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Failure: the building block of Sustainable Innovation General Management

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"Creativity is inventing, experimenting, growing, taking risks, breaking rules, making mistakes, and having fun." — Mary Lou Cook

It would be relatively easy to run a business if nothing ever changed. Many of the problems experienced by businesses arise because of changes in the environment or changes in the operations. Everything in our world -- from marketing to technology to distribution to capital markets -- is changing faster than ever (and not always in the same direction).Our world is continually evolving and long-standing methodologies and techniques don't necessarily provide the benefit that they once did. Yet most companies are clueless about what's causing the change, how it might affect them, and, most important, what to do about it.

Moreover, companies today operate in a very dynamic, uncertain and competitive environment and they often try to achieve competitive advantage in order to obtain a better and a stable position in the marketplace and the best way to achieve a competitive advantage is ***innovating***.Albert Einstein had it right when he said: ***"We cannot solve our problems by using the same kind of thinking we used when we created them."*** The translation of this is companies and people must evolve their thinking and try new things if they are to survive and grow. In other words, they must innovate.Peter Drucker (the father of management consulting) said that the chief functions of a firm are innovation and marketing, and "the rest are just costs."

In the last few decades, the rate of change in business has increased, so companies are more likely to experience problems. Due to factors such as globalization and outsourcing, there is an increased push to improve efficiency and effectiveness of organizations. Organizations need to adjust to economic, social and competitive changes and not settle for simply protecting the turf that is currently generating most of the profit and growth in the organization.Organizations need more than good products to survive; they require innovative processes and management that can drive down costs and improve productivity. Most companies today realize they can't simply cost-cut their way to growth anymore. Now they are turning to innovation because they have exhausted the value they can achieve through operational efficiency. On the other hand, innovation promises top line growth, higher margins, increased market share, and greater market relevance.

The term "innovation" as such was used for the first time by Schumpeter at the beginning of the 20th century. He defined innovations as product, process and organizational changes that do not necessarily originate from new scientific discoveries, but may arise from a combination of already existing technologies and their application in a new context. Innovation is one of the primary drivers for growth and profitability in business today, assuming a very significant place sitting at the top of many corporate agendas. Moreover, constant innovation is a hallmark of companies of successful growth—staying ahead of the competition requires inventiveness at the individual, group, and company levels. As companies grow, market demands and competition can force them to maintain a culture of nonstop innovation. In an era ofintense globalization, rapid demographic change and accelerating technological progress, the best companies forleadership recognize the value of innovation, putting it at the heart of their corporate culture and using this targeted,focused innovation to drive shareholder value and improve efficiency.

Innovation, the endless effort to find a better way, cannot be achieved by robotically lining up best practices and imitating them. The real catalyzing agent for innovation is the ground from which these best practices spring -- the confluence of purpose, people, and processes better known as *culture*. One key element is that the companies must embrace and foster a culture of experimentation in which *failure* is acceptable as long as the intentions were relevant and if the learning of the failure was captured so that people don't go on repeating the same failures over and over again.

Great wisdom shared by two great business leaders
"***Failure is our most important product***."
R W Johnson, Jr., Former CEO, Johnson & Johnson, 1954

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"***Our Company has, indeed, stumbled onto some of its new products. But never forget that you can only stumble if you're moving."***
Richard P. Carlton, Former CEO, 3M Corporation, 1950

"**Purposeful Accidents**"

Jim Collins and Jerry I. Porras, authors of the bestseller "Built to Last", discuss the role of Creativity and Innovation that drives some of the successful habits of Visionary companies. They observe that "some of their (visionary companies) best moves were not by detailed strategic planning, but rather by experimentation, trial and error, opportunism, and--quite literally--accident." But they were no ordinary accidents. Rather "purposeful accidents" according to the authors. They give several examples of visionary companies including Johnson & Johnson's accidental move into Consumer Products with discovery of "Johnson's Toilet and Baby Powder" and "Band-Aid", Marriot's opportunistic step into Airport Services from providing meals in the airports to inside the airplanes, American Express's unintended evolution into Financial and Travel Services with the introduction of "American Express Travelers Cheque" and then Tourism and Travel, HP's unplanned move into computer business (when it designed its first small computer simply to add power to its line of instruments products) and more. These innovations were neither aberrations, nor they represented random luck--the authors discovered there was more to these innovations than what appeared on the surface--something bigger at work.

15 per cent time rule: Culture of Innovation at 3M

Founded in 1902 in a little town on the shores of Lake Superior, 3M started out in the mining business as the **M**innesota **M**ining and **M**anufacturing Company. The company thought it had found corundum, a mineral ideal for making sandpaper. But instead, it was low-grade anorthosite -- of little value. With mining hopes dashed, the founders bought a sandpaper factory and struggled for years over how to run it. New investors had to pour in cash to keep it afloat. Eventually, one of them, Lucius Ordway, moved the company to St. Paul, where 3M hit upon some key inventions, among them: masking tape and cellophane tape.

