

Nascent Technology Companies: Planning for Success and Safeguarding Intellectual Capital

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In the evolving competitive landscape, the importance of intellectual capital is recognised as a key organisational asset. This is particularly so in a knowledge-based economy, where intangible assets are believed to be the only asset class capable of delivering continued profit, cash flows and a sustainable competitive advantage. This paper explores the importance of evaluating, recognising and protecting intellectual capital of innovative start-up companies. It examines the strategic role of the business plan for an innovative start-up and the importance of intellectual capital which enables it to profit from its competitive advantage for stakeholder well-being and long-term shareholder wealth creation.

INTRODUCTION

Competitive Advantage Identification, Classification & Value

Start-up companies are renowned for being competitively and financially fragile. The failure rate in the first year is estimated at 54 % (Van de Ven et al 1984, Pena, 2002). Conversely, strategic management of intellectual capital has been identified as a key to success and long term viability of a firm by providing knowledge-based companies with the means of achieving a sustainable competitive advantage (Zhou and Fink, 2003). Consequently, intellectual capital has been identified as ‘an essential asset’ for new business ventures (Pena, 2002).

A start-up company may perceive their competitive advantage to lie within the organisation’s initial innovations, which Pech (2002) explains may take the form of a new tangible product design, intangible service or channel structure via the use of a unique value chain in the task environment or newly identified markets. Competitive advantage may also be perceived as consequence of a novel organisational structure or innovative method or process within the organisation. These process-oriented forms of innovation are classified by Brooking (1998) as arising from IP assets, market assets and infrastructure assets, incorporating further, the area of human centred assets.

Table 1: (Source: Brooking 1998)

<i>Forms of Innovations - Classification</i>	<i>Description</i>
IP Assets	Tangible Product Design
Market Asset	Service, Channel Structure, Markets
Infrastructure Asset	Structure, Process & Production Methods
Human Centred Assets	Knowledge, Experience, Skills, Education

However, as Pech (2002) observes ‘in order to qualify as an asset, an innovation must add value to the organisation.’ in terms of its marketing reach and financial profitability. Brooking’s classification would appear to benefit further by the additional qualification pointed out by Pech that in the absence of innovations adding value to a firm, there would be considerable doubt if the management of intellectual capital has produced the desired effect in maintaining the competitive position of the firm. This statement itself poses a question of concept value. Based on a broad interpretation of intellectual capital, the question arises if the value of the innovation is embedded in the product or service design. Alternatively, applying a narrow interpretation of IC, the question arises if its, value is associated with the innovative practices of the inventor and the dissemination of the inventor’s vision and knowledge throughout the internal environment of the new company.

The following discussion, viewed from a pluralistic stance, highlights arguments in support of this dichotomy. To add structure to the debate an organisational framework is considered by Oakland (2001) wherein start-up company characteristics can be identified along with their strengths and weakness with regard to IC and performance excellence.

FRAMEWORK ANALYSIS OF THE START-UP COMPANY

Human Assets in Leadership and the Cultural Environment

Start-up companies are generally ‘built’ and nurtured in their infancy stages by either the inventor of the original concept (Levy, 1998), or by an entrepreneur who identifies with the initial concept, forming a company in order to ‘exploit the information, (IC) to gain a competitive advantage’ (Hanson et al, 2002). These two possible leadership sources can offer personal traits that differ from each other and the suggested requirement for leadership per se. A table of traits for comparison is given below in order to illustrate this point.

Table 2. Traits

<i>Leadership Traits</i>	<i>Inventor Traits</i>	<i>Entrepreneur Traits</i>
Enthusiastic	Enthusiastic	Enthusiastic
Charismatic	Creative	Creative
Courageous	Optimistic	Dynamic
Determined	'Detail blindness'	Realistic
Decisive	Individualism	Opportunistic

(Robbins, 2007) (Levy, 1998) (Pech, 2002, Levy, 1998)

Although the above have been identified by trait theorists, it has been argued by Blake and Pfeffer (1989) cited by Robbins (2007) that these traits are situational and therefore dependent on the influence of the surrounding environment. However in the start-up environment it may be argued that the traits of the inventor can have both a positive and negative influence on the performance of the start-up organisation. To illustrate this point further it can be seen from the above table that both inventor and entrepreneur show the same trait of enthusiasm. Although this may be viewed as a positive factor as regards motivation towards a vision for both entrepreneur and leader, a view supported by Senge (2002), inventor enthusiasm has been negatively correlated with a risk of 'championing' an invention to point of 'excessive optimism' (Levy, 2001).

Risk can be incurred to the firm from inventor over-enthusiasm. According to Levy (2000) the value of the inventor to the organisation may be questionable. There is an increased risk associated with their involvement in an operational decision making process. An effective way of reducing this risk and retaining the knowledge and skills (IC human centred asset) of the inventor is to promote openness within a team based internal environment, where a realistic appraisal of the organisation's situation can be conducted and opinions voiced accordingly.

