



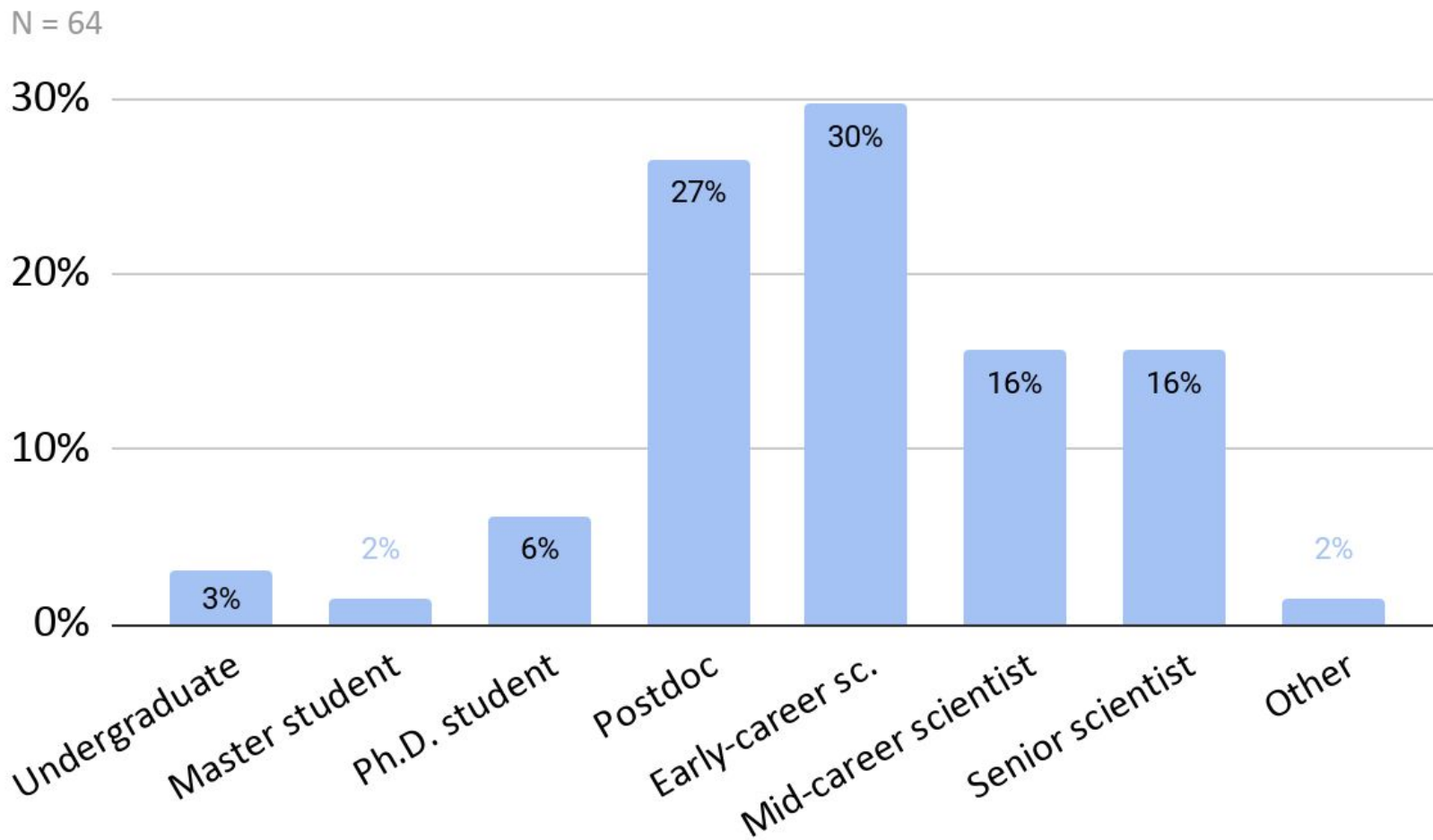
# ELECTRON ION COLLIDER USER GROUP STATE OF SOFTWARE SURVEY

Survey from February 16 – 23, 2021

The Software Working Group collected information on the community's specific software tools and practices during the Yellow Report Initiative. This *software census* will be essential to better understand and quantify software usage throughout the EIC community.

