



## **Accelerated Business Benefits**

# **Why Innovation is Imperative Now**

## ***Creating a Continual Competitive Advantage***

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### Why Innovation

You may be asking, why innovation now? Why is it continually becoming more and more important that individuals and companies become skilled in innovation techniques? Why can't we just continue using current techniques like process management, six sigma, lean and other business performance improvement techniques? How does innovation relate to strategy, revenue and profit growth, decision making, customer relationships, market capitalization, etc? These questions and others will be addressed throughout this paper.

There is a simple consequence for firms not coming to terms with the need for innovation: they go bust. History is littered with firms that failed to innovate. However, the effects can be much more devastating. Lack of innovation nearly wiped out the once-mighty Swiss watch industry, and killed the British motorbike industry. The effects are profound, going well beyond the financial health of a given company, extending into the entire social and economic vitality of an industry, a region and a country.

### An Historical Perspective

As human beings, we are constantly striving to do better, to survive, to compete. At one time man had little or no tools and techniques for improvement. But let's not go back that far; let's go back a few hundred years and look at what has and is shaping our business environment.

The industrial revolution took hold in the eighteenth century and flourished throughout the nineteenth century. Machines of all types were emerging, replacing what was once done by the labor of man. We can say that this period was an era of mechanization.

In the late nineteenth century and throughout the twentieth century we spawned two eras; the productivity era and the quality era. In the late 1800's we were in an era where the focus was on mass production, accelerated by Henry Ford and others. Then soon after we had the ability to mass produce, it became obvious that we were producing a lot of poor quality. For obvious reasons it became important to focus on quality improvement, if for no other reason than to control costs. Such names as Shewhart, Deming, Juran and others typify this era along with improvement approaches like TQM, Six Sigma and Lean. For several decades we have used statistical and productivity tools for the improvement of quality and on cost reductions.

This does not mean that we no longer put effort into these previous areas, but rather that we have already made significant gains. It means that the next area of significant gains will likely come from innovation.

The *Economist* magazine called innovation the industrial religion of the 21st century. Without it many firms will go out of business, and those that remain will become second-rate and subservient to international leaders in decision-making and profit-taking. Without innovation, there won't be the new businesses and jobs that are necessary in a modern dynamic economy.

### A Business Financial Perspective of Survival

Everyday, every CEO is under constant pressure to improve revenues and profits. For the past several decades much of the revenue growth by corporations has come from acquisitions and less from organic growth. While that strategy has worked extraordinarily well for many companies, profitable growth through acquisitions is opportunistic and the



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number of opportunities is less abundant. Tom Copeland, in the book *Valuation*, found that only 23% of all acquisitions were ultimately successful. Corporations will continue to aggressively pursue acquisitions, but organic growth will be increasingly important for profitable growth. As you might expect, to achieve this type of growth, you are going to have to come with new ways of performing and improving a business. Finding such ways is at the heart of innovation.

Recent studies indicate that technological innovation is now responsible for up to one half of the growth of the US economy. Because of factors such as globalization, increasing competition, the growing impact of information and communications technology, and the high pace of scientific and technological change, firms must innovate more rapidly than ever before. Surveys suggest that the average R&D cycle of firms has fallen from 18 months in 1993 to less than 10 months today.

It is well understood that the stock market values a continuous combination of profit and revenue growth in determining the valuation of a company. Operating profit can be improved through cost reductions, but this can only help somewhat. Additional growth in profit and valuation must come from a growth in revenue. Less than 10% of all publicly traded companies have been able to sustain for more than a few years above average shareholder returns? What factors might contribute to this dismal statistic?

The factors for failing to achieve consistent profitable growth have received considerable study by a number of notable individuals. A major finding has been the failure to systematically apply innovation to the development of new products, processes, services and business models.

