

Corporate innovation online

CIO - Innovation management best practices

Unlocking creativity by demystifying innovativeness in SMEs

While creativity is at the center of innovation, it is not the only characteristic which leads to successful innovation in a corporate setting. The ‘surrounds’ of leadership, organization and management of day-to-day affairs, and the approach taken to encouraging idea generation and realization are fundamental to the ability to unlock creativity in any corporate environment.

The challenge for SMEs is how to maintain the entrepreneurial and innovation spirit which will propel the SME into a sustained growth stage. Beyond survival mode, the issue for the SME is to keep growing, be profitable and to continue to innovate.

We offer an approach based on;

- Understanding the current state of innovativeness in the company
- Recognizing that it is important to take into account the views of employees and stakeholders regarding innovation
- Identifying barriers which exist and could constrict innovativeness

More broadly, the notion is to gain a better understanding of the role of innovation in the SME, identify issues and come up with solutions which focus on priority address needs.

January 1, 2016

Table of Contents

Overview

Creativity is little understood but innovation management is more so!

What is an SME?

A technology oriented learning organization with global ambitions.

Stages of innovativeness

For SMEs the management practices are different

Measuring innovativeness

Is there a problem to be addressed?

Innovativeness and management practices

How practices impact innovativeness

Investing in the full spectrum of innovation

Are all aspects of innovation considered?

Innovation country climate

Certain countries have a better climate for innovation

Corporate innovation online

CIO - Innovation management best practices

Overview

Creativity is little understood but innovation management is more so!

Creativity, as key to the innovation process, remains mostly a mystery, and will likely remain so for some time to come. Creativity is at the center of innovativeness.

While creativity remains much of a mystery, other aspects of corporate innovativeness are much better understood and yet, remarkably, often missed in actual practice. Deconstructing a corporation's innovativeness can be part of a process which ultimately leads to a way of opening up the organization for creativity.

The toughest nut to crack is creativity and there is no surprise to this aspect of innovation except for having the right people and more specifically, the brains of people placed in the proper environment. We do know that really clever people, singularly or in groups, are the basis of creativity – and that the talent is rare.

The 'surrounds' of creativity are, however, more amenable to understanding and therefore able to be restructured and improved upon.

Recent studies have shown that innovation per se cannot only be studied and measured but also nurtured and encouraged¹. The focus of this recent book by Jonah Lehrer is in fact on the subject of creativity but the examples given are drawn from the corporate practices of highly-innovative companies such as 3M (see 3M CIOMAX report) and Google; those companies which we have researched in order to understand how their policies and management practices lead to innovations; commercially successful innovations. Creativity is conditioned by its surrounds.

There are at least three themes to understanding the management practices which encourage innovativeness. First, obviously, is leadership. Nothing happens unless there is top level support for innovation at Board and CEO level. Secondly, there are better and worse ways of organizing and managing a corporation and each practice, by itself or combined with other practices, impact innovativeness. Thirdly, and specifically concerning the movement of ideas within the corporation, there are practices which can stimulate or retard the flow of ideas. Without ideas - the only evidence of creativity at work - there is no innovation. Innovation, even good ideas becomes marginalized.



¹ The Economist, March 17, 2012, a review of a new book by Jonah Lehrer, *Imagine; How Creativity Works*, published by Canongate
Building, sustaining and articulating innovation management best practices

Corporate innovation online

CIO - Innovation management best practices

What is an SME?

A technology oriented learning organization with global ambitions

Industry Canada provides a definition² of an SME which, in its simplest terms, includes any organization with fewer than 500 employees. Since there are so many types³ of SMEs, our definition is set out below. This definition applies to a sub set of the more inclusive definition but brings out those organizations which desire to be innovative. The definition⁴ used here is not so much limited by size as it is to an organizations vision, strategy, policies and management practices!

Characteristics of a technology-oriented learning type SME.

- Have a focus on the final customer/end user as, if not more than the immediate customer.
- View the long-term interests of the end user.
- Largely invisible to consumers since they supply high-profile companies with products with products essential to the operation of their products.
- They do a few things but do them really well.
- Are export oriented and focus on innovative and high value products.
- Compensate for their ‘razor-thin’ focus by diversifying internationally which permits the required economies of scale.
- Service a niche market but world-wide.
- Want to be the best and charge premium prices over the competition because they are at the top of their game.
- Are most often privately held, or family-owned companies.
- Are not driven by a need to satisfy quarterly earnings and hold a longer term view of profitability.

