Dr Dennis Sherwood, Managing Director, The Silver Bullet Machine Manufacturing Company Limited

Dennis Sherwood read Natural Sciences at Clare College, Cambridge, specialising in physics for Part II. Dennis also has an MPhil in Biophysics from Yale, and a PhD in Biology from the University of California at San Diego, as well as being a Sloan Fellow, with distinction, of London Business School.

For 12 years Dennis was an IT consulting partner in Deloitte Haskins & Sells, and also Coopers & Lybrand. Subsequently, he was an Executive Director at Goldman Sachs, and MD in the UK of the Californian think tank SRI Consulting. For the last 10 years he has been running his own business, which focuses totally on organisational creativity and innovation.

Dennis is a frequent speaker at conferences, and has written many journal articles and nine books, including *Seeing the Forest for the Trees – A manager's guide to applying systems thinking* (Nicholas Brealey Publishing, 2002) and *Smart Things to Know about Innovation and Creativity* (Capstone, 2001). Dennis also participates in many academic programmes at institutions such as London Business School, the London School of Economics, the University of St Gallen in Switzerland, and London South Bank University, where he is Visiting Professor of Systems Theory and Innovation.

We have had a very lively and informative day, and in this last talk, I would like to draw the threads together and give 'a view from the top'. As I will be explaining, the successful management of innovation requires an enterprise-wide approach. My purpose is to give you what I trust will be pragmatic and down-to-earth guidance as to what *you*, in your roles as senior managers, can actually *do* on Monday morning, to make innovation happen in your various organisations.

My business is named 'The Silver Bullet Machine Manufacturing Company Limited', and that is exactly what it does. Let me explain: a 'silver bullet' is a metaphor for a great idea – and every enterprise needs a great idea. However, relying on a single great idea is fragile: sooner or later, every silver bullet must ultimately tarnish, as competitors introduce an even better idea. So, rather than having a single silver bullet, it is far smarter to build a 'machine' that makes them, so that silver bullets can be manufactured again and again, whenever and wherever the enterprise needs them. Clearly, a silver bullet machine is not a piece of kit like a lathe, but rather an organisational capability. My company helps create that capability in our clients.

Throughout today we have heard lots of fascinating case studies, and we have been given several different frameworks for managing innovation. We have all been exhorted to become more innovative, and we are all now energised to do so. That is great, but without wishing to be unduly downbeat, let me offer a word of caution – or rather let me offer someone else's words of caution. Here is an observation made in *The Economist* over 10 years ago:

'Unlike cutting costs, or making an acquisition, innovation does not happen just because the chief executive wills it. Indeed, it is confoundedly difficult to come up with new ideas year in, year out – especially brilliant ones. Underneath the gurus' diagrams, lists and charts, most of the available answers seem to focus on two strengths that are difficult to create by diktat: a culture that looks for new ideas, and leaders who know which ones to back.' The Economist, 4th December 1999, page 90.

Why does *The Economist* assert that managing innovation is so difficult? Is the author just being alarmist? Or is the author describing an important reality? I think what *The Economist* is saying is important, and real.

Let me explore four reasons why…

1. THERE IS ALWAYS SOMETHING MORE URGENT TO DO

Innovation is very rarely the most urgent thing you need to do in your working day – even though it might be the most important. As Catherine Shuttleworth said earlier today, 'It slips down the agenda.' This is especially true in project-based organisations, like those most of us here today are involved with. Projects are very demanding, immediate and urgent – there are deadlines to meet, resources are finite, and clients do not want any risk. These are not the circumstances to foster innovation.

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2. WORKING STYLES

TWO DIFFERENT WORKING STYLES

In the illustration above, we have an archetypal 'creative' person on the left and an archetypal 'project manager' on the right. Stylistically they are very different in their approach to work: the creative person demands freedom and craves recognition; the project manager demands obedience and craves control. These two different styles can be very much in conflict: the project manager does not want the creative person on a project suddenly to say, 'I've had this fantastic idea about changing the design,' and the creative person rebels when the hard-nosed project manager says, 'I want the answer to this problem within three minutes.'

I have portrayed this contrast as one between stereotypes – so it is somewhat extreme – but managers often have a conscious or unconscious tendency to like and promote people like themselves. This can result in senior management teams that all think the same way, in which everyone is a 'task-oriented completer-finisher', and where innovation has been squeezed out. Those who are more creative can become marginalised, and are likely to leave the organisation, so fulfilling what I call the 'third law of organodynamics': organisations end up with the cultures they deserve. Take a look around your organisation, and especially at the more senior levels. What are you doing to ensure a good stylistic balance?

