

Zero-sum? Realising the value of IT in Business

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A while ago I wrote an article on how, in my belief, business processes were under threat of being modelled and implemented in organisations, without understanding the full context of their usage. in an over-complicated or non-realistic manner (Sharif, 2003). In that article I was concerned about the lack of communication between process and implementation and how in particular, the Customer Relationship Management (CRM) mantra of “one view of the customer” was lacking in the case of a my experiences with a direct marketing campaign of a retail UK bank. In the light of that viewpoint, and to evolve the discussion further, around the role of business process management and IT, I wish to elucidate another issue, which come to my attention lately. Namely, this is concerned with understanding what the current *value* to organisations IT has, and if it in turn, is under any similar threat as I noted in the earlier article. As such, for the paragraphs which follow, I base my views not as a result on statements of fact, but rather as a state of affairs. The former differs from the latter in the sense that the former *is*, whilst the latter *might well be*. Thus, the focus of this article is to discuss whether or not IT is still delivering value to business, through implementing business processes, and if so what factors are involved in its effectiveness ?

First of all, let us clarify the relationship between the business and IT functions. Business very much needs IT and relies on it heavily to exist. In every sense of the word, IT has become the lifeblood of many organisations, without which business would not be in business. From its point of the view, IT justifies its existence in order to execute transactions, create revenue and sustain development (organic growth or acquisition) for the enterprise. IT adds value by not only supporting these activities, but more often than not by just “being there” – having an IT presence and IS organisation, denotes success for a modern day organisation, even if certain IS functions are routinely sourced away from it (as is the the case with offshore outsourcing lately). As Cronk and Fitzgerald (1999) highlight, the concept of business value, particularly to the IS organisation, is predominantly based upon quantitative metrics based upon system implementation, user empowerment and fit with business strategy. Thus, value creation and sustainability, is no more or less than the successful maintenance of such metrics, which many IS organisations within companies have become singularly good at (alongside their IT delivery function).

Similarly, the Business organisation, business is business : it’s main concern is not really liasing with IT. It’s ultimate goal is to either stay in business; generate revenue;

appease / please the shareholders (depending which management science strategist you read). Underlying the modern day corporation's business ethic, is the justifiable necessity to sustain competitive advantage. In many cases, this translates to an attempt to be the market leader in every field that a company services – the ideal “market of one” espoused by the new economy (Tapscott *et al*, 2000). Even so, the Enron-isation of business has tarnished the pristine ideals of the captains of industry around the world, where the focus has inevitably shifted towards dealing with corporate governance, ethics, and other regulatory requirements, which have sought to straight-jacket the business environment further. This has been personified by acts such as Sarbanes-Oxley, which enforces management accounting and GAAP disclosure; and Basel II, which is attempting to enforce capital adequacy rules.

Although definitely part of an organisation, the IT/IS function is more often than not, a separate, though subordinate entity, which tends not to feel the effect of these external forces as much. It exists to fuel the necessities of the enterprise as highlighted above. This approach is exactly that advocated by value chain gurus such as Porter (1985) and Tapscott *et al*. (2000). But what about the IT/IS function? This organisation, is struggling with change, and struggling with delivery: there is a constant battle and effort to maintain performance and capability as the needs of the business changes. This is even more important in a bear market, where costs are costs are being scrutinised ever more closely. Agility and leanness may still be novel concepts for manufacturing organisations, but is an attribute that is virtually unheard of within the IS world. What is the reason for this ? Most technical professionals would point skywards, and utter one word : management (to be precise, IT management). Such managers, tend to firefight, rather than manage, purely as a result of the delivery-focussed culture that has grown out of the subservience of IT towards business goals. I have seen this in a few cases, where managers tend to be involved with the facilitation of needs rather than the proper management of resources. The IT/IS organisation requires proper project and programme managers who have knowledge and experience of resolving bottlenecks, and smooth resource constraints and actively manage a project, and not firefight. In my experience, those types of managers are those who have had experience of direct resource allocation, such as engineers (production control managers, civil engineers), inventory and sales marketing administrators, academicians, and specifically trained project managers - but not necessarily IT literature and skilled professionals (they should stick to IT).

