

# CIO – Corporate innovation online

*Innovation management best practices*

## ‘Innovation management’ background

*The inference is that innovation can be managed and, while serendipity may occur and should not be discouraged, innovation can be improved by the application of well-thought-out management practices. Innovation is no longer looked at as a random phenomenon<sup>1</sup>.*

*This paper explores the genesis of innovation management thinking starting with Schumpeter.*

## Overview

Innovation management is all about using a set of business policies and practices which encourage the commercialization of ideas within an organization. Innovation is not relegated to only the research and development function, as it was seen to be in the past, but rather encompasses the whole organization; all levels and all functions. This was not always the case. At the core of innovation management is the notion of energizing and moving ideas, of all sizes and scope, through an organization culminating in their successful commercialization.

Entrepreneurship is fundamental to innovation and Schumpeter<sup>2</sup> did much to delineate the important role played by entrepreneurs in the economy and in organizations.

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## Definitions

**Entrepreneur;** a person who organizes, operates and assumes the risk for a business venture.

**Innovation;** 1. Act of introducing something new. 2. Something newly introduced.

**Innovate;** To begin to introduce (something new) for or as if for the first time.

**Innovative;** marked by or given to innovations. **Management;** 1. The act of managing; handling, supervision and control. 2. The person or persons who control or direct a business or other enterprise.

**Strategy;** A plan of action resulting from strategy or intended to accomplish a specific goal. To strategize is to plan a strategy for (a business or financial venture, for example).

**Tactic;** An expedient for achieving a goal; a manoeuvre.

**Management of innovation;** by inference refers to the process of ‘handling, supervision and control’ of introducing something new in the organization.

Definitions courtesy of ITP Nelson, Canadian Dictionary of the English language

<sup>1</sup> Inno resource, Innovation 101

<sup>2</sup> Joseph Alois Schumpeter (German: ['ʃʊmpə:tə]; 8 February 1883 – 8 January 1950)<sup>[1]</sup> was an Austrian-born American economist and political scientist. He briefly served as Finance Minister of Austria in 1919. In 1932 he became a professor at Harvard University where he remained until the end of his career. One of the most influential economists of the 20th century, Schumpeter popularized the term "creative destruction" in economics.

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### Early developments in innovation thinking

*Schumpeter's late 19<sup>th</sup> century thinking identifies an important role for entrepreneurs*

Innovation management is based on some of the ideas put forth by the Austrian economist **Joseph Schumpeter**<sup>3</sup>, working during the 1930s, who identified innovation as a significant factor in economic growth. His book "Capitalism, Socialism and Democracy" first fully developed the concept of **creative destruction**.

Schumpeter was probably the first scholar to theorize about entrepreneurship, and the field owes much to his contributions. He brought attention to the risk in all innovation projects, the need to move quickly in order to secure the benefits which would derive from a bright idea and which would ideally be brought about by leadership and vision, the top two qualities usually associated with an entrepreneur. He was also quick to point out that society would resist change and that this societal lethargy had to be overcome by hard-driving entrepreneurs.

His fundamental theories are often referred to as<sup>4</sup> Mark I and Mark II.

*In the first, Schumpeter Mark I, argued that the innovation and technological change of a nation come from the entrepreneurs, or wild spirits. He coined the word Unternehmergeist, German for "entrepreneur-spirit", and asserted that "... the doing of new things or the doing of things that are already being done in a new way" stemmed directly from the efforts of entrepreneurs. Entrepreneurs, those with novel ideas, were characterized as those fighting against lethargic social norms.*

*Later, in the early twentieth century, Schumpeter notion of individual entrepreneurs, as individuals fighting social norms, gave way to the recognition that innovations often required teamwork and thus would be more prevalent in larger organizations.*

*Schumpeter Mark II, acknowledged the need for studying how innovation could be managed in larger organizations, but did not himself carry out the research.*

Mark II was developed when Schumpeter was a professor at Harvard. Many social economists and popular authors of the day argued that large businesses had a negative effect on the standard of living of ordinary people. Contrary to this prevailing opinion, Schumpeter argued that the agents that drive innovation and the economy are large companies which have the capital to invest in research and development of new products and services and to deliver them to customers cheaper, thus raising their standard of living.

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<sup>3</sup> Courtesy of Wikipedia

<sup>4</sup> Mark I and Mark II arguments are considered complementary today.

