



**Lean Enterprise
Architecture: How to
achieve better
business
performance from
softsystems**

Written by

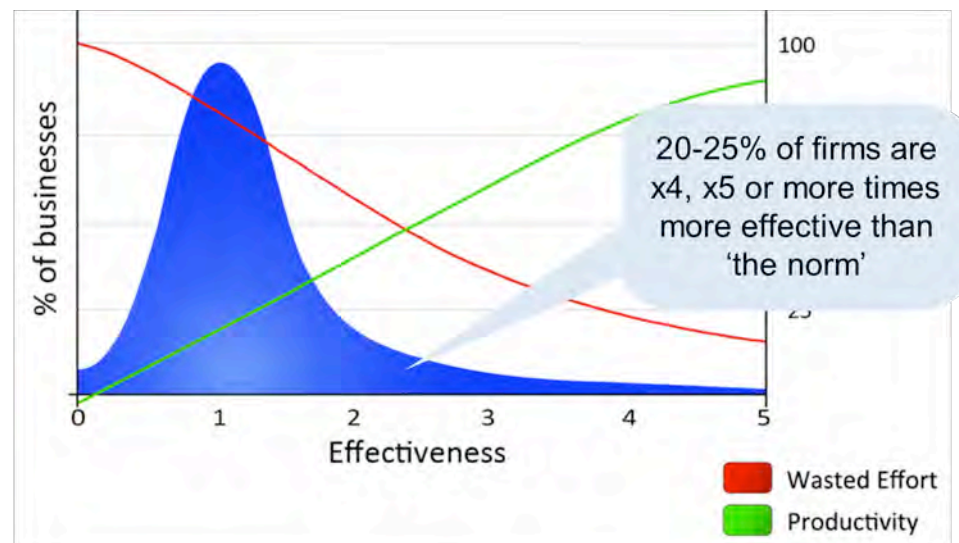
<<P. Grant Rule>>

<<January 2010>>

There's an elephant in the room. It's big, it's pink and it's embarrassing... many folk pretend it isn't there. But the fact is, there's an elephantine gulf between the potential of the software creative process and the effective delivery of value to business users and customers.

Around one in five organisations predictably obtain the quality softsystems their business needs up to ten times faster, for costs that are as little as one eighth of 'the norm'.

These market leading organisations are effective at using their resources to deliver the outcomes desired by their various stakeholders.



Conversely, the majority of organisations are much less effective. They waste resources and incur risk unnecessarily. They exhibit performance that is unpredictable, that often falls far below what is demonstrably achievable. Concept-to-consumption times are extended, effort and costs are high, product quality and poor user satisfaction reduce their ability to compete. Unfortunately, many of those involved with softsystems, whether during procurement, development or support, have developed the habit of judging success in terms of the activities performed, rather than the results achieved. This simply does not deliver the value deserved by business users, consumers and taxpayers in the 2nd decade of the 21st century.

One lauded report suggests experienced project managers, averaging "17 years in the IT industry and 9 years as a project manager", expect "to come within a small margin of their targets on at least two out of every three projects"¹. Which implies that every third project can be expected to overrun. If you have a programme consisting of several inter-dependent projects, the likelihood of 'failure' increases accordingly. And many organisations distribute programmes of development to multiple groups scattered around the globe. Go figure.

¹ "The Impact of Size and Volatility on IT Project Performance", By Chris Sauer, Andrew Gemino, and Blaize Horner Reich, Communications of the ACM November 2007/Vol. 50, No. 11



This may, in any case, be a somewhat optimistic view. A study reported by the British Computer Society in June 2008 suggested that "...only one in eight information technology projects can be considered truly successful (failure being described as those projects that do not meet the original time, cost and (quality) requirements criteria)"². The general tenor of the findings of the two studies referenced are supported by other, independent, observations too numerous to mention.

Gordon Frazer, Managing Director of MicroSoft UK, has said, "the software industry is particularly important because its success has a disproportionate effect on the UK economy as a whole"³. The CBI has called for IT suppliers to "better support customers' business... through early engagement and communication on service innovations, and greater alignment with their customers' long-term strategy"⁴. The President of the CBI is also on record as saying that the IT Industry in the UK needs a "huge culture change" to accommodate the mass adoption of outsourcing and offshoring. I doubt the UK is alone in this.

The economic difficulties experienced during 2009 simply serve to emphasize the need to use resources wisely and effectively.

However you look at it, we are facing significant changes in the business-IT relationship, driven by technology and by economic necessity. We live in a market economy, and by one means or another, the market *will* find a way to replace those who deliver poor or mediocre performances with something that offers better. Frequently, it is new, disruptive technology or methods that provide a completely different way to create value, replacing ways that seemed set in stone - and reinventing the pricing and resourcing structure in the process.

