

# Coordinated Reuse and Deployment for Scientific Software Prototypes with D-UEA-ST

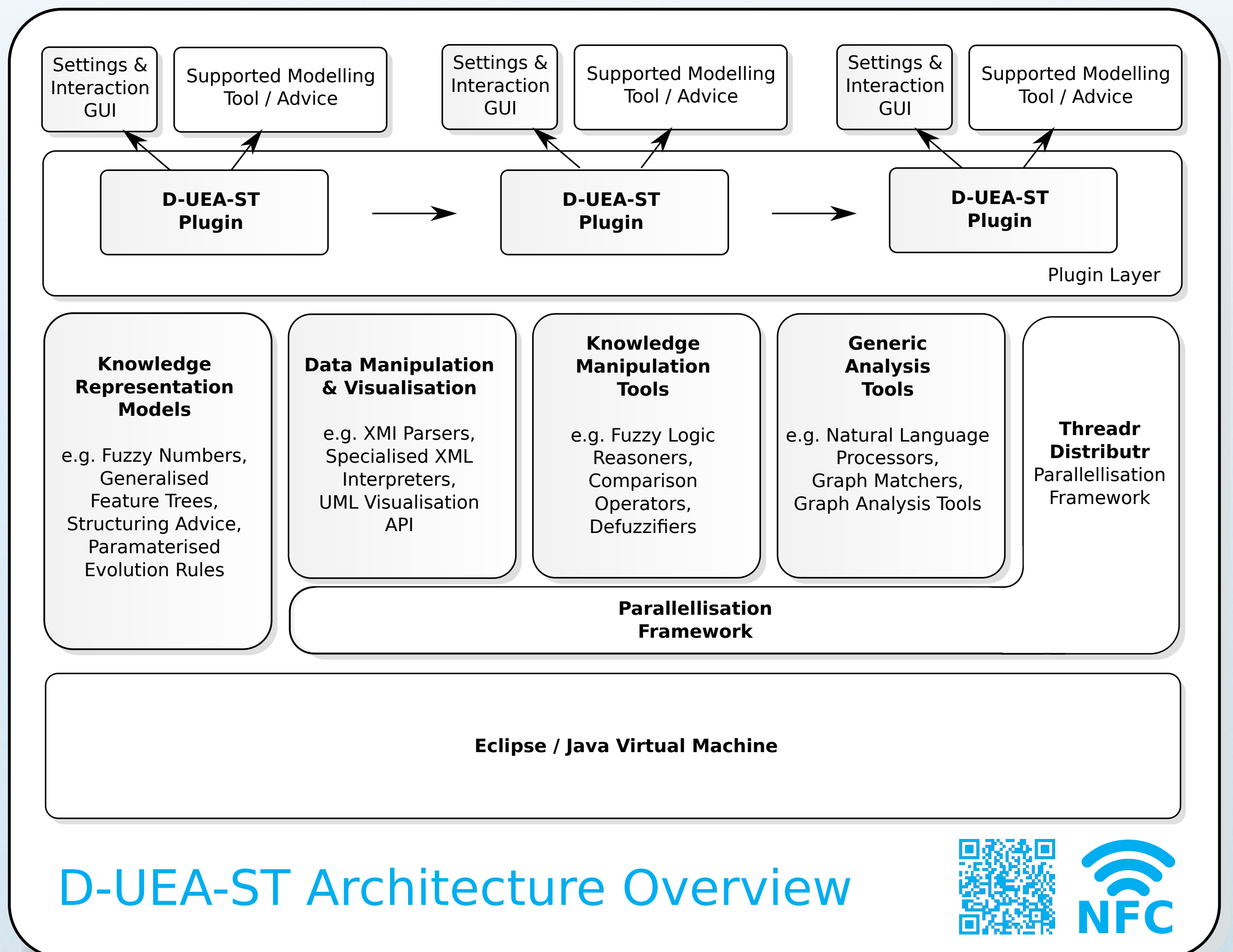
## Overview



D-UEA-ST (pronounced due east) is a plugin architecture that enables easy development of scientific software prototypes aimed at supporting software developers. Prototypes are developed as D-UEA-ST plugins that make use of knowledge representation models, reasoners and optimisers, and visualisation APIs.

