An approach to characterising organisation culture with an example linked to innovation

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Abstract

The expression "organisation culture", perceived as behavioural norms and (frequently unspoken) rules related to knowledge sharing and decision-making, appears as a significant influence factor in a number of aspects of management research. The authors have been conducting parallel research studies in the fields of inter-organisational collaboration and innovation for some time, and have noted references to "a culture of collaboration" and the need for an "innovative culture" in these fields. Our objective is to assist individual firms in achieving beneficial outcomes from active collaboration and from embracing innovation, and as part of that process we have been addressing issues of organisation culture. Some people are comfortable with the term "culture" at the conceptual level, but others want some more specific form of characterisation that helps define areas for improvement and has clear linkages to enterprise imperatives. This paper presents an approach used in such a characterisation, and discusses its application to a culture of innovation.

Organisation operational drivers

During research into some forms of collaboration (global virtual enterprises: Globemen, 2000), it has been found convenient to separate operational requirements into two families; one associated with the mission of the enterprise, which tends to emphasise factors specific to a market sector, and the other concerned with management and control, which tends to be generic across market sectors. Enterprise models reflecting this view have been developed for application in a wide variety of dreumstances (eg GERAM, 2000). The mission component has an emphasis on such things as core competencies (eg Hamel and Prahalad, 1990) that support the focus and competitive advantage of an organisation. The management and control component may be generalised at a high level of abstraction in terms of those

systems that any enterprise needs: Leadership and Strategy, Commercial, Human Resources, Operations, Quality, Innovation and Asset management systems.

Drivers of organisation behaviour

Parker (1999) studied the interaction between commercial and not-for-profit enterprises, and observed a growing mutuality of interest between them. Each did some things better than the other, as was illustrated by a comparison of ten factors influencing their decision to partner in some way: impetus, public rationale, problem definition, time frame, structure of the partnership, interdependence, approach, personnel involved and outcomes sought. The point being made here is that even though an organisation may be market driven or value driven, each one required components of both attributes for optimal operation. This is reinforced by De Geus (2002), who notes that the average life of a Company focussed only on market factors is less than ten years, and that Companies that endure balance underlying values with changing market opportunities.

There is also a widely held view that what gets measured gets done. This is reflected in the enthusiasm for key performance indicators and balanced scorecards (eg Kaplan and Norton, 1992). Setting standards is an important aspect of organisational culture. Organisations do not exist in a vacuum, and customer expectations, the regional community where an organisation is located, and the dominant professional community its employees are drawn from all influence behavioural norms. Cope and Kalantzis (1997), and Leonard and Strauss (1997) both extol the virtues of diversity in stimulating innovative and productive ideas, whilst maintaining organisational alignment

Some consider that leadership has the greatest influence on organisational culture. It is generally accepted that a good leader will provide vision, be able to mobilise people, and will set standards. At the appropriate occasion this will require the application of conceptualisation competencies, people interaction competencies and technical competencies. A representation of actions arising from combinations of these attributes and competencies is shown in the table below. This has been used for more than a decade in industry leadership development programs by one of the authors. It has been used at multiple levels by introducing as time horizon factor. For example, "assess and advise where we are going and how we will get there" may relate to next month at the coal-face or next decade at the strategic management level. People have been invited to map their own areas of relative strengths and weakness on this table, and this is helpful in identifying their own cultural orientation, and by looking at these maps for a number of people across the organisation, the likely leadership emphasis within that organisation.

According to Youngblood (200) most highly successful company maintain the primary source of its success is directly attributable to its culture. The key element in a company's culture according to Knox (2003) is the organisation's effectiveness in developing its systems and implementing strategy and this is done through the commitment and skills of its employees. Culture according to Tucker (2001) can be described as a company's values, traditions, priorities, and paradigms. While a company's culture may be centred on creativity managers need to ensure that its climate does not stifle innovation by fostering an unwillingness to make a mistake or take a risk.

