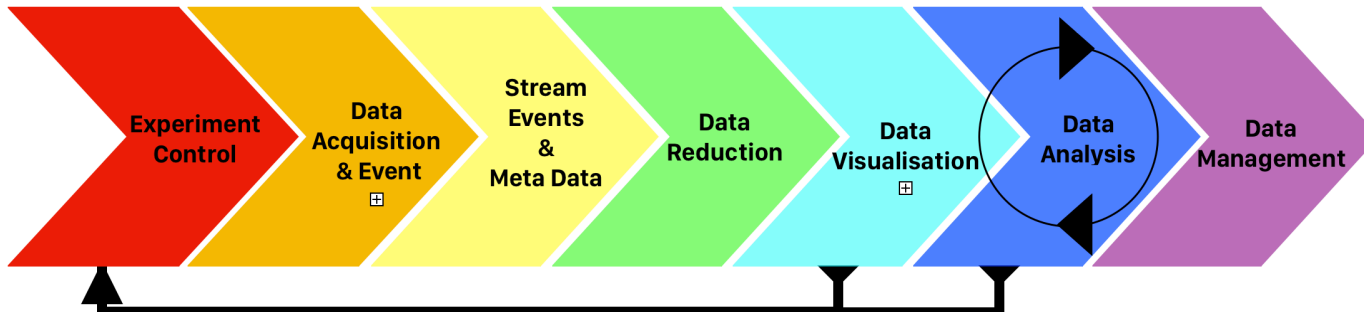# DMSC software workshop update

Jon Taylor

DMSC update

- Cluster upgrade
  - Installed & available end of November
  - 560 cores

- Excellent progress on event formation & readout

Software workshops

- Collect requirements for DMSC from the instrument suite

- Couple DMSC delivery to each instrument project

- Work shop series by instrument class

- Check and agree on high level requirements

- Discuss data analysis work packages

- Summary document at ESS-0148155

	Date
SANS	1-2 June
Spectroscopy	15-16 May
Imaging and engineering diffraction	26-27 April
Diffraction	7 April
Reflectometry	21 March

Common actions
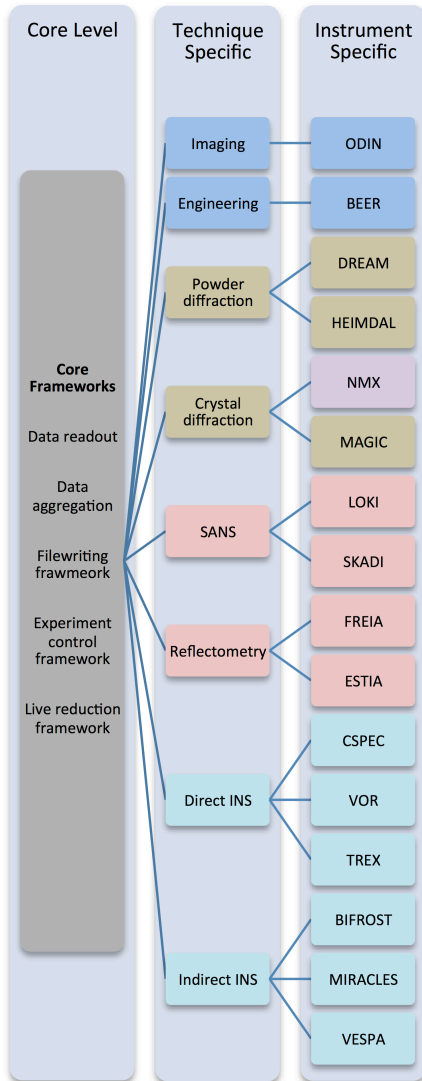
- Requirements matrix
  - Controls, reduction & analysis
  - Enable planing and prioritisation

- Project Milestones
  - Instrument project milestones that define delivery requirements for DMSC functionality
  - DAQ 'detailed' design required for TG3
  - Connection, Cable routing, Detector specification & read out requirements

- DAQ / DM requirements

Common Themes

- Beam monitors.

- Common WFM implementations across the instruments.

- Common implementation for polarisation DAQ / treatment.

- User experience and interaction with remote systems.

