



UK DQW Challenges & Schedule Discussions

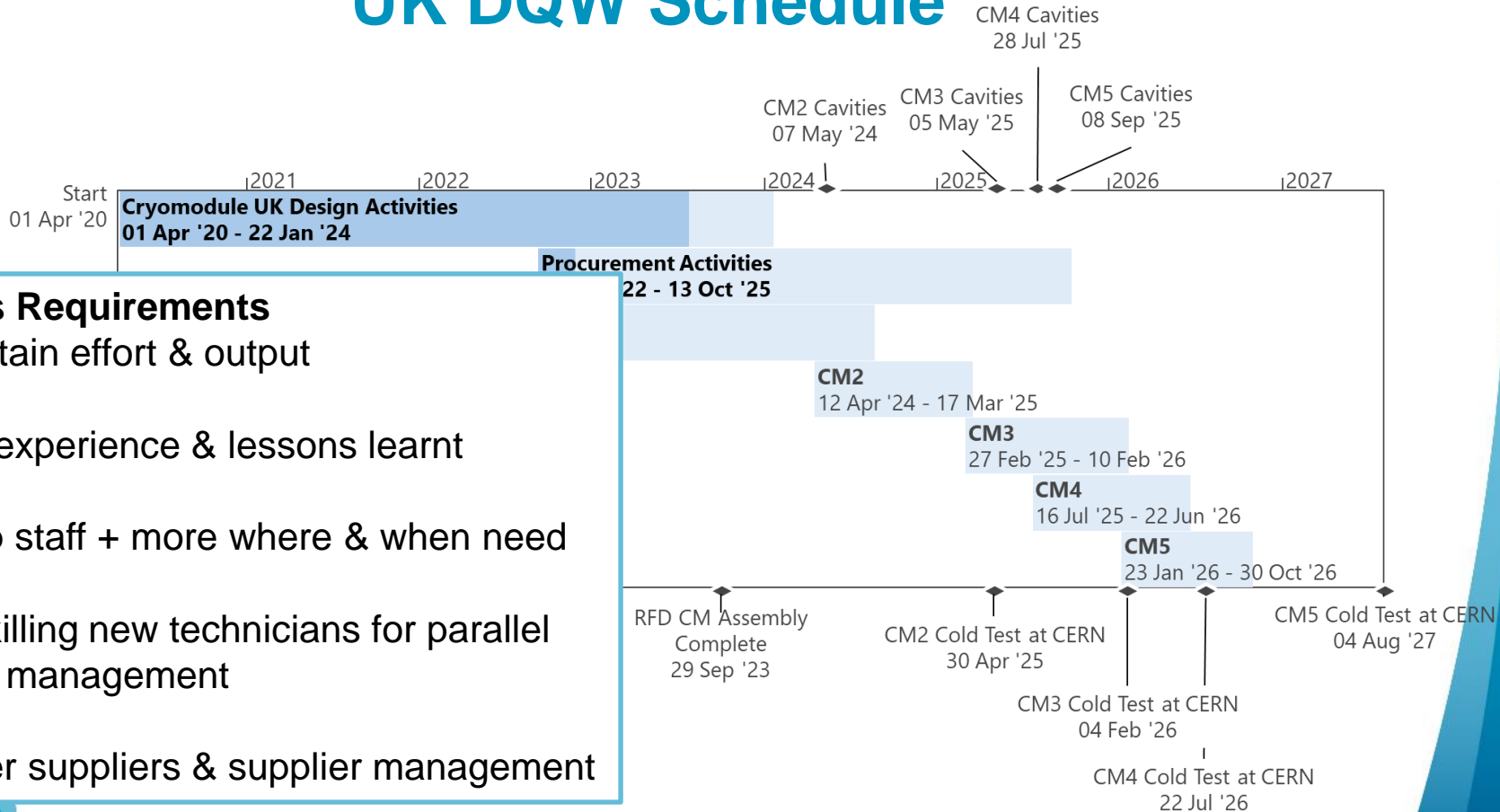
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On behalf of the UK Crab Cavity collaboration