It is typical for 30% to 50% of a company's revenue to come from new products and services. To not falter even once and to consistently achieve above average returns, a company cannot be periodically innovative. It has to consistently be able to innovate at a faster rate than its current or future competitors. To demonstrate the strength of this need, a recent Business Week interview of 100 CEO's found that 95 of these CEO's believed that innovation was absolutely critical to their company's success. And Bill Ford, CEO and President of Ford Motors, recently stated the following, "Innovation will be the compass guiding this company going forward." A strong statement about where Ford expects to generate consistent revenue and success.

Innovation will be a key component to financial success and sustainability in today's global economy. Innovation drives profitability and performance by allowing companies to differentiate themselves to create a competitive advantage. Innovation applies to all areas of a business for generating revenue and profit, ranging from performance improvements, new product, manufacturing, operations, services and the design of organizational structures.

### **Definition of Innovation**

Innovation is not new, however it is not a common household word either. To better understand what innovation is, it is first important to dispel the common belief that innovation is only about finding the next market leading product. Yes it can do that, but it can do many more activities that are just as important.

For example, let's consider the success of Dell. How did they displace such giants as IBM, Toshiba, Compaq and others in the computer market? Is it because they have the



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most innovative technology, products and software? Or is it because they have a very innovative business model and distribution system, an innovative employee training system and an innovative approach to manufacturing that significantly differentiates them from the rest of the pack?

Generally speaking, innovation finds value added solutions to problems which at first may seem impossible to solve. It does this best, as you might expect, by using a defined methodology. Innovation can be defined as; bringing something new and different into what already exist to create new and extremely high value outcomes. These outcomes are not incremental, they are truly breakthrough level. These breakthroughs produce highly differentiated new products, business models, services and new markets at an accelerated rate over existing approaches.

It is the methodology of innovation that enables the creation and selection of the most successful solutions for a desired outcome. But it doesn't stop there; a good idea is of little value without an execution plan to transform it into a value added solution. Therefore the definition of innovation also includes the ability to execute in order to obtain the desired results.

### **ROI Examples and Uses for an Innovation Methodology**

The Wall Street Journal reported that a two year in-house creativity course at General Electric resulted in a 60% increase in patentable concepts. Participants in Pittsburgh Plate Glass creativity training showed a 300% increase in viable ideas compared with those who elected not to take the course. At Sylvania, several thousand employees took a 40 hour course in creative problem solving. ROI: \$20 for every \$1 spent. Hewlett-Packard invested over \$2 billion in R&D in 1999, and generated more than 1,300 patent applications. Net revenue: \$42.37 billion. (Source: HP 2000 Annual report)

The uses for innovation have a broader application than most people realize. As previously stated, its uses significantly expand beyond the common belief that is only used for the generation of new products. It can be used for a large variety of problems and opportunities; such as creating a new business strategy, solving most types of business and process problem, improving sales, designing products, building team collaboration, designing organizational structure and many more.

For example, innovation techniques can be used to develop a company's vision, purpose, mission and key strategies...while making it a collaborative effort for the executive team. Innovation spans the spectrum from helping to solve a specific problem to taking a fresh look at the future in order to create new possibilities for growth and profit.

According to Dr George Land, a Pulitzer prize nominee and noted expert on innovation, "Business leaders have supported creative process breakthroughs so their people could solve problems innovatively and create new, competitive opportunities. They have recognized that creativity training can pay large dividends." After a creative strategic session, lead by George Land, with top management at Herman Miller, Craig Schrottenboer a Vice President at Herman Miller said, "It allows people to use their creativity to open up the box of future possibilities; it explores and brings clarity to the rich diversity of ideas present in each of us, and allows a group to quickly come together around the prioritization of initiatives."



