



# **GEO Knowledge Hub to preserve and share EO Applications: Introduction and practice**

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**GEO Knowledge Hub team**

Date: 21th of March from 10:30 to 12:30 (Geneva time)

Where: EIFFEL Project Workshop - Online

# GEO Knowledge Hub team



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**We are not alone!** Our team thanks everyone who worked with us, especially Gilberto Camara, Douglas Cripe, Gilberto Queiroz, Florian Franziskakis, Hendrik Baeyens, and the InvenioRDM community

# Material availability

All the materials used during this workshop are available in the following GitHub repository:



[geo-knowledge-hub/geo-knowledge-hub-workshop](https://github.com/geo-knowledge-hub/geo-knowledge-hub-workshop)

# Group on Earth Observations (GEO)

**GEO** is a partnership of more than 110 national governments and in excess of 100 Participating Organizations



# Group on Earth Observations (GEO)

**GEO** envisions a future where **decisions** and **actions** for the benefit of humankind are **informed** by coordinated, comprehensive and sustained **Earth observations**



## GEO Data Sharing principles



23<sup>rd</sup> Programme Board Meeting – 21-22 June 2022

PB-23.12

### Revised GEO Data Sharing and Data Management Principles

*This document is submitted by the Secretariat to the Programme Board for decision.*

#### 1 INTRODUCTION

In 2015, the GEO Data Management Principles Task Force was tasked with defining a common set GEO Data Management Principles<sup>1</sup>. These principles address the need for discovery, accessibility, usability, preservation, and curation of data and related resources that are shared. Such resources also should be shared as open data in accordance with the GEO Data Sharing Principles<sup>2</sup>. The GEO Data Management Principles complement the FAIR Principles and TRUST Principles, which also are being adopted across research communities. The GEO Data Management Principles can be applied to the entire data management lifecycle,

## Open Knowledge Statement



21<sup>st</sup> Programme Board Meeting – 28-30 September 2021

PB-21.17

### GEO Statement on Open Knowledge

*This document is submitted by the Secretariat to the Programme Board for decision.*

#### 1 INTRODUCTION

This document presents a revision of the GEO Statement on Open Science (see Annex A) that was presented to the Programme Board at its 19<sup>th</sup> meeting in January 2021. Based on consultations with the GEO community, the Secretariat proposes that the statement be reformulated to focus on “Open Knowledge”. This concept, while inclusive of Open Science, is considered to be more closely aligned with the GEO Mission and Vision, which aim to support decision making and not only or primarily science.



# Group on Earth Observations (GEO)



Download the [GEO Work Programme 2023-2025 Summary Document](#), which contains short descriptions of each of the GEO Flagships, Initiatives, Pilot Initiatives and Regional GEOs that comprise the GEO Work Programme.





