

# Faraday Institution Management Plan

Version 2, 3<sup>rd</sup> of September 2019

## Challenge Project Background

### Challenge Project Priorities

The aim of the Faraday Institution (FI) is to maintain a balanced portfolio of research, to support the UK's industrial strategy via the UK Industrial Challenge Strategy Fund, in partnership with Innovate UK and the UK Battery Industrialisation Centre under the Faraday Battery Challenge (FBC). Initially research will be focussed on the transportation sector, but the remit is more extensive than this.

Challenge priorities are defined by the Expert Panel, taking input from the Faraday Battery Challenge Advisory Board and Industry, as well as their own view of research priorities. This recommendation is then provided to Faraday Institution Head Quarters (FI HQ). They will cover Science, Engineering and Societal & Economic areas. Further challenges will be identified at the start of each year, or more frequently as need and budget dictates to create a balanced portfolio of long, medium, and short term targets to support industry need.

The programme is driven by the achievement of milestones, which are defined at different levels:

Level 0: Refers to the Programme e.g. the FI portfolio of projects.

Level 1: Refers to the top level plan of a project challenge e.g. countering battery degradation.

Level 2: Refers to the second level plan of a project challenge e.g. work package 1, interfacial coatings.

Levels below this are the responsibility of the organisation carrying out the research, keeping within the terms and conditions of the grant, with monitoring and review as described below and in the project reporting guidelines.

### Challenge project ideals

During the definition of the projects a number of principles were developed as aims for a good proposal. Essential is that the project is driven by relevant challenging problems, but also:

- Projects must assign a dedicated Project Leader (PL) who will spend at least 80% of their time day-to-day managing the project. Principal Investigators (PI) are expected to spend at least 20% of their time leading the project.
- Successful applicants will be required to work with the Faraday Institution HQ to define their project prior to the grant being awarded. Specifically:
  - Collaboration agreement- co-ordinated by the host institution and signed by all collaborative participants.
  - Second level project plan.
  - Financial profile.
- Projects must contribute to the growth of this field of research by recruiting staff to maximise the impact of the funding available.
- Organisations must facilitate the work of the Institution and its chief executive by allowing participating staff the freedom to work solely on the work of the institution i.e. allow participating staff on occasion to work at the headquarters of the institution and to free up staff time to focus on specific institution projects, where relevant.
- The FI, following recommendations from the expert panel reviews, will actively manage projects working with the PIs & PLs to plan to exploit new opportunities rapidly and stop unpromising themes early.
- Organisations must provide access to facilities to all institution partners across the headquarters and research projects.
- Projects must work with others in the innovation chain, specifically across innovation and scale up activities, where relevant and appropriate to their project.

- There must be a clear willingness to collaborate with other universities, forming integrated teams, including different people with diverse skills across disciplines.

## Challenge project process

The process for running a challenge project is shown in Figure 1:

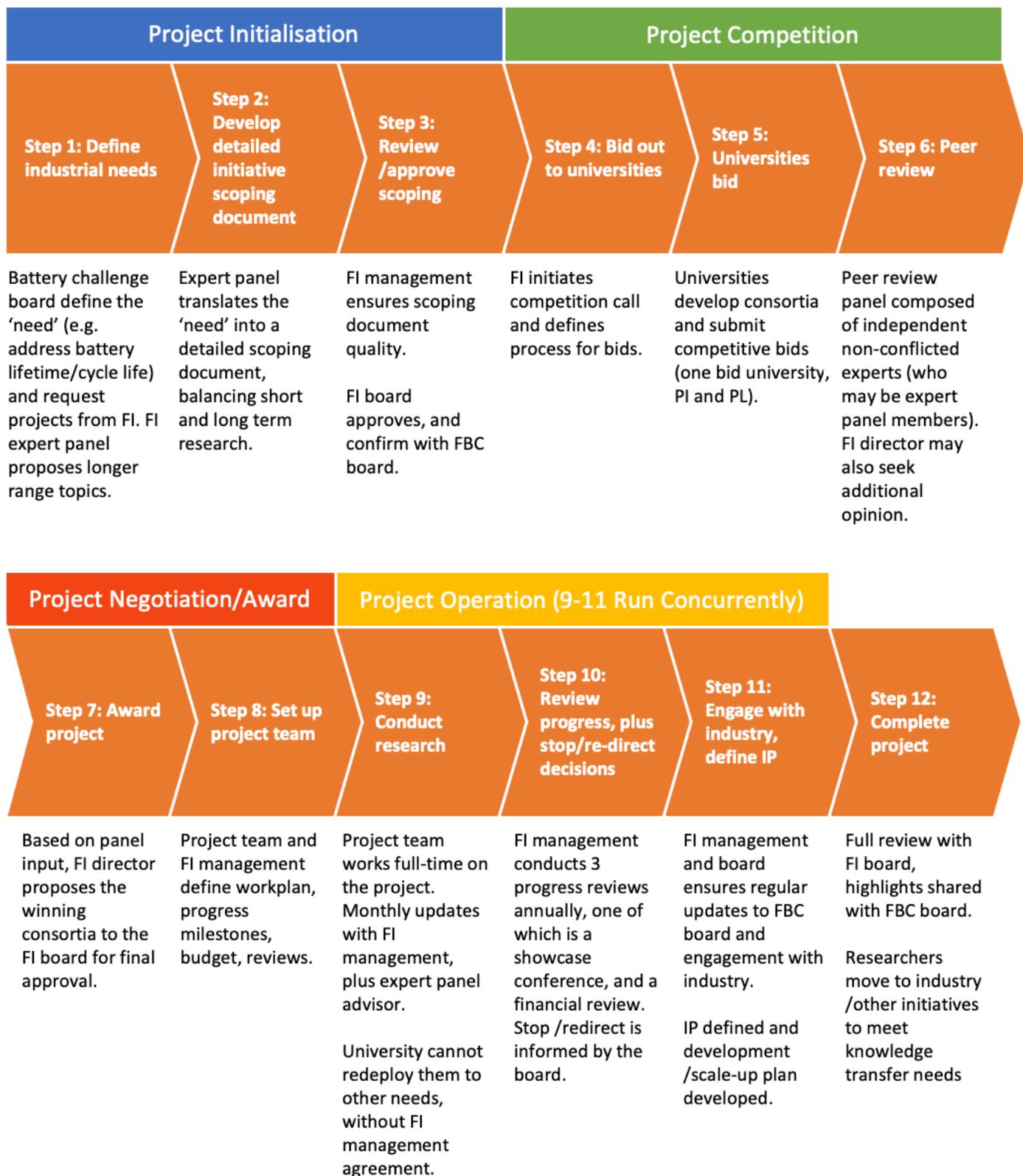


Figure 1 Schematic summary of FI challenge project process

Each challenge will have a kick-off meeting involving all the partners, FI HQ and member(s) of the expert panel. Advice from the expert panel is important at this stage (and may also be called on during project negotiation), to ensure the most important scientific questions are identified and addressed as a priority. PIs have authority to manage funding

appropriately, according to the change management process detailed within this document and the grant terms and conditions.

## 4-monthly project review

It is important that the projects understand the work and achievements of the other projects, and to meet for exchange of ideas and results. The 4-month reviews will be the main opportunity to do this. The FI board will also meet at this time. There will be two types of four-month review:

- The November meeting will be a large open annual showcase event and review, in the form of a conference, that will involve all projects, FI HQ, expert panel and industry members.
- February/March and July events will be a smaller closed review session, with selected members from all projects and the expert panel.

The review is open to all participants of projects or members of the FI (from students up). The review should focus on outcomes from the project, positive or negative, and how the project has progressed towards solving the big challenges. The format and content of the 4-monthly reviews is shown below, but is subject to periodic revision:

Review	Content	Who's involved
<b>Annual</b>	<p>Main project reviews:</p> <ul style="list-style-type: none"> <li>• Research achievements- is the project delivering transformative and internationally leading research?</li> <li>• Milestones and deliverables met/not met.</li> <li>• Highlight any research that demonstrates exploitation opportunities.</li> <li>• Training achievements.</li> <li>• New opportunities identified- could be proposed for new funding within the project or as a new project.</li> <li>• Agree milestones and deliverables for following year.</li> </ul> <p>There is also to be a separate high level summary for presentation to FI board privately, including impact against KPIs.</p> <p>There will be scientific posters and presentations, socio-economic information and market trends, talks from industry, etc. These may not be in the same room as the project reviews depending on the agenda.</p>	<p>FI: HQ Expert panel (plus external advisors as required).</p> <p>Project: PI &amp; PL to present plus 1-2 project scientists. Other project staff as observers.</p> <p>FI Board: Summary review</p> <p>Observers: government, industry</p>
<b>4-month</b>	<p>These reviews will cover the same content as above, but this will be to a much smaller audience, FI community only.</p> <ul style="list-style-type: none"> <li>• Main presentation to the community, covering the same points as the annual review.</li> <li>• High level summary for private review with the expert panel.</li> </ul>	<p>FI: HQ &amp; Expert panel. Smaller group from each project.</p>

Table 1 Summary of review meetings

Following each review, feedback from the Expert Panel will be provided. The target is to have this completed within a month of the review. If the expert panel provide any recommendations for change, this feedback will form the start of any Level 0 or Level 1 change deemed necessary, according to the change management process.