So, both business and have their own issues and factors to contend with. And rightly so. But in upholding the notion of IT being and continue to be a value adding, novel component within the enterprise, its existence as a separate entity is coming into question. Taking excessive licence with the fundamental mathematical theories proposed by the likes of Von Neumann and Morgenstern (1944) and Nash (1951), who singularly developed the phenomenal concepts behind Game Theory. The application of game theory has been far and wide, ranging from the purely theoretical to the modelling of negotiation and pricing processes, including political negotiating, financial arbitrage, management decision making and other econometric tasks which involves the contractual involvement of two or more parties (Biermann and Fernandez, 1993). I therefore propose that we view the relationship between the Business and IT organisation, in a similar vein, where the processes of negotiation and decision making are clearly inherent. To clarify my point further, a brief explanation of the fundamental concepts of game theory are required.

The best known explanation of how game theory works, and the one which is most understandable to the layperson, is known as the Prisoners Dilemma. Two suspects in of a crime, Suspect A and Suspect B, have been arrested by the police and are held in separate cells in a jail. There is enough evidence from witnesses, to convict each of them for a minor act of crime. However, there is not enough evidence to convict any one of them for the major crime, unless one of the prisoners acts as an informer against the other. The dilemma, and hence the concept of a game which defines this dilemma, arises out of the potential options which each prisoner has available to him. One outcome is that, if both prisoners decide to not say anything to the police, each of them may be convicted of the minor offense and spend a short amount of time in prison. Another option is that if only one of them informs on the other, say Suspect A “tells” on Suspect B, without the other knowing about it, Suspect A may be freed and used as a witness against Suspect B, convicting him of the major crime instead. Suspect A, however, will still be on record as being arrested for a crime – which could affect his life in many other ways in the future. If both prisoners decide to inform on each other, on their own volition, they may each spend a long time in prison (though much shorter than the maximum sentence available to a single suspect). The point of this elaborate and detailed analysis of each prisoner’s options, is that we are not concerned with the ethical or moral aspects of the crime committed but the manner by which each prisoner could make their decision. Ultimately, the game highlights the fact that these participants are more than likely to take advantage of the situation for their own benefit, whatever the other participant decides to do. Thus, game theory attempts to model the range of decisions available to decision makers within a scenario, who have certain preferences on the outcome of the decision.

The solution in this case, is for Suspect A to help Suspect B – thus both prisoner’s satisfy their goals, and both win at the same time. Thus, the philosophy behind non-cooperative game theory, which involves modelling the behaviour of decision makers, is “do what's best for yourself and the group” i.e. develop a win-win situation. However, there is a potential case, where both suspects can decide not to co-operate at all, and then nobody wins ! This is outcome is known as a zero-sum. Such a result in any game is the culmination of a combination of solutions to a known problem, for which an equilibrium state exists. Specifically, in his Equilibrium Theory, John Nash devised the concept of equilibrium (the zero-sum) which can best be described as:

‘...a set of mixed strategies for finite, non-cooperative games between two or more players whereby no player can improve his or her payoff by changing their strategy. Each player's strategy is an 'optimal' response based on the anticipated rational strategy of the other player(s) in the game.’

(ISCID, 2004)

In other words, a stalemate. Thus, in a similar vein, I advocate that the value of IT is a zero-sum game. Consider if you will that changing the cell in the prisoner’s dilemma within the game of value creation, to a modern day enterprise instead. Who are the “prisoners”? Well, for the purposes of my argument, and this viewpoint, that is straightforward : the “Business Organisation” and the “IS Organisation”. As I have

noted, none can exist without the other. Indeed, none can survive without the other. But one is always struggling to win over the other, and manipulate the outcome of the result (in this case, the mythical goal of “value”) in their own favour, such that budgets can be secured, stakeholders can be satisfied, shareholders can be pleased, and senior management can award themselves generous payrises.

Business has now come to rely on IT to such an extent, that IT has finally become a commodity, and an entity whose decision preferences (in the parlance of Nash’s Equilibrium theory), are typically overlooked in favour the preferences of the business. Likewise, the business organisation wishes to asserts its dominance over IT through its control of the IT/IS function. Thus, this gives rise to the notion of a steady state of no change – which also leads onto the second conjecture in Nash’s theory which asserts that both of the decision makers within the game, share the beliefs about each others actions, and insist that these viewpoints are the actual facts.