# Best practices for creating Knowledge Packages



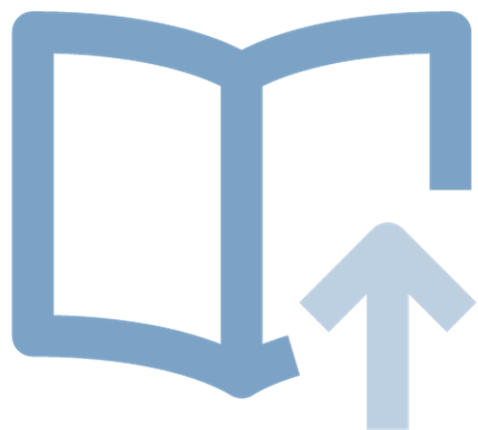
# Clear Documentation



# Descriptive Metadata & Data Accessibility



# Make publications visible



# Provide access to training materials



**Ensure effortless  
access to the full  
range of products**





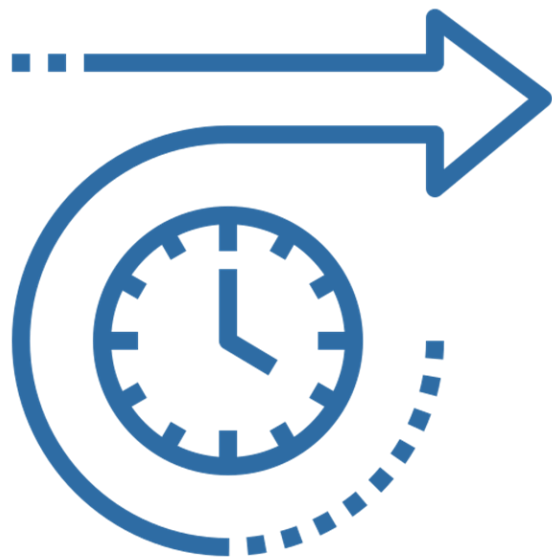
# Providing User Stories



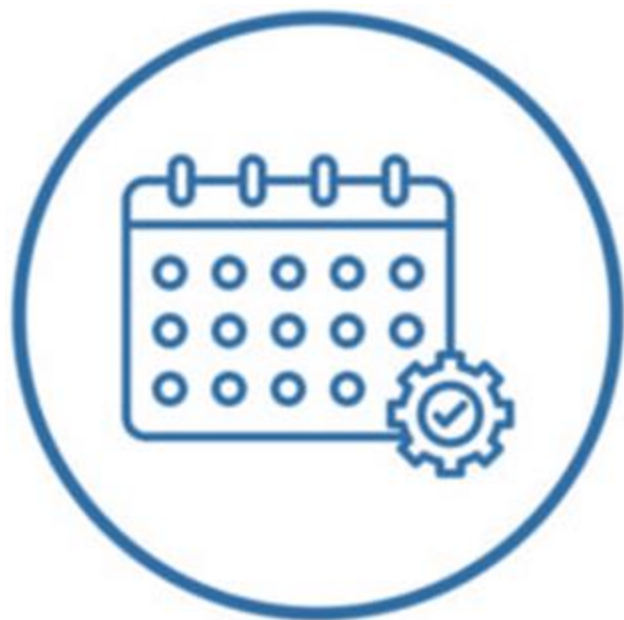
# Licensing



# Interact with community

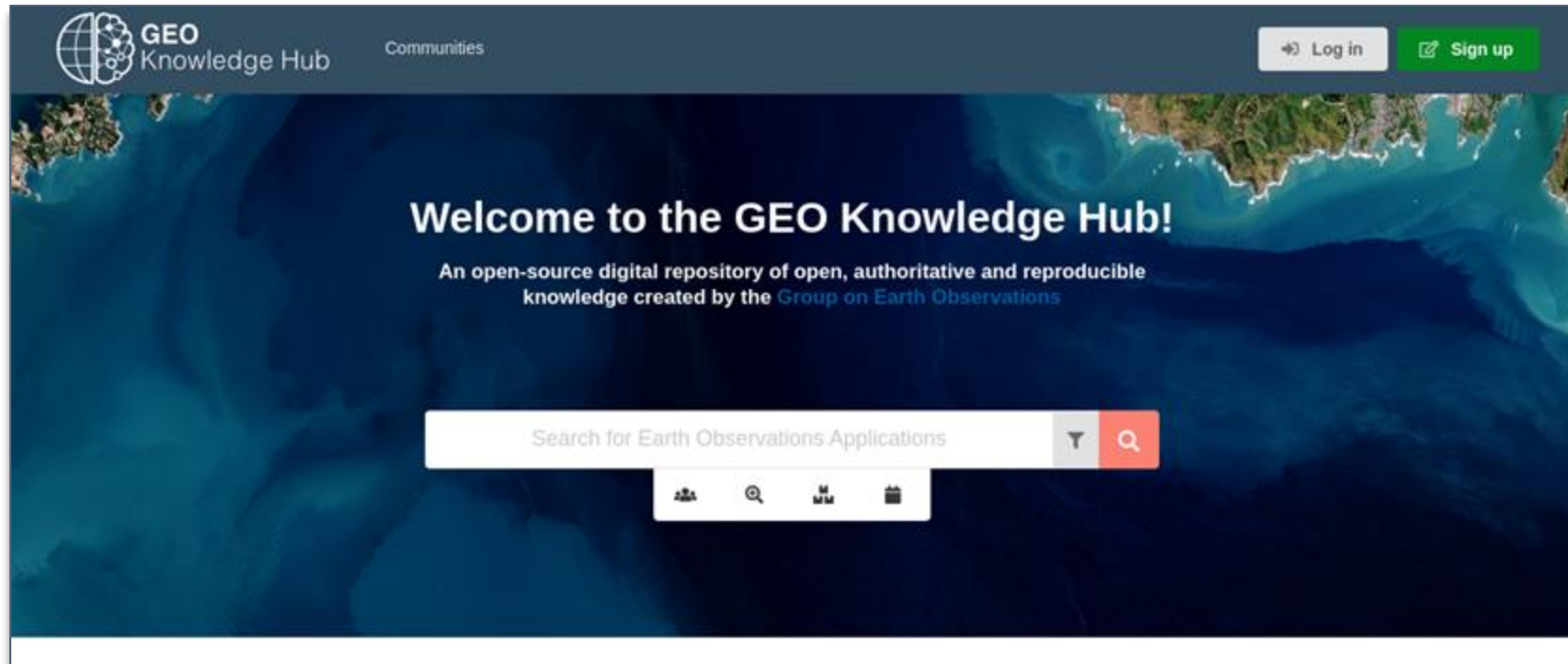


# Think in the long-term



# Always Up-To-Date

[gkhub.earthobservations.org](https://gkhub.earthobservations.org)



