



← Please scan

Role of the Scientific Working Group (SWG) and User meetings

Anders Markvardsen (ISIS), Anna Sokolova (ACNS, ANSTO)
and Stephen Cottrell (ISIS)

6th Nov 2025

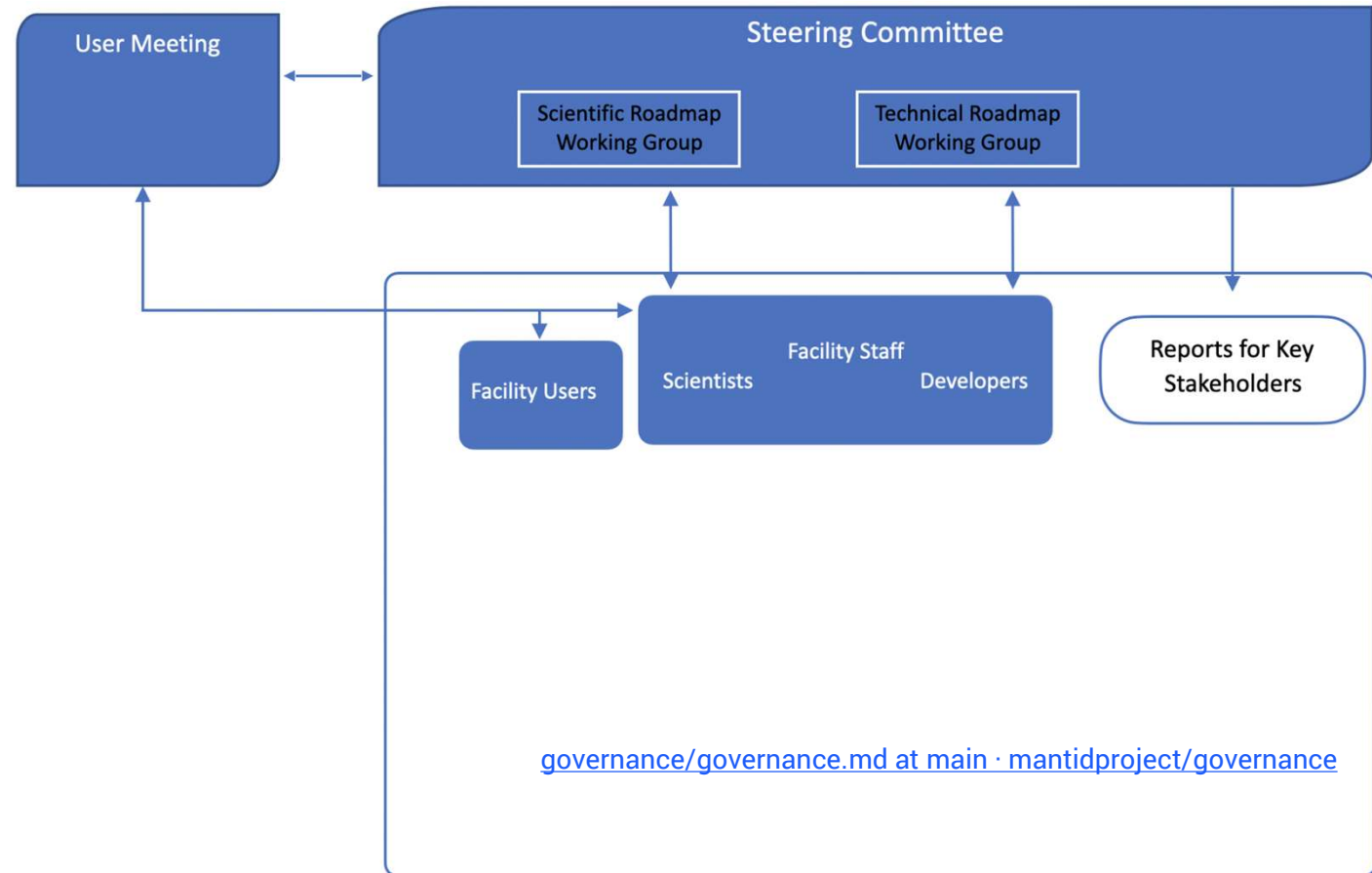
2025 Mantid User Meeting - part of Mantid Developer Meeting and User Workshop 3-6th Nov 2025



