

# AN INTRODUCTION TO QUALITY ASSURANCE WITHIN THE LOCAR THEMATIC PROGRAMME

Throughout the LOCAR Thematic Programme, emphasis is placed on Quality Assurance (QA) at all levels. This is mainly in response to the request from the user community to ensure that the data and information produced by the various projects funded under LOCAR are reliable and fit for purpose, and also partly to broaden experience of QA across NERC-funded research.

The benefits of QA to researchers include:

- Ensures all staff are aware of project aims and objectives
- Facilitates access to information and data for all project staff, both now and in the future
- Summary information about the project is contained in one document, available to all project staff and the user community
- Organised approach to data collection and storage
- Consistent and defined work practices that everyone follows
- Training in QA for research students
- Promotes communication within consortia

Formal QA procedures have been used widely in commercial organisations, including those concerned with research and development, for many years. In contrast, the level of knowledge and usage of QA amongst the wider research community is very variable. Some institutions have extensive systems in place, while others have little or no experience. Because of the wide variability in QA experience amongst Principal Investigators (PIs) and consortia, it has been decided to take a tutorial rather than a prescriptive approach.

A moment's reflection will reveal that the preparation of and adherence to documented procedures is already very common in most organisations. This might include contracts of employment, COSHH risk assessments and regulations, manuals for the operation of complex scientific instruments or software, or following instructions to authors in the preparation of a paper for submission to a journal. Thus, the process of establishing a quality system requires no new intrinsic skills that are not already present in most organisations.

A QA Guidance Manual has been prepared to guide and assist consortia in installing and operating appropriate quality systems, with the aims of meeting the needs of the LOCAR programme itself and also enhancing the general level of knowledge and skill in QA procedures in the participating institutions. The present version includes some of the history, terminology and basic principles of quality systems. All PIs should receive a copy of the manual automatically; please contact the LOCAR QA Advisor, Andrew McKenzie ([aam@bgs.ac.uk](mailto:aam@bgs.ac.uk)) if you would like a copy.

For those with little experience of QA systems, setting one up from scratch may appear rather daunting. As a first step, it is recommended that PIs concentrate on writing a Quality Plan for their project. A Quality Plan *pro forma*, with guidance on what to include in a Quality Plan, has been drawn up. During the process of preparing a Quality Plan, PIs will find that they need to consider all the usual components of a quality system. These can then be developed into a more formal QA system at a later date if required.

## LOCAR QUALITY PLAN *Pro Forma*

Many aspects of Quality Assurance are no more than good project management. Thus the purpose of a LOCAR Quality Plan is to assemble, within one document, information on the principal aspects of the management of a project. It is not meant to be a comprehensive document in itself but rather to act as a signpost to the organisation of the project, individual responsibilities and where other project information may be found. It is envisaged that the Quality Plan will be made available to all project staff in the interests of good communication, especially within the larger consortia where some researchers may not be fully aware of how their work feeds in to the wider aims of the project.

Documents that form part of the quality system need to be identified, issued and updated in a controlled fashion so that staff have access to the latest correct version. Adopting a standardised page format can greatly assist here. Much of the relevant information can be placed in headers and footers that are easily manipulated with modern word processing software. Thus, at a minimum, a date and version number should be shown in the header, and at the bottom of each page its number, together with the total number of pages in the document. For documents such as procedures, the status of the document should be clearly marked as “operational” or “provisional” if it is still under review. At the end of each document there should be section that identifies who prepared the document, who checked it and who approved its use, together with their signatures and the date. Some of these features are illustrated in the Quality Plan *pro forma* prepared for the LOCAR thematic programme.

To assist PIs in getting their Quality Plan off the ground, a suggested structure and content are given in the *pro forma*. **Words in italics indicate parts of the document that need to be modified and amplified for each individual project.** To be effective, a Quality Plan must be written by members of the project team for the benefit of the project as a whole. The preparation of a Quality Plan should not take long if all the components of good project management are in place. Hopefully, it will act as a prompt if they are not!

Once an initial draft of the Quality Plan has been completed, it should be sent to the LOCAR QA Advisor Andrew McKenzie ([aam@bgs.ac.uk](mailto:aam@bgs.ac.uk)) for comment. It should be regarded as a live document throughout the project and updated on a regular basis.