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In one of his seminal works, Schumpeter provides an example from an industry which W&P has profiled.

*As soon as we go into details and inquire into the individual items in which progress was most conspicuous, the trail leads not to the doors of those firms that work under conditions of comparatively free competition but precisely to the door of the large concerns--which, as in the case of agricultural machinery, also account for much of the progress in the competitive sector--and a shocking suspicion dawns upon us that big business may have had more to do with creating that standard of life than with keeping it down.*

Schumpeter's choice of the agricultural industry in prescient. W&P has profiled John Deere in the last ten years and also Massey-Ferguson circa the 1960s. Deere has survived to this day and done well whereas MF has gone out of business. Their reputations were dramatically different even in the 1960s. Deere was the innovator and MF was the follower. Neither was dominant in the market at any time but each was a major competitor along with many other participants in the industry. Deere, under the last two CEOs<sup>5</sup>, makes it clear that they focus on the management of innovation. Deere's winning management practices are the subject of one of our in-depth profiles<sup>6</sup>.

Whether one agrees with Schumpeter or not, he had the effect of unmasking the importance of innovation and that<sup>7</sup> 'innovation-driven market power can provide better results than the invisible hand and price competition'. He did argue that technological innovation often creates temporary monopolies, allowing abnormal profits that would soon be competed away by rivals and imitators. These temporary monopolies, such as the East-India company active in India and the Hudson's Bay Company in North America, were necessary to provide the incentive for firms to develop new products and processes. In the agricultural equipment industry, there never was a monopoly but rather an oligopoly existed with John Deere dominating the markets for many years through the introduction of new models and price leadership.

Most importantly, Schumpeter identified innovation as the critical dimension of economic change. He argued that economic change revolves around innovation, entrepreneurial activities, and market power.

Schumpeter thus deserves a lot of the credit for thinking about the interrelationship of innovation, entrepreneurship and the impact on societal well being. His seminal thinking led the way to a body of work now referred to as the management of innovation.

On 17 September 2009, *The Economist* inaugurated a column on business and management named "Schumpeter". The publication has a history of naming columns after significant figures

<sup>5</sup> See profile available on the web site.

<sup>6</sup> Available on the web site under CIOMAX reports

<sup>7</sup> Wikipedia

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or symbols in the covered field. The initial Schumpeter column praised him as a "champion of innovation and entrepreneurship" whose writing showed an understanding of the benefits and dangers of business that proved to be far ahead of its time.

More recently, Clayton Christensen's book, *The Innovator's Dilemma* further explored the subject of innovation and supported Schumpeter's notion that established markets are destroyed – or disrupted – by innovation.

While Schumpeter argued that large companies have an innovative advantage due to their monopolistic power and access to capital, Christensen highlighted that innovation comes by way of disruption and often the source is from smaller start-up organizations. Currently, the success of 'Uber' would be a good example. 'Tesla', 'Google' and a host of other growing companies provide further examples.

SMEs in particular, including business start-ups, are seen to a major source of new ideas and generating new businesses and jobs.

Schumpeter's thinking contributes to the definition of innovation management by placing the role of entrepreneurs and, importantly, their assumption of risk front and centre.

### **Innovation management defined**

*Innovation management can make use of 'tools' but first and foremost a culture for innovation is needed.*

Innovation is about doing things differently and strategy is about doing different things. Both involve change in the way in which an organization goes about its business. Strategy is meant to set out a clear direction towards an agreed upon goal – a goal which can be changed over time. Innovation, at least in one sense of the word, refers to something somewhat unpredictable happening in an organization and may only be viewed as successful in hindsight. The operative word is *change*. Integrating the management of innovation with the strategic direction of the organization is essential.

According to Wikipedia, '*innovation management is the management of innovation processes. It refers both to product and organizational innovation.*

*Innovation management includes a set of tools that allow managers and engineers to cooperate with a common understanding of processes and goals. Innovation management allows the organization to respond to external or internal opportunities, and use its creativity to introduce new ideas, processes or products. It is not relegated to R&D; it involves workers at every level in contributing creatively to a company's product development, manufacturing and marketing.*

*By utilizing innovation management tools, management can trigger and deploy the creative capabilities of the work force for the continuous development of a company. Common tools include brainstorming, virtual prototyping, product lifecycle management, idea management, TRIZ, Phase-gate model, project management, product line planning and portfolio*

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*management. The process can be viewed as an evolutionary integration of organization, technology and market by iterating series of activities: search, select, implement and capture.*

But this definition brings in a new term – ‘tools’. Innovation management, as the term is used on the web site is not so much about ‘tools’ as it is about creating an environment within which innovation is encouraged by the practices and policies adopted by management. It is not about tools and techniques often associated with getting innovation going. Tools will not work effectively unless there is an atmosphere, or climate within the organization, which encourages innovation.

