

Technical Working Group Report

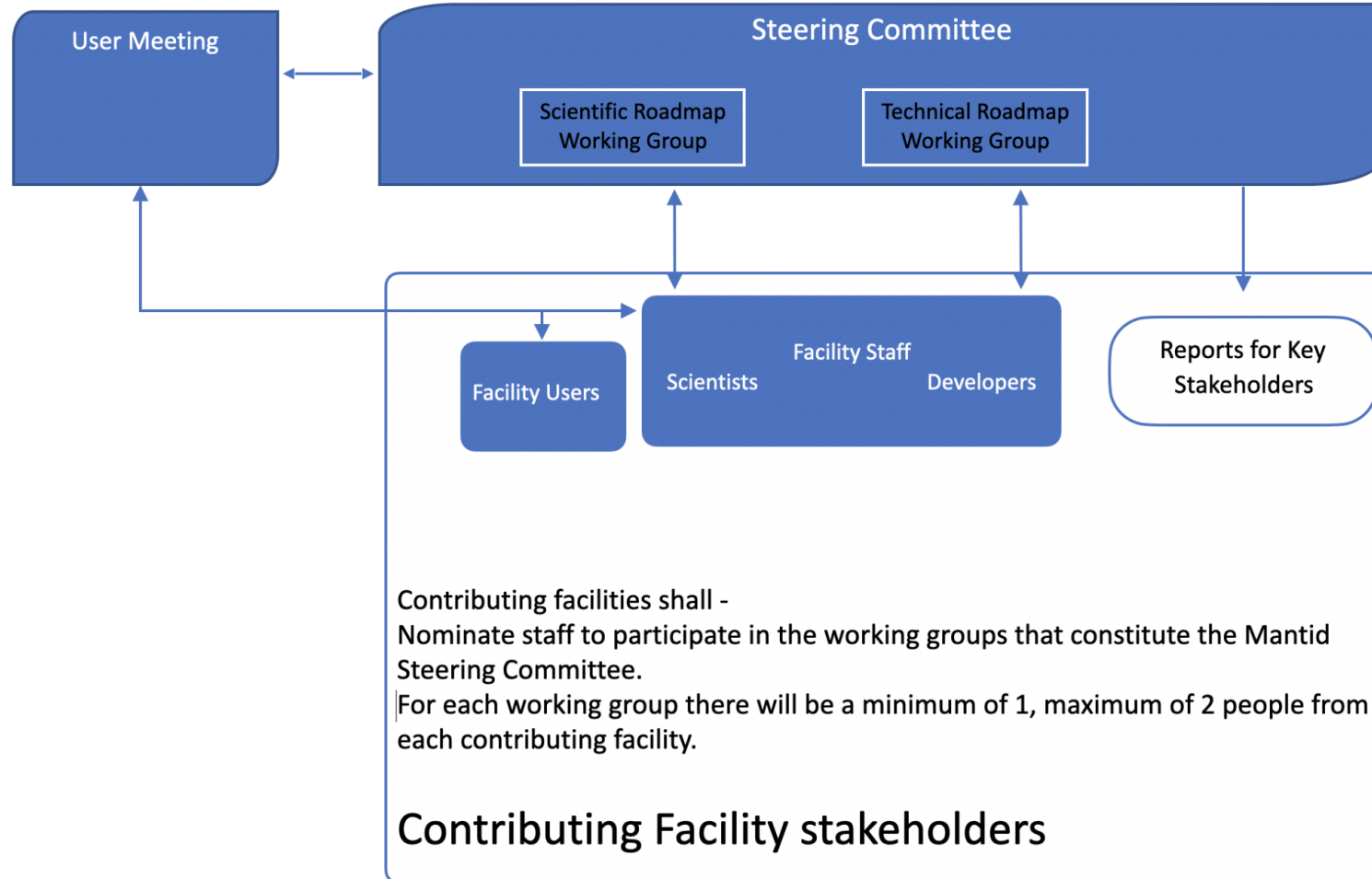
Pete Peterson, TWG Chair



References

- <https://github.com/mantidproject/governance/>
- <https://github.com/mantidproject/roadmap/>





Some Steering Committee Responsibilities

- Ensure coordination between Contributors.
- Ensure the Working Groups deliver publicly available scientific and technical roadmaps.
- Act as a clearing house for discussion on all matters concerning Mantid between Contributors.
- Nominate the Chairs of the User Meeting who have authority to engage a local organising committee for each User Meeting. These individuals do not need to be members of the Steering Committee.
- Hold and maintain the development risk register.
- Collate status and progress reports as required by key stakeholders.
- Prepare an annual summary for the Contributing Facility directors.
- Hold a list of its members.
- Coordinate the review of the governance and associated documents.
- Resolve conflicts, using a defined process, where there is no consensus among collaborators.



