

Improving information systems success: why CIOs need Business Analysts

Introduction

The Information Systems (IS) function has developed over the last few decades from a specialist area of expertise with its own language and high degree of autonomy, to an inherent part of the organisation that is responsible for delivering vital support services. Research suggests that business performance is improved when there is alignment between business and IS strategy. However, alignment between the needs of the business and delivered information systems is becoming more complex as business expectations increase; this is a key concern of many Chief Information Officers (CIOs).

Difficulties persist in ensuring that IS projects are successful. The Financial Times reported on several failed projects where budget overruns ran into millions if not billions of pounds, commenting that 'poor communication – particularly between business and technical experts – is a constant problem'¹. The report also identified poor requirements as an issue despite the IT industry having been aware of the importance of understanding requirements for several decades.

Increasingly, the IS function is required to both enable and support business change and the focus has moved to the effective delivery of business services. As customers have become more IT literate and aware, so have there been more calls for the IS function to have greater understanding of customer needs. Similarly, as businesses have become more complex, so has their reliance on information systems to support them. More and more emphasis is now placed on having the most up-to-date infrastructure to enable data access, providing the most accurate management information, and ensuring that customer interfaces are highly usable. And this is in addition to ensuring 99.9% reliability and 24/7 availability. Such is the importance of IT to business that many organisations now look to specialist organisations to supply their IT through outsourcing or offshoring arrangements. However, this approach brings its own challenges; Information Week reported that many outsourced IT projects are failing² and there is a question about how companies retain adequate control over specialised functionality and critical intellectual property. Another question concerns whether projects that are succeeding in terms of delivering to time and within budget are meeting the business needs. Although the success measures for project management concern the triple constraint of 'time, cost and quality', research suggests that these 'process-related criteria' need to be supplemented by 'outcome-related criteria' of learning, value and use if the evaluation is to be comprehensive and accurate³. In essence, while the delivery of a system within the required timescale and budgetary constraints provides one measure of IS success, it does not guarantee the usefulness of the delivered solution to the organisation.

Whereas timescale and budget are tangible elements to assess, the evaluation of outcomes may be much more subjective. Approaches adopted include investment appraisal using

¹ Why big IT projects crash. <http://www.ft.com/cms/s/2/794bbb56-1f8e-11e3-8861-00144feab7de.html#axzz2jL208Sjj>

² Why IT Outsourcing often fails <http://www.informationweek.com/it-leadership/why-it-outsourcing-often-fails/d/d-id/1105317>

³ R Ryan Nelson, Project Retrospectives: Evaluating Project Success, Failure and Everything In Between. MIS Quarterly Executive, September 2005.

Discounted Cash Flow or Internal Rate of Return, the Balanced Scorecard or delivery of business benefits. Whichever approach is used, the achievement of success is reliant upon a solution that aligns with business needs.

A further issue for IS functions is the ever increasing need to deliver business value early. In some organisations this has seen a major shift from linear development approaches to more iterative development/incremental delivery approaches such as Agile. However, Agile is not a silver bullet for information system success. The UK Department for Work and Pensions (DWP) Universal Credit project has been reported to have failed because of inappropriate use of Agile, with Computer Weekly stating that “Universal Credit failed on Agile because it was a waterfall contract”⁴. The rush to use Agile without due diligence is an example of organisations adopting solutions based on anecdotal wisdom rather than considering the options available and deciding on the best approach for the situation. Also, many organisations fail to recognise that moving to a new way of working, such as Agile development, is a business change requiring new processes, techniques and skills and, as a result, requires careful analysis, consideration and planning.

Business Analysis

Business analysis is a relatively new specialism in the IS function and offers a means of bridging the gap between business needs and information system solutions. BCS, the Chartered Institute for IT, offers the following definition of business analysis:

an internal consultancy role which has the responsibility for investigating business situations, identifying and evaluating options for improving business systems, defining requirements and ensuring the effective use of information systems in meeting the needs of the business (Paul et al., 2010)⁵

Business analysts have the skills and knowledge to investigate business situations or problems, and understand the business needs – from strategic through to operational – in order to ensure that the defined requirements enable business/IT alignment. Despite being a relatively new discipline, many senior business analysts offer extensive skills, providing internal consultancy to their organisations. They advise on aspects such as the priorities within the change project portfolio and the most relevant analysis approach to adopt. They can also help to ensure that wise investments are made and solutions are agreed that will resolve genuine business issues rather than addressing more evident symptoms.