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Scientific Software Group

To provide context:



SWG's role is described to includes:

- Owns the common five year scientific roadmap
- Promote and foster collaboration between contributors by finding commonalities
- Review common projects at each Working Group meeting

(Anna) SWG's stated membership list – as per ~~2020-2021

Nominally seven facilities, seven de facto

- ANSTO:
 - Anna Sokolova (Chair)
- CSNS:
 - He Cheng
 - Xiaozhi Zhan
 - Hanqiu Jiang
- ESS:
 - Judith Houston
 - Thomas Holm
- ILL:
 - Stéphane Rols
 - Charles Dewhurst
 - Miguel Gonzalez
 - Paolo Mutti
- JCNS:
 - Marina Ganeva
- *PSI*:
 - *Joachim Kohlbrecher*
- ORNL
 - Douglas Abernathy
 - Mathieu Doucet
- STFC:
 - Pascal Manuel
 - Anders Markvardsen
 - Stephen Cottrell (User Group Chair)

(Anna) What did it manage to do in terms of creating a common scientific roadmap

..		
ANSTO.pdf	Add initial scientific roadmap from ANSTO	4 years ago
CSNS.pdf	Add Initial Scientific Facility Roadmaps	4 years ago
ESS (Scipp).pdf	Add Initial Scientific Facility Roadmaps	4 years ago
ILL.pdf	Add Initial Scientific Facility Roadmaps	4 years ago
ORNL.pdf	Add ORNL roadmap	4 years ago
README.md	Link to minutes from new governance README.md	4 years ago
STFC.pdf	Add Initial Scientific Facility Roadmaps	4 years ago
mantid_scientific_common_roadmap_Nov20...	Add files via upload	4 years ago



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<https://github.com/mantidproject/roadmap/tree/main/scientific-roadmaps>

(Anna)

	SANS mono and ToF (Bilby), Mantid is in use	Cold neutron TOF spectrometer (Pelican)	High resolution back scattering (Emu)	SANS monochromatic only (Quokka)	USANS (Kookaburra)	High resolution powder diffraction (Echidna)	Single crystal (reactor source - white beam!) (Koala)
ANSTO	Operating with data in Event mode. Data reduction: use of csv sheets to reduce large numbers of files at once; User interface work implementing the same sheets' logic is in progress. GISANS data reduction. Grasp 2D data reduction implementation.	Mantid in use	Mantid in use	Mantid use possible. Demonstration needed.	Mantid use possible. Demonstration needed.	Mantid use possible. Demonstration needed.	Demonstration needed; it is different from spallation sources!

	SANS	Powder Diffraction	Reflectometry	Disordered PDF (commissioning)	Imaging (construction)	VSANS (construction)	Engineering Diffraction (construction)
CSNS	Inconsistence of 2D data in qx and qy, due to the vertical and horizontal resolution difference of the detector. And the converging of 2D data from different wavelength with different resolution. Converging of data merged from the bank crosswise angle. Resolution calculation and resolution function for TOF I(Q). Possible smearing correction for I(Q). Data analysis and simulation for GISANS.	Good correction algorithm for heavy absorption samples. More precise position correction for tof-to-d conversion, where $TOF = c \cdot 0^{\circ} \cdot (1 + \text{offset}) \cdot d$ is not enough for very high resolution requirements, such as single crystal measurement.	Data stitching from the measurements with different angles. Data reduction for Off specular reflection. Absolute calibration for R(Q) in different angle and detector areas. Data reduction for diffraction.	Good correction algorithm for inelastic scattering, like H. Good correction algorithm for multiple-scattering. Convince of S(Q) merge with different resolution. Possible resolution deconvolution for S(Q)	Whole profile fitting for Bragg-edge Imaging. CT reconstruction with high space resolution.	Merge scattering data from different detectors with different neutron detection efficiencies.	Texture analysis of orientation distribution function (ODF). Auto Position fitting with different profile function Position correction for the application with very high resolution.
MantidPlot & Workbench Develop new GUI for all instruments in workbench instead of MantidPlot Improve the stability of GUI, where frequent crashes in usage of Cloud Improve the speed of data loading Parallel handling for time slice Reduce the memory usage for big data handling Solve the bug that keyboard is lost sometimes Web Develop web application for all instruments Integrate the authorization and authentication							



