UNDERSTANDING THE ERP POST-IMPLEMENTATION DISCOURSE

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Abstract: This paper presents the first stage of a larger research project focusing on understanding the emergence of ERP II. ERP is now being seen for what it really is: 'a means to an end', in that, its primary benefit is in the integrated infrastructure that it introduces and its ability to support future IS investments. The paper focuses on the changes that have been observed in the services offered by vendors and consultants in the now renamed ERP II market. Now terms like 'ERP' and 'e-business' are for the most part avoided by vendors and consultants as they are perceived to be out-of-date. For example, SAP once promoted that fact that they were '29 years in the business of e-business' with 'the best-run e-businesses run SAP', but now their message promotes, '30 years in the business of helping businesses grow' with 'the best-run businesses run SAP'. In this paper, issues of concern with the realities of ERP post-implementation are presented through examining: benefits realisation; informational requirements; and generic to specific solutions. While we would argue that it is difficult to understand the rationale for the introduction of these 'newer' ERP extensions, we must acknowledge that a market has been created and that once again the 'new-look' ERP vendors are the dominant ERP II players. This leads us to question whether there is anything new in ERP II.

1 INTRODUCTION

There is no doubt that the introduction of a new Information System into an organisation should deliver multiple benefits and achieve the desired Return On Investment (ROI), in that it meets a business need or solves a business problem. Therefore, an organisation's ability to identify the need for the introduction of an Information System is extremely critical to ensure success and realised benefits. In relation to ERP systems, benefits have not been realised due to the lack of understanding by managers of what these systems entail (Sammon *et al.*, 2003) both in terms of implementation and use. Therefore, it seems that there is an inherent danger in the way that ERP systems, were and are currently being, adopted by organisations. As ERP systems are being introduced, the specific needs of the organisations and the specific features that make them different may be lost or eroded in a way that is not controlled or understood by managers. In certain cases the enormity of the system leads the business rather than the business leading the system. Brown and Vessey (2003) comment on improving the understanding on how to leverage, what they call, the 'enterprise system maturity curve' in an effort to reduce the high risks and costs of implementing 'the next wave of complex enterprise systems'.

Based on these observations, we propose that organisations need to dictate the ERP systems agenda, now and in the future, to a much greater extent, therefore, strengthening their *needs* discourse and thereby improving their chances of realising all of the benefits expected from integrated enterprise-wide systems. However, while strengthening their *needs* discourse, organisations are now being subjected to successive waves of post-ERP hype. In this paper we present our initial observations in an attempt to understand what this *needs* discourse is and why it has emerged, and examine the recursive elements in the emergent *sales* discourse (the essence of what is new in ERP II). Fundamentally, we attempt to identify if, in fact, ERP II is positioned to address these needs. In an attempt to position the ERP II trend in the overall evolution of the integrated enterprise-wide systems market, a number of research questions are presented.

2 THE EVOLVING ERP MARKET

To date, researchers have looked at the ERP market as the place where organisational needs, in terms of integrated enterprise-wide systems, were met by the packages and services proposed by ERP vendors and ERP consultants. However, current research in integrated enterprise-wide systems (e.g. Hossain and Shakir 2001; Wood and Caldas 2001 and Sammon and Adam 2002) has found that the ERP market reality is characterised by a strong vendor and consultant push whereby organisations appear to have little choice but to '*jump on the bandwagon*' (as described for Activity-Based Costing by Jones and Dugdale 2002; and IT outsourcing by Michell and Fitzgerald 1997; and to some extent for e-commerce development by Howcroft 2001). The strong vendor push that characterises the ERP movement inherently favours the *sales* discourse (that which is proposed by ERP vendors and ERP consultants) and replaces the *needs* discourse (that of the implementing organisation). The accuracy of this contention is now more obvious than ever, or indeed should be to an implementing organisation, due to the fact that a 'bizarre trend' (Hayler, 2003 p.1) is now emerging: the re-implementation and extension of ERP, referred to as ERP II (Humphries and Jimenez, 2003; Hayler, 2003). It is hard to imagine an organisation wanting to undertake an ERP II initiative having just finished an ERP systems implementation. Therefore, this trend further heightens our contention that the implementing organisation needs to be empowered and made aware of the complexities of the ever changing ERP market and needs to internally assess, if not their readiness for ERP, or now ERP II, their ability to manage the external parties (the ERP vendor and the ERP consultant) within the ERP Community (Sammon and Adam 2002).