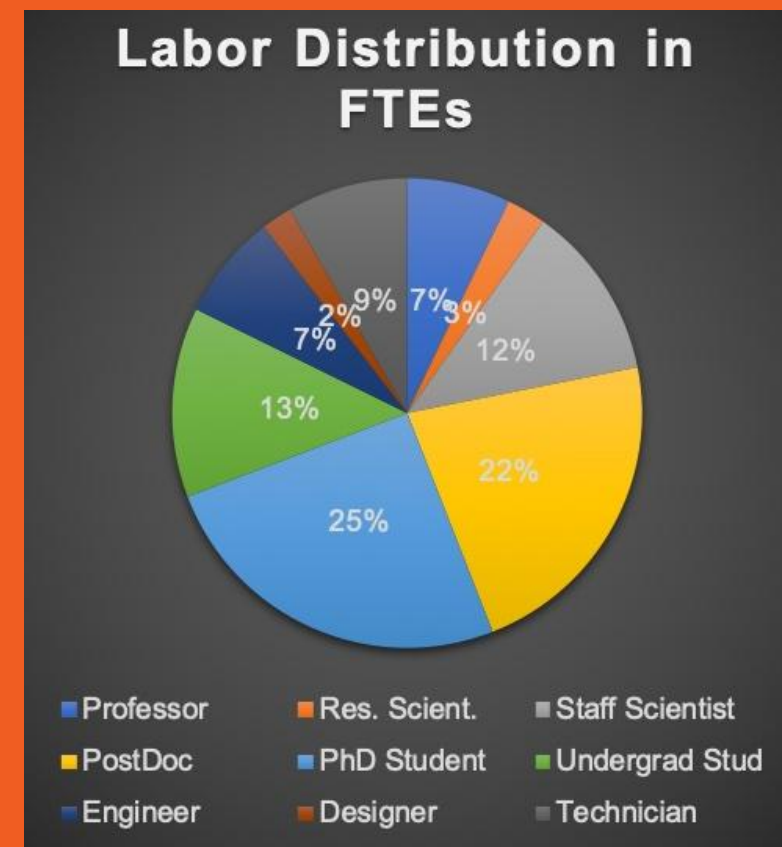
Survey results summarized by Wouter Deconinck (Manitoba), Markus Diefenthaler (JLab), Rebecca Duckett (JLab), Sylvester Joosten (ANL), and Kolja Kauder (BNL).