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	SANS (D11, D22, and D33.SAM (CRG) in 2023)	Powder diffraction (D20, D2B and D1B(CRG). XtremeD (CRG) in 2023)	Time-of-Flight reflectometry (D17 & Figaro)	Monochromatic reflectometry (D17 and SuperADAM)	Single crystal monochromatic diffraction (D3 (polarized neutrons), D9, D10, D19, and D23)	Single crystal Laue neutron diffraction (CYCLOPS, OrientExpress, LADI+DALI)	Disordered materials diffraction (D4 and D3-liquid)
	Basic reduction is implemented in Mantid	Mantid is in use.					

(Anna) On the ground feedback on SWG ~4 years ago

In 2021, the proposed steps were the following:

Regular meetings: communication.

Regular updates of the facility roadmaps.

Identifying of the common areas (thank you, Pascal Manuel!).

Setting the priorities and effective communication with the TWG.

In 2021, the main issues were identified like the following, and have not changed much:

Communication between facilities, especially on the project resources; there is a sufficient difference between resources available at ORNL and ISIS, comparing to ACNS (<0.3 FT) or FRM-II (< 1FT).

Complex combined roadmap: everyone has a lot of specific tasks.

User meeting ... some observations

In the early days (pre-2016, when I started as Chair of SSC) ...

- Annual in-person meeting (usually at ISIS or ORNL)
- Focus on requirements gathering for the coming year
- Output was meant to be a prioritised list for developers by technique area
- Meeting attended by representatives of each technique area
- Aimed to foster collaborative working in technique areas (good to meet in person!)

But there were problems ...

- Cost and Time associated with travelling
- Making sure broad requirements were captured given majority couldn't attend
- Not sufficiently dynamic to react to changing priorities
- Not much focus on how Mantid was being used in the community

Things gradually changed 2017-2020 ...

- Facility pre-meetings introduced to try and involve more people
- Task of requirements gathering gradually fell away (replaced by local discussion?)
- Greater emphasis on highlighting how Mantid was being used and understanding areas where it wasn't
- Emphasis on sharing and discussion – recognising areas where collaboration possible/beneficial

Series of well-attended meetings, lively discussion, ...

Category:Users Workshop 2017



When

12-13 June 2017

Where

The Cosener's House, Abingdon, Oxfordshire, UK

Organising Committee

- Stephen Cottrell (stephen.cottrell@stfc.ac.uk)
- Nick Draper (nick.draper@stfc.ac.uk)

Attendees		
RAL	ORNL	ESS
Diffraction		
Helen Playford Pascal Manuel Tung Lik Lee	Xiaoping Wang	
Direct Inelastic		
Toby Perring Duc Le	Doug Abernathy Garrett Granroth Andrei Savici	Jon Taylor
Indirect Inelastic		
Sanghamitra Mukhopadhyay	Timmy Ramirez- Cuesta	
Muons		
Stephen Cottrell Adrian Hillier James Lord		
Small Angle		
Steve King	Chris Stanley	Andrew Jackson
Reflectometry		
Max Skoda		

Category:Users Workshop 2018

When

29-30 January 2018

Where

SNS CLO room C156. Oak Ridge National Laboratory, Oak Ridge, TN, USA

Registration

Registration is now closed.

Organising Committee

- Stephen Cottrell
- Peter Peterson
- Doug Abernathy
- Nick Draper
- Andrew Jackson
- Paolo Mutti



Category:Users Workshop 2019

When

3-5 April 2019

Where

Amphitheater Chadwick, ILL 4 (ground floor)

Break out sessions:

- ILL 4 - Room 226 (second floor).
- ILL 4 - Room 264 (second floor).
- ILL 4 - Room 164 (first floor).
- ILL 4 - Room 163 (first floor).