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### Obtaining Innovative Talent

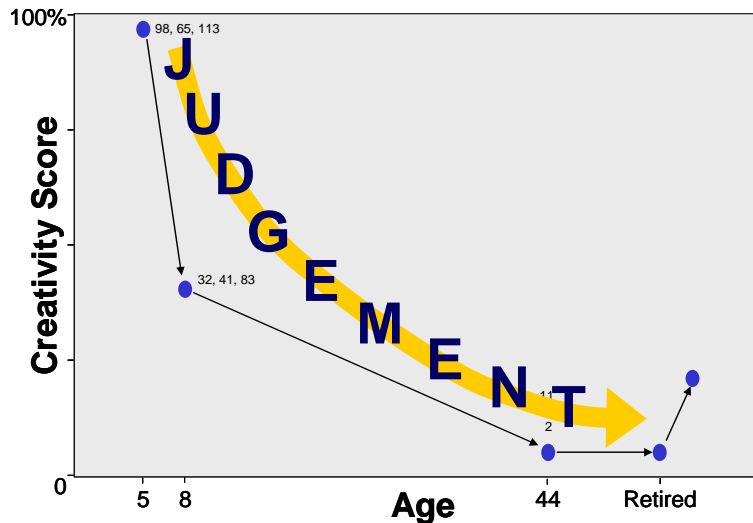
Where do you find the talent and people who can make such improvements for you? What we have discovered in our research and from the extensive research of many others may surprise you.

It is a common belief that creativity and innovation are something that only a few pre-determined individuals are capable of doing. Some think that creativity is inherited, some think that it is learned, some have it and some don't. Creativity is something that exists in all of us. As a young individual you probably were very creative. Remember back to when you were around 5 years old and you will surely remember how imaginative and exploratory you were. Five year olds are also talented at using metaphors, analogies and paradoxes, powerful techniques used in innovation.

In 1968, George Land distributed among 1,600 5-year-olds a creativity test used by NASA to select innovative engineers and scientists. He re-tested the same children at 10 years of age, and again at 15 years of age. The following, almost amazing, results were obtained:

- Test results amongst 5 year olds: 98%
- Test results amongst 10 year olds: 30%
- Test results amongst 15 year olds: 12%
- Same test given to 280,000 adults: 2%

"What we have concluded," wrote Land, "is that non-creative behavior is learned."



***Creativity* is not learned by adults...  
Non-creativity must be unlearned!**

As the graph quickly shows, creativity continually declines until people reach retirement, where it begins to improve. Why do people seemingly lose their creative ability?



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The primary reason is because we learn to judge or evaluate our ideas before we express them. When we evaluate our ideas and if they seem a little crazy, or maybe a little embarrassing, we do not express them. We are very much focused on assessing right vs. wrong before we release what we are thinking.

Research has demonstrated time and time again that creativity is not learned by adults, it is rediscovered. When assisted by a methodology, aided with some technology to make it easier to do and guided by some experienced facilitation, individuals and groups can quickly increase their creativity by over 400 percent.

### An Example of Applying Innovation to a Business Need

This is an example of how an executive team used innovation techniques to find the right approaches to solve a business dilemma. As was mentioned earlier, there are a variety of applications for innovation method. This was a non-product application to solve a lingering and serious business problem. In this example, 16 individuals from the leadership team were tasked with finding innovative solutions to achieve the revenue and profit targets for the company over a five-year period. Part of the problem was finding some good ideas; part of the problem was getting broad buy-in, and then remaining was the ability to create an executable plan.

In an innovation session the ultimate goal of each participant is to find creative solutions for the desired outcome. To achieve this goal it then becomes necessary to look back from success (the desired outcome of the innovation effort) to determine all of the things that can be thought of, which **were** done to achieve the revenue and profitability goals. This is called divergent thinking for future pull.

To do this, individuals and teams in the session create lists of ideas, no matter how crazy they may seem at first. This process includes a number of collaborative events, techniques for setting a vision for the outcome, and for identifying various enablers and potential problems which could affect the success of the outcome. Next a process of convergence is employed to find the best of the best ideas.