One of the most celebrated aspects of 3M's entrepreneurial workplace culture is the 15 percent rule that encourages employees to explore and work together to generateideas. Product development is driven by the cross-fertilization of ideas and new technologies shared across the entire company. "Products belong to divisions, buttechnologies and ideas belong to the company." William L. McKnight, the former CEO of 3 M, believed in the imperatives of hiring the right people, *tolerating mistakes* and giving *employees the freedom* to explore in order to foster a culture of innovation. 3M has put the McKnight Principles into practice by encouraging employees to dedicate a significant portion of their time to projects and research that go beyond their core responsibilities. Although it may take years for such innovative "tinkering" to bear fruit, the results of 3M's storied 15 Percent Time are truly remarkable. Examples include *Scotch Brand Tapes, Post-it Notes, Scotchgard Fabric Protector, automobile window treatment films, multilayer optical films* and *silicon adhesive systemsfor transdermal drug delivery*.

A core belief of 3M is that *creativity needs freedom*. That's why, since about 1948, they've encouraged their employees to spend *15% of their working time* on their own projects. If there's a secret ingredient to 3M's more than 100 years of innovation, it's this: give talented people the time and resources to prove the worth of their ideas, and in the long run you'll come out well ahead. Even if those talented people are mistaken, you've learned something.Today, 3M is a multinational powerhouse, with more than $20 billion in annual sales across a product line 50,000 deep, from adhesives to optical film. It boasts 22,800 patents, many derived from its **15 percent program**. The program has been a key to 3M's business strategy and could be a model for other companies eager to innovate.

3M implemented a groundbreaking policy called the ***15-percent-time rule***: regardless of their assignments, 3M technical employees were encouraged to devote 15 percent of their paid working hours to independent projects chasing rainbows and hatching their own ideas. It might seem like a squishy employee benefit. But the time has actually produced many of the company's best-selling products and has set a precedent for some of the top technology companies of the day, like Google and Hewlett-Packard. The 15 percent program has clearly inspired copycats. Google's 20 percent time famously gave birth to Gmail, Google Earth, and Gmail Labs. (Google would neither confirm nor deny that the idea for its program came from 3M, but it's hard to imagine otherwise; after all, 3M's program had been around 50 years before Google even filed incorporation papers.) Likewise, Hewlett-Packard Labs offers personal creative time.

Most of the inventions that 3M depends upon today came out of that kind of individual initiative. It could have well been called the "Richard Drew Policy":***encourage more freethinking employees to hatch up world-changing ideas.***

3M - Accidents to Innovation

3M is best known for its household brands such as Post-It note, Masking tape, Scotch tape, and many more. 3M initially failed in its mining business, and eventually stumbled onto most of the successful innovations that we know 3M for, including Post-It, Masking and Scotch tape. According to the authors, "Although the invention of the Post-it note might have been somewhat accidental, the creation of the 3M environment that allowed it was anything but an accident."

3M institutionalized such mechanisms to drive Innovation as the "15 percent rule" - technical people spend up to 15 percent of their time on projects of their own choosing or initiative, "25 percent rule" - each division should produce 25 percent of annual sales from new products and services introduced in the previous five years, "Golden Step" award - given to those creating successful new business ventures originated within 3M. More mechanisms were created to stimulate internal entrepreneurship, test new ideas, create unplanned experimentation, share new ideas, develop new innovation, cross-fertilize technology, ideas and innovation, stimulate innovation via customer problems, speed product development and market introduction cycles, provide profit sharing, and promote "a small company within a big company feel" by creating small autonomous business units and product divisions - in early 1990 3M had over sixty thousand products and over forty separate product divisions.

An example of the commitment to innovation by the organization is set out in 3M's publication, 'A Century of Innovation'. When asked to describe his company in one sentence, Coyne, who was senior Vice President of Research and Development, was succinct. In a book titled "Innovation: Breakthrough Thinking at 3M, DuPont, GE, Pfizer and Rubbermaid," Coyne said, "At 3M, we live by our wits. Innovation may be an important element of other corporate strategies, but for us, innovation is our strategy." For decades, Coyne said, 3M has been balancing on "the innovation high wire" and funding research. McKnight, one of 3M's most senior executives during the 20th century, speaking about 3M in 1944, stated that he knew risk was necessary to achieve success. "The best and hardest work is done," he said, "in the spirit of adventure and challenge . . . Mistakes will be made." Robert W. Lane, Chairman and Chief Executive Officer of Deere & Company from an address he gave on May 7, 2007, addresses how Deere is 'Driving Growth through Innovation'. Quoting from other sources, he states; 'You are not really committed to innovation unless you're willing to see some innovations fail', "You can stumble only if you're moving" – so said Roberto Goizueta of Coca Cola. – All statements are explicit evidence of a commitment to innovation.

