The Hubble Project

Writing a tech specification

March 2021

Writing a technical specification

Introduction

If you are introducing new technology to a care service, you should invite several potential suppliers to quote for the work. You should prepare an initial specification to enable them to quote. This basic guide outlines how to write that specification.

Once you have selected a supplier, you should review and agree the final technical specification for the work to be carried out. If you have inhouse technical experts, they may be able to write the full technical specification, but as you are introducing specialist tech, it may be valuable to work closely with an external consultant and/or the suppliers to write and agree the final technical specification.

This document has been developed as part of the Hubble Project.

Specifications

Specifications, (sometimes called a 'Statement of Works' or a 'Terms of Reference') need to be a clear, complete and unambiguous statement of the technical or essential characteristics that describes your requirement. Specifications need to be written with sufficient detail to ensure that suppliers understand your requirements in order to quote for work, and if selected, they can then measure the degree of their conformance.

In a procurement context, a Specification can be defined as a 'statement of needs'. It describes what you want to buy and consequently, what the successful supplier is required to supply.

Specifications can be simple or complex depending on the need.

Accurate specifications play a crucial role in contracting the right supplier, ensuring that needs are met, and implementing the system successfully as it clarifies and shares all of the details with all parties. Apart from being a means of identifying the goods / services required, a specification will form part of the final contract you agree with a supplier.

Types of Specifications

There are three key types of specifications. Depending on your level of knowledge, or stage of development, you may choose one approach only – or combine all elements into one specification.

Functional specifications

A functional specification outlines what the product or service are required to achieve, rather than how it is to be done. This enables suppliers to provide innovative solutions to defined problems. This approach can be valuable if you are open to very variable proposals. Or it can form a key element or a more detailed specification. All specifications should describe what you are trying to achieve.

Performance specifications

These are specifications that define the purpose of the goods or services in terms of how effectively it will perform. Performance is a logical extension of function. Performance specifications define the task or desired result by focussing on what is to be achieved. They do not describe the method of achieving the desired result.

Technical specifications

These are specifications that define the technical and physical characteristics and/or measurements of a product, such as physical aspects, design details, material properties, energy requirements, processes, maintenance requirements and operational requirements. They are used when functional and performance characteristics are insufficient to define the requirement and are often used for information technology requirements.

Writing the specification

The initial specification to be used to select your supplier should be led by the project manager, and written in collaboration with the wider project team and experts if required.

The people who write the specification need to:

- Be familiar with the project, its ambitions, objectives and how the tech will be used
- Understand the technology sufficiently well in order to identify details needed: you may need to buy in expert advice to help write the specification. Ask other care providers who have introduced similar systems if they would be willing to share their specification or insights
- Understand how the tech may need to integrate with existing or future systems.

Keep the language very clear and instructional. Be clear about what the tech *must* be able to do – and what might be optional.

The specification content

A typical Specification contains the following:

1. Scope – what is included in the scope of works (ie what you need or don't need)
2. Background – including objectives, rationale for change, current arrangements, desired usage
3. Detailed Requirements
    - Detailed product requirements – including what the system should achieve, how it should be used, what reports/outputs are required.
    - Maps, images or graphics to explain the tech
    - Performance requirements
    - Quantities, sizes etc
    - Support and maintenance required during and after installation
    - Testing programme
    - Training programme (eg train the trainer, or train all staff)
    - Installation and delivery plans
    - Post-installation support (eg helplines, warranty etc)
4. Sustainability requirements
5. Insurance requirements
6. Risk mitigation
7. Reports
8. Budget – You may want to advise potential suppliers of the budget parameters. They should supply full details in their quote inc expenses, transport, maintenance or contracts required
9. Milestones
10. Standards: performance, quality and technical standards that should be met
11. Relevant Documents – resource material and manuals
12. Inhouse support: Assistance provided by you as the customer