These are the characteristics often associated with German mid-tier Mittelstand companies or in Japan referred to as ‘chuken kigyo’⁵ (strong medium-sized firms).

² Industry Canada has often defined a small or medium business based on the number of employees: goods-producing firms are considered "small" if they have fewer than 100 employees and service-producing firms are considered "small" if they have 50 employees or fewer. Firms with between 50 and 499 employees are considered "medium". The smallest of small businesses are called micro-enterprises, most often defined as having fewer than five employees. The term "SME" (for small and medium-sized enterprise) is used to refer to all businesses with fewer than 500 employees. Firms with 500 or more employees are considered "large" businesses.

⁴ We are indebted to Ross Bradsen, Regional Director, Southwestern Ontario, Sector Lead, Advanced Manufacturing, for much of this definition as set out in his presentation on German Mittelstand companies.

⁵ The technology prowess is a reminder of the country’s industrial strength – even after two decades of economic stagnation – and the loss its place to China as the world’s second largest economy. The existence of these chuken kigyo firms is at the core of Japan’s economic structure and act to support the larger well-known electronic firms as well as meet foreign needs. These components are known for their high quality and reliability. Small parts, yes, but parts that are essential for the operation of a larger system and require continual innovation to avoid becoming a commodity.

Corporate innovation online

CIO - Innovation management best practices

Stages of innovativeness

For SMEs the management practices are different!

Any approach to addressing innovativeness needs to recognize the corporation's stage of development. Is the company small and growing or is the corporation large and potentially slowed due to the inevitable layering and bureaucracy which comes with size? The approach to innovation management is directly related to the company's stage of development.

For example, while fundamental research, applied science and development are exceedingly important for the medium and long-term future of most companies, it is less important for the struggling-to-survive SME. Keeping in touch with fundamental developments in technology is, however, important and can be accomplished by maintaining close and meaningful contacts with research institutions, universities and bright individuals. Early collaboration can build relationships which may prove useful at a later stage of development. Acquisitions are not the solution for SMEs but acquiring and selling technologies and businesses are common practice amongst larger and global innovative companies.

Innovation management practices designed to encourage innovation and to mark its importance are thus dependent upon the stage of development.

Having a strong management team – leadership - is a first priority but so is having some sort of orderly process for managing innovation efforts. A disciplined approach to innovation management soon becomes essential to ensure that activities which are productive are fast-tracked are those which are non-productive are eliminated or minimized. Thus having a system in place which allow the SME to capture and manage the creative and implementation process is an important contributor to accomplishing tasks in the earlier stages. An early focus by management and the Board on the importance of innovation can also plant the seeds that the organization has a 'culture of innovation'.

Corporate innovation online

CIO - Innovation management best practices

The following chart summarizes the innovation management priorities by stage of development.

Innovation Stages					
	Industry Maturity				
Innovation management	Start Up	Rapid Growth	Growth	Mature	Aging
	SME Focus				
Management's overall attention	Establishing credibility Entrepreneurship Survival	Developing a strong competitive position Market share	Maintaining a strong competitive position	Maintenance of profit and market position	Exiting the business Ongoing survival
Innovation effort	Specific new product development tasks Setting in place the seeds of a culture for innovation	Business model establishment New product quality and support Customer feedback for success		Product enhancements and modifications Search for innovation	Opportunistic only
Innovation management systems	Non existent Reward is skewed to share value appreciation	Simple idea management system Rewards migrate to other forms of recognition	Full-fledged idea management system Sophisticated reward system for full range of innovation spectrum		System maintenance
Management structure	Loose and informal, little definition of responsibilities Individual performance	Some organizational definition required Individual and group performance	Group performance Decentralized Well defined responsibilities and accountabilities		
Management's innovation style	Open and ad hoc	Bordering on participative	Open and non-hierarchical	Formal, delegation and control	
Collaborative initiatives	Virtually none outside the enterprise	Mainly Internal effort	Seeking outside collaborators; research institutions etc. for new ideas	Managing outside collaboration	
Likely casualties during stage	Cost reduction and continuous improvement, cost containment		Risk profile shifts from risk taking to more conservative	New products	No new products

Highly-innovative companies have a breadth and depth to their innovation practices which starts early on in their history and has been, we have found, much influenced by the founder's attitudes and values. Our research into early developments at GE, 3M, John Deere and other noted companies bear evidence that innovativeness starts early on. Typically, however, a start-up struggles with just one aspect of innovation; a new product or a new business model. Seldom is a start-up concerned with continuous improvement.