3. RISK

There is always risk in innovation, because innovation necessarily implies doing something you have not done before. It is a very understandable human trait to avoid risk, and it is natural for organisations to be risk averse: it is far more comfortable to do things as they have been done before and to maintain the status quo. If you are pitching for a project where the client is asking for innovative ideas, where time is of the essence, and where you fear that any innovation in a proposal could easily be leaked to all your competitors, there is every incentive just to play safe.

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The risks associated with innovation are not just the physical risks that something might not work as intended, or indeed fail – we saw an image of Sir Clive Sinclair and his ill-fated C5 in a previous presentation. The risks are political too, as astutely observed by Niccolò Machiavelli some 500 years ago:

'The innovator makes enemies of all those who prospered under the old order ... and whenever those who oppose the changes can do so, they attack vigorously.' Niccolò Machiavelli, 1469–1527 *The Prince*, 1515

There is personal risk in innovation because it often is seen as invading another person's space, or challenging their modus operandi. To innovate with safety within an organisation we must manage both the physical and political risks, and so we must have a robust risk management framework and build a climate of trust. Easily said, but – as we all know – not so easily done.

4. THE NEED FOR AN ENTERPRISE-WIDE APPROACH

So far, I have given three reasons why becoming more innovative is difficult – the fact that it is rarely urgent to do, the issue of personal working styles, and the need to manage physical and political risks wisely. Let me now turn to the fourth reason – the need to take an enterprise-wide approach.

What does this mean? Very briefly, you cannot become more innovative by doing something on a single project, or by sending people on a one-day training course in so-called creative techniques. For the enterprise to become more innovative requires an enterprise-wide approach, touching all parts of the organisation, and taking some considerable time to come to fruition. Just like implementing a quality programme, things do not happen just locally, or 'overnight'.

To explain this more fully, I need to explore in more depth just what I mean by the words 'creativity' and 'innovation'.

INNOVATION AS A FOUR-STAGE BUSINESS PROCESS

There are many definitions of 'creativity' and 'innovation', and in my view the most useful simple ones are these: creativity is having an idea; innovation is making that idea real. To me, creativity and innovation are different – creativity is in essence an activity of the human mind, whereas innovation is making that activity fully tangible; creativity is having the idea for that new product, innovation is having it on the shelf, being sold.

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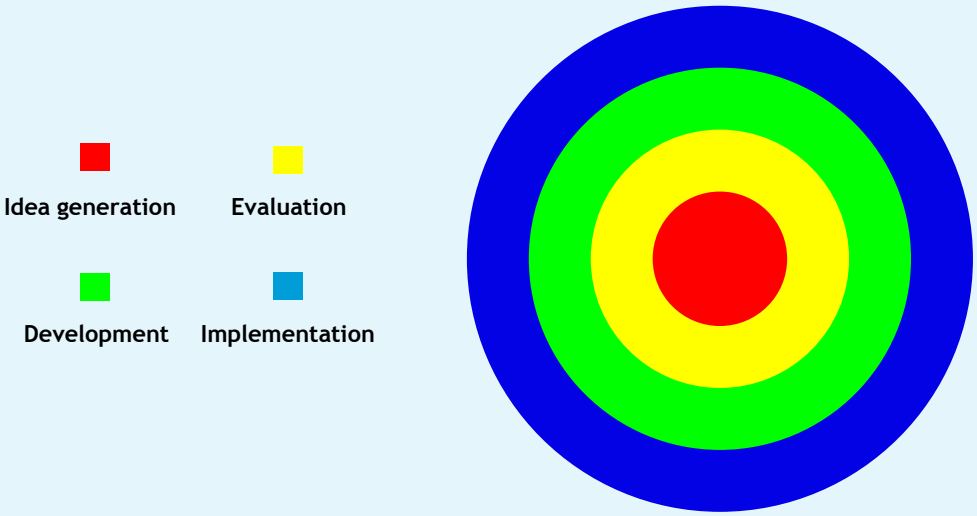
INNOVATION AS A FOUR-STAGE BUSINESS PROCESS



A richer definition of innovation is represented by my 'target diagram' shown above, in which innovation is represented as a four-stage business process:

1. **Idea generation:** the act of creativity, the generation of an idea (red zone)
2. **Evaluation:** the judgement as to whether the idea is 'good' or 'bad' (yellow zone)
3. **Development:** the process of making the idea fully fit-for-purpose (green zone)
4. **Implementation:** the roll-out or launch of the idea (blue zone)

To manage innovation well, any enterprise needs to design and implement business processes to support each of these four stages. In my experience, whereas most organisations have well-developed processes for development and implementation, many are very weak as regards idea generation and evaluation. Indeed, this is exactly the situation described in the following extract from *The Economist* where the author says:

'… it is confoundedly difficult to come up with new ideas year in, year out – especially brilliant ones. Underneath the gurus' diagrams, lists and charts, most of the available answers seem to focus on two strengths that are difficult to create by diktat: a culture that looks for new ideas, and leaders who know which ones to back.'

