

THE RISE & RE-INTEGRATION OF THE ERP EMPIRE

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Author : Troy DuMoulin
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1 EXECUTIVE SUMMARY

Adopting IT Service Management – SAP User Survey

In February 2007, BMC and Pink Elephant conducted online research that examined how SAP enterprises are using the IT Infrastructure Library (ITIL[®]), and what they perceive as the greatest advantages and challenges in adopting this framework.

Most of the results are based on responses from 240 people who met the following qualifications. Some of the results, where indicated, include responses from additional individuals who participated in the survey, but did not meet the detailed qualification criteria. That group includes 664 respondents. Each respondent is:

- Using SAP, Oracle, BMC, CA, HP or IBM software for ERP implementation
- Implementing ITIL strategies
- Managing the SAP environment as part of ITIL initiatives
- Member of Application Development/Operations, Infrastructure Engineering/Operations, IT Business Management, IT Process Management/Service Support or Security Departments
- Responsibility level of Executive, Director, Manager, Individual Contributor or Consultant

The data from this survey was released earlier as part of Pink Elephant's vision for leading the way in IT management best practices. This white paper builds on the survey results and examines the business reasons for the rise and separation of the SAP organization from the general IT function in the 1990s and early 2000s. The current trends in IT organizational design show a reversal of that model, whereby these standalone IT functions are being re-integrated into the larger context of enterprise IT. This re-grafting of an IT function that has been largely left alone to manage its own services is part of an emerging trend that is related to the IT industry's transition from a technology to a service orientation.

The term Enterprise Resource Planning (ERP) has been generally applied to major business applications that represent an integrated suite of application modules focused on automating the front and back office processes of the business value and supply chain. A key premise of these application suites is that integrated business processes are best served by integrated business applications, and that all source information from a common repository of record represents the assets and resources of the organization. Based on this model, vendors such as SAP, Oracle Financials, Peoplesoft, JD Edwards, etc. have built compelling solutions.

In many of the organizations that participated in the online survey, a common pattern can be observed that shows why ERP groups are generally early adopters of formalized process in general and turn to ITIL specifically.



Table Of Contents

| | | |
|---|--|----|
| 1 | EXECUTIVE SUMMARY | 2 |
| 2 | HISTORICAL CONTEXT (IT & THE MANUFACTURING MODEL)..... | 4 |
| 3 | BUSINESS CRITICALITY & GOVERNANCES AS A DRIVER FOR BEST PRACTICES..... | 6 |
| 4 | TRENDS FOR ORGANIZATIONAL DESIGN & COMMON PROCESS IMPLEMENTATION..... | 7 |
| 5 | THE CHALLENGE OF CULTURAL SEPARATION..... | 10 |
| 6 | SEQUENCE OF PROCESS IMPLEMENTATION - A LIKELY STARTING PLACE | 11 |
| 7 | TRENDS FOR IT TOOLS | 12 |
| 8 | SUMMARY | 14 |



2 HISTORICAL CONTEXT (IT & THE MANUFACTURING MODEL)

Silo-based organizational design finds its roots in the management principles derived from the manufacturing sector during the early industrial revolution. With the advent of modern manufacturing processes pioneered by men such as Henry Ford, who brought to the world his famous Model T automobile, organizational design has focused on breaking apart complex processes into the smallest individual tasks for the purposes of specialization. These focused tasks would then be organized into common groupings, resulting in vertically-oriented silos or business units based on a supply chain model. In an IT context, this translates into management silos that are created around technology domains or platforms such as servers, databases or business applications.

The inherent challenge with organizing around this model is that while communication and information sharing occurs quickly and naturally in the vertical silo or business unit, the silos themselves represent significant barriers for collaboration and communication across these structures. Since the lack of collaboration becomes embedded culturally, collaboration challenges can surface within the silos, which can create issues even within IT domain management groups.

Due to this organizational design model, early business application design focused on specialized point solutions targeted at the needs of the individual business units. The result was a patchwork of poorly integrated solutions. Seeing a business opportunity in this complex model, ERP vendors such as SAP offered an alternative solution that encouraged the elimination of the point solution model in favor of the integrated business suites we see today; however, as more of the core business functions and process outcomes became dependant on IT services and systems, the relative impact of IT organizational and process maturity became an issue.

While today we see a clear trend in the adoption of best practices surrounding IT governance at an enterprise IT level, this was not the case fifteen years ago when the implementation of these ERP suites was becoming very popular. Frankly stated, the existing technology-focused IT organizations were not capable of managing and supporting business critical IT services and systems at a level that did not place the business at risk.

