

# OSTrails: Advancing Biodiversity Monitoring through FAIR and Interoperable RIs

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# The Ambition



## WHAT

**Seamless Information Exchange** and **Service Integration** in Research Data Management through Interconnected Data Management Platforms, Scientific Knowledge Graphs, and FAIR Assessment Tools.

## HOW

**Collaborate:** Improve and **connect** existing infrastructures

## Current limitations: Scientific Knowledge Graphs

- Mainly for **extracting knowledge**, complementing AI/LLMs, and **bibliometrics**
- Most SKGs are in their **infancy** with
  - **Quality issues related to metadata and relationships**
  - **Limited coverage for data, software, etc.**
  - **Isolated**
- The **depth of knowledge** required resides within research communities

## Current limitations: Data Management Plans

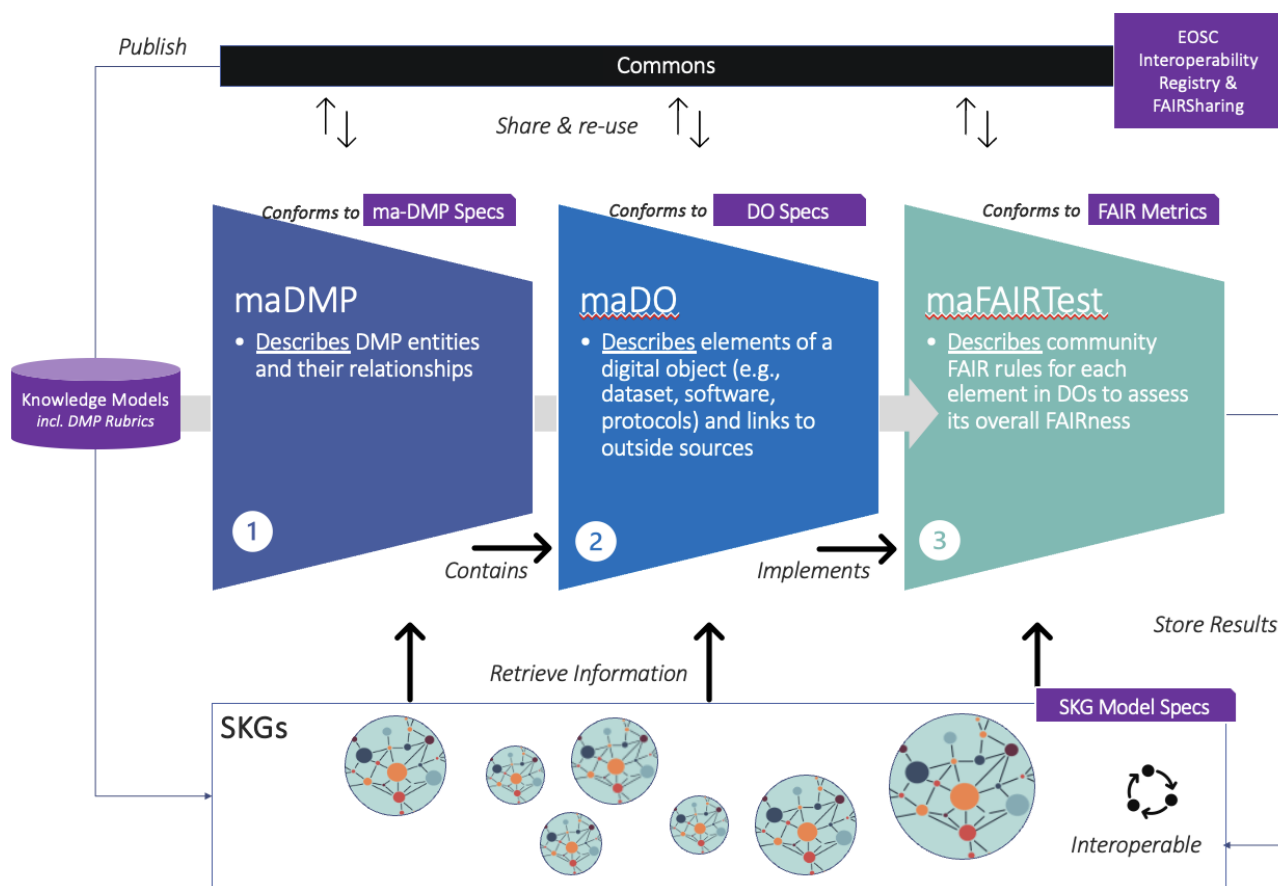
- DMPs => **better RDM** practices, or **FAIRer** research results???
- DMPs not shared as **FAIR outputs**
- DMPs seen as a **burden** due to unclear process and coordination.

