

The SPace ENVironment Information System (SPENVIS) - a new framework.

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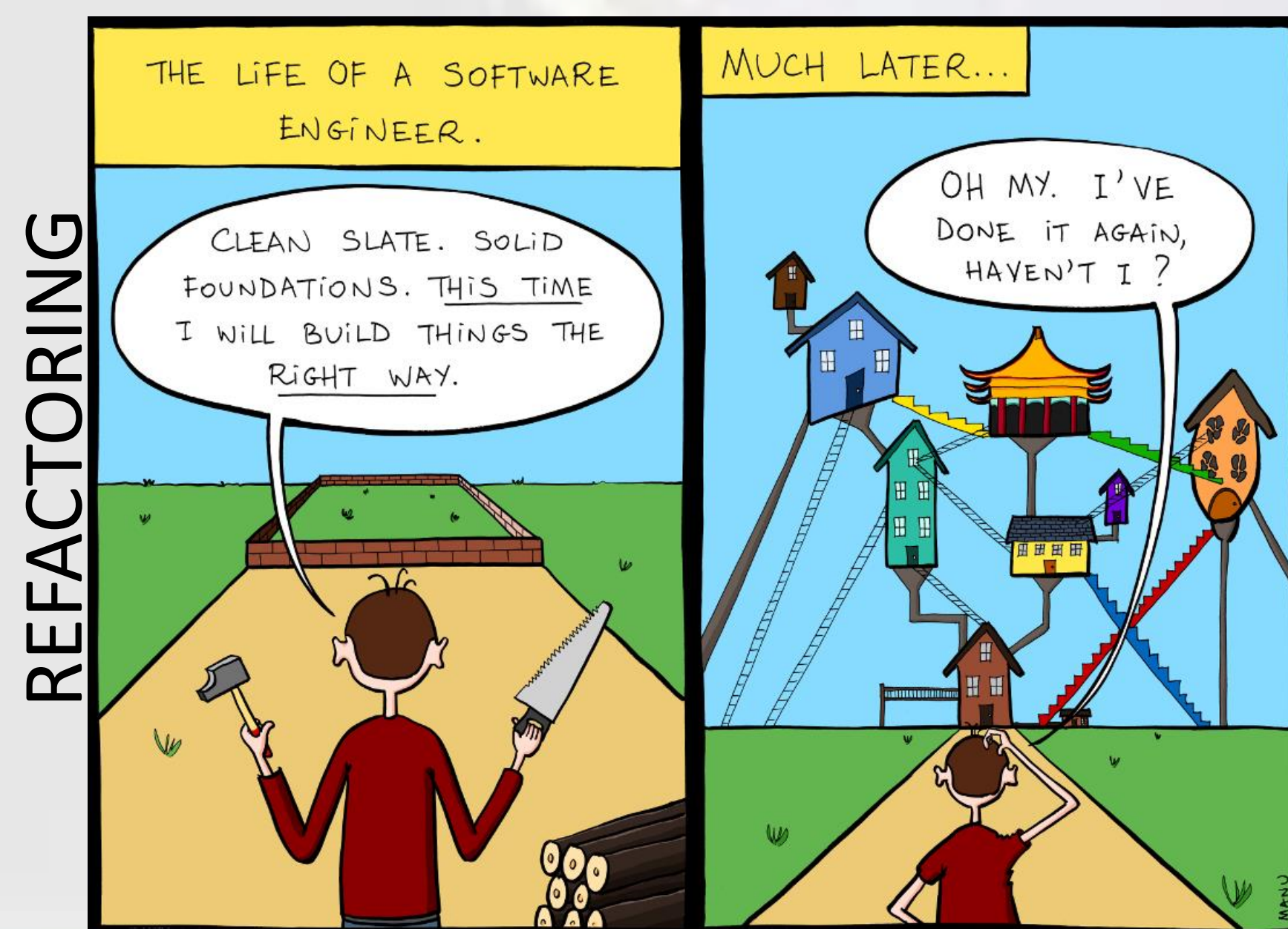
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In order to facilitate access to space environment and effects models, the SPace ENVironment Information System (SPENVIS) has been developed for ESA by BIRA-IASB since 1996, under ESA contracts. SPENVIS is a web-based interface to a comprehensive set of models of the space environment and its effects on spacecraft components and astronauts. SPENVIS has been operational for more than twenty years and has a large international user community who is using the system for various purposes like mission analysis and planning, education and scientific research.