ILL, Grenoble

Registration

To be arranged



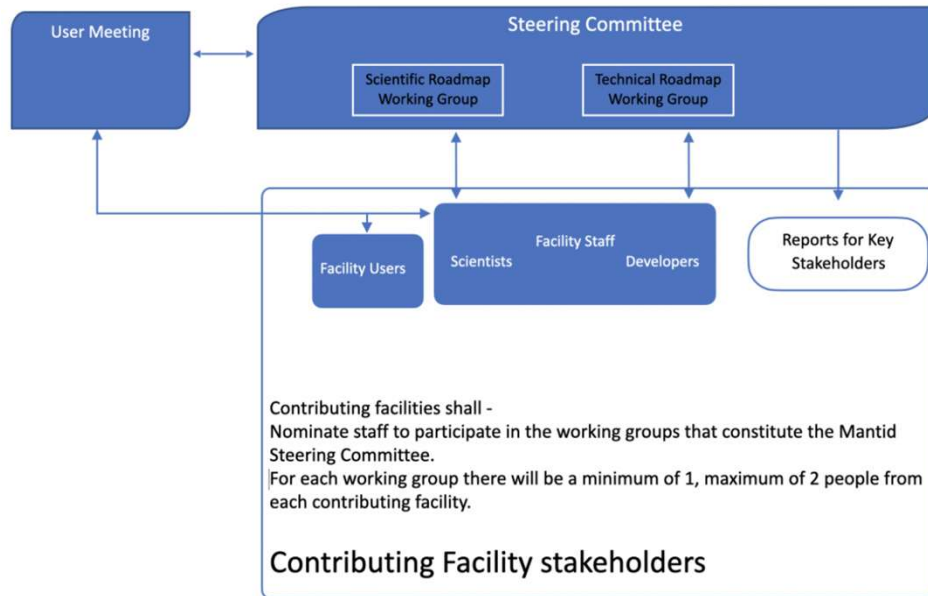
Then ...



Coronavirus

- An online meeting in 2021 (very well attended)
- New governance
- SWG lost momentum, stopped meeting
- User meetings stopped happening ... no enthusiasm?

Officially - User meeting



- These meetings will be organised with the aim of enabling an effective connection between contributors and users of Mantid and the applications produced using the Mantid framework. There will be two meetings held back-to-back; the first centered on scientific usage and needs (User Meeting), and the other centered on technical discussions (Developer Workshop).
- User Meeting
- **The Collaboration shall organise an annual face-to-face user meeting.** The Steering Committee will facilitate this by:
 - Electing a Chair for the meeting.
 - Agreeing on a host and date for the meeting.
 - Ensuring there is a point of contact in each Working Group who is willing to help identify key themes for the meeting.
 - Providing a list of contacts for Individual Contributors with whom local contributions to the meeting can be discussed.
 -
- The elected chair will organise the meeting with the aim of:
 - **Informing users on the latest news** and 'hot' topics relating to the Mantid collaboration.
 - **Promoting interaction between contributors** to stay abreast of new advances in techniques for data reduction/analysis across different scientific areas.
 - **Promoting interaction between developers and scientists** to improve understanding of scientific requirements and technical constraints.
 - **Identifying common areas of development between contributors**, and promoting collaborative work both through immediate discussion and in feedback to the Steering Committee.
 - **Discussing new technologies/infrastructures** which may be leveraged to enhance the user experience.
 - **Addressing both technical and scientific topics**, and providing **constructive feedback to the Steering Committee** as to whether the respective roadmaps are meeting user needs.
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- The elected chair will make a report to the Steering Committee following the User Meeting.

User meeting experienced

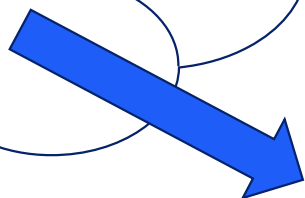
A recent straw poll by Anders ...

- Two parts of previous User Meetings recognised :
 1. users sharing and discussing
 2. requirement gathering exercise
- The latter was considered a total waste of time



User meetings ... Going Forward ...

Is a 'global' User Meeting needed?



**What format should it take
(e.g. in person / online)?**

How often?