To address this issue, many organizations literally created a separate (redundant) IT management organization under one executive structure to manage their ERP solutions as an end-to-end service. We see the results of this approach today in the fact that many organizations have a separate ERP group with its own dedicated environment and data center. Based on this need for mature management practices for IT services, you also find that most ERP groups are early adopters of best practice IT management frameworks such as CMMI and ITIL. This is supported in the survey results, where we see 71% of SAP groups acknowledging that they are adopting ITIL. This percentage is somewhat higher than in other surveys analyst organizations conducted with the general leadership



of IT management organizations. You can conclude, from the development of these separate organizations and the subsequent adoption of best practices, that a primary motive for adoption of these models is Risk Mitigation. Simply put, the pain of not having formalized control over the IT practices for service management has driven many of these changes.

It is important to note that while the ERP or SAP group may be an early adopter of formal service management, this does not mean that the other IT functions of the organization have come to the same conclusion. It is very common to see formalized processes for application and service management exist only within this single group; meanwhile, at the same organization, the importance of formalized processes is barely acknowledged by Senior Management in the general application and infrastructure groups.



3 BUSINESS CRITICALITY & GOVERNANCES AS A DRIVER FOR BEST PRACTICES

The growing impact of IT failures on business process outcomes has not been lost on the governments and regulatory bodies of the world. We see law after law being established for business governance and risk management that places stricter controls around how IT manages its affairs. Concerns around accurate financial reporting, privacy, information security, data retention, national security and public safety are resulting in our industry becoming increasingly regulated. Consider that as IT becomes critical for business survival, it also bears the burden of what it means to become a corporate and public utility.

The premise:

- The financial results, data and information of a company are a direct product of its business processes (*many of which are automated within the ERP suite*)
- The business processes and their digital output were automated several years ago by IT services
- The services are supported by IT systems and technology components
- The technology is managed, or not managed, by the processes of IT Service Management
- The IT professionals participate, or do not participate, in the processes that design, transition and operate IT services

The logical conclusion that can be derived from these statements is that if IT professionals do not manage their processes well, the financial results of the company suffer directly.

In the end, when the business process fails completely without its automating technology, there is no real ability to separate the two. IT has quietly become the manufacturing line and the core utility for business success. The challenge faced is that while this statement is true in practice, it has not been absorbed completely by the business or the IT organization's culture. This model of interdependency is what ITIL version 3 describes as the Service Ecosystem.



4 TRENDS FOR ORGANIZATIONAL DESIGN & COMMON PROCESS IMPLEMENTATION

As was stated earlier in this paper, many organizations chose to replicate or re-create a subset of their IT organization as a separate and distinct function. This enabled organizations to manage their ERP solution as a means of gaining higher control, availability and reliability for their key business systems, such as SAP. However, over time more business applications have become business critical as the majority of primary business processes slowly but surely become absolute in their dependency on IT. Rather than repeat the expensive solution that was applied to the ERP system, IT executives have had to address the root cause instead of the symptom because of the overall cost of redundancy.

IT organizations are therefore re-organizing around a shared services model in part due to economies of scale, lower transactional cost, and a growing realization that IT has to evolve into a services organization. To accomplish these goals, the senior leadership who manage these organizations are adopting new enterprise IT management roles, processes and tools that tie the disparate technology domains into a unified service organization.

A key tool being employed to achieve these objectives is the implementation of enterprise IT processes that span technology silos in support of service delivery, security, risk management, quality, control, and support. These process projects in turn support the cost and efficiency-driven technology consolidation projects focused on shared data centers, shared business applications (e.g. SAP), and the inter-connectivity of common network backbones.

In support of this movement, a trend can also be observed towards integrated IT management tools in support of a shared service model that is strikingly reminiscent of the business case presented by SAP and its competitors over fifteen years ago. From this perspective, we get a nickname for this tool trend called *ERP for IT*.

However, the largest hurdle that these trends face is the organizational and cultural changes they represent. The survey clearly indicated that most SAP organizations struggled with culture, resistance to change and cross-organizational/silo collaboration. Interestingly, these are the same major challenges faced by the SAP groups as they implement their business-focused process tools in the business units.

While these industry changes are positive for enterprise IT and its business customers, they present an interesting dilemma to the classic ERP organization. For many companies, the creation of a separate SAP group was a necessity due to the lack of maturity in the general IT environment; however, what happens to the business case for retaining a separate and distinct ERP group when the general IT management organizations' practices become mature enough to support business critical IT services?