Johnson and Johnson - Failures to Innovations

Johnson & Johnson, one of the visionary companies had many failed ventures such as a foray into Kola stimulants, colored casts for children, heart valves, kidney dialysis, and ibuprofen pain relievers - the list is quite big. The failures result at J & J from the fact that the company emphasizes placing bets on many potential opportunities--most opportunities possibly fail, but the ones that do succeed, they succeed big. The bets, or the experimentation, are an essential price to pay for successful Innovation and Long-term growth.

Innovative ideas can come from anywhere, at any time. Forward-thinking organizations find ways to motivate and reward employees for developing and testing these ideas. Any corporation wishing to improve its innovativeness must establish a culture of openness to new ideas and not a culture which stultifies the sometimes crazy but eventually great ideas put forth by mavericks and others. Tolerating mavericks, and even more so, encouraging mavericks or people who could even be called zealots about new ideas, is one of the keys to fostering innovation. Keeping the 'suits' away from the creative side of the business is another way of saying let's not always stick to the corporate rules. The trick for many companies, as they increase in size, is to maintain the innovative culture that was present at the beginning of their successful growth.

The prevailing school of thought in progressive companies—such as Intuit, General Electric, Corning and Virgin Atlantic—is that great success depends on great risk, and failure is simply a common byproduct. Executives of such organizations don't mourn their mistakes but instead parlay them into future gains. But this is not the case today because most companies have "low tolerance for failure culture". This leaves no room for experimentation and without much of a surprise the punching back for this is the top leadership.

And the innovative company must teach its employees that each failure is a step along the road to success. Thomas Edison famously invented 1,000 light bulbs before creating one that worked. IBM's Tom Watson Sr. once said, "If you want to succeed, double your failure rate." In recent years, more and more executives have embraced this point of view, coming to understand what innovators have always known: that failure is a *prerequisite to invention*. Innovation activities involve a high probability of failure, and the innovation process is unpredictable and idiosyncratic with many future contingencies that are impossible to foresee. A business can't develop a breakthrough product or process if it's not willing to encourage *risk taking* and learn from subsequent mistakes. The deeper source of the problem of failure isn't necessarily the failure *itself* but rather the *fear* of failure before it even happens. Fear of failure keeps many people from taking a step into the unknown. And when we're afraid we'll fail, we can start doing some pretty unproductive things, including not even trying in the first place, or giving up part way through whatever we're doing – which constitute *real* failure.Butemployees will be reluctant to take the risks inherent in innovation unless they know that their leadership team iswilling to accept a certain amount of failure as an inescapable component of the innovation process.

BCLs are essentially twice as likely as other companies to celebrateinnovation and to see any performance problems as opportunities to learn and improve. Recognizing innovatorssends other employees a powerful signal that innovation is something that the company greatly values. At DowChemical's (#19), risk-taking is not only accepted, it is encouraged, which helps the company to stay agile andinnovative. Dow evaluates its leaders not only in terms of customer value, but also taking into account whether they areleading courageously, whether they are collaborating themselves and whether they are encouraging collaborationamong others. As a source with Dow put it, "It's empowerment that really helps us stay agile. We encourage everyoneto lead courageously — constantly asking ask "what if?" or "why not?" We challenge our employees to recognizepossibilities and push beyond boundaries."

Five takeaways stimulating Innovation

The authors summarize their findings from 3M and provide five takeaways to drive Innovation at any business:

1. "Give it a try--and quick!" - Essentially echoing on having a process to try out a lot of stuff, and keeping what really works. The key here is to do something. Keep on trying something new.
2. "Accept that mistakes will be made." - Learn from the mistakes quickly, and move on. Failures are part and parcel of what creates new innovation. Don't repeat the same mistakes.
3. "Take small steps." - Experiment, but on a small scale. When something looks promising, go all out and seize the opportunity. This way one can do plenty of inexpensive experiments that create a funnel of would-be innovations.
4. "Give people the room they need." - Without entrepreneurship, there is no experiment. Without experiment there is no success or failure. People need some time and room to experiment.
5. "Mechanisms - build that ticking clock!" - How do you harness creativity and build innovation? It cannot happen simply by chance. Companies need to create practices and tangible mechanisms to experiment, try out new ideas and innovate.