Technical Working Group Members

- Shenglan Chen (CSNS)
- Rong Du (CSNS)
- Gemma Guest (STFC)
- Tom Hampson (STFC)
- Oleksandr Koschii (JCNS)
- Geish Miladinovic (ANSTO)
- Simon Heybrock (ESS)
- Zach Morgan (ORNL)
- Eric Pellegrini (ILL)
- Pete Peterson (ORNL) - Chair
- Rémi Pérenon (ILL)
- Emmanouela Rantsiou (PSI)



Technical Working Group Responsibilities

- **Communicating the technical roadmap** with Scientific Roadmap Working Group.
- Working with the Scientific and Technical Roadmap Working Groups to tension technical roadmap priorities against scientific roadmap priorities for development.
- The chair will act as “Lead Coordinator” of the overall direction and health of the project. This ensures decisions on significant technical issues will not get stalled by the various committees.
- **Resolving conflicts** in the technical roadmap which cannot be resolved by consensus.
- **Calling regular meetings of the Working Group.**
- Attend the User Meeting



Roadmap(s)

- Scientific Roadmap Working Group is grounded by informed technical input, and the work of the Technical Roadmap Working Group is grounded in the scientific priorities and requirements of the Collaboration.
- Each Working Group shall be responsible for development and curation of a **five year roadmap**. The **Technical Roadmap Working Group** shall be responsible for **execution of both roadmaps for the immediate 12 month period**.
- The Steering Committee is precisely the union of the two Working Groups. The objective of the Steering Committee is to coordinate and manage the long term direction of Mantid, aligning it with the agreed technical and scientific priorities. It meets as required (but at least annually) to resolve any major contention between scientific requirements and technical issues or where a significant external event impacts significantly on both the scientific and technical planning. It also produces an annual summary for the key stakeholders.



Release 6.134

roadmap #32

Enhancement to Mantid Error Reporting

ILLORNLSTFC

roadmap #43

Migrate to python 3.11

roadmap #42

ARM OSX packages

STFC

roadmap #21

NeXus File Handling Consolidation

ORNLSTFC

+ Add item

Release 6.146

roadmap #31

Polarised SANS

STFC

mantid #37875

Migrate from boost::optional to std::optional - c++17

Maintenance

mantid #37248

Remove qtassistant and reduce size of mantiddocs package

ORNL Team

mantid #38332

Plan to consolidate Nexus loading code

EpicMaintenance

mantid #39334

Update to CMake 4

ORNL Team

mantid #39498

Update to boost 1.86

Maintenance

+ Add item

Release 6.158

mantid #39497

Migrate from Jenkins to GitHub actions

roadmap #39

Replace systemtests with ctest

STFC

roadmap #41

POLDI Reduction post detector upgrade

PSISTFC

roadmap #30

OSIRIS Si Analyzer

STFC

mantid #40188

MIDAS instrument upgrade

DiffractionORNL TeamPowder

mantid #40189

VNext reduction - AlignAndFocusPowderSlim

DiffractionORNL TeamPowder

mantid #39944

Drop support for intel osx

DevOpsmacOS OnlyMaintenanceTechnical Debt

+ Add item

Release 7.02

mantid #38415

Move to qt v6

ISIS: Core

roadmap #40

Instrument View Overhaul

STFC

+ Add item

Future10

roadmap #38

Vesuvio scripts for calibration and analysis

STFC

roadmap #34

Multiple UB Matrices

STFC

Draft

3D iso-surface viewer

Draft

Benchmark loading workflows

roadmap #20

Scope Replacement Fitting Engine

Needs ScopingSTFC

roadmap #37

Polarised Reflectivity

STFC

roadmap #44

WISH II Performance enhancements

roadmap #45

ConvertToMD continuous rotation extension for

+ Add item



V6.11.0 – October 2024

- Formal deprecation policy
- Mantid-developer package introduced
- FindMultipleUMatrices
- IntegratePeaksSkew
- AlignAndFocusPowder compression improvements
- Reflectometry polarization
- QENS fitting interface
- Elwin tab of data proc GUI

V6.12.0 – February 2025

- Numpy 1 → 2
- Matplotlib 3.7 → 3.9
- Algorithm profiler usable without recompiling
- Mslice integration with ADS
- ISIS Reflectometry changes
- IntegratePeaks1DProfile
- CreateMonteCarloWorkspace



V6.13.0 – July 2025

- First osx-amd64 version
- Python 3.11
- NeXus API takeover
- Polarized ISIS SANS

V6.14.0 – October 2025

- Last osx-64 version
- Optional mslice install
- Instrument view preview
- Slice viewer masking
- Polarized ISIS SANS
- ENGINX texture
- Vnext reduction prototype (VULCAN)



V6.15.0 – January 2026

- Drop osx-64
- Rattler-build for packages
- Migrate from Jenkins to github actions
- Systemtests run from ctest
- POLDI reduction
- OSIRIS Si Analyzer
- MIDAS reduction
- Vnext reduction

V7.0.0 – when it is ready

- Qt6 – Qt5 is EOS May 2025
- Instrument view overhaul



Select Developer Meeting Notes

- LLM service in mantid workbench
- Using AI to develop mantid discussion
- CSNS using texture analysis
- Cppcheck fixes (>250 issues fixed)
- Converting manual tests to automated tests
- Faster builds (skip doxygen, remove unnecessary includes, create profile from build)
- Modularizing mantid discussion – along facility lines

