

# Research Object Management Tools

DEMO

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# Software Architecture

Specifies **functionalities** required by a (workflow-centric) Research Object mgmt. and preservation infrastructure, along with a set of functional entities for their grouping and **categorization**

## » Architecture principles

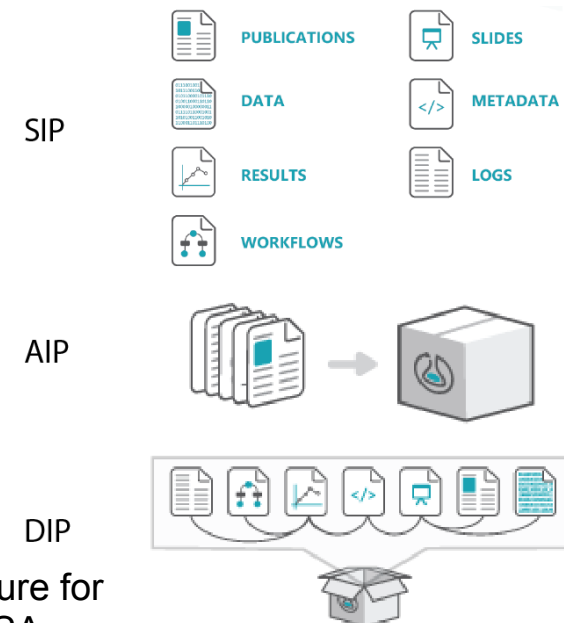
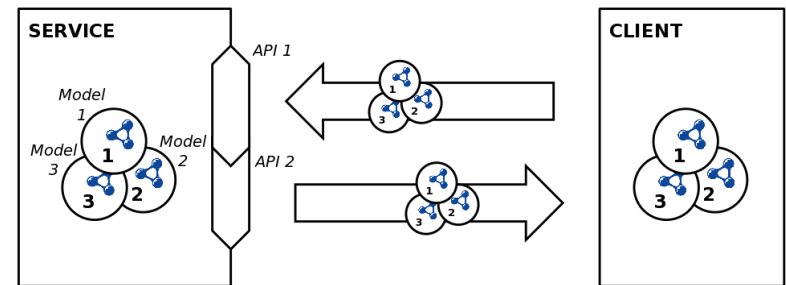
- » Adoption of **Linked Data** and **RESTful** approaches

