

IT - Real Simple

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Doing away with the black art

IT - REAL SIMPLE

“Some problems aren't glamorous, they just need solving.” This is one of our favourite comments from the group of European CEOs and CIOs we recently asked about their expectations of IT. They also told us that they don't want to see IT: they just want it to work - invisibly.

We agree. And the good news is that there's a movement sweeping through the IT industry that meets these pleas head-on. Dedicated to removing needless complexity and cost, industrialisation is bringing fundamental changes to the way IT is delivered. It's bringing greater realism and focus, and helping organisations move much faster and further with their business plans.

At the heart of the industrialisation movement is the stark fact that around 80% of the IT needed in any business is standard. When you need a new system, the chances are that it has already been built - often many times over. It's effectively a commodity. So why start every project with a blank sheet - and a blank cheque?

If you could benefit from commoditisation of the 'standard 80%' in your business, you could redirect your IT investment to the 20% of IT that does need to be unique, and where your business can really score - in innovation, service excellence and differentiation.

It takes a shift in perspective to recognise that large parts of your infrastructure can be supplied by common components. But once that shift has happened, the benefits flow - repeatedly and predictably. It's a small shift, but one with massive implications.

Anyone who is responsible for buying or operating IT can be forgiven for feeling cynical about the airy promises of the blue-sky merchants. “Everything can be done with IT”, they say. For years almost every solution has been bespoke. This was partly because building and supporting IT looks like such a mysterious process. The brainwork that went into systems stayed in the heads of the people who developed them, and the 'intellectual property' never took any tangible form.

In IT we've long had a taboo about appearing to offer predetermined solutions. We want to respect our users and not prejudice their requirements. Our hearts are in the right place. But we're wrong to think IT is an all-or-nothing proposition. The true choice isn't between a fully tailored solution, lovingly crafted by hand, and a cheap-and-cheerful, one-size-fits-all job. In reality, we can produce systems of stunning quality and fitness from standard components. That's what we mean by 'industrialising IT'. And it's what mature industries do every day.

Take the automotive sector. The car changed society because the techniques of mass production brought ownership within the grasp of everyone. Large-scale infrastructure initiatives such as the development of highways and filling stations supported growth. Today, the automotive industry offers a vast array of product options and is nearing its goal of mass customisation; the ability to 'run off' a personalised vehicle to match a customer's order. Every car that is built without a known customer is regarded as scrap. There are no 'solutions looking for problems' in the auto world.

The auto industry hasn't achieved this state of refinement by throwing more people at the production problem, or by constantly reinventing its processes. It has focused on architecting its operations around finite sets of components that can be combined in multiple ways to produce apparently infinite sets of possibilities. Mature automotive companies have relentlessly pursued continuous improvement, searching for tiny improvements in process, speed, reliability or understanding that will make the end product more reliable for its end-user.

Draw the line. And move on.

From these components, every kind of vehicle becomes virtually available. Buyers can design their own products, learn the exact cost of each option, and know when to expect delivery. From the manufacturer's point of view, the technical range is constrained at the component set and the rules governing the set. The cost, lead time and build process for every component in the set are known and understood.

At last, the IT industry is starting to emulate the automotive industry in the delivery of repeatable, configurable products. In the same way, we can reduce the effective complexity in our IT by 'boxing up' meaningful chunks of technology. The power and performance is all still there, it's simply tamed and caged.

Draw the line. And move on.

CIOs and other senior IT managers should know that the 80/20 rule means that every time they embark on a new project, 80% of the infrastructure they need already exists. The problem is, they don't know where that 80% is. It doesn't exist as a separate, bounded entity. As a result, the existing capability ends up being respecified and rebuilt - and paid for all over again.

If you could nail down these common elements, then you could reuse them. Even better, you could begin to identify further elements that should join the common infrastructure set. The more activity you can consign to the 'business-as-usual' part of your IT portfolio, the more you can invest in your business's differentiators. You need your best brains trained on future opportunities and investments, not keeping the show on the road.

Perform this analysis on a continuous basis and the value of the 'novel' - 20% - side of the line grows exponentially. The more activity you shift into the realm of repeatable, measured, transparent processes, the more resources you free up to invent new differentiators. Or take new markets. Or deepen your customer relationships. You create space for everything that really matters. What used to take a miracle becomes a matter of routine. And you start paying bread-and-butter prices for bread-and-butter activities. It doesn't mean you can't have bespoke systems - of course you can - but they only need to be bespoke in 20% of your business, where it matters. The rest is just commodity.

Once you have identified the 'standard 80%' and committed to managing it as a core resource of the business, you can work on further optimisation. Ideally, you not only want to remove duplication when you commission technology, you also want your technology base to offer better serviceability and lower operating costs over a long lifetime. Cars have become cheaper to buy but also more reliable and robust through industrialisation, with advanced management systems and self-diagnostics increasingly built-in. The equivalent in IT is the system designed for light-touch support, so that operating costs - and therefore lifetime ownership costs - tumble.

