Managing Innovation: A Typology of Theories and some Practical Implications for New Zealand Firms

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Abstract

The quality of a firm’s innovations is determined by a variety of factors. One such factor is the performance of the firm’s innovation system. This in turn is partially determined by how well the innovation system is managed. Despite plenty of scholarly activity in this field of study, a comprehensive, generic framework for managing innovation is still lacking. Combining old-fashioned management theory with modern-day innovation concepts, a new conceptual framework for the management of innovation is put forward in this paper. Its scope of application is much broader than that of contemporary theory in the sense that it addresses not only aspects of the innovation process, but also strategy, metrics, supportive organization, leadership, and innovation tools. In the first of a series of papers the current paper, through exploratory quantitative research, sheds light on how well New Zealand managers/CEOs are managing innovation within their firms. The results indicate that while there are many encouraging signs, there is also ample scope for improvement. New Zealand firms lack strong leadership in creating ‘innovation friendly’ cultures and seem reluctant to define appropriate innovation metrics and regularly assess their organizational innovation performances.

Keywords
Innovation management, innovation capability assessment, innovation process, innovation tools, framework, economic growth.

1. Introduction

Innovation has been hailed as the primary source of wealth creation, and absolutely essential for corporate survival (Dillon et al 2005). Given its importance, essential questions that ought to be asked by governments and business leaders alike are: 1) How innovative is the
country at national and corporate levels compared to other countries? 2) To what extent is the combined national innovation effort contributing towards increased wealth and prosperity for all of the country’s citizens? (Are the innovation outcomes significant for the country as a whole?) 3) What can be done at firm level to increase the quantity of innovation output while simultaneously improving the quality of innovation output?

Only when satisfactory answers can be found to these questions, can countries and organizations begin to make significant strides forward towards improving its innovation performance at various levels.

Over the past five years the New Zealand Government has, in collaboration with third parties, conducted a number of research projects aimed at addressing these questions. These and other findings are briefly discussed next.

1.1 Macro and micro level innovation indicators

At both macro and micro innovation levels it seems that New Zealand’s ranking is at the lower end of the OECD, according to the recent results of The Global Competitiveness Report 2005-2006 (World Economic Forum, 2005). The country came 22nd out of 117 countries in terms of the Global Competitive Index’s (GCI) Innovation Factors. The GCI Innovation Factors sub-index has its own two sub-indices, the Business Sophistication Sub-Index, and the Innovation Sub-Index. The former index is determined by factors such as the efficiency in the production of goods and services, the quality of a country’s overall business networks, and the quality of individual firms’ operations and strategies. New Zealand achieved a score of 5.24 for this index, putting it in 22nd place. The Innovation Sub-Index is determined by factors such as the national innovative potential and capability, and an appropriate and conducive environment (which in turn is characterised by joint and coherent efforts by both public and private sectors; the quality of scientific research institutions; skills levels of the workforce; sufficient R&D spending by private companies; sufficient IP protection; and active collaboration between universities and R&D companies.) For this indicator New Zealand came in overall 23rd place with a score of 4.25.

Another report by the Ministry of Economic Development (2005) found that the private sector’s expenditure on R&D of total expenditure is only 37 percent compared to the OECD’s of nearly 70 percent. The country also lags the OECD significantly in international patenting rates. On the plus side, both R&D expenditure and patenting are growing at a fast rate.

1.2 Innovation Outcomes

In addressing the second question, the Ministry of Research, Science and Development’s Innovation in New Zealand (2003) survey focused on the achieved outcomes of innovation activity. It found that 80 percent of businesses that implemented innovations in the last three years reported an increased range of goods and services as a result. 79 percent furthermore reported increased profitability, 75 percent improved efficiency, and 64 percent entered new or expanded markets in New Zealand as a result of innovation activity. On the down side the survey found that innovation activity contributed little to opening up new overseas markets (30 percent), reduced environmental impact (21 percent), or reduced energy consumption (18 percent).

