STRUCTURAL CAPITAL MANAGEMENT CREATES SUSTAINABLE COMPETITIVENESS AND PROLONGED FIRST-MOVER ADVANTAGE

- INTELLECTUAL CAPITAL MANAGEMENT SERIES - (Article 3 of 3)

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Structural (SC) capital is part of the intellectual capital that is owned by an organisation and its efficient and dedicated management is essential for the creation of shareholder value, sustainable competitive advantage, and prolonged first-mover advantage. SC consists of three types of capital, namely: innovation, organisational and process capital. Organisational capital consists of organisational culture, management philosophies etc. and has received a large amount of management attention. However, organisational capital is not as valuable towards the creation of sustainable competitiveness and first-mover advantage as innovation and process capital are.

It is the purpose of this article to demonstrate how a thorough understanding and the efficient management of innovation and process capital enables organisations to achieve the afore-mentioned benefits. Innovation capital management consists primarily of patent and brand management, which are particularly important as patent management forms a high-margin justification for the implementation of organisation-wide intellectual property management, and the management of high-equity brands secures a loyal customer base and associative sustainable competitiveness and first-mover advantage benefits. Although not as obviously valuable as innovation capital, the article also explores the value that the efficient management of unique organisational processes and methodologies contribute towards the achievement of prolonged first-mover advantage and the provision of protection against competitor actions.

This exploration involved an examination of contemporary literature, theories and business cases and subsequently revealed that SCM is a vital discipline/philosophy that must be implemented by any organisation wishing to achieve greater sustainable competitiveness. Innovation and process capital are of particular importance as these assets can be made tangible, leveraged and integrated into existing business operations to create unique, inimitable and sustainable competitive advantage.

Keywords and phrases: intellectual capital, structural capital, sustainable competitive advantage, first-mover advantage, brand, patent

INTRODUCTION

It has been established that relationship capital is an essential form of intellectual capital that is required to achieve sustainable competitiveness (see articles 1 and 2 of this intellectual capital management series). Relationship capital unlocks customers' and suppliers' ideas and preferences and engenders increased loyalty and preferential rates. Relationship capital does however need to be supported by and combined with structural capital in order for the value-adding and sustainable benefits of intellectual capital to reaped. This article explores structural capital and its contribution to sustainable competitiveness in more detail.

Structural capital (SC) is the skeleton and glue of an organisation and has been described as what is left behind after employees have left the organisation. SC is owned by an organisation (as opposed to human capital which is never the organisation's property) and comprises the infrastructure that supports human capital. SC includes information systems, proprietary databases, organisational charts, process manuals, laboratories, market intelligence and intellectual property (i.e. brand names and patents). This capital is part of the intellectual capital that is owned by an organisation and its efficient and dedicated management is essential for the creation of shareholder value, sustainable competitive advantage, and prolonged first-mover advantage. The ultimate role of SC is to enable managers and employees to leverage their human capital to ensure the efficient pursuit of organisational goals and, in so doing, the achievement of the above-mentioned benefits (Gagne 2001: Internet & Nastansky 2000: Internet).

SC is essentially comprised of three primary types of capital, namely: organisational capital; innovation capital: and process capital. Organisational capital includes all the existing computer systems, distribution and supply channels, and the corporate philosophy and culture of an organisation. It is this component of SC that has received much attention from present organisations and forms the supporting backbone for human capital. However, it is an organisation's unique innovation and process capital that ultimately enables the achievement of sustainable competitiveness and prolonged first-mover advantage in the current dynamic market place. The purpose of this article is to explore both innovation and process capital and to demonstrate how the efficient management of both forms of capital translates into a superior competitive position and enhanced profitability for an organisation in the current dynamic, fiercely competitive marketplace (Nastansky 2000: Internet).