According to Sammon and Adam (2003) the three entities that comprise the ERP Community are the *de facto* actors that play a role on the ERP market, where the implementing organisation is dependent on the offerings of the ERP vendor and the ERP consultant. This may not be 'by-choice' for the implementing organisation, but few, if any organisations can use exclusively internal resources to undertake an ERP implementation. Therefore, they are subject to the 'system' (Carlton Collins, 2000) and the dependent actors in the ERP Community. Markus and Tanis (2000) also believe that due to the all-encompassing nature of all ERP offerings, a level of dependence is created that "far surpasses the dependence associated with prior technological regimes" p.203. They further pose the questions "does this dependence have negative effects on organisations?" and "how do the effects manifest themselves?", "how do organisations cope?" and "what are the costs of picking the wrong vendor?" pp.203-204. However, they also question how adopting organisations "influence the strategic plans (behaviours) of vendors?" p.204. Kestelyn (2003) offers some insight into this 'level of dependence' stating that enterprise applications – whether for traditional enterprise resource planning or 'newfangled' ERP II processes, "form the central nervous system of the intelligent enterprise, [such that] as they go, your entire business goes". However, Kestelyn (2003) further comments that "a vortex of emerging customer requirements are forcing [enterprise application solutions providers] to rethink how their companies develop, market, and maintain business-critical software". This observation is further supported by Pallatto (2002) who states that "the major consultants, integrators, and vendors are responding to this management focus by beefing up the ERP capabilities that go to the sweet spot of the value chain for a wide range of industries, such as chemical, health care, manufacturing, and even service". In effect, this is addressing the discourse gap between the *needs* and *sales* discourse highlighted by Adam and Sammon (2004), where the ERP vendors and ERP consultants (*sales* discourse) appear to be addressing the concerns of the implementing organisation (*needs* discourse). Alternatively, it could also be a simple re-packaging exercise by vendors and consultants to ensure future market growth. To solve this riddle we analyse the discourse of the ERP Community actors, as explained in the next section.

3 USING DISCOURSE ANALYSIS TO UNDERSTAND THE ERP MARKET

The term *discourse* and *discourse theory* has become common currency in a variety of disciplines, and plays an increasing significant role in many branches of the human and social sciences (Howarth, 2000; Mills, 1997; Van Dijk, 1997), so much so that it is frequently left undefined, as if its usage were simply common knowledge (Mills, 1997). Van Dijk (1997) comments that the 'notion' of discourse is essentially 'fuzzy', however, discourse analysts try to go beyond the 'common-sense' definitions and introduce a more 'theoretical concept' of discourse "which is more specific and at the same time broader in its application" p.2, and provides a definition for this 'complex phenomena' (Van Dijk, 1997).

Discourse theory "does seek to provide novel interpretations of events and practices by elucidating their meaning"…"by analysing the way in which political forces and social actors construct meanings within incomplete and undecidable social structures. This is achieved by examining the particular structures within which social agents take decisions and articulate hegemonic projects and discursive formations" (Howarth, 2000). Mills (1997) states that "the constituents of discourse itself are less important than the range of practices which are necessary to support that discourse and to exclude other discourses from positions of authority" p.24. Thus, the study of discourse is not simply the analysis of utterances and statements; it is also a concern with the structures and rules of discourse (Mills, 1997). Howarth (2000) further points out that the "adequacy or inadequacy of discourse theory as a whole depends on its ability to engender plausible accounts of social phenomena". In this sense, the ultimate criterion for judging the adequacy of the discourse approach as a whole is pragmatic; it can be evaluated by the degree to which it makes possible new and meaningful interpretations of social and political phenomena it investigates.

Panteli (2003) argues that "discourse analysis is not a fancy new approach in IS research, but that it could indeed make a real contribution to our discipline". Panteli (2003) takes the view that 'virtual workplaces' cannot be understood from a 'simplistic view' of a physical organisation centred around 'peripheral, dispersed and electronically-linked segments', but instead centred around, "human cooperation and flows of information that bring together and separate at the same time their dispersed segments". This view is also shared by Sammon and Adam (2002) with regard to the concept of the ERP Community. They propose that the ERP Community might be understood from a discursive approach, in that, actors are engaged in the creation of complex discourses (Adam and Sammon, 2004). As a result, analysing the ERP market as a network of actors with different interests, different techniques, and different modes of interaction, will foster novel ideas for improved ERP post-implementation trends, and the emergence of ERP II. Therefore, we plan to use discourse analysis in an attempt to understand the *needs* and *sales* discourse of the *de facto* actors, within the ERP Community, and their contribution to the structure of the evolving ERP market.

