



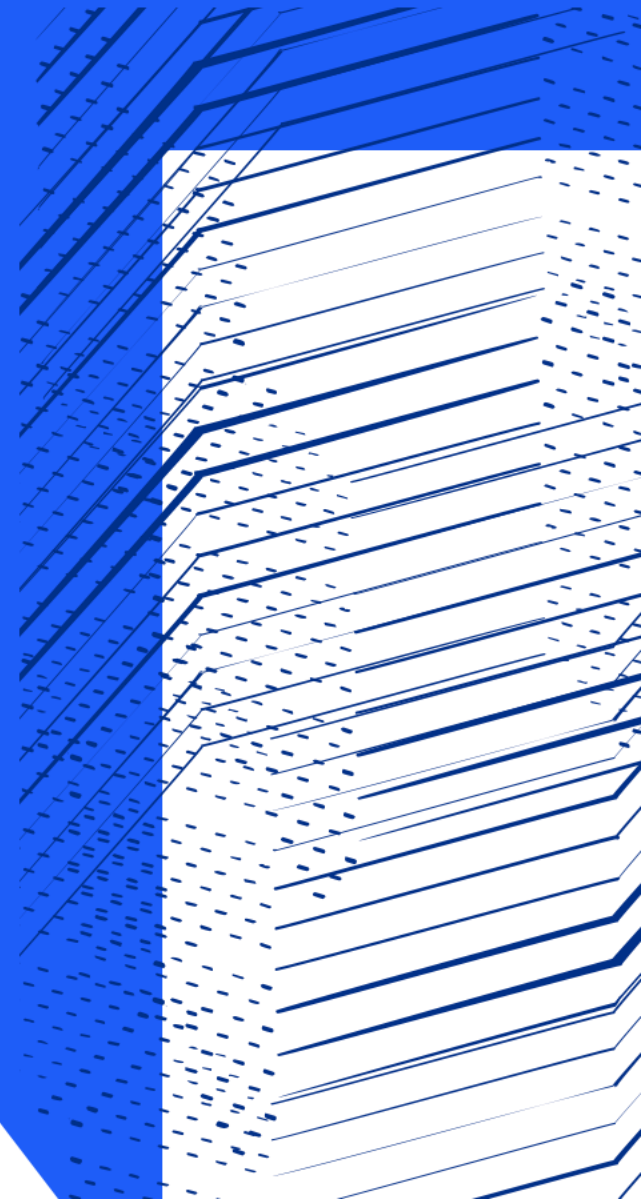
Science and
Technology
Facilities Council