Our research also indicates that companies which undergo rapid expansion often forget about, or place insufficient attention to continuous improvement. Starbucks, one of the companies profiled by White & Partners, is a case in point. Management's attention is, as one might expect, focused on growth but failed to bring back-room systems along at the same time.

Building, sustaining and articulating innovation management best practices

Corporate innovation online

CIO - Innovation management best practices

Different aspects of innovation management come into play at various stages of a company's growth.

Measuring innovativeness

Is there a problem to be addressed?

Many corporations use as a measure the percentage of new products which have been introduced over the last 5 years and seek to keep this figure at 25% or better (see P&G⁶ CIOMAX report). The hypothesis is that the product line is continually being refreshed, new business platforms established (See DSM profile⁷), and that change will bring about growth and profit. Definitely the percentage of new products is an indication of product-inspired innovation but is, in reality, only one part of the answer to the question; is the corporation's innovativeness in place and working? We offer several other quick and easy-to-use measures to answer this question.

White & Partner's on-line survey provides one possible measure of whether a corporations' innovation management systems are working. Respondents who complete the survey receive a 'score' which is an indication of the success of their innovation management practices.

Means of measurement	Explanation
<i>On-line survey results.</i>	If the score (the 'Delta') is over 60 there is probably a problem(s) to address.
<i>Innovators are leaving the company – or not.</i>	Factor #21 – a huge gap between the 'Ideal' and 'Reality' indicates the presence of an issue.
<i>Company has an innovative tradition – or not.</i>	Factor #22 – a tradition established and still exists? Establishing a tradition is more difficult than keeping one!
<i>A sense that innovation is increasing or decreasing.</i>	Factor #24 – probing in which direction innovation is trending?
<i>Innovation Assessment Tool [IAT] See web site; http://www.corporateinnovationonline.com</i>	Examines the corporation's innovation culture, the 'Spectrum of Innovation' and the presence of Innovation-oriented structures to enable innovation.

The on-line survey instrument provides an overall score for each respondent and his/her view of the corporation's innovativeness. The score; the difference between respondent's 'Ideal' and 'Reality' for each Factor and summed, provides insight into the degree of concern overall.

Three Factors, in addition to the results of the on-line survey, provide an early and easy recognition of the presence of a problem with a corporation's innovativeness. By itself, the overall score is useful but in our opinion should be supported by other outward manifestations of a potential problem. One key area is whether there is a sense that people known as innovators are leaving or staying with the company; Factor #21. Better known as the 'talent drain', departures can be serious for mid to long-term growth of the company.

⁶ <http://www.corporateinnovationonline.com>. Corporate profiles.

⁷ *ibid*

Corporate innovation online

CIO - Innovation management best practices

Two other Factors round out the sense of what is happening in the corporation. Factor #22, asking whether the company has an innovative tradition or not, provides insight into the opinions of employees and/or stakeholders. Factor #24, asking whether innovation is increasing or decreasing, provides additional insight into respondents' opinions. Perception may be reality.

The summation of each of these outward indications of success in innovation or not, should stimulate further enquiry into the reasons for these opinions.

Innovativeness and management practices

How practices impact innovativeness

The on-line survey, one of the tools used to measure innovativeness, addresses employees' opinions regarding 25 Factors which provide metrics for corporate innovativeness.

For purposes of this analysis we segment management practices into three themes;

- Leadership
- Organization and management of day-to-day affairs
- Idea generation and realization

For each of these three themes we have allocated those Factors which most relate to the theme. The challenge is to put together a portrayal of corporate innovativeness based on the opinions expressed. Probably less complicated than putting together an Ikea chair!



Corporate innovation online

CIO - Innovation management best practices

Leadership

Five Factors can be used to probe and measure leadership's role in the innovation process.

Opinions on whether management places an undue emphasis on the need for short-term profits need to be examined. If the message is that quarterly profits are most important then there is little room for people to think too far ahead or expecting that funds for new ventures, however appealing, will materialize. There is need for management to convey a balance between short-term and longer-term profit motives.

Surprisingly, some managements do not call for innovation. That is always the choice and it could be appropriate in certain circumstances. But if the latent desire of senior management and the Board is to be innovative, but employees and stakeholders have a different view, then there is a serious disconnect between top management and those expected to implement plans.