4 ISSUES IN ENTERPRISE INTEGRATION WITH ERP

For more than a decade, organisations have adopted a number of different approaches to IS integration; from Data Warehousing in the early-to-mid 1990s, striving to achieve informational integration, through to ERP in the mid-to-late 1990s, focusing on operational integration. In particular the evolution of the ERP movement has gone through a number of waves in an effort to achieve the required level of enterprise integration. According to Kalakota and Robinson (2001) *Wave* 1 addresses the emergence of MRP, *Wave* 2 relates to ERP, *Wave* 3 positions Customer-Centric Integration (CRP), and *Wave* 4 identifies Inter-Enterprise Integration (XRP) (Jeanne, 1999). However, we identify a new wave, *Wave* 5 which positions ERP II as the 'new', or is it in fact 'nothing-new', integration', as illustrated in Figure 1.

One of the most significant factors for *Wave* 2 ERP adoption was Y2K preparation (Brown *et al.*, 2000; Kalakota and Robinson, 2001; Themistocleous et al., 2001; Hayler, 2003), however, a level of understanding is now required to uncover what the most important factors are for the emergence and adoption of this new wave, *Wave* 5. In this research project we focus on improving our understanding, and identifying the important factors for the emergence of ERP II, through examining the concept of:
• benefits realisation
• informational requirements, and
• generic to specific solutions,
in terms of the realities of ERP post-implementation.

4.1 Post-Implementation: Benefits Realisation

As organisations moved toward the post-implementation phase of their ERP projects, post Y2K for the vast majority of organisations, the real issue of benefit realisation emerged (Sammon *et al.*, 2003). Pallatto (2002) comments on the fact that some vendors and consultants are presently 'soft-peddling' the term ERP due to bad experiences and management frustration, when original business goals and benefits were not achieved, with their ERP implementations. Pallatto (2002) adds that concessions and compromises in the design of these rushed Y2K upgrade projects (ERP) had negative impacts on systems performance and benefits which were not promptly and fully communicated to the
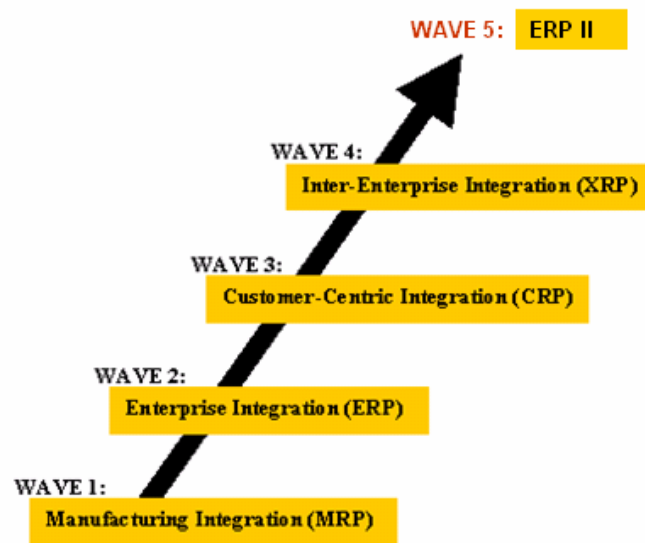
Figure 1: IS Integration Evolution

implementing organisation. Hendrickson (2002) supports this argument, stating that "organisations that have future designs developed from a clear understanding of [business] requirements will gain more vision and value from their ERP implementation".