## » Architecture structure

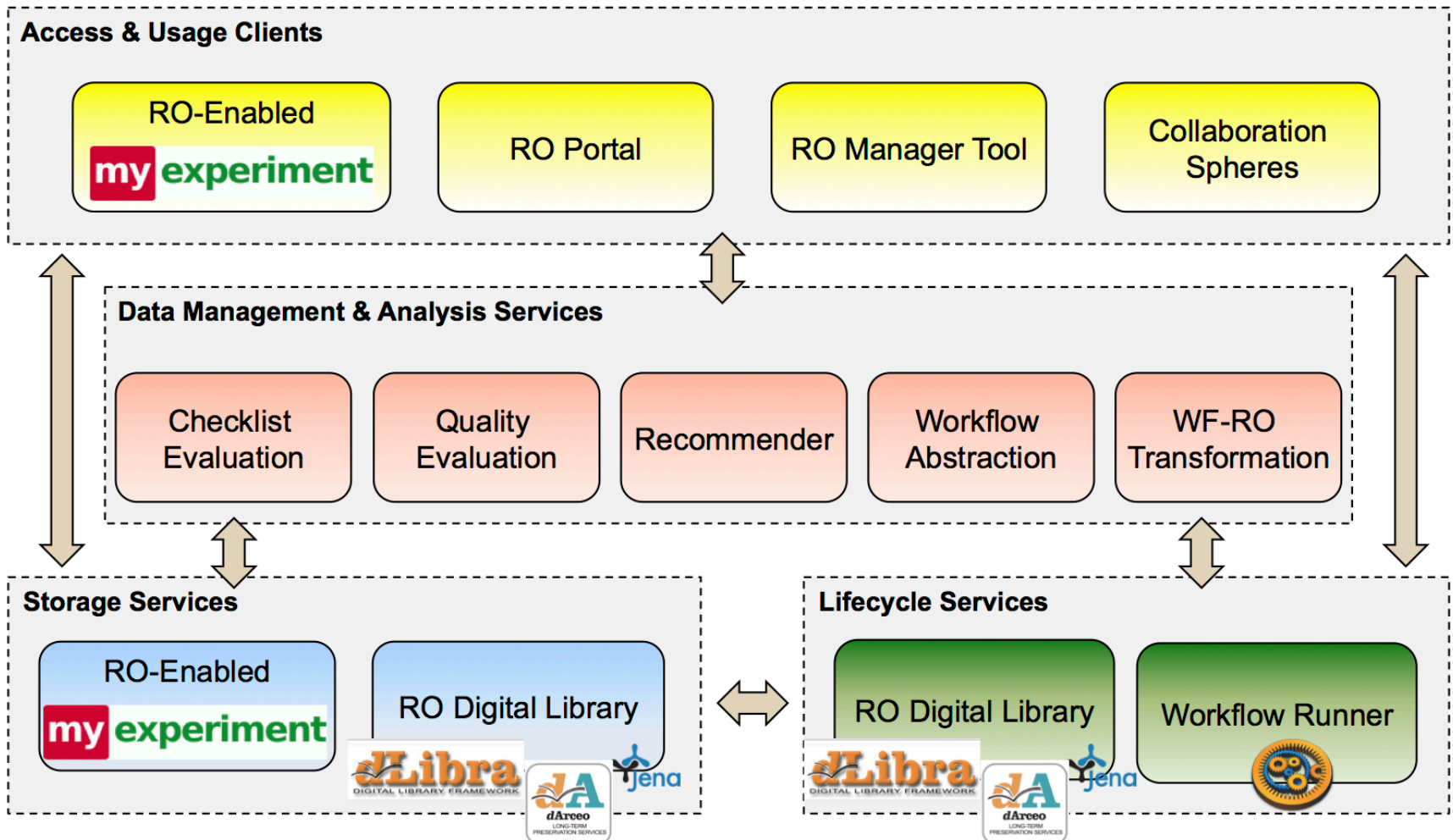
- » **Models**: data structures that encode the concepts and relationships of information
- » **APIs**: set of resources and their representations for guaranteed compatibility (of a service)
- » **Services**: implement functionality that is provided to multiple clients

