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## Mantid: Building a framework to last

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The Mantid[1] project was started by ISIS (RAL UK) in 2007 to provide a framework to perform data reduction and analysis for neutron and muon instruments and to accommodate the increasing data volumes from newer instruments[2]. The project has now been running for over 12 years and has grown into a significant international collaboration between ISIS, Oak Ridge National Laboratory, the European Spallation Source and the Institut Laue-Langevin, with the software relied on routinely by thousands of users worldwide.

The Mantid project initially started to support a small subset of instruments being built at target station 2 of ISIS, but has developed over time to support over 52 instruments across eight facilities worldwide. This talk will look at some of the design and development approaches highlighting those that have stood the test of time and those that needed to evolve over the course of the project. The talk will cover topics such as code quality/architecture, changing dependencies, management, development and quality processes.

[1] [www.mantidproject.org](http://www.mantidproject.org)

[2] O. Arnold, et al., Mantid—Data analysis and visualization package for neutron scattering and  $\mu$ SR experiments, Nuclear Instruments and Methods in Physics Research Section A, Volume 764, 11, 156-166 (2014), <http://dx.doi.org/10.1016/j.nima.2014.07.029>

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