Innovation and improvements in technology are generally recognized as the major underlying drivers of long-run economic growth (Ministry of Economic Development 2005). Whilst little is known about the exact relationship between innovation and economic growth, including how it works, evidence is emerging from research within the European Union that regional innovative activities play a significant role in determining differential regional
growth patterns (Crescenzi, 2005). Even though differences in economic growth in different
countries cannot simply be explained by differences in innovative activities or innovation
measures alone, a comparison of GDP figures among different countries is still insightful.
Towards the end of the 1990s New Zealand’s per capita GDP had been declining relative to
its OECD counterparts (OECD, 2005). This trend has since been reversed and in recent times
New Zealand has enjoyed almost consistent economic growth. Since 2000, New Zealand’s 3.9
percent average growth per annum has been above Australia’s 3.3 percent, the UK’s 2.8
percent and the US’s 2.9 percent, and significantly higher than the OECD average (2.5
percent). In real terms, the picture is less attractive. In 2004 New Zealand came in 24th place
in GDP per capita, way behind Australia in 13th place and Ireland in 4th place. In absolute
terms New Zealand’s GDP per capita is only about 81 percent that of Australia, despite New
Zealand’s Global Competitiveness Index on Innovation Factors being on par with Australia’s
at 4.75. Disregarding other factors for a moment, the indication is that New Zealand’s
innovations do not translate into the same degree of wealth generation as it does in Australia.

1.3 Achieving innovation excellence

If New Zealand firms struggle in getting the most out of their innovation efforts, they need
not feel alone. Worldwide firms still struggle in getting it right, as is evident from a 2005 global
survey of more than 900 top executives by The Boston Consulting Group (2005). It found that
even though companies continue to pour more money into innovation, a majority of their senior
executives were not happy with the returns on this investment. As early as 1993 Cooper and
Kleinschmidt contributed this to a clear gap that often exists between managers’ perceptions
and the reality of appropriate criteria for successful innovation.

What then, are the criteria for successful innovation? The MOED’s 2003 report found
that 56 percent of all businesses surveyed rated a lack of management resources as the biggest
impediment to innovation. Other factors rated by a majority of businesses as hampering
innovation were the costs to develop new products, processes or services (53 percent), and
lack of appropriate personnel (51 percent). Other impediments to innovation that were
adapted from the European model for use within New Zealand survey, but with ratings
significantly lower than those mentioned before, were a lack of information about finance,
lack of marketing expertise, lack of cooperation with other businesses, and availability of
obtaining intellectual property. It seems fair to reason that the opposites of these impediments
would make for a sensible yet incomplete set of criteria for successful innovation. As such,
success criteria can be seen to be a sufficient supply of management resources, funding,
staffing, marketing expertise (especially in overseas markets), collaboration with other
businesses, and intellectual property (listed here in descending sequence of importance for
New Zealand).

From the above reports it appears that New Zealand as a country is playing innovation
catch-up with most of the OECD countries, and that they are increasingly successful in doing
so. While the country’s firms are introducing new products and processes at a similar rate to
firms in European Union (EU) countries, there is little benchmark information on the quality
or value of these innovations or the impact they are having on firm-level productivity.
Ultimately market forces determine whether, and to what degree, innovations are absorbed
into world economies. Market force ‘decisions’ are inevitably based on the quality, and not
the quantity, of such new innovations. This paper argues that while it is important for the
advocates of innovation to focus on the desired outcomes of innovation, they should pay at
least equal attention to the factors that determine the quality of innovations. Such factors
include (Ministry of Economic Development, 2005):
1. effective and competitive markets;
2. a dynamic research and development system;
3. high quality skills and basic information for innovation and entrepreneurship;
4. well designed, targeted and evaluated business assistance programs;
5. capital markets that can effectively recognize a country’s innovation opportunities;
6. effective business links, both nationally and internationally; and
7. the performance of the innovation system.