GENERIC COMPETENCY	CONCEPTUAL	PEOPLE	TECHNICAL
GENERIC ATTRIBUTE			
VISION	Assess and advise where we are going and how we will get there	Assess and define what kind of people and attributes we will need for the future	Identify what tools and techniques will be needed for the future. Apply problem-solving techniques to roadblocks
MOBILISING PEOPLE	Translate concepts into action plans involving people	Communicate, motivate and resolve conflict	Provide career / discipline counselling, develop and train peers and subordinates
S TANDARD SETTING	Define competitive performance targets, state short and long term goals and practices	Maintain discipline of people and processes, set ethical standards	Define standards of workmanship to satisfy customer needs and Enterprise objectives that complement and reinforce stated operational needs

Table 1 Actions involved in enacting leadership Some key questions

The approach of focussing only on leadership as setting the culture has some shortcomings, as organisational norms are also influenced by the history of the organisation and the people in it. Clearly, culture is a complex multi component concept. In broad terms, we are suggesting that this complexity may be captured in a framework comprising some combination of operational requirements and market / value drivers. At the first level of abstraction, organisational requirements are reflected in mission, which determines some specific capabilities needed, and in management and control components, which influences generic capabilities needed. Again at a first level of abstraction, market and value drivers shape organisation culture, with market drivers influencing what things are done, and value drivers influencing how they are done. Combining these factors together and asking some key questions, as outlined in table 2 below, provides a framework for exploring aspects of organisation culture that parallels the view of conceptual / people / technical leadership actions presented in table 1.

	IS THE ENTERPRISE MARKET DRIVEN? (influences WHAT things are done)	IS THE ENTERPRISE VALUE DRIVEN? (Influences HOW things are done)
ENTERPRISE MISSION R EQUIREMENTS (Influences specific capabilities needed)	What are our core competencies — what do we do? How do we leverage these competencies to win new business?	 What is our vision – what do we value in what we do? How do we practice what we preach?
MANAGEMENT AND CONTROL R EQUIREMENTS (Influences generic capabilities needed)	How do generic business functions support our competitive advantage? How does our organisation structure and management practices support customer oriented organisational alignment?	 What defines our business ethics? Do we have effective internal and external communications? Does our culture and climate support individual initiative?

Table 2 A framework for exploring organisation culture

Exploring innovation culture

The circumstances supporting innovation vary from company to company, and depend on the mission of the company (for example does it design and manufacture it's own product, or does it provide a service) and on the operational values of the company (for example does it encourage risk-taking or not). A particular company may be predominantly market-driven, constantly adapting to meet shareholder requirements, or value driven, constantly balancing the short and long term needs of all stakeholders.

Companies that endure blend all of these things into practices that help make them unique, and by characterizing a particular company using four parameters (market/value, mission/control), a better understanding of what motivates the company can be obtained. Table 3 below suggests some generic questions oriented towards innovation attributes that might be asked to surface a company's unique attributes that may be deeply embedded in its day-to-day practices. This variant of Table 2 places a particular emphasis on innovation, drawing on an international study of innovation in SMEs (Little, 2001) that identified innovation capacities required, grouped under six headings: Vision and strategy, managing the competency base, creativity and idea management, culture and climate, intelligence and organisation and process. Discussing these questions helps reinforce who we are and our current position, a situation that may support or inhibit the kinds of innovation that are to be pursued.

	MARKET DRIVEN (influences whatthings are done)	VALUE DRIVEN (influences how things are done)
MISSION R EQUIREMENTS (influences specific capabilities needed)	What are the company's core competencies — what do we do? How do we leverage core competencies? Understand and manage own core competencies and capabilities Ability to develop new core competencies Identification and management of background competencies (see management & control below) Ability to filter and select ideas and initiatives on the basis of fit to core competencies What is our source of competitive advantage — what wins new business? What is our mission statement — where do we want to go?	What is our vision, and what do we value in what we do? How do we maintain the vision? How do we practice what we preach? Openness to ideas from all sources Creative idea generation Idea management Integrated problem solving Managing for creativity
	MARKET DRIVEN (influences whatthings are done)	VALUE DRIVEN (influences how things are done)
MANAGEMENT AND CONTROL R EQUIREMENTS (influences generic capabilities needed)	How do generic business functions support our competitive advantage How does our organization and process support innovation? Appropriate structure Ability to blend creativity and control Seamless integration across functions Effective resource deployment Strong communication skills Ability to balance customization with simplicity Capability to make wise use of external technology resources Understanding and use of networks with customers, suppliers and other firms for product creation/supply Appropriate freedom to discover Ability to develop the organization Commitment to the development of people Understanding of risk Do we have intelligence and feedback practices supporting innovation? Generation and protection of technological knowledge External knowledge absorptive capacity Knowledge articulation and deployment Understand own performance and limitations Commitment to customer needs Structured thinking / scanning of future horizons Recognition and screening of new ideas Understanding and using networks for	What defines our business ethics? Is financial control equitably distributed and transparent? Do we have effective internal and external communication? Do our operational norms support innovation? Shared but flexible culture Learning High involvement in innovation across all staff Goal-oriented problem identification and problem-solving Questioning and challenging Respect for individuals Cross cultural awareness Broad range of skills combined with depth in key areas Recognition and reward for innovativeness