## » Compliance with preservation standards

- » Aligned with OAIS reference model & Merritt microservices



# Technology

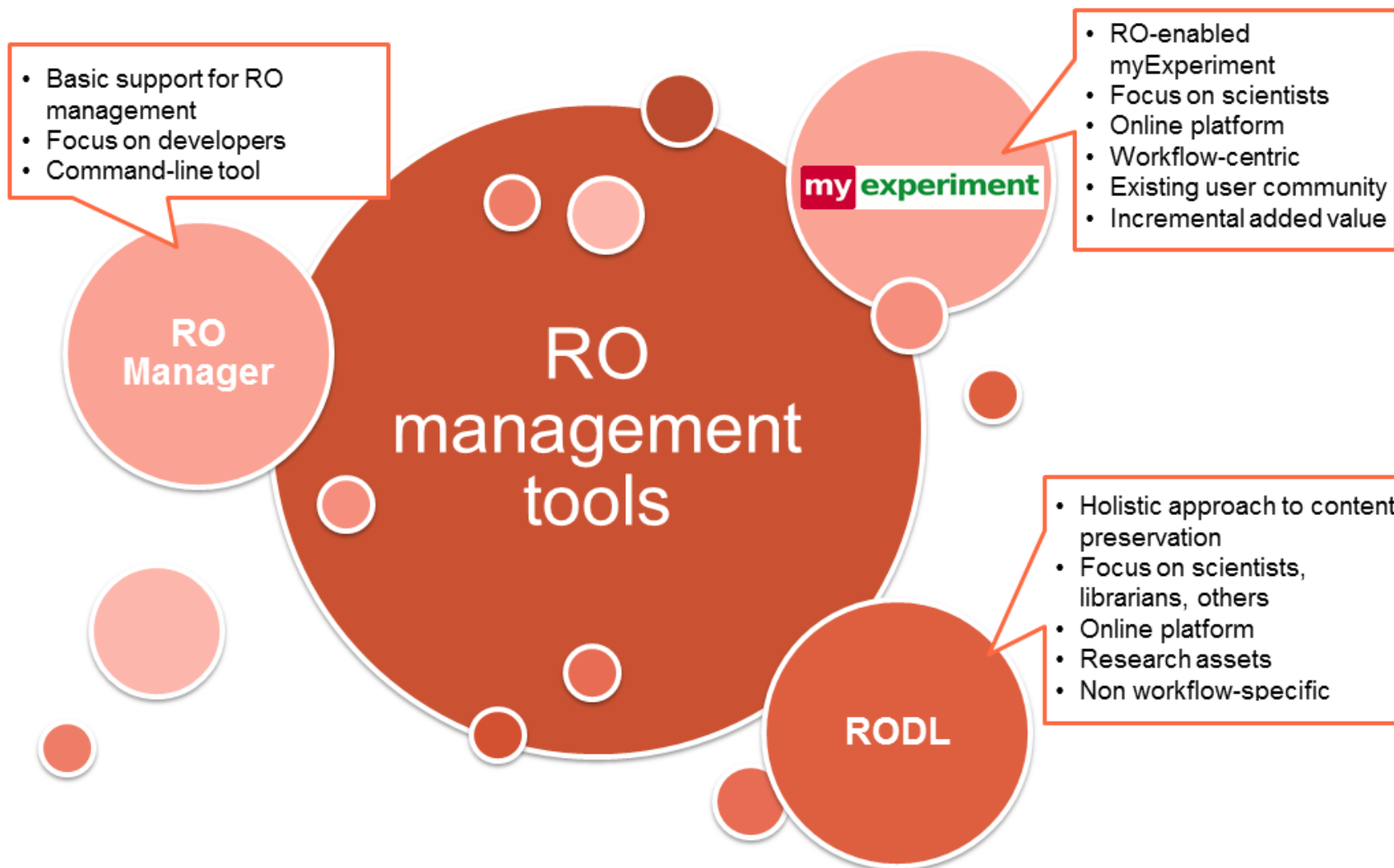


APIs overview: <http://www.wf4ever-project.org/wf4ever-reference-implementation>

Live: <http://sandbox.wf4ever-project.org/> <http://alpha2.myexperiment.org/>

Source code: <https://github.com/organizations/wf4ever>

# Portfolio of Research Object tools



# Demo Introduction (1/2)

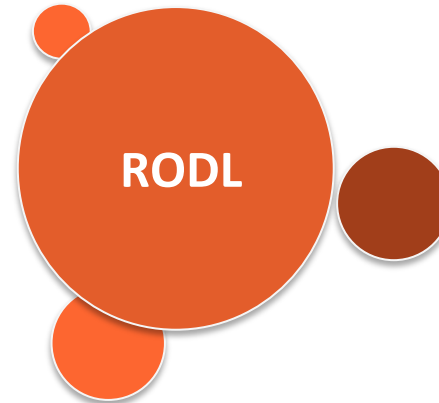
Show the process of building a research object from the music research experiment, with the purpose of **sharing** and **preserving** the **experiment and its context**, in order to facilitate its **reusability**, **reproducibility** and **better understanding**.

- In particular, the following demo will show:
  - How to create a new research object
  - How to aggregate and annotate the artifacts related to the music research experiment, including,
    - Research question, Experiment design sketch, Workflow definition, Workflow runs, Web services, Software dependencies, Workflow runs (Example, Prospective, Results generating), Conclusions, Experiment description paper.
  - How to capture the status of the research experiment at different moments in time, e.g., to share it with others, to cite it, to preserve it.
  - How to archive the research object once the research has been concluded, ensuring its preservation.
  - How to search and explore other research objects

