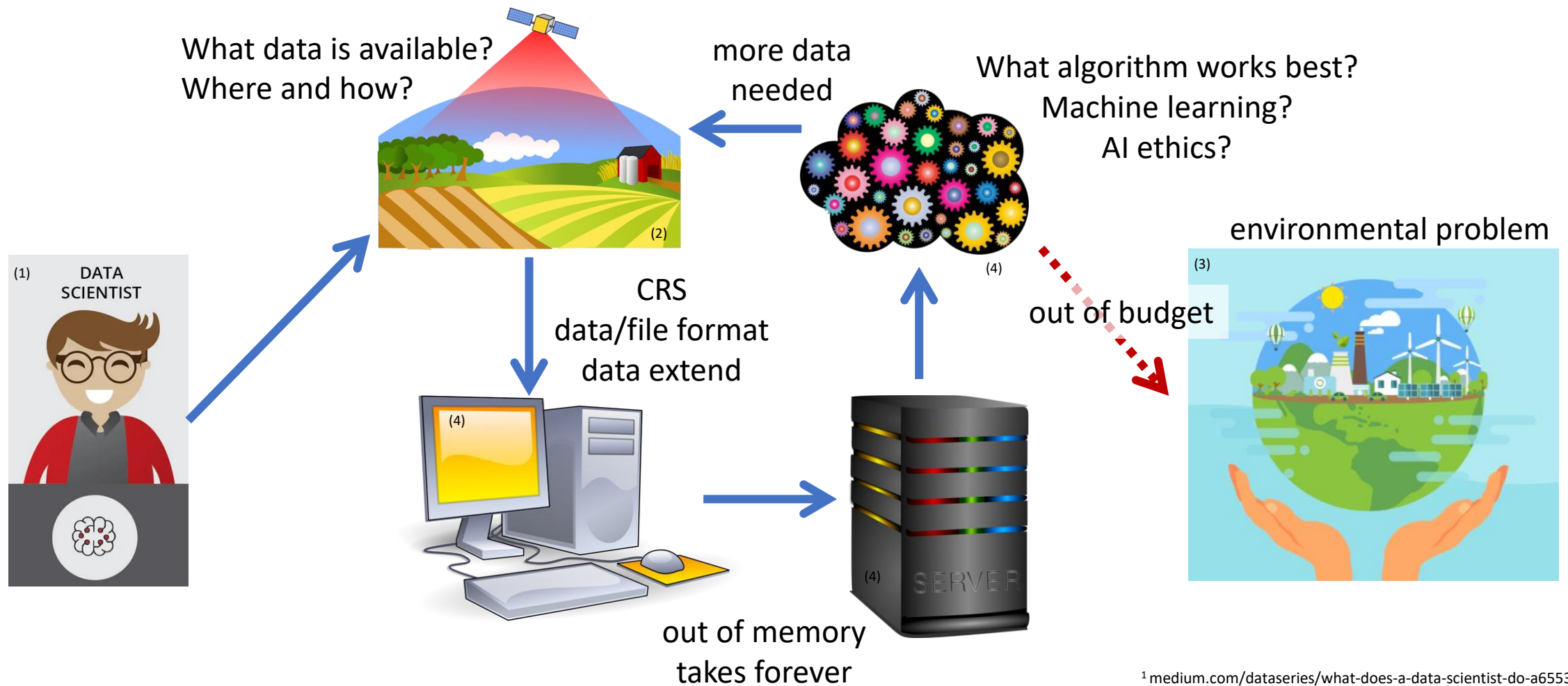
<sup>2</sup> [publicdomainvectors.org/en/free-clipart/Satellite-imaging/82710.html](https://publicdomainvectors.org/en/free-clipart/Satellite-imaging/82710.html)

<sup>3</sup> [www.mindler.com/blog/careers-to-save-the-environment/](https://www.mindler.com/blog/careers-to-save-the-environment/)

<sup>4</sup> [www.rawpixel.com](https://www.rawpixel.com)