Table 3 A framework for exploring a culture of innovation

Embracing a culture of innovation

The business press and governments are imploring enterprises of all kinds to embrace innovation as a matter of survival in the globalised, knowledge economy. Some CEOs respond by announcing that their

company will adopt a culture of innovation. But what has to change? Is the Company already innovative in its current style of operation? If so, will this style of innovation be a sufficient basis to enact the Company's strategic plan? The authors have been working with several companies using a process representation of innovation to explore these questions (see Beckett, Hyland and Soosay, 2002 for details). Some activities in the process: explore possibilities; choose combinations of things that make a unique proposition; manage risk and change to obtain enduring value from an idea – are all impacted by some aspect of corporate culture. From this point of view, it is instructive using the framework presented in Table 3 to examine perceptions about the company mission, its vision for the future, its perceived core competencies, how market and technology intelligence is gathered and shared, and how someone with an idea can progress it. Some companies like 3M have simple rules for these kinds of things (eg Mollema, 1995). Two case studies are presented and analysed to demonstrate the framework for an innovation culture.

Case 1

The culture of innovation is evident on arrival at the Harvest Company, no large shed in a paddock here but a city centre location in an exhibition centre, complete with funky furniture and moveable walls, not a truck in sight. The concept is to develop a creative, agile business model that will drive sales, using a technological infrastructure to increase the speed of information transfer along the supply chain.

Harvest is a highly flexible branded food marketing company with a strong supply chain forming the base of its operation. The supply chain is well integrated and, for the food sector, relatively low cost. Harvest markets products that have a significant point of difference and that it has exclusive rights to produce as the company owns the protected license for the particular varieties of seeds. There are sixteen criteria for selecting products, these being grouped around flavour, time and convenience, value, quality and the overall eating experience. This high level of differentiation allows the construction of a robust supply chain through the identification of a different way of getting from A to B. Harvest have moved away from the traditional wholesaler model, based on the ownership of assets, to a model based on outsourcing, strategic alliances and competing network against network. The present key product focus is on seedless watermelon, mangoes, pineapple and avocados, with a new variety of tomato also showing early promise. Harvest trawl for ideas in the US and Europe with individual creativity being encouraged and seen as an asset to be developed. Linked to this is recruitment based on character rather than the content knowledge of a particular function, with people being responsible for particular processes rather than products or categories, which is the more normal model in this trade.

While there is a very strong foundation and culture supporting innovation at Harvest for long term sustainability the company needs to identify the ways in which it currently practices the process of innovation, and consider ways of doing it better. Management needs to find ways to enhance the company's ability to identify and supply innovative products. Harvest needs to widen its innovative focus from product development to other areas of business development to achieve Company growth objectives. To achieve these objectives management needs to work on internal communication, which at times is poor and can distort critical information sharing. The current strategic imperatives are growing market share, building a robust supply chain, improving product quality and identifying new, highly differentiated products.

The Harvest Innovation Environment

Innovation has been stimulated by the founder and Managing Director, Rob Robson, who continues to explore new directions for the company. He has encouraged respect for creativity and innovation throughout the company. However we consider that the company could ensure continuing and broader benefits if it were to establish a formal process of innovation in all aspects of its operation as it grows, rather than just rely on a few individuals and particular processes. The company has strong core competencies in marketing and distribution, and in the development of special purpose fresh food products, and it values creativity and excellence. It utilises a strong network of growers, suppliers and contractors to minimize costs and ensure delivery reliability. Innovation is clearly a significant part of the company's past and its future. The company envisages large sales growth in its traditional products in the marketplace, and this is expanding. It also envisages growth in traditional markets from the introduction of new products and additional product families. The largest growth, however, is envisaged in new markets from both existing and new products. The company is expanding its supplier base to support this strategy, with a major constraint being inadequate supply. The company is involved in a number of collaborations particularly with growers. These collaborations are intended to enhance the company's effective capability, capacity and market reach.