A further feature of the target diagram is that the four stages – idea generation, evaluation, development and implementation – are mutually embedded. Let me explain. Suppose that you are implementing an idea, and have hit a particular problem – perhaps something concerning a design detail or training.

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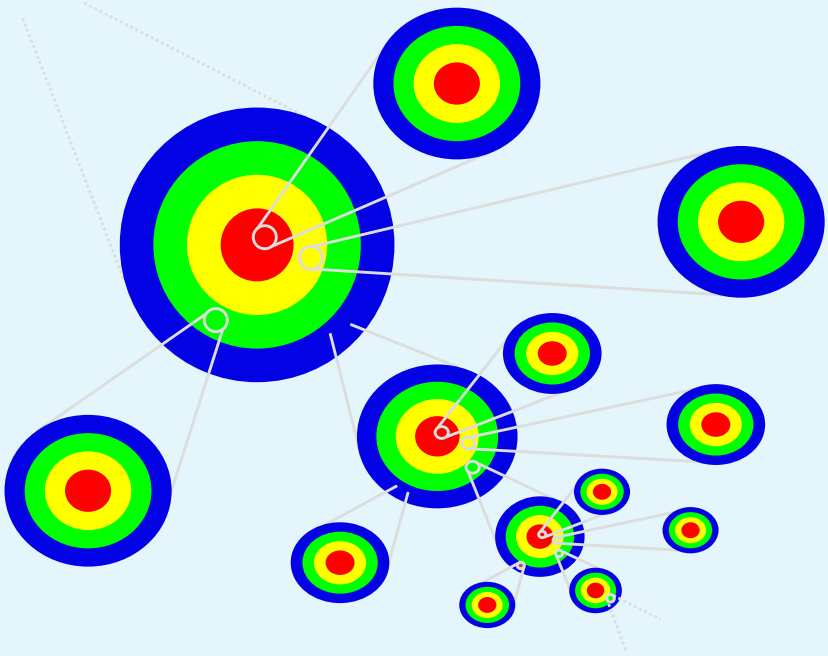
To solve the problem, you can invoke the entire process: idea generation to identify alternative solutions, evaluation to choose the best solution, development to ensure the solution is fully fit-for-purpose, and finally implementation. This embedding is represented in the diagram below – the more you move to the right and downwards of the diagram, the more specific and localised the idea; the more you move to the left, and upwards, the more general and bigger the idea.

THE INNOVATION PROCESS IS 'EMBEDDED' IN ITSELF



DELIBERATE CREATIVITY

I have mentioned that each of the four stages (idea generation, evaluation, development and implementation) should be supported by an appropriate business process. This is quite obvious for development and implementation, but it might seem that having a business process to support idea generation makes no sense at all. How can something as serendipitous and magical as creativity be reduced to a process? Well, I could talk for England on that, but this is not the right time!

Very briefly, let me show you…

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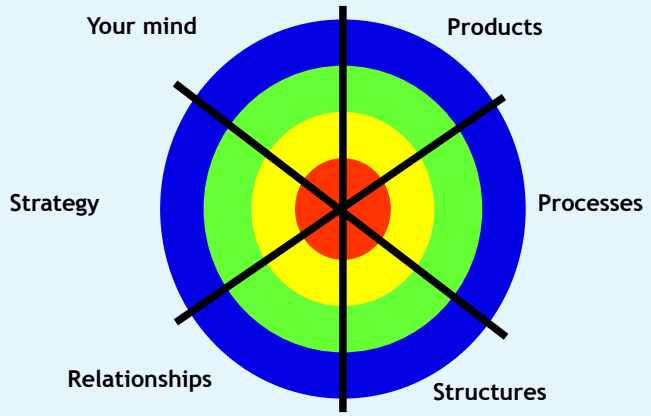
Do you see this bottle of water? Have you noticed that the top of the screw top is flat? Indeed it is – but how banal is that? Well, yes, it is flat…but it need not be. How might it be different? Well, it might be any shape you like: conical, a cube, with Mickey Mouse ears – maybe that would be a good product for DisneyWorld! – it could be a sphere, it could be a tower, it could be dimpled. Dimpled? Ah, if the top were dimpled – a concave depression – then something important has happened. I can put something in it: I've made another container. What could I put in it? Well, anything I like. A sweet maybe, or a present; or something that really goes with water…something like an aspirin. Now, that's interesting…how about a 50 ml bottle of water with a cap containing just two aspirin? Exactly what I need when I have a headache, and need to buy something quickly before I jump on the train…