In this example, the team generated 197 ideas during the divergence process. They were then able to narrow the 197 down to a smaller list using manual convergence techniques. Listed below, in no specific order, are the 18 remaining strategies or actions they determined were most likely to achieve the revenue and profit targets over the upcoming five-year period.

1. Develop a formal VOC system.
2. Enter personal storage/entertainment market.
3. Reduce total number of suppliers.
4. Acquire DCT technology.
5. Enhance web search engine rating.
6. Create an automated outbound marketing newsletter.
7. Rationalize the current product set for volume, revenue, and profit.
8. Redesign account development strategy aimed at growing revenues 5X from existing customers.
9. Implement outbound telemarketing lead generation system.
10. Hold an annual "Customer" appreciation conference.
11. Implement a market, customer and competitive analysis system.
12. Deploy Lean Six Sigma through out the enterprise.
13. Extend subassembly manufacturing into China.
14. Reduce product development time by 40%.
15. Create common metrics for the Quality Reporting System.



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16. Emphasize people caring strategies for development and growth.
17. Make quality achievement a key part of compensation.
18. Establish a product development steering team.

The question for the team at this point is; how to determine which of the 18 ideas are the most important, where and how many resources should be applied and who best to be assigned?

Technically here is the challenge. To achieve success by focusing on the right strategies, each of these 18 ideas must be evaluated against each other. Mathematically with 18 possible solutions or strategies to decide on, there are  $((n \times (n - 1)))$  combinations. In this effort there are then  $(18 \times 17)$  combinations for a total of 306 comparative decisions that must be made.

Obviously this would be a difficult task if done manually. Thanks to the application of technology, vast amounts of data can be quickly obtained and analyzed. In this scenario the total amount of data collected would be 16 participants times 306 comparative decisions, for a total of 4,896 pieces of data. By using a computerized decision support software system this can be quickly performed in today's environment. The output, as you will see, will be a set of high probability outcomes based on a number of scientifically based algorithms to compute the result.

Further, even more pieces of quantitative data can be obtained in just a matter of minutes about each of these ideas in order to achieve the maximum results and success. Relative importance of one idea over another, data from current levels of performance, formal effort or not, level of resources expected, level of resources currently supplied, etc can be obtained in minutes.

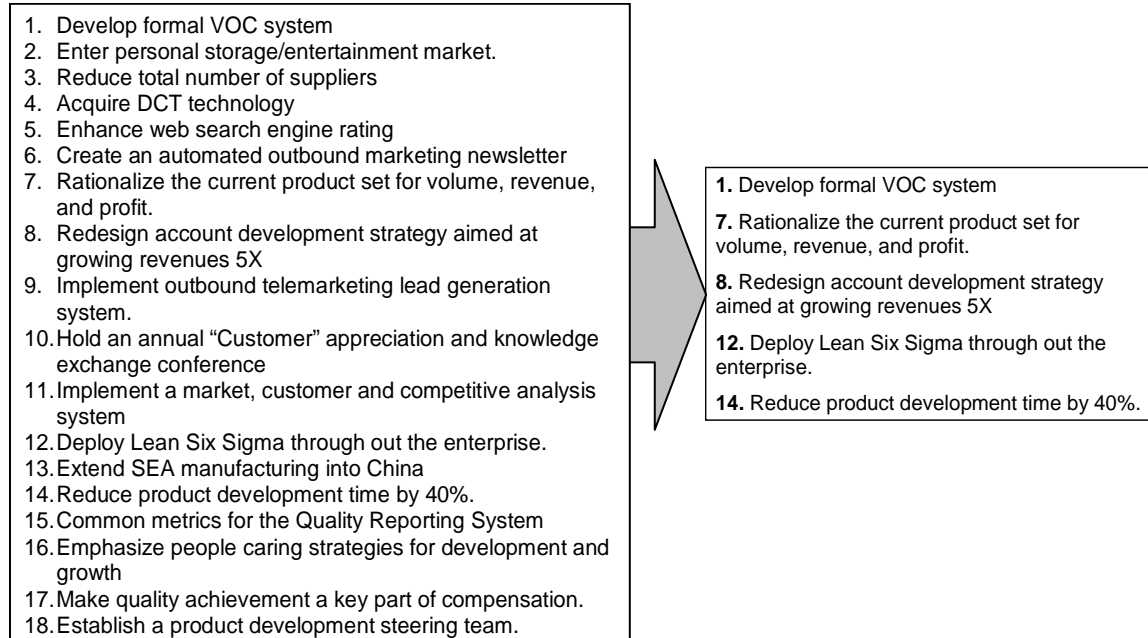
It is also possible to add demographics data from the participants such as; gender, department, experience level, time in position, etc. This data could be used to assure there is strategic alignment amongst the participants or to discover actions which may be required, again to assure the success of the outcome.

