

APPLICATIONS DON'T DIE

of natural causes

It takes real management effort to kill them

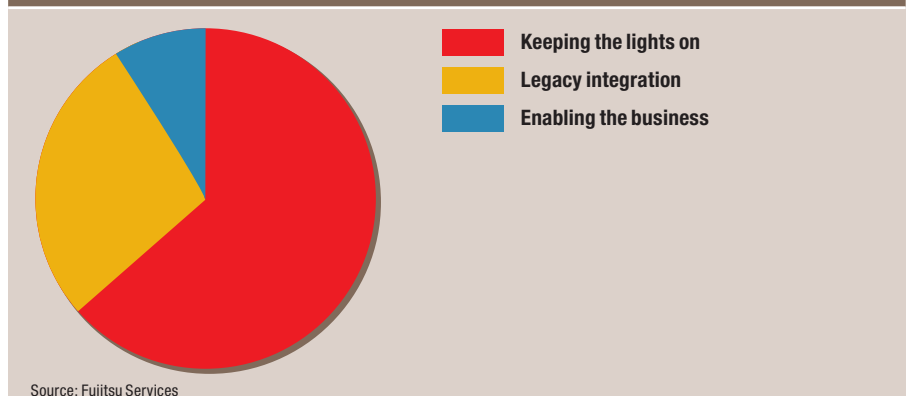
As applications age their business value changes but the cost of supporting them only ever increases. The legacy element in many organisations is now consuming up to 90 percent of IT spend – squeezing investment for new business capabilities. It's our opinion that managing applications over their lifecycle into extinction is urgent and critical, and that applying the principles of service oriented architecture (SOA) with robust governance can transform IT's impact on the business.

Graeme Wright

WHERE THE MONEY GOES

Our experience of working with large, well established organisations suggests that around 60 to 70 per cent of IT spend is dedicated solely to 'keeping the lights on' (see Figure 1). The bulk of this expenditure goes on infrastructure, but it's worth remembering that IT infrastructure is only there to provide applications to the business. We've become used to regarding infrastructure spending as a kind of tax on the business and easily lose sight of its actual contribution to the organisation's goals. But if the remaining 30 to 40 per cent of the IT budget is being used to drive the business forward, then perhaps we should be comfortable with the spending split.

FIGURE 1: IT SPEND



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However, when we look more closely at what IT teams actually do with that remaining 30 to 40 per cent, we find that around 70 per cent of it is used on integrating existing systems. In other words, only 10 to 15 per cent of the total IT budget is really being invested in enhancing the business's capabilities and adapting to new competitive pressures or opportunities.

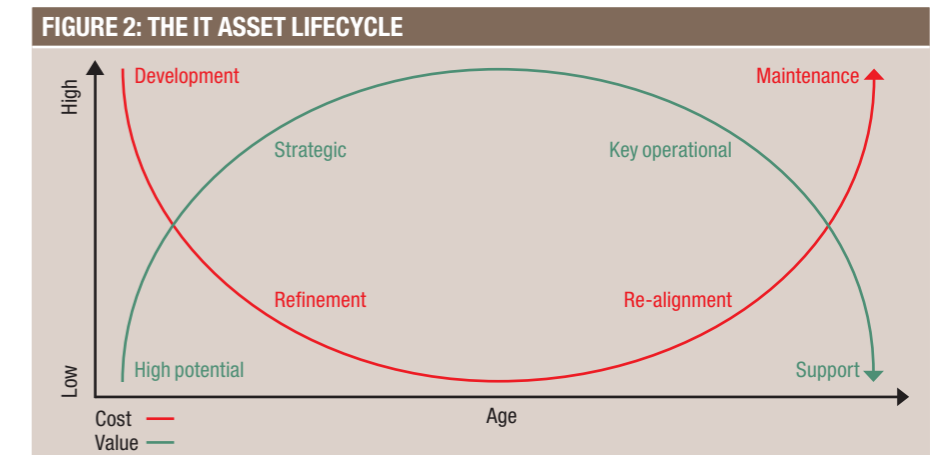
Legacy applications evolved over time, often in an unstructured way. This evolution is now causing an imbalance in the cost/value equation. IT's efforts to correct this typically lag behind business requirements by many months, if not years. By the time an application has been delivered the business has moved on. IT tries to play catch-up via enhancements and integrations. Developers and integrators get caught in the reinvention cycle, endlessly trying to freeze reality with ever more sophisticated systems, or trying to buy peace of mind by adopting (and inevitably adapting) package solutions.

One client we have worked with has, over many years, developed several billing systems, each time with a perfectly valid business case and each time never quite enabling the decommissioning of the previous system. In some cases existing functionality has been used in order to reduce upfront development costs, but the result is a portfolio containing four billing systems, at least two of which ought to be retired. All of these systems have associated infrastructure and support costs as well as continual maintenance and enhancement schedules.

A glance at the applications portfolio of any major organisation is likely to reveal similar clusters of evolved duplication. The good intentions of each successive generation weigh down those that inherit their work, and the criticality of the oldest systems becomes more, rather than less, entrenched. The value of a genuine 'portfolio' approach lies in letting decision makers choose which applications they need to serve the business. A portfolio shouldn't just be an ever-growing list: we need to fire as well as hire, divest as well as invest.

