# Terms of Reference Guidance

## 1. Purpose

The Terms of Reference (ToR) document is created following initial and substantial contact with the project partners, potentially by any member of the RSE team, though it is most likely that the team member occupying the role of **Analyst** in this project that will prepare this document. It is not intended to be customer facing but rather a record for the RSE team of requirements and for later referral.

If the RSE team conduct **Project Planning Approval** this information can be used to inform decisions about whether or not the research fits well with your organisational goals and skill sets.

At a minimum it should cover the high-level concept in sufficient detail to discuss technical and management strategies within the team at the **Feasibility** stage.

Although each section is discrete, there will inevitable be overlapping details and priorities between the sections.

## 2. Completing the ToR

### 2.1 OVERVIEW section

This section of the ToR is for outlining the high-level concept(s) of the research being proposed. It is an opportunity to gain an understanding of goals of the research, and the team involved.

The matrix below offers some prompts and key questions for effectively completing this section. It is not exhaustive, but aims to stimulate the initial conversation in a productive way.

|  |  |
| --- | --- |
| Example Questions and prompts | Check |
| What knowledge domains are being explored? |  |
| What disciplines does the research draw on? |  |
| What data sources are being used? |  |
| What established methodologies will be used? |  |
| What skills are needed within the project team? |  |
| Is inspiration being drawn from any other projects? |  |
| What are the concrete outputs anticipated from the research? |  |
| How is the project team structured in terms of responsibilities and leadership? |  |
| What organisations and institutions are involved? |  |
| What level of funding is anticipated? |  |
| Which funding schemes are being considered or are already secured? |  |
| Who are the intended audiences for the project output? |  |
| How will the audiences interact with the research outputs? |  |
| What is the time span for the project? |  |
| What expectations are there for the project beyond the funding period? |  |
| What are the archival expectations? |  |
| *Ask to the team to describe a typical user journey through the output in terms of a target audience and their goals...* |  |
| *Encourage the team to provide a 1 or 2 sentence elevator pitch...* |  |

### 2.2 BACKGROUND CONTEXT section

This section provides an opportunity to record information that can feed into decision making during the **Project Planning Approval** stage.

The matrix below offers some prompts and key questions for effectively completing this section. It is not exhaustive, but aims to stimulate internal conversation in a productive way.

|  |  |
| --- | --- |
| Example Questions and prompts | Check |
| Have the RSE team had previous experience of working with this project team or members of the team? |  |
| Will the project team fully engage with the RSE processes? |  |
| What previous work (if any) is being built upon? |  |
| Has previous work in this area failed to produce quality research? If so, why? |  |
| Is there an existing resource upon which this new work depends? |  |
| What distinguishes this research as particularly ambitious or innovative? |  |
| Does the project align with current internal goals and strategies? |  |
| Does the project align with internal research interests? |  |
| Does the RSE team have access to the necessary expertise to fulfil the project requirements? |  |
| How amenable to digitisation are the data sources being proposed? |  |
| How amenable to archiving is the project being proposed? |  |
| Are the ambitions of the team realistic? |  |
| Does the project present ethical issues? |  |

### 2.3 REQUIREMENTS section

This section is to summarise the main deliverables of the project. Although absolute prioritisation might not be practical at this stage, it is worth attempting to identify those outputs that, if not delivered, would compromise the rationale of the project. All requirements should be considered from infrastructure upwards.

***Must Have*** *requirements (M) are those that would compromise the rationale of the project if not delivered. Test whether the core goals of the research can still be met, even at considerable inconvenience, if this requirement were not fulfilled.*

***Should Have*** *requirements (S) are those that would significantly improve workflow and reduce inconvenience for users attempting to achieve a core goal of the research. Additionally, these requirements, if not directly applicable to a particular* ***M*** *requirement, may be of secondary importance to the core research goals.*

***Could Have*** *requirements (C) are those that provide marginal improvements in workflow and may be aesthetic or of tertiary importance to the core research goals.*

***Would Have*** *requirements (W) are those that are likely to be aspirational in nature but present significant technical and practical obstacles given the timeframe and funding proposed. They may present very marginal benefits to the overall project goal, or may be more suited to follow on research pending the successful completion of the initial project.*

The matrix below offers some prompts and key questions for effectively completing this section. It is not exhaustive, but aims to stimulate internal conversation in a productive way.

