

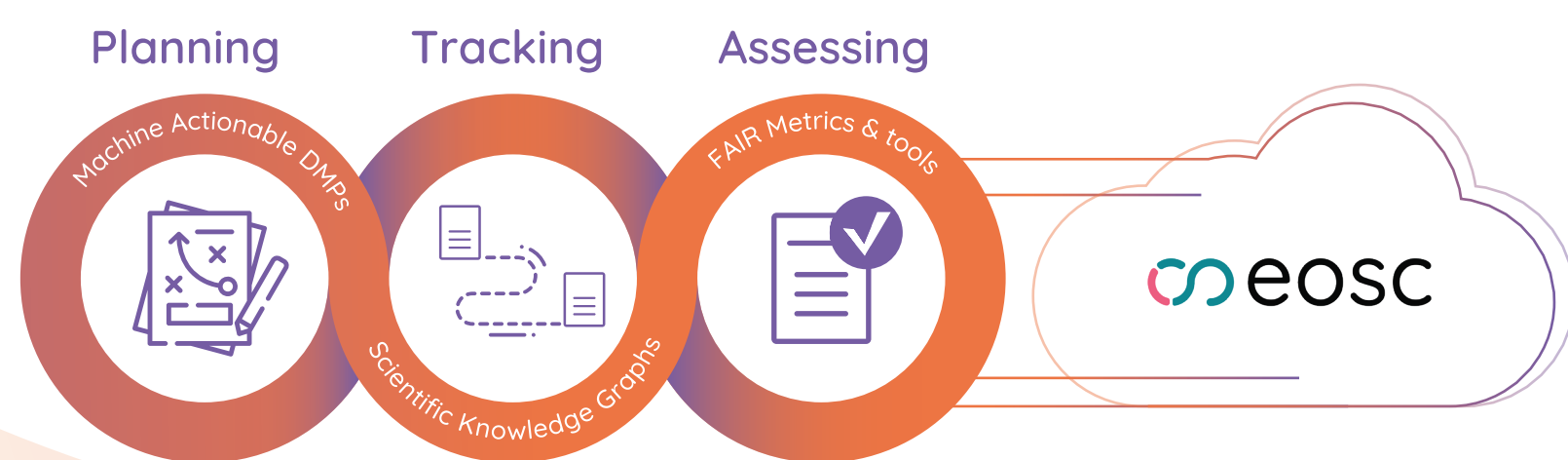
Context

Establishing the Pathways and Interoperability Reference Architecture (IRA) to enable seamless integration and information exchange between Scientific Knowledge Graphs (SKGs), Data Management Planning (DMP) platforms, and FAIR assessment tools

Impact on EOSC

- Enhanced FAIRness: Ensures research outputs within EOSC are findable, accessible, interoperable, and reusable.
- Improved Data Management: Converts DMPs into living documents, enhancing the research lifecycle within EOSC.
- Greater Interoperability: Facilitates seamless data sharing and integration across EOSC's diverse research domains

The Goal of OStrails



Tools and Services



12 SKGs

Enhancing data interoperability and knowledge discovery.

