



Document No.: ISIS-ESS-PM-PD-0001

Revision: 1.03

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Date: 12 May 2017

Project Name: ESS Instrument

Project No.: Add Project No.

ESS Project Management Plan

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ISIS Delivery of instruments for ESS:

This document describes the project practice to be adopted to realise the requirements of the ESS Instrument Project.

1. Introduction

The UK government is investing £165M in the ESS project, as part of this investment the ISIS design team will deliver neutron instruments to ESS. This document describes the project practice to be adopted to realise the requirements. This project will be undertaken as per the STFC Project Management Framework (<https://staff.stfc.ac.uk/prog/project/Pages/default.aspx>) in association with 'Project Management in ISIS Department'. This document is intended to summarise the salient points so that personnel involved can understand their roles and responsibilities and create a reference point for the associated documentation.

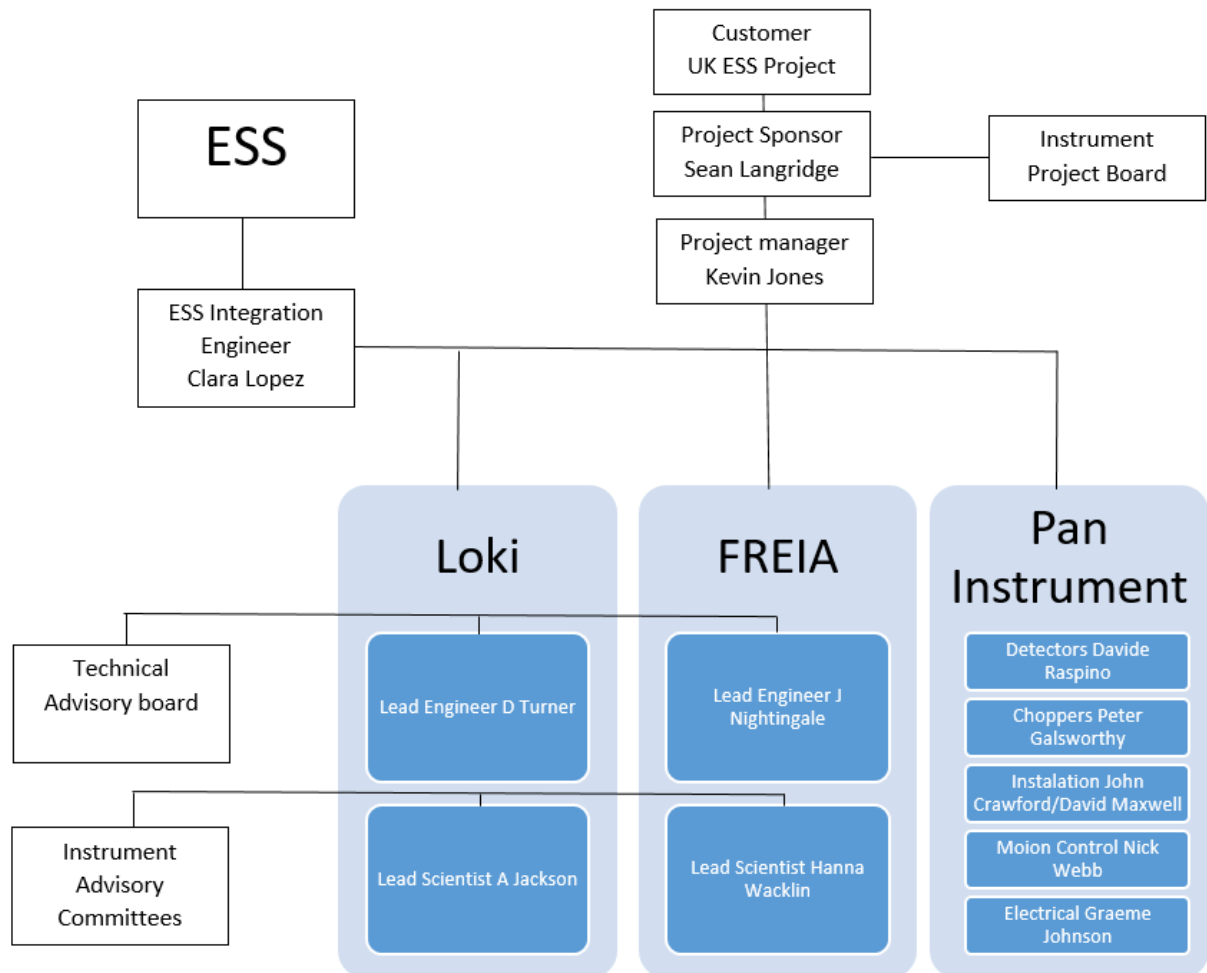
2. Philosophy

The strategy for the provision of instruments to the ESS facility is to design, construct, and prebuild the instruments in a custom facility at ISIS. The instruments will then be disassembled and shipped to ESS, to be reassembled by the ESS construction team. It was also intended that true research and prototyping of equipment would be performed during the feasibility stage, in order to minimise, technical risks during implementation. This work will be carried out by ISIS staff in conjunction with the ESS team.

