

Ensuring the ROI from ERP has a Bigger 'R' than 'i'

By Sean Culey



It is over two decades now since Enterprise Resource Planning (ERP) systems first arrived on the scene promising a new dawn of business performance by integrating the enterprise through software. However, they appear to be more famous for 'business disruption' headlines than for business transformation ones. Constantly criticised for what is known as the 'four too's' – 'too big, too slow, too expensive and too complex', recent developments have seen ERP vendors move their solutions into the cloud, and develop new capabilities designed to analyse 'big data'. In his latest article, Sean Culey addresses the question; *'can companies actually obtain a significant, sustained return from their investments in ERP?'*

An awful lot of money has been wasted on ERP.

ERP systems like SAP are designed to allow companies to implement a single system that facilitates the transparent integration and flow of information between

all functions within the enterprise, in a consistently visible manner, replacing or re-engineering their mostly incompatible legacy information systems.

It's good business. Gartner Inc. revealed that the value of the enterprise software market will total around \$120.4 billion in 2012¹ (approx. €94.4 billion), an increase of 4.5% from 2011. Topping the list of enterprise software spending is ERP software at \$24.9 billion (€19.52 billion) making it the largest enterprise application market. The largest player in the ERP market is SAP, who holds 25.5% market share, followed by Oracle with 18% and then Microsoft's Dynamics with 11%.²

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The statistics show, however, that the Return on Investment (ROI) for the vast majority of these ERP investments is either below expectations or simply not known. In a study of 14,000 UK companies, Professor Clegg of Sheffield University,³ identified that only 20% of their IT investments were considered to have met their objectives, whereas 40% were deemed outright failures and the remaining 40% met just some of their goals. In many cases ERP implementations have proven disastrous – nearly bringing many companies, such as Nike, to their knees. In fact, research shows⁴ that after implementation many companies suffer a dip in business performance that may take up to two years to recover from.

This often leads to the system becoming an easy scapegoat for any business performance issue that arises. In *'The Information Paradox'* John Thorp⁵ states that often business executives feel like gamblers in a casino when making decisions on technological investments like ERP. They may not be winning, but they have seen or been told by vendors about the stories of other organisations that have placed winning bets. Often, they may have had the occasional win themselves. So, they keep playing the odds – gambling huge amounts of money on technology. No wonder some companies resent paying the significant and ever increasing maintenance costs for an ERP system that they perceive they gain little value from.

The success of an ERP implementation is more than just considering its TCO (Total Cost of Ownership) – it's whether you are obtaining sustained ROI (Return on Investment). **In the ROI calculation, if you don't deliver a return - 'R' - then the investment - 'I' - simply becomes a C - 'cost'.**

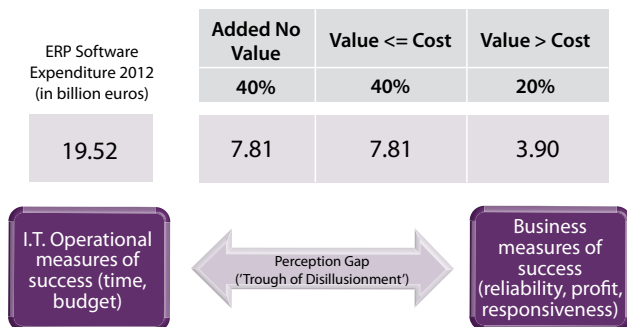
The ERP Perception Gap

One of the major reasons why many ERP implementations have failed to deliver a return is because they were primarily implemented as a software project, rather than a business improvement one. ERP implementations may be undertaken with the intention of being a business re-engineering initiative, but to actually deliver the project and cut through internal bureaucracies, it comes under centralised IT control with IT focused measures of success – measures such as; ‘was the system implemented on time and within budget? Could people log on OK? Did it work without crashing?’ The problem with IT led initiatives is that IT as a function is usually independent of the business units – and it is this independence that causes the problem. The business sees ERP as something separate from their ‘day job’ – rather than it being the new day job – and assume things will go back to normal post-project. The go-live is therefore frequently celebrated as the successful completion of the project – when in fact it is the start of the journey, not the end.