In order to fulfill the above-mentioned purpose, innovation capital management is initially explored. The two most important dimensions of innovation capital (namely patent and brand management) and their associative management are investigated in order to demonstrate the enormous potential value this capital presents to organisations that fully understand, harness and efficiently manage their patents and brands. Efficient patent management is especially important, as it paves the way for the development, management and value maximization (including the gaining of sustainable competitive advantage, increased profitability, and prolonged first-mover advantage) of all structural and other intellectual capital. A large portion of this article is subsequently devoted to a thorough investigation of patent management.

Secondly, the article explores process capital management, where the focus falls upon business process management and methodology management. It is demonstrated how the efficient development, maintenance and management of an organisation's unique business processes and methodologies results in prolonged first-mover advantage and competitiveness as these unique processes and methodologies are difficult for competitors to imitate.

INNOVATION CAPITAL MANAGEMENT

Innovation capital comprises an organisation's ability to create new products and services that represent additional value for customers and primarily includes patents and brands. Each one of these types of intellectual property and their associated management are explored in detail below.

Patent Management

A patent is a license to run a limited monopoly, where others are excluded from making, selling or exploiting the patent for a period of time while the inventor develops, markets, and capitalizes on his/her ingenuity. Licenses confer certain rights to organisations where the exclusive patent rights allow for the acquisition of a monopoly of a business and can be used as a weapon by organisations to have their products dominate the market or increase their share in the market (Japan Patent Office 2000: Internet & Holland 1999: Internet).

It is essential for organisations to develop and manage strong patent portfolios, as these portfolios can be the foundation of a successful organisation. In order to develop and manage these portfolios, organisations must first acquire patent rights, maintain these rights and develop strategies for efficient portfolio management. Efficient patent portfolio management is essential, not only for controlling and reaping the benefits from these innovative intellectual assets, but also to serve as a foundation for the justification of investment in and efficient management of all other intellectual assets.

Acquiring patent rights

Organisations continue to pursue profits despite growing technical competition by meeting the needs of the market and contributing to society through technical developments. Organisations gain the upper hand over their competitors by converting the results of their technical developments into patent rights. In order to ensure that technical and research and development efforts are converted into and registered as patents, organisations must develop and manage a patent office that liaises with R&D personnel and ensure that new ideas and inventions that represent potential patents are thoroughly evaluated and accordingly registered with the appropriate authorities. The patent office must also constantly communicate with top management regarding the patents that are available for development and exploitation in the market.

The acquisition of patent rights provides three areas of potential exploitation: monopoly development, licensing income, and freedom of activities. Patents allow organisations to develop products that incorporate unique technology in their production and/or use, where the patent protects the organisation against competitor imitations and subsequently prolongs first-mover advantage through the protection of market share and profitability – patents enable the opportunity for the development of an initial monopoly with the subsequent development of a loyal customer base. As a result, when the patent expires, the loyal customer base will be more immune to competitor offerings, translating into sustainable competitiveness for an organisation (Japan Patent Office 2000: Internet).

Intellectual property rights (patents) also secure maximum freedom for an organisation's activities through the cross-licensing of patents with other companies that possess patent rights that are obstacles to the organisation.

Finally, licensing patents developed by an organisation to third parties enables an organisation to utilize the patent right as a means to increase its corporate profits by earning licensing fees. An organisation can increase its income by licensing to other firms that require the technology in situations where: a product based on a previously developed new technology has been fully developed, modified and extended and has generated sufficient prior profits; subsequent competitors' products are under circumstances that do not threaten the organisation's strategies; or where patents are related to a non-core technology unrelated to the organisation's products. Patent royalty earnings are very profitable, there is almost no cost involved in licensing out existing patents, and the same patent can be licensed many times – all resulting in increased organisational profitability. Patent revenue also provides income stability (predictable stream of income from licensing contracts) and can be used to sustain operations during economic downturns and, in so doing, sustain competitiveness (Japan Patent Office 2000: Internet & Delphion Industry Insights 2002: Internet).