We present the current status of the new SPENVIS system in development that is based on the Network of Models (NoM) concept and includes a complete new front-end design. In this new framework users will be able to run state-of-the-art space environment and effect models through the GUI or a REST API. Furthermore, the system will allow users to construct their own workflows for running various scenarios of chained models starting from a single particle energy spectrum or generated/uploaded spacecraft trajectory up to environmental effects.

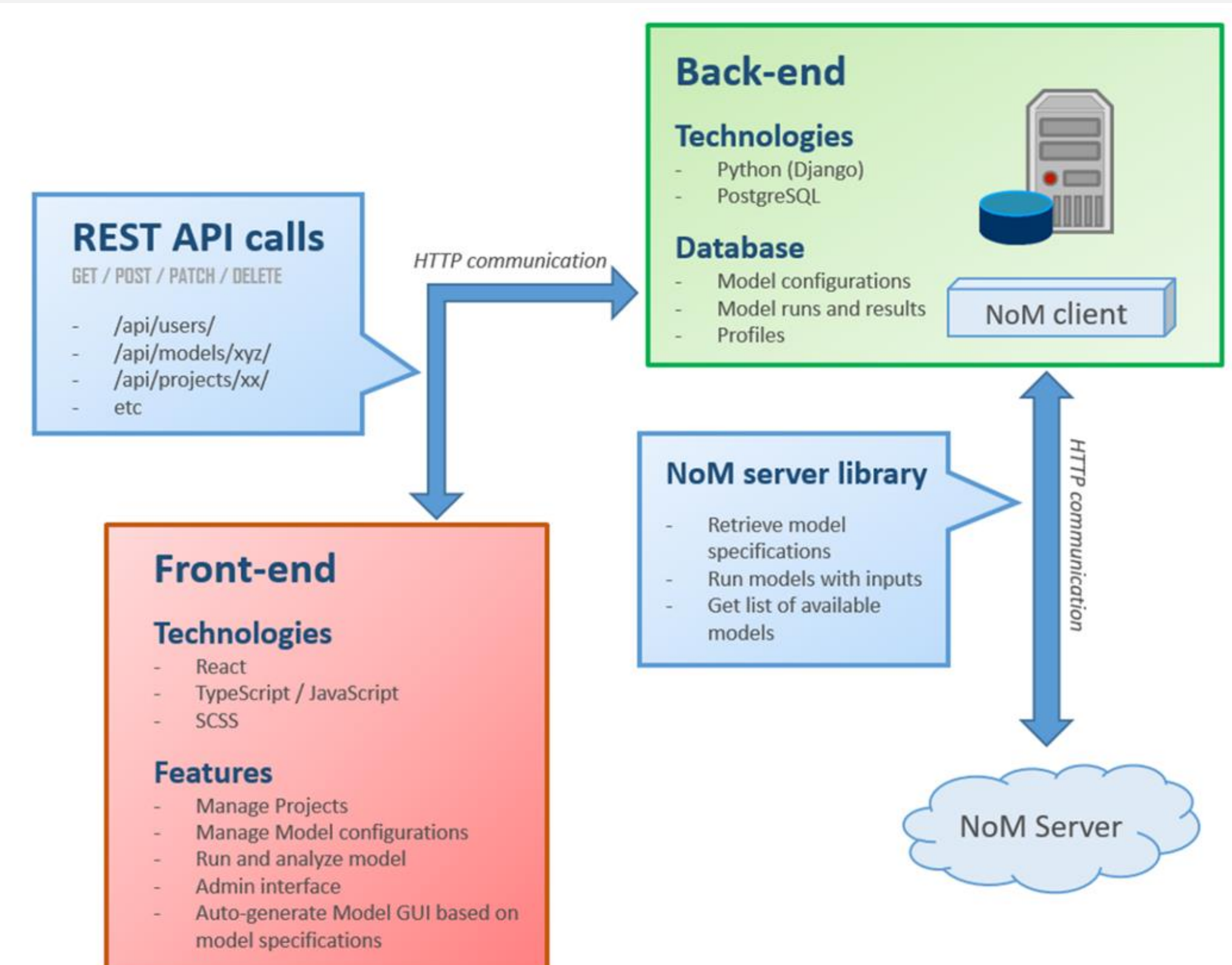
GOALS

- ❑ Increase flexibility and granularity of the system
- ❑ Modernise the SPENVIS Graphical User Interface (GUI) and enhance the user experience
- ❑ Provide a consistent and expandable interface to models and tools
- ❑ Provide a SPENVIS Application Programming Interface (API)