In contrast, senior executives measure project success by business results – such as whether it makes the business more responsive, reliable or agile in order to gain market share and profit. This ‘Perception Gap’ (or ‘Trough of Disillusionment’) leads IT to believe that it has done the job well, but the business to believe that it has been short-changed and mis-sold an expensive ‘silver bullet’ solution that failed to deliver.

The size of this trough can be substantial. If we were, as a rough calculation, to apply Gartner’s estimated 2012 figures for ERP investment against the finding that only 20% of implementations deliver value greater than the cost of implementation, this ‘Perception Gap’ equates to €15.62 billion per year – and in the ROI equation that’s a big ‘I’ for very little ‘r’.

Source: Gartner



A 2011 Aberdeen Group study on ERP⁶ usage found that ‘Best-in-Class’ implementations are 35% more likely to have business professionals accountable for their success, not the IT department. Without full and thorough input from the business throughout the implementation there will be limited ownership, and without ownership, there is no accountability. IT is given responsibility for implementing tools and designing business processes that they will never directly use, and conversely the business has limited accountability for the success of the

ERP project but feels the brunt of any failure.

This issue continues even after implementation. IT departments have often become another functional silo in the business, especially in organisations where their services have to be procured. This means that the business has to know what it wants and decide that it is worth paying for, rather than a more optimal (and cheaper) solution of having ERP process experts working alongside the business in order to fully understand how ERP can be used to deliver increased business effectiveness or efficiency. The move away from internal ERP / business experts to out-sourced and off-shore facilities for cost reasons has also reduced the likelihood that ERP will deliver substantial business performance improvements.

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Does IT Matter?

Nicholas G. Carr suggested in his 2004 book ‘Does IT Matter?’⁷ and famous HBR article ‘IT Doesn’t Matter’⁸ that organisations are wrong to continue to make large scale investments in IT. He reasoned that large scale investments in technology (like ERP) have resulted in ubiquitous, powerful IT, something that every organisation can own. He reasoned that as every organisation can own this software, it cannot provide competitive advantage to any individual firm, stating that “as their availability increases and their cost decreases--as they become ubiquitous--they become commodity inputs. From a strategic standpoint, they become invisible; they no longer matter”.

Fast forward eight years and the commoditisation of systems like ERP has increased to a greater level than Carr probably deemed possible. The rise of Software as a Service (SaaS) has enabled ERP over the internet, increasing accessibility and reducing the cost of ownership even further. The business can choose between renting out whole ERP suites or just certain functionality on demand via the cloud, in the same way as TV and movies can be accessed. Growth has been rapid as companies see immediate benefits from reduced capital costs, real-time collaboration, and increased visibility. This hosted delivery model requires no initial cash outlay for IT resources, has faster software implementation, on-demand scalability, and improved ROI. SaaS applications have matured to the point where ‘ERP as a service’ is now a serious consideration for many companies.

So is Carr right? Do IT systems like ERP make no difference at all, simply because everyone can purchase them? Well, yes and no. He is right that simply owning ERP is no longer limited to those with deep enough pockets to finance the cost of installing and maintaining it. However, the benefits from

ERP have *never* come from simply owning the software (and never will); they have come from being able to leverage its integrated capability to put better information in the hands of key decision makers so they can make more informed decisions. They come by being able to use ERP to effectively enable a business to execute its strategy, to serve its customers better and more efficiently.

Technology itself changes nothing – **it's what you do with it that counts.**

It's not what you do, it's the way that you do it....

There **are** massive benefits available from the implementation of ERP software, but yet these benefits are not achieved by all. As proof of the fact that simply buying an ERP solution doesn't deliver the same benefits and competitive advantage, the Aberdeen Group conducts annual research on the use of ERP.⁹ Last year's research shows that the scale of returns from technological investment varies widely, as shown on figure 2 below.