Maintaining patent rights

In order to maintain the registered patent rights, applicants must pay annual maintenance fees which, if unpaid, result in the revocation of patent rights. It is a waste of corporate resources to continuously pay the annual maintenance fees for patents that have lost their significance and it is necessary for organisations to regularly evaluate whether it is worth maintaining the registered patent rights or not. This should be the responsibility of a patent office that should regularly analyse the patent portfolio and communicate their results and recommendations to top management. Patent rights that should be maintained include: patents concerning an organisation's products, production processes, production facilities, etc.; patents licensed to other companies; patents concerning products to be marketed in the future as well as those which can earn profits in the future through licensing to other companies; patents which are basic and technically important; and patents which are important with respect to an organisation's sales policy.

Patent rights which should be disposed of include: patents which are not used and have no future prospects; patents which have lost their value due to the development of alternative technologies and would not bring any disadvantages to the enterprise if they were used by others; patents which are deemed to have lost any prospects of earning profits through licensing (Japan Patent Office 2000: Internet).

Efficient patent portfolio management

Currently, the key to survival in today's dynamic marketplace involves the efficient management of ideas. Organisations need to know where ideas come from as well as how they can make the most of new innovations. However, it is very difficult for organisations to measure and account for the value of technological and intellectual assets. It is for this reason that businesses need new methods of accounting for technological and intellectual assets that will more accurately reflect their real value and earnings on corporate balance sheets, which will enable an organisation to demonstrate to investors the true value of their operations and to better direct an organisation's actions. As patents are the only corporate intellectual assets that earn obvious high margins, patents form the starting point for the development and implementation of thorough intellectual property asset management systems (IPAMS) (Zimmerman 2002: Internet & Delphion Industry Insights 2002: Internet).

Organisations with substantial patent portfolios can use them as a practical, high payoff starting point for intellectual property asset management, and from where IPAM can be spread throughout an organisation. IPAMS have become key in capturing and sharing knowledge about patents across many departments in an organisation. IPAMS also assist companies in making decisions about which patents to pursue and about whether patents that the company holds are making money (Delphion Industry Insights 2002: Internet & Zimmerman 2002: Internet).

Efficient patent portfolio management is required as organisations cannot capitalize on patent revenue streams nor develop monopolies if they are unaware of how many and what patents they possess. Patents are often registered at a cost and forgotten, and this results in under-utilized business and new product development and product enhancement opportunities, and infringement damages. Not understanding one's own patent holdings leads to ignorance of the competitive environment of others' patent holdings which can lead to unwitting infringement upon patents held by others. In addition, when patents aren't managed as business assets, maintenance fees inadvertently go unpaid which results in forfeited rights and uncollected fees.

Patent portfolio management begins with organizing existing patents into related portfolios with the object being to identify patents that are relevant to current technology and that companies on the cutting edge of technology are using or are likely to have a need to use. Management responsibilities must then be allocated for each portfolio (including maintenance costs and licensing income) and each portfolio must then be allocated to an appropriate specific operating unit of the business and its managers (this division and allocation must be implemented and managed by a central organisational patent office – where the office also continuously monitors the status of all patents within all units). According to Rubenstein (1998: Internet) and Delphion Industry Insights (2002: Internet), following division and allocation, patents can then be reviewed by operating managers to establish their financial and strategic importance and the managers can then plan to create immediate, medium-term and long-term benefits, namely:

- Immediate savings can occur from simply identifying patents that have little or no business value and subsequently canceling them in order to save on their maintenance costs. These savings may be used to pay for the startup cost of the IPAM program.

- Medium-term planning results in specific licensing benefits. The organisation can uncover which patents can be licensed to everybody including competitors in order to maximize revenue. Licensing to competitors also results in a cost structure advantage, as the competitor will be paying a license fee on every product sold. Tying a competitor to an organisation's technology also reduces the competitive incentive to find ways to work around the technology or even make the technology obsolete with an innovation of its own. Sustainable competitiveness can subsequently be realised.

- Long-term strategic patent portfolio planning involves business managers assuming "ownership" of patents and making quantifiable evaluations of the need to develop successive technologies to protect the firm's competitive position and profitability in the future, and optimize plans for ensuring this.

