White Paper

It's Never Just IT

The importance of examining a problem holistically

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Adrian Reed

Adrian Reed is a Principal Consultant and Director at Blackmetric Business Solutions (*www.blackmetric.co.uk*), where he provides business analysis consultancy and training solutions to a range of clients in varying industries. He is a director of the UK chapter of the IIBA, and a member of the team that runs Pragnalysis.com (a site providing a free BA toolkit including templates). Adrian is a true advocate of the analysis profession, and is constantly looking for ways of promoting the value that good analysis can bring.

You can read Adrian's blog at *www.adrianreed.co.uk* and follow him on Twitter *@UKAdrianReed*

It's necessary for organizations to continually evaluate and respond to opportunities and threats in their business environment, and to ensure they are operating as efficiently and effectively as possible. The business environment is often described as somewhat Darwinian; it isn't necessarily the organizations with the most resources, but those with the best aligned resources (and those that can adapt quickly) that survive.

In this competitive environment, organizational focus often understandably falls on effective and innovative use of Information Technology. Managers ask how IT and automation in general can be improved to yield benefit for the business and its customers. Sometimes, projects might be initiated with a specific IT change or IT solution in mind. Yet a hidden danger is lurking beneath the surface and projects that fix on a solution too early or focus purely on IT are missing a trick. Smart organizations focus on first establishing a thorough and holistic understanding of the problem they are trying to solve (or the outcome they are trying to achieve), including an understanding of the underlying desired business process.

It's never just about IT

The danger of early solutionization

There is no doubt that Information Technology is a pivotal enabler, and in many cases the operational backbone, of many organizations. Good IT ensures that leaders, managers and other stakeholders have access to the information they need to make informed decisions. It ensures that front-line workers have the information to hand to successfully meet a customer's needs. When organizations are innovating they often look for new and innovative ways of utilizing technology. When organizations face a problem, or want to leverage an opportunity, they might gravitate towards information technology as a possible solution.

However, a real danger occurs when projects focus exclusively – or nearly exclusively – on the technology element. Even the most technical of projects will exist in the context of a business, with business stakeholders, users, managers etc. There will be people, organizational and process concerns to take into account. However, sometimes our stakeholders might get somewhat 'blindsided' and blinkered by a particular IT solution. Perhaps an executive stakeholder goes to a trade-show, sees a new piece of software and declares:

> *"We must migrate to the new XYZSoft Customer Relationship Management system, it is so much better and feature-rich than our existing software! I have budget; let's kick off the project…"*

Whilst the solution the executive stakeholder has chosen might be appropriate, we're missing significant information about the business context in which the system needs to operate, the types of users that would use it, the processes and workflows that it will automate and so forth. Put simply, we need to understand the existing situation more holistically. We need to understand the problem that the organization is trying to solve through implementing this IT system. And most importantly, we need to understand the business outcomes they are looking to achieve.

If we – and the business stakeholders – don't know what problem or opportunity we are intending to address, and which business outcomes we are trying to achieve, then we simply can't know if the proposed solution will meet them. This could lead to hard-earned business revenue leaking directly down the drain in unnecessary expenditure that doesn't solve the right problem. A project might well be delivered "on time" and "on budget" but if it doesn't solve the desired problem and deliver the desired benefit then it can still be considered a failure. Even worse, it may cause other, new, unexpected problems elsewhere. A situation best avoided!