The authors believe that while much progress is being made in New Zealand to optimize factors 1 to 6, not enough is being done to increase the performance of the country’s innovation system (factor 7 above), in particular at firm level. Firms are often quick in making statements about their perceived state and level of innovation, and also claiming that their managers are good at managing innovation, but they cannot quantify it or back it up with factual data.

To date little research has been carried out in New Zealand to shed light on how well managers are managing innovation within their firms. The performance of innovation systems in part depends on how well these systems are being managed. Despite plenty of scholarly activity in this field of study, much confusion remains to this day as to what exactly constitutes managing innovation. Scholars often confuse this important function by limiting its scope to those activities related to managing the various stages in the innovation process, e.g. idea generation. A comprehensive, generic framework is still lacking. In this paper the authors propose a much broader view of innovation management that includes not only aspects of the innovation process, but also strategy, metrics, supportive organization, leadership, and innovation tools. This framework seamlessly integrates with the generic-functions-theory of management (Fayol 1949). With a suitable framework in place, the authors continue to explore one of its building blocks, namely organizational innovation capability assessment. The concept of innovation capability assessment, often referred to as innovation audit, is here considered to be the first step of the innovation management process, and involves the definition of innovation metrics and the ongoing measurement of a firm’s innovation performance.

2. Literature review

2.1 Managing innovation

Innovation means different things to different people. As there is no single authoritative definition for innovation and its underlying concepts, including the management of innovation, any discussion on the topic becomes difficult and even meaningless unless the parties to the discussion agree on some common terminology. For the purpose of this research we shall use two definitions, each contributing valuable insights. The first is the New Zealand Ministry of Economic Development’s definition (MOED 2005): “Innovation is the dynamic process through which firms create new economic value by creating, adopting and adapting knowledge into new or improved products and services, processes and organizational arrangements.” The second is by Tidd et al (2005, p.40): “Innovation is a core process concerned with renewing what the organization offers and the ways in which it generates and delivers these”.

In the context of this study, a particular significant point to note from these definitions is the fact that innovation is a process, which implies that it can be managed. This is indeed good news, as it means managers can proactively plan, organize, control and lead all aspects of innovation and thereby presumably positively impact the desired outcomes. The bad news however, reverberated by Tidd et al (2005, p. 571), is that innovation is complex, uncertain and almost impossible to manage. They claim that in conditions of complexity and change, which
are reminiscent of managing innovation, there are no easily applicable recipes for successful management practice.

The second significant aspect that flows from the second definition is that different organizations justifiably do it differently (“… and the ways in which it generates and delivers these”). In support of this view is the observation that innovation is a context-dependent phenomenon (Wolfe, 1994) which means it is influenced by environmental, organizational and individual level variables. Furthermore, because of differences in technological, market and organization-specific characteristics among industries and firms, there is unlikely to be ‘one best way’ or universal formula for successful innovation (Tidd et al, 2002 p.128). Koen et al (Belliveau, 2002 Chapter 1) explain why they prefer using the term “effective innovation practices” as opposed to “best innovation practices”. Similar to Tidd et al they feel the latter term implies that there is a best practice that should be followed. In reality, however, certain practices may be “best” only in particular company settings. The use of the term “effective” indicates that certain practices have been found to be successful for particular companies. Against this background Tidd et al suggest a contingency approach to managing innovation. Central to contingency theory is the concept that no single organizational structure is effective in all circumstances, and that instead there is an optimal organizational structure that best fits a given contingency, strategy, task uncertainty or technology (Donaldson, 1996). Other experts such Peters and Waterman (1982), Cooper and Kleinschmidt (1987), and Gupta and Wileman (1990) prefer using the term “better practice”.

While acknowledging the difficulties expressed by the various scholars above, the current authors do not fully succumb to the view that it is too difficult or even impossible to find a recipe that satisfies everybody under all possible circumstances. By its nature innovation is uncertain, complex, and constantly changing, but the management thereof is far less ambiguous and uncertain. The same fundamental management principles that govern other aspects of business should equally apply to managing innovation, and hence can be conceptualized in a generic framework which is developed in the sections that follow.