Figure 2

Definition of Maturity Class	Mean Class Performance
Best-in-Class: Top 20% of aggregate performance scorers	<ul style="list-style-type: none"> • 18% reduction in inventory levels • 97% inventory accuracy • 3.33 days to close a month • 96% manufacturing schedule compliance • 97% complete and on-time shipments
Industry Average: Middle 50% of aggregate performance scorers	<ul style="list-style-type: none"> • 11% reduction in inventory levels • 95% inventory accuracy • 5.98 days to close a month • 89% manufacturing schedule compliance • 89% complete and on-time shipments
Laggard: Bottom 30% of aggregate performance scorers	<ul style="list-style-type: none"> • 3% reduction in inventory levels • 89% inventory accuracy • 7.04 days to close a month • 79% manufacturing schedule compliance • 86% complete and on-time shipments

Source: Aberdeen Group, June 2011

For example, the bottom sector, named the 'laggards' by Aberdeen, achieved an average of 3% reduction in inventory levels, whereas the 'Best-in-Class' group saw a 18% reduction. This would equate to millions of pounds more working capital freed up by a 'Best in Class' implementation, compared to a Laggard implementation. Other differences were:

- 8% more accurate inventory records
- 4 days shorter month end processing
- 17% greater manufacturing compliance to plan
- 11% better customer service through complete and on-time deliveries

I have been tracking these measures since the mid 2000's, and the gap does appear to be narrowing, but it is still substantial nevertheless. But why are the differences so great? If the

tool itself was the key element then surely implementing it should generate universally similar level of improvement that Carr alluded to?

Clearly this is not the case.

Jim Collins makes this point in 'Good to Great'¹⁰; "you could have taken the exact same leading-edge technologies pioneered at the good-to-great companies and handed them to direct comparisons for free, and the comparisons still would have failed to produce anywhere near the same results."

ERP - an accelerator, not a silver bullet

Simply purchasing ERP may not provide sustained competitive advantage, but using it effectively can. As Collins stated, "technology can accelerate a transformation, but technology cannot cause a transformation." ERP should be viewed as an enabler of excellent business processes, processes designed to effectively deliver value through the execution of business strategy. However, many find it easier to buy into the concept of technology being the solution rather than working on the hard task of developing the cultural, leadership and behavioural drivers that actually create the transformation.

Many businesses still view ERP as just an 'IT' tool years after the system went live, utilising it to simply automate the transactional execution of the standard business processes – to take orders, raise invoices, buy stuff and manage the finances. All valuable and necessary – but unlikely to provide the required sea-change in business performance that the company hoped it was procuring. As the saying goes, automating an inefficient process simply magnifies its inefficiency.

One area where wide gaps in ERP performance exist between the Best-in-Class companies and the rest is in providing visibility into business processes – managing their end-to-end performance, not just their transactional execution. The Aberdeen report identified that the Best-in-Class companies are 25% more likely to use ERP as the mechanism for that visibility.

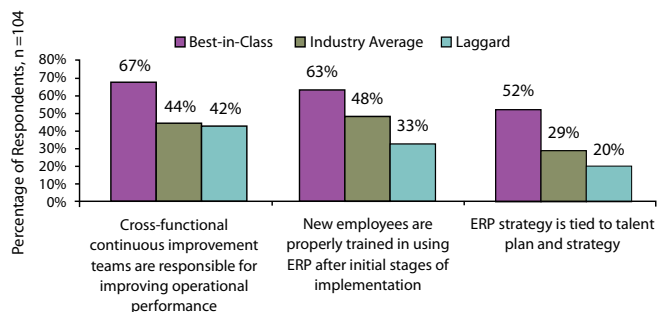
Figure 3 begins to explain what's really going on, and why some companies achieve unexpected levels of high performance from ERP and others do not. ERP enables the causal analysis of why the business is failing to achieve its strategic goals – but this is irrelevant if;

1. The strategic goals are not known
2. The business is not educated, integrated and measured to behave in an way that is aligned to the delivery of these goals
3. The data in the system is inaccurate

Other factors are also very important – the user community needs to be educated on how an integrated system works and how to develop the discipline needed to maintain it – rather

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Figure 3



Source: Aberdeen Group, June 2011

than just trained on how to execute functional activities. Also, analysis of whether the team has the skills and capabilities to exploit the potential of the system is needed to identify development requirements, clear ownership of the master and transactional data is required, and the executives need to insist on the running of business reports from the ERP system, not from offline data sources such as spreadsheets.