7 DMP Platforms

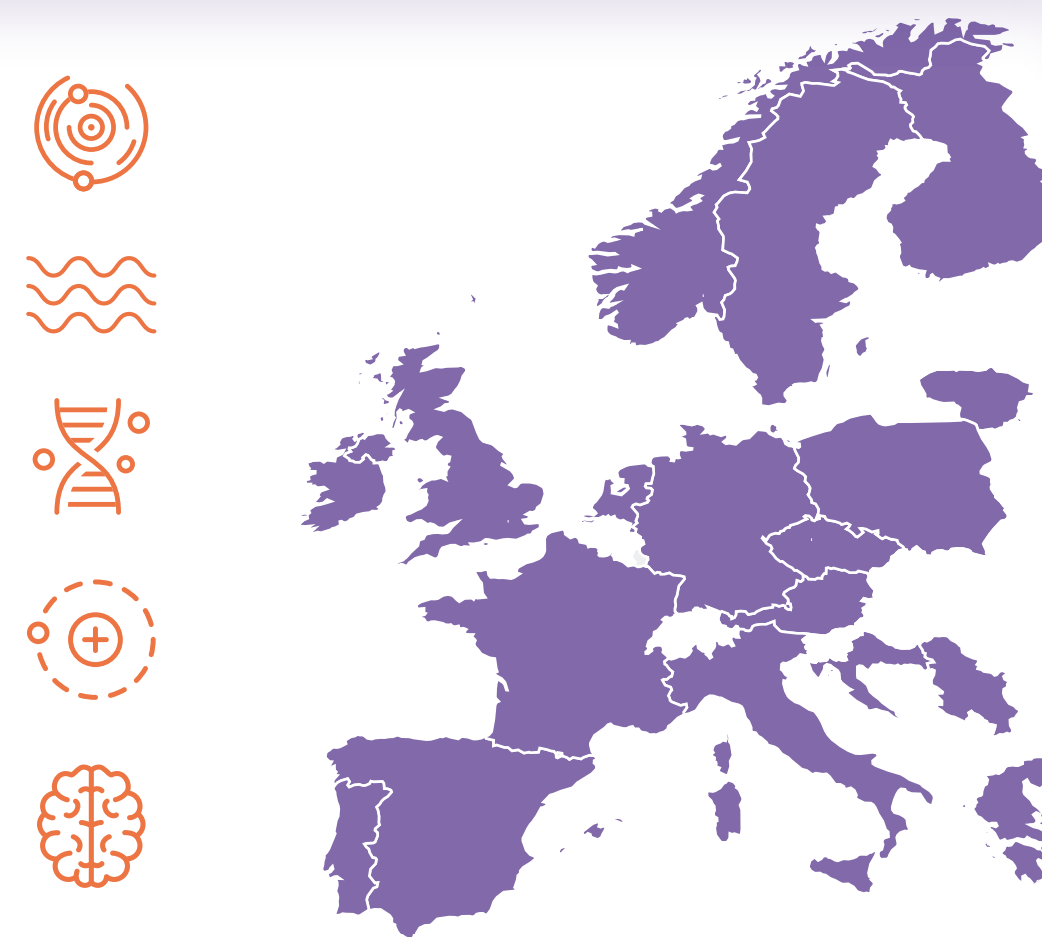
Creating and managing DMPs that support FAIR data practices

10 FAIR Assessment Tools

Evaluating and ensuring the FAIRness of data and DMPs

Other Services

(27 Repositories and CRIS systems , 4 PID infrastructures, 3 other catalogues and search interfaces, 3 monitoring systems, 2 Lab notebooks ,1 workflow system)



Conceptual Components

SKGs IF

Accessed Interfaces:
Subscribe to event



Provided Interfaces:

Access record by ID Search by criteria
Resolve by ID and relationship type

Support access to metadata and links in SKGs from other services:

Notifying other services about "interesting events" regarding records in SKGs; Allowing other services to contribute to SKGs (modify/create)

Commons: Starting from the RDA SKG-IF:



DMPs IF

Accessed Interfaces:

Import DMP Evaluation Result
Import FAIR Evaluation Result
Notify Service about Changes
Push DMP to other Services



Provided Interfaces:

Edit/ Curate Information in DMP
Create DMP
Export DMP Document
Expose Information from DMP
Expose FAIR Evaluation Result
Subscribe to DMP Changes

Exposing DMPs to (any) other services -Notifying other services about "interesting changes" in DMPs; Consuming notifications about "DMP-related interesting changes" from other services; Pushing DMPs to other services; Allowing other services to contribute to DMPs (modify/create/populate); Listing/searching records from other tools

Commons: Starting from the RDA DCS



Extras:

Data model and exchange formats for the APIs
Schema for notifications
Uniform schema(s) for records
Schema for results and metadata of DMP evaluation

FAIR Tools IF



Provided Interfaces:

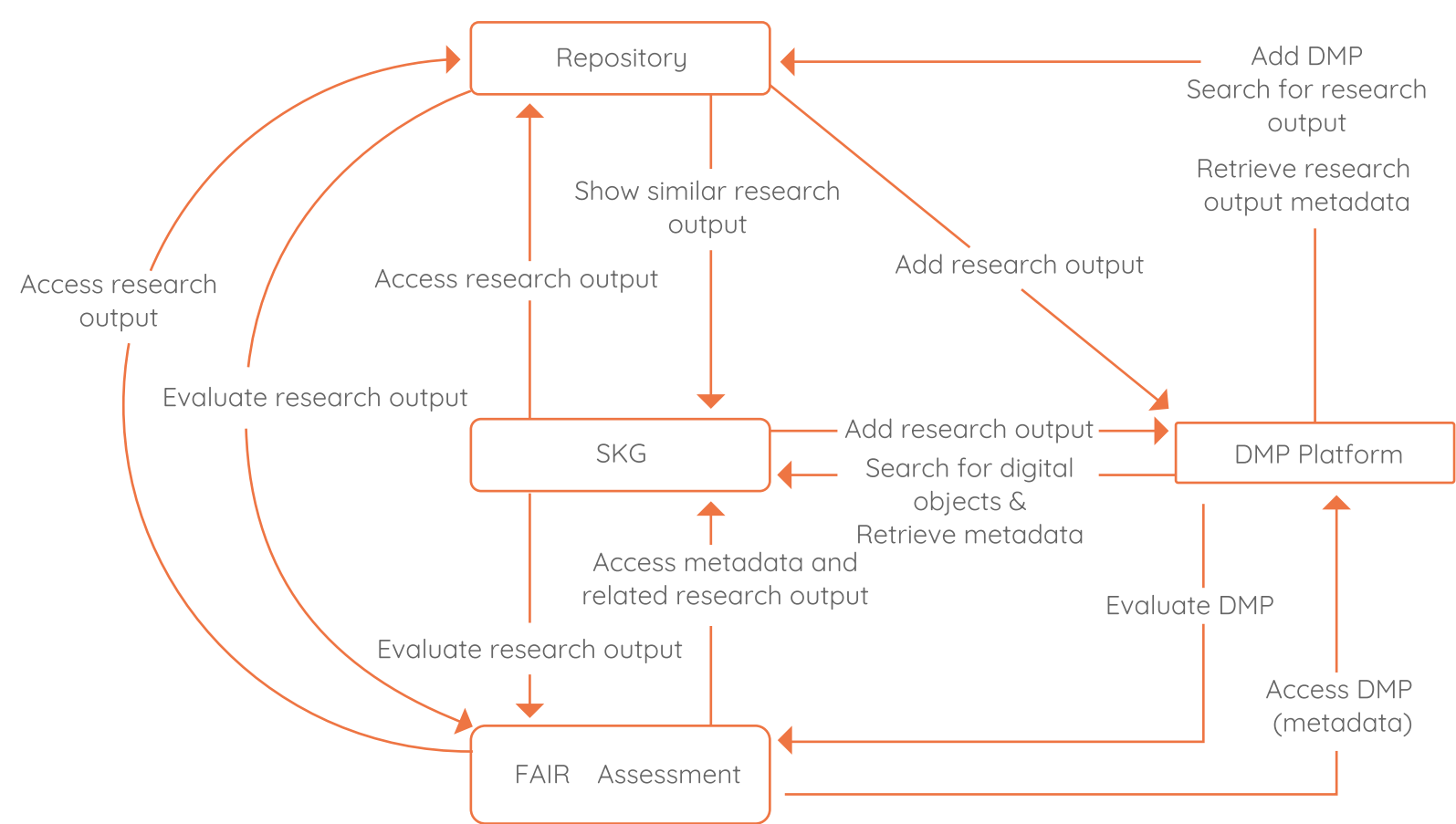
Expose Test Execution
Expose Test Metadata
Expose Metrics involved in FAIR Assessment

Exposing Test Implementation metadata; Exposing FAIR Metric metadata; Exposing FAIR Benchmark metadata; Initiate Test execution and retrieval of results; Initiate Algorithm execution and retrieval of results

Commons: Developing the Data Model for FAIR IF within the Project

Pathways

Blueprints outlining the interactions between DMPs, SKGs, and FAIR assessment tools, activated by user actions or tool integrations