Harvest Innovation Strengths

Innovation may be implemented via a succession of small steps, or via radical change, sometimes involving stopping current practices rather than enhancing them, and sometimes adopting new practices. Harvest Industries has clearly demonstrable strengths in <u>developmental</u> and <u>adaptive</u> innovation, drawing on the experience of its employees. Its product portfolio has evolved as markets have changed, its supply chain has continuously improved, and its approach to asset management has enhanced the company's capability and capacity and apparently its balance sheet. The practice of regular meetings to identify potential issues and improvements that are then prioritized by operational management and put in place supports incremental innovation. A practice of regularly scanning trade fairs and symposia in Europe and North America for things that may expand the capability of the Company, or be adapted to establish a new capability at reasonable cost has been the norm for many years. Some details of these and other initiatives identified are presented in two portfolios.

	T	T
MISSION R EQUIREMENTS (influences specific capabilities needed)	MARKET DRIVEN (influences what things are done What are the company's core competencies?— Fresh fruit marketing and supply How have they leveraged core competencies? Understand and manage own core competencies and capabilities Identification and management of background competencies (see management & control below) Ability to filter and select ideas and initiatives on the basis of fit to core competencies What is our source of competitive advantage? Knowledge of new unique products and market relationships Securing exclusive access to unique new products What is our mission statement — where do we want to go?	VALUE DRIVEN (influences how things are done) • What is our vision, and what do we value in what we do? • Market leaders in fresh food supply • How do we maintain the vision? • Through scanning the market • How do we practice what we preach? • Through involvement of all employees • Do we value creativity and idea management? • Openness to ideas from all sources • Creative idea management • Managing for creativity
MANAGEMENT AND CONTROL R EQUIREMENTS (influences generic capabilities needed)	Name to go: How do generic business functions support our competitive advantage? Yes How does this organization and process support innovation? Appropriate structure Ability to blend creativity and control Effective resource deployment poor communication skills Ability to balance customization with simplicity Capability to make wise use of external technology resources Understanding and use of networks with customers, suppliers and other firms for product creation/supply Appropriate freedom to discover Ability to develop the organization Commitment to the development of people Do we have intelligence and feedback practices supporting innovation? Good protection of technological knowledge Excellent external knowledge absorptive capacity Limited Knowledge articulation and deployment Good understanding own performance and limitations Excellent commitment to customer needs Ongoing scanning of future horizons Recognition and screening of new ideas Embryonic understanding and use of networks for intelligence	What defines our business ethics? Transparency and market values Is financial control equitably distributed and transparent? Yes throughout the sup ply chain Do we have effective internal and external communication? Good but room for improvement Do operational norms support innovation? Shared but flexible culture High involvement in innovation across some staff Goal-oriented problem identification and problem -solving Questioning and challenging Respect for individuals Broad range of skills combined with depth in key areas Recognition and reward for innovativeness

Table 4 Harvest's framework for an innovation culture

Case 2:

Broens Industries is an expanding SME located at Ingleburn in the Western Sydney economic region that currently employs about 100 people in a variety of activities centred around toolmaking. The Company first started about 20 years ago, and a number of the employees have been with the Company for a decade or more. Artefacts in the lobby of the Company suggest that creativity and workmanship is valued — there are art works made by apprentices, examples of 50 year old measuring instruments and Chinese woodwork. The Company has developed a strategic plan to support continuing growth both by product and market development, and to progressively move towards management practices appropriate to a larger business enterprise. The Company has traditionally provided a manufacturing service, possibly designing special purpose tools in conjunction with its clients. It is developing a presence in support of growth industries such as biotechnology, and in some export markets such as China. The Company has won a number of regional recognition awards for its innovative style of operation. Recently, Broens acquired some machine tool IP and resources from another business that has given Broens its own automation product and a global presence in the automotive market sector. The people from this other enterprise have brought enhanced product development expertise and broader experience in international sales and service with them. The Company now has offices in the UK, USA and China.

