

Innovation as a Weapon in Global Competition

By: Stephen M. Shapiro

To say the global economic environment is undergoing the most rapid change in the history of business is to state the obvious. Unless you have been living under a rock for the past year, you know all about the market blow following the September 11 terrorist attacks, the dot-bomb phenomenon and the collapse of Enron. To make matters worse, many American companies are increasingly facing resistance -- internal and external -- as they try to expand globally.

These events, combined with an already declining global economy, have left corporate executives on edge. Yes, it's bad news and it's depressing. The good news? Everyone's in the same boat.

But now as before, the fundamentals stand: If you create a business that can adapt quickly and flexibly to the changing economic and cultural landscape, you may have the silver bullet you're looking for.

A key to achieving this kind of quick response is learning how to inject innovation into decision-making at all levels of the organization. It won't happen by decree from the CEO, and I'm afraid there is no shortcut. Real innovation requires broad cultural change based on values, guidelines, and outcome-based measurement systems that give flexibility to all employees while mitigating risk for the business as a whole. Done properly, a company can stay ahead of the change curve and beat the competition while also easing its move into new markets.

If you aim to achieve and sustain a leadership position in a global marketplace that never sleeps, your company must be a hothouse of creative thinking, flexibility and agility -- twenty-four hours a day, seven days a week.

Continuous innovation

Innovation has traditionally been thought of as something separate and discrete, brought into the organization from outside, from the laboratory. Take your most innovative, creative people and lock them in a room while they develop a new process. Then tell them to implement the change company-wide.

But is this really the way a company should be run? A study carried out at Eckerd College in Florida challenges the traditional models.

Managers who came to the Eckerd leadership course were broken up into teams and given a problem to solve, "The Hollow Square". Before being allocated to their teams, the managers were assessed to determine whether they were "innovators" or "adapters". In general, innovators tend to "do things differently" and are prepared to break with rules or ignore past traditions. Adapters, on the other hand, are focused on "doing things better", but they tend to work within the rules and accept the status quo.

For this exercise they were divided into teams, of which three are of particular interest. Each team was comprised of two groups. One of the groups was designated as "planners", and its task was to work out a solution to the problem. The second group consisted of "implementers", charged with making it work. The planners told this group what to do in order to form a hollow square with the tools that had been made available to them.

In the first team, the group of planners was made up of the "innovators" and the implementers group was made up of

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“adapters”. In the second team, they were all mixed up together. The planning group had both innovators and adapters, and so did the group of implementers. In the third team, however, the groups were turned upside down. The planning group contained only “adapters” and the implementing group contained only “innovators”.

Although most would dismiss the structure of the first team as unworkable, this is how most companies implement change. Team structure two, the cross-functional approach, is usually assumed to be the best alternative. But in reality, the third option is the one that turns out to be most effective -- the one where the “adapters” do the design and the “innovators” implement it. The “adapters” are able to come up with a design very quickly, albeit an imperfect one. And the creative types are then able to take that design and build something from it, correcting and improving as they go along. Whenever a problem arises they are able to solve it there and then without checking back with someone else.

Can everyone be innovative?

Continually competitive businesses will be built not around a lot of heads and hands, but around a lot of hearts, around motivation, dedication and commitment to creative thinking. Successful innovation is continuous, and that very continuity enables companies to keep pace. Executives recognize that their company loses ground when the pace of change outside the company is greater than the pace of change within.

A popular myth is that some people are born creative, and some are not. There is, in this view of the world, a creative type of personality – Michelangelo, Mozart or Tolstoy, for example – and then there are the rest of us. But this is totally wrong. It’s all a matter of degree. We all have the potential to be innovative – perhaps not quite as much as Mozart, but innovative nonetheless.