## The scope of innovation management

*Innovation is not limited to research and development but is best viewed as pervasive within the total organization.*

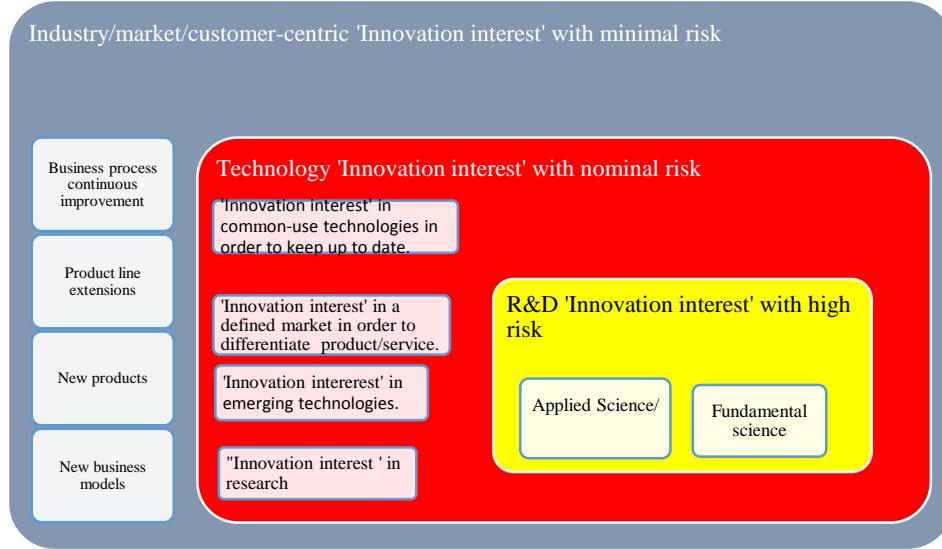
The scope of innovation is illustrated by the chart.

Innovation management is not just about making capital investments nor just about the funds invested in research and development. It is about having an attitude which encourages change throughout the organization.

Innovation management is about managing the risk associated with change. Innovation is categorized into three major levels of risk.

The highest level of risk, whether demonstrated by investment or by simply investing mental time on a subject, is associated with the fields of fundamental science and applied science; most often the territory of universities and research institutions.

The least level of risk is associated with what one can call ‘industry/market/customer centric ‘innovation interest’ where much is already known about the market and the likely acceptance of a new idea. This type of innovation process has been referred to as ‘pushed through’ (by the customers) development in contrast to a ‘pulled through’ process where solutions are found to unmet needs of customers. Often the lines are blurred between these two concepts but what is clear is that the further one gets from the customers’ needs, the higher the risk<sup>8</sup>.



<sup>8</sup> RIM, now Blackberry, is a classic example of sticking too close to the customer and being side swiped by a competitor, Apple. Why? Because RIM was too busy satisfying the mutually profitable needs of their immediate customers.

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### Management of innovation evolves with the life cycle of an organization

*Managing innovation takes different forms over the life-cycle of the organization.*

The management of innovation takes on different forms as an organization moves through the business cycle. While the entrepreneur's role is mostly associated with the start-up phase, there are many examples of entrepreneurship emerging as a force to revitalize an organization or an industry and thereby shifting an otherwise 'aging' organization back to a growth situation.

Innovation management	Life Cycle Stages				
	Industry Maturity				
	Start Up	Rapid Growth	Growth	Mature	Aging
	SME Focus				
<b>Management's overall attention</b>	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
<b>Innovation effort</b>	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
<b>Innovation management systems</b>	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
<b>Management structure</b>	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		
<b>Management's innovation style</b>	Open and ad hoc	Bordering on participative	Open and non-hierarchical	Formal, delegation and control	
<b>Collaborative initiatives</b>	Virtually none outside the enterprise	Mainly internal effort	Seeking outside collaborators; research institutions etc. for new ideas Managing outside collaboration		
<b>Likely casualties during stage</b>	Cost reduction and continuous improvement, cost containment		Risk profile shifts from risk taking to more conservative	New products and enhancements	No new products

As the organization becomes larger and more complex to manage, managers need to rely on an ever-changing set of management practices in order to stimulate growth and keep the sense of entrepreneurship alive within a larger setting.