Having done this, the group now has multi-dimensional data, and they are just seconds away from an optimized and collaborated set of actions. If you are familiar with using data for solving problems like what is done in six sigma, you will quickly recognize that there now exists over 10,000 pieces of data to assist this group in making the right selections. Innovation brings the power for making data driven decisions to almost every situation, even on ideas which at first are qualitative in nature.



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During the divergent thinking process, this group started with 197 ideas. They then manually converged the idea set to 18 total. Then with the aid of a comparative evaluation system they collaboratively found the top 5 contributors for meeting the revenue and profit goals. Shown on the left is the initial list of 18 and on the right, numbers 1, 7, 8, 12 and 14 that were found to be of the highest priority to be worked on.



The leadership team, using innovation techniques, now knew where to focus for the maximum impact. They are now prepared to apply innovative approaches to achieving results from each of these 5 areas of focus. For example, the Customer Relations group innovatively developed a voice of the customer system to go to customers with a highly creative and computer assisted process for identify things the customer didn't even know that they needed.

This was an innovative approach that went well beyond the usual VOC discussions, surveys, etc. With this approach, the customers had the opportunity to discover their future needs that they could not voice consciously. This technique, to determine unmet needs is often called a Deep Needs Analysis (DNA) innovation technique. We cannot discuss the other four action areas as the company did not want to release this information for public consumption.

This brings us to the last step of the innovation session, assuring that there is a solid plan of action to achieve these critically important actions. This is a rigorous approach with defined outputs that generate results. It is fully documented with responsibilities, dates, reviews, etc prior to the end of the innovation session. The team was now well prepared for taking the next step, execution of the defined strategies.

### **Summary**

Over the past 30 years, innovation has given the U.S. and the rest of the world wave after wave of technological advancement and generated millions of high-skilled jobs. The world is becoming dramatically more interconnected and competitive. In many ways, the playing field is leveling, and the barriers to innovation are falling. Whenever such a shift occurs, there are always changes in how economies and societies work – including new



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ways of creating value and measuring success, and realignments of competitive advantage.

In the 21st century, the pace of these changes will accelerate. To thrive in this new world, it will not be enough – indeed, it will be counterproductive – simply to intensify current stimuli, policies, management strategies and to make incremental improvements to organizational structures and business improvement approaches.

Together, these large shifts suggest that we stand at an inflection point in history. Whether one looks at demographics, science, culture, technology, geopolitics, economics or the biological state of the planet, major changes are underway that will shape human society for the next century and beyond. We have entered the era of continuous innovation!

What will you do? Will you learn the skills of innovation; will you plan and invest for the long term, rather than just the next quarter, putting in place the talent pool, innovation capital and infrastructure necessary for continuing success throughout the 21st century? We believe, as many people do, that is imperative to do so.

We thank you for your interest in this powerful methodology and invite further dialogue and exploration into how this can make you and your organizations more successful. Please feel free to contact us toll free in the US at 888-826-2484 or at 480-897-2484 if you would like any additional information.