# What is your current role in the EIC project?



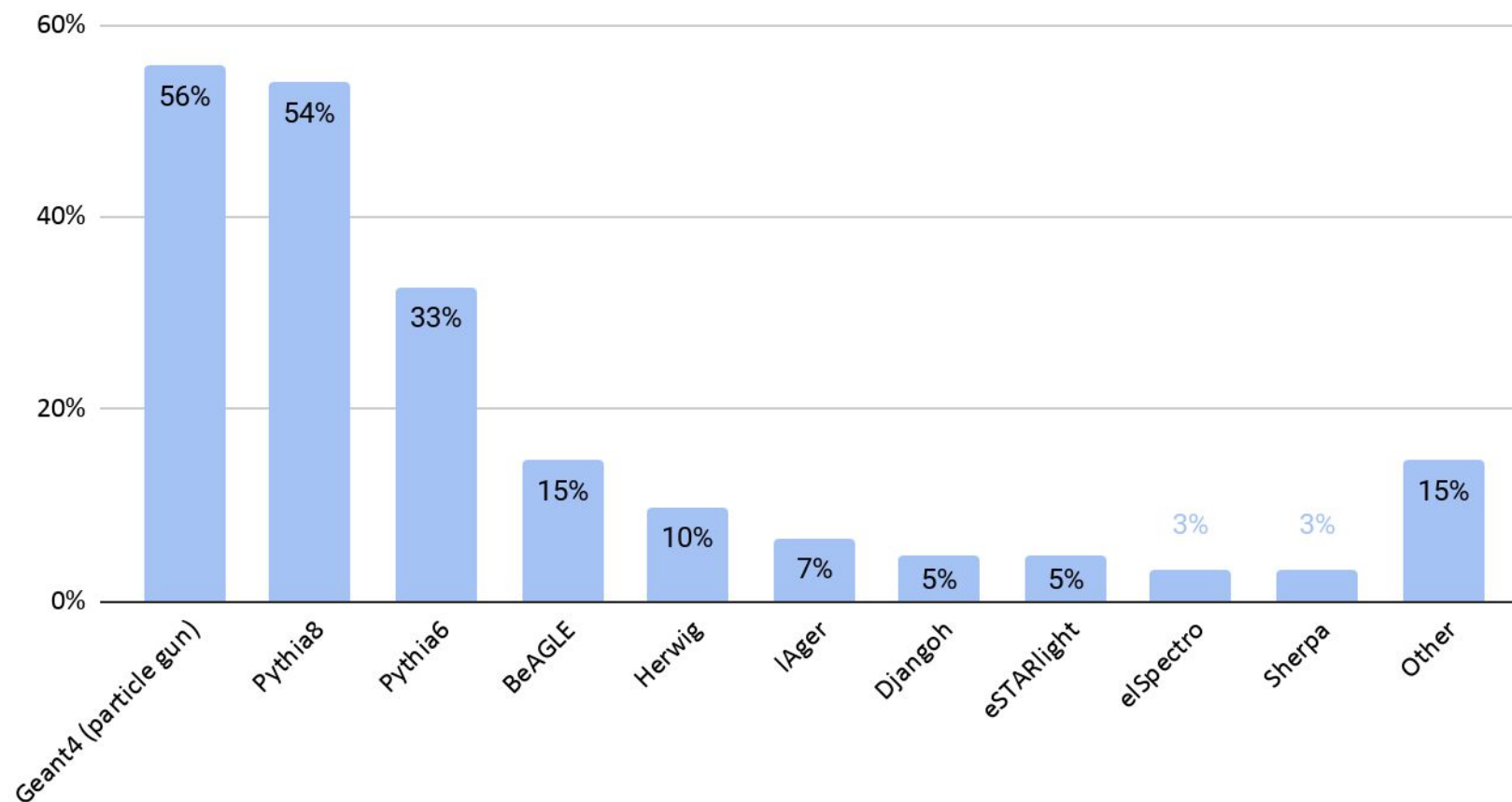
Other (N = 1): semi-retired senior researcher

**Feedback from Expression of Interests ([link](#))**  
Contributions from Ph.D. students and postdocs will increase over time.