2.2 Innovation Routines/Processes

In specifically dealing with the management of innovation, Tidd et al (2002) introduced the concept of organizational routines. They theorize that all organizations develop particular ways of behaving, or firm-specific routines, which become ‘the way we do things around here’ as a result of repetition and reinforcement. Ultimately these routines are either strengths, that help move the organization in the right direction, or barriers that prevent progress. They make a strong case that successful innovation management is primarily about searching for, building and improving effective integrated routines or processes.

2.3 Innovation Tools

Many of these innovation routines involve the use of different innovation tools, which Tidd et al (2002) define as structured aids to help analyze (diagnose) and act in managing the innovation process. On their site Innovation Management Toolbox (2006) they provide an introduction to innovation tools and a brief overview of some popular ones. At the simplest level the authors see innovation tools as something which helps get a job done, but they stress that it is not a substitute for the person doing the job. Tools can be fairly simple (back of the envelope stuff), to very complex applications such as computer based aids to analysis. All tools have one thing in common, though, the fact that it can be used to help get something done in an effective and efficient manner.
2.4 Innovation Strategy, Innovative Leadership and an Innovation Supportive Organization

"There is no innovation without a supportive organization" (Ideaction, 2007). But what constitutes an innovation supportive organization? Innovation scholars have unveiled numerous factors that, to a greater or lesser degree, have the potential to make organizations more conducive to innovation. It becomes a no-brainer for managers who are keen to create innovative organizations, to emulate and manage these factors in their organizations. As it is not the main focus of this research, only a limited synopsis of factors is provided in Table 1. This list by no means claims to be exhaustive.

Table 1: Characteristics of Innovative Organizations

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<thead>
<tr>
<th>Characteristics</th>
<th>References</th>
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<tr>
<td>Innovative leaders who provide a strong and significant influence on organizational learning which indirectly affects firm innovation. Leaders who stimulate employees' idea generation and application behaviour.</td>
<td>Aragón-Correa &amp; García-Morales 2007; de Jong &amp; Den Hartog 2007</td>
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<tr>
<td>An innovation strategy that outlines a long-range plan for innovation and technology management.</td>
<td>Ettlie 2000</td>
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<td>Managers at all levels that support innovation.</td>
<td>Buhler 2002</td>
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<td>A culture that encourages creative thinking, innovation, and risk-taking. One that supports and guides intrapreneurial liberty and growing a supportive and interconnected innovation community.</td>
<td>Sheppard &amp; Canning 2006; Jamrog et al 2006; Pinchot &amp; Pinchot 1996</td>
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<tr>
<td>Cross-functional teams that foster close collaboration among engineering, marketing, manufacturing and supply-chain functions.</td>
<td>Diether et al 2006; Eppinger &amp; Chitkara 2006</td>
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<tr>
<td>An organization structure that breaks down barriers to innovation (flat structure, less bureaucracy, fast decision-making, etc.).</td>
<td>Chanal 2004; Buhler 2002</td>
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<tr>
<td>A reward system that reinforces innovative and entrepreneurial behaviour.</td>
<td>Saleh &amp; Wang 1993</td>
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2.5 Innovation Metrics and Organizational Innovation Capability Assessments

Guest (2005) argues that, in addition to having innovation processes with supporting innovation tools in place, the effective management of innovation also requires organizations to pay attention to innovation performance metrics. In contemporary innovation literature the practice of assessing the state of innovation within organizations is commonly referred to in two ways, interchangeably. The first is ‘innovation audit’ and the second is ‘innovation capability assessment’. In this report we shall refer to it interchangeably.