## Monthly update meetings

An important aspect of the active management is the continuous interaction between the project and expert panel/FI HQ. At the start of each project a member of the expert panel will be assigned to advise on science and technology issues, as well as review progress and make recommendations to the PI and FI HQ. Their role is to ask hard questions to ensure the best science is done and the right problems are tackled, and to provide help when needed. Any change requirements arising from these meetings must follow the change management process.

These progress updates should be held as face to face meetings at the lead or partner institutions, the FI HQ, or other appropriate venue. In order to capture progress and to inform the wider expert panel, a single sheet should be prepared to cover progress and issues- a template is provided. This is to be circulated to the attendees the day before the meeting to allow pre reading. It will also be provided to the expert panel by FI HQ. Additional scientific results are expected to be added as appropriate e.g. looking at a single aspect in more detail. A typical expectation would be a short presentation (less than 10 slides) covering one work package, and the others in minimal detail, as well as general project management update. This presentation is not expected to go to the expert panel.

Review	Content	Who's involved
Monthly progress updates	<ul style="list-style-type: none"> <li>• 1-2 hour meeting around a single page summary and highlight presentation.</li> <li>• Achievements &amp; highlights.</li> <li>• Progress against milestones &amp; deliverables.</li> <li>• Issues &amp; risks (technical, commercial, people, finance, etc.).</li> <li>• Focus of work for the next period.</li> </ul>	FI: Programme manager (PM), Expert panel member.  Project: PI, PL, WP leads as appropriate

Table 2 Summary of fortnightly update meetings

## Financial Review

### Budget/financial processes

The initial budget for the grant is set at the time of award and a quarterly financial spend profile should be agreed between the FI and the project. This profile should be submitted to the FI on the standard FI template and show quarterly projected spend by type, using the provided headings in the template, and by research institution over the duration of the award.

The FI works on a budget year of 1st April to 31st March. Budgets will be reviewed annually based on this financial year. Before the end of each financial year, the FI will review project progress and expenditure and will agree a process for setting the following years budget. However, where it is deemed necessary project content and budgets will be reviewed according to the level 0 change process and adjusted to maintain a balanced portfolio of research.

### Invoicing

Grant payments are paid quarterly in arrears based on actual incurred costs. Where costs are based on allocations, the allocated amounts (e.g. estates costs, indirects) should be in line with the relevant direct spends and not based on budget. The invoices should be submitted to [finance@faraday.ac.uk](mailto:finance@faraday.ac.uk) within 6 weeks of the quarter end. At the same time as submitting the invoice, a reforecast of the remaining project spend using the same template as the original financial profile should be submitted showing expected revised profile. Projects are requested to forecast their future spend as accurately as possible in order to support the FI's ability to utilise all available funding.

## Change processes

Project changes may be initiated by PL, PI, FI HQ, FI CEO or FI board (with or without the recommendation of the Expert Panel), but it is expected that most will be originated from within the project.