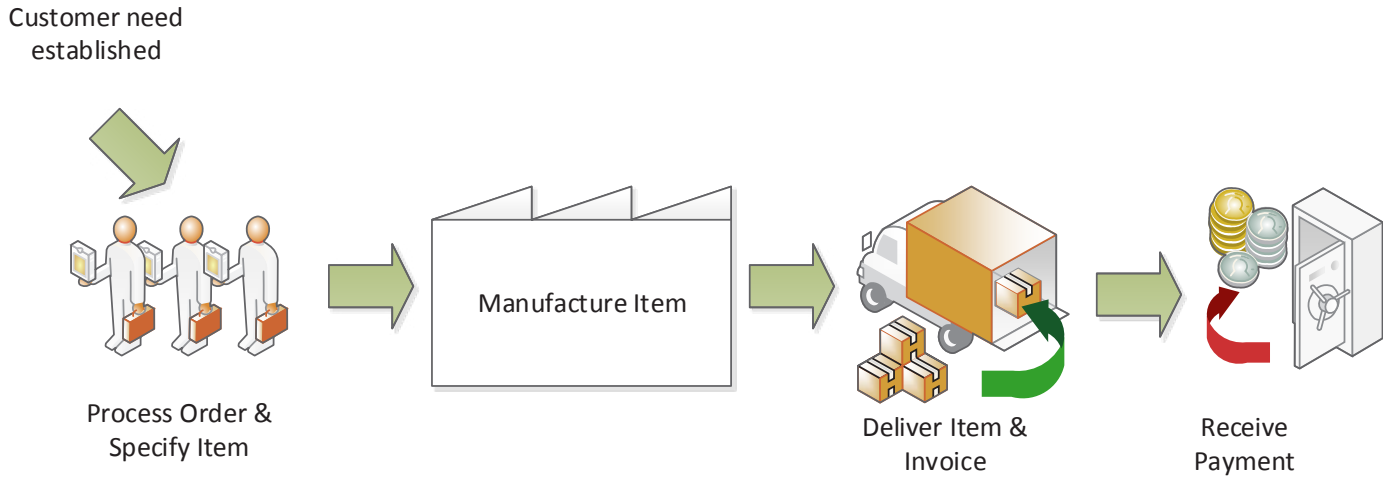

Figure 1

The importance of analyzing and understanding the end-to-end process

When stakeholders gravitate towards a specific IT solution, it is valuable to encourage them to take a step back. Understanding the high level end-to-end processes that the system will be integrating with is useful. It is quite likely that a true end-to-end process will span several IT systems and include manual procedures as well, and it's important to ensure we work to optimize the process as a whole. It is worth considering the process(es) at varying levels of granularity, starting at the very top level. If we optimize a part of the process that isn't a bottle-neck, we might well end up causing problems further downstream. This is of course true of all process improvement opportunities; the difference being that by using IT or automation we could potentially significantly speed things up leading to backlogs and congestion further downstream.

Let's imagine we work for an organization that manufactures widgets. In our example, widgets are customized and produced on demand for our clients. Perhaps our normal end-to-end sales and production process (at the highest level) could be represented as illustrated in *Figure 1*.

Imagine a problem was spotted where orders aren't being processed quickly enough. Perhaps the existing sales process is entirely manual, or relies on disparate IT systems that aren't integrated. Perhaps this means that the sales team doesn't have access to the information they need, which slows down orders and means they can't pre-empt possible future sales – both of which lead to missed sales opportunities. The temptation might be to implement an improvement initiative in the order processing arena; perhaps involving a new automated order handling solution. However, the question needs to be asked, "can the manufacturing team keep up with greater volumes of orders". And indeed "Do we (or our delivery firm) have the capacity to deliver those orders?" If the answer is no, then by streamlining or introducing technology up front, we are simply moving the bottleneck further down the process. Solving a localized problem has led to inefficiencies to be transferred elsewhere,

and the customer is still left waiting. In fact, the customer experience may even be worse; rather than having to wait to make their order (which is bad enough) they can now make their order quickly, but have to wait a long time for delivery. We might actually lose customers as a result!

Almost certainly in this situation, the organization is actually looking for greater revenue through increased orders (whilst retaining customer satisfaction). In which case, changes might be required in order processing, manufacturing, logistics and even in finance. Implementing technology in one area might have a direct impact on the others. Examining the process end-to-end, and considering change holistically and from the perspective of the underlying problem helps. Understanding the problem holistically might lead us to a whole range of possible options. Perhaps we streamline our sales process using IT effectively, but outsource part of our delivery and distribution (so we can keep up with the extra demand). Or perhaps we notice that there's the opportunity for a pure process change that will lead to the same outcome.

The importance of business and user engagement

As well as the process, and indeed the technology, it's vital to consider the people who are involved in executing the process. It is crucial to understand how they actually conduct their work to understand the problems they face in detail. It's important to understand their attitudes, whether they've received the right training and whether the organization has employed people with the right skills to start with. Any kind of change is likely to impact the organization's people, and it might necessitate new training, or even new job roles.

I once heard of an organization that undertook a substantial upgrade project which affected many of its front-line (customer-facing) staff. The project had been seen as a 'technical upgrade' with no need to engage the business or the users (and presumably the business did not push to become engaged on the project either). Apparently, although the users had been sent a couple of e-mails a few months before, the first the users knew the upgrade had actually happened was when a new icon appeared on their desktop. The upgraded application had a significantly different user-interface, causing significant frustration for the users who weren't expecting it. Unsurprisingly, the users never warmed to the system and found every reason to pull it apart and criticize it. I'd like to think that this level of engagement failure doesn't happen in organizations – and perhaps the story that was told to me was somewhat of an embellishment – but either way, this story highlights the importance of business engagement even on seemingly 'technical' projects.

It is sometimes argued that some IT projects can be run without any business engagement, particularly those projects that appear to be IT-centric. However, experience tells us this is a dangerous game. Ultimately, technology exists to enable the business' operations; if the business isn't bought into a technical change then there is a dangerous disconnect. Even the most technical-sounding project (e.g. "Upgrade network infrastructure") should have a business outcome (e.g. "In order to improve capacity in line with business plans").

The antidote: A holistic viewpoint

Start with the business problem

An important first step to achieving a holistic view of a business situation, particularly when a stakeholder presents us with a pre-determined solution (often an IT solution), is to re-focus on the business problem or opportunity that is being solved. This can be achieved by working with the business stakeholders to understand the business value that they perceive the solution will bring them. What objectives are they aiming to achieve? And what pain are they trying to avoid (or what opportunity are they trying to move towards)?