  This planning also allows for improved competitive intelligence and strategic vision – long-term patent strategy involves reviewing the field of patents owned by competitors on computer generated "patent maps" that graphically display the distribution and ownership of patents regarding selected products and technologies. These maps uncover areas where research and patenting may be lucrative and areas to avoid due to strong competition, as well as the strengths and weaknesses of competitors and the new directions they may be taking. This information provides valuable input in the development of overall corporate strategy with regards to new product and market development and competitive positioning.

It is demonstrated in the preceding section that efficient patent portfolio management contributes to the achievement of increased profitability, sustainable competitiveness and prolonged first-mover advantage. Successful patent IPAM can also lead to the spread of IPAM throughout a business, enabling the efficient management of and consequently increasing the value of other organisational intellectual assets.

Brand Management

A brand is a name, term, sign, symbol, or design, or a combination of these, that identifies the maker or seller of a product or service. Consumers view a brand as an important part of a product, and branding can add value to a product. The process of branding involves knowing why people buy an organisation's products and services and giving customers what they want during the selling-and-marketing process. Brands are one of an organisation's most powerful tools and they add significant value to the bottom line. They also allow an organisation to have premium margins and premium profitability and consequently represent valuable intellectual assets that need to be efficiently managed (Willins 2000: Internet & Armstrong et al. 2001: 301).

The brand dimensions that enable an organisation to achieve sustainable competitiveness, high profitability and market share, and prolonged first mover advantage in the market place are: brand loyalty, equity and personality.

Brand loyalty consists of three phases, namely: brand recognition, preference and insistence. Brand recognition is an organisation's first objective for newly introduced products and involves an organisation's attempts to leverage their brand to top-of-mind awareness with their customers. Brand preference involves customers preferring the brand above all others, with brand insistence representing the ultimate stage of brand loyalty as it leads to consumers refusing alternative brands and searching extensively for their desired brands. A brand that has secured this level of loyalty represents a valuable structural intellectual asset for the organisation, as customers are immune to competitor actions and offerings, resulting in sustainable competitive advantage, profitability, and market share for the owner of this brand. In addition, subsequent innovative products released under this brand will enjoy prolonged first-mover advantage due to the competitor immunity of the brand's loyal customer base. Efficient management is required in order to determine what stage of loyalty is relevant to each of an organisation's brands and strategies need to be accordingly developed and implemented to develop brands to the insistence stage and keep them there. This, however, requires a dedicated brand management team under a competent brand manager (Boone & Curtz 2001: Internet).

A strong brand personality that is supported by superior quality offers two important strategic advantages, namely: it increases the likelihood that consumers will recognize the organisation's product or product line; and, secondly, a strong brand personality can contribute to, and increase buyers' perceptions of quality. There are four dimensions of brand personality, namely: knowledge, esteem, differentiation and relevance. Knowledge refers to the extent of customers' awareness of the brand and an understanding of what the product or service stands for; esteem is a combination of perceived quality and consumer perceptions about the growing or declining brand popularity; relevance refers to the real and perceived appropriateness of the brand to a large consumer segment. Finally, differentiation refers to a brand's ability to stand apart from competitors. A strong brand personality results in initial purchase, which may lead to brand preference, and ultimately to strong brand loyalty and its associated advantages. The brand must be carefully managed to ensure a consistent, relevant and strong personality in order to achieve the desired loyalty (Boone & Curtz 2001: Internet).

Brands vary in the amount of power and value they have in the marketplace. A powerful brand has high brand equity, which translates into higher brand loyalty, name awareness, perceived quality, and stronger consumer brand associations than competing brands. Strong brand equity allows an organisation to realize the following benefits: stronger brand loyalty; larger margins with associated price inelasticity; reduce vulnerability to competitor actions; higher trade and channel support; increased marketing communication effectiveness; and greater opportunities for licensing and brand extensions. All these benefits ultimately translate into sustainable competitiveness (with associated high market share and profitability) and prolonged first-mover advantage for innovative products released under a high equity brand, making a high equity brand a powerful and extremely valuable source of organisational intellectual capital (Armstrong et al. 2001: 302 & Chanolmsted 2002: Internet).

