



Creative Functional Specifications

Patrick Onions, The Knowledge Studio discussion forum, 6 June 2012

Specifying what needs to be done is an important aspect of any project, particularly digital and software solutions. Requirements studies and functional specifications are one way of doing this, but these can become very tedious and sober documents that deter readers from anything beyond referencing. They need not be, and have the potential to be dynamic and powerful tools that engage stakeholders and provide competitive advantage for contractors and solution providers.

The IIBA's Business Analysis Body of Knowledge describes a number of qualities of good analysis documents; including accuracy, clarity, consistency, objectivity, traceability and good organisation. Additional qualities are needed for greater impact. Specifications should articulate the vision and engage, enthuse, delight and surprise the reader. They should also build the readers confidence in the team's ability to deliver, portray a scenario that the reader can picture themselves in, overcome any uncertainty that readers may be feeling towards the project, and provide a solid foundation for mobilisation and delivery.

Document structure is an important aspect of an engaging specification. It is the key to comprehension, perception of quality and directing the reader to important details. A good template also guides the writer and helps keep the message strong and consistent. Although there is no universally agreed standard for requirements or specification documents, the IIBA does offer a basic layout and experience points to a common document structure used by many organisations. Variety can however set one's documentation apart, so we have developed the following set of twelve templates for requirements studies and functional specifications for use on digital and software projects:

- **All in one:** a single document combining the requirements, user specification and technical specification.
- **Butterfly:** matching pairs of business requirements and technical solutions in a symmetrical relationship.
- **Fractals:** building a picture filled with wonderment and designed for exploration.
- **Functional breakdown:** incrementally structuring the document according to business areas or functions.
- **Journey:** a story that takes the reader through the actions of a user in a narrative form.
- **Layer cake:** separate the system into a series of horizontal layers, iteratively slicing the entire solution and describing each layer to a distinct audience and for a specific purpose.
- **Object oriented:** synthesising a series of objects that describe the real world.

- **Problem-based:** describe requirements and functionality as a series of distinct problems to be solved, in the format [*persona*] has [*problem*] with [*frequency*] that will be solved by [*solution*].
- **Process-centric:** mapping and incrementally describing the processes that the system is to perform, based on the *input-process-output* model.
- **User scenarios and experiences:** decomposing the journey or world view into a set of scenarios that describe the experiences of each category of user in their interaction with the system.
- **Use cases and story cards:** describing the system using use cases or story cards, based on the formal methods and practices of Agile, eXtreme Programming and UML. This is more system centric than user scenarios.
- **World view:** borrowing from Checkland and the concept of *weltanschauung*, this approach models the world-view of the system and its participants.

Choice of document structure will ultimately depend on the project, the client and the requirements elicitation. It therefore helps to have a set of templates in the analysis toolbox, and there is also no reason why the document cannot be a hybrid. If you are expected to produce requirements studies and functional specifications then be creative and keep your readers engaged.