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# **Overview of requirements for the ONLINE 3Rs SELF-ASSESSMENT TOOLS FOR THE NC3Rs**

# 1 Specification Content

## 1.1 Glossary

**Editable version:** Whilst answers to the various questions in the self-assessment tools are under discussion, the content inputted into an account will remain in an editable format.

**Final version:** Once answers to the various questions are finalised, they are submitted as a final version for analysis by the tool. The answers can no longer be amended in the final version and are stored either online or as a downloaded file.

**Lead user:** Within the two tools, each user account will have an individual who has the highest level of administrator rights, this is the lead user. This user has the ability to add others users to the account (sub-users).

**NC3Rs:** National Centre for the Replacement, Refinement and Reduction of Animals in Research.

**Sub-users:** The lead user identifies and grants sub-users access to the account. The sub-users have limited access to the data and all changes can be tracked by the lead user.

**The 3Rs:** Replacement of animals with non-animal methods, Reduction of the number of animals used per experiment, Refinement of scientific procedures and animal husbandry to improve animal welfare.

**User account:** This contains all the information inputted into the tool about a single institute or research group as applicable. The lead user holds the log on and password information for the account.

## 1.2 Introduction

- **Background to the NC3Rs.** The NC3Rs is an independent, scientific organisation established by the Government in 2004 to accelerate the

development and uptake of technologies and approaches which lead to the replacement, reduction and refinement of the use of animals in science (commonly referred to as the 3Rs). It works with scientists in universities and industry, and with research funding bodies and regulatory authorities, both in the UK and overseas. The NC3Rs annual budget is approximately £10 million, with the majority of this spent on funding research and innovation. Further information on the NC3Rs can be found at [www.nc3rs.org.uk](http://www.nc3rs.org.uk)

- **The need for 3Rs self-assessment tools.** The NC3Rs has recently published its strategy for 2017-2019 ([www.nc3rs.org.uk/our-strategy](http://www.nc3rs.org.uk/our-strategy)). This includes a commitment to work with research institutions (primarily universities) to embed the 3Rs in the scientific process. Part of this commitment is to develop two complementary 3Rs self-assessment tools that will allow research institutions and individual research groups to collate, track and benchmark over time their 3Rs activities.
- **What form will the tools take?** The tools will be freely available, web-based resources, based around questionnaires. Users will input answers to a series of preformulated questions about their 3Rs culture and activities. The system will score their responses and provide summary feedback and suggestions for improvement.
- **Who will use the tools?**
  - (i) For research institutions: This tool will most likely be completed by a nominated senior individual for the institution (typically a university).
  - (ii) For research groups: This tool will most likely be completed by the principal investigator (senior scientist) or others within the research group.

### 1.3 Scope

- The NC3Rs is seeking a company to develop two online self-assessment tools in the first instance. The company will need to suggest dynamic

solutions and engage with the NC3Rs at each stage in order to generate products that meet the requirements laid out in this document.

- Once the tools have been developed, the company will need to provide training to NC3Rs staff members to ensure that they can make minor changes to the tools and maintain them day-to-day.
- During the tool development and training stages, a representative of the company must be available to attend meetings at the NC3Rs office in London.
- User testing should be incorporated into the development of the tool.
- In the longer term, the company will need to provide ongoing support, including changing the content of the tool itself, troubleshooting issues reported by the NC3Rs and users, and also ensuring that the technology and software evolves in order to remain contemporary.
- There is also a requirement for hosting of the tools on secure servers.

#### **1.4 Service Conditions and Environmental Factors**

- Data within the system needs to be held and managed securely – see 1.12 Security.

## **1.5 Specifying Goods and / or Services**

- The tools will enable users to: 1) identify the elements of an active 3Rs culture; 2) self-assess themselves on how well they are embedding the 3Rs into policy and practice; 3) obtain feedback and suggestions for ongoing improvement.
- In so doing, the self-assessment tools will help the NC3Rs to support research institutions to implement a culture that actively promotes the 3Rs.

## **1.6 Services and Support**

- In the first instance, the NC3Rs is looking for a company to design and produce the required two bespoke online self-assessment tools. In order to achieve this, the company must take the lead and make dynamic suggestions, whilst working closely with the NC3Rs team to ensure that the tools are fit for purpose (for example, regarding content, ensuring that appropriate weighting and subcategories of questions are correctly applied, and that feedback and advice is allocated correctly).
- The company must provide in-depth training to the NC3Rs staff to ensure that they are able to alter the questions within the tool and easily make small modifications to the website interface (for example, adding new documents as part of the feedback) without computer programming knowledge (staff are familiar with using a variety of website content management systems).
- Once the tools have been produced and are functional, it would be preferable for the NC3Rs to own the tools and all component parts that are essential for functionality.
- Once the tools are available online, the company will need to provide an ongoing service for a further 5 years as outlined below.
- The company needs to maintain and update the software to ensure it remains contemporary. When the system evolves, the questionnaires

already stored within the tools using previous versions of the system will need to be supported in newer versions.

- The content of the tools needs to evolve to keep up with the current 3Rs climate and so the company needs to respond within a week to requests from the NC3Rs to change the content of the tool itself.
- The company needs to respond in a timely manner to minor issues regarding useability of the tool and technical problems. These issues may be raised by both the NC3Rs and users themselves. Ease of use is extremely important and so it is expected that users will receive an acknowledgement within 24 hours of an issue being reported with the tools being restored within 8 days. Failure to meet this target will incur financial penalties that will be mutually agreed within the contractual agreements.
- In the case of a major fault that renders the tool(s) unusable, a reponse must be received within two hours and the tool(s) restored within 12 hours.
- The NC3Rs requires the company to provide two separate quotes. One for tool development and training, and another for hosting, service and support for a further 5 years.