One of the key philosophies of this project is to maximise the UK in kind contribution in both the financial aspects and knowledge transfer.

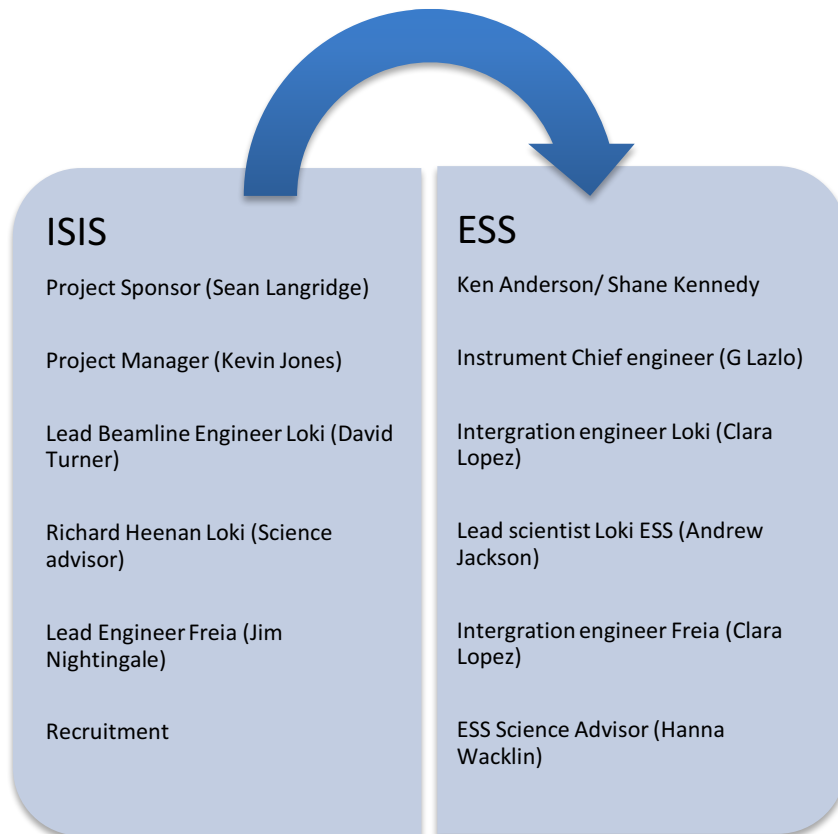
Once shipped to ESS the ownership will transfer from ISIS to ESS and the instruments will be operated by ESS scientists.

3. Project structure



3.1. ISIS/ESS interaction

The communication and interactions between the two organisations are essential and provide an excellent opportunity to develop the skills and experience of both facilities. However there are areas within the project where this interaction is going to be crucial to the success of the project and there for needs to be more formally identified.



4. Roles and Responsibilities

4.1. Customer – UK ESS Project board

The role of the customer is:

- Approving the final project specification in consultation with the Project Manager and Sponsor
- Approving any other documentation as defined in the Project Specification
- Keeping the Project Manager and Sponsor informed, if any, in their requirements
- Taking responsibility for any contribution to the project

4.2. Instrument Project Board

The top level control of the projects will be performed by a Project Board which reports to the customer.

The duties of the Board are:

- Advise the Project Sponsor and Project Manager.
- Approve the Project Specification and monitor compliance.
- Approve changes to the Project Specification (in line with the change control procedure ISIS-ESS-PM-PD-0004).
- Approve the Project Schedule and monitor progress.
- Approve the Cost Plan and monitor expenditure.
- Approve bids to the contingency funds controlled by Project Board.
- Monitor compliance with Procurement Strategy.
- Sign off the Project on completion on behalf of STFC.

The Project Board will seek advice from the Instrument Advisory Committees and Technical Advisory Board as required.