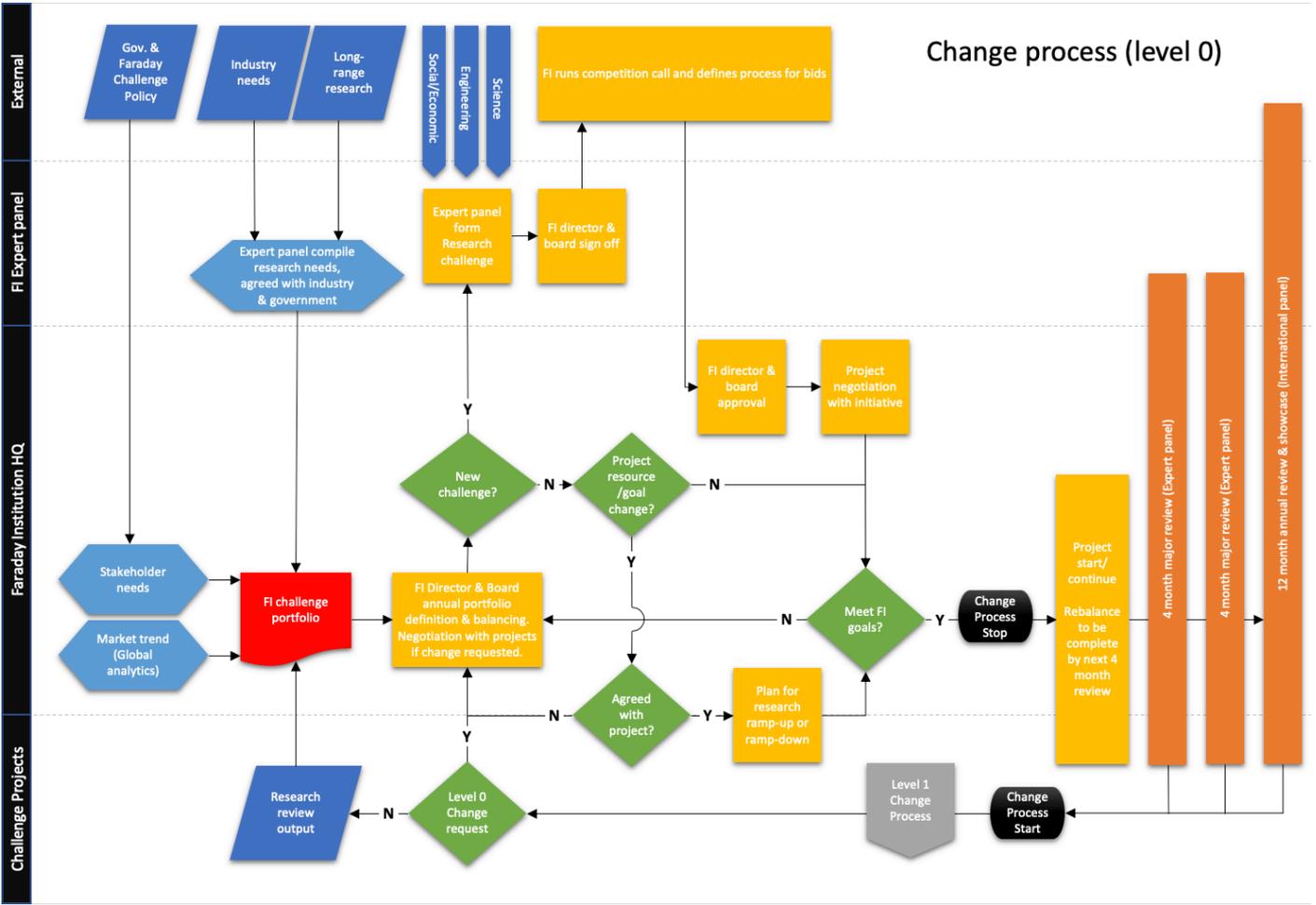
Table 3 and Figure 2 summarise the authority level associated with a change at each level of the programme and how the change processes will be implemented.

Level	Examples of type of change	Authority to change	Trigger points
0: FI challenge portfolio	<ul style="list-style-type: none"> <li>• Changes to FI goals.</li> <li>• New challenge initiative.</li> <li>• De-/Emphasise challenge area.</li> <li>• Significant (+/-) budget change.</li> <li>• People allocation change.</li> </ul>	FI CEO with FI board approval	Board meeting at any of the 4-month reviews

<b>1: Project</b>	<ul style="list-style-type: none"> <li>• Reallocation of people within existing projects, between themes or work packages.</li> <li>• Change to project milestone.</li> <li>• Change to plan (1-3 month impact).</li> <li>• Minor budget change, as defined in grant terms and conditions, and within financial guidelines.</li> </ul>	PI in consultation with EP member, and with FI HQ approval.	Monthly updates or 4-month reviews
<b>2: Work Package</b>	<ul style="list-style-type: none"> <li>• Sub-project/Workstream or deliverable change.</li> <li>• Minor budget change, as defined in grant terms and conditions, and within financial guidelines.</li> </ul>	PI in consultation with EP member, and with FI HQ approval.	Any
<b>3: Work Package sub task &amp; lower</b>	<ul style="list-style-type: none"> <li>• Sub-task or deliverable change.</li> <li>• Net-zero cost budget change.</li> </ul>	PI in consultation with EP member.	Any

Table 3 Summary of programme changes authorisation required to change.