Other leading thinkers on innovation also agree on the importance of measuring innovation, and suggest it is a good place to start for any organization committed to innovation. Innovation metrics has two main purposes (Muller 2005). First, it helps managers make informed decisions on objective data, and second, it affects behaviour by helping align goals and actions with the best interests of the company. Peter Drucker (Amidon 1998) claims that innovation, and the ability to measure the performance thereof, are essential competencies for the future. Mark Fuller, chairman and CEO of the Monitor Group, was recently quoted as saying “competitive advantage roots best in soil nourished by disciplined,
sustained innovation…” (Prospero 2004). He continued saying that innovation is impossible to sustain without rigorous, and relentless, efforts to measure and improve performance along all relevant dimensions. And as the quality guru, W. Edwards Deming, once said, “If you don’t measure it you can’t manage it.”

Measuring innovation is not a once-off process, as Fuller implies, it should be monitored on a regular basis. The term ‘audit’ means assessing, checking, evaluating, and improving performance (Tate 2003). Tate suggests the process should be designed to help organizations think, compare, illuminate, learn, plan and improve. In this context they define innovation as a process involving the generation and implementation of new ideas, practices or artefacts within an organization (Van den Ven et al 1989).

At present there are almost as many approaches to measuring innovation as there are innovation audit tools. These audit tools can be broadly categorized in three categories. The Internet-based audits (National Centre of Excellence in Functional Foods 2005; Innovation Network Innovation Quotient 2005; Thunderbolt Thinking 2005; The Idea Centre 2007) are often of the self-assessment, free-to-use types that provide real-time processing of submitted data. Users typically answer a few (up to twenty) online questions whereupon they are instantly provided with output, which merely consists of one to six high-level innovation indices that really only serve the purpose of stimulating interest in the rest of the paid-for services on offer on these sites. Then there are the more advanced, free-to-use innovation audits such as the Innovation Climate Questionnaire (2005) and that of The Windeaters (2004). These audits typically require more input and provide more detailed reports, but often fall short because of its apparent lack of incorporating a sound theoretical basis in its design. As a result the metrics offered by these tools offer a limited view of a company’s innovativeness. Finally there are the commercial or proprietary innovation audits that are generally quite thorough in its assessment, and founded on sound theoretical principles. Examples in this category include Fast Company’s Innovation Scorecard (Prospero 2004), William Tate’s Business Innovation Audit (Tate 2003) and the Value IQ instrument, first introduced by David and Jim Matheson in 1998 (Matheson 1998). In the true spirit of New Zealand innovation, the country recently devised its own tool for measuring innovation performance, called the Innovation Monitor™ Survey (IdeasAccelerator 2007).

Despite the large number and variety of audit tools, Rae (2006) observes that “it is very curious to note that at a time when the business world uses such sophisticated tools to measure just about everything, this same type of universal yardstick has yet to emerge for innovation”. The authors argue that, in the absence of such a universal yardstick, it is still better to make an attempt at measuring innovation than not to measure anything at all.

2.6 A new conceptual framework for managing innovation

To this day many business owners, CEO’s and business managers continue to struggle with the key question of how innovative their organizations are, and what they can do to improve their innovation performance. Possible reasons for this include failure to measure (Muller et al 1996), choice of limited metrics and tools (Rae, 2006), a perceived lack of appropriate metrics (The Boston Consulting Group 2005) or simply not having a true understanding of what innovation really means (Muller et al 1996).

From the literature review six key elements or determinants emerged that aught to be addressed in the pursuit of managing innovation effectively. These include (1) the identification of appropriate innovation metrics and its subsequent and continued measurement, (2) the
formulation of an innovation strategy, (3) developing and implementing suitable innovation processes, (4) making use of appropriate innovation tools, (5) having an innovation supportive organization, and finally (6) providing innovative leadership. Integrating this view of innovation management with the four functions of management, it is possible to devise a generic framework as depicted in Figure 1. It is not claimed that the determinants in this framework are the only ones that matter; it is merely proposed that sufficient evidence exists to confirm its importance in the context of managing innovation and achieving quality innovation outputs.