# Practical demonstration



# Creating Knowledge Packages

# Creating Knowledge Packages



# Creating Knowledge Packages



# Creating Knowledge Packages



Dataset



Software

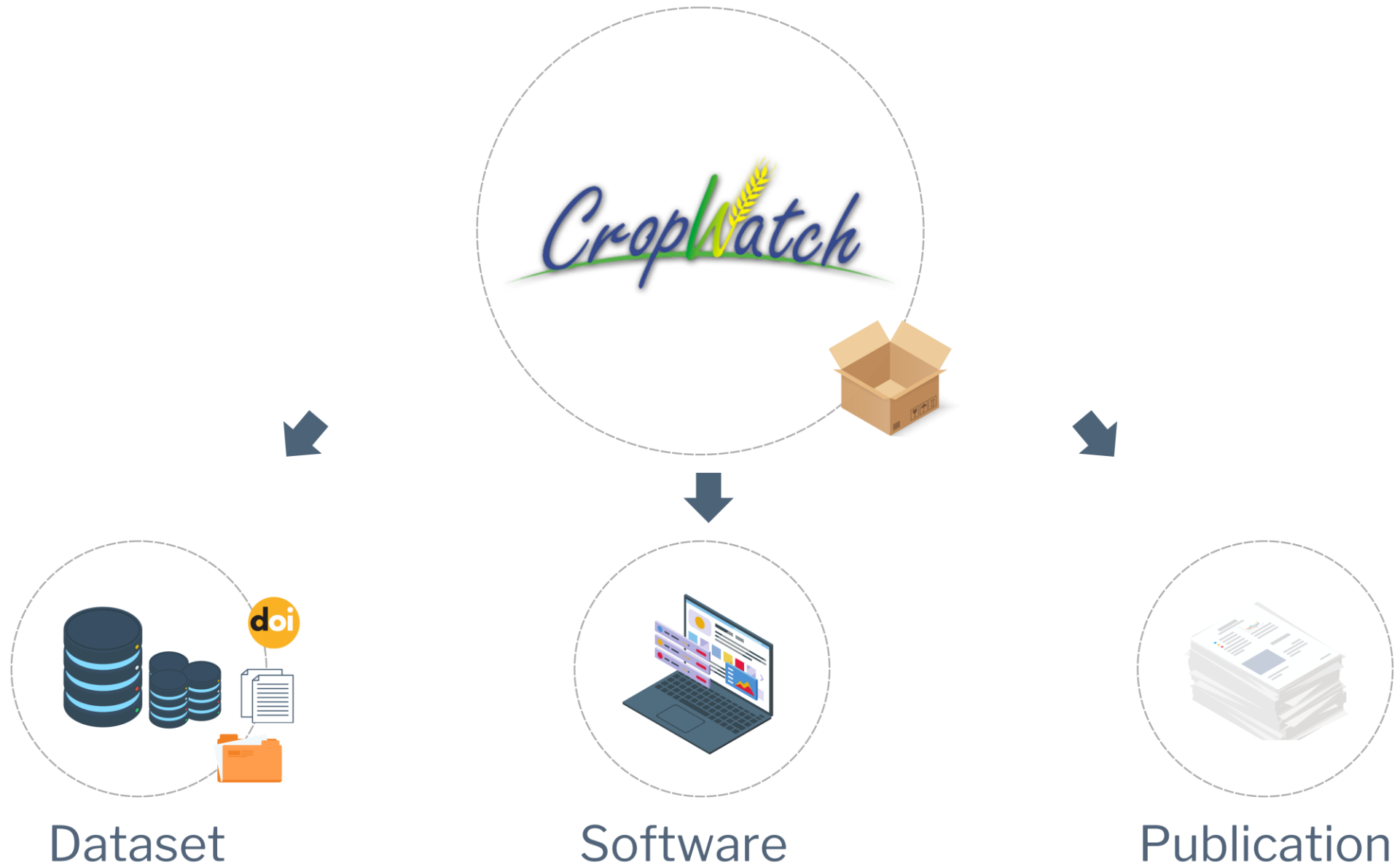


Publication

# Creating Knowledge Packages

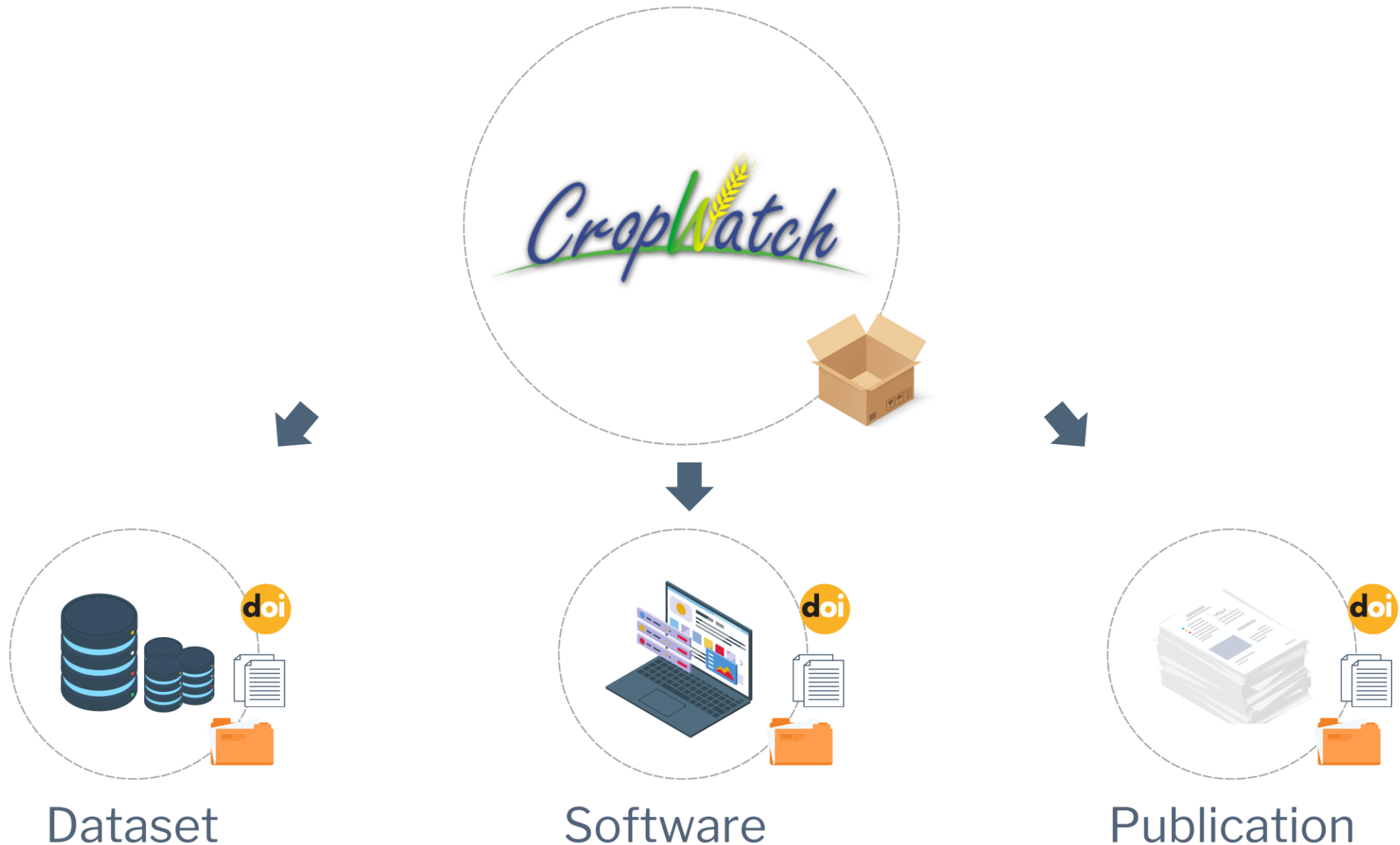