Yes, that was an exercise in 'deliberate creativity' – the generation of an idea by pure thought, even when there is no problem to solve and no need directly articulated by a customer. And there was a process. A process combining **observation** (noticing the top was flat) with **curiosity** ('how might that be different?'), in a context of **permission** (the boss was not telling me 'the top's flat, got it – flat!'). Yes, there is a process to make ideas happen, deliberately.

Here is one other point on creativity. Previous speakers today have stated that in their view, learning or the desire to learn is the key spur to creativity and innovation, and we have all heard of the 'learning organisation'. I do not agree. To me, the key spur to creativity and innovation is not learning, but curiosity, i.e. the desire to imagine how things might be different from their current state. Indeed, learning – or, more accurately, the state of having learnt – is in my view one of the biggest barriers to creativity and innovation.

Often, what I already know and my reluctance to discard my learning to make room for a new idea, combine to block all innovation, and so keep me safe. As every golfer knows, before a new swing can be learnt, the old swing has to be discarded. And unlearning the old swing can be desperately difficult. In my view, 'unlearning', and the willingness to 'unlearn', are critical. To me, the innovative organisation is not the learning organisation, it is the unlearning organisation.

THE SIX DOMAINS OF INNOVATION



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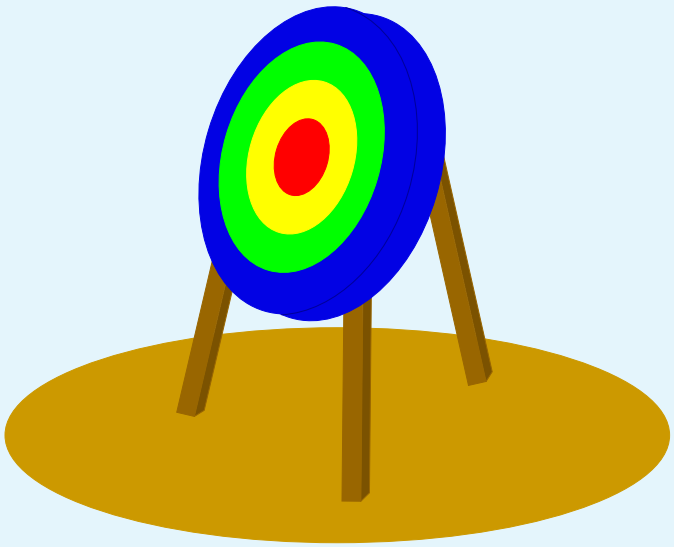
In which areas of business is innovation important? We tend to think of innovation as applying to the invention of the better mousetrap, but as the diagram above shows, the development of new *products* and services is only one of the domains where a deliberate and systematic process to support innovation is valuable. Some others are:

- *Process improvement* and *cost reduction.*
- Improvements and changes to the *structure* of the organisation and the associated roles, responsibilities, accountabilities and budgetary authorities.
- Issues concerning *relationships:* improving teamwork within enterprise; or improving external relationships, such as those between a supplier and a customer, or between an organisation and its regulator. In the extreme case of conflict, you really will need some new ideas and the willingness to come to terms with them.
- *Strategy* itself, whether this is the development of a strategy which is different from the competition, or the development of the more internal-looking strategy of becoming more innovative, of building a 'silver bullet machine'.
- And the last segment –*'Your Mind'* – is just to remind you that if you think that you are the only person in your organisation who can have good ideas, then forget all the rest – it just will not happen.