Business and IT people need to find constructive solutions to the management and communication issues that bedevil the workplace. We need to find ways of addressing these key factors that drag down business performance soon. Expecting different results from doing over again those things that have not worked in the past is one definition of insanity.

The Customer-Supplier Relationship

For most large organisations, developing and providing services via softsystems necessarily involves an extended supply chain. A typical chain consists of: the end consumer, the business user, a retained IT organisation, and a supplier of outsourced services. Such chains often extend through many organisations, all of whose services need to be coordinated and whose work products must be integrated if value is to be delivered to the end consumer.

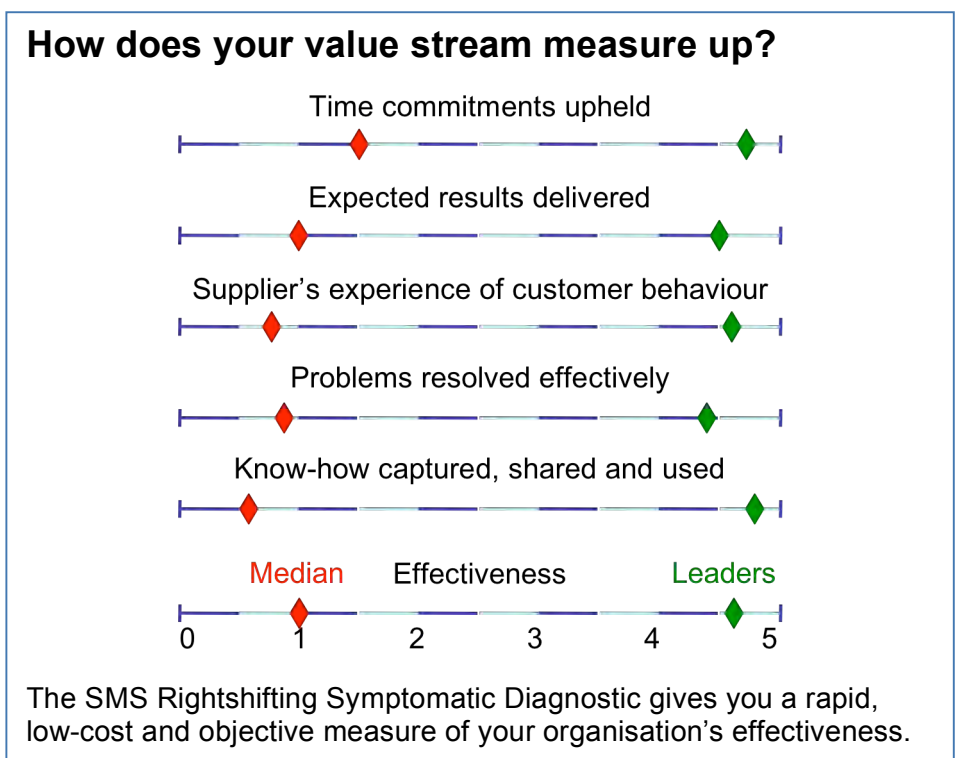
² "A Study In Project Failure", Dr John McManus and Dr Trevor Wood-Harper, BCS, June 2008

³ "Developing the Future 2008", Microsoft, BCS & Intellect, December 2008

⁴ "UK Competitiveness: the role of IT services", CBI, July 2008

The failure or poor performance of any link in the chain impacts the effectiveness of the whole chain. Local optimisation of any one link does not necessarily improve the end-to-end performance. In practice, it can lead to ‘siloes’, ‘over the wall’ syndrome, ‘blame culture’ and de-optimisation of the whole.

To increase the effectiveness of an extended supply chain, it’s important to think holistically, to consider all the contributors and process steps as they inter-relate. More often than not, that requires the customer to work in



partnership with their supplier of outsourced services.

There are a number of reasons why organisations outsource their software development and software-dependent services. It may be because softsystems are seen as anything except a core competency. There may be a perception that professional SITS suppliers are more productive, deliver faster, offer greater flexibility, enable level scheduling, at lower risk. But mostly, those who have outsourced software development have done so because outsourcing has been perceived as a cheaper way. For many businesses, it seems this remains the only measure applied to the outsourced supply of IT services - how much does it cost? And those involved are under pressure to make it cheaper still.

So let’s look at some typical costs for new software development. And further, let’s use the term ‘value stream’ instead of ‘supply chain’, to focus our thoughts on the value delivered.

The average organisation pays eight times more than they need to for their software-intensive products.

They get ten times lower productivity than they could achieve.