13th HL-LHC Collaboration Meeting – Vancouver (CA) – 27 Sep '23

UK DQW Challenges & Schedule Discussions

- Schedule
 - Keys to success
- Open discussion on challenges & mitigations
 - Please contribute
 - I don't want to talk everyone to sleep (even more)
- Comments, suggestions, questions on all UK talks

UK DQW Schedule



Success Requirements

1. Maintain effort & output
2. Use experience & lessons learnt
3. Keep staff + more where & when need
4. Upskilling new technicians for parallel build management
5. Better suppliers & supplier management

Equipment Challenges

#	CHALLENGES	TYPE	CRITICAL (/5)	MITIGATION OPTIONS	ACTION(S)	OWNER
1	Cryoline raw materials (plates, tube, bar)	Equip.	5	CERN supply low vol items (t>15mm) STFC & TRIUMF share plate proc. (t<15mm)	Evaluate combined plate requirements & options	RL
2	<i>Equipment underspend FY23/24</i>	Finance	4	More CM Proc. info & drawings Bring forward off-shelf / short-lead items FSI? Instruments? More raw materials, rf adaptors?		
5	Parts Management (storing & locating)	Equip.	4	Collaboration knowledge transfer 5S consultancy Improved incoming travellers		
15	Fastener grades, mag perm, coating & venting	Equip.	2	Relax and/or simplify specs Procurement support		

Staff Challenges

#	CHALLENGES	TYPE	CRITICAL (/5)	MITIGATION OPTIONS	ACTION(S)	OWNER
7	Retaining key staff	Staff	4	New pay deal DL Programme resource discussions Rewards & recognition		
8	Securing & training additional mech techs	Staff	4	RFD Technician knowledge transfer Technician CERN & TRIUMF knowledge transfer visits UK-CM2 placements for new staff		
9	Apprentice supervision load	Staff	3	Discussed with apprentice & DL management Improved Tech Man planning	Raise formally	NT
17	Info & EDMS drawing releases	Staff	3	More design & manufacturing readiness reviews Improve release processes		
16	PLM usability (where used & export BOMs)	Staff	2	Improve usability & access Use EDMS instead CERN BOM Support		
19	Procedure bottleneck	Staff	1	More staff Improved & hybrid styles (detailed vs lightweight) Use CERN DQW		
20	Coded & Orbital Welding	Staff	0	More welding and weld eng staff		

Management Challenges

#	CHALLENGES	TYPE	CRITICAL L (/5)	MITIGATION OPTIONS	ACTION(S)	OWNER
12	Co-ordinating specialist resource & visits	Planning	4	Develop & improve DQW logic poster	Draft poster logic with CAD for discussions	EJ
6	Storage space	Infrastr.	3	Build area optimisations on-site mitigation options		
11	Top plate integration strategy	Infrastr.	3	Design mods: gantry, floor, pushers, FPC top-hat Survey & rigging analysis		
18	In & Out manufacture processes	Infrastr.	2	On-board machinist		

QA & Technical Challenges

#	CHALLENGES	TYPE	CRITICAL (/5)	MITIGATION OPTIONS	ACTION(S)	OWNER
3	Supplier QA	QA	5	Free issue materials Market surveys Large tender processes - more control More staffing		
4	Protecting bellows	Technical	5	Bellow guards on as much as possible (Eliminate, Reduce, Isolate, Control, Protection, Signs)		
10	Survey effort & strategy	Technical	3	Recruitment, upskilling, outsourcing Changing & improving strategy		
13	RF tasks	Technical	3	Better planning, Upskilling (UK), more staff (CERN)		
14	EDMS & MTF barriers & workload	QA	3	Local Instructions / Procedures, more training, resource management, outsourcing		