To return to Schumpeter's thinking, a disruption process takes place by replacing old 'somethings' with the new 'somethings'. An organization which fails to do this will eventually complete the cycle of business and disappear as a force within its industry. Creative destruction, whether as defined by Schumpeter or by Christenson, drives the constant change in both products/services but also in managements' approach to managing innovation.

There is a growing realization that innovation requires that individuals and companies develop networks both within the organization and with outside agencies or sources of ideas and

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research. Collaboration is emerging as an important characteristic of the innovation process. No more silos!

### Measuring the management of innovation?

*Yes, it is possible to measure. If you can't measure it, then you can't manage it!<sup>9</sup>*

W&P has developed twenty-five Factors which represent a good start to understanding the impact of managements' policies and management practices on the climate for innovation. Whose opinions are these? Stakeholders; employees and customers.

Five major topics are addressed by an on-line survey.

1. **The results or outcomes** of in-house management practices and policies;

- whether good and valued people are staying with the organization, or leaving for greener pastures. Tied into this is, of course, the ease or difficulty of attracting bright people to the organization,
- whether the organization has a solid reputation for innovation amongst employees and stakeholders or not and
- whether this reputation is growing or declining.



Best practices have consequences which can be measured on an ongoing basis.

2. In view of the **emerging importance of collaboration** within and without the organization, the following issues are addressed by the on-line survey;

- input into decision making; i.e. whether this is broadly based or limited to a small group of individuals,
- the style of communication in the organization, whether this is frequent enough and sufficiently candid and
- staff versus line involvement. Staff – an old term but well understood – can sometimes be left out of a role in influencing decisions.

Collaboration, such as represented by P&G's 'Connect and Develop', is becoming every more important to the process of innovation.

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<sup>9</sup> Peter Drucker

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3. Signals from management and the Board on the **importance of innovation** to the future of the organization;

- the emphasis on short versus long-term profit, whether management decisions are seen to be focussing on the short term and therefore discouraging innovation or, on the other hand too far in future and therefore jeopardising profitability (F#1)

- investment in research and development levels. As noted before, this indicator is far from the totality of measuring innovation but nevertheless is one of the strongest indicators of the interest in innovation,

- is innovation a core value? Most innovative companies have made innovation an explicit part of their core values,

- managements' emphasis on cost reduction or on seeking opportunities. Cost reduction, while innovative in itself, may leave little room for seeking opportunities which may require capital before the opportunity can be realized.

All of the highly-innovative, idea-intensive companies which have been researched by W&P, have explicitly set out innovation as a core value essential to their success over the long term.

4. **Decision making** within the organization;

- whether communication within the organization are too formal or not,

- tolerance for uncertainty in planning process since any innovation requires making decisions without the full realization of the potential outcome, i.e. at planning time,

- use of independent task groups, as an indicator of an organization which is prepared to decentralize and delegate decision making,

- planning or action oriented, since organizations can have reputation for over-thinking opportunities or, by contrast, jumping to conclusions without taking the time to think through outcomes, and

- whether the emphasis is on decentralization or a highly-centralized organization with all decisions going to the top.

Decentralization is just one of the ways organizations grow. As decentralization increases so does the importance of regular and informative communication from the top to the bottom increase.

5. **Managements attitude** towards;

- the tolerance for mavericks,

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- tolerance for failure, and
- the use of rewards, bonus and incentive programs to spur innovation.

Mavericks can inspire new ideas – think of 3M, tolerance for failure is best viewed as a learning experience for all involved – think of P&G and Lafley’s target for a failure rate (too low and the company knew they were not innovating, and lastly, the use of both monetary and non-monetary rewards is a proven tool to encourage outstanding performance.

Peter Drucker has the last word on the topic of measurement ‘if you can’t measure it, you can’t manage it’.

### **Conclusion**

The end game for Schumpeter was that capitalism, with its creative destruction power, would be destroyed because of its successes. Apparently he was not happy with this part of his prognosis. His view was that capitalism sparked entrepreneurs, that entrepreneurship was more than invention. The benefit of radical destruction outweighed the economic value inherent in staying with the status quo.