Workflow 4Ever

Workflows – the New Rock and Roll

Research in many disciplines is increasingly data-intensive, and researchers are using computational techniques to manipulate and analyse the data. A scientific or computational **workflow** is the description of the sequence of processing steps they use for a particular data processing task – their data analysis pipeline.

Workflows are executed by machine to assist the researcher in systematically processing the deluge of data today's research – the computer gets on with the repetitive and mundane work so that the researcher can focus on their research.

Workflows and Digital Libraries

Making a workflow part of the research record is a way of capturing the methods used in a piece of research – it makes it easier to interpret the results, and helps repeat and reproduce it. Sharing workflows is also a powerful way of sharing expertise, so that researchers can reuse and repurpose research techniques within and across domains.
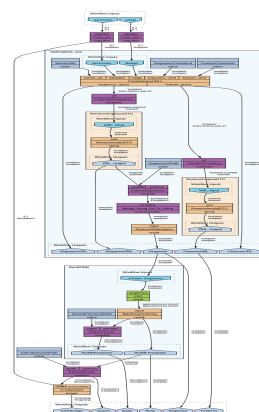
This is why it's important to bring together workflows and digital libraries, which is the purpose of the the Wf4Ever project – together we have the basis for an important transformation in Scholarly Communication. And together we can tackle one very important challenge: the **preservation of workflows**.

The Wf4Ever approach

Repeatable, reproducible and repurposeable research isn't just about capturing the workflow description, it also needs all the pieces around that such as the input and output data and execution records. Hence we are working with **Research Objects** – digital artefacts which bundle together all the components of a piece of executable research, including the **provenance** of data. And we are taking a holistic view of the social life of these Research Objects, from recommendation through to repair.

Our Partnership

Wf4Ever brings together the teams behind a major workflow system (Taverna), the largest open repository of scientific workflows (myExperiment), a leading digital library system (dLibra) and many successful projects in semantic e-Science – working closely with scientists in our two important exemplar areas: **astronomy** and **genomics**.

www.wf4ever-project.org