This premise has been tested out many times over the years. For example, George Land and Beth Jarman, gave 1,600 five-year olds a creativity test used by NASA to select innovative engineers and scientists, and 98 percent of the children scored in the “highly creative” range. These same children were re-tested five years later and only 30 percent of the 10 year-olds were still rated “highly creative”. By the age of 15, just 12 percent of them were ranked in this category, while a mere 2 percent of 200,000 adults over the age 25 who had taken the same tests were still on this level. So, it seems, creativity is not learned, but rather unlearned.

And yet the business world has traditionally favored analytical thinking over the capacity to innovate and has seen to it that business schools produce highly trained young men and women to think along strict parameters.

But times have changed, and now the mission has to change -- to help people unlearn their uncreative habits. The ability to innovate is much more pervasive and ubiquitous than most of us imagine.

A word about definitions. Innovation is not the same as invention. Invention is something to be pursued in a carefully controlled laboratory atmosphere. Invention is the process of discovering things that have never been discovered before. Innovation is different. In the business world, innovation is the discovery of new ways of creating value. Not everyone can be an inventor, but everyone can be innovative.

Stimulating employees

Innovation is a must, because (to the great frustration of some) the environment in which companies operate is highly unpredictable. Customers today are perplexingly fickle and demanding, and they want us to do things that our detailed binders of workflows are not able to handle. How can we satisfy them when the policy book does not provide the answer?

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We must look elsewhere. Jazz is the perfect metaphor for innovative business activity. This appeals to me because in my other life I love to improvise on the tenor sax. I am not the only one who has been struck by the appropriateness of the jazz metaphor. In 1996, John Kao wrote "Jamming" which used jazz as a theme for creativity. And, in "The Social Life of Information", the authors, John Seely Brown, director of Xerox's Palo Alto Research Center (PARC), and Paul Duguid describe some work done by two Xerox technicians trying to repair a client's machine.

To paraphrase the authors: "The afternoon resembled a series of alternating improvisational jazz solos, as each took over the lead, ran with it for a little while, then handed it off to his partner, all against the bass-line continuo of the rumbling machine, until it finally all came together". That is the way the two technicians found a solution to their client's problem, a solution they would never have found by simply following the book.

But for me, jazz is more than just creativity. It is bringing a company together in such a way that there is coordinated action throughout. Just as with jazz, this requires simple structures that enable innovation to take place in a harmonized and collaborative fashion. These simple structures equate to the role of process in fostering innovation. They provide the framework for freedom inside the structure.

What the jazz musician adds of his own accord is not pulled out of thin air. It is based on fundamental rules about chord progression and chord structures. Likewise, what the business invents in order to improve any given capability has also to be founded on certain basic ground rules. The players in a business have to be able to innovate at any minute of the day while literally "on their feet". Innovation in business thus is just as important as improvisation is to jazz.

Employees have to be trusted to search intelligently for improvements. But they do need guidance, training, and the tools to fulfill whatever solutions they come up with. It's not a straightforward choice between rigid structures and allowing total anarchy. It's a question of finding the right balance of structure and freedom.

What this leads us to is the difference between "box" thinking and "line" thinking. When people say you need to get "out of the box" to be innovative, they are right, but for the wrong reasons. The box that most people operate in is focused on activities, computers, people, or departments within a company. It is the lines, the interconnections and interdependencies between the boxes, where innovation emerges. Innovative thinking comes from making connections. Connections between boxes. Connections between ideas. Connections between companies. Or connections between industries. Focusing on the lines frees up the organization to improve within the guidelines of the simple structure

Strategies that have worked

How do the concepts of jazz, lines, improvisation and five-year-olds translate into practical business application? Over the years I have seen many innovative companies. And although there is no formula for their success, here are a few common strategies:

Make everyone accountable: Because a few individuals at the top cannot possibly plan all of a company's activities, give employees a set of rights, responsibilities and rewards that make them accountable for their own actions. Koch Industries, an oil and gas company based in Wichita, Kansas, wanted to achieve world-class safety. Rather than have a few safety engineers scour the company, Koch (pronounced "coke") gave this responsibility to all employees, with rewards both for uncovering unsafe conditions and for discovering new ways to conduct business more safely. This initiative resulted in as much as a 50 percent improvement each year in the number and

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severity of accidents across Koch Industries. Within one year the company had moved from middle of the pack to one of the best safety records in its industries.