CONCLUSION

At many companies, there's a lot of room for lip service, but little for real failure. We hear the catch phrases over and over: *failure is necessary for success; we must fail faster to succeed sooner,* and so on. But as soon as the possibility of actual failure arises, suddenly all those comforting clichés fly out the window. A lot of big companies know that fear of failure is the biggest problem when it comes to fostering innovation.James Joyce noted rather poetically that "mistakes are our portals of discovery." They stimulate us to look beyond our narrow cocoon and encourage lateral thinking. They invite a fuller exploration of the periphery, that vast domain outside our area of focus where treasure may be hidden. Thomas J. Watson, Sr., who founded IBM, understood this deeply when he said: "So, go ahead and make mistakes. Make all you can, because that's where you will find success: on the far side of failure."

Although many companies compete through the development of new technologies and products, it is well known that innovation is inherently risky and therefore may increase the *ex ante* likelihood of both exceptional company performance and bankruptcy. However, existing empirical studies consistently find a positive relationship between innovative activity and company survival.

The innovative leader encourages a culture of experimentation. The large Indian conglomerate, Tata Group, gives out an annual award for the "best failed idea." The goal is to recognize and reward failures since without them, successes would be impossible.Pharmaceutical company, Eli Lilly, hosts "failure parties" where employees come together to share their stories of failure and discuss what they learned from them.

All stories of success in the history are also stories of great failures. By having the courage to acknowledge and probe fears, barriers, and failures, we discover new pathways and perspectives on the problem that then lead to new insights, solutions, and ideas. This is called failing forward, rather than backward. We learn and move forward. Learn from our failures and keep moving.Innovative organizations build an experimental culture that often leads organizations down paths that many others might consider weird. These organizations build a huge tolerance for failure. Failure is built into their culture. Failure is expected to happen. If a company experiences no failures over a long time, then it is likely that there is no experimentation taking place leading eventually to a decline in the business and bankruptcy.

A *risk-friendly* and *failure-tolerant* culture is of great relevance for fostering innovations. Moreover, such culture is the playing field of innovation. Unless it honors ideas and supports risk-taking, innovation will be stifled before it begins. Unless a company is willing to risk failure, the outcome is preordained: mediocrity or stagnation. Without change, learning and growth, companies are doomed to become irrelevant. One of the reasons people stop learning is that they become less and less willing to risk failure. To be truly agile and successful in the long-term, a company must give people the freedom to innovate, the freedom to experiment and the freedom to succeed. That means you also must give employees the ***freedom to fail.***With the emphasis properly placed on the positive aspects arising from a failure, the failure is positioned as a great learning experience for all of those involved. By encouraging an open discussion of why things went wrong much can be gained and made available to the corporation. Managements who are intolerant of failure will ultimately kill initiative. A key obstacle is our deeply ingrained aversion to failure. Research shows that most organizations are not very good at accepting failure. Most just want to eliminate errors altogether. This is because most managers pray at the altar of results rather than innovation.

"Insanity is doing the same thing over and over again and expecting different results."
Albert Einstein

That is exactly what non-innovative organizations do. They resist change, they fail to look at the rapidly changing business landscape, and they fail to adapt—all of which can threaten their survival. So a leader's role in fostering innovation is to build a culture that is playful and disciplined; chaotic and focused; full of experts and broad thinking boundary-spanners; a culture that promotes high standards and tolerates failure.A key obstacle is our deeply ingrained aversion to failure. Our psyche registers pain more strongly than loss. So we need to work on reframing failure as perhaps "time-released" success. Just view it as the bitter medicine that we need for innovation, and then take a few gulps.

But companies should realize that improving innovation isn't going to happen by simply investing more money in research and development (R&D). Innovation requires a more strategic approach. The facts back this up. According to Accenture's The Innovation Death Spiral, a study on innovation found that there is little correlation between R&D spending and revenue growth. To make tangible improvements, companies need to develop an innovation strategy and recognize that improving innovation requires transformation of the organization, culture, and business processes of the business.

3M adds 500 innovative new products every year to its 60,000+ productline. Many of these products are ground-breaking, newly-invented products, unique in themarketplace and protected by patents.Successful innovation is in reality accomplished by its people. 3M's senior management empowers employees to work with determination and imagination to createinnovative solutions

Most of us won't run toward risks. We want to maintain our health, wealth and peace of mind. But no progress is made without calculated risk taking. Since people know that innovation is risky, many people run away from it. In fact, some organizations habitually play the game of finding things that could go wrong. Many of the classic responses ("We've never done this before"; "This failed when we tried it before") come up almost as a reflex. Once risks are identified, innovation is often stopped. But a clear-eyed view of risks balanced against benefits can create an environment where innovation is nurtured rather than killed.