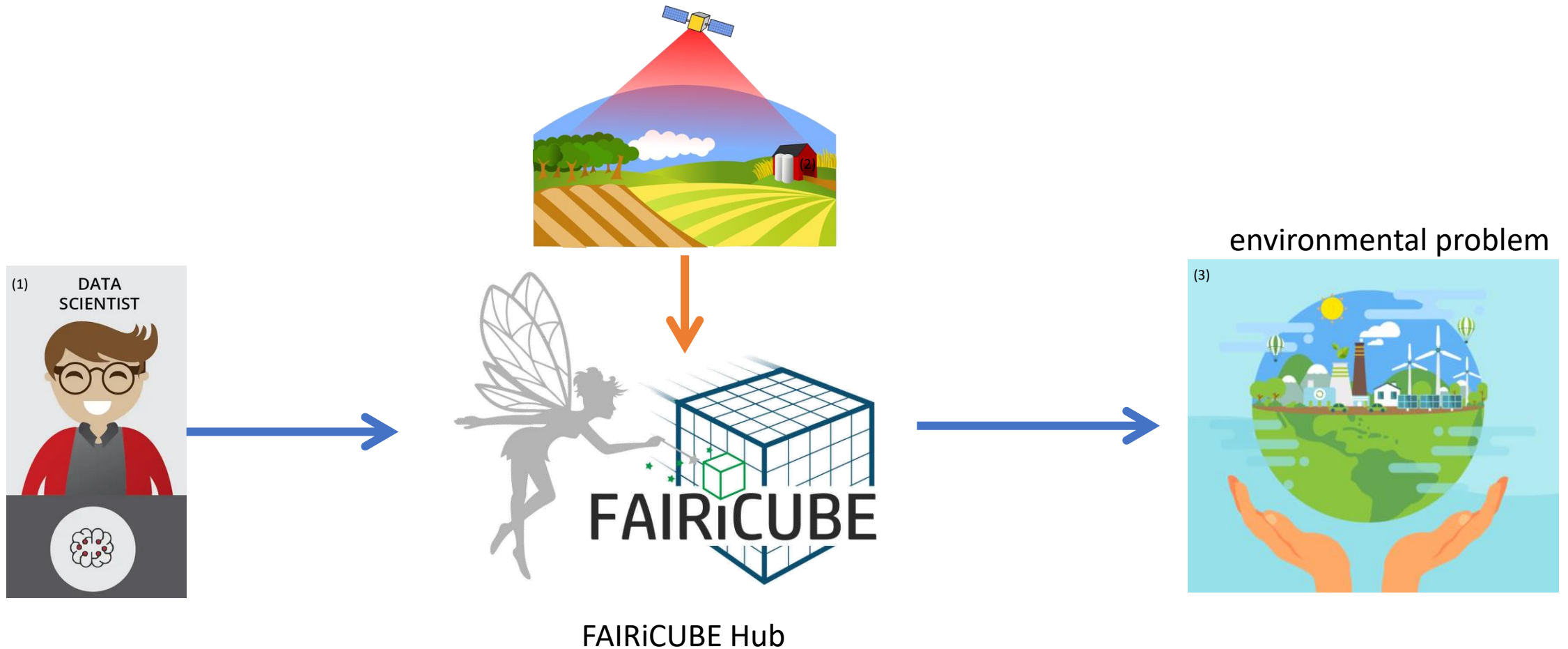
## Motivation – Real case



<sup>1</sup> [medium.com/dataseries/what-does-a-data-scientist-do-a6553dc720f](https://medium.com/dataseries/what-does-a-data-scientist-do-a6553dc720f)  
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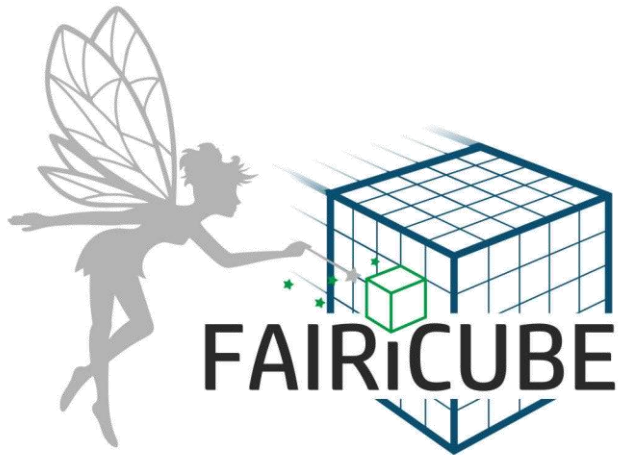