Monitors

- Readout and rate requirements

- Data reduction – normalisation to monitor
  - Normalisation per pulse

- Data reduction – Determination of T_0
  - Flight path determination

- Controls (& commissioning) scanning phase to calibrate chopper offsets

Identified gaps

- Polarised neutron diffraction software

- Single crystal workflows

- Data management & data curation workflows and UX

- Engineering diffraction requirements

- MX requirements

Next steps

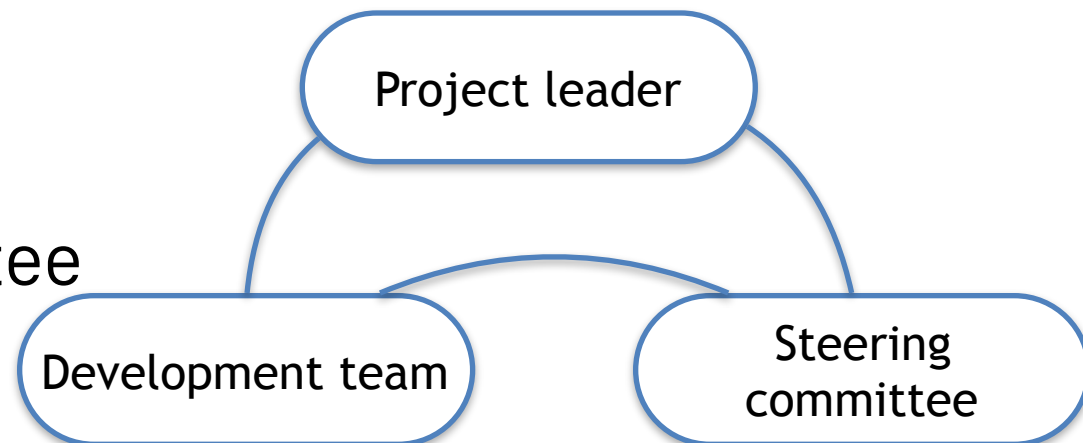- Coordination meeting 12th September
  [ESS-0148156](ESS-0148156)

Mtg Nr.	Point Nr. & Action	By
#1	Instrument teams to complete requirements matrix	Class coordinators to coordinate collection
#2	Organise NMX software workshop	Esko
#3	Organise engineering diffraction workshop	Robin & Thomas
#4	Discuss / document standardisation requirements for treatment of polarised neutrons at ESS	Jon & Werner
#5	WFM processing & lessons learned presentation	Robin
#6	Document proposing a Software development project governance structure for inkind	Jon
#7	Workshop on user experience and remote access	Sune
#8	Proposal for how to communicate current Mantid functionality	Jon
#9	Organise Data management and curation meeting	Tobias
#10	Single crystal strategy meeting	someone
#11	Setup Nicos demo environment for ESS building 205	Jon / ID group
#12	Develop governance model for software projects	

Data analysis project update

Class	SINE2020	ESS
Imaging	• Some technical debt removed • Increased community supp. (e.g. MLZ)	TA with PSI to continue work.
Powder diffr.	N/A	Collaboration with ILL on FullProf Collaboration with Chalmers
Single crystal	N/A – This was probably an oversight in retrospect	Probably ILL collaboration for small molecules. In house dev for NMX, Collaboration with photon sources
SANS	Running as one project at ESS. New release Spring / Summer 2018. Then reallocation of resources to other projects. 1st demo at next workshop Lund Uni VR grant.	
Reflecto-metry	MLZ/FZJ responsible. 1st demo at next workshop	MLZ/FZJ can start working now (roadmaps). 1st recruitment completed. 2nd ad is out. QENS – Chalmers VR grant
QENS	Discussion of way forward at ISIS. 1st demo at last workshop	
INS	Not considered	Resources in house. IK from PSI and collaboration with ISIS PACE and CEF + Vates Student with KU for Bifrost analysis
Mol. spec.	Aligning existing efforts	DMSC collaboration with SNS

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Software project governance

- ## All software projects benefit from governance
  - Stake holder communications
  - Requirement prioritisation
  - Model depends on project size

- ## Scientific steering committees work well

- ## Mantid SSC
- ## ECP steering committee

Any questions?