4.2 Post-Implementation: Informational Requirements

Due to the monolithic style integration of the mid-to-late 1990s, many organisations are now discovering that the solution to leveraging investment decisions in, and retrieving useful data from, an ERP system is to undertake additional initiatives, for example Data Warehousing, in conjunction with the implemented ERP system (Sims 2001; Raden 1999; Inmon 2000; Radding 2000; Hewlett-Packard 2002; Hayler, 2003; Sammon *et al.*, 2003). Sammon *et al.* (2003) refer to this as a '*double learning curve*' for an organisation, undertaking additional projects in quick succession to the ERP project, in an attempt to finally achieve the benefits expected but never realised. The harsh reality of ERP systems implementation, to the expense of those organisations that invested resources in the initiative, is that ERP only gets data into the system, it does not prepare data for use and analysis (Inmon 2000). This is due to the fact that ERP systems lack certain functionality and reporting capabilities (Adam and Doyle, 2001). However, it bears thinking that as long as organisations can analyse data, supporting different business processes, even across differing

data structures that change with the diversity of systems, there is no need to force a rigid standardisation of business processes (a straightjacket) across the organisation (Hayler, 2003). For example, organisations that expected ERP systems to solve their Information Systems problems have found that ERP systems solved some, but hardly all, of these problems. Many organisations experience frustration when they attempt to use their ERP system to access information and knowledge (Radding 2000). It has been quickly realised that ERP systems are good for storing, accessing and executing data used in daily transactions, but it is not good at providing the information needed for long term planning and decision making (Radding 2000; Adam and Doyle, 2001) as ERP systems are not designed to know how the data is to be used once it is gathered (Inmon 1999).

4.3 Erp Ii: From Generic To Specific Solutions

It appears that much of the value of these 'all-encompassing' systems lay in the infrastructure foundation they created for future growth based on Information Technology. As a result organisations are now focusing on implementing the extensions and components of ERP that "managers think have the greatest potential to improve the bottom line, manufacturing, and supply-chain management systems" (Pallatto, 2002). However, managers, for
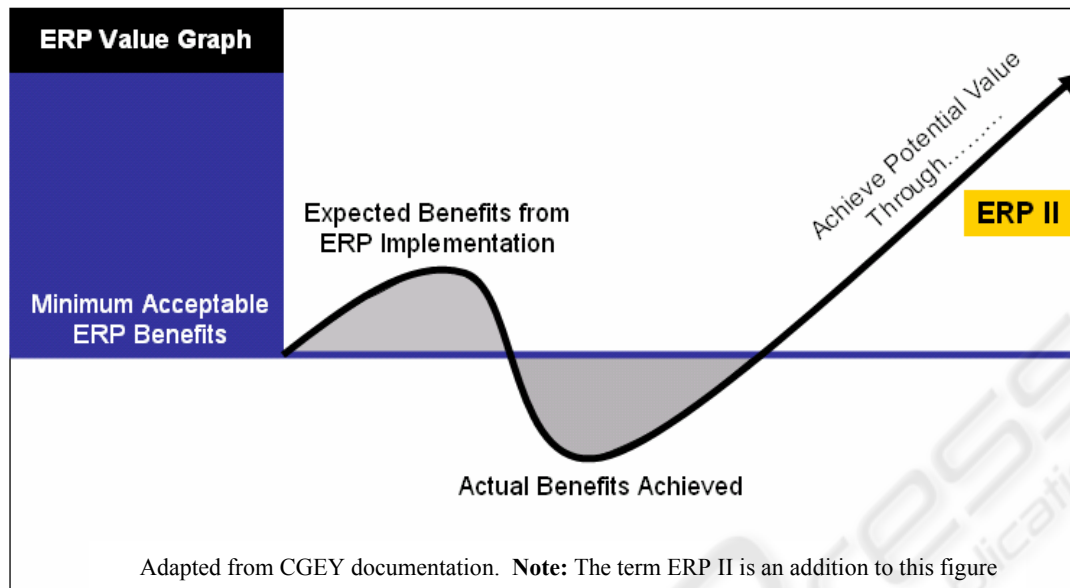
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Figure 2: The Myth and Reality of ERP Systems Benefit Realisation

the most part, want "assurances that the system will deliver the performance and business benefits that were promised when they agreed to sign on the dotted line". That is because they know from bitter experience that "keeping such promises is easier said that done" (Pallatto, 2002). Nowadays the focus is on "enterprise collaborative systems". Pallatto (2002) argues that it is "better to focus on thespecific components and the benefits they deliver, rather than the all-encompassing concept of ERP. The main interest is in systems that make interactions between customers, partners, and suppliers more efficient and contribute to improvements in the bottom line". Organisations can now implement these 'new' collaborative systems because they have already implemented an ERP, but, what is really new about implementing these ERP II extensions?

