To reusability... and beyond!

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Houston, we have a problem...
Reproducibility crisis

“70% of researchers have tried and failed to reproduce another scientist's experiments”

“52% agree there is a reproducibility crisis”

1: https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970
Reproducibility in HEP

Collaborations publish papers even after 15 years from the data taking end.

![Graph showing ZEUS published and anticipated data](image.jpg)
...but there might be a solution!
Reproducible research data analysis platform

Flexible
Run many computational workflow engines.

Scalable
Support for remote compute clouds.

Reusable
Containerise once, reuse elsewhere. Cloud-native.

Free
Free Software. GPL licence. Made with ❤️ at CERN.
REANA’s approach

There are 4 questions to be answered:

1. Code?

2. Input data?

3. Environment?

4. Analysis workflow?

(reana.io diagram with steps for structure analysis, selecting a REANA cluster, and running analysis)
Could we go.... beyond?
Introducing REANA-UI!

Let’s provide a dashboard

In addition to the CLI
Wireframes and discussion

Yeah, it is necessary...
Technologies

**REACT**: Building the interface

**SEMANTIC**: Giving style

**REDUX**: Managing state

**VIS.js**: Visualizing analyses
Remember inputs?
Remember env?
Remember analysis?
Remember code?
Even outputs show up
REANA-Ul: Future work

Public analyses

Mobile friendly Ul

Create analysis from the UI

Analysis logs filtering
By the way...

REANA 0.3.0 is about to be released
Contact us!

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Additional resources:

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