Our research indicates clearly that risk taking, at all levels, is a feature of highly-innovative companies and risk taking, in particular in the planning process, is encouraged.

Those companies such as 3M, P&G, and John Deere make a point of singling out those who are innovators in the company and providing rewards, not always monetary, for exceptional performance.

Organization and management of day-to-day affairs

Eight Factors address how management goes about organizing and managing routine day-to-day affairs. These Factors have much to do with people management, internal communication, delegation of responsibility, accountability, and reporting; i.e. management practices issues which are well recognized.

There is not much new in this category. The question is, however, how all of these practices are viewed by employees. Is there a consistency of viewpoint or are there disconnects which could inhibit innovation? Are the views of employees in line with those of senior management and the Board? If not, why not?

Most of these management practices and their successful application have been well documented. Studies of 3M's management practices abound. Almost every study of innovation management makes mention of 3M's practices and have done so for over a century.

Leadership Factors

- *Emphasis on short versus longer-term profits – F#1*
- *Extent to which management explicitly looks for innovation – F#2*
- *Planning emphasizes opportunities and not just cost reduction – F#4*
- *Use of career ladders and recognition of innovators – F#7*
- *Tolerance for risk in the planning process – F#9*

Organization and management of day-to-day affairs Factors

- *Emphasis on management of people and their interactions – F#6*
- *Degree of formal communications in the organization – F#10*
- *Use of independent work groups – F#11*
- *Management decisions with input from a broad cross section of employees – F#12*
- *Formality of the decision process – F#13*
- *Planning versus action orientation – F#15*
- *Decentralization versus centralized hierarchy – F#18*
- *Staff versus line involvement in the decision process – F#20*

Building, sustaining and articulating innovation management best practices

Corporate innovation online

CIO - Innovation management best practices

Other companies which we have researched, including; John Deere, P&G, GE, Nucor, and Toyota, have a similar pattern of management practices. The pattern is clear; people come first, a degree of informality in communications and decision making is called for and, as well, delegation of responsibility, and authority and accountability are essential elements in innovative companies. A balance between shooting from the hip and planning paralysis is also seen as a desired management practice.

Idea generation and realization

Six Factors, mainly comprised of attitudes and decisions by management, impact the flow of ideas in an organization.

For those companies placing a priority on innovativeness, it is clear that some notion of how ideas develop within an organization should be well understood by all participants.

Tolerance plays a big part in this process. Tolerance for failure and for mavericks is an important characteristic. On the other hand, a corporate norm, with the increasing concern over ethical issues, and the manner of doing business, needs careful articulation. Often it is difficult for senior management to get an objective handle on these important Factors since the opinions are very much a subjective judgment and not easily rendered in an otherwise open and transparent corporation. None-the-less they are important attributes of highly-innovative companies and could become game stoppers when it comes to the flow of ideas.

While product-inspired innovation is much impacted by spending on R&D, as noted earlier, the effectiveness of spending is equally if not more important. Again a value judgment!

Innovativeness is composed of a broad spectrum of initiatives from science-based to what could be referred to as 'suggestion-box' ideas; just good ideas for improving productivity – so valuable to the process of continuous improvement.

Recent software developments are facilitating the means of capturing and managing ideas through to implementation. This is further evidence of the importance of 'idea management' to many companies.

The measurements noted above attempt to answer critical questions about innovativeness.

- Do all or most employees appreciate the importance of innovation to the future of the company?
- Is management's message regarding innovation getting through?
- Is what we do as managers, encouraging innovation thinking?
- What is the employee attitude to innovation?
- Are innovative people leaving the firm? Why?
- Is the starting point that the company already has an innovative tradition or is the view that this has yet to come?
- How do we identify our innovativeness? How broad and how deep does our innovativeness go?

Building, sustaining and articulating innovation management best practices

Idea generation and realization Factors

- *Tolerance for mavericks – F#3*
- *Tolerance for failure – F#5*
- *Tolerance for variation from a corporate norm – F#8*
- *Mechanisms in place to reward innovators – F#14*
- *Resources generally available for new ventures – F#19*
- *R&D budget levels above the competition – F#23*

Corporate innovation online

CIO - Innovation management best practices

In summary, the idea is to remove constrictions which interfere with the release of ideas for improving productivity and shareholder value.

Investing in the full spectrum of Innovation

Are all aspects of innovation considered?