The answer of course is that the business case for the separate and sometimes redundant IT organization for managing a key but single business solution begins to erode. This is demonstrated today as companies begin to re-centralize key elements of the ERP group back into the general IT resource pool. Among the first elements centralized are the dedicated ERP infrastructure components. These IT resources are often consolidated as part of the data center consolidation project under a central infrastructure and operations group. With the integration of SAP into the general IT environment, it now becomes one of many business-critical application services supported by IT.

While SAP may have been first to implement processes based on best practice, it now becomes critical to have only one common process for supporting services within the IT function. Regardless, if both the SAP process and the general IT process is based on ITIL, they will not be integrated unless they have the same shared characteristics, such as:

- Common process activities
- Common policies for interpreting and guiding execution of the activities
- Common roles for executing the process activities
- Common KPIs for measuring the effectiveness of the process

However, while these points may seem obvious, many organizations struggle with the business case for using a single or common process based on a technology silo-focused culture. An excellent example of where this is true is in the implementation of Change Management.

According to ITIL, it is critical that the enterprise Change Management process be capable of seeing all changes recorded in a single Forward Schedule of Change (FSC), which is reviewed and approved by an enterprise IT Change Advisory Board (CAB).

Traditional objectors to this policy are usually the ERP groups who, in their opinion, have been performing Change Management the right way before the rest of IT could even spell the process. Or perhaps, it is an application development group embedded in a business unit that does not actually perceive itself as part of IT, and they have their own special process for promoting changes into the production environment.

The common thread that runs through these arguments of justification is that they have more than enough controls and very mature processes, so they do not need to submit themselves to the bureaucracy of the overall IT change process. To be fair, the first part of their claim is more than likely true. The SAP group has been performing Change Management according to best practice for years; however, even the most mature change in isolation may still cause a service outage if it is implemented in ignorance of all the other changes happening in the data center that same day. This is true because of the inherent technological complexity and interdependency of IT resources prevalent today. To illustrate this concept, consider the following analogy.



An Airline Analogy

Consider that the shared data center is like the primary and only runway for a busy airport. Landing changes safely in the production environment is exactly like lining up aircraft for a landing while they are still miles out and ensuring they land safely with no casualties for those who are in the plane or to those who are living their busy lives on the ground. Many different types of planes of varying sizes need to land at this airport all the time and the runway is called on to meet the needs of private two-person planes (standard changes) all the way up to big commercial Boeing 747s (big projects).

If the air traffic controller is not aware of the type of aircraft that just landed (a 747 vs. a Gulfstream IV), the landing can have catastrophic results if a lighter aircraft flies through the wake and turbulence generated by heavy aircrafts. Landings must be spread out. The same is true with Change Management – changes cannot be made in isolation or without knowledge of other dynamics in the environment without potentially sustaining a disastrous unintended consequence.

Remember that the goal of Change Management, in layman's terms, is to efficiently and effectively handle lots of changes while minimizing the impact to the people that work and live around the airport.

Now, consider that having multiple change processes that do not talk to each other is the same thing as having multiple air traffic control towers on that single runway working blind of each other's activities.

Sooner or later, we are going to have casualties to deal with.

This scenario describes an airport that does not have coordination and collaboration between the individuals, driven by common process and procedures, not to mention tools – the radar system.



5 THE CHALLENGE OF CULTURAL SEPARATION (A TALE OF TWO CITIES)

As organizations look for ways to re-integrate the ERP group back into the processes of the IT enterprise, they are hitting a common and passionate cultural resistance. This can perhaps be attributed to the fact that these two separate groups developed very differently over the past two decades.

The separate ERP group did not become a reality until the industry move to client server technology supported the proliferation of the technology out into the business units. When SAP was at Release 3, the client server technology supported the full development and deployment into multiple business units. In large organizations, each business unit often implemented its own discrete ERP implementation based on its own customized processes. This in itself later became an issue which many companies are struggling with even now as they move to consolidate their financial and HR processes and tools into common systems.

Development of these applications was placed into the hands of business managers and analysts who were focused on process and lived it as part of their daily lives. These analysts were performing complex customizations of standard out-of-the-box software to make it fit their unique business processes that spanned many business silos. While doing this work, the ERP developers developed a solid understanding of the IT/business linkage and dependency while at the same time developing a healthy respect for the power of process and procedures.

Over time, the ERP IT groups became less technology-focused and more business-oriented. Customer service quickly became a priority and most of the help desk tickets ended up being related to business process as opposed to technology-based failures. It was well understood that there was no such thing as acceptable downtime because of the complex web of users spread across the organization.

