

# **ePIC Collaborative tools**

**Peter Steinberg, for the ePIC Collaboration Tools PD / 17 June 2026**

# What are “collaborative tools”

- **Everyone has a somewhat different answer to this question!**
- **In recent years, I think it’s fair to say the word reflects the various services that an experiment needs to get on with its daily work**
  - Organization
  - Membership
  - Tasks and planning
  - Communication
  - Meetings
  - Privacy
  - Documents, especially publications and talks (and their approvals, which requires input from all of the above)
- **At CERN, many of these things were developed iteratively and lab-wide**
  - BNL left these functions to the experiments
- **With the current funding environment, experiments are much leaner and there is little/no support for this**
  - In recent years, trend seemed to be to make the best of what we have, with relatively little development

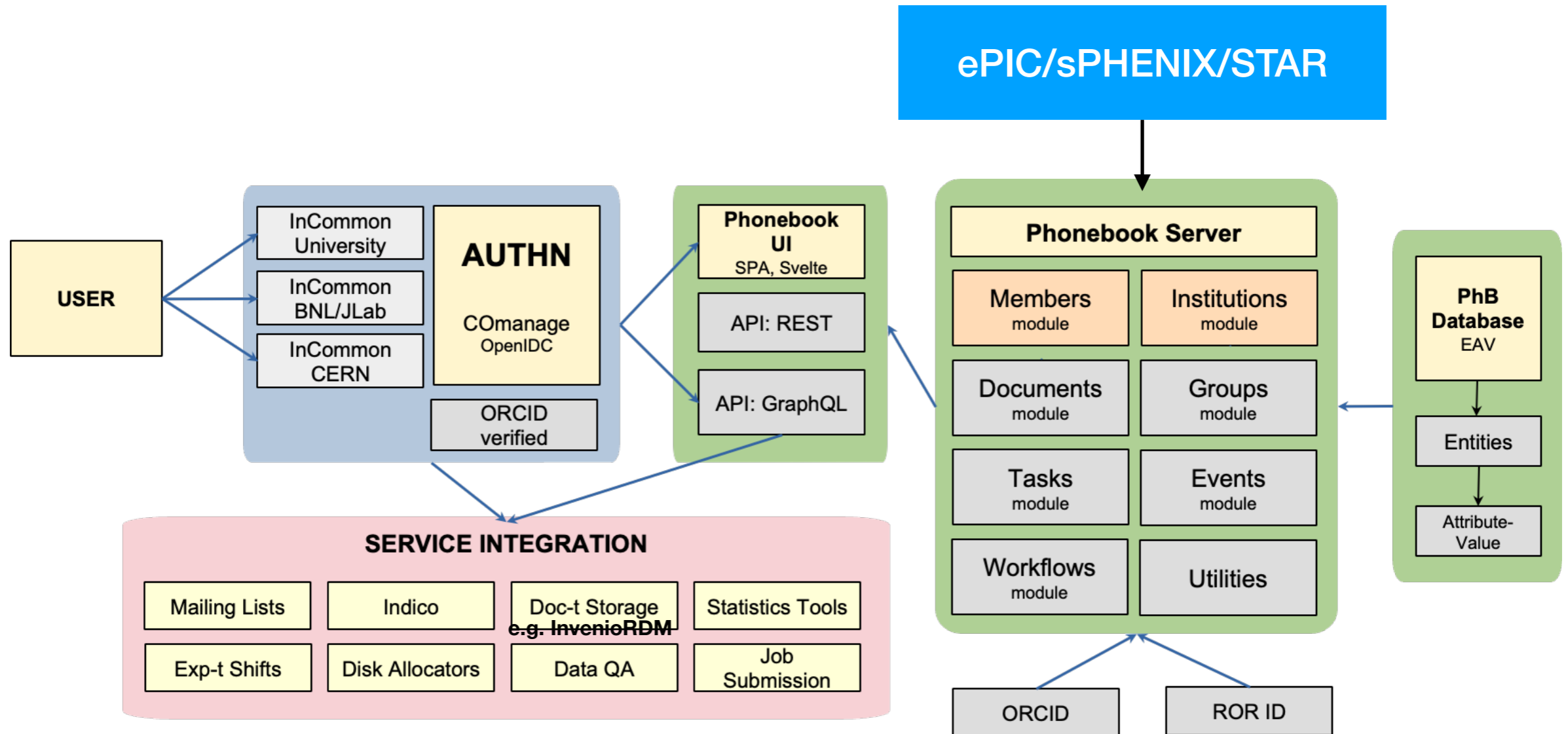
# ePIC collaborative tools PD

- **Earliest discussions I can remember for EIC were in 2021/2022 as part of ECCE and Athena collaborations**
  - Realization that there were no turnkey options for managing any of these resources
  - e.g. ECCE had 10s of notes, and lots of things to approve, and so we had to develop (cobble together) lists of spreadsheets
- **Started in FY2024, run by E. Lancon**
  - Goals were to develop a set of modern tools to help the ePIC experiment
  - Less development in those days
- **Eric moved to another PD for DAP, and further discussions with SDCC led to a new group structure with new PI's**
  - Ofer Rind/Peter Steinberg - co-PIs
    - *Dovetailed with my role on ePIC as membership chair*
  - Uma Ganapathy - invenioRDM developer
  - Eric Lancon - UX/ePIC membership
  - Vincent Garonne - tool development & integration
  - Dmitry Arkhipkin - ePIC phonebook (membership database)
  - Rob Hancock - Comanage
  - Louis Pelosi - infrastructure
- **Finishing up in September 2026**
  - Important question about future support in the next FY