THE IT ASSET LIFECYCLE

Applications portfolios become clogged with legacy systems because managers habitually misread the lifecycle of IT assets. Decision makers tend to appreciate that IT projects have high start-up costs, and invest in them for the high rewards they expect to reap in the longer term. But as Figure 2 shows, the investment and reward model isn't so simple.

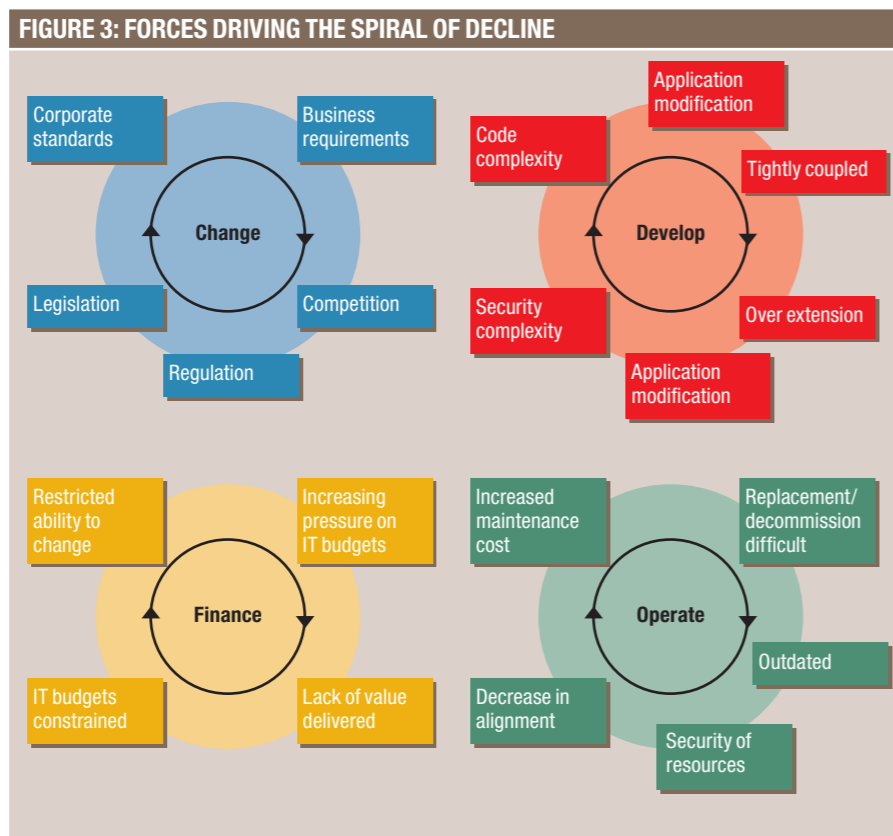


The value of applications changes over time, initially showing high potential by offering to deliver strategic value. As they age their strategic value declines and the residual value tends to be more operational. Several forces contribute to this decline. For example, a customer-facing system may provide a competitive advantage in the marketplace until other organisations bring out their equivalents. Often the business requirements underpinning the application change, making the core principles of the application redundant and thereby introducing waste.

At the same time as an application's true value is beginning to fail, so its development costs are beginning to rise again. In most organisations, 'refinement' of the system is gradually abandoned in favour of 're-alignment', with more complex and expensive interventions being made to prop up the application's role in the business.

The forces driving the IT asset lifecycle are shown in Figure 3. There are effectively four 'engines' of evolution active at the same time. These interact with each other as well as impinging directly on the applications portfolio. Applications are pulled, twisted and bent out of shape in response to these forces. This often results in uniquely unusual systems landscapes, with applications pressed into services they were never designed for, or inserted into business processes that did not exist when they were conceived. The generic characteristics of the situation are similar across all organisations. Put simply, IT becomes out of sync with the business.

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One last challenge in this area is that, in almost all organisations, strategy is set with clear principles and goals that are then broken down into a mass of individual projects and tasks which soon acquire lives of their own, distinct from the original 'big picture' view. The organisation is redesigned to support the strategy, and processes are changed. IT lags behind the business, often still implementing the changes outstanding from the last strategic change. IT can only get further and further out of harmony with the business.

This might not be such an acute situation if the IT industry was better at stopping projects that are in progress. But decision makers tend to be caught by the common fallacy that if something has had a valid business case and a lot of money spent on it so far, then it must be taken to completion. Even where decision makers are aware that sunk costs can never be retrieved by further expenditure, they often default to an obsession with cost to completion – rather than cost to value. This means that they attempt to secure the completion of the project at the least possible cost, even though any cost may now be unjustifiable in the changed business environment. IT managers may say they are 'looking to build a Mini rather than a Rolls Royce', blind to the fact that the business now needs a boat.