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ERP as a Strategic Enabler

Structure always should support strategy, and not the other way round. Businesses will not win through simply owning innovative technology; they will win when that innovation is used to deliver strategic benefits or competitive advantage. The question is, what is 'wildly important' to your organisation and your customers? ERP's focus should firstly be on providing competitive advantage; creating effectiveness through better demand visibility, more accurate plans, more responsive supply, consumer insight, better traceability and so on – and then on increasing efficiency in the processes needed to manage the business.

Technology cannot possibly be the answer if you are unsure as to the questions.

ERP therefore needs to be viewed not just as a transactional recording device but as an enabler of business strategy. ERP's information flow structure and ability to provide cross-process integration can be a fantastic enabler of strategy, but only when used appropriately and where the correct inter-relationships between people, processes, data and technology are implemented. It can (and should) be used to plan, optimise, analyse, smooth, sense and respond as well as transact. After all, the 'P' in ERP does stand for Planning.

This involves much more than IT knowledge – it requires a mix of strong business awareness, knowledge of current best practice processes and a good understanding of how to apply the technology to support the strategy. For example, if the

Value Chain strategy was focused around *reliability*, then the ERP system needs to be exploited in such a way as to provide consistently *reliable* information on all aspects of the end-to-end Value Chain, such as determining whether customer requests for product or information can be reliably satisfied.

ERP needs 'T' shaped people and teams

The human element is one which can derail the most perfectly designed system implementation. Significantly more time and attention is often spent on the technical implementation than on working with the organisation so that the integrated nature of ERP is fully understood, the inter-relationships between the different processes are known, the required behaviours are clear and ownership for the integrity of transactional and master data is established.

When everyone understands the end-to-end, integrated nature of the processes they execute, they will appreciate how their actions affect (and are affected by) colleagues both upstream and downstream, and the importance of their role in the Value Chain. ERP implementations are successful when this is understood and unsuccessful when silo functions and silo thinking still exist.

IT needs to become 'T' shaped – it needs to retain its technical expertise, whilst developing strong understanding of how the end-to-end business processes need to be integrated to deliver value. It needs to understand the needs of business, the potential of the system, and how to manage not just the execution of processes, but also the successful management and reporting of them. IT's measures of success need to become business measures of success – what purpose does IT serve other than to enable people to more effectively and efficiently create business value?

I once ran a series of ERP 101 workshops with a large client designed to help educate the organisation in this subject, and the reaction at the end of each session was mostly one of frustration and anger – frustration at why no-one had taken the time to explain this before they went live, and anger at the lost time spent simply recording past events, the amount of effort they now needed to expend to fix things, and the missed opportunity to use ERP to plan and manage the business.

Occasionally however, the organisation simply does not have the skills to handle the new technology.

I remember the painful experience of working on a global project where much effort had gone into developing Advanced Planning capabilities that used complex planning algorithms and network optimisation tools that were then imposed onto planners who have previously only used simple spreadsheets – with the mistaken assumption that they could make such a large leap in ability in such a short period of time. Their lack of understanding of how the system generated results, where they came from, and the assumptions behind them, meant there was no willing ownership of them – and a lack of ownership means a lack of accountability. No one would be willing to accept ownership and responsibility for a demand or supply plan unless they

understood how it was arrived at. It is no wonder that planners often create their own 'shadow' plans on tools like MS Excel.

Which leads me onto data.