MAKING INNOVATION HAPPEN

MAKING INNOVATION HAPPEN



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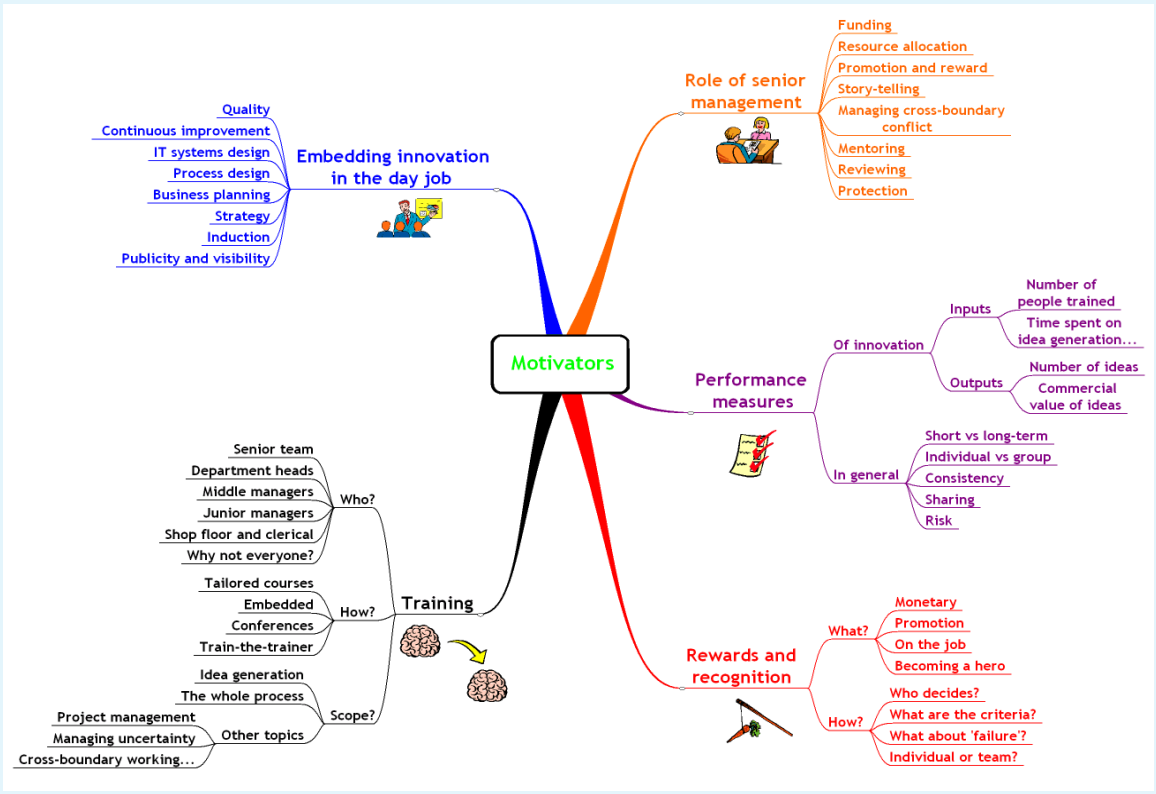
Rather than my target floating in space, let me ground it in reality, as shown above. Here, the 'ground' represents the organisational will to innovate. Without this will and without leadership, nothing will happen.

The 'back leg' represents the provision of suitable finance. Like any change programme, becoming innovative and building your own silver bullet machine, requires some investment. Not a huge amount, but some. It makes sense to draw up a business plan to assess what amount is required and take a view accordingly.

The two 'front legs' are what I call motivators and enablers. These are the conditions that need to exist to motivate and enable people to be more innovative. The models below shows a checklist of many of the common motivators and enablers: familiar things like the availability of budgets and the provision of training, appropriate recognition and reward, and the role of senior management.