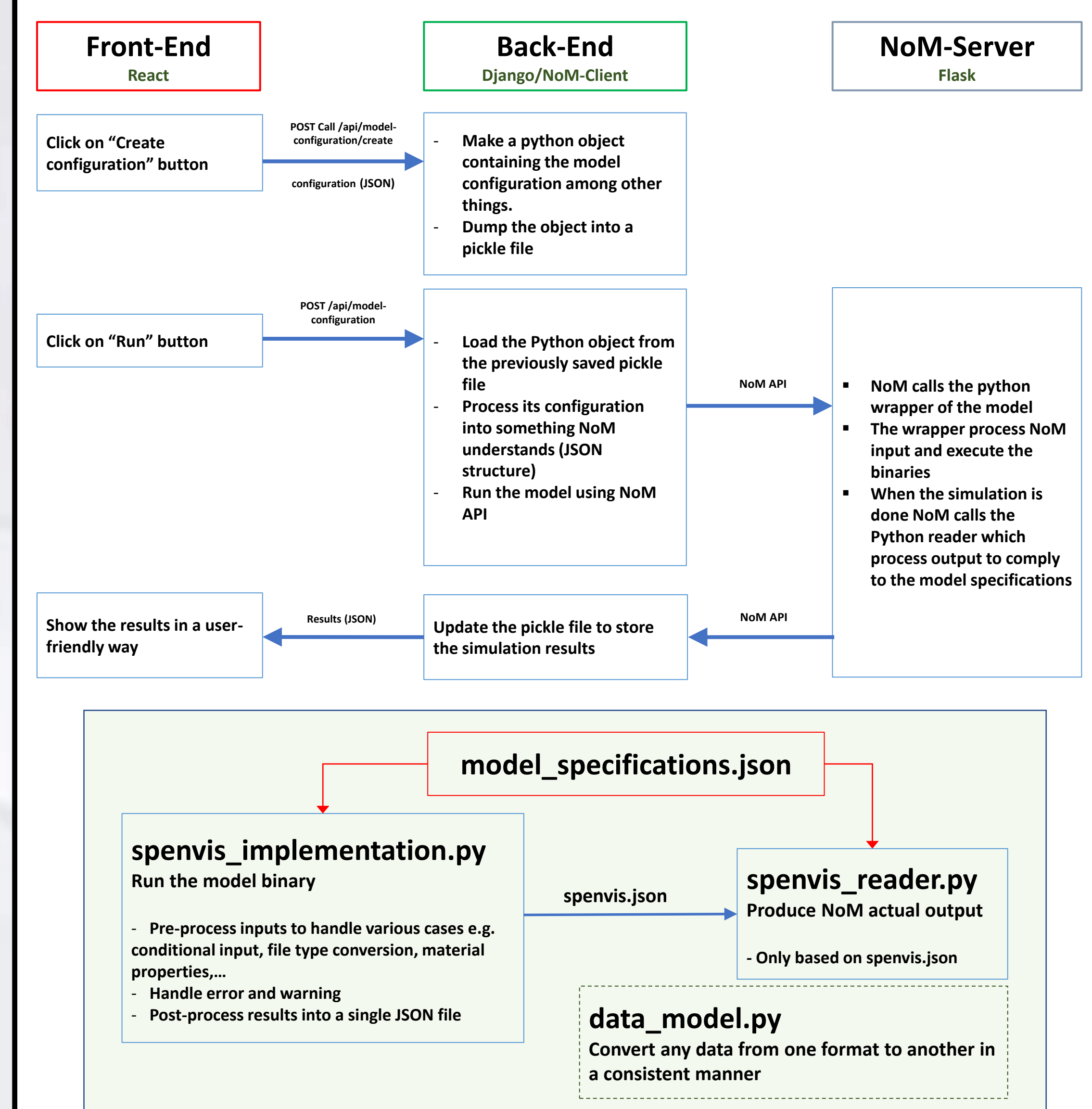


(<https://bids.berkeley.edu/news/joy-code-refactoring>)