**What should
the meeting
cover?**

**What outcome is
expected?**



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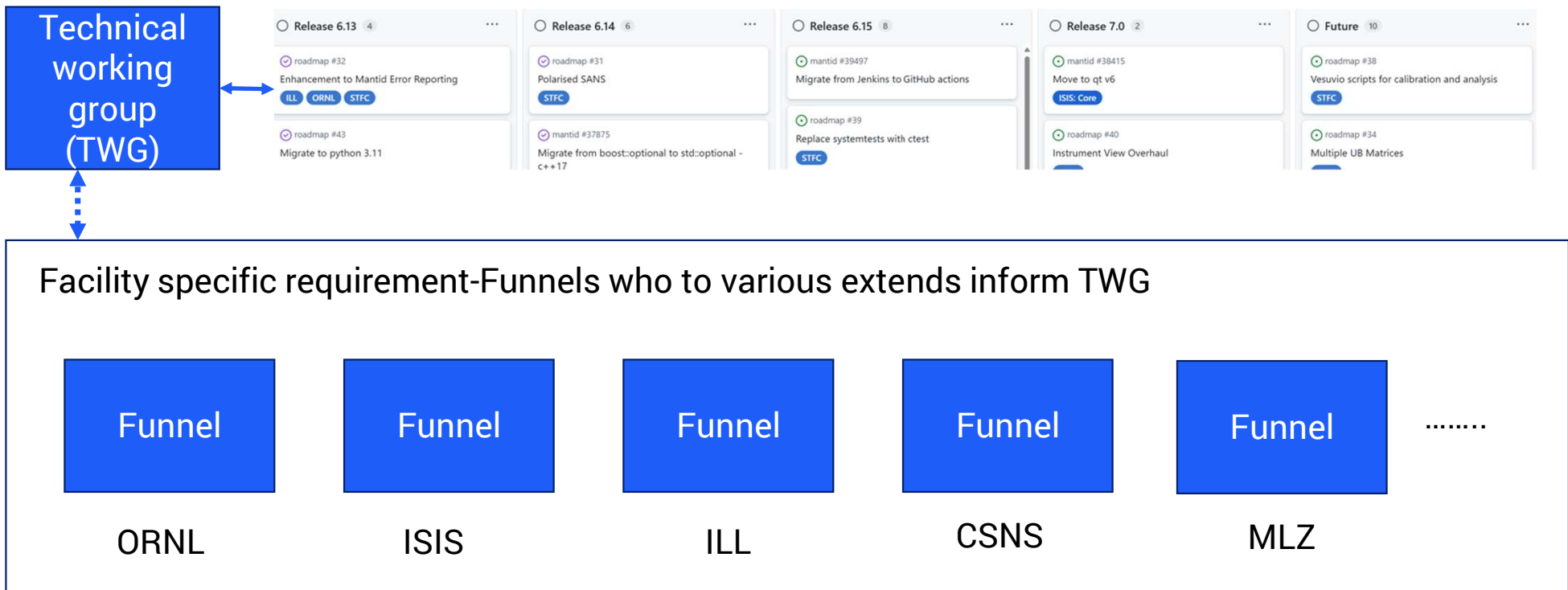
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In the void of SWG how is information shares on common large Mantid software needs and roadmap of these?

<https://github.com/orgs/mantidproject/projects/47/views/1>



Example of a requirement-Funnel for large software need - ISIS

Funnel	Reviewing	Analyzing	Ready	Implementing	Done
All big ideas are welcome	Refine understanding of the Epic Preliminary cost estimates	Share Epics with wider stakeholders Gathering feedback Require further reviewing or is Ready?	List of Epics prioritised by business value and enabler value	Work on the Epics	
Remove if no engaging owner found within timebox	Pull from Funnel if engaging Epic owner is found. Move to Done if too small (currently	Pull from Reviewing when Epic description is assumed complete	Pull when approved by the MPB	Pull when capacity is available within the team	Pull when the Epic is sufficiently complete

~<0.25 FTY)



In the void of SWG and current situation, do you have ideas for how we could share information about common large Mantid needs and roadmaps between facilities better?



How do you see the role of the User meeting in the future?

① The Slido app must be installed on every computer you're presenting from

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Outside of User meetings, can information about completed and upcoming Mantid tools be shared better between facilities? How?



Audience Q&A

① The Slido app must be installed on every computer you're presenting from

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