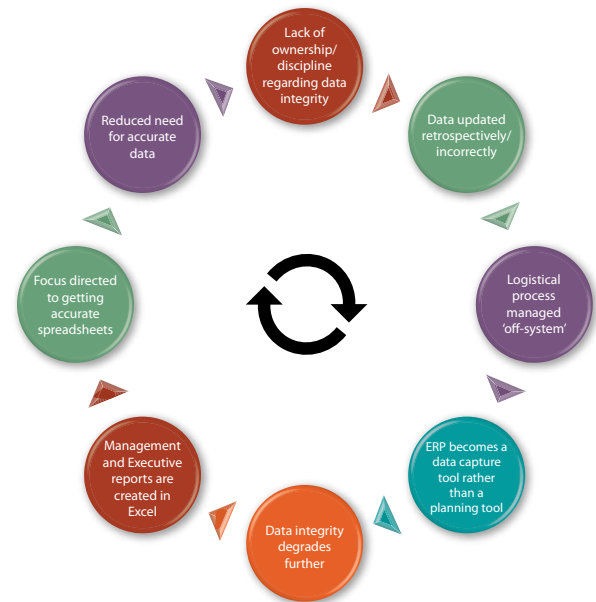
Data is for life, not just for go-live...

Information is the lifeblood of the organisation, and the primary goal of ERP is to provide decision makers with the information that they need in order to make properly informed decisions; to provide a *solid foundation of truth*. Accurate and timely data can enable rapid, incisive decision making, whilst poor and inaccurate data slows down everything, creates excess management, duplication and indecision. Many businesses use tools like ERP as transactional recording devices – to capture what they have done, rather than pour their intelligence into the system so it can plan what they should do. These organisations usually complain that their ERP system presents information they disagree with, and constrains the flexibility of the supply chain. They implemented it because they'd heard that it was a worthwhile thing to do. They did not know what to expect and they feel that the system becomes the master and they become its servants by having to spend time and effort maintaining data that they perceive provides little results.

Data is seen as boring and unglamorous, and is therefore often an afterthought. However, ask any business who has implemented an ERP system and didn't understand or appreciate the importance of data management whether they would turn the clock back and do it differently, and the answer is always a resounding 'yes'. Many don't realise until it is too late, and then become daunted by the effort involved in playing 'catch up' by cleaning up years of old and inaccurate data, effectively ensuring that the ERP system is unable to provide any level of integrity in its operational or management reporting. This creates one of the most costly of business diseases – uncertainty. A business that suffers from uncertainty in its cashflow, sales, spending, debt or inventory information usually buffers to compensate, and this buffer can be very costly indeed.

The diagram on the right shows how a lack of discipline in data management can quickly result in a system that is ineffective in its ability to support the business.

Learning to develop the discipline, roles, responsibilities and key data conformance measures needed to maintain the optimal level of information integrity is an empowering event but, like all training, it is worthless unless put into practice. Best-in-Class organisations are 69% more likely than all others to have a job role or group dedicated to data management, and this creates a 91% increased likelihood that they have real-time visibility into the status of all processes from quote to cash. This visibility allows decision makers to quickly identify performance issues and determine root cause, eliminating the need to track down individuals and delay the process. This root cause may well be a process performance issue, such as a machine breakdown or supplier failure, or a conformance issue such as a person failing to update ERP with the right information at the right time. Both are important, impact the bottom line, and



should be measured. Once the linkage between the executive's strategic performance KPI's and the operational process conformance KPI's is established, and people know their lack of data discipline could be exposed as the root cause of incorrect management information, then any resistance to maintaining data integrity generally fades away. People will understand that accurate, trusted data frees the business from uncertainty and empowers rapid decision making, simulation and theory validation. It also ensures that decision makers are not making plans or decisions based on out-of-date or invalid information, but instead are aware of the current state and thus the impact their decision will have on the end-to-end Value Chain.

Creating an environment whereby data accuracy is held in higher esteem than data manipulation is also paramount. A paradigm shift is required here – if the basics of data integrity are achieved through consistent and timely updates, and the executive team insist on using information sourced from the ERP system for their reports, then the system becomes the organisation's servant – providing all the insight and knowledge needed to control the business.