**Need:** Integration with **research operational workflows** to streamline the management of research activities and outputs.

## Current limitations: FAIR Assessments

- Funders, institutions, and infrastructures provide **limited funding, support and guidance**
- Results are **inconsistent** among tools and/or assessments
- Lack of a **commonly agreed minimum set of guidance** and direction to assisting researchers
- Results are not shared
  
- **Misconception:** FAIR vs Data Quality
- **Miscommunication in use:** metadata vs data

# OSTrails: Connecting the Building Blocks



## PLAN

Make DMPs more effective, researcher-centric, and integrated (maDMPs).

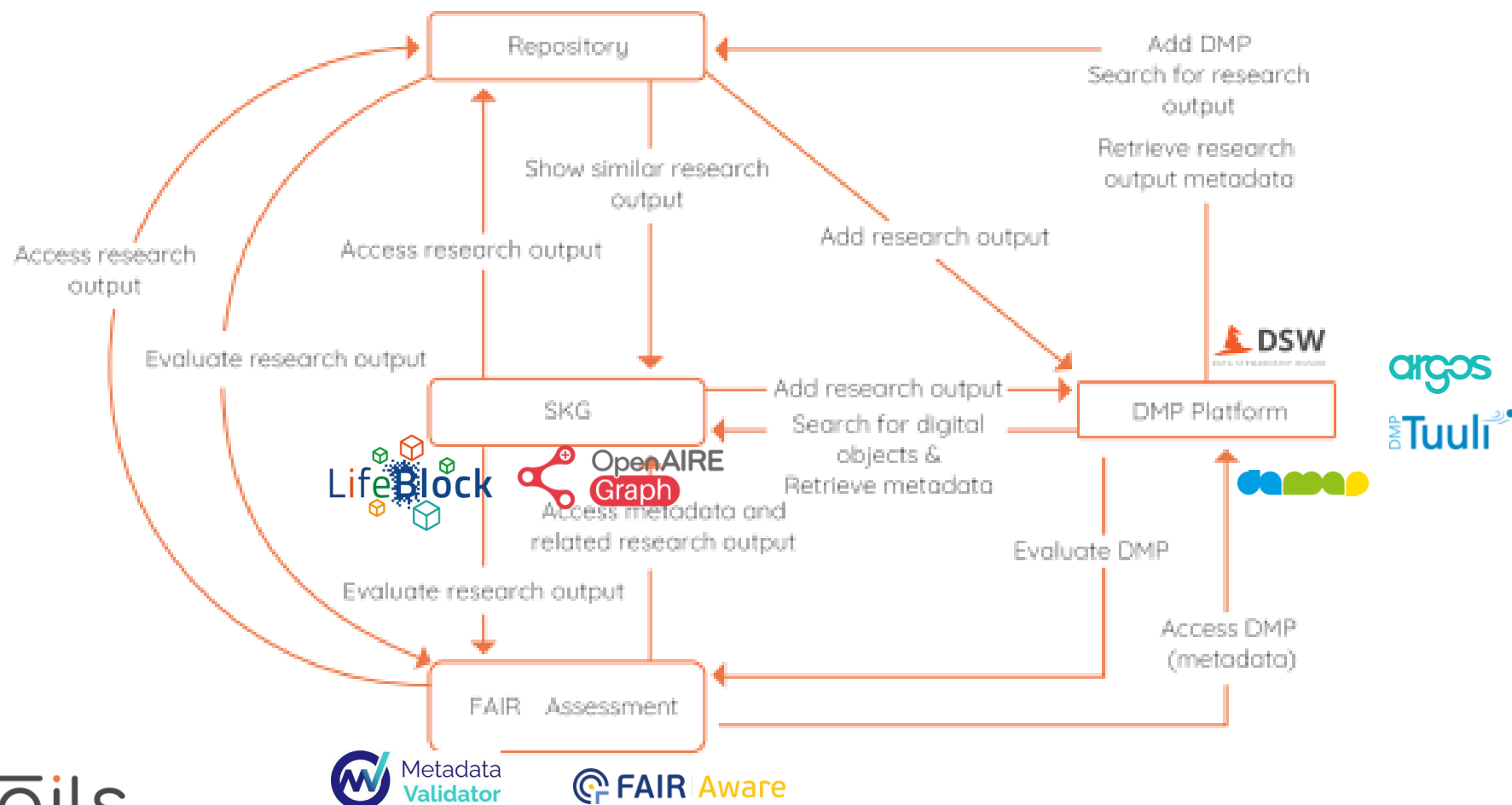
## TRACK

Build an open, high-quality SKG ecosystem linking diverse research outputs and metrics.