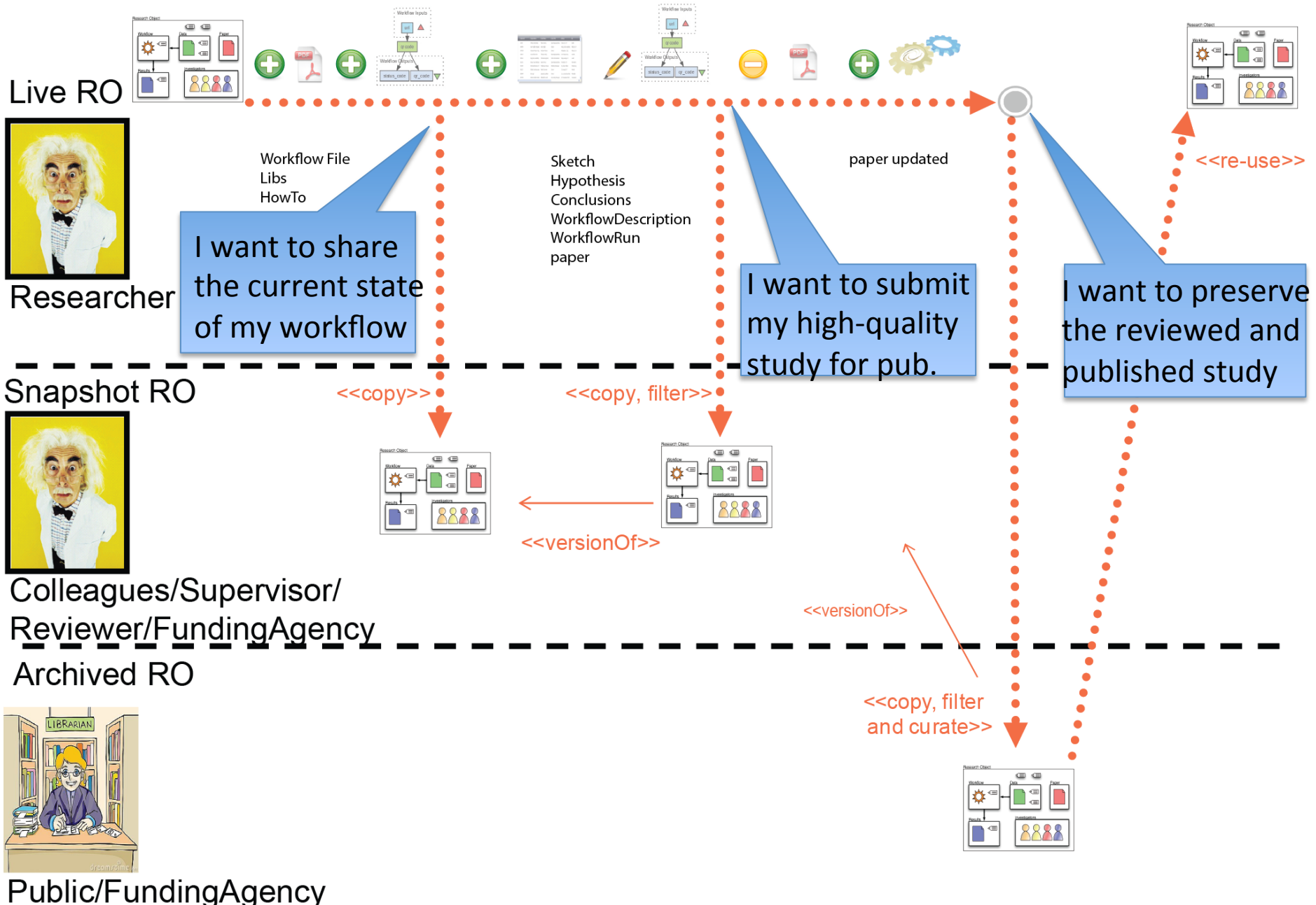
# Demo Introduction (2/2)

Show how to **use** and **interact** with the **research object management tools**

- In particular, in the demo the following tools will be shown:
  - Research Object Digital Library
  - RO Portal
  - Checklist Service
  - Wf-RO Service
  - Quality Service
  - Taverna



# Demo context – sharing and preserving music research experiment



Thanks!