In the first of a series of research papers that will investigate all six of these elements in the New Zealand setting, the current paper only addresses some general issues that relate to innovation management in New Zealand, and more specifically, the first element which is about innovation metrics and organizational innovation capability assessments.

3. Research Methodology

In the first instance a literature review was done to identify the key elements of innovation management. This was followed by an empirical exploratory research component which involved a nationwide Web-based survey. The first part of the survey collected general data on innovation management, while the second focused on the first key element of innovation management, namely innovation metrics and capability assessment. The open-source survey software Unit Command Climate Assessment and Survey System (UCCASS) was used to collect primary data from New Zealand organizations. Personal invitations were mailed out to 500 randomly selected CEOs/managers in a database of New Zealand organizations. In an effort to increase the sample size, participants were also asked to invite appropriate organizations to take part in this survey. By the survey cut-off date a total of 83 responses were registered (65 male and 18 female), representing a wide range of industries. The two biggest contributions came from the manufacturing (27.7 percent) and professional, scientific and technical services (13.25 percent) industries. More than 70 percent of organizations in the sample have been operating for longer than ten years. By chance the sample was almost equally represented by Small and Medium-sized Enterprises (SMEs) (48.19 percent) and those with twenty or more than full-time employees (51.80 percent) – categorized as large enterprise. (The New Zealand Ministry of Economic Development (2005) defines enterprises with nineteen or less full-time employees as SMEs.) Almost 40 percent of the sample was found to employ more than 50 full-time staff. Approximately one quarter of participating organizations’ annual turnover are less than NZ$1 million, another quarter falls into the NZ$1 to 5 million band, while the remaining 50 percent earn more than NZ$6 million per annum in revenue. Half the sample operates exclusively in New Zealand, with only approximately ten percent indicating exports in excess of 50 percent originating from export sales.

The survey consisted of 38 questions of which 24 made use of a 7-point Likert scale, with added options of ‘Don’t know’ and ‘Not applicable’. The quantitative analysis focused on the views and attitudes of these managers, firstly towards innovation management in their organizations, and secondly, on the concept of organizational innovation capability assessment.

Figure 1: Innovation Management Framework
4. Results and Implications

When asked if innovation was crucial to the organization’s long-term survival and success, the majority of respondents (84.3 percent) felt that this was indeed the case for their organizations. Just over half of the respondents strongly agreed with this statement, while nobody indicated that the question was not applicable to their organization. This result indicates that the sample strongly represents organizations that view innovation as relevant to their business model.

Almost three quarters of respondents indicated that they felt comfortable to describe their organizations as being innovative, at least to some degree. However, less than 10 percent claimed to be very innovative. It seems there’s a remarkable downward shift when comparing the perceived importance of innovation to how participants regard their organizations’ actual innovation performance is. This observation is further supported by an almost across-the-board view that significant scope for innovation improvement exists. More than half the respondents indicated dissatisfaction with the returns on investment they got from innovation projects, while only about one fifth said they generally achieve great results. Surprisingly two thirds of the represented organizations have a high incidence of innovations that are not commercialized.

In an open-ended question respondents were asked what they thought was the most important condition for innovation. In top spot (37 percent) respondents answered in favour of some organization cultural aspect that supports innovation. Phrases that were used include: “Having a staff and organizational culture that supports creativity”; “A culture that rewards creative thinking and that accepts risk as a natural consequence of change”; “Freedom for ideas to be explored without fear of failure”; “Freedom of thought; encouragement to think outside the square”; “…celebrating and rewarding those that are successful”; “Open communication”; “Flexibility of time and resources for staff to try new techniques or
equipment”; “A workshop culture that understands and appreciates the value of failure”; “Willingness to tolerate and fund failure”; “A learning-focused culture”. Of almost equal importance (20 percent) and in second place, are the right type of staff (employees) and market-driven innovation. Less important factors that were identified include the right leadership and top management support for innovation, as well as sufficient financial and time resources.

Approximately a quarter of respondents indicated that the most important condition for innovation that they indicated in the previous question, was not present to a satisfactory degree, or being practiced in their organizations.