In contrast, the worth of an entrepreneur may be evaluated utilising their experience level within new business ventures. According to Sullivan (2000) there is a learning experience from merely establishing a new enterprise. The level of education, according to Bates (1995) among others has also been positively associated with start-up company survival and growth (Pena, 2002).

STRATEGIC PLANNING & CUSTOMER MARKET FOCUS

According to Oakland (2001) the initial vision and construction of the organisational objectives is the responsibility of the individual in a leadership role. However, the strategy correlation within a start-up company is not only dependant on the goals of the visionary but should also incorporate adequate scanning of the task, remote environment and global environments.

A combination of innovation, objectives and scanning process allows for the integration of IP strategy with business and marketing plans (IPA, 2003). A suggestion of strategies are listed below both diagrammatically and in bullet point form, which defend the need for IP asset protection in the form of patents, registered designs, registered trade marks and copyright, supporting the view of IP value to the new organisation.

- Creating value and start-up company worth from an investor perspective.

The management of intellectual capital and ascribed value to the balance sheet can be considered as financial leverage for investment from business and finance communities (IPA, 2003).

- Forming a barrier to market entry.

IP rights provide a legal barrier to market entry. The advantage may create a monopoly where the start-up company is first to market and able to capitalise on the window of opportunity through a premium price strategy (Mischlewski, 1995). In the first stages of development it may also create valuable time for further R&D research (IPA, 2003).

- Protecting differentiation.

The protection of an innovation, which differentiates it from those already in the market place, may prevent the process of imitation from competitors. A study by Sandberg and Hofer (1987) found that organisations who adopted this type of strategy out-performed ‘the rest of start-up companies’, (Pena, 2002).

- Brand protection.

In order to build brand equity, company reputation and market share IP protection can be taken in the form of trade marks (Mischlewski, 1995).

- Creating organisational value in the form of wealth from licensing protected patents.

This may be an option to be considered when financial resources are low, a further characteristic of the start-up company. Licensing may also prove to be a strategic option for start-up success in order to obtain network ability with external stakeholders (Pena, 2002). The lack of experience and knowledge in a start-up company may reflect in the use of outside vendors and the formation of strategic alliances.

The argument against IP protection may be found in a cost-benefit analysis.

- The protection of one patent alone can be placed at the time of writing at approximately AU\$10,000, which offers only domestic market protection (Watermark, 2003). This is a large financial commitment for a start-up company, where the financial resources may be utilised in other areas such as production, marketing and distribution.
- The limitations of protection for product differentiation against competitors' further production of a novel feature or function can render protection costly and ineffective.
- Limited financial resources for legal defence against patent infringement may promote a ‘so what’ attitude of large corporations with a blatant infringement of IP rights.

In summary IP protection ‘may be sought to attract investors, protect products, attack competitors or create wealth through licensing arrangements’ (Rutland, 2003). The quality of the patent in respect of revolutionary innovation, the market covered the potential for licensing and the stringency of patent enforcement all affects the worth of a patent to an organisation (Lang, 2001).

In summary, this section has identified areas of competitive advantage derived from IC, along with an evaluation of start-up company characteristics, which show both advantages and disadvantages for new business venture success. The dichotomy of central IC worth has been addressed briefly and a pluralistic analysis presented. The interpretation of research findings, although by no means exhaustive, illustrates that all assets within Brooking’s classification are of value to a start-up organisation. There is compelling evidence that investors and shareholders in start-up intellectual capital firms place strong reliance on a broad range of non-financial factors, beyond the purely quantitative data available to them (Bose, 2004). Thus, for such start-ups, conveying information in relation to value is critically important in order to attract investments to sustain capital investments and working capital need. Since balance sheet data is inadequate according to Heller (1994) and , Razgaitis (1999), the potential of a start-up’s intellectual

capital must be adequately stated in the firm's business plan to ensure smooth investment flows to sustain its capital requirements in the nascent stage of their existence.

INNOVATIVE START-UPS AND THE BUSINESS PLAN

Process management can be related to all business processes including those attributed to the planning and start-up phase of a new business venture. The following plan includes areas of IC assets already identified and integrates these together with IP protection into a start-up business plan for the new company. The intention is to disseminate knowledge in this area in order to aid the inexperienced innovator in the initial stages of business start-up, a phase which has been referred to as the 'ex-ante period', which includes both human capital, tangible, and intangible assets (Pena, 2002).

The Business Plan

The business plan may be viewed as an entrepreneur's road map for a profitable venture. The wealth of its intellectual capital must comprise the basis of its sustainable competitive advantage. However, in most cases, such start-ups are characterised by low financial resources and often, lack of experience and knowledge. Both these problems may be addressed by a good business plan. It therefore serves as a major gateway for the entrepreneur to enter the investment process (Kuratko and Hodgetts, 1998).

