MODASTI

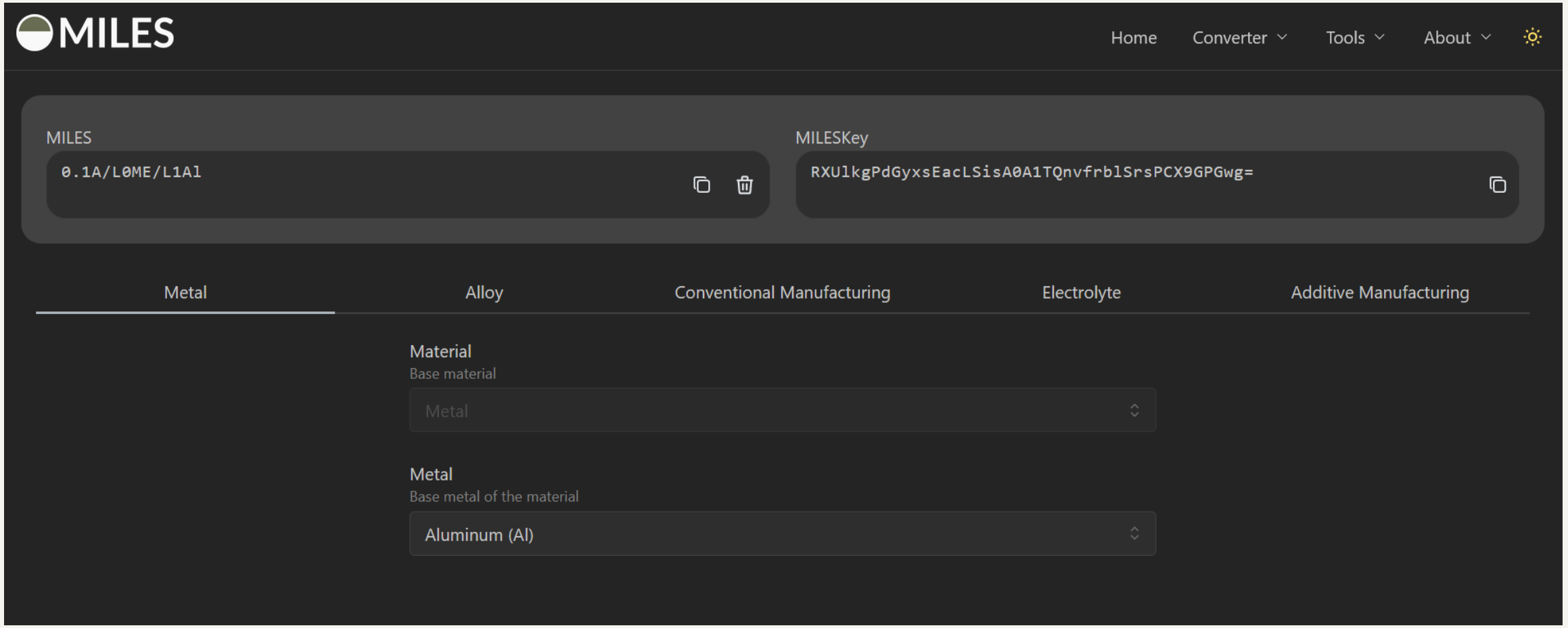
Modular Assessment of Impacts

An infrastructure proposal for
experimentation in life cycle impact assessment