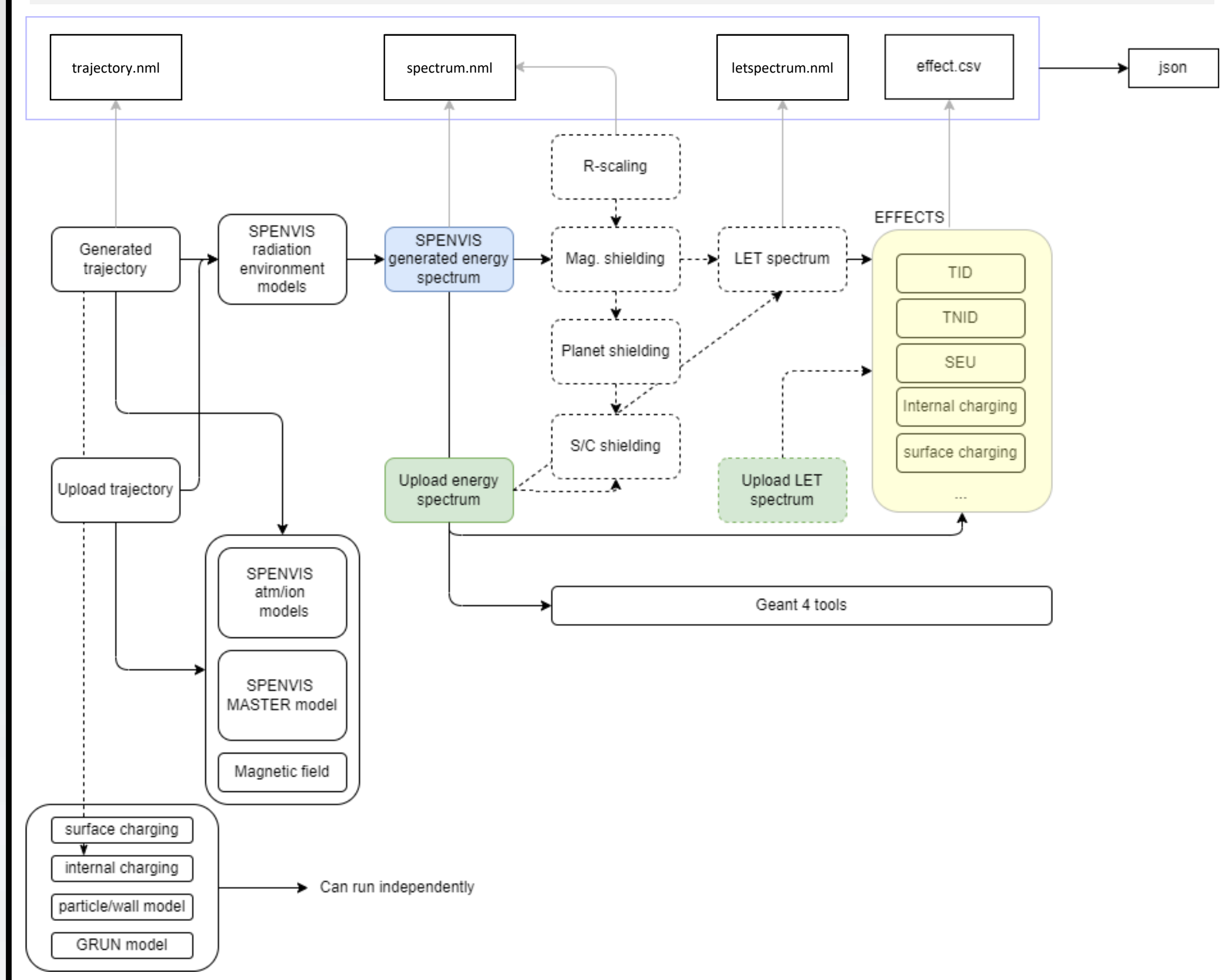
SPENVIS framework architecture



SPENVIS model runs



SPENVIS workflows



SPENVIS mission analysis tool