# Over the past year, which physics event generation tools did you use for EIC simulations?

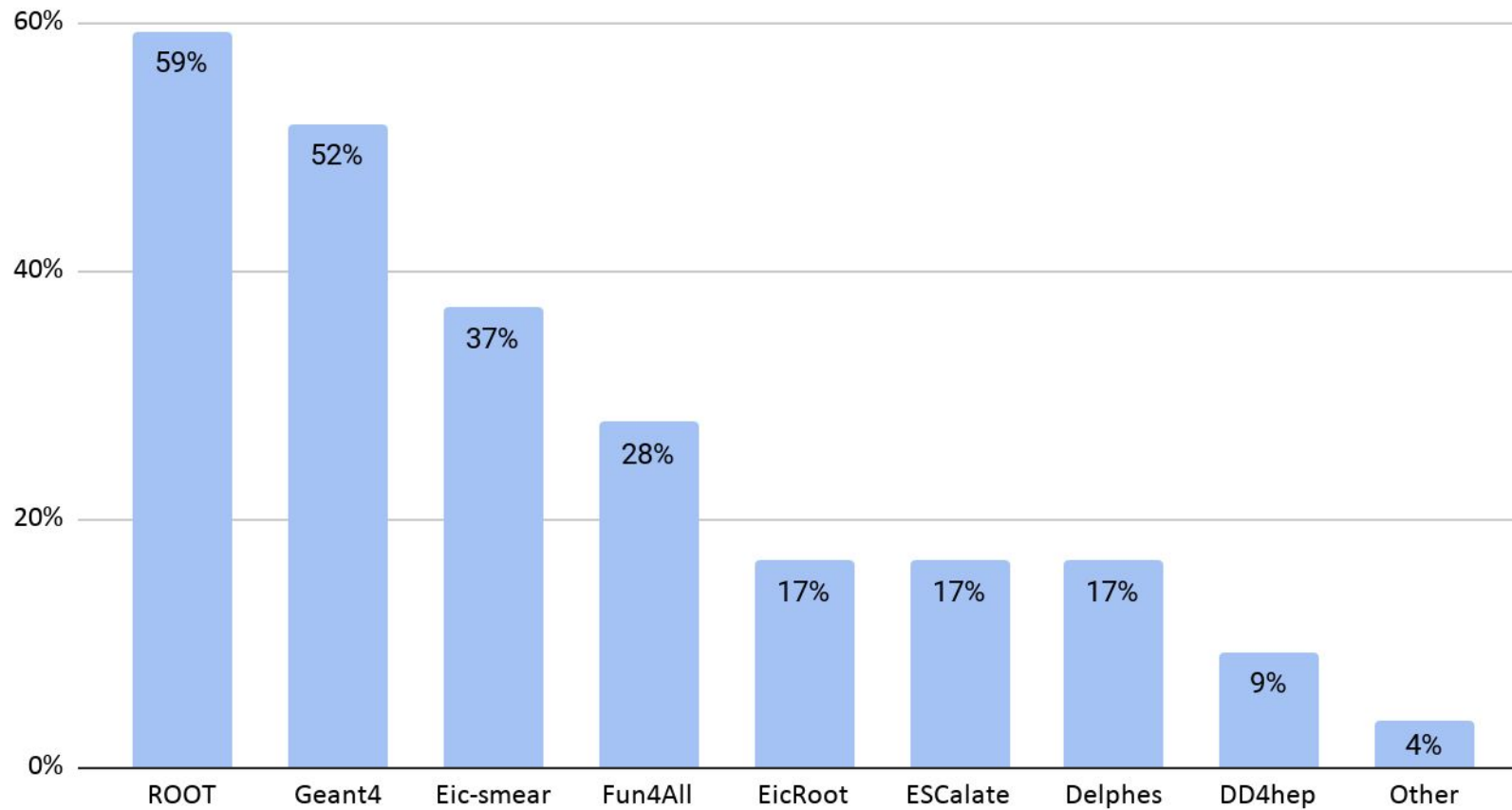
N = 61, average number of selected options = 2.0



Other (N = 9): personal computer codes (N = 2), ACT, CLASDIS, ComptonRad, GRAPE-DILEPTON, MADX, MILOU, OPERA, RAYTRACE, Sartre, Topeg, ZGOUBI