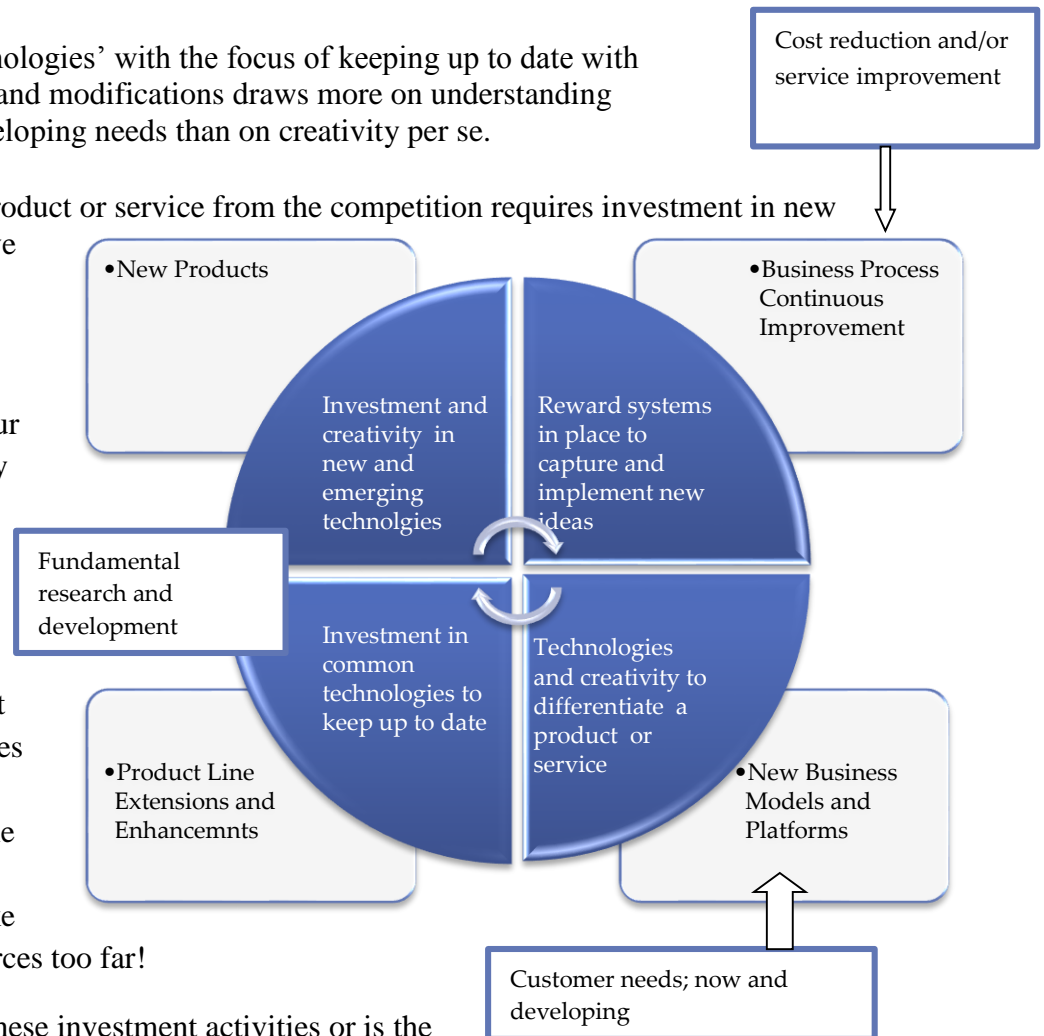
A benchmark for understanding innovation is to understand the scope of the company's investment in innovation. Innovation takes many forms (see chart). For example;

- Investment in new and emerging technologies drives new product development and requires creativity.
- Having transparent reward systems along with systems to capture new ideas for improvement to processes (continuous improvement) can contribute significantly to productivity improvement. Creativity, while a factor, is less important than capturing ideas from whatever source.
- Investing in 'common technologies' with the focus of keeping up to date with product line enhancements and modifications draws more on understanding customer's current and developing needs than on creativity per se.
- Seeking to differentiate a product or service from the competition requires investment in new technologies and the creative minds to bring diverse elements together.

Creativity is important to all four quadrants but is particularly key in two of these four areas; new products and the introduction of new business models or platforms.

Investment in this context is not simply funding, but also involves staff commitment, time and energy, and in general taxing the scarce resources of a growing SME. SMEs can make a mistake by spreading their scarce resources too far!