The membership of the board is comprised of:

- Chair – ISIS Director (Robert McGreevy)
- Sponsor (Sean Langridge)
- UK-ESS Board Representative (Roger Pynn)
- Finance Representative (STFC Finance, Jane Warren)
- Project Management (James Treadgold)
- User Representative (External to STFC) (Adrian Rennie)
- International Partners - (Christian Rüegg)
- International Partners – (Giuseppe Gorini)
- ESS Representative – Shane Kennedy
- UK ESS Project Manager – Justin Greenhalgh

- Internal Resource manager – Matt Fletcher

In attendance:

- Instrument Subproject Manager - Kevin Jones
- Instrument Scientific Leads – Andrew Jackson/Hanna Wacklin
- Secretary - Peter Baker

4.3. Project Sponsor

The Project Sponsor (<https://staff.stfc.ac.uk/prog/project/Roles/Pages/Sponsor.aspx>) will act as the interface between the Project, the end Customer, the Project Board and the User Community. The duties of the Project Sponsor are to:

- Develop the Technical Specification with the Project Manager;
- Approve other relevant documentation;
- Keep the Project Team informed of changes in requirements;
- Take responsibility for any contribution to the project by the Customer's organisation;
- Look after the interests of the external customer(s) but gain internal organisational and political support;
- Resolve any conflicts between the internal (project team) and external (customer) organisations;
- Realise the benefits of the project for STFC and ESS;
- Act as the point of contact for the Project, customers' organisation and any third parties employed by them;
- Act as scientific spokesman for the project;
- Ensure that the approved instrument specifications meet the scientific requirements and that there is wide consultation with the User Community on these requirements;
- Act as interface with the Instrument Advisory Committees and potential users;
- Take responsibility for publicising the scientific opportunities of the project and for stimulating potential new users.

4.4. Project Manager

The role of the Project Manager (<https://staff.stfc.ac.uk/prog/project/Roles/Pages/Manager.aspx>) is to deliver the project to specification, in time, and on budget within the constraints and critical success factors in the project specification, strategy, and management plan.

The duties can be summarised as:

- Utilising the Post Implementation Review reports of other, similar, projects to help ensure success of the current project
- Agreeing the Project Specification with the Project Sponsor/Customer

- Ensuring that the project team is thoroughly familiarised with the contents of the Project Specification once full agreement has been reached on its contents
- Ensuring that any changes to the Project Specification, throughout the life of the project, are reviewed and agreed with the Customer
- Developing a Project Strategy
- Developing a Project Management Plan of sufficient detail and accuracy to enable good management practice and control.
- Identifying the correct skills and resources to achieve the objectives
- Establish detailed budgets, allocate individual responsibilities and define the budgetary control process
- Acting as a common focal point throughout the project lifecycle from initiation to closure
- Maintaining a proactive management environment within the project team. This means foreseeing problems and taking appropriate and timely pre-emptive action
- Liaising with specialists, suppliers and commercial departments as required
- Monitoring and controlling the physical progress and budget expenditure and reporting to the customer
- Undertaking reviews as defined in the quality plan.
- Working closely with the Project Sponsor/Customer so that the project objectives are fully satisfied with respect to time, cost, quality and performance
- Ensuring that the project is completed according to the Project Specification and that a comprehensive project Close Out and Post Implementation Review is carried out

4.5. Project Office

- To provide time / cost reports to demonstrate the project progress. (Policeman role)
- To ensure that project documentation complies with the Project Management Plan.
- To provide ‘what if’ planning support to manage the programme
- To support instrument project managers and team members for expert planning / cost control assistance

4.6. Instrument Manager

The instrument manager can change through the life of the project. It is envisioned that at the concept and feasibility stages this function will be performed by the lead scientist, and as the project moves to the implementation phase this will pass to the lead engineer.

- To act as project manager for that instrument. Definition of project manager as per the STFC Project Management Framework (<https://staff.stfc.ac.uk/prog/project/Roles/Pages/Manager.aspx>).

- To report progress to ESS Project Manager.

4.7. Pan-Instrument Project Manager

There are several groups which will work across all the instruments and other ISIS activities. These will have a manager associated which will report progress to the instrument manager. In this way they will act the same as a task manager but with larger budgetary responsibility.

4.8. Lead Scientist

To be responsible for the Scientific performance of the instrument.

4.9. Lead Engineer

To be responsible for delivering the technical performance of the instrument

4.10. Team Member

- Ensuring that their tasks, work packages or sub-projects, are completed to the agreed specification, time and budget.
- Reporting to the instrument manager (or project manager) on the progress and performance of their task
- Escalating issues that are out of their authority to the instrument manager (or project manager).
- Taking part in reviews as required.

4.11. Instrument Advisory Committees

The Instrument Advisory Committees represent the scientific interests of the user community. They will advise the Project Board on issues that directly affect the scientific utilisation of the instruments.

The function of the Instrument Advisory Committee is to advise on:

- The science programme of the instrument;
- The initial design/performance of the instrument in relation to the science programme;
- Changes to the design/performance as construction progresses;
- Other non-instrumental requirements to deliver the science programme (e.g. software, sample environment);
- Commissioning experiments.

