OPEN INNOVATION

From knowledge to dollars
By Kenneth Husted

Innovation is one of the main drivers of economic wealth in developed societies, and knowledge-intensive and high-tech innovations have driven the most prosperous societies for the last couple of decades. The question for us now is whether our strategies toward innovation – on both organisational and national levels – are up to scratch with the challenges of the 21st century.

For many years innovative companies have allocated resources for in-house research and development (R&D) to capture benefits from the knowledge production they sponsor. The economic success of this strategy was reliant on building protective fences around knowledge to secure monopoly rents. Many national innovation systems have also been designed this way, with a strong focus on intra-organisational knowledge.

There are many signs that these well-proven innovation strategies are under pressure from the diversity and complexity of globalisation. The explosion in global knowledge production is having a dramatic impact. In fact, many traditional, R&D-based companies are rethinking the way they organise, fund and capture value from knowledge. The new winners are companies that subscribe to “open” innovation, and have a strong ability to combine input from a variety of sources and collaborate with other organisations – without incurring high transaction costs or sub-optimal positions in the value chain. The essential building blocks of this approach are agility and frictionless collaboration with numerous partners, and a strong ability to reconfigure knowledge and technology to meet multiple market needs. It is social innovation that allows clusters (or innovation hives) to coordinate and reconfigure cheaper and faster than larger, well-established organisations.

Here are some of the opportunities and imperatives of open innovation:

Build receptive capacity:
Robust business models are increasingly dependent on the ability to keep the configuration of technology, scientific breakthroughs, market needs, and the availability of complementary resources and value propositions, in a state of fluidity. A certain degree of confidence about a potential market is needed, but systematic analysis of trends can do more harm than good. Instead, build a strong receptive capacity that enables you to capture and analyse feedback about the potential for an innovation. Today, you actually need to change trends and customer behaviour in order to make a new technology or service profitable.

Avoid early lock-in to a business model:
Financial incentives often limit thinking to a specific market, much too early in the process. This stifles innovation and creative thinking about how a technology or scientific breakthrough could be combined with potentially larger value propositions and business models. The desire to protect value actually undermines the ability to create value.

Fund universities for Kiwi entrepreneurs:
The government needs to make decisions about whether it wants to invest in universities as engines for long-term growth and value creation, or encourage universities to seek contract research and licensing from international companies – therefore allowing the true value creation opportunities to be exported to richer societies?

Universities as the potential catalyst:
It’s important to develop new strategies for the role of universities. In societies dominated by SMEs, national universities should play the crucial role of gatekeeper, and facilitate the interaction between domestic industry and international knowledge. Universities help industries develop a capacity for identifying opportunities and assimilating knowledge. The ability to play the role depends on whether universities are recognised internationally as sources of quality research, focused on niches where a small budget can win the race for scientific discovery.

New Zealand is known for having (at least in the private sector) an easy-going, non-contractual and non-bureaucratic approach to industry interaction and commercial activities. That could well prove to be a core asset in designing the winning and sustainable innovation system of the future. The question we need to answer is whether we have the courage to create open boundaries and frictionless communication. Otherwise it’s inevitable we will pass golden opportunities to a more entrepreneurial and collaborative society.

Dr. Kenneth Husted is a Professor in Innovation and Research Management at the University of Auckland Business School, and Head of Tamaki Division.

University of Auckland Business Review
New Zealand is a country of small business. To be precise, we are a county of micro-, small- and medium-sized businesses (SMEs) – enterprises employing less than 100 people. Together, these three categories make up nearly 90 percent of all New Zealand businesses and account for just over 60 percent of all employment. Increasingly, SMEs are being called on to provide the platform for economic growth both domestically and internationally. While this is not news to most of you, what is perhaps less well known is that the vast majority of these SMEs are probably family businesses. I say probably because very little research has been carried out in New Zealand to give us a true indication of the level of family firm activity.

This is not the case overseas. Internationally family firms are commonly cited as making up nearly 80 percent of all registered companies – a figure consistent in most European countries and in North America. Closer to home, a 1997 survey in Australia indicated that 75 percent of businesses were family-owned and these businesses employed approximately 50 percent of Australia’s workforce. What limited research has been done here indicates that these figures are comparable to those in New Zealand.

If we are looking to develop a platform for economic growth within the SME sector, then we need to build on the successes of entrepreneurial family firms. Over the past few decades centres and institutes for family business have been established throughout the world particularly in Europe, North America, and Australia. As a result, there is a growing body of work discussing why some family businesses have been successful, the challenges they face and how other businesses can benefit from their experiences. For example, successful family firms behave in flexible, innovative, adaptive and responsive ways and tend to have a more long-term focus. And importantly for this country, family businesses can provide a strong platform for intergenerational entrepreneurial activity – taking the success of the founding generation(s) and creating new businesses that expand on this success. So is this the case in New Zealand?