The Broens Innovation Environment

In the 1990's Broens Industries consolidated operations in a new plant with room for expansion. Capabilities were progressively enhance via new equipment acquisition, and by in-house upgrading of older equipment owned by the Company, or acquired by it for this purpose. In a variety of ways, the founder of the Company, Carlos Broens proved very innovative in asset management, resulting in solid financial backing and ever growing capability and capacity. During the period, there was intense competition in toolmaking from imported products, and Broens began to specialise in more difficult projects to be undertaken interactively with the client. Small-scale R&D capabilities were developed. The Company expanded into Aerospace tooling, and began making simple automation equipment. There are now three Divisions reflecting this history: Broens Precision, Broens Aerospace and Broens-Kirby automation, each servicing domestic and export different markets, and product R&D is a new focus area for the Company.

The company actively seeks technology intelligence from attendance at international trade fairs, and through its technology supply chain. Management visits to and by customers are encouraged to gather market intelligence. These activities are used by the Managing Director to identify trends and to position the Company for the future. In the 1990's Broens Industries entered into a collaborative venture with several other toolmaking companies to enable them to pool resources for larger tasks, and in pursuing export market opportunities, and this collaboration has opened up additional opportunities for the partners in terms of resource sharing during workload peaks and combined purchasing deals. The combination of this experience in collaboration, and the international marketing and project management experience of the new staff is positioning Broens well to take on an expanded role in international aerospace projects.

Broens Innovation Strengths

In 2002, an innovation audit was carried out at Broens, and this indicated the main focus of innovation activities had been in asset development, in customer problem-solving, and in incremental improvement in both manufacturing and business processes. Small team problem solving was the norm. Innovation may be implemented via a succession of small steps, or via radical change, sometimes involving stopping

current practices rather than enhancing them, and sometimes adopting new practices. Broens Industries has clearly demonstrable strengths in <u>developmental</u> and <u>adaptive</u> innovation, drawing on the experience of its employees. Its product portfolio has evolved as markets have changed, its manufacturing operations have continuously improved, and in its approach to asset management has enhanced Company capability and capacity and its balance sheet. A second innovation audit was carried out in 2003. The company had changed significantly, with 100 compared with 50 employees and double the factory floor space compared with the year before. Some key managers had retired, and were generally replaced by managers from the newly acquired automation business. The number of candidate innovations in an options portfolio was trebled, and the number in an investment portfolio had doubled. There were more product development options, and more strategic market development options. Sales growth was broadly consistent with that sought in an earlier strategic plan.

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	MARKET DRIVEN	VALUE DRIVEN
	(influences what things are done	(influences how things are done)
MISSION REQUIREMENTS (influences specific capabilities needed)	Nhat are the company's core competencies? Toolmaking and systems engineering craftsmanship, tool design and automated machining systems design How do we leverage core competencies? Understand and manage own core competencies and capabilities Ability to develop new core competencies Identification and management of background competencies (see management & control below) Ability to filter and select ideas and initiatives on the basis of fit to core competencies What is our source of competitive advantage — what wins new business? Comprehensive metal machining know-how Demonstrated product reliability Ability to deliver turn-key packages What is our mission statement — where do we want to go? To provide innovative, precision engineered solutions in toolmaking, automation and special purpose machines for industrial applications worldwide	What is our vision, and what do we value in what we do? We will establish Broens as the industry leader through excellence in quality, value, innovation and service How do we maintain the vision? Sustain an internal focus on innovation with the highest level of quality accreditation How do we practice what we preach? Maintain close links with key customers Be prepared to take on difficult jobs that require some innovation in their execution Do we value creativity and idea management? Openness to ideas from all sources Creative idea generation Idea management Integrated problem solving
MANAGEMENT AND CONTROL REQUIREMENTS (influences generic capabilities needed)	How do generic business functions support our competitive advantage Strategy? – A devloping practice Commercial? – greatly strengthened by international contracting HR? – Good people are hired when they become available. An inclusive "family" culture is maintained. Operations? – An updated MRP system is being installed Quality? – ISO 9001 accreditation recently validated R&D? – moving to both product and process R&D Asset management? – maintaining excellence How does our organization and process support innovation? Appropriate structure – Manager, Marketing & Innovation appointed Ability to blend creativity and control – within cash flow constraints of an SME Seamless integration across functions – OK but still room for improvement Effective resource deployment – inhibited by size and large number of opportunities identified Strong communication skills – still room for improvement Capability to make wise use of external	What defines our business ethics? The vision and values of the founder Is financial control equitably distributed and transparent? Yes, within the first tier of management CEO approves strategic investments Do we have effective internal and external communication? There are varied perceptions within and outside of the Company regarding its strengths and market positioning, which is related in part to the rapid rate of change. The MD sponsors a lunchtime BBQ for all employees once per month, where Company updates are shared, and there is a regular internal newsletter Do operational norms support innovation? Shared but flexible culture High involvement in innovation across all staff Goal-oriented problem identification and problem-solving Respect for individuals Cross cultural awareness Broad range of skills combined with depth in key areas

technology resources O Understanding and use of networks with customers, suppliers and other firms for product creation/supply Commitment to the development of people o Understanding of risk