Replace rigid processes with clear business objectives:

Too often innovation is stifled because companies define business processes in great detail, then hand those designs to the line that is expected to execute them. Mölnlycke Health Care, one of Europe's leading manufacturers and suppliers of single-use medical products, allowed production teams to decide how to meet their goals. With the responsibility for quality products moved to individuals on those teams, nearly 70 percent of the company's new products launch on time, compared with just 15 percent previously. As a result, the company will have quadrupled its shareholder value in only five years.

Challenge employees to compete: When challenged by external (or sometimes internal) organizations, groups are kept on their toes. For example, prior to being acquired by RWE AG in 2000, VEW Energie AG, a German-based utility, created a new business entity responsible for service, maintenance and construction. But other VEW managers were allowed to do business with competitors offering the same services if the price was right. As a result, the new unit worked hard to remain competitive, and in return was able to offer services to outside companies as well.

Encourage employee innovations, and reward them accordingly: Companies are often fast to turn to outside help, when in fact they already have the capabilities within their organization to do the job. Koch's pipeline business in Minneapolis had budgeted \$30 million to expand its pipeline with external support. A team of company employees decided that they could do the job themselves better and cheaper, and within a couple of months they had increased the pipeline's capacity by 15 percent while spending only just over \$1 million. Koch immediately gave

them all a check averaging 15 percent of their annual salary.

Focus on your core strengths... and outsource: Another way of using innovation to stay nimble and competitive is by focusing on your differentiators, and relegating everything else to partners who have that expertise. Imagine an insurance company established only two years ago that has already contracted 15,000 policies and is issuing 200 new policies every week. Now imagine that the company has only two employees. This is Universal Leven, a Netherlands-based subsidiary of Allianz, focused on large, professional broker organizations. The two employees are in charge of corporate strategy, network expansion and product development. Everything else, including product branding, product design, marketing and all back-office operations, is outsourced.

Link strategy, customers and capabilities: To be competitive and sustain market leadership in a changing Brazilian marketplace, Multibras (appliances) embarked on an ambitious change program. This was achieved by focusing the business imperatives at three levels: industry, customers, and competencies. Multibras first looked at future discontinuities in the industry by mapping potential future transformations and expected changes. They did this through the creation of scenarios and business imperatives. The changes were then fed into a view on what customers would want in the future. What are customer expectations (current, and potential future), needs and wants? This was done using current customer knowledge, direct involvement from customers (e.g., Whirlpool), and leveraging marketing expertise. The outcome helped drive the definition of the distinctive capabilities required in the future. This effort ultimately generated \$50 million in cost reduction benefits for the company, reduced time to market by 35 percent, and cut development cost by 15 percent.

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Creating a culture of innovation

This all sounds impressive, but unfortunately your company's culture may be light-years away from that of the companies cited above. And, typically, organizations are not comprised of five-year-olds with an infinite supply of creativity, energy, and flexibility. They are more likely composed of adults with long histories, territories to protect, and boxed-in thinking. This makes any kind of change difficult, and culture change particularly difficult. As someone once said, "The only one who likes change is a wet baby."

Structural changes alone are not sufficient for an organization to become innovative throughout. Changes must be made in virtually all parts of the organization, from the management style to the measurement systems. Ramming home a new change program without preparation would be a bit like dropping a high-powered engine into a Volkswagen Beetle without altering the transmission, the drive train, the suspension and so forth. It can be done, but chances are the finished product won't work very well.

It is important to recognize that even the greatest enthusiast has finite limits to the amount of change that he or she can tolerate. Since each company is made up of a unique bunch of individuals, and each company's capacity for change is unique. Any company's plans have to take these limitations into account. The timing of the change, the approach to it, and the people who lead it will all vary depending on each company's circumstances. There are no templates here.