Instrument Advisory Committees should have of order 5-8 external members, plus suitable internal members. There should be national members, but also international as appropriate (especially where individual countries are contributing financially to particular instrument construction).

4.12. Technical advisory board

The Technical Advisory Boards role is to give an independent view on the technical and safety aspects of the instrument. Their main role is to advise the project manager and sub project managers however they will also be able to be utilised by the project board.

The function of the Technical Advisory Board is to advise on:

- technical performance of the instrument
- the initial design/performance of the instrument
- changes to the design/performance as construction progresses;
- give recommendation on implementation of change requests

Technical Advisory Board should have of order 5-8 internal members.

4.13. Science Team

The science team will act as a support team to the Lead scientist. They will take responsibility for specific beamline components and will act as deputy when the lead scientist is not around and they will be based at ISIS.

- Support the lead scientist
- Responsible for the scientific design of specific components
- Aid in the development of junior scientist

4.14. Finance specialist

The finance specialist will give advice and support to the project about all financial issue.

4.15. Procurement specialist

The procurement specialist will give support and advice to the project teams regarding procurement of beamline components. They will also procure major items for the beamline that are not covered under existing frameworks. They will actively monitor critical components and take the “policeman” role on procurements that are not running to plan.

4.16. Logistics Manager

A logistics manager will be employed to manage the procurement, storage and eventual delivery to ESS of all components. The key responsibilities will be:

- Management of outside manufacturing staff responsible for the project
- Procurement of components for the build

- Storage and delivery of components ready for prebuild
- Disassembly, packaging and delivery of components to ESS

4.17. OM representative

A dedicated member of the OM team will be allocated or employed to manage the “standard” mechanical component manufacture.

4.18. ISIS Facilities Safety

The ISIS safety advisor will be used to advise on all aspects of safety associated with the design and prebuild at ISIS.

4.19. Logistics support

An admin assistant will be employed their duties will be

- To arrange travel to ESS for project team
- To ensure all documentation is completed in the correct format and stored ready for delivery ESS
- To support the team in general logistic tasks

5. Project Specification

The Project specification will be defined as the delivery of the Instrument technical specifications ref:

- ISIS-ESS-Loki-SP-0001
- ISIS-ESS-FREIA-SP-0001

6. Progress Reporting and Control

See Project Reporting Plan – (Doc Number ISIS-ESS-PM-PD-0003)

See Change Control Procedure – (Doc Number ISIS-ESS-PM-PD-0004)

7. Review process.

See ESS Instrument Quality Plan (Doc Number ISIS-ESS-PM-PD-0002)

8. Scheduling and Resourcing

The Outline schedule is defined within ESS Outline Summary schedule (??????). This holds the time-plan information. This can be presented in many different formats. The views which are included are:

- 1) Instrument specific schedules.
 - a. Loki – (Doc.No. ISIS-ESS-Loki-Sc-0001)
 - b. FREIA– (Doc.No. ISIS-ESS-FREIA-Sc-0001)
- 2) Milestone plans
 - a. Loki – (Doc.No. ISIS-ESS-Loki-Sc-0002)
 - b. FREIA– (Doc.No. ISIS-ESS-FREIA-Sc-0002)

See ESS Instruments Staffing and Procurement Plan (Doc.No.ISIS-ESS-PM-PD-0005)

See Loki Delivery Model (Doc.No.ISIS-LOKI-PM-PD-0001)

See Loki Procurement Options (Doc.No.ISIS-LOKI-PM-PD-0002)

9. Cost Management

9.1. Cost Breakdown Structure

See ESS Instruments Staffing and Procurement Plan (Doc.No.ISIS-ESS-PM-Fi-0001)

9.2. Cost Plan

See ESS Instruments Staffing and Procurement Plan (Doc.No.ISIS-ESS-PM-PD-0008)

10. Procurement

See ESS Instruments Staffing and Procurement Plan (Doc.No.ISIS-ESS-PM-PD-0005)

11. Risk Management

See ESS Instrument Risk Plan (Doc.No ISIS-ESS-PM-Ri-0001)

12. Stakeholder Management

See ESS Stakeholder plan (Doc Number ISIS-ESS-PM-PD-0007)

13. Documentation Control

See ESS Instrument Quality Plan (Doc Number ISIS-ESS-PM-PD-0002)

14. Quality Plan

See ESS Instrument Quality Plan (Doc Number ISIS-ESS-PM-PD-0002)

15. Safety Plan

See ESS Instrument Safety Plan (Doc Number ISIS-ESS-PM-PD-0006)