|  |  |
| --- | --- |
| Example Questions and prompts | Check |
| Will the project require dedicated infrastructure? |  |
| What key services will any dedicated infrastructure need to provide? e.g. Image server, Web server, High Powered Computer etc. |  |
| How much storage is likely to be required for any source materials? |  |
| Is there a minimum appropriate specification for |  |
| Does the project require a website? If so, what is its primary purpose? e.g. Dissemination, Research platform etc. |  |
| Does the project require bespoke data structure? If so, which forms are most suitable? e.g relational database, graph database, XML etc. |  |
| Are there domain specific conventions and standards that must be observed, such as data formats, ontologies etc? |  |
| What are the design requirements of the website? e.g. a landmark resource with a strong brand identity, limited brand identity with a focus on specialist functionality, or a completely standard backend interface which will only be used by the project team etc. |  |
| For a web resource or stand-alone piece of software, what are the key user interactions that should be possible? e.g. textual search, faceted search, free browsing, data entry, moderated contributions, forums, map visualisations, data visualisations, API? |  |
| Will the resource draw upon third-party data or resources? |  |
| Will there be consultancy products? e.g. reports, scoping documents, design guidelines, etc. |  |
| *Attempt to categorise this requirements into the MoSCoW classification* |  |

### 2.4 RISKS & ISSUES section

This section attempts to direct early planning toward possible difficulties and complications with he research project. Anything which represent reputational risk or complicates a successful outcome should be considered here.

The matrix below offers some prompts and key questions for effectively completing this section. It is not exhaustive, but aims to stimulate internal conversation in a productive way.

|  |  |
| --- | --- |
| Example Questions and prompts | Check |
| Can the RSE team expect reasonable and equal collaboration with the project team and its members? What can be implemented to mitigate any identified risks? |  |
| Are there legal or ethical data risks associated with the collection and storage of data? Is there any precedent to draw upon? NB. Any use of personal data should be tested according to GDPR regulations. |  |
| Does the content of any website expose the RSE to reputational risk? |  |
| Can the RSE team confidently deliver the outputs given current access to skills and resources? |  |
| Are there any ownership or copyright issues to be considered with source materials? |  |
| Is the project already at an advanced stage and heavily invested in particular technical solution? |  |
| If the finished resource is to be hosted by a third party, does that party have internal review processes for approval? |  |
| Will the resource rely on third-party data or resources and can these be relied upon for continued service and consistent standards? |  |
| Does the resource (as envisioned) pose any security risk? |  |
| *Identify, where possible, mitigations for these issues.* |  |

### 2.5 TECHNICAL CONSIDERATIONS section

This section provides for further detail for any technical considerations that may have been identified in the Background Context, or in the Risks & Issues sections. This section may be important for making the case for funding by demonstrating how the digital aspirations of the project can be met. The role of the RSE in the funding application is to sense-check and underwrite the technical goals and inspire confidence on the project feasibility.

The matrix below offers some prompts and key questions for effectively completing this section. It is not exhaustive, but aims to stimulate internal conversation in a productive way.

|  |  |
| --- | --- |
| Example Questions and prompts | Check |
| Can the RSE identify suitable software solutions to deal with the project requirements? Ideally, the RSE should be able to identify a fallback solutions as well... |  |
| Does the RSE have access to sufficient computing power to meet the demands of the project? |  |
| Will the project require new software licenses or skills and training? Will these skills be useful beyond the life of the project? |  |
| What standards and conventions are applicable or essential? |  |

### 2.6 RESEARCH OUTPUTS section

This section may also be important for making a compelling case for funding, usually by the core project team preparing the application.

If the RSE can demonstrate that an innovative technical approach is being developed which may result in reusable resources such as modular code, or software, then list it here along with the traditional research outputs.

### 2.7 IMPACT section

Reiterate here which audience will be engaged and what new knowledge will be created.

|  |  |
| --- | --- |
| Example Questions and prompts | Check |
| What channels will be exploited to publicise the research? |  |
| Will the RSE present papers as a result of involvement with this project? |  |
| Is there a pressing and topical need for this research? |  |
| Does the project feed into REF for your institution? |  |
| Is the project high-profile? |  |

### 2.8 RELATED RESOURCES section

Finally, list here important related resources, perhaps prompted from feedback gathered in the sections above.

|  |  |
| --- | --- |
| Example Questions and prompts | Check |
| Include links to any existing website |  |
| Include links and clarifying descriptions to related websites and comparable research |  |
| Include links to sample resources provided by the project team e.g. images, documentation, sound files, spreadsheets, prototype designs etc. |  |
| Provide link to project management tool being sued for this project e.g. Trello, ActiveCollab, Google Docs etc. |  |