# Creating Knowledge Packages





# Creating Knowledge Packages



# Creating Knowledge Packages



# Workshop instance



## Practical demonstration

# Rest API

# Rest API



External systems

# Rest API



Bulk Package Loader



External systems



# Rest API



External systems

Bulk Package Loader

OGC/CSW Package Loader  
(Harvester)

# Using the Rest API

## Meet the e-shape legacy through the GEO Knowledge Hub

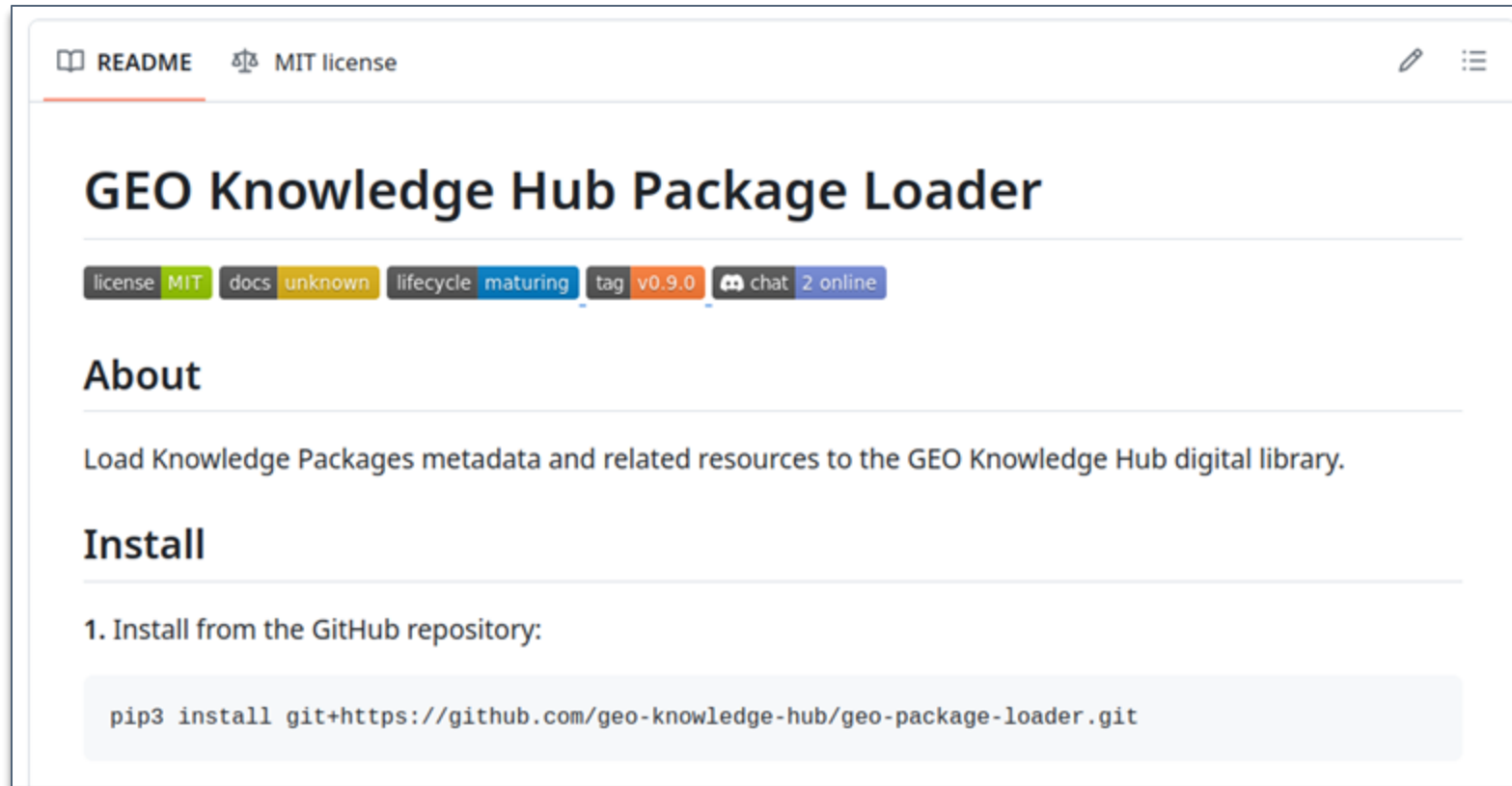
As a European flagship project contributing to EuroGEO, the [e-shape project](#) has linked with the [GEO Knowledge Hub](#) (GKH) to support the promotion and the results dissemination of the 37 pilot showcases, which have been developed during the project life time.