There are many techniques that can help us focus on analyzing the problem. The humble 'problem statement' or 'opportunity statement' is one such technique, and it is a remarkably effective technique for crystallizing these views and helping move the discussion away from a pre-conceived solution through to a common understanding of the problem. There are many ways to write a problem/opportunity statement, but a fairly standard approach, derived from content in IIBA's Business Analysis Body of Knowledge (BABOK®) guide v2.0 is shown in *Figure 2*. This precise yet succinct format helps stakeholders to agree on the problem they are trying to solve.

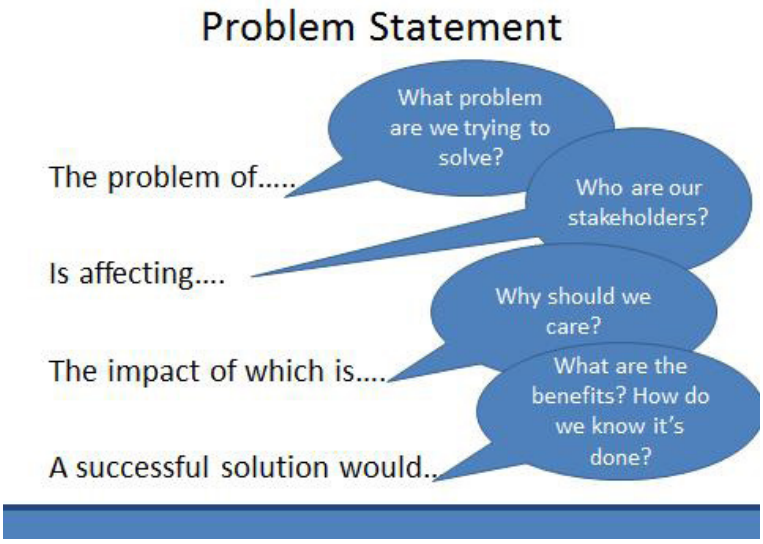

Figure 2: Problem Statement
(Image © Blackmetric Business Solutions Limited, 2012. Used with permission)

A good written problem statement is succinct and precise. It is likely to take several rounds of iteration to get right. It may take a series of workshops, stakeholder interviews and even observation sessions to achieve clarity on the problem, but once completed the problem statement becomes a useful guiding beacon. There are many other tools and techniques that can be used alongside the problem statement (this is certainly no 'silver bullet'!) and you'll find some useful references in the further reading section.

Examine the problem before the solution

Before considering solution options, it's also important to consider the problem (and the proposed improvement) through varying 'lenses'. As outlined above, it will be important to understand the end-to-end process. What impact does it have on the process? What does it mean for the people? Are the right people from the business engaged? Does the change fit with the business culture?

It can be tempting to rely solely on process models and other artefacts when analyzing the end-to-end process. However, formal process models, unless they are stored in a shared tool which is easily understood and accessed by all stakeholders, can soon fall out of use and become out of date. Observation becomes an important technique in these circumstances, and this becomes an opportunity to accurately capture and document the end-to-end process so it can be referred to again in future. Organizations that have centrally documented processes in a common notation that stakeholders understand can save time and yield benefits here.

Generate and evaluate solution options: A holistic viewpoint

A problem statement is a good starting point for understanding the organizational need. It is a useful artefact, but it will need to evolve or be supplemented and added to. It is quite possible that further problem and requirement analysis will be required – quite possibly resulting in further requirement artefacts. The level of depth will depend on the organization and the size of the problem. However, it should be our goal to use these artefacts to understand the true business need and generate a range of solution options. Some options might be IT related, some might be related to pure process change. Others might involve organizational change, or a combination of all of these factors. By thinking in this divergent way, maximizing the pool of potential solution options, we avoid the temptation to pounce upon the first solution that we find. Each solution option can then be evaluated, a short list can be created, and the most appropriate can be progressed. Whatever happens, beware of solutions that are framed as being “just an IT change”.

Conclusion

Often, project stakeholders may have a preconceived idea about what solution they want to implement. Projects may be framed as "purely IT projects", and both cases should ring warning bells. It is important that organizations and projects gain a holistic view of the current business situation and the problem they are trying to solve before buying or building an expensive solution. It is also essential that various project stakeholders – across the business, IT and any other relevant functions – are aligned over the objectives that the business is trying to achieve.

Taking time, briefly, to crystallize a common and holistic understanding pays dividends in the long run.

Further reading

Readers interested in the topics raised in this paper may find the following resources useful:

IIBA (2009) A guide to the Business Analysis Body of Knowledge® (BABOK® Guide) Version 2.0, IIBA, Toronto

Cadle, J et al (2010) Business Analysis Techniques: 72 Essential Tools for Success, BCS, Swindon

Podeswa, H (2009) The Business Analysts Handbook, Cengage Learning, Boston, MA, USA

Reed, A "Adrian Reed's Blog" [Online] http://www.adrianreed.co.uk

Orbus Software
3rd Floor
111 Buckingham Palace Road
London
SW1W 0SR
United Kingdom

+44 (0) 870 991 1851
enquiries@orbussoftware.com
www.orbussoftware.com

orbus software