5 CONCLUSIONS: THE SALES DISCOURSE FROM ERP TO ERP II

The 'new-look' ERP vendors and ERP consultants now talk about collaborative, component-based systems for specific vertical rather than all-encompassing generic ERP; opening and maintaining full communication channels with implementation partners to avoid disputes over business objectives, deadlines, project scope and system design, which were common in ERP

implementations; shorter implementation projects; quicker actual ROI and benefits realisation; systems implementation knowledge transfer and dedicated system experts for implementation.

As an illustration of how discourse analysis must be included in our observations of the ERP market, we examined a recent product brochure titled 'Optimise your ERP Investment' by Cap Gemini Ernst & Young (CGEY), promoting their E³ solution. In this it was argued that "most companies have high expectations of their ERP implementations but some of these fail to deliver on all the benefits that were promised. In fact, these ERP implementations experience high dissatisfaction levels, which is evidenced by many operational glitches and limitations". Furthermore, they state that "in effect, the ERP implementation gives you sight of business potential – but may not deliver much of the expected value". As a result, they propose that "E³ can help you detect and correct ERP-related lost value in your business and deliver those benefits you expected in the first place". A graphical representation, adapted from the CGEY brochure, is presented in Figure 2.

In essence, if we examine what Figure 2 represents, the achievement of potential value is through the use of 'fine-tuned' (New Straits Times, 2003) ERP II type functionality. "With proper implementation and full utilisation of these tools, and using software applications that are highly scalable, enterprises will be able to see returns on their investments" (New Straits Times, 2003).

In a further illustration of our application of discourse analysis to the ERP market, we tried to understand the full implications of the "Square Peg, Round Hole – No Problem!" message appearing on the JDEdwards (now acquired by Peoplesoft) website in April 2001, as illustrated in Figure 3. This highlights the fundamental over-simplified nature of the ERP vendors' *sales* discourse.
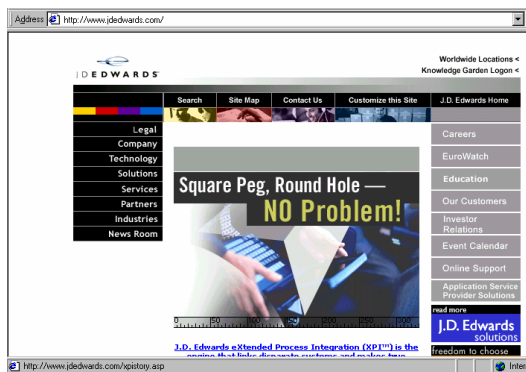

Figure 3: Over-Simplified Sales Discourse

Furthermore, SAP are now delivering "a business platform that unlocks valuable information resources, improves supply chain efficiencies, and builds strong customer relationships", while it delivers "the tools, technologies, and methodologies that minimize total cost of ownership and maximize your return on investment in SAP solutions" and "proven implementation methodologies give you control over deployment to reduce risks and ensure reliable results. Best practices anticipate your business needs, reduce costs, and decrease your reliance on external consultants" (SAP, 2003a,b).

Based on our initial observations in this research study, it appears that further investment of resources is required for an organisation to realise the initial benefits promised from their ERP system investments. However, the worrying issue here seems to be ERP vendors and ERP consultants admittance of not addressing critical implementation issues, or fulfilling the organisational requirements, in the previous ERP implementations. Therefore, in light of the current market trend, it is legitimate to question whether ERP II is addressing ERP post-implementation concerns or new emerging business issues. In an attempt to understand the positioning of ERP II within the evolving ERP market, the researchers pose two research questions as follows:

Research Question 1: with regard to the *sales* discourse, *is the market positioning of ERP II functionalities, in terms of their proposed benefits, addressing some of the ERP post-implementation concerns, within organisations?*

Research Question 2: in relation to the *needs* discourse, *will ERP II solutions be implemented by organisations to [1] address dissatisfaction with their ERP implementation, or, [2] support new emerging business requirements?*

It is hoped that these questions will fulfil the objective of the study, to understand the nature of the discourse gap (Adam and Sammon, 2004) between the *needs* and *sales* discourse in the evolving ERP market.

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