The approach relies on the use of the webservice-energy GEO community catalogue to initiate the creation of one metadata record per pilot (<https://tinyurl.com/5dk34cks>). Metadata records, 19139 and/or INSPIRE Network Service profiles, have been created having the concept of the granule in mind. It means, beside the access to the given application, to provide a bucket of e-shape resources including, scientific communications, DOI, videos support presentations, Jupyter Notebooks, repositories, OGC Web Services GetCapabilities and output result datasets samples. A prime enriched metadata record is available here: <https://tinyurl.com/3bjd7ymu>

[tinyurl.com/e-shape-gkh](https://tinyurl.com/e-shape-gkh)

The screenshot displays the 'e-shape' community page on the GEO Knowledge Hub. The header includes the 'e-shape' logo, a link to the community index, and navigation options like 'Project' and 'EuroGEO, Group on Earth Observations'. A 'New upload' button is visible in the top right. The main content area shows search results for 'e-shape co-design presentation and pilot's testimonials - Video' and 'Collective action for bridging digital and sustainability transitions: modelling and experimenting a new form of co-design between Earth-observation data providers and unknown users. (Doctoral thesis). Mines Paris, PSL University.' The page includes filters for versions and resource types, and a 'New upload' button.

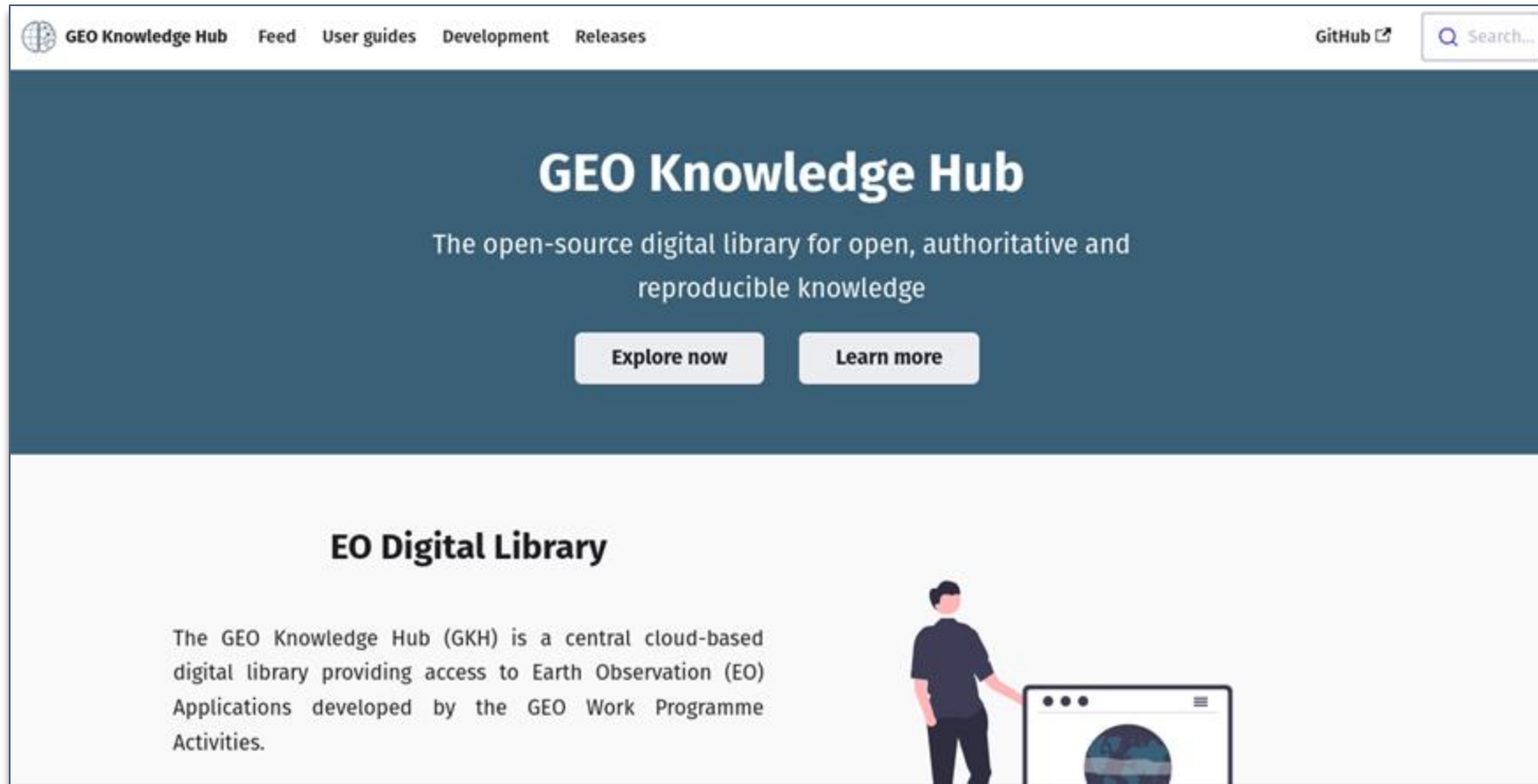
# Using the Rest API



[github.com/geo-knowledge-hub/geo-package-loader](https://github.com/geo-knowledge-hub/geo-package-loader)