D-UEA-ST also defines a clear workflow that allows for continuous integration and deployment. This makes it easy for target users to try the tools and for researchers to get rapid feedback.

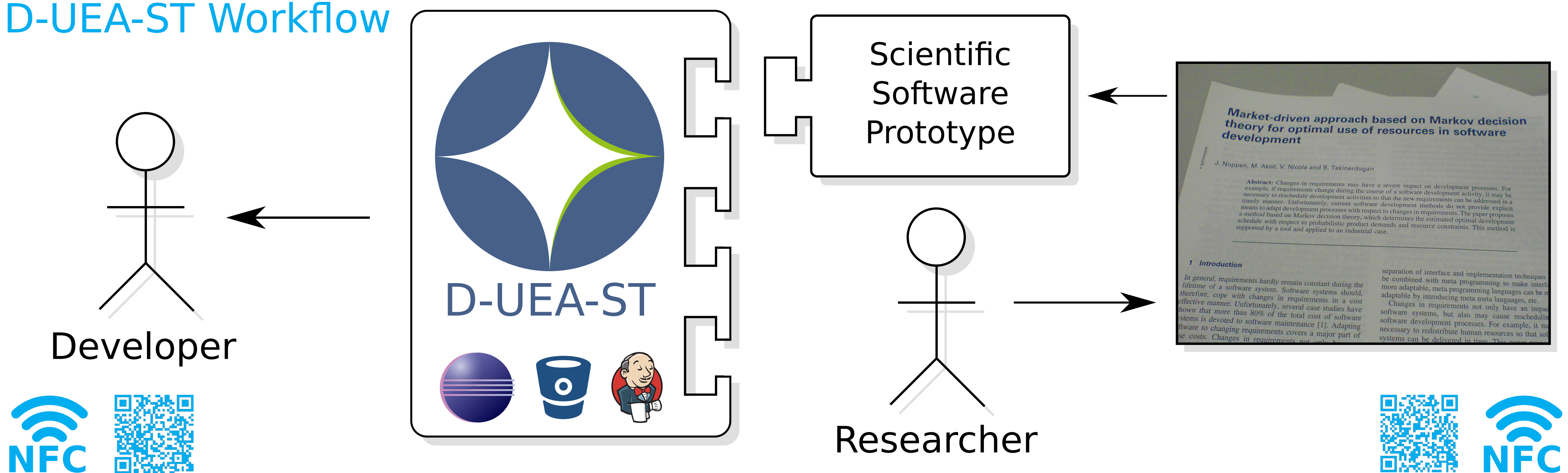
Tap the NFC or scan the QR tags for additional video content or to visit the project website.



D-UEA-ST Architecture Overview



## D-UEA-ST Workflow



## Deployment and Usage

D-UEA-ST is itself an Eclipse plugin, which makes distribution of research software easy. Developers who wish to use a software prototype simply download D-UEA-ST as a dropin or subscribe to an update site.

D-UEA-ST comes with full continuous integration support via Bitbucket and Jenkins, allowing for group based development and rapid deployment.

Research groups can create their own instance of D-UEA-ST and extend its architecture to tailor their reuse and research prototypes delivery.

<http://seg.cmp.uea.ac.uk/software/dueast/>

## Development using D-UEA-ST

Researchers developing prototypes based on their research with D-UEA-ST get access to a large range of existing libraries in its architecture that help with knowledge representation, data analysis and visualisation.

The D-UEA-ST architecture defines explicit APIs and plugin communication mechanisms that enables access to functionality of other software prototypes. This mechanism further enhances reuse possibilities while keeping code dependency to a minimum.

The Threadr parallelisation framework allows for easy to use parallel execution of independent analysis tasks, even if the source is not thread-safe. Distributr offers support to run these tasks on any number of remote machines with a direct network connection to the host.