# “CRISP”: a suite of tools for ePIC

- **Tried to optimize work to explore new ideas while always being responsive to ePIC needs**
  - Ongoing process, with lots of discussions with ePIC SP, and various activity coordinators
- **CILogon/COmanage - provides federated login from many institutions (no need for SDCC account) and combines many different accounts into a single “Coperson”**
  - ORCID is a key piece of this - to uniquely identify each person, even if their name/institution/anything changes
- **Phonebook evolved into a full “membership database”**
  - Ground up development from Dmitry, and very dynamic evolution throughout last two years
  - Implemented full org chart of ePIC (detectors, physics groups, computing groups)
  - Lots of work this FY on “workflows” to manage the assignment of ePIC “things” (e.g. conference talks and ePIC publications), to authors, speakers, reviewers
    - *Modular setup to construct different processes for different tasks*
    - *Will be the tool to manage approval processes, and to allow proper access to them*
  - Expansion into collaboration management: membership, service tasks, etc.
    - *Eric developed an extensive “dashboard” to help with his role as ePIC membership chair*
- **Used as the authorization framework several crucial collaboration tools**
  - Meetings on Indico (managed by BNL ITD)
    - *Vincent Garonne developed a plugin to allow authorization for particular pages in a “managed area” (e.g. ePIC meetings) based on membership in ePIC or membership of specific groups*
  - Email groups on Sympa (managed by BNL ITD)
    - *Vincent developed a scheme to propagate ePIC group membership to sympy, to synchronize membership with specific email lists*
- **Also used to provide authorization framework for InvenioRDM, a document database (maintained by U. Ganapathy)**
  - Primary means to store and disseminate documents at different stages, from draft versions to final public form
  - Continually working with invenioRDM developers to maintain a set of custom features (many developed for sPHENIX), e.g. comments and notifications
  - Various instances to aid with new feature deployment, while maintaining consistency for the accessible instance
- **Git-based service development platform, key to management of a production service**
  - Used successfully for last invenioRDM upgrade cycle

# CRISP Architecture



# ePIC Dashboard

ePIC Membership Dashboard



Dashboard Version: v67

Authentication

Logged in as: steinberg@bnl.gov

Role: Rep of Brookhaven National Laboratory

Navigation

- Home
- Dashboard
- Reports
- Settings

Filters

Institution locked to Brookhaven National Laboratory

Year

2026

Active Filters:

Institution: Brookhaven National Laboratory

Year: 2026

Activity Overview

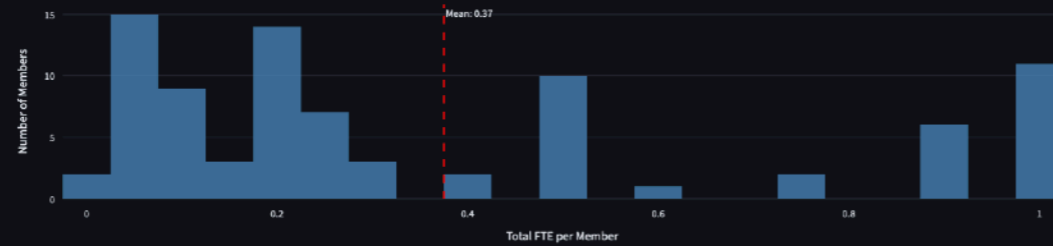
Total Activities  
23

Total FTE  
32

Total Contributors  
85

Member-Level FTE Distributions

FTE per Member (n=85) (2026)



Avg FTE / Member by Institution (n=1) (2026)

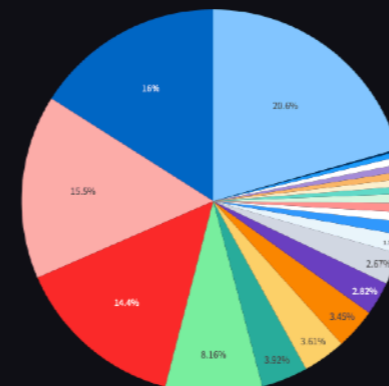


> Members with Total FTE  $\geq$  1.0 (n=11)

> Likely placeholder / dummy members (n=4)

FTE Distribution by Activity

FTE per Activity (Total: 32) (2026)



- Not Provided
- Other
- Backward RCH
- SI Trackers
- Streaming Computing Model
- Physics and Detector Simulation
- SI and Precision LW
- Forward HCAL
- Collaboration Council Chair Office
- Software and Computing Coordinator
- Exclusive Diffraction and Tagging
- Far Forward
- ACLSAD TDR
- Same HCAL
- Jet and Heavy Flavor
- Far Backward High Rate Tracker
- Forward LCAL
- Membership Committee
- Production
- Technical Coordination Office
- Software and Computing Coordinator
- Conferences and Talks Committee
- Electronics, Readout and DAQ

Activity Details

# Questions for the future

- **How to optimize further development, after the PD is over**
  - Nearly everyone involved at BNL at the moment will be around, and working part time
  - However, the formal “group” will have to evolve into new organization
  - The effort also needs more developers, e.g. to replace Vincent who left BNL in early 2026
- **This meeting with STAR, sPHENIX and ePIC**
  - To discuss the present and future requirements for each experiment
  - From our experience, it would seem challenging to maintain completely separate instances of each tool, with specific requirements for each experiment
- **It has been a very productive couple of years**
  - A good combination of development work, and effective middleware to leverage existing tools
  - We hope it has been useful to ePIC and that the experience, and future work, can benefit the other experiments