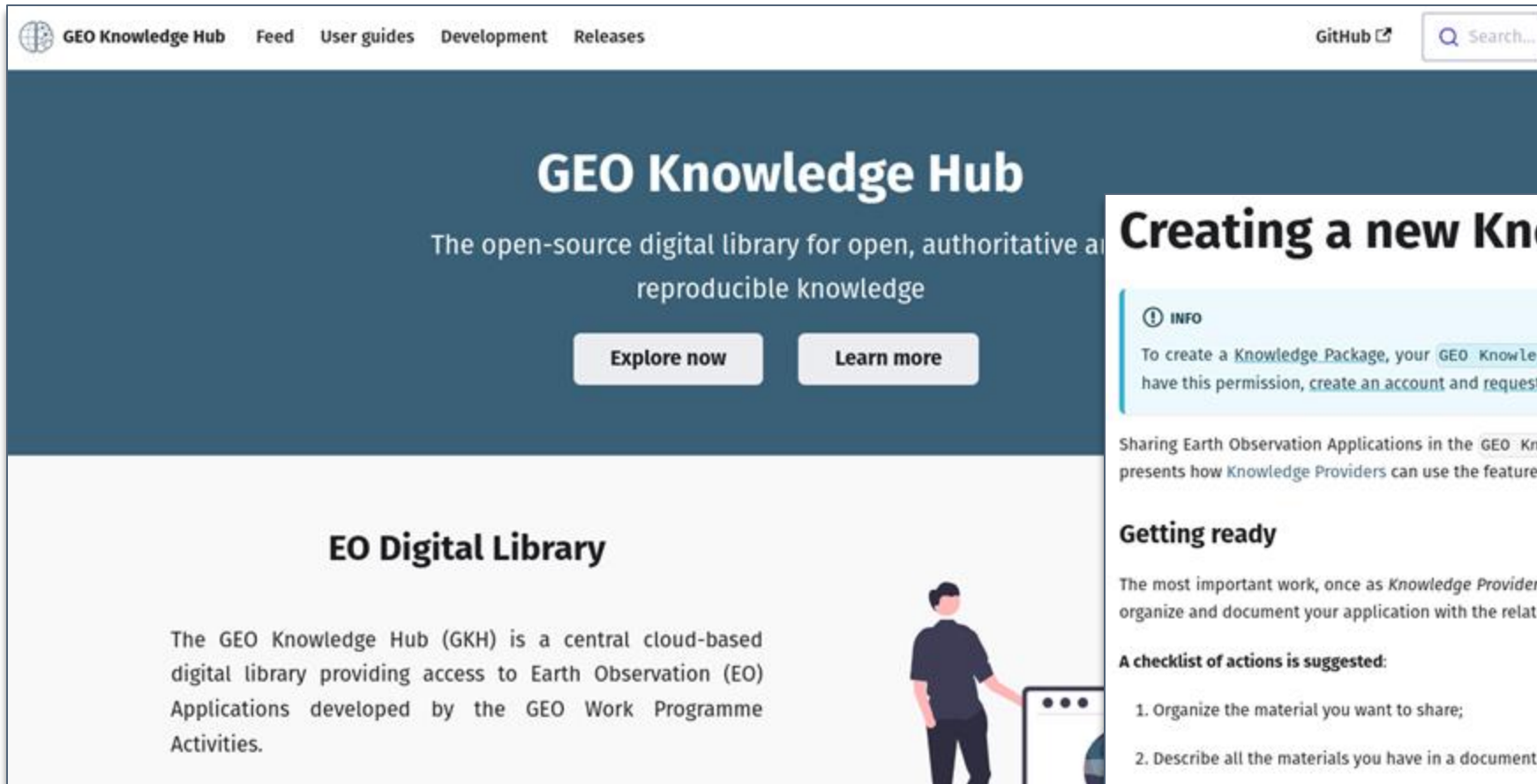
# Documentation

# Documentation



[gkhub.earthobservations.org/doc](https://gkhub.earthobservations.org/doc)

# Documentation



[gkhub.earthobservations.org/doc](https://gkhub.earthobservations.org/doc)

## Creating a new Knowledge Package

### ! INFO

To create a Knowledge Package, your GEO Knowledge Hub user must have the Knowledge Provider role. If you do not have this permission, [create an account](#) and [request the required role](#) for the GEO Knowledge Hub team.

Sharing Earth Observation Applications in the GEO Knowledge Hub is done through Knowledge Package creation. This section presents how Knowledge Providers can use the features of the digital library to create these packages.

### Getting ready

The most important work, once as Knowledge Provider you decided to share your application in the GEO Knowledge Hub is to organize and document your application with the relative resources.

#### A checklist of actions is suggested:

1. Organize the material you want to share;
2. Describe all the materials you have in a document (e.g., Title, Authors, Licenses, Files and so on);
3. Go to the GEO Knowledge Hub and follow the step-by-step guide to create a Knowledge Package.

### Step-by-step

To create your Knowledge Package, follow the step-by-step instructions on the following pages.