# Over the past year, which detector simulation tools did you use for EIC simulations?

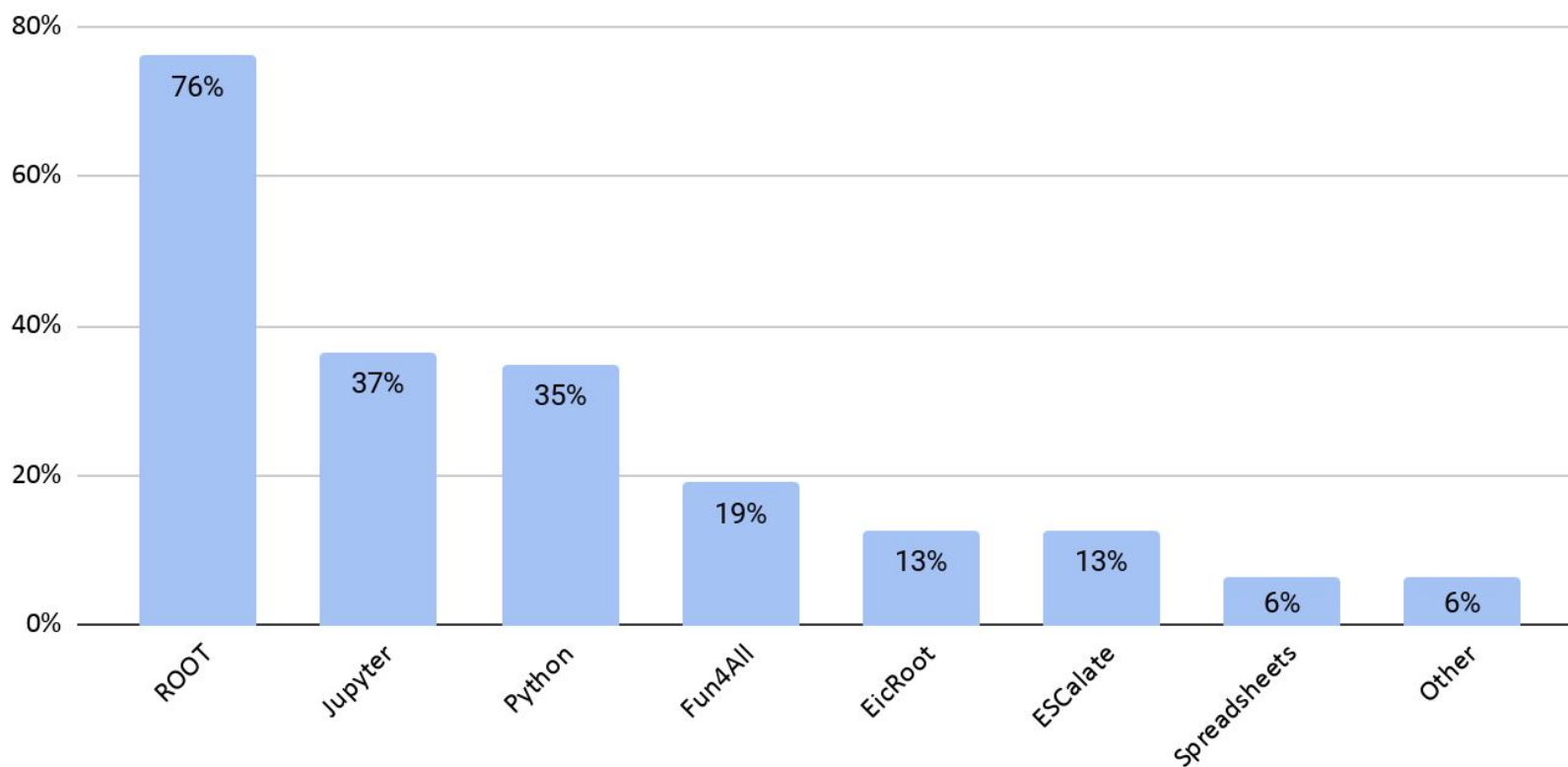
N = 54, average number of selected options = 2.4



