Managing by Numbers: ROI and the death of business

By Patrick Lambe

When it comes to investing in anything that involves technology, nowadays everybody wants an ROI analysis. For the very few in Singapore who are not bosom buddies with this particular acronym, it means Return on Investment – the net profit from your investment, as a percentage of the capital invested. And if you can satisfy that demand, you still won't be able to rest easy: hard on its heels come the notions of Economic Value (the net profit from your investment, less the costs of the capital employed) and Economic Value Added (the difference between your realized Economic Value and the current rates of return from the same amount of capital if it were deployed elsewhere in the marketplace.

At face value, these look like strong management tools, and they have indeed been taken up with evangelical fervour in both public and private sectors. ROI helps you determine the financial benefits from your investment. Economic Value recognizes that cash numbers have little value when applied over different times and in different conditions – what was the *cost* of using capital in this way at this time? And Economic Value Added prompts you to ask yourself whether this capital could have been deployed to better, more productive effect elsewhere. Ideal for sound planning and control, one would think.

So when we put up our e-business investment proposals, our e-learning proposals, and our knowledge management proposals, the CEO wants to see an ROI analysis, and the CFO will be doing a surreptitious EVA. All very objective, terribly easy to decide.

The trouble is, when you look at them very closely, very few aspects of real-world enterprise actually run on numbers, and ROIs tell you surprisingly little about whether you really should invest – especially once you move outside the ambit of simply buying something. The passion for ROIs, which is often justified in the service of a simple purchase that has attributable profits, becomes positively dangerous when it is used in the service of complex investments, business innovation, capability development, or infrastructure investment – as it happens, all characteristics of e-business, e-learning and knowledge management initiatives.

When George Hudson, a small scale British draper with a large inheritance to spend, was elected treasurer of the York Railway Committee in 1833, he found himself surrounded by petty shopkeepers who would have been very comfortable with the notion of ROI. The committee had been tasked with bringing a railway line to York from Leeds, so that coal could be more cheaply supplied and foster industrial development there. Public, horse drawn railways had been around for almost fifty years, and it had been four years since Robert Stephenson had exhibited his Rocket steam engine on the Liverpool and Manchester Railway – achieving twice the speed of a horse drawn train. Railways were becoming commercially viable businesses by the early 1830s. To entrepreneurs like George Hudson, later to become Britain's biggest and most famous railway magnate, the

multiples of doubling or tripling transportation speeds promised astounding prosperity. Goods that travelled at twice the speed meant larger markets for produce, faster communications and decision making, cheaper commodities to fuel industrial expansion.

The cautious shopkeepers of York, when they issued their report in 1834, preferred the smaller but proven returns of the horse drawn business model. It took George's vision (and his money) to swing the day in favour of steam. He bought almost all the shares in the new railway, and then embarked on a fifteen year career of aggressive expansion, amalgamation and acquisition, building Britain's biggest railway network, and leveraging the value of network effects. By 1848, speculation fever reached its pitch as Hudson toured the country paying large dividends on railway shares in his companies. The mainstream economy began to falter as capital soaked into railway enterprises that were not yet producing revenues.

When the crash came, the country looked for a scapegoat, and they found it in George Hudson. In an eery prefigurement of Enron, investigators found that Hudson's dividends had been paid out of capital, sometimes his own, sometimes that of his shareholders, with careless disregard for transparent accounting. He had fuelled his vision with capital, and used it not merely to build railways, but also to heighten market confidence in his railways, sparking a self-reinforcing investment fever that was hard to quench – or repay.

Hudson was disgraced and bankrupted. Yet at the end of his life, living on the generosity of friends, he reflected ruefully that apart from the recession caused by the collapse of the bubble, his enterprise had built solid, lasting value to the British economy on a scale that had benefited millions. He had got it right. And he had taken the risks based on vision, drive and instinct, *not* on micro-analysis – initially very high personal risks. He was later to be punished for trading liberally in risk on behalf of his shareholders, but had he looked for the precise, measurable and safe financial returns that his shopkeeper colleagues had wanted, the powerhouse of industry that the railways connected and leveraged would never have arisen. Uncertainty, unfamiliar business models, building new capabilities, getting extraordinary results; none of them can be entirely satisfied by a simple ROI.

And not every enterprise is profit driven. An ROI analysis on the Challenger space shuttle programme would provide very little real help in making your investment decision, simply because profit is not a primary objective. In fact, while the objectives have heavy financial and performance costs, it simply makes no sense to express the outcomes of that programme in pure financial terms. The formula that helps you decide does not work if you simply look at ROI. And the value that is produced is very little influenced by the measurable outcomes first drafted by that initial ROI.