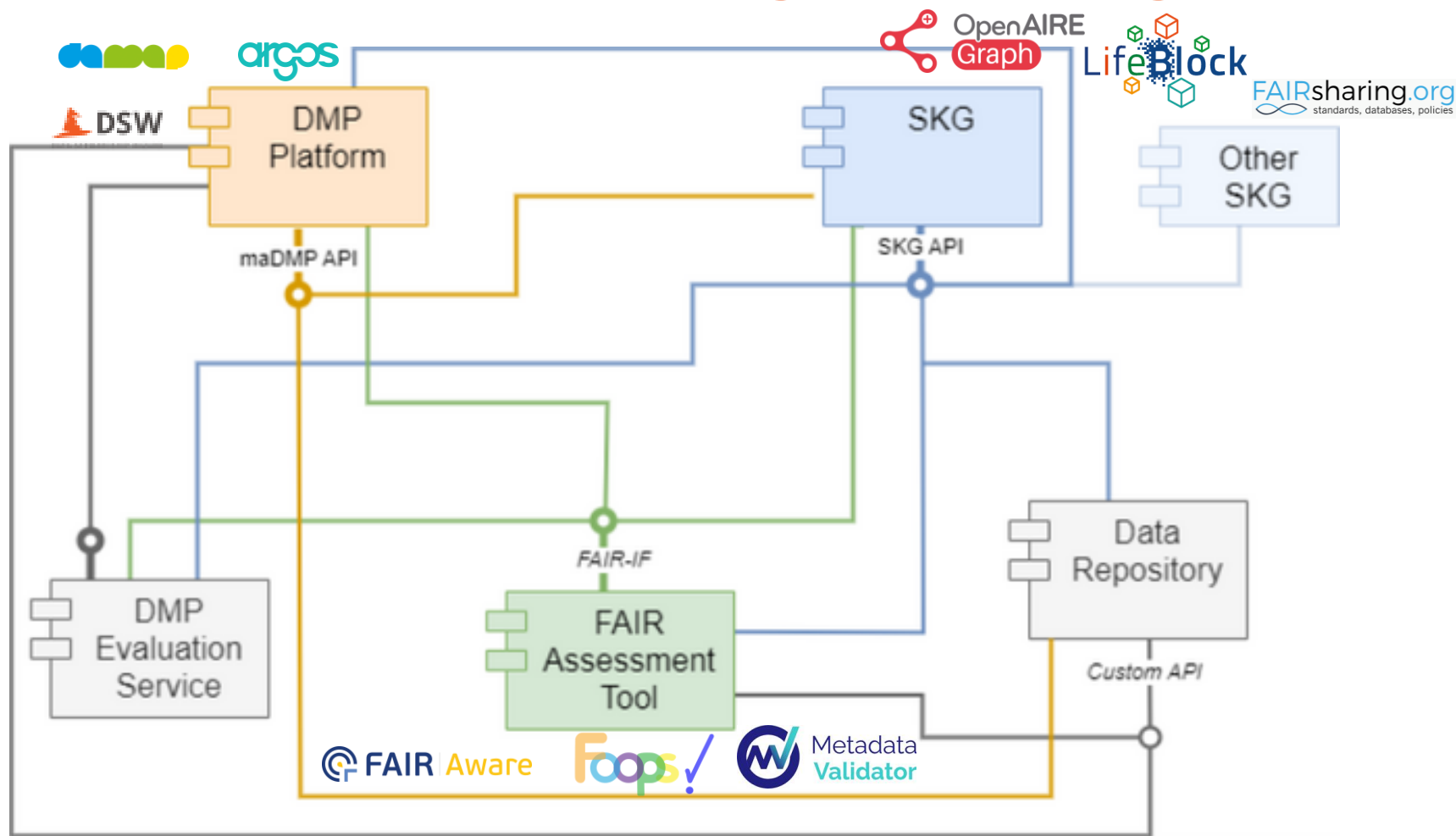
## ASSESS

Provide modular, maFAIR tests with integrated user guidance.