MOTIVATORS



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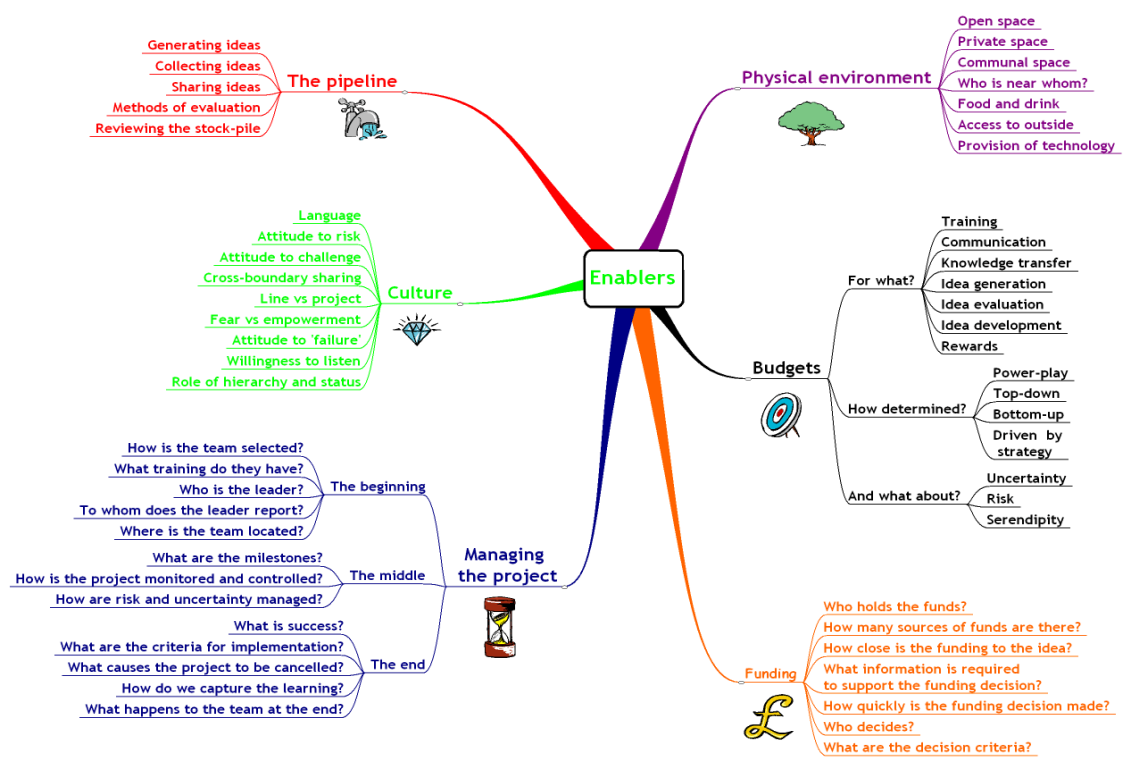
ENABLERS



I will mention just a few of these. Take, for example, the topic of budgets. If I go to my boss and say I have a fantastic idea, and he or she replies that it is not in this year's budget and I will have to wait for next year, then we will not be surprised that innovation dies. The organisation that fosters innovation will not let this happen – it will have lines in the budget for projects which have not yet been thought of, and there will be wise ways of allocating that budget safely.

My next example also concerns budgets. If I go to my boss saying I have a fantastic idea, he or she might reply, 'Yes, but it's not wholly within my area of the business, and because it spills over into someone else's area I cannot champion it. Sorry.' I then go to another area of the business, and the same thing happens. Innovation dies again.

What the boss should say is, 'That's a great idea! But, as you know, it doesn't fit squarely into my area of the business. What you should do is go and see John who holds the budget for 'orphan' projects that do not fit within the formal budgeting structure. That budget is specifically there to support ideas like yours.'

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My examples are just two instances of a very common occurrence: the presence of a business process or system that has been sensibly designed, but which frustrates creativity and innovation. Why is this? It is certainly not the case that someone has deliberately designed the budgeting process to stifle innovation – no one is that malicious, or indeed that clever. What has happened is that the budgeting process, the reward process, the performance measurement process and all the other processes were designed and implemented, at different times, by different people.

They were designed with good intent, but innovation was absent as an overall objective. It is no wonder that the budgets do not support innovation, and that creativity is not rewarded. For an organisation to become innovative, these processes and systems all need to be aligned, so that they actively and cooperatively support the overarching objective of innovation.

It is not, as they say, rocket science. It is all very ordinary stuff. But making the budgeting process work to support innovation will not happen by itself. It has to be deliberately redesigned to do that, and the implementation has to be well managed. The same applies to the processes for reward, recognition and promotion and all the others. Most importantly they all have to work simultaneously, *together*. There is no point in introducing an 'innovator of the year award' in an attempt to recognise and stimulate innovation, if the organisation's performance measures stifle it. That is why managing innovation, and building that 'silver bullet machine' requires an enterprise-wide view.

Here is an idea that you can implement on Monday morning, an idea that will help you overcome the difficulties identified in the quote from *The Economist*. Take a look at the lists of motivators and enablers above, and initiate a brief review within your own organisation to establish which of these already actively support creativity and innovation; which neither support nor frustrate creativity and innovation; and which, inadvertently, frustrate creativity and innovation. Once this has been done, fix whatever needs to be done to those that are in the third category, and you are well on the way to building your enterprise's 'silver bullet machine'.