TESTING & THE BUSINESS ANALYST

In the information technology industry, for many years the Business Analyst has been expected to undertake the testing of the outputs. While this is common practice, it poses significant risks to the project, the organisation and to the individual.

In the context of the change project, testing is not a phase in a sequence, but an activity ongoing throughout the life of the project. Specific test tasks such as User Acceptance Testing are simply components of the overall Quality Assurance process that commences with the project and only ceases at implementation and handover to the organisation's Quality Management process.

In this bigger context the dangers can be clearly identified. Firstly, there are those that relate to the capability to undertake the task: the skills and training needed, and the personal capacities. Secondly, there are those that relate to the structure and governance of the project.

SKILLS AND TRAINING

Testing is a professional discipline in its own right. In the context of information system products, since the 1970's[1] it has had principles, research, methodologies, approaches and documentation of its own, independent of Business Systems Analysis[2].

These need to be learnt and practised for the tester to become professionally proficient. If the tester is also undertaking analysis tasks (whether sequentially, or—worst case—in parallel), then they simply can not focus on the task or on their professional development as a tester,

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[1] Glenford J. Myers' classic text, *The Art of Software Testing*, was published by John Wiley and Sons in 1979.

[2] In the context of engineering and construction projects, going back even further.

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As well, there will often be specific testing regimes and technologies for specific types of outputs. While the principles are similar, the test procedures used for testing a real-time control system such as building management are not the same as those used for testing a transactional database. It will be difficult for an analyst-tester to maintain their competence in the relevant technological sphere if they are required to multi-task.

PERSONAL CAPACITIES: ATTRIBUTES AND DISPOSITIONS

What makes a 'good' Business Analyst?

- The capacity to work well with other people. The core task of the Analyst is to work with stakeholders to elicit and validate the requirements.

- Strong communication skills. The Analyst works constantly with a wide range of stakeholders and requires a sophisticated set of communication strategies and options to address their needs.

- Without losing sight of the detail, a 'big picture' orientation.

- Ability to work well with ambiguity. Analysis is the initial function of the project, the 'discovery' phase, when scope is still being finalised, requirements change, and priorities fluctuate wildly.

- Creativity. Without imposing on the stakeholders, the analyst is orchestrating the creation of a significant change.

- Focus on the long-term outcomes of the project. There are two core outputs from the analysis function: the Business Requirements Specification, and also the Benefits Realisation Plan. Understanding the benefits will inform the selection of Requirements; equally, the Specification documents the Requirements needed to address the business objectives of the project, that is to deliver the long-term outcomes.

What then, are the personality traits—the attributes and dispositions—of the tester?

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- Meticulous attention to detail. Do the test results match the prediction? Does the Test Plan test all aspects of the Specification? Does the test data trace all significant paths?

- Capacity and inclination to work alone. The tester is working primarily with documents and outputs. There will be a test team on a large project, but the requirement to work with other people is clearly not intrinsic to the task.

- Focus on 'breaking' the product or output. The tester is attempting to identify the faults in the product—it is not their domain to question whether it is a significant fault in terms of the overall outcome of the project, nor to resolve the fault.

Are we talking about the same person here? Clearly not.

PROJECT FRAMEWORK: TASKS SEPARATED IN TIME

For any given output, the testing task is separated from the analysis task by the design and development functions. Quite literally there is a time delay from completion of the analysis task until testing of the associated outputs. If the Analyst is redeployed to any other task or project, they may not be available to commence testing on time, with consequent risk of project schedule slippage. In the context of a large project this is perhaps not a significant risk, as the Analyst may be allocated to analyse requirements for subsequent phases while waiting for the outputs become available for testing. However, this is still a complex scheduling situation with plenty of opportunity for slippage.

FOCUS ONLY ON ONE ASPECT OF TESTING

By referring to the activity as "testing", or "User Acceptance Testing" the Business Analyst loses sight of the broader range of quality assurance functions that must be undertaken. All aspects of the analysis function may need to be quality-assured. The range of quality assurance tasks to be undertaken during the analysis function will normally include[3]:

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[3] In addition, if the analyst has been tasked with their preparation, other outputs such as the Functional Specification may need to be quality-assured.

- review of the Business Analysis Plan (that is, the strategy for undertaking the analysis task, including the quality assurance tasks therein)

- review of interview and planning session outputs

- review of the Business Objectives (the business risks, problems and opportunities to be addressed in the new proposal)

- walkthrough and review of Business Requirements Specification

- walkthrough and review of Benefits Realisation Plan

In practice, because of the focus on the latter-stage test function, these earlier Quality Assurance tasks can often be neglected, down-graded or simply forgotten. The focus shifts to "sign-off", rather than to detection and resolution of errors and omissions. This poses a significant risk to the successful outcome of the project: the earlier errors are introduced into the project, the more expensive they are to detect and resolve.

CONFLICT OF INTEREST

Considering the Test function in the bigger picture of overall Quality Assurance for the project highlights the key danger: we cannot check our own work. Ultimately, the most significant problem is this last one: the conflict of interest that arises between the two roles. Both writing the Test Plan and executing it are clearly the responsibility of the tester. However, the person undertaking these activities must be independent of the Business Requirements Specification. It is too easy for the Specification to be insufficiently detailed, and for assumptions to be undocumented: an independent testing function provides a checkpoint to ensure adequate accuracy and clarity. More importantly, it is difficult for anyone to be completely impartial about their own work: there is a significant risk that the Test Plan will focus on proving the product 'right' (even though that is impossible), rather than finding the errors and omissions.

Testing is a professional discipline in its own right. Independent Verification and Validation teams—whether in-house or external—add rigor, independence and professionalism to projects.