Portfolio (level 0) change process



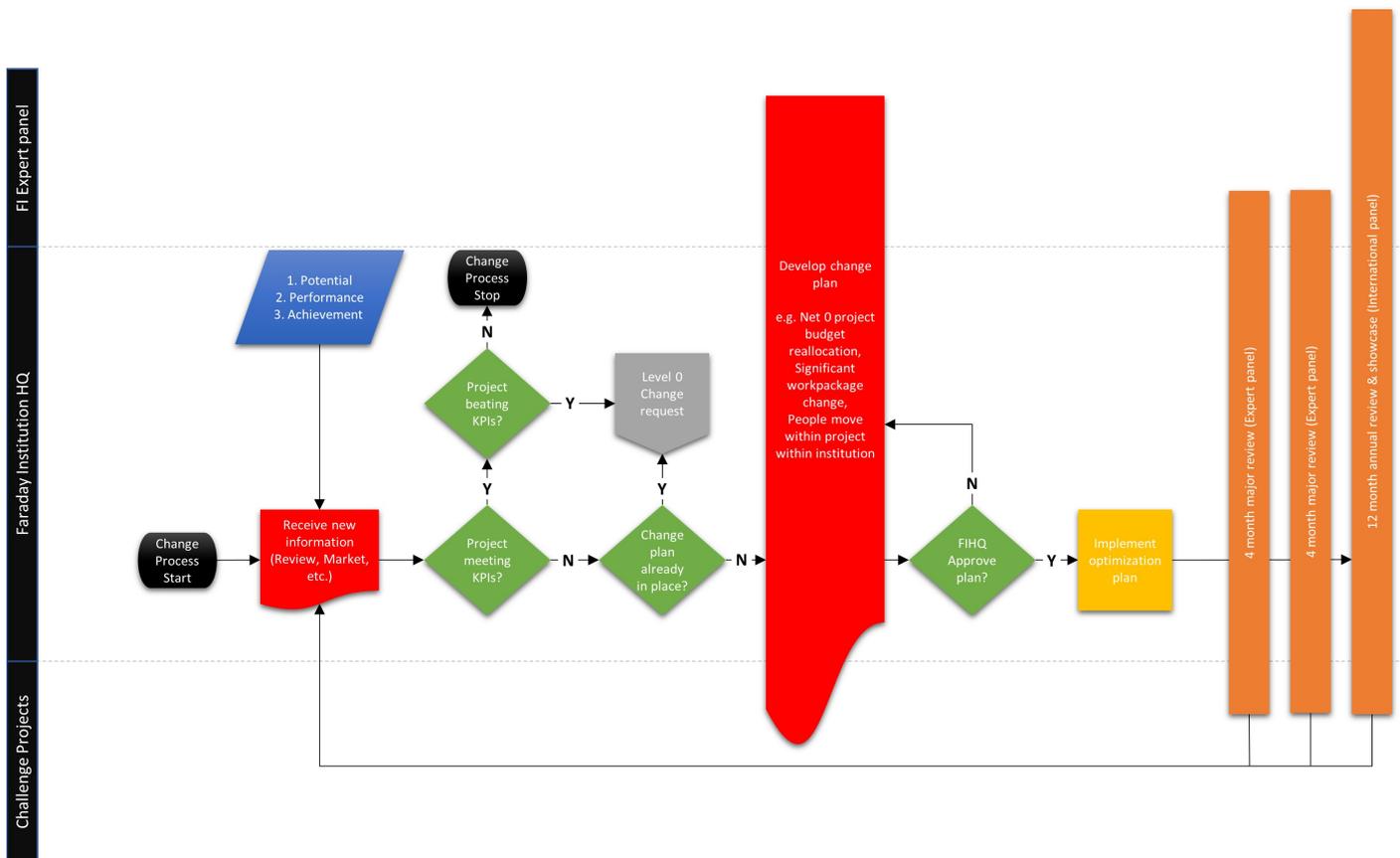


Figure 2 Schematic of change processes and level 0 and level 1.

Changes at level 0 will be implemented over a 4-month period i.e. between 4-month reviews. For project initiated Level 1 and 2 changes, or for financial changes outside of PI authority, a change request form will need to be completed- a template will be made available. A review process for changes >£10k, including additional equipment and changes to resources will be performed from that template. Level 3 changes are the responsibility of the individual project teams to administer as they deem appropriate.

Review of people allocation will be prioritised to minimise impact on research staff and to enhance quality of life. Therefore, an example of the sequence that could be followed if funding needs to be redistributed is: reallocation within project, within institution, secondment to other institution, transfer to other institution.

### Project completion

Upon project completion, at the next appropriate FI event, the project is expected to present a showcase of the results of the project, this may coincide with the annual review.

A final project report will also be required, with a focus on achievements and exploitation of project results both in follow-on higher TRL projects and work with industry. A template and guidance will be provided at an appropriate time.

In accordance with the grant terms and conditions, the FI reserves the right to request a financial audit at any time. Projects should expect an audit upon project completion, and it is likely that final quarterly payment will be reserved until satisfactory completion of all reporting on the project.