## **1.7 Tool Specifications**

- The self-assessment tools will be freely available, web-based resources.
- The tools must work without the need to install extra software.
- Both versions of the tool will be based on a set of questions/statements, where the user decides how well they comply. The question sets have already been developed.
- It is envisaged that there will be a public 'landing page'. This needs to contain a link to the data protection privacy notice, guidance for users and FAQs.

- The 'landing page' will also allow users access to either the research institution or research group 3Rs self-assessment tool via a log-in system to an account. There should be clear navigation, a simple account registration process, and the option to save information either on the system or locally.
- Accounts should rely on a valid email address. The validity of the email address should be instantly verified by the system.
- The user account will be accessed via a username and password held by the lead user. They must be able to add sub-users to the account who are provided with their own username and password that allows them to access the online version ('editable version') and make tracked changes/comments for the lead user to accept/reject.
- Several individuals are likely to be involved in collating and inputting information into the 3Rs self-assessment tool/s. It should therefore be possible to update information over time without having to complete the assessment in 'one sitting', with free movement between questions. The tools must allow a working document to be saved and amended over time and, as a minimum, it must be possible to download the working document and entire question set as a PDF for circulation or discussion within the institution or research team. Some questions will need to include guidance (perhaps by hovering over text for example). The option to upload supporting documents should be available.
- Once a final version (i.e. completed questionnaire) is ready, this must be submitted for analysis and either saved to the account profile along with any supporting documents, or downloaded as a file for local storage depending on user preference. Only the lead user will be able to submit the final version for analysis. Following analysis, both the institution tool and research group tool will need to provide a summary of the answers based on a scoring system, (including a visual summary, for example a 'spider web diagram'). The questions/statements will be weighted by importance and so the analysis and output must take this into account.

The tools should also provide bespoke advice and suggestions for improvement.

- The tools will be used by institutions and research groups to monitor 3Rs activity over time and therefore previous submissions (and uploaded documents) stored online should be available on the account profile for reference at a future date (until the point of automatic deletion of data as detailed in a retention document – see below). The tools must also allow those users that have saved previous data locally to upload this back into the system for reference. The tools should allow questionnaire results from different submissions over time to be compared alongside each other in an easily interpreted manner. Ideally, it should allow the user to select which categories/questions to include in the comparison.
- All outputs from the tools need to carry a protective marking and a date stamp.
- Data stored online must automatically delete as it reaches an expiry date (as outlined in a retention document). Within a user account, different categories of data will have different expiry dates. These expiry dates must be issued automatically when data is uploaded.
- The tools must contain an audit trail that traces the movement of data, including when it has been downloaded locally.
- The NC3Rs will appoint an expert working group to advise on the development of the 3Rs self-assessment tools.
- User testing should be incorporated during the development of the tools.

## **1.8 Technology and Systems**

- The online tools should be compatible with different internet browsers, including at least the last three versions of: Mozilla Firefox, Google Chrome, Internet Explorer, Safari and Opera.

- As detailed in the above service specification, the company is required to continue improving the software systems to ensure the tools remain compatible with future interfaces.

## **1.9 Quality Assurance Requirements**

- The NC3Rs is seeking to appoint a company to develop (and maintain) the 3Rs self-assessment tools. The company will need to understand the purpose of the tools, develop web resources which incorporate the functionality described in this document, and design them to make them attractive and user-friendly. These requirements will form part of the terms of Agreement.
- The company must ensure that the tools meet the expectations of, and feedback received from, the user group testing.
- The tools should adhere to the following accessibility guidelines: HTML 4/5, CSS 2/3.0 and WCAG Version 2 (AA).
- For security requirements, see below.

## **1.10 Whole Life Support**

- See 1.6 Services and Support.

## **1.11 Security**

- All aspects of the project, including the system as a whole, any personal data held, and the data within the tools must be secure to ensure that users feel confident about using the tools.
- All employees and contractors will be screened by the NC3Rs' security consultants in accordance with the HMG's Baseline Personal Security Standard policy.
- In order to meet the required security levels, the software supplier must employ the use of up to date Security Policy and Information Management

Protocols, including Security Procedures in order to protect the information held about users and the data within the tool.

- The tool should be hosted securely. Should the company not be able to provide the appropriate level of hosting security, the tool will be hosted by a secure hosting provider identified by the MRC.
- The hosting provider must be based in the EU with EU servers.
- The tools will need to comply with government requirements relating to security. It is advised that the company works to the recommended guidelines of ISO 27001 for information security management systems, especially if the company does not hold full government accreditation of their information security systems.
- As part of the tender process the company will be required to submit a copy of their Security Policy and relevant security procedures which include Personnel, Information and IT Security to the NC3Rs.
- The company should also show how they will enforce critical controls for effective cyber defence; these recommended guidelines can be found at: <http://www.cpni.gov.uk/advice/infosec/Critical-controls/>

## **1.12 Training / Skills Transfer**

- See 1.6 Services and Support.

## **1.13 Branding and Marketing**

- The tools must be branded NC3Rs.
- The tools must follow the [NC3Rs visual identity guidelines](#), including logo usage, positioning and exclusion zones, colour references (pantone, four colour, screen and web), secondary palettes and typefaces etc.

## **1.14 Documentation**

- The user interface must contain online user guides written by the company with input from the NC3Rs.
- The company must provide the NC3Rs with an electronic user guide to support the training provided to NC3Rs staff (e.g. for making changes to the questions/feedback).

## **1.15 Implementation**

- A project timeline must be supplied by the company as part of the tender process and must include milestones. This timeline will form part of the contractual agreement and will be used to ensure that the project is progressing in a timely manner.

## **1.16 Returns to be completed**

- It must be possible to monitor the total number of accounts held for each tool.