For a new knowledge-based firm, the business plan should be viewed in a more critical light. It exists in the continuum between the firm's vision and its eventual performance, but more importantly, it serves as a bridge between strategy and implementation. Fundamentally, it is the embodiment of a set of hypothesis about a perceived opportunity and the results expected if the opportunity is pursued in a particular manner.

Thus, a carefully crafted business plan is likely to contribute materially to the value of a new knowledge-based firm, but is unlikely to be the clear determinant of success or failure (Smith and Smith, 2000).

One of the reasons for this is the element of risk. Risk in its various forms exists for every type of business, but it is evident at more concentrated levels for knowledge-based firms. Identifying each specific type of risk, and setting out the means for addressing them will contribute greatly to the value of such firms (Bose, 2004). This clearly implies that reducing risks is an underlying value driver for knowledge-based firms. However, if risks materialise in a manner not envisaged by the business plan, it could threaten the existence of the firm.

One of the major purposes of the business plan for a new venture has an external focus, that is, to obtain funding for capital investments and working capital. Clearly, if the business plan fails to inspire the confidence of investors, it will eventuate in disruptions to investment flows, leading to low financial resources.

These points of distinction need further elaboration. Intellectual capital is now widely regarded as the platform for maintaining competitiveness, and creating long-term shareholder value. Intellectual capital is the knowledge capability of a firm to produce assets that can become profitable. Sullivan (1998) defines intellectual capital as 'simply, knowledge that can be converted into profits. The link and relationship is clear: profitable intellectual assets (trademarks, patents, copyrights etc) cannot be created unless there are the skills, knowledge, and managerial capability present in an organisation. Therefore, what is important is that companies direct their efforts to identifying, creating and nurturing the intellectual capital base of the firm that are now regarded as critical drivers of profitability and value. In essence, intellectual capital is the knowledge capability of an organisation to convert knowledge, skills and expertise into profitable intellectual assets, and include inventions, technical know-how, design approaches, computer software and programs. When these assets become protected by patents, copyrights, trademarks, and trade secrets, they assume the character of an intellectual property.

In order to give value intellectual assets arising out of intellectual capital must be given the protection of the law. In earlier research, Bose (2004) stated that the ability of the firm to protect its intellectual assets is one of the underlying value drivers in innovative start-ups. This value factor reflects the legal environment in regard to the protection of intellectual assets and implies a major concern about this aspect of the legal environment pertaining to proprietary rights to innovations developed in these industries.

The value implication of patent protection is in the challenges posed by the knowledge economy in calculating the value of intellectual assets, primarily because of their intangibility. Nevertheless managers are well aware that that these assets need to be protected as vehicles of wealth creation, just as much as any tangible assets (Cheeseman, 2002). And the very reason why firms invest in intellectual assets is to gain rewards from their use in the knowledge economy (Hovey, 2002). Patents not only protect a firm's investments in intellectual assets, but also provide a basis of valuation (Leuhrmann, 1997).

The issue of valuation for innovative start-ups is also of material importance and the business plans of such firms must attempt to make an objective and accurate valuation of its intellectual capital, which balance sheets often fail to express. For example, Research by Lev (1996) found that 40% of the market valuation of the median corporation was missing from its balance sheet. For high tech companies, this was found to be more than 50%.

Therefore, financial managers must understand the value of non-quantitative data, particularly that relating to intellectual capital of the firm, and its likely impact on the value of the firm. In these circumstances, the business plans must attempt to value the intellectual capital of the firm in order to induce smooth investment flows.

CONCLUSIONS AND IMPLICATIONS

The role of the business plan for innovative start-ups is fundamentally important in ensuring the long term viability of the firm. A particular risk arises from the inability of such firms to ensure a smooth investment flow in the initial years of their existence. This is often caused by the failure to capture the value the intellectual capital of the firm in the business plan, leading to an undervaluation of the business, and its perceived business opportunities. It is of fundamental importance that in targeting the investors, an accurate business valuation, which includes its intellectual capital, is provided in the business plan. Methodologies for valuation provide significant opportunities for further research. However, in the provision of details of valuation of intellectual capital lies a major distinction between business plans for innovative start-ups and those of established firms. A second distinction is that attainable precision of forecasts is less for an innovative start-up. Nevertheless, much econometric and statistical rigour must be expended by management to test assumptions underlying forecasts in order to reduce uncertainty. The third distinction is that the plan must reflect simultaneous thinking about the firm's organisation, product-market and financial strategies. This means that the business plan must evaluate the financing method and organisational form that would best fit a scenario of product-market growth.

Although innovative start-ups are fraught with uncertainty, the opportunity to profit from intellectual capital is undoubted. Phenomenal growth and shareholder wealth creation have been witnessed by firms worldwide who have leveraged their competitive position on their intellectual capital and innovativeness. But for this to occur, the business plan must recognise and integrate the wealth of a firm's intellectual capital, and provide the means for their protection.

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