If you are buying a CRM system on the other hand, you can probably draw a definable link to sales success and set measurable financial performance goals. The ROI becomes more interesting, because the business goal is closely aligned to financial goals. Not all business goals are so closely linked to financial outputs. When John Chambers was asked whether he had done an ROI for Cisco's investment in e-learning infrastructure, he

responded impatiently, “You might as well ask me to do an ROI on my telephone system”. The return on the investment is quite simply the fundamental capability to operate as a dispersed, networked business. How do you put a dollar value on that? What is the economic value of a circulation system to a human body?

In the second part of this article, I will look at how to construct a smarter business case for complex investments in e-business, knowledge management and e-learning.

Beyond the Numbers: Understanding Business Value

In the first part of this article, I examined the rationale for using ROI and EVA on complex e-business, knowledge management and e-learning initiatives, and found that they were very limited in making a sound investment decision. A good business case needs a much more systematic and comprehensive approach. The numbers don’t tell it all.

Business value is not the same as economic value – it includes ambition, aspirations, imagination, drive, competitiveness, reputation, brand, positioning and a host of other things. However much the rest of business activity depends on that simple surplus at the end of each accounting period, relatively few investment decisions (money, resources, people, time, reputation) we make in enterprise can be perfectly expressed in a financial expression of realizable cash, and an assumption of more cash out than cash put in. In the end, our business goals are much richer and more sophisticated than value or cash analysis will express.

The better sort of creative accountants would be perfectly capable of describing everything we do in such terms, of course, but accountants are notoriously poor at making good, entrepreneurial, strategic decisions. As early as 1980, in a groundbreaking *Harvard Business Review* article called “Managing our way to economic decline” Robert Hayes and William Abernathy noticed the connections between

- productivity declines in the United States throughout the 1970s
- a heavy focus on short-term ROI-based management by numbers
- neglect of risk-taking long term investments
- the rising proportions of corporate leaders with financial and legal backgrounds

To be able to describe things financially is not the same as being able to make good business decisions. To force e-business investment decisions to ride on ROI analyses alone is like asking a chemist (who can describe the structural, optical and plastic characteristics of acrylic paint) to paint a landscape or a still life. If he does a good job, he’ll be using very little of his chemistry.

And EVA, taken to a logical conclusion, converts business leaders into market traders, shifting their capital to where it creates most value at the moment. Why should I invest in an ecommerce portal for my existing customers, when I can get a better return in the

world coffee market? In extreme form, Enron grew from a respectable business with core competencies, products, services and relationships, into a monstrous market-driven mercenary of commerce. If everybody followed that route, everybody would be shifting industries as quickly as we change clothes, and nobody would be standing still for long enough to make anything useful and tangible. The charming examples of Nokia (from paper to mobile communications), Corning (from cookware to optic cables), and Vivendi (from water company to media and communications giant) would become less the shining examples of corporate adaptiveness to changing environments, and more like symptoms of chaos and parasitic profit at the expense of sustained enterprise and production. Did we not see this at the bursting point of the dot com bubble, as capital and value bled from the tangible, thing-producing blue chips into the fantastic parasitic landscapes of unproven business ideas?

When the tool becomes the master, its wielder ends up looking like an idiot. The lesson is, of course, to understand these tools and to understand what they can and can't tell us.

How then do we use these tools appropriately, and how do we make good investment decisions about things like e-business and knowledge management? "Find a business problem and work out what it takes to fix it" says Andrew Sadler of IBM Mindspan Solutions in the USA. The shape of the problem will determine the relative weight of the tools we employ. For investment decisions, we need a solid, reasoned business case, but this is only partially supplied by attention to numbers. "Your business case for an investment is much broader than an ROI" says Peter Block of PWC Consulting in the UK. "Your business impact measures may include any combination of cost analysis, impact on performance, competitive advantage. It all depends on your reasons for looking at the investment in the first place."

So why invest in e-business, e-learning or knowledge management? If it's simply about short term profitability by streamlining business processes, or improving speed and accuracy of transactions with suppliers, partners and customers, then ROI starts becoming more relevant. But these initiatives are rarely so simple. The issues are often very similar to those faced by George Hudson as he contemplated railway investments in 1833. The multiples and the leverage of network effects change all the rules of the game.

Relationships – both internal and external ones – can change radically when you put your business online. Processes change too, and there are enormous migration issues if your business is moving from low levels of automation. Your reach is global, but your knowledge of customer conditions, cross-border laws, and customs tariffs is probably quite limited. You have real-time links trading sensitive information with customers, suppliers and partners who never see your face or hear your voice – you don't know if you can trust them, and they don't know if they can trust you. The dynamics of pricing work in entirely unpredictable ways, traditional business cycles no longer hold sway. A lot of habits, traditional rules, attitudes and competencies need to change for it to work, and it will probably be some time before you invent – yes, invent – new, reliable processes for your e-business. Uncertainty, risk, but a conviction that there is long term competitive advantage, are the prevailing conditions for e-business investment. It's a

complex decision tree, but one that needs a strong, disciplined attention to the business issues in addition to a sound knowledge of the numbers.