Comments, suggestions, Qs for UK



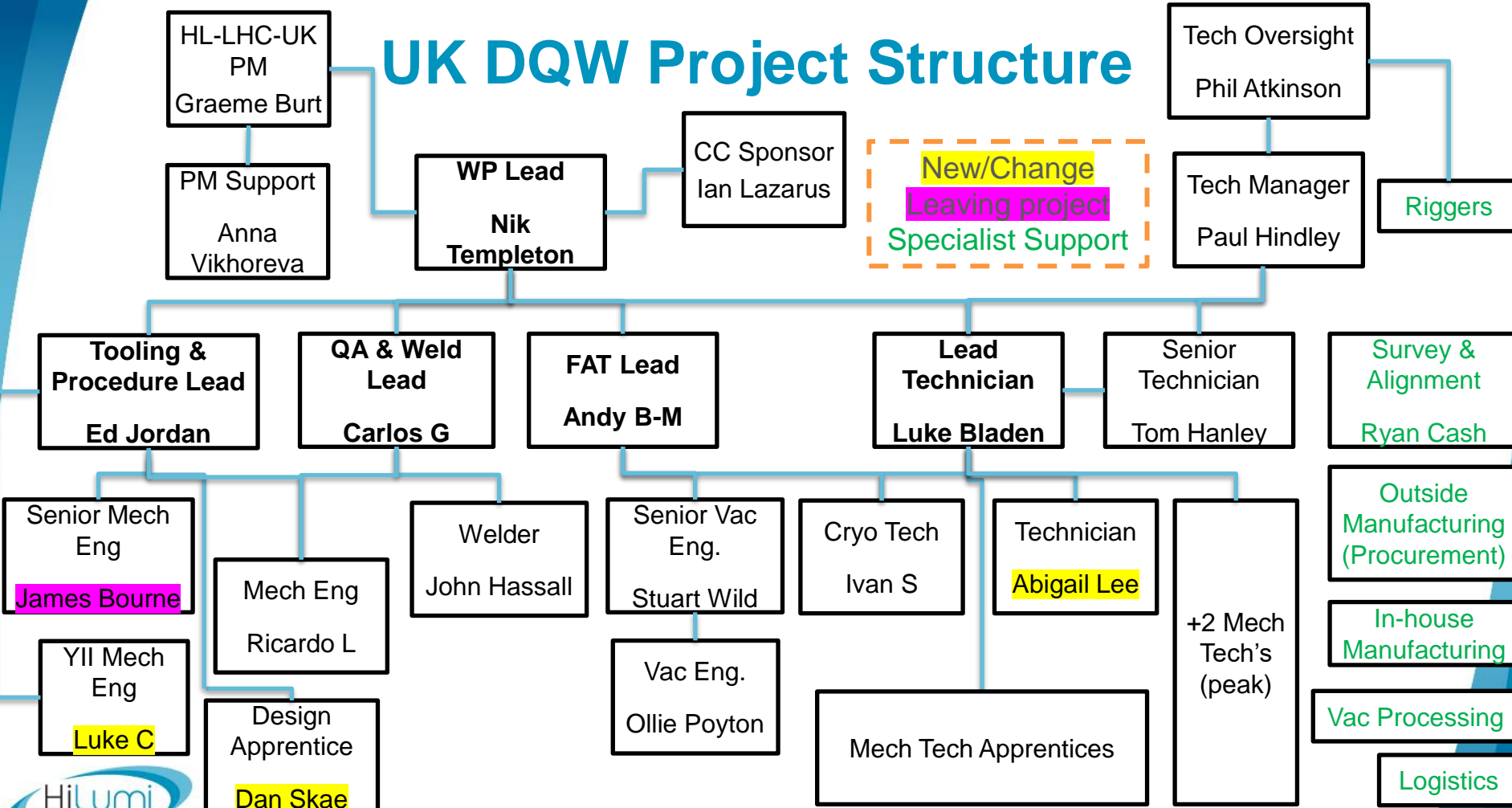
Thank You!

Questions?



Sci-Tech Daresbury
Daresbury Laboratory

UK DQW Project Structure



New/Change
Leaving project
Specialist Support



*Does not reflect STFC pay bands. Some staff are shared between multiple projects.

Infrastructure Layout

