MIND STEP

MODELLING INDIVIDUAL DECISIONS TO SUPPORT THE EUROPEAN POLICIES RELATED TO AGRICULTURE

Summary of Deliverable D 7.5: Setup of the version control system and the continuous integration tool

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1. BACKGROUND AND CONTEXT

The aim of the deliberable was to further the collaborative development of models and the elaboration of data sets within the MIND STEP context. Models and datasets comprise collections of files whose evolution should be carefully managed. This includes keeping track of who did what and when. A version control shystem (VCS) assists with the detailed bookkeeping involved in such managed evolution. The files being managed are kept in a repository that records the entire history of change. Continuous integration (CI) allows automation of actions tied to version control repositories, for example the automated testing of new code changes comitted to repositories. The capabilities of a CI system encourage more thorough and granual quality assurance. Deliverable 7.5 involved establishing appropriate shared VCS and CI IT infrastructure for collaborative use by project partners.

To gauge constraints, a questionnaire polled project partners for technical details of their models and development practices. It was found that a majority were familiar Subversion, one of the dominant Open Source VCSs. A minority of partners was familiar with Git, the more modern alternative. Experience with CI was limited but a large fraction of models was found to already have some test scripting in place that could be transformed for CI deployment.

2. INFRASTRUCTURE

The required infrastructure as provisionedis hosted on IIASA premises and is comprised of:

- A Subversion server (VCS).
- A Jenkins server (CI).
- A GitLab instance with a private MIND STEP space (VCS + CI).

In addition, a website was set up to provide technical detail and guidance to project partners on how to gain access to and use these resources.

3. OUTCOME

Beyond enabling collaboration, a positive outcome of the provided choice of infrastructure was that project partners made themselves familiar with the more modern Git VCS as well as the GitLab platform that integrates Git repository hosting with development and collaboration services. Over time, Git/GitLab became the preferred platform for hosting MIND STEP code and data collaboration. It is expected that the acquired skills will continue to benefit project partners in future research.

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