In Japan, industrialisation is well established. Japanese businesses have been benefiting from industrialised components for some time, paying less for their infrastructures, having them deployed faster, and getting better performance from them.

Business is tough enough as it is. Why make life any harder? Draw a line around the functionality that's keeping the lights on, standardise it, and forget about it. You've got better things to do.

Knowledge - it's in the box.

The enemy is complexity. That's the opportunity.

The greater unmanaged complexity we have in our systems, the harder they are to predict and change. Errors creep in. Correct performance cannot be modelled ahead of implementation. Reliance on specialist technicians grows.

This situation is not just the preserve of established organisations with systems that have grown over many years. It also applies to any company that acquires another, or that merges with one - or, increasingly, that wants to work with another in a partnership. These days systems must talk to systems across the value chain.

Similar problems have grown around scalability and responsiveness as processing capability has been added haphazardly to existing systems. Organisations that once suffered shortfalls in capacity react by over-specifying their needs for the future. When they need more power, they buy more kit; but if they have excess capacity they can't unload it. They're trapped in a product-led model, when they really need a service-based environment.

Analysts estimate that 60% of most IT budgets are spent simply managing existing infrastructure. They also estimate that 60% of server capacity is never used. The first figure is the average cost of needless complexity, the second is the average cost of keeping your fingers crossed.

Knowledge - it's in the box.

As a global IT provider, we believe it's our job to remove burdens from our customers. We're doing that by capturing the wisdom and experience of our people and building intellectual property into our products and services.

Building and supporting IT looks like a mysterious process. The jargon's bad enough, but the real killer is that everything, but everything, is the result of individuals solving problems with their brains.

'Intellectual property' sounds like a fine idea until you realise most intellectual property never takes any tangible form. The developers of your 'unique' systems walk away, taking the keys to the future with them.

Engineers who inherit systems spend much of their time guessing how those systems work, and praying that they don't break them by mistake. Some IT specialists spend their lives dusting away at old systems, like archaeologists. They might learn something about how people used to do things in the dark ages, but they don't add anything to today's business. We shouldn't have to go through this pain just to understand how our systems work.

So at Fujitsu we're creating building blocks that encapsulate know-how and make it usable by others. TRIOLE, our method for optimising IT, is an industrialised approach to providing infrastructure that removes risk and cuts costs. TRIOLE has been delivering benefits to our customers for three years now. We typically deploy solutions 30% faster because our designs have been built, tested, sized and verified in our factory. The extensive factory testing we perform means that our solutions are also up to 30% more reliable. Standardisation and repeatability makes for systems that are highly efficient and predictable.

In Japan, organisations as diverse as hospitals, oil companies and bookshops have benefited from TRIOLE, which has enabled them to forget about their 'standard 80%' while they focus their best talent on growing and developing IT to drive their businesses forward.

Demand better

Some companies aspire to reusability by compounding their learning across a series of deployments. That's a polite way of saying they learn from the mistakes they make at your expense. Our approach is different. Uniquely, we invest in exhaustive design, testing and verification processes that create 'zero defect' products.

But we're not just plucking components out of the air. We capture requirements on a continuous basis, analysing them for emerging common patterns. We then feed our findings into the design process, so that we're continually investing in new components that meet mass demand just ahead of the curve. By monitoring needs intelligently we create an R&D pipeline optimised for the real world. It's a kind of managed evolution.

At Fujitsu, industrialisation means that everything we produce is designed in the lab, engineered in the factory, and then deployed in your business - keeping the major costs and risks at our end. It means that our customers get to leverage our economies of scale. They also get to share in the benefits of the \$2.4 billion we spend annually on research and development.

In the old world, if you wanted reliability and robustness, you had to buy over-engineering. You invested in redundancy, whether you liked it or not. And the hidden killer cost was the lack of flexibility in the solution. If you targeted cost-effectiveness and flexibility, you had to sacrifice reliability and robustness. Not any more. With industrialised IT, you get both.

Demand better

The role of IT in the enterprise is to enable the business. For too long, the complexity and unpredictability of IT has acted as a brake on progress and a wrecker of hope.

There's nothing inherent in the nature of IT that makes it a bad team player, only a handful of poor habits typical of an immature industry. The urge to see every problem as unique, the joy in solving difficult problems; these are admirable qualities that become dysfunctional unless they're elevated to higher levels of business awareness.

We need to stop fixing yesterday's problems, and engineer our experience into our tools and building blocks. By standardising the bulk of our repeated activities, and accessing the packaged wisdom of previous deployments, we can free our organisations to focus on what really matters.

Industrialising IT turns vendors into trusted partners who transform your IT infrastructure into a cost-effective, flexible platform for growth. This is the demand of today's enterprises - and one that we're excited to meet.

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