As Y2K was approaching, the ERP group had the ear of all the executives because mission critical systems were predicted to fail at the stroke of midnight. The power and the timing were right to argue for the complete separation of these key systems from the general IT environment. During the intervening period of the last ten years, the ERP groups flourished and absorbed the IT person with a penchant for business knowledge and process.

What is interesting is that these ERP groups had influence around the boardroom table long before their counterparts from other areas of the IT organization. Needless to say, many organizations struggle with this difference in management culture as they look for ways to re-integrate.



6 SEQUENCE OF PROCESS IMPLEMENTATION – A LIKELY STARTING PLACE

From the perspective of process sequence, the survey informed us that the majority of organizations have implemented Incident, Problem, Change and Service Level Management first.

This sequence fits our understanding and experience for all organizations developing a priority-based roadmap of process implementation.

While several of the decision factors are unique to each organization, there is one consideration, based on general service management principles, that remains relatively consistent irrespective of the organization. Based on logic and sequence, certain processes need to be in place at a relatively mature state in order to support the introduction of others. For this reason, *process dependencies* can be defined with all other things being considered equal.

To start the discussion, there are two basic premises to consider:

1. IT's role is to support, control and manage defined IT services for the business customer (the goal of Incident, Problem, Change and Service Level Management).
2. Certain processes are customer-facing, while others occur behind the scenes (the intended consequence of Incident, Change, and Service Level Management).

With these two considerations, one starts to see that the same processes begin to take on a logical sequence. Regardless of the other factors that apply to unique IT functions, most organizations will start with these same processes for the following reasons.

- Support of IT services and systems is a core and highly visible element of IT Service Management
- Uncontrolled and unplanned changes have an adverse effect on service delivery
- It is difficult, if not impossible, to plan for or become proactive in service delivery unless IT has defined what services it provides and at what levels
- Consistent data gathering to provide improved management information is highly important



7 TRENDS FOR IT TOOLS

The range and sophistication of tools to support ITSM has grown rapidly in recent years in correlation with the growing businesses dependency on IT services. The rapid convergence of the industry driven by almost monthly acquisitions and mergers have allowed the software vendors to offer new levels of workflow and process integration that was impossible only a short time ago.

However, while this vision of an integrated system of IT tools makes sense, it rarely represents the reality of most IT functions today. This is again in part due to the transition our industry is currently undergoing – from a focus on managing and optimizing technology domains to one focused on understanding, managing and supporting end-to-end services.

The primary reason why an organization has multiple point solutions for automating processes and managing data is a result of history, politics and IT procurement practices. Based on a traditional technology management view, each IT domain is managed as a unique function and procures tools for its own needs. For example, the database group has a database on databases. The server group has one database for Unix boxes and another for Wintel Machines. The application groups track their applications, the network group is just concerned with network components, etc. From this perspective, each group has built separate process tools and data sources to manage their own assets. For the SAP group, this is represented by the tools built into the SAP system itself using solution manager.

However, what do you do when you realize that managing each domain in mythical isolation prohibits you from understanding the relationship of dependency between them? It is only when an organization begins to move to service orientation does this question become a burning issue. Unless an IT organization can understand how any technology component connects to another, and how they both impact a business process outcome, it is very difficult to claim alignment with business objectives.

This paradigm shift requires the creation of an integrated ecosystem of IT tools that share data and provide the capability of Business Service Management.

Consider that we started this discussion with the concept that ‘ERP’ is defined as an integrated application solution. Each business unit had separate applications to support business processes, such as accounts receivable, inventory management, procurement, payroll, etc. Each unit had their own separate databases on different platforms which needed to be connected through complex integrations; however, IT stepped up to the plate and said, ‘would it not make sense to have a suite of integrated applications all getting their data from the same primary central source with federation to other internal and external sources applied when necessary?’



The Enterprise Resource Planning (ERP) suite was born!

If we preach this as a good strategy for the business, what makes IT any different? The answer of course is that we are not, and we are following the same pattern of realization and action the business has already acted on based on IT's guidance.

Effective and efficient delivery of IT services is likewise dependent on the development and implementation of an integrated suite of capable service management tools. These service management tools must be capable of underpinning processes described and presented in ITIL.



8 SUMMARY

The results of the SAP user survey provide an interesting context within which we can understand the impact of ITIL implementation at an industry level. Consider that an SAP group in many ways presents us with a mirror micro-climate within the greater enterprise IT function. Many of the drivers that caused the initial creation of these organizations and the subsequent adoption of best practices around people, process and technology now also apply to the larger enterprise. The results of this survey can serve as a model for predicting similar trends and challenges facing the IT industry in general as it moves from a reactive silo-based model to one focused on the proactive delivery of highly available and reliable end-to-end services.

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