Over 80 percent of respondents agreed that innovation is a process that can be managed, while only 36 percent acknowledged that it is a difficult process to manage. Nobody rated themselves as excellent managers of innovation. To the contrary, most managers/CEOs rated their organization’s collective innovation management skills as being quite average. A staggering 30 percent admitted that their organizations were not great at managing innovation!

Can innovation be managed without it being measured? This is the one question that had the biggest evenly spread responses across the board, from strongly disagree to strongly agree. Clearly there are mixed opinions on whether measurement is an essential step in the innovation management process. As a result of this confusion, which was confirmed by the next set of responses, approximately seventy percent of participating organizations seem not to have a clearly-defined set of innovation indicators. Not surprisingly, when asked if organizations regularly monitor their innovation indicators, the same negative pattern in response was observed as for the preceding question (do you keep innovation metrics?).

5. Conclusions and future research

While almost three quarters of the survey respondents viewed innovation as significantly important to their organizations, most indicated that they were underperforming and felt there was significant room for improvement. Only twenty percent of respondents seem to be greatly satisfied with the returns on investment they generally get from innovation projects. This finding is in line with that of The Boston Consulting Group’s in the USA, reported earlier. For an alarming 66 percent of represented organizations the reality is low rates of successful commercialization of innovation. An innovation-supportive culture, a strong market focus, and the ‘right people on the bus’, were identified as the most important criteria for successful innovation. Sadly, about one quarter of respondents said that the criterion which they identified as the most important for successful innovation, was not apparent in their organizations. One can only wonder whether these respondents, when they answered this question, came to realize that this deficiency reflects directly against their inability as leaders to champion innovation within their organizations.

The research further indicate that New Zealand managers and CEOs view innovation as a process and generally don’t regard it as a particularly difficult process to manage. Yet strangely enough the results show that by large New Zealand organizations are not doing a great job at managing innovation. What could possibly be the reason for this? The authors believe that part of the answer can be found in the overall inconclusiveness expressed by respondents regarding the issue of whether innovation metrics is essential or not for the effective management of innovation. Clearly they think it is not essential.

An interesting observation is that when participants rated their organizations’ innovation
efforts, nobody chose the “I don’t know” option. Instead, as was reported earlier, more than seventy five percent had no difficulty in responding definitively to this question. The real question now is this: In the absence of factual innovation metrics, on what basis did they make these judgments? Is it based on experience gained over a period of time within the organization, or simply based on ‘gut feel’? Whatever the reason, if innovation is not measured, any opinion regarding the degree of innovation is highly subjective and purely speculative, and prone to error. Moreover, as shown by this research, managers and CEOs are inclined to overestimate their innovation efforts in the absence of hard evidence.

In conclusion, the findings of this research should serve as a wake-up call to those New Zealand’s managers and CEOs who are not currently getting the innovation results that they desire. From the limited scope of this research some obvious weaknesses became apparent. Strong leadership is lacking in creating ‘innovation friendly’ cultures in organizations. This is a top-down activity that requires very specific actions to be sanctioned and cultivated by top management over time. A second area of weakness is the apparent reluctance to define and measure innovation metrics. It is as if managers are in total disregard of its importance. One could almost say managers seem to treat innovation metrics with disrespect. It would be in the best interest of all stakeholders if organizations start paying attention to innovation metrics and treat it with the same degree of importance as they do with corporate financial reporting.

This paper provides a practical framework for managing innovation in firms across a variety of industries and business sectors. By analyzing and assessing each of its components separately, one can gain a fair view of how well innovation is managed within a firm. As a starting point this paper also provides a general overview of the state of innovation management in New Zealand firms, and in particular how managers and CEOs view the value of innovation capability assessments. The next papers in this series will address the remaining determinants of effective innovation management in the New Zealand context. Future research could also attempt to use the framework as basis for developing a set of new metrics for measuring innovation management within individual firms.
References