## Motivation – FAIRiCUBE case





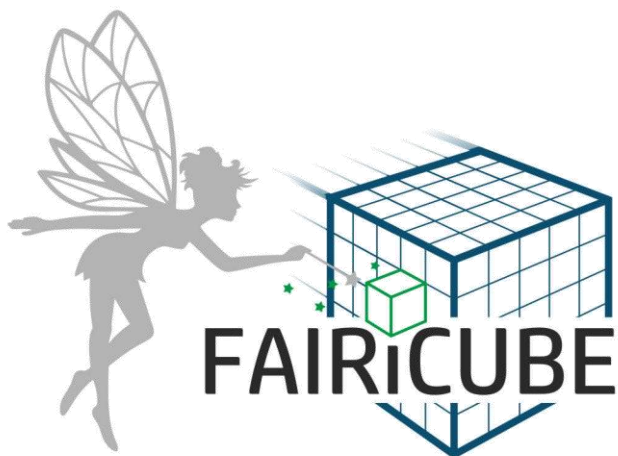
## FAIRiCUBE Objectives



- data catalogue of pre-gridded, pre-aligned, pre-referenced EO data
  - create your own custom data cube
- data storage & compute resources
- data processing catalogue (including Machine Learning)
- community platform sharing
  - data layers, data products
  - processing steps (e.g. Python Notebooks)
  - ML models & AI ethics
  - documents
- if all this works: F.A.I.R. ✓



## FAIRiCUBE Objectives



The **core objective** of FAIRiCUBE is to enable players from beyond classic Earth Observation (EO) domains to **provide, access, process, and share gridded data and algorithms** in a FAIR and TRUSTable manner.

The project's goal is to **leverage the power of Machine Learning (ML)** operating on multi-thematic datacubes for a broader range of **governance and research institutions** from diverse fields, who at present cannot easily access and utilize these potent resources.

Project duration: 07/2022 – 06/2025

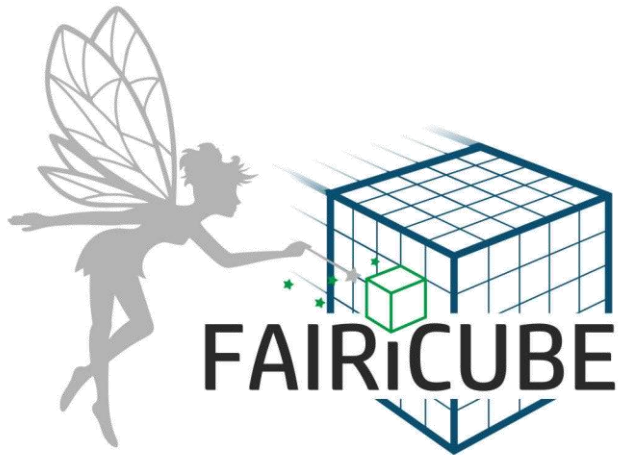
kick-off held 01.07.2022, technical kick off 13/14.10. 2022







## FAIRiCUBE Partners

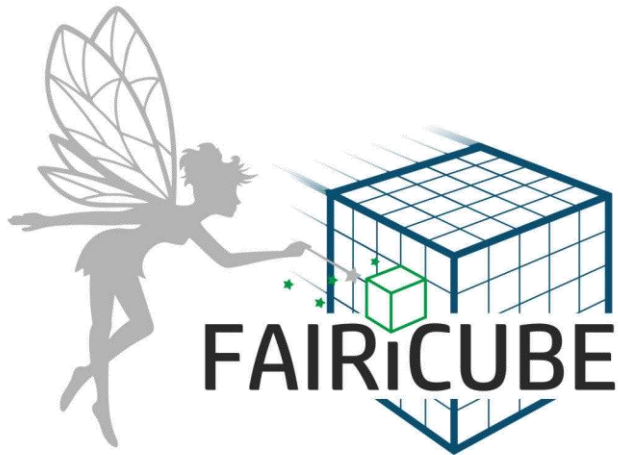


- data cubes are mature, performance, scalability and capability is proven
- platforms are well established
- data cube platform providers are project partners
  - Jacobs University / rasdaman (EarthServer), Germany
  - EOX (EuroDataCube), Austria
- research institutes
  - **NILU**, Climate and environmental research institute, Norway
  - Wageningen university and research, Holland
  - Museum of Natural History, Vienna, Austria
- environmental SME's
  - space4environment, Luxembourg
  - 4sfera, Spain
  - epsilon, Italia





## Use case «demonstrators»



- 4 Use Cases being executed on the FAIRiCUBE Hub
  - addressing **EU green deal** action items
  - urban / regional focus
  - Barcelona / Vienna / Oslo / Luxembourg
  - using different scale length, areas, objectives, technical platforms
  - How can we make this data available through the FAIRiCUBE Hub

- 1) Urban adaptation to **climate change**
- 2) Spatial and temporal assessment of neighborhood building stock (urban, **circular economy**)
- 3) **Biodiversity** and agriculture nexus (regional)
- 4) **Biodiversity** occurrence cubes (urban / regional, **climate change**)





## Many thanks for your attention



**Finansiert av  
Den europeiske union**



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Learn more here:

