Our software focus in the context of the software EoI

A WORKFLOW-CENTRIC SOFTWARE APPROACH FOR EIC

- **Workflows -** *leveraging the power of GitLab CI*
  - ✓ Automized simulation-reconstruction-analysis pipelines
  - ✓ Low bar of entry, were able to onboard external collaborators (students!) with minimal training, already doing valuable work.
  - ✓ **next:** build out analysis portfolio, better dispatch to HPC, persistent distributed data storage, “publish” benchmark results through GitLab Pages

- **Detector simulations**
  - ✓ Geometry and simulation tooling around DD4hep
  - ✓ **next:** develop library of parametrized detector concepts, accelerate simulation with GANs
- **Reconstruction**
  - ✓ Functioning generic tracking with ACTS (and Gaudi)
  - ✓ **next:** reconstruction for other subsystems, improve task-based concurrency, accelerate part of workflow on GPUs, or with AI.
- **Data model**
  - ✓ Data model definition with podio
  - ✓ **next:** optimize and freeze exact data model, together with community
- **Explore user-centered design**
  - ✓ Modular workflow with low bar of entry for analysis
  - ✓ **next:** automatic publication of pipeline results to website
- **Data analysis preservation:**
  - ✓ Analysis as part of benchmark portfolio pipeline
  - ✓ **next:** website to aggregate analysis results and monitor quality of results (in the vein of benchmarks/tests).
- **Discoverable software**
  - ✓ Software pipeline fully containerized, software stack built and managed with Spack
  - ✓ **next:** integration of newer software tools with Spack