Working with participants from the ICEHOUSE Owner Managers Programme, we are developing detailed case studies exploring the issues and challenges faced by second, third and fourth generation family businesses in New Zealand. Initial findings indicate that family businesses here are very similar to their international counterparts. Each generation is keen to “earn their stripes” and leave their mark on the business. Consistent with overseas findings is the inherent trust that exists between family members. This is particularly useful for family businesses working in international markets. Passing on networks formed by the CEO of a business is a challenge – but much easier when it stays in the family.

Of course not all aspects of family
Why is there suddenly so much interest in supply chains? We've always moved materials from their raw form through to the final consumer. The difference now is that organisations throughout the process – from large retailers to relief agencies – understand that getting this aspect of their operations right can realise large financial rewards.

Conversely, getting it wrong can be very painful – recent research on more than 500 supply chain disruptions reveals an average decline in share price of 40 percent.

Here are three broad areas for designing, managing and improving supply chains:

Configuration: New Zealand was a relative latecomer in adopting the concept of a Distribution Centre. As recently as a decade or ago many NZ retailers and merchandisers were still receiving most or all their goods directly from manufacturers – leaving themselves buffeted by the winds of demand and supply uncertainty, and incurring inordinately high costs of excessive stocks, unsatisfied customers, and trans-shipments. Transport deregulation, Third Party Logistics firms, and software have assisted the transition to a two-, or sometimes three-tier network. Leading companies are now experimenting with variations on this, including the use of supplier hubs, cross-docking, and/or vendor-managed inventory. The key – sadly missed by many firms – is to fit the design/practice with the strategy/priorities of the firm and its products. Some products need responsive supply chains optimised for speed, and others optimised for cost. A "one-size-fits-all" approach, so prevalent in New Zealand management thinking, generally

Dr. Christine Woods is a Lecturer at the University of Auckland Business School.

Supply chain savvy

By David Robb

Business are plain sailing. We could say that family business is a bit like 'The Force' – it has a dark side and a light side. By exploring both sides, the successes and limitations, we can improve our chances of growing future generations of successful businesses.
performs poorly.

Co-ordination: Configuring a supply chain may be the easy part, for integrating multiple enterprises in different tiers is fraught with difficulties – stemming partly from technical issues (e.g., ICT-related and financial incentives) but mostly from behavioural/political concerns – for trust is never easy to build, and readily lost. Yet there’s much fruit in co-ordination – including reducing the likelihood and impact of disruptions, and moreover the now infamous “bullwhip” effect where self-induced variability in orders and inventories increases dramatically as one moves up the chain. Obtaining and appropriately using information from both downstream (e.g., point-of-sales data), and upstream (e.g., location of goods using GPS) goes a long way to reducing this phenomenon.

Decision Analytics: Superb network design and great relationships only go so far – one still needs to make intelligent operational decisions, such as when and how much to order. At the heart of these decisions is forecasting. While it’s notoriously difficult in New Zealand (due to higher variability associated with lower demand) it often can be improved, e.g., through appropriate tuning of parameters and/or combining forecasts). Just as importantly, the forecast error needs to be measured, and incorporated when deciding on order quantities. Such decisions should also take into account uncertainty in lead-times as well as the relative cost of shortages and inventory carrying (which may well differ for different products). Delivery performance needs to be measured to drive improvement. Again, while technologies such as RFID and GPS are assisting in improving decision making, the real gains are often in politicised areas such as generating supply chain and company-wide performance metrics for forecasting and delivery.

One theme emerging is that outstanding performance sees supply chain in broad terms. Firms viewing Supply Chain as the flow of goods to the customer are missing the perhaps more critical aspect of the flow of information, and finances, and moreover, bi-directional flows. Similarly, outstanding firms are recognising and incorporating supply chain implications in decisions in other business areas, such as product design, off-shoring production, and employee development.

New Zealand is flush with low-hanging fruit in the above areas. However, we must beware of directly translating practices from other environments. We have unique demographic, geographic, trade, and financial conditions (we also suffer from rather antiquated practices like 20th of the month trade credit terms). Developing and deploying appropriate supply chain skills and technologies will play a key role in improving our performance.

Dr. David Robb is an Associate-Professor of Operations Management at the University of Auckland Business School. His research and consulting focuses on improving Supply Chain performance.