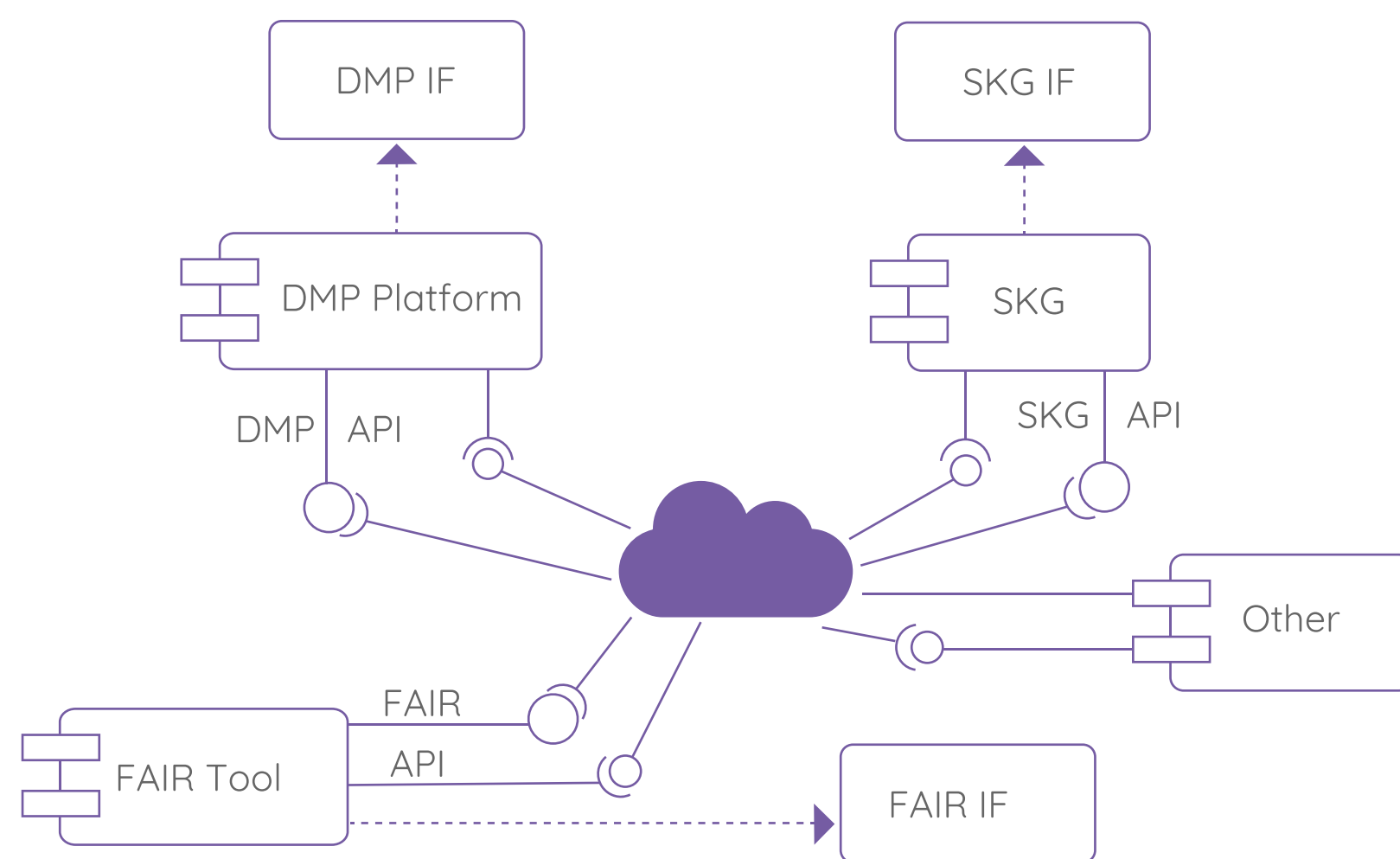


Partners

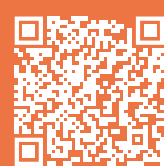


Architecture

A comprehensive framework defining the technical standards and protocols necessary for achieving interoperability among diverse components.



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Supporting