IMPLEMENTING DELIBERATE DARWINISM IN IT GOVERNANCE

We don't mean to suggest that managers sit idly by while the spiral of decline rages around them, but we do believe that the classic remedies have failed. The highest-profile approach to containing the downward drift of applications' value is off-shoring. Moving development and support to territories with lower costs can make an impact on the external symptoms of decline by improving the cost profile. However, this is only a short-term fix that will address issues like a budget squeeze. Off-shoring does nothing to address the issues of business value or of IT being an inhibitor of change. Off-shoring generally enables organisations to reduce cost, but not to remove the waste – and it takes attention away from the place where it is most needed: the service of the business.

The key to a better application portfolio is breaking out of the conceptual straitjacket formed by our traditional applications perspective. The concept of service oriented architecture (SOA) is well positioned to assist in this change by breaking up applications into small, reusable components which are defined to deliver specific business capabilities. SOA is often seen as an approach to building applications efficiently, and with maximum reuse potential.

SOA has been taken up enthusiastically by developers, but the 'reuse' message has usually been read as an attempt to predict future business needs and standardise on sets of core components. Building such core libraries has long been a dream of systems architects, but it's hard to turn the dream into a specification, and then acquire the investment funding needed to realise it. In any case, moves in this direction soon run foul of the same forces that drive the classic spiral of decline: we can't freeze the 'core components' for long enough to make them valuable to the business.

However, by building applications in a service oriented way, we can create applications that are much more flexible to change, and which can provide reuse through their emergent – rather than planned – properties. This means that a group of components acting as an application can serve current business needs, adapt to new requirements through changes in the component family, and donate capability to upcoming requirements through their proven utility.

But the introduction of a multitude of SOA components into an existing application portfolio can only make the management challenge more intense. It is vital to have a governance process which can track the usage of the components and the value delivered by them, as well as dealing effectively with both the legacy and emerging assets so that they are managed over their entire lifecycle, from cradle to grave. The governance process needs to implement the Darwinism of the real world, ensuring the survival of the fittest and the extinction of the weak.

Moving to value-based rather than cost-based governance gives managers greater ability to control the IT expenditure. This approach also has political (with a small 'p') value. Applications are inevitably identified by the business areas that sponsor them. The inevitable duplication in functionality and the excess support costs that they

carry are justified because, without their applications, the business areas cannot function. In an SOA world, components serve different interests depending on the contexts in which they are used. Business areas can, where there is a genuine common interest, share in their development and support costs. In this way, competition for investment in technical duplication is replaced by cooperation.

PUTTING THE BUSINESS BACK IN CHARGE

SOA represents a major change to the IT landscape and to the business. In particular, it implies a step change in the professionalism of IT. Leaders of IT teams have long wanted to contribute as equals with their partners in the business but in the absence of a sound technical route they have had to fall back on good intentions and rhetoric. SOA coupled with full lifecycle governance now offers a way to manage IT with greater clarity, granularity, accuracy, responsiveness and accountability.

Making the change is not, however, going to be easy. A major inhibitor is the inertial pressure of existing investment. Decision makers need to accept that they work in a brown-field environment: it's a rare business that can start its investment or applications portfolio from scratch.

But, if anything, the inevitable pain associated with this degree of change will only underscore the urgency of actively managing existing applications into the grave. The change from applications management to IT value governance is inescapable because IT, in its present form, is adding too much drag and too many constraints to the businesses it is meant to serve. We are running out of ways to run the same applications more cheaply, so retiring them is becoming the only way of making further savings.

WHERE TO START?

At the beginning! The robustness of the governance process and the organisational model of how applications support business value will develop over time; we recommend starting with the basics. We also strongly urge that you regard the process as one of business value governance rather than IT management. And although the best way to break into value governance is via a thorough lifecycle review of the existing portfolio, it is important that this exercise is not seen as a one-off governance cataclysm that occurs every few years. Governance of the IT portfolio must be an ongoing process with identified and measurable benefits. In this way organisations can track the improvement in the value being delivered by IT and verify that they are continually removing "waste" from the systems that support their business.

The introduction of SOA has often been technology-led and is widely seen as a benign influence on the evolution of IT. It needs to be more than that. It must be accompanied by active management, which acts as the lens through which IT is examined, interrogated and ultimately tethered to the business that it serves. With the right governance in place, IT can at last take up its role as a deft enabler of business capability, keeping pace with the ever-changing environment while minimising its call on resources through effective and ongoing removal of waste.

Whose **OPINION?**

GRAEME WRIGHT



Graeme specialises in delivering large and complex value governance assignments using business architecture, strategic governance, portfolio management and benefits realisation approaches. His current focus is on managing service orientated architecture (SOA)-enabled business change programmes. Graeme has a degree in computing science and a Masters in Business Administration, and has used his experience and knowledge of both business and technology to deliver IT-enabled change for many organisations. Outside of work, he has just finished building his own house and is now starting to train, once again, for the next London marathon.

graeme.wright@uk.fujitsu.com

YOUR OPINION

Graeme would welcome your comments by email (graeme.wright@uk.fujitsu.com) or at uk.fujitsu.com/opinion



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[+44 \(0\)870 242 7998](tel:+44208702427998) or email askfujitsu@uk.fujitsu.com
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