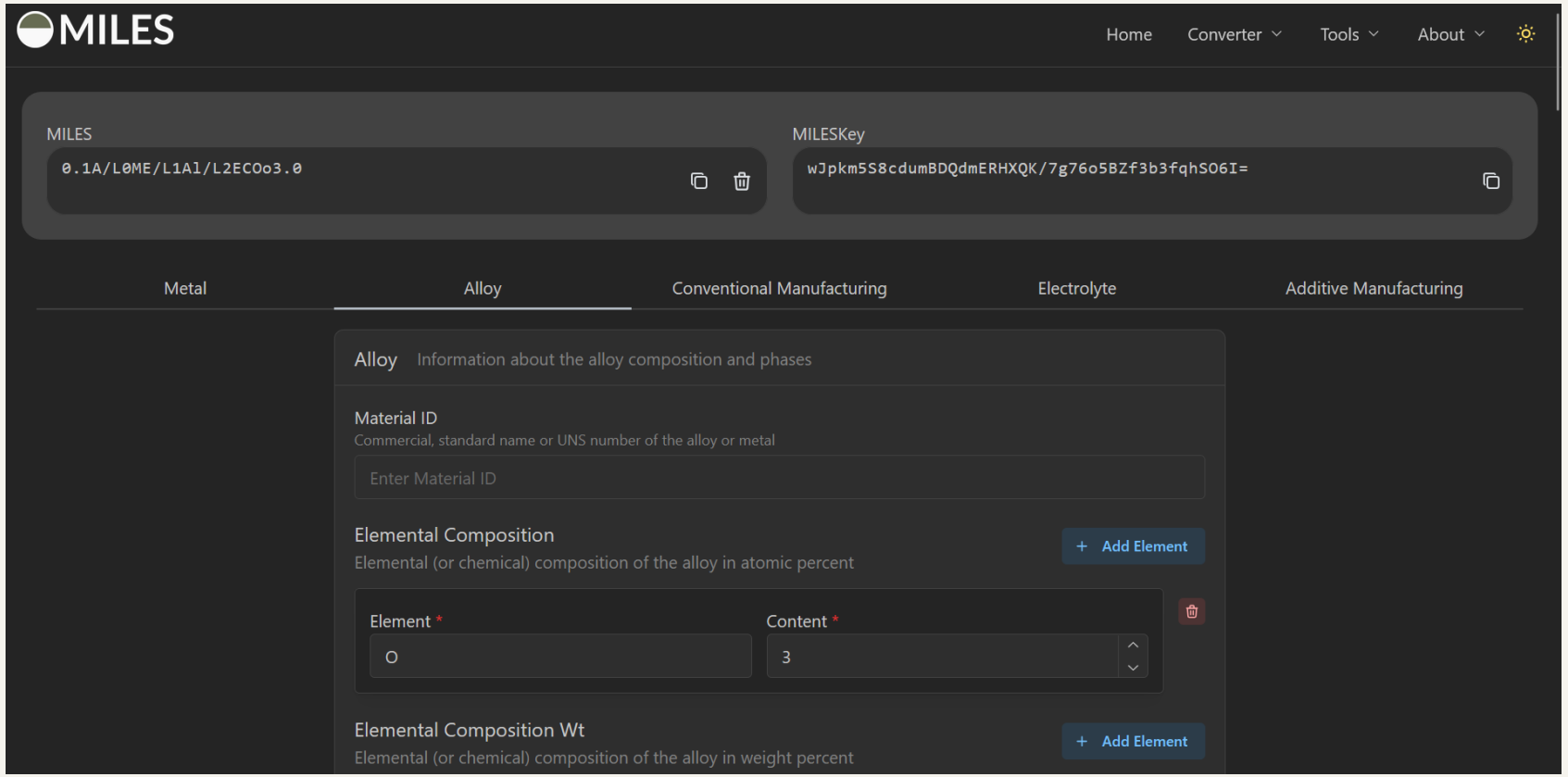
Brightcon 2026 workshop

The inspiration: MILES

A GUI assembles a surface description and produces a key.

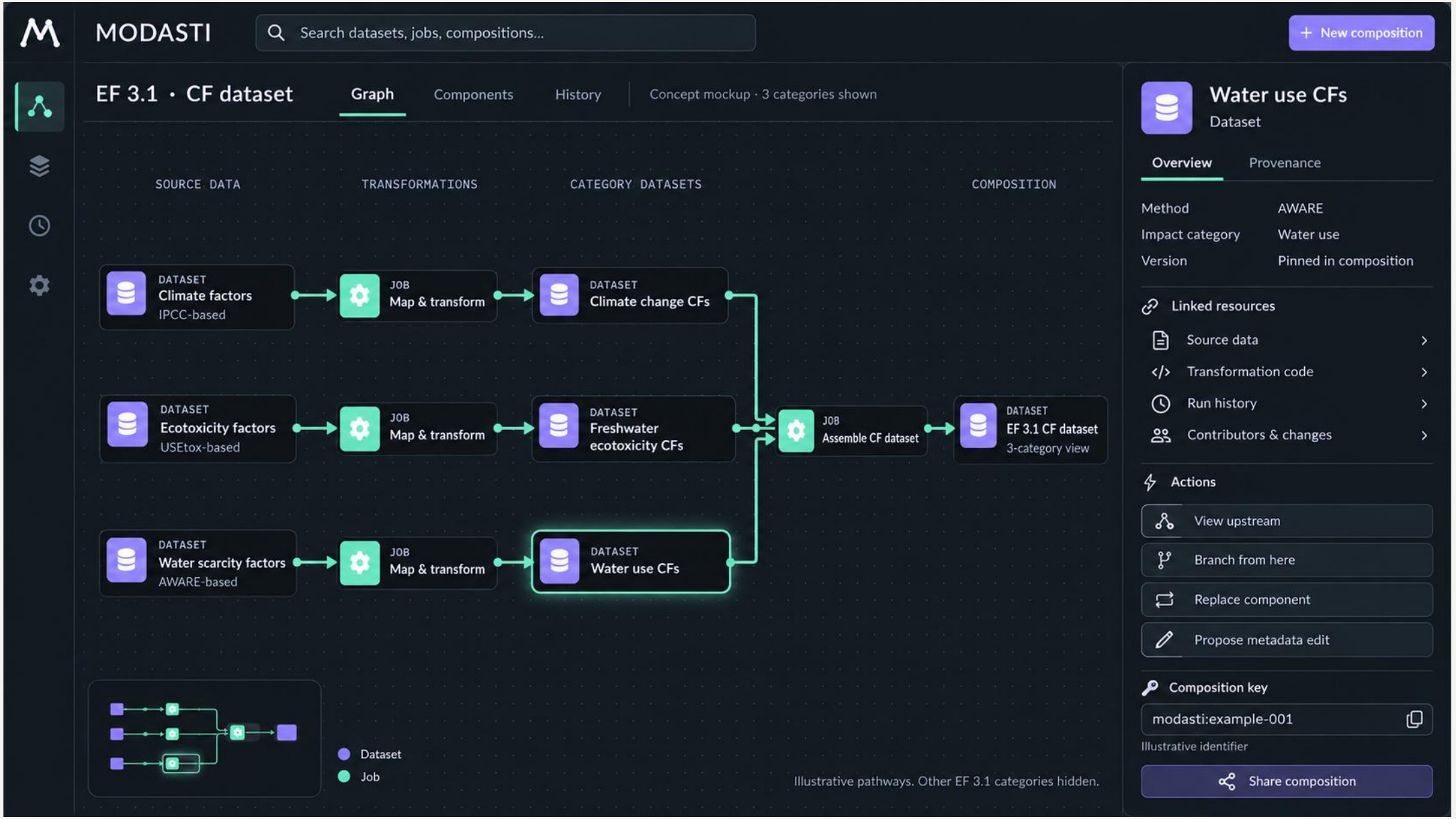


A changed composition, a changed key



What if we could assemble an LCIA composition this way?

A possible structure



Understanding the CFs I use

01

“How were these characterisation factors created?”

01 Open a dataset and follow its upstream pathway.

02 Inspect sources, jobs, authors and recorded decisions.

03 Open the supporting code, data and documentation.

Result: an inspectable explanation of the dataset’s provenance.

Replacing one impact method

02

“I want EF 3.1 with a different USEtox version.”

01 Start with an existing composition.

02 Replace the relevant category method and record its version.

03 Generate a new identifier and share the composition.

Proposed integration: resolve the identifier for use in Brightway.

Continuing from an intermediate dataset

03

“I want this pathway, but only up to this point.”

01 Select an intermediate output in the pathway.

02 Retrieve it or reproduce it from the recorded inputs and jobs.

03 Branch at that point and add your own transformation.

Result: a new research pathway that retains its upstream history.

Contributing reusable work

04

“I have a mapping that others could use.”

01 Add a dataset, mapping, filter or transformation job.

02 Describe its inputs, outputs, version and conditions of reuse.

03 Link it to the pathways where it can contribute.

Result: others can discover the component and build on it.

Improving shared metadata

05

“This description needs a clarification.”

01 Propose an edit to the existing description.

02 The author or responsible maintainer reviews the change.

03 An accepted revision preserves the contribution history.

Result: shared descriptions improve through a review process.

Using regional data

06

“I want to test a more detailed regional scarcity raster.”

01 Start with an AWARE-based pathway.

02 Substitute the regional input and add any needed mapping.

03 Recompute the affected outputs and retain other selections.

Result: a regional variant with a traceable record of the change.

Questions for the small groups

01 Value and overlap	Which problems matter? What existing projects could we build on?
02 Architecture	What should MODASTI store, reference or execute? What are the connection points?
03 Schemas and connections	How do we describe components and supply missing mappings?
04 Contributions and governance	Who reviews changes, maintains components and receives credit?
05 First demonstrator	What small example would show value? Who could help test it?

Small-group discussion

Choose a topic and form a small group.
Discuss the questions and sketch an idea.

Each group shares

One recommendation
One unresolved question
One concrete next step

A short report to everyone, supported by your sketch or notes.

Interested in collaborating?

Message me to collaborate

Work email: nico.mumm@uni-a.de

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