# OSTrails PTA Framework: Connecting the Building Blocks



# OSTrails Architecture: Connecting the Building Blocks





# 25 pilots

- 17 national infras
- 5 Science Clusters



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# Pilot - Biodiversity

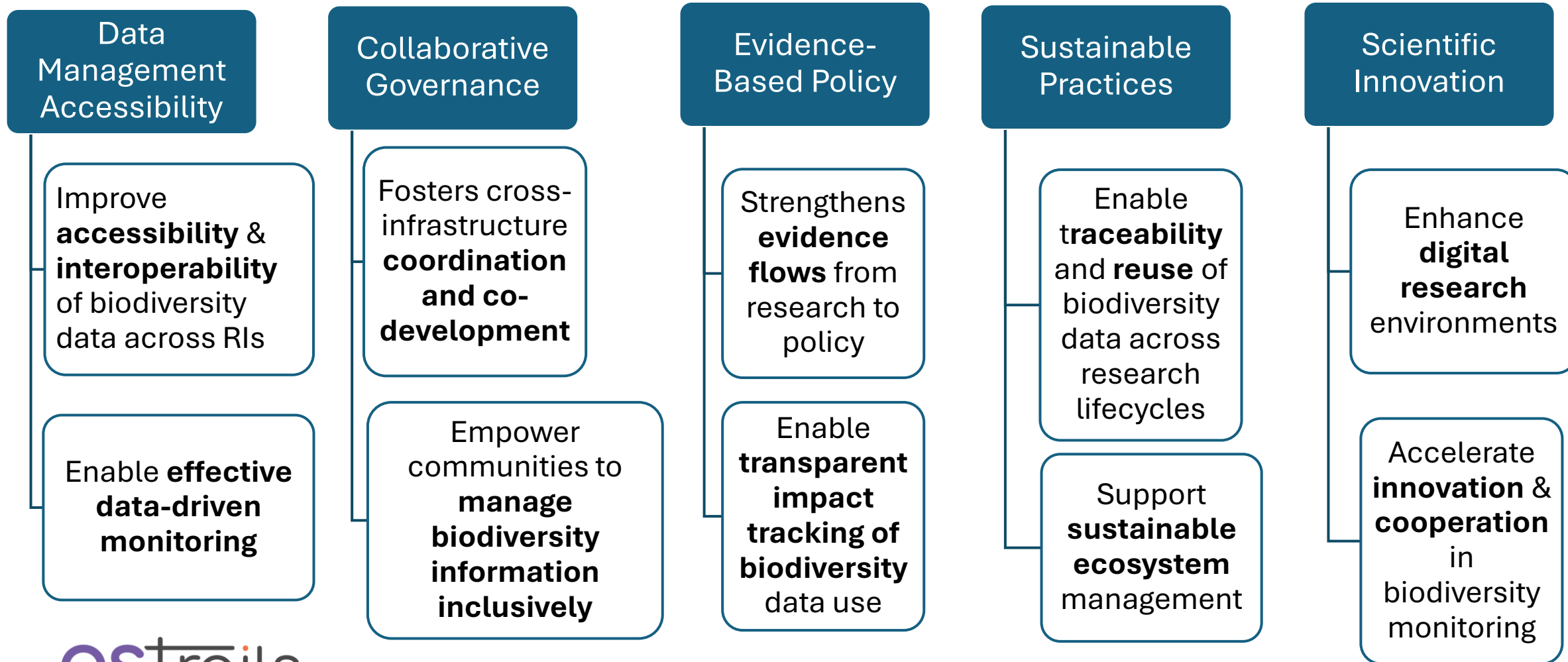
**LifeBlock** graph system for biodiversity: 1) linking data, analytical services, and research products; 2) ensuring proper attribution to resource owners for any usage.

## Goals

- **Develop Community-maDMP Templates** with integrated community FAIR metrics.
- **Linking research outputs** to institutional data services and various research products.
- **Enhance LifeBlock SKG** by Integrating maDMPs, PIDs and links to research products.
- **Collaboratively** establish community-specific FAIR assessment metrics.



# Contributing to **Biodiversity Monitoring**



# Thank you for your attention!

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