- Do we have intelligence and feedback practices supporting innovation?
- Understand own performance and limitations
- o Commitment to customer needs
- o Structured thinking / scanning of future horizons
- o Recognition and screening of new ideas
- o Understanding and using networks for intelligence

Table 5 Broen's framework for an innovation culture

Discussion

Organisation culture is about the way people behave in a particular organisation. In considering influences on innovation, Bharadwaj and Menon (2000) considered the relative contribution of creative people and organisational processes in more than 600 business units of the S&P 500 companies, finding it was not sufficient to hire creative people - there had to be a process for deriving benefit from their creativity. Having a company process without unleashing the creativity of people gave better, but still sub-optimal results. The two working in unison gave the best results.

Enterprises focused on efficiency may have difficulty with some transitions stimulated by an innovation, and some innovative firms may be so turbulent that they do not operate efficiently in a business sense, even though they keep coming up with new ideas. So some balance is needed as Hickman and Raia (2002, p.14) observe: "Convergent thinking systems, which include most established business organizations, survive on order, measurement, and predictability". In contrast, most innovations occur in divergent thinking environments that thrive on disorder, imagination, and ambiguity. If a company's culture embraces one orientation and spurns the other, or keeps them too separate from one another, neither the organization nor the innovation will flourish. The convergent-thinking organization that inhibits divergent-thinking innovators because of their odd and disruptive ways will always lack the creativity and passion to make breakthrough innovations a consistent and continuous reality. By the same token, divergent-thinking innovators who loathe the convergent-thinking organization because of its rigid and stifling norms will always lack the perception and persistence to realize the potential of their innovations within the current organizational context. What emerges from this is a paradox, is it possible to balance divergent thinking and convergent thinking or can firms take a systematic approach to innovation that integrates convergent implementation with divergent incubation?

This paper presents a simple two by two matrix of questions relating to what drives an organisation and its operational requirements as a framework for understanding organisational culture. The framework was also helpful in accommodating another level of detail from research into a culture of innovation. In presenting two case studies there were similarities and differences in the cultures of both organisations. Both were driven by a strong leader who valued innovation.

In Case 2, there is a bias towards technical aspects of leadership within the firm. This is not unreasonable, as the clients are buying technology from the firm, with most sales being custom variants of a generic design of tool or machine. There is evidence of collaboration within the firm, and between firms, being valued in both case study firms. There is evidence that the founding Managing Directors has good conceptual skills, being able to position the firm for action based on a perception of market trends and opportunities. These attributes are reflected in the culture of the firms. But other, new competencies and approaches to business systems are now being reflected as the firms grows. There is agreement amongst both established and new employees however that "innovation matters", and the majority of attributes suggested in Table 3 are present. External peers, customers and suppliers regard Broens' Industries and Harvest as innovative firms.

But what about the attributes that were not strongly represented? In this discussion, we will examine some of these attributes. One item from Table 3 missing is "managing for creativity". It is suggested here that the strong project and goal orientation of the firms may minimise this attribute. Others are "balance customisation with simplification"; "use external technology resources"; "freedom to discover"; "Access external knowledge"; "absorptive capacity"; "knowledge articulation and deployment"; "learning"; "question and challenge"; "recognition and reward for innovativeness". One could assess each item in turn, like the first example, to obtain a comprehensive discussion on areas for the case study firm to improve, however this level of detail will not be presented here. The point is that even with firms broadly regarded as innovative, the approach used here in assessing its culture can provide insights into its relative strengths and weaknesses.

Conclusion

Both firms are enabling an innovative culture, both firms have a strong dynamic leader who has espoused a vision that values innovation. The case study business are clearly focus on the changing market and are building networks that will add value to their market position. While the senior managers are keen to be innovative they have put in place systems that allow them to effectively manage the ongoing day to day demands of the business while looking for ways to be innovative. These two relatively small businesses are building a culture that both values and supports innovation. A crucial test for the sustainability of this cultural will occur as the firms grow in size, another test will occur if and when the current leadership steps down and the remaining staff are expected to continue without that leadership.