So how do business analysts achieve this? Firstly, they work at a pre-project level, uncovering root causes of problems rather than merely documenting stated requirements that will only address symptoms. In other words, they begin by asking ‘what problem are we trying to solve?’. Secondly, they listen to what stakeholders say so that their underlying beliefs and values are understood. Thirdly, they consider options in the broadest sense so that they meet business needs rather than immediately assume that software will provide all of the answers. They recognise that not all problems require new IT systems, sometimes the need may be met by redesigning the process or re-training the staff.

As an example of a business analysis assignment, a project was set up to explore how close collaboration with key business areas might enable transformational change. However, the projects where the collaborative approach was proposed were all concerned with the delivery of software solutions. If the business areas failed to appreciate the benefits of

⁴ Why Agile Development Failed for Universal Credit www.computerweekly.com/news/2240187478/Why-agile-development-failed-for-Universal-Credit

⁵ Paul, D., Yeates, D. & Cadle, J. 2010. Business Analysis, BCS.

collaboration and did not want to collaborate, then making a significant investment in the systems would have been a waste of time and money. The BA assigned to this project recognised this and influenced the senior business leaders to try different approaches and contexts for collaboration, thus establishing an improved basis for success.

It is the responsibility of the business analysts to ensure the effective use of information systems in meeting the needs of the business. Therefore, it is essential that they develop models and definitions of the business requirements and understand the IS requirements within the business context. The V model may be used to illustrate how the business analysis activities align with systems development activities; this is reflected in the extended V model in figure 1.