Big Data

The latest technological silver bullet that is being hyped up by ERP vendors is 'big data' products such as SAP's HANA. 'Big data' relates to the ability to store, manage and analyse huge amounts of information within a tolerable elapsed time, and is now viable using cloud based 'in-memory' data storage. The challenge, of course, is still the mining itself – the unlocking of value. There exists more technology and data than ever before – but the same question remains; what do you want to do with it? Do you have the discipline, the people and the skills to manage it?

The fundamental issue is this – having the ability to rapidly provide intelligence and analytical capabilities across the Value Chain still requires people who (a) know

what questions to ask, (b) know what to do with the results, and (c) are empowered to do it.

Clothing firm Zara provides a good example of a company that invests in technology specifically to support the effective delivery of its competitive strategy. Zara needs a demand driven Supply Chain with 'sense and respond' capabilities that is highly responsive to consumer tastes, and thus requires the constant capture, analysis and distribution of demand information to the designers so they can determine trends and identify what is selling and what is not. They need 'big data' to analyse trends to provide the 'fast fashion' solutions they are famous for. They have developed a responsive and demand driven Value Chain, supported by their IT systems to provide responsive demand driven data that enables them to deliver fashion into the stores quicker and in smaller batches than the competition. They constantly analyse where technology can be applied to add future value to this strategy, instead of buying technology then figuring out how they want to use it.

Conclusion

At the start of this article I stated that a lot of money had been wasted on ERP. This wasn't because the software was a waste, but because the powerful potential of this software was not realised. Does IT matter? Absolutely – but ERP technologies like SAP can only deliver enormous benefits to those organisations that realise that they are not a 'silver bullet' solution but an enabling tool – and as such need people to manage and maintain them. Any ERP solution will only deliver superior results if used to automate superior processes that provide insight and information to people educated how to use this information to deliver corporate goals and create competitive advantages.

The cost focused trend of off-shoring and outsourcing ERP support has also, in my experience, dramatically increased the likelihood that its value is not exploited. The time spent translating requirements, checking quality and managing the inter-relationship between off-shore partners, internal IT and the business, has, in my opinion, increased the cost and complexity whilst decreasing the likelihood of a satisfied business customer – compared to a well-co-ordinated injection of experienced process and ERP specialists directly into the Value Chain teams.

Ensuring a good ROI from ERP relies on the following:

- Start with the strategy – understand your customer's needs, where competitive advantage can be gained, and how ERP will be used to enable this. Understand the questions you want ERP to answer
- Top down support – get buy-in and ownership from executive stakeholders, and ensure they insist on their management information being sourced from the ERP system wherever possible
- ERP education – educate your team to use ERP in order to deliver tangible business benefits to the organisation – don't just train them on which keys to press. Understand

how to manage and plan the business processes using ERP as much as how to execute them

- Create a foundation of truth – demand consistent, clean, accurate and timely data, and clearly identify the key people responsible for its integrity - and then measure them and hold them accountable for it

This will allow your company to leverage the capabilities of your ERP system so that you have certainty and visibility across the value chain, improving competitiveness, profitability, and providing a solid foundation for future growth. It will ensure that your ROI from ERP has a bigger 'R' than 'i'.

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Sean has worked around the globe helping companies create dramatic increases in profitability and growth, breaking down their barriers to success through the alignment and integration of their people, processes, systems and data. He helps companies to navigate the journey from functional silos, creating foundations of control that enable continual improvement and innovation via his 'Aligned & Integrated Organisations' (AIO) approach designed to create end-to-end, integrated customer and profit focused Value Chain teams. This approach also helps companies align their Integrated Business Planning, Management and Execution processes. He also has 20 years' experience of creating value from ERP investments such as SAP, and is an expert in helping companies to understand how to realise the value of these investments.

Sean is a frequent conference chair, speaker and author with many published articles on Organisational Greatness, Cultural Change, ERP and Value Chain excellence. His book 'Becoming Great (by taking everyone with you) – Developing the Aligned and Integrated Organisation' is due to be published late 2013.

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