

Don't let testing become part of the furniture



■ Having worked in the computer industry for over 25 years like many of you I have become part of the 'intellectual furniture'. Now, before you write to me in protest demanding that I withdraw that comment, I will explain.

As an industry, ICT (Information, Communication and Telecommunications) is immature in comparison to others that spend similar amounts of money. We have expanded rapidly and are constantly struggling to deliver a blend of package and bespoke systems involving lots and lots of cutting edge and untried technology to give our companies market leading business solutions. "So?" I hear you say "tell me something new".

What is new is the perspective that we are forced to take on this level of change. In something like 20 years we have progressed from single vendor hardware and software solutions that support one business application to multi vendor, multi-layer, multi hardware, multi OS, multi application (multi etc etc) systems that support a business process. A process that may involve multiple suppliers, our whole company and our customers. The challenge today is not finding out what the users want, it is finding out who they are!

Whilst the technical challenge is becoming more complex, so are the stakeholder inter-relationships. With the onset of Private Finance Initiatives (PFI), Multi-Sourcing and Business Process Outsourcing (BPO) projects and their numerous derivatives we have a myriad of political considerations to make on how we structure an effective test process for a large change programme.

■ One size fits all

Whilst this increasing complexity has been happening we have seen that the structure of testing has increased little in its sophistication or focus. In a typical IT Programme we expect testing to undertake many different services (in comparison to development) from a single reporting line.

For example; make sure it functions to specification, make sure it performs, make sure it is secure, make sure it is usable and make sure it is what the business expected. Often attempting these diverse tasks simultaneously with the same team of people.

And this is where I return to my first comment on 'intellectual furniture'. Maybe it's time we stopped accepting the norm. Project after project takes the previous one as its foundation. Our project structures are based on processes that were devised when the world was much simpler. We must face the fact we have been going through a rapid period of change, business has moved on and the dynamics of a business change project have become more complex.

■ Challenge the 'norm'

I suggest we must challenge the procurement processes, test processes and project structures we continuously adapt to fit project after project and look at a new complex project with the question.

“ How do I structure testing in this project to best achieve a solution that is of the correct quality and fit for the business? ”

So, we must stand back and understand what place testing has in this change and don't accept what we have always done as satisfactory with minor adaptation.

■ Procurement and the Role of Testing

I have an example. Over many years of 'incremental thinking' our industry has developed an approach to procuring a system which involves collecting ideas, building a business case, running an ITT and then handing the project on to a prime supplier/contractor to deliver it. A prime contractor will be expected to identify the needs of the business but the next real chance a customer gets to answer the question "is this the right system" is at the

■ Adam Ripley of IS Integration suggests that the IT industry needs the software testing movement to step forward to be more creative and take charge if it is going to improve on its reputation for failure and overspending.

business acceptance testing stage, which may be anything from 3 months to 3 years later.

Proof of how badly this approach works can be seen when we examine the statistics on project failure. "Extreme Chaos", a report from Standish Group, stated that 78% of the projects fail simply because the software doesn't do what the customer asked for.

■ Why do we Fail?

I discussed why businesses often fail to get the 'right system' with Clive Davies, a Senior Partner at Olswang, one of the leading IT law firms. Clive said that in his experience the legal position on acceptance testing is that it is fine in theory but very often not applied in practice. As he says "The theory is that at the time the contract for the supply of the equipment or services is signed, it includes detailed acceptance provisions. These will be typically in a clause and a schedule and will set out the types of tests, when they will occur and the scripts which will be used to conduct the tests. The incorporation of these provisions in a properly thought through and negotiated manner in the contract will save time and make the acceptance tests more effective. The tendency, however, is to consider these "too difficult" at the time when the contract is negotiated and to postpone agreement on the detailed acceptance tests until later." Clive went on to say "This is a false premise. It is at that time that the description of the goods or services being supplied is constructed and the price for its delivery determined and recorded in the agreement. What better time also to agree the means by which successful operation can be tested." This seems like common sense to me.

■ Retaining Business Value

One of the issues we also hear is that the original 'value' that could be attributed to the project, initially identified in the business case, is not delivered in the final system. De-scoping or other major changes can have a significant negative effect on the end value to the business. On this subject I spoke with Ian Wyrley-Birch the Managing Director of the Birchman Group, a company which specializes in IT Value Management. Ian put it very clearly "In today's environment the value that IT delivers to the business is increasingly questioned. Various surveys have confirmed that business feels that IT investments lacked credibility and added little business value. The Birchman Group found that one of the key reasons is the lack of focus on tracking the value IT investments add throughout the investment lifecycle. Although scope changes are inevitable during a project, very few IT projects continually revisit the original business case and assess the impact any variations to contract have had on the business case. Failing to assess these changes dramatically increases the risk that the project will not deliver the benefits that were originally planned."

■ Why not Test Differently?

However, if the basic issue is that of retaining the original business need and with it the intrinsic value of the new system. I propose the solution is to take a more continuous approach to accepting a system. Why not acceptance test at every stage? Why not do this externally and independently from the project? By doing this we are validating that the system meets the key business case needs through scenarios that support the business value proposition. Using this approach we find out if we are going off track within an appropriate timescale to adjust the business case and re-evaluate the question "is this the right system?". This form of acceptance testing will involve 'witnessing' key business scenarios and the ability of the system to support them. In the early stages this will be merely at the documentation level moving on to software execution as the system is developed.

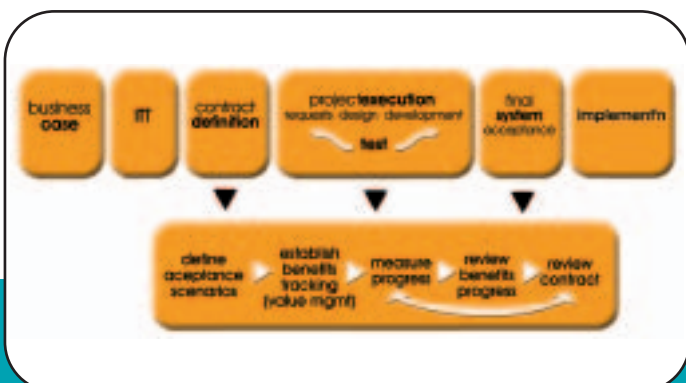
An example of how this would work is shown in figure 1.

■ Are we Ready for Change?

Now for many of us steeped in the accepted wisdom of the last 20 years we can raise many reasons why this example could not work, but I suggest that 'thinking like we have always thought is going to get the results we have always had', which, as we know from the myriad of independent surveys, is not good enough.

So come on let's look at how we can take forward testing to reverse our industry record for failure. I encourage all of you to challenge the way things are done, to go and seek out new and progressive routes to focused, efficient and, most of all, independent testing of major IT programmes.

■ Figure 1 - Continuous acceptance process



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