So your business impact evaluation will need to consider some important key questions: does this investment impact a critical, enduring business issue or problem? If it's not critical, and its only temporary issue, then such large scale migration to technology is probably misconceived.

Once you've decided *that* it's important, you then need to work out *how* it is important. Does it provide significant cost efficiencies? (ROI becomes important here!) Does it provide competitive advantage? Is it a basic condition for remaining in the marketplace (like Cisco's reliance on e-learning)? Does it diminish marketplace risk? Does it promise significantly better leverage out of your human talent? Any of these questions will require different evaluation tools (see diagram below) to check whether the promise is justified, all of them will need a risk assessment to see how likely you are to achieve your goals, and they will all have varying uses for an ROI assessment.

Such tools are for the cautious. There will always be inspired entrepreneurs like George Hudson, who use instinct and genius as their guiding light, however dubious their methods. Yet those who aspire to discipline and careful stewardship are poorly served if they rely only upon the meagre illuminations of ROI and EVA. The discipline of major investment decisions requires more than mere attention to numbers. And in the final analysis, it is experience and good judgement across the board, not just the numbers, that eventually win the day.

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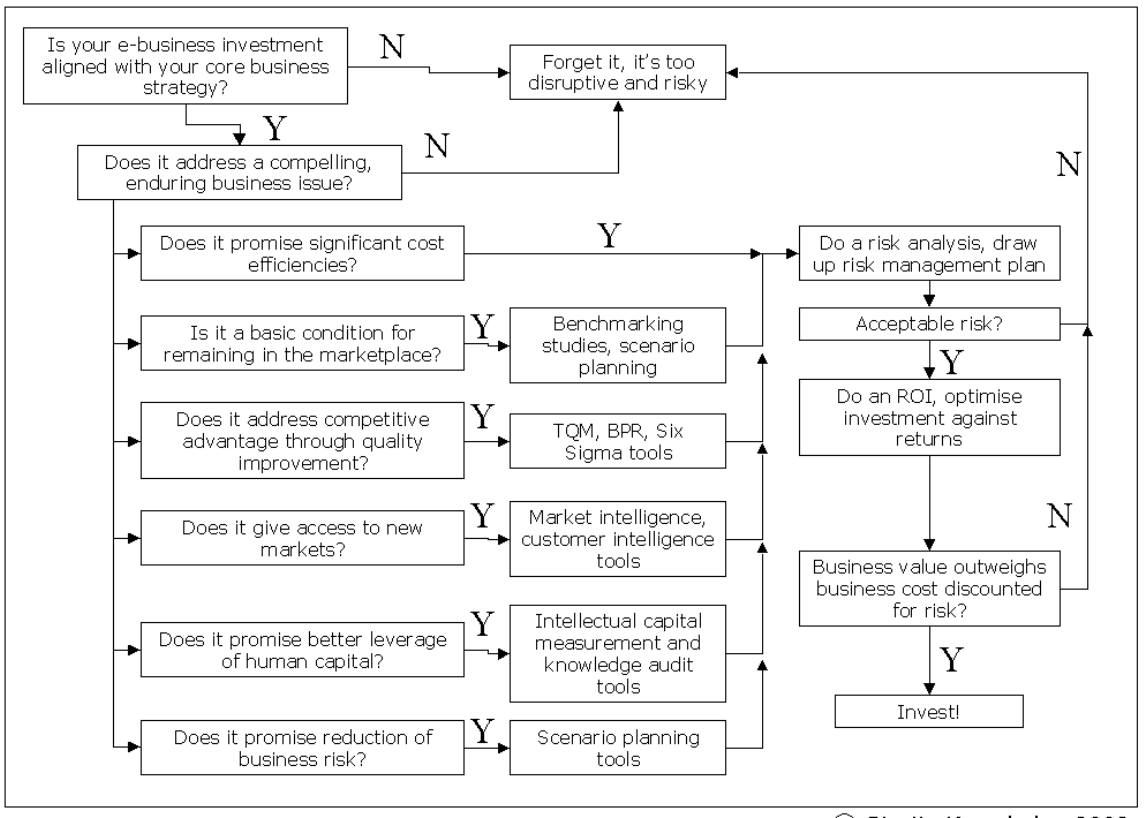

Business Impact Decision Tree for E-Business Investment