To highlight this within this day and age, is hardly surprising to many. Indeed, IT and the IS organisation have always been seen, and have always sold themselves, *as a service*. So what has broguht upon this sudden commoditisation of the IS organisation, such that business views and uses it as a utility ? Economic and market conditions over the last 4 years have not helped this situation, with a ruthless and malignant bias towards the installation of iron bars and padlocks to our conceptual cell, in the form of “cost control”. The IS organisation prisoner can’t get out. It has a dilemma on its hands. The IT/IS organisation has to deliver the goods. But surely IT is seen to be the enabler, the vanguard and the resultant solution to implementing such requirements? This is obviously true, and indeed has meant that now more than ever, IT and the concept of the IS organisation as a whole, is very important. In lean times, we are told that the business must deliver : QED, IT must continue to deliver services, technologies and infrastructure to keep the business going. One such example, is in the case of IS evaluation and technology adoption (Zhu and Weyant, 2003). In this recent research, the authors have found that information and in particular, the lack of coherent information, which relates to the decision making process within technology adoption, affects the outcome greatly. This is to the extent that uncertainty relating to the decision making task itself, in the form of unknown post-adoption costs, leads to different incentives and strategic behaviours of key decision makers. Most notably, Zhu and Weyant highlight the fact that having better information is not always a good thing. What is lacking in the present climate however, is the application of the more subtle aspect of John F. Nash’s Equilibrium Theory.

Business and IT must co-operate. In order to co-operate, business must ultimately carry out an enumeration of their requirements – which is an appreciation of the *real* costs and the benefits of adopting IT, via putting IS within a holistic context (i.e. a joined-up thinking approach to business process management and design). IT should not be constrained to the mere control of costs alone (whether this be in terms of assets, headcount or other human capital resources). It should be made and led to innovate and optimise its effectiveness, in a lean and progressive manner, so it work alongside the business better. Eventually, both the business processes of each organisation should be aligned, leading to a complete synergy of intent across the enterprise. This enumeration of requirements will allow business to work more effectively with IT, and to progress from the zero-sum game of being constantly trying to win, like those helpless prisoners in their didactic dilemma.

The solution is therefore based around the proper realisation of IT and the IS organisation, as being one with the business. It is interesting to note, that business leaders may well be attuned to this Zen-like thinking – that is, if they have at all read Sun Tzu's *Art of War*. For example, many financial services firms are completely reliant upon technology in order to execute and run their business. Without recognising the importance and the capability of IT to assist and co-operate with the business, this particular “prisoner” would have perished long ago, either through not recognising the efforts of ongoing implementation projects, or providing adequate career paths for IT professionals at all levels of the IS organisation. However, even such tech-savvy organisations buckle under the demands of a “right place, right time” mindset : if your project is not business-focussed and sponsored by the business, you can leave with your paycheque.

These are harsh words (couched in the language of analogy as they are). But it is apparent, that in order to survive and exist in the modern day business world, it is no longer relevant or necessary to act in an individualistic manner, striking out towards organisational success alone. Perhaps this is what Tom Peters (Peters and Waterman, 1982), Kenichi Ohmae (Ohmae, 1994), Thomas Davenport (1993), Peter Drucker (Drucker, 1993), Michael Porter (1986) and others have always been talking about: striving for excellence, working together in teams, involving yourself as part of a global environment for change, identifying potential in others for greatness, recognising the future and living in it. It is a shame that now, in the time when both business as well as IT need each other most critically, and when the economic soothsayers are pointing towards the shadows of looming debt-mountains and credit defaults, these wisened words from the psyche of strategic management, are not being heeded. Organisations must wake up to the fact that employing the IS organisation on a mercenary, ad-hoc or devious basis, in order to get out of their particular cell in the game of business value creation, will just not do. It may harm both IT as well as business a great deal if trust in supporting each other's existence and capacity to deliver value, is eroded as a result of this acrimony towards each other. The IT organisation must be even more forthright about expressing its own preferences and defining its relationship with the Business organisation, in order to achieve the win-win state in this game.

If there exists or continues to exist, such an impasse between the (non) co-operating entities of business and IT function within the corporations of the world, then IT will surely subsume to the decision preferences of the business function entirely, and become a true utility, instead of being an enabling and value-adding component of an enterprise. And there is only one answer to that fateful, zero-sum scenario.

Game over.

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