Efficient brand management is required in order to develop and maintain high equity brands with their associated brand loyal customer bases. Brand management involves consciously providing a product with an identity that is understood on all levels. Brand managers and their team must constantly ensure that brands are understood both internally and externally among customers, employees, suppliers and distributors. Brand management is the philosophy and core behind all business development and it puts the big picture perspective into focus and determines where an organisation takes and makes its future (TechDivas 2001: Internet).

Brand management is essential for ensuring the development and maintenance of high-equity brands that will ensure an organisation's continued competitiveness and long-term survival in the marketplace. However, traditional brand management cannot ensure this, and brand managers now need to approach branding in a different way in order to build sustainable competitiveness. Traditional mindsets involving brand management must be changed in order to continuously build and maintain innovative brands. The old and required new mindsets are explored in more detail below (Hodgins 2002: Internet).

It was traditionally thought that a superior product resulted in sustainable organisational competitiveness. However, competitors can easily match product attributes, which results in an organisation no longer having a superior product and losing their competitive position. Organisations must elevate the purchase decision beyond an intellectual, rational or functional level to a brand level in order to achieve sustainable results. Managers must recognize that consumers connect with brands on two levels: on a functional level where superior functional or physical product attributes must be provided; and on an emotional level which involves a need for product security and personal relevance, which a well built and managed brand personality can provide. Managers must position their brands to create emotional superiority and, in so doing, establish a long-term emotional bond between the brand and the customer. Leading brands transcend and outlive products and are a valuable source of intellectual capital. The new mindset that must be adopted is that a superior brand results in sustainable business results (Hodgins 2002: Internet).

It was also traditionally believed that being the first to market with new products is the key to sustainability. However, in today's competitive and technologically-enabled market place, competitors can easily imitate the latest products of an organisation and may even be capable of reaping greater profitability as they will have learned from an organisation's mistakes and benefit from the organisation's investment in building and educating a new market. Brand managers must realize that the only way to create a sustainable, prolonged first-mover advantage is to be the first brand to market. A strong brand will be protected from competitor actions and subsequent new products can be easily released under it (Hodgins 2002: Internet).

Finally, many organisations believe that brand management builds great brands. However, the culture of traditional brand management is based upon managing the status quo and making incremental improvements on past efforts. Most brand managers work in a culture that is focused on analysts' expectations and do not have a long-term focus, managing their brands on a day-to-day basis. In this culture, short-term sales tactics erode the value of the brand. The most powerful brands in the world have been built by thought leaders who look for the opportunity of breaking set conventions. The new mindset that must be adopted is that it is thought leadership that builds great brands that are source of sustainable competitive advantage and valuable intellectual capital for an organisation. Brand managers must be encouraged to think creatively and constantly challenge the status quo. A culture of innovation and internal "love of" and dedication towards building, developing and maintaining and organisation's brands must be instituted.

PROCESS CAPITAL MANAGEMENT

Although not as valuable as innovation capital, process capital also contributes towards sustainable competitiveness and prolonged first-mover advantage. An organisation's unique business processes and project management methodologies cannot be easily imitated by competitors and result in sustainable and prolonged advantage. However, process capital is more difficult to identify, codify and analyse, and manage. Business process and project methodology management are explored in more detail below.

Business Process Management

A process is any business function or set of functions that includes the interaction of large numbers of distributed people and disparate systems where management, coordination, and automation of tasks and decision making would provide a business benefit. Business processes involve the specific way in which organisations develop, produce and sell their products and services and is at the core of long-term success. Business process management (BPM) is required in order to maximize the efficiency of an organisation's unique set of systems, people and partners and to optimize the processes that define how work is achieved. BPM offers organisations tangible opportunities to focus on core competencies and collaborate successfully with customers, partners and suppliers