Regardless of which attributes may or may not be present, there is agreement amongst both established and new employees that "innovation matters", and a majority of innovation attributes suggested are present. External peers, customers and suppliers regard Harvest and Broens' Industries as innovative organisations, and the application of as an assessment template as described in this paper has helped enunciate the similarities and differences between these two organisations. This demonstrates that an innovative culture is dependent on people in an organisations and that diversity is an important aspect of engendering a creative environment. In Harvest the diversity omes about from a employees in businesses scanning the environment and bring ideas and capabilities to the organisation, in Broens the leadership values and encourages a diverse range of views and ideas that add to the business' innovative position. Both organisations operate in an extremely competitive environment and this has enabled the development a mission and set of values that see change and innovative approaches as the way we do business. It is important for businesses seeking to sustain a competitive position in a deregulated market place that they are able to not only adapt to a changing environment but also to identify future scenarios and directions. Innovative organisations require a set of competences and capacities that enable them to win new business, these may be located within the organisation or they can be accessed externally. While

competences and capacities can be acquired externally the values that create an organisational culture that supports and encourages innovation needs to be embedded in the organisation. The management and control systems within the organisations must allow for diversity and creativity, time and other resources must be made available to generate and test different ideas. Clearly in the organisations described the internal requirements for innovative cultures are different but both organisations at present have some if not all the requirements of an innovative culture.

References

Bharadwaj, S. & Menon, A. "Making innovation happen in organisations: individual creativity mechanisms, organizational creativity mechanisms or both?", Journal of Product Innovation Management, Vol.17, p.424-434, 2000

Beckett, R.C. & Hyland, P.W. "Innovation and enhancement of enterprise capabilities", ANZAM Conference, Beechworth, Dec 2-7, 02

Beckett, R.C., Hyland, P.W. & Soosay, C. "Representing Enterprise Innovation: a System Engineering View", Proceedings of the Sixth International Research Conference on Quality, Innovation and Knowledge Management, Kuala Lumpur, Feb 17-20, 02

Cope W. & Kalantzis, M., Productive Diversity – A New Australian Model for Work and Management, Australia: Pluto Press, 1997

De Geus, A. "Beware: innovation Kills", in Hesselbein, F., Goldsmith, M. & Somerville, I. (Eds), Leading for innovation and organizing for results, San Francisco: Jossey-Bass, 2002, p.225-237

GERAM, "GERAM: Generalised Enterprise Reference Architecture and Methodologies" Annex A (Part of WG1 N431), ISO 15704 "Requirements for enterprise reference architectures and methodologies" GLOBEMEN, Global Manufacturing and Engineering Networks, http://globemen.vtt.fi, 2000

Hamel, G. & Prahalad, C. K. "The core Competence of the Organisation", Harvard Business Review, May-June, p.89, 1990

Hickman, C. & Raia, C. "Incubating innovation: Companies must leverage the full spectrum of innovation, from the incremental to the revolutionary", Journal of Business Strategy, Vol.23, No 3, p.14

Kaplan, R. S. & Norton, D. P. "The Balanced Scorecard: measures that drive performance", Harvard Business Review, Vol.70, No 1, Jan-Feb, p.71-79, 1992

Knox Simon 2002 "The boardroom agenda: developing the innovative organisation" Corporate Governance Volume 2 Number 1 pp. 27-36

Leonard D. & Straus, S "Putting Your Company's Whole Brain to Work", Harvard Business Review, July-August, p.111-121, 1997

Little, A. D. The Innovative Company – using policy to promote the development of capacities for innovation, Final report to participating governments, OECD NIS project, Cambridge, UK, 2001

Mollema, H. "Leading and integrated innovation process – case study of 3M Australia", Presented at the National Conference on innovation and technology, Melbourne, 7-8 September, 1995

Parker, B., "Public benefits and private gains: cause-based nonprofit / business collaboration", Workshop on Interorganisational Collaboration, University of Melbourne Department of Management, Faculty of Economics and Commerce, 1999

Tucker Robert B. 2001 'Innovation: the new core competency" Strategy & Leadership Volume 29 Number 1 pp. 11-14

Youngblood Mark D 2000 "Winning cultures for the new economy" Strategy & Leadership Volume 28 Number 6 pp. 4-9