In a typical software development value stream, exhibiting median performance, the unit cost of new software development averages around £666 GBP per function point. Productivity is around 0.11 function point per work hour: that is, about 120 fp/FTE per annum (figures based on the median performance of 2087 projects selected from the ISBSG database⁵, filtered with respect to data quality, and UK average salary for Application Developers in 2008⁶).

Compared to this, effective high performers are paying nearer to £80 per function point. They are achieving productivity levels around 1 function point per work hour: that is, 1000 fp/FTE per annum.

In plain English, the average organisation pays eight times more than they need to for their software-intensive products. They get ten times lower productivity than they could achieve.

If your business goals include improved productivity and reduced costs, then it is crucial to look at how the top performers are achieving their results.

Understanding effective Value Streams

The lean manufacturing revolution teaches us that the first step to improved performance is to focus all business activities on delivering value to the customer.

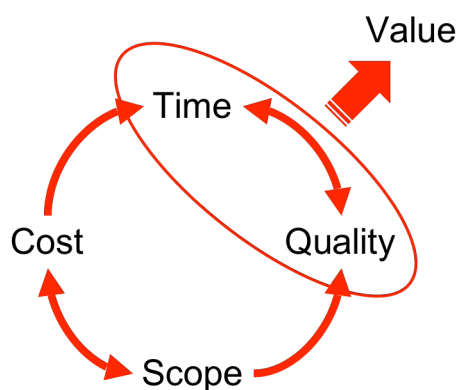
The customer (or taxpayer) is the ultimate source of all income. Failing to deliver value to the customer (or taxpayer) over any significant length of time is unlikely to lead to success! Conversely, performing only those activities that do add customer value will cut waste, reduce costs and duration, and satisfy customers. A simple concept, but far from simple to implement. Not least because the word spoken as 'value' is so often heard as the word 'cheap'.

Being effective is not achieved by driving a hard bargain. It's not achieved by scoring points. Or by putting one over on the competition. It's not achieved by cutting staff, extending work-hours, or exploiting cheap labour. It's achieved by developing your organisation's ability to deliver its strategic goals - consistently, repeatably, predictably, efficiently.

This requires intelligent and engaged management of the end-to-end value stream.

⁵ International Software Benchmarking Standards Group, ISBSG Database Release 10

⁶ UK IT Salary and Skills Report 2008, CNET Networks UK Ltd. reported UK average salary for Application Developers was £49,391 GBP. Once benefits, National Insurance and other expenses are taken into account, the employer's costs are nearer to £80k approx.

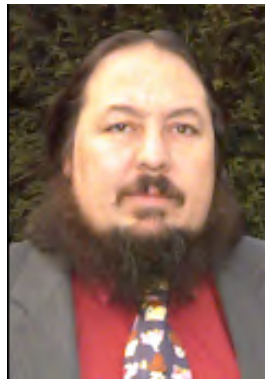




Many executives are beginning to focus on these issues. But given the performance history of the huge majority of value streams, there is a paucity of experience throughout the IT industry in what constitutes high performance. As a result, there is a lack of effective advice on improving effectiveness - advice and guidance that will have the desired effect of transforming the IT-business relationship. Many of those who talk about improving performance do not really understand where they are trying to go, let alone how to get there. It is completely unknown territory. What is needed is a robust methodology from industry experts on managing process performance.

In the next paper in this series, we will be looking at how to map the value stream, and align activities towards the delivery of the desired business outcomes.

Author Biography



Grant Rule is founder and CEO of the SMS Exemplar Group. With over 34 years experience in IT, Grant is a recognised authority in using quantitative methods to continuously improve the quality of the software process and its products.

Grant has applied lean engineering principles to develop the SMS Rightshifting product suite for transforming the IT-Business relationship. Rightshifting aligns all activities in the value chain to deliver the results business needs from 21st century technology.

Grant worked with Ken Dymond to introduce the Software Engineering Institute's 'Capability Maturity Model' into the UK, and helped bring to Europe the first public 'Introduction to the CMMI[®]' training. He has contributed to structured methods and to ISO standards, and helped improve the inter-counter consistency of counting practices for IFPUG and Mk II Function Point Analysis. He is a member of the COSMIC core development team.



SMS provides selected clients with unique insights into the whole-life effectiveness and efficiency of software-intensive systems. We are an independent consultancy working with private and public sector decision-makers on behalf of stakeholders to improve outcomes and increase value delivered to the customer and taxpayer while reducing cost and risk.

We are dedicated to rightshifting the performance of outsourced services, along with those managed in-house. Using evidence-based methods and benchmarks of value delivered, we coach business people and technologists to work as partners.

Our recognised specialists have wide experience, enhanced by SMS' objectivity as an independent consultancy and trusted 3rd party. This definition-to-deployment know-how enables us to contribute authoritatively on the cost-effective use of softsystems to implement our clients' business strategy.

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