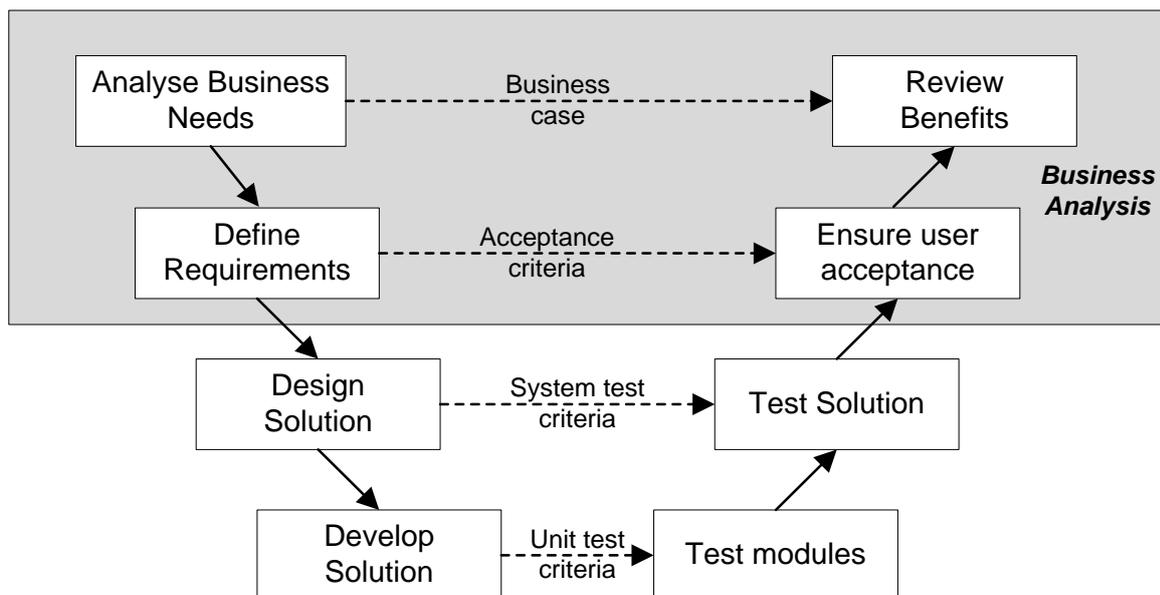


Figure 1: extended V model

As shown in figure 1, the work of the business analyst provides the requirements documentation and criteria that form the basis for the acceptance of the delivered solution. While surveys have identified several reasons for project failure, requirements definition is cited frequently as a major issue. For example, a survey of 99 IT projects identified requirements determination as a source of problems in 31% of projects⁶. While the impact of ill-defined requirements is well documented, without a holistic understanding of the entire business situation it is not possible to determine the best way forward. Too often the need to elicit business requirements is recognised but the solution envisaged is focused on software without sufficient recognition of the surrounding business context. In effect, the nature of the solution has been determined before defining the requirements and without consideration of alternatives or more holistic solutions.

This is a common theme which is predicated on an assumption that requirements are elicited and defined for the sole purpose of developing or enhancing software. However, in many situations, a software system may not be the only possible solution, or may form only part of the solution, if the business needs are to be met. It is vital that there is understanding of the problem, the business domain and the factors inherent in the particular business situation; after all, the business problems may be resolved, or partially-resolved, by non-automated

⁶ R Ryan Nelson, IT Project Management: Infamous Failures, Classic Mistakes, and Best Practices, MIS Quarterly Executive, June 2007

means. Failure to consider a broader business context may result in requirements that are ambiguous and incomplete.

Business analysts use a holistic approach that extends beyond information systems to incorporate aspects from the broader business context such as process improvement and people change. One of the key approaches used in business analysis is to take a holistic view using models such as the POPIT™ model shown in figure 2. This approach is used to ensure the business processes, organisational policies and structures, and people are aligned with the information and technology.

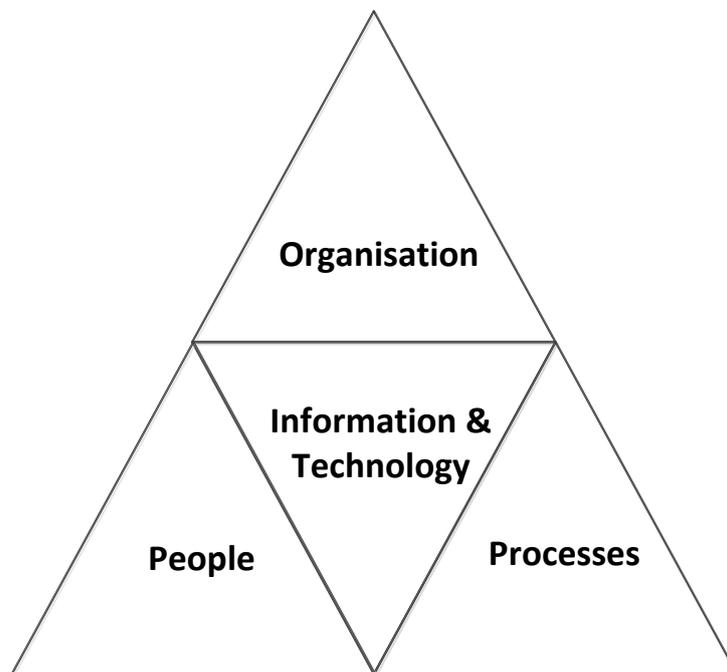


Figure 2: POPIT model

Conclusion

The purpose of information systems is to enable the delivery of improved organisational performance through IS and process improvement and, to achieve this, the IS function must offer the capability to investigate business needs and formulate feasible, relevant solutions, each of which may require changes to any combination of systems, structures, processes and people. Requirements must be firmly based within the business context and benefits must be analysed such that the enabling IS and business changes are established. This requires the holistic, analytical approach which is central to business analysis work. Given that alignment between the needs of the business and the delivered information systems is often difficult to achieve and the results imperfect, it is vital that organisations employ skilled business analysts who understand the business context, as well as the IS function. BCS has recognised the importance of the business analyst role in investigating problematic business situations, identifying business needs and defining requirements. This recognition reflects the relevance of the business analysis specialism to today's business world.

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