In my experience, culture change goes through three waves as it moves toward a true culture of innovation. Each wave starts at a modest level, then builds up to a plateau. It then rests for a while (as if to take a breath) before gathering enough momentum to go to the next level. Successful companies move through three waves of

S curves, each of which increase the company's capacity for change:

1. *Leadership-Driven Capacity*

At this early stage, progress is invariably based on the tenacity and leadership of a single individual, someone who gets the bit between his or her teeth about an opportunity for improvement. By taking responsibility for it, the individual drives the change. This top-down approach requires the individual to create such a sense of urgency about the initiative that he or she prevents it from falling into what is all too common – a debilitating series of fits and starts. If there is no compelling need to change, change is unlikely to happen.

2. *Structural-Driven Capacity*

At this stage the responsibility for change no longer rests with an individual. To some extent, it has been taken over by the organization. Mechanisms have been put in place to enable employees across the business both to implement change and to drive it. Typically, such mechanisms include various performance measures, organizational structures and lines of communication. This often includes a move towards a process orientation. Process improvements in one area eventually help to build up the organization's over-all ability to improve. The better a company becomes in one area, the more skilled it becomes at getting better in other areas.

3. *Organic Capacity*

By this stage, the capacity for change has become built into the organization, and it is often being driven from the bottom, with employees seeing it as an integral part of their jobs. This comes about partly because companies that reach this level have focused specifically on developing change competencies in their employees. They have reached the idyllic stage where innovation is an integral part of the company culture.

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The path through these three waves will take years but the payoff can be great. Once completed, a company can avoid the continuous gut-wrenching change programs that have plagued organizations for so long. Change will happen much more continuously and pervasively throughout the business.

The impact on global companies

Due to the relative homogeneity of the United States, many American companies are structured in a more centralized and standardized manner. Control is driven from the center of the organization, with strong corporate governance. But this model has caused heartburn for many companies trying to expand overseas. I have worked with a number European companies over the past few years. Their approach to organization models is quite different.

With their varying cultures, economies and (until recently) currencies across Europe and the world, non-American companies typically use a more decentralized structure. This enables businesses in each country to get close to the customers and markets and design propositions and ways of working that meet local needs. And while market turmoil can mean sharp swings in profitability, much can still be learned from these global companies.

One British company, Invensys, is a large, global electronics and engineering firm that was created by the merger of BTR and Siebe in 1999. At that time it operated globally through four divisions -- Software Services, Controls, Power Systems, and Intelligent Automation. And within those divisions there were approximately 30 product groups, each of which operated in the countries of its choosing. Profit and loss accountability is at the product group level, giving a fair amount of autonomy and supporting the decentralized philosophy of the company.

This "small business within a business" approach has enabled Invensys to reconfigure its portfolio from hard-

core engineering to a focus on smart products via selective purchases of automation, and technology businesses. One of the ways this is achieved is by only allowing the strongest, most profitable, highest-growth areas of business to dominate, while others that are withering on the vine are lopped off. Invensys acquires and disposes of new operations as needed. And more importantly, its business model allows each of the countries to operate somewhat independently, enabling them to make decisions that meet local needs. In their industries, Invensys leads in the area of global diversity, with over 50 percent of their business coming from sales outside of their home region.

ABB, the Swiss-based technology and engineering company, is renowned for its ability to create a powerful global structure. ABB serves customers in power transmission and distribution; automation; oil, gas, and petrochemicals; building technologies; and in financial services (this last group is in the process of being sold at the time of writing). The ABB Group is comprised of 800-900 companies operating in 142 countries, and employs 170,000 people. ABB's historical strengths lie in its decentralized management philosophy. This enabled local businesses to tailor offerings to the needs of the local market and respond quickly to changing market conditions. Throughout the 90's ABB was the poster-child for how to create and run a global business.