Is there an appropriate mix of these investment activities or is the emphasis on one aspect while neglecting others?



Building, sustaining and articulating innovation management best practices

Corporate innovation online

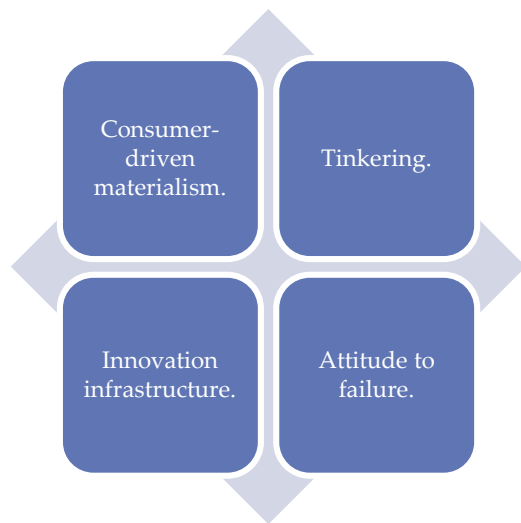
CIO - Innovation management best practices

Creativity is the least understood element of the spectrum of innovation and yet is absolutely important at some level in all stages. Creativity can arise in many forms; customer input, smart employees, connections with research institutions, and group brainstorming sessions. What is most important is to know what is happening within the corporation and whether all potential levers to cause productivity improvement and growth are in place.

Innovation country climate

Certain countries have a better climate for innovation

Beyond the obvious, there are some subtle elements of the country-context for innovation that can encourage or discourage innovation. For comparison purposes, there are significant differences in the country climate amongst nations such as the U.S.A. and Russia, to take two extremes.



Tinkering, consumer-driven materialism, an open attitude to failure and the presence of an innovative infrastructure are four of the most important attributes of a dynamic, innovative economy.

Tinkering gets ideas going either in the head or on the work bench.

Consumer-driven materialism ensures a ready market for new concepts and gadgets.

Innovation infrastructure facilitates the relatively easy establishment and destruction of enterprises.

An open attitude to failure encourages people to try new ideas, gadgets, and business models. All four attributes are found in the most dynamic economies; probably most evident in the United States.

Russia has at least one of these attributes in spades; namely ‘consumer-driven materialism’. A society which, over decades has been denied material goods, now wants to have the latest of everything. The other three attributes, however, are less prevalent.

Tinkering⁸ is a concept that has pervaded the success of the U.S. economy more so than most other economies in the world. The notion of one or two people (most often male) working on a project in their garage and years later having a successful global company is a classic example of successful entrepreneurship in America. Think of; Microsoft, 3M, Lincoln Electric, Facebook etc.

Innovation infrastructure is the notion of a system of government, jurisprudence, laws, which encourage the creation of enterprises but also facilitate bankruptcy should the initiative fail. The development of this

⁸ One who enjoys experimenting with and repairing machine parts⁸

Corporate innovation online

CIO - Innovation management best practices

infrastructure takes place over decades. The establishment of government/corporate laws, open and transparent, are fundamental to the availability of venture capital and the assumption of risk with a 'cap' for corporations and for individuals.

Attitudes to failure, at both corporate and individual levels, have changed dramatically over the years. In terms of new ventures, some corporations; e.g. P&G⁹, 3M and other innovative companies are explicit about failure; some even have quantitative goals so that employees (and shareholders) understand that there is risk inherent in moving forward with new ideas. The idea is to encourage risk taking, and with that, an acceptance of failure. Failure is treated as a learning experience.

Perhaps the attribute that will most challenge Russia's innovation initiative is the notion of trust. The business culture in Russia, brought about by centuries of centralized domination, legacies from communist times, has created a sense of mistrust among individuals and corporations. Two decades after the fall of communism in Russia, the legacy still exists, less so than before, but is still present. Trust among individuals and between corporations and stakeholders is fundamental to the encouragement of ideas, the sharing of information, and the collaboration necessary to get ideas off the ground.

This is all to the point that often innovation at the micro level is influenced, albeit subtly, by the actions or inactions of government and the legacy of history on economic developments in a given country or region has a significant impact – analogous to the impact of founders on corporations.

⁹ See <http://www.corporateinnovationonline.com> for examples of 'risk explicit policies'.⁹ One who enjoys experimenting with and repairing machine parts⁹

⁹ See <http://www.corporateinnovationonline.com> for examples of 'risk explicit policies'.