ITRF/LhARA Review Session

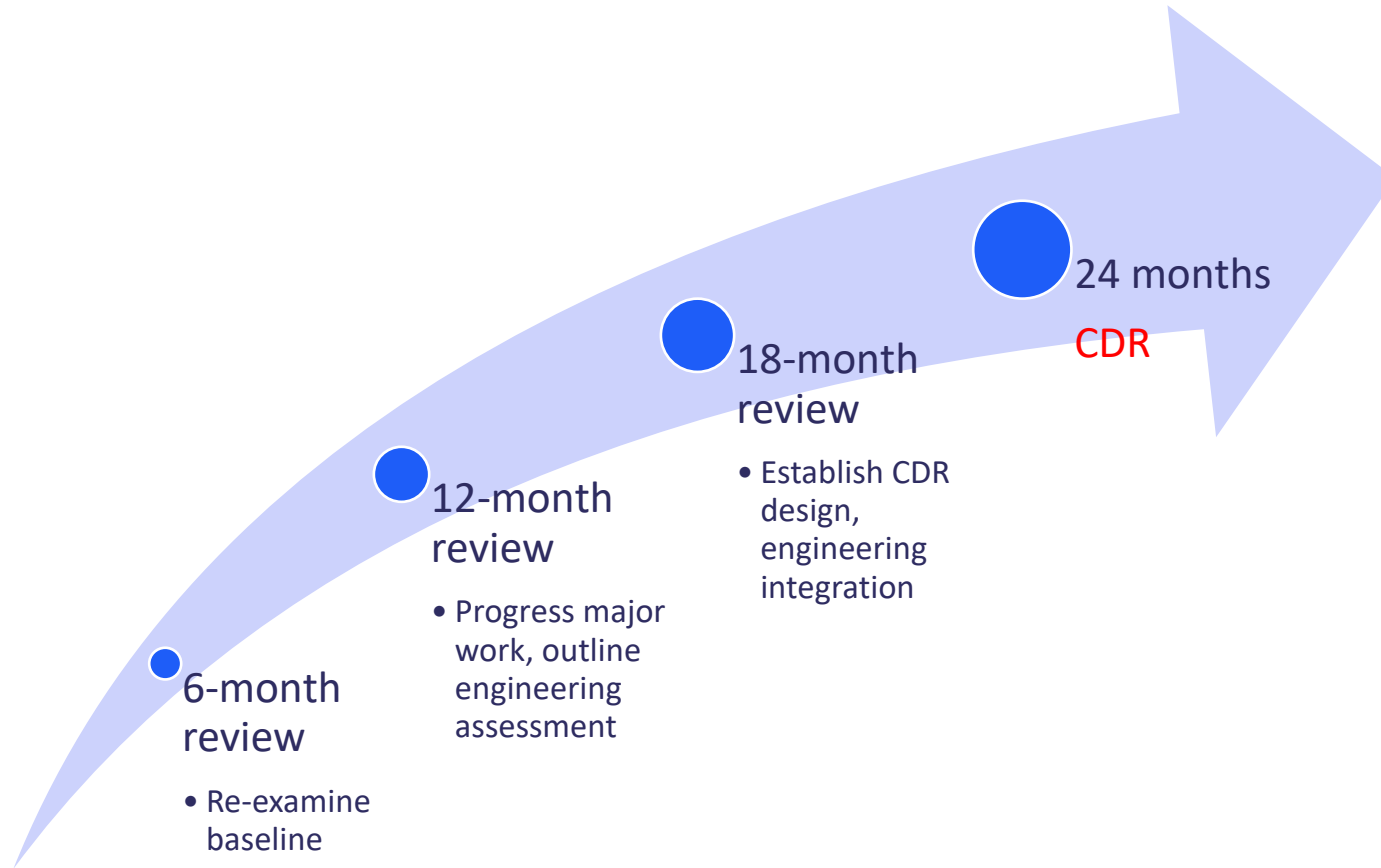
24-month review

Hywel Owen (for collaboration)

3rd September 2024



Where are we?



Major Milestones Summary

Major Milestones Summary (key project stages and major deliverables)					
Ref	Milestone Description	Baseline	Forecast	Variance	Comments
M2	Refined scope, specifications, defined parameters and schematic diagram of facility equipment complete (6 month design review) .	23/03/23	21/03/23	-3	Complete
M4	ITRF Baseline designs complete (12 month design review)	21/09/23	20/09/23	-2	Complete
M11	Refined ITRF specifications & designs (18 month design review)	21/03/24	26/04/24	27	Complete
M12	Start ITRF CDR write up (21 month design meeting)	20/06/24	20/06/24	1	Complete
M18	ITRF CDR Publication	23/09/24	23/09/24	1	
M19	ITRF CDR phase complete	30/09/24	30/09/24	1	

24 Month review meeting September 2024 - Belfast

Milestones

Minor Milestones Summary (green means finished)					
M3	Validate LhARA plasma simulations with existing Swansea experimental set-up (LhARA M3.1)	03/04/23	14/06/24	315	
M5	Prediction of optimised LhARA proton source parameters for 100+ TW laser systems based on hydrodynamic and kinetic simulations complete (LhARA M2.1).	02/10/23	02/05/24	154	
M6	Preliminary design of LhARA MA RF cavity, FFA magnet, diagnostic system, control & feedback systems complete.	28/03/24	28/03/24	1	
M7	Preliminary design study of LhARA Building concept design, bulk shielding assessment, mechanical systems integration support concepts, vacuum concepts, power consumption & cooling requirements complete.	28/03/24	28/03/24	1	
M8	First LhARA ion source simulations and experiment on SCAPA completed (LhARA M2.2)	01/04/24	14/06/24	75	

M9	Progress report of LhARA large diameter plasma experiments and simulations (LhARA M3.2)	01/04/24	14/06/24	98	
M10	Geant4 simulations of beam energy deposition profile (LhARA M4.1)	01/04/24	01/04/24	1	
M13	Finalise Conceptual Design iterations (All LhARA WP6 systems) complete	24/07/24	24/07/24	1	
M14	Next generation plasma lens test bench design (LhARA M3.3)	30/08/24	30/08/24	1	
M15	Acoustic sensor array design complete (LhARA M4.2)	30/08/24	30/08/24	1	
M16	Automated cell dish handling and environmental system design complete (LhARA M5.1), End-station user-community consultation complete (LhARA M5.2), End-station component testing at Birmingham complete (LhARA M5.3), kG,y/s tests at Birmingham complete (LhARA M5.7).	30/08/24	30/08/24	1	
M17	Specification of LhARA beam monitoring technology complete (LhARA M5.5)	30/08/24	30/08/24	1	

CDR Preparation

- Content and deadlines
- Author list
- Institute acknowledgements – logos etc.
- Printing, distribution and publicity
- Press releases