These types of structures have enabled these and other companies to quickly enter new markets or even new businesses. However, anyone who has followed these two companies knows that the past two years have been difficult for them and a number of other companies in their sector. I contend one reason (but certainly not the only one) is that these companies did a great job of focusing on the "boxes". Lots of little boxes (in contrast to one big box typically used by American companies). They created powerful, localized businesses. The problem is, they did not focus on the lines. There was little synergy across the operating units within the company. Because of this,

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doing business internally with other operating units can be more difficult and expensive than buying product from external competitors.

One company I am familiar with believes that nearly 50 percent of business transactions that could have been conducted internally across operating units, were sourced externally from competitors. This is not helped by the fact that it is not unusual for these companies to have dozens or even hundreds of different ERP systems. Unfortunately, each ERP system does not talk to the others, and typically has different number schemes for customers, suppliers, parts and products. This makes any level of collaboration as difficult as if each business were speaking a different language.

The Koch example

Earlier I referred briefly to Koch Industries' innovative safety program. This is a customer-focused innovative organization that believes deeply in the tenets of the free market. The company is the second-largest privately held firm in the United States and would rank 21st on the Fortune 500 if it were public. Koch is a conglomerate with a wide range of interests. But it is not so much what the company does that is interesting as the original way it does it. Koch Industries operates as a network of employee-entrepreneurs who work within a framework of appropriate incentives and decision-making powers. Anyone brought in specially to do a job within the group is immediately given the authority to spend money and to move people when and where he or she chooses.

Koch Industries is a highly entrepreneurial company that does also connects the dots. A clear mission, set of values, and culture are shared throughout the organization. Decision-making is decentralized as far as possible, and based on the best local knowledge and information, while knowledge is shared across the company.

But potentially most important is the company's use of "internal markets", which brings the price system of the free market inside the organization. This is done by applying internally the prices and services that employees actually use in their daily work. Koch allows any two units within the organization to account for an internal transaction at the prices they would seek in the open market, even if these prices differ (of course done in conformance with Generally Accepted Accounting Procedures. The important point is that this ensures that units are rewarded appropriately for co-operating with each other. The company reckons that up to 50 percent of its profit comes from such initiatives. These approaches have helped the company grow 200-fold over three decades, and helped it expand into new business areas previously not considered.

What's the bottom line?

So, what is the key for global companies trying to compete in today's difficult, volatile environment? It is creating a culture of innovation where decision-making is pushed to the lowest levels of the organization. This then needs to be balanced with a set of simple structures, rules, and measures that enable coordination throughout the company.

A one-size-fits-all structure will hamper the efforts of American companies to truly compete globally. It is rarely smart to try to export Los Angeles to Paris. But adopting a culture of flexibility through pervasive innovation, based on market and cultural realities, can lead to changes that suit the business environment. It is never quick and easy, it is never painless, but failure to face up to the challenge will almost surely mean losing advantage in the marketplace, and ultimately seeing the more creative competition take away business.

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About the author

Stephen Shapiro is the author of *24/7 Innovation: A Blueprint for Surviving and Thriving in an Age of Change* (McGraw-Hill, 2002, ISBN: 0-07-137626-7, \$29.95) and founder of The 24/7 Innovation Group. Previously, he spent 15 years at Accenture. During his last three years, he was based in London and led the firm's European Process Excellence practice. In 1996, he was one of the founders and directors of Accenture's Global Process Excellence practice. And he was one of the leaders of the firm's reengineering practice from its inception in 1992. Shapiro has advised many of the world's leading organizations, from BMW WilliamsF1, ABB and UPS to Lucent and Xerox. He has also collaborated with other thought leaders including Michael Hammer and Peter Keen, and is recognized as one of today's most influential consultants in the area of process and innovation. Articles by Shapiro have appeared in over two-dozen newspapers and magazines, and he was recently quoted in *The New York Times*. For more information, go to www.24-7Innovation.com.