Other (N = 2): GEMC, RAYTRACE

# Over the past year, which analysis tool(s) did you use for EIC simulations?

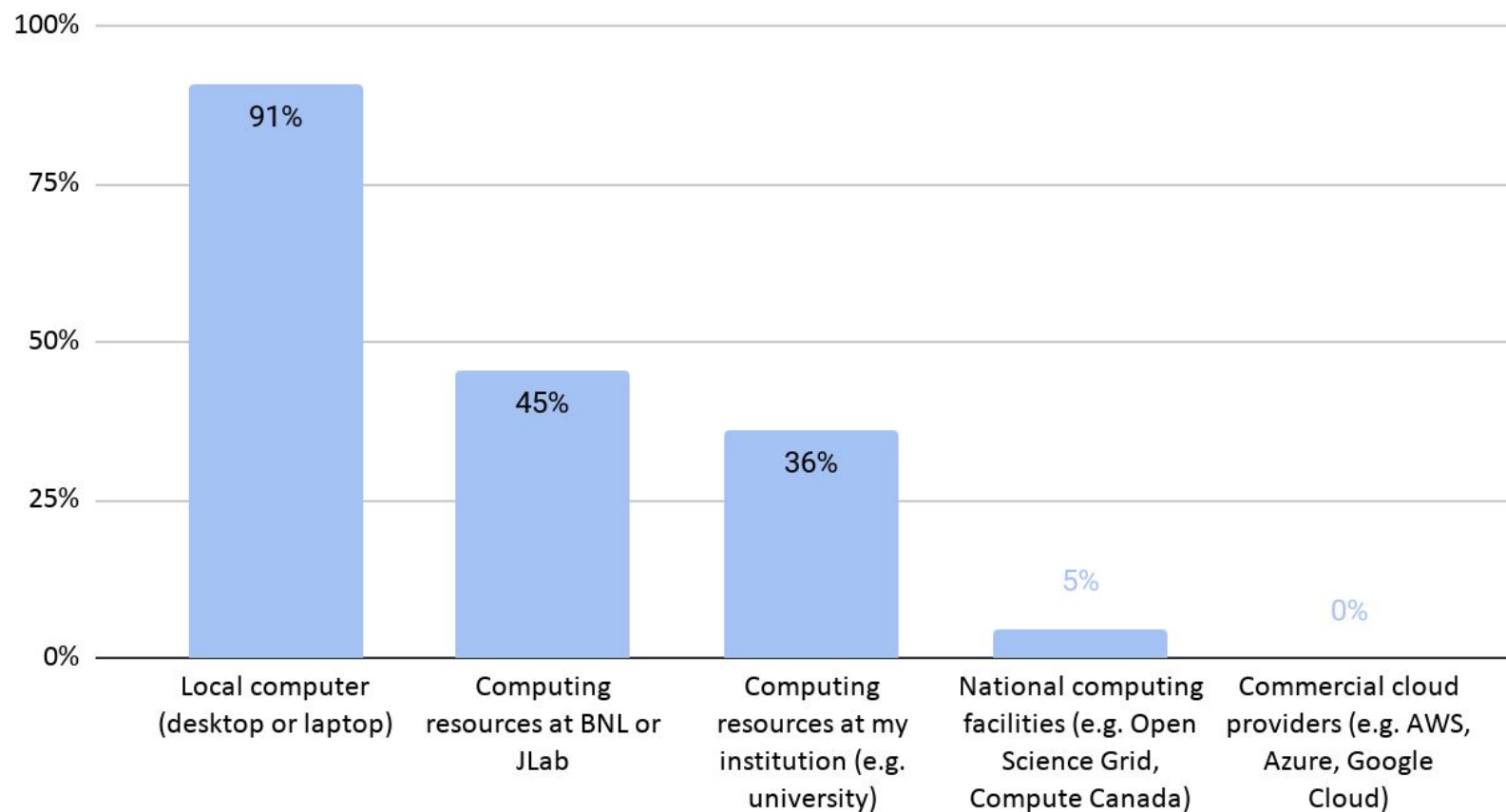
N = 63, average number of selected options = 2.1



Other (N = 4): Rivet, ACE3P, jas4pp, custom codes

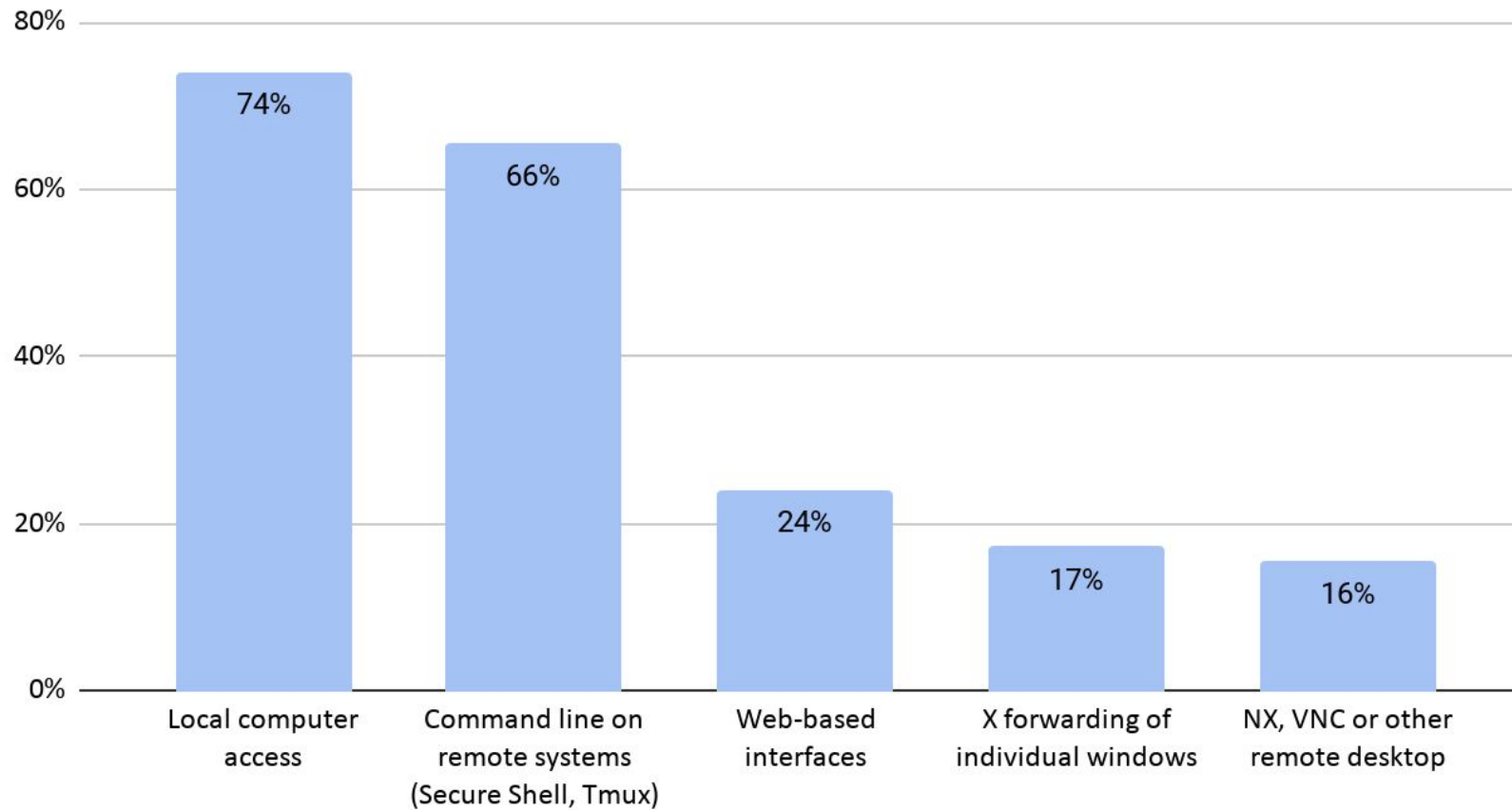
# Over the past year, which resources did you use for EIC simulation and analysis?

N = 64, average number of selected options = 1.8



# Over the past year, how did you access the computing resources for EIC analysis?

N = 58, average number of selected options = 2.0



# Do you have any comments on your current experience with EIC Software?

N = 9

There are too many generators and simulation tools used at the moment.

5 x

- Lack of documentation.
- More tutorials would be beneficial.

3 x

The group should focus on full Geant4 simulation.

1 x





# ELECTRON ION COLLIDER USER GROUP **STATE OF SOFTWARE SURVEY**

Thank you to everyone who participated in the EICUG State of Software survey. We would like to extend a special thanks to those who volunteered for the focus-group discussions. The Software Working Group will repeat the survey at the end of 2021 to compare results as we continue to design and build the Electron-Ion Collider.

## **Next steps**

- We will organize focus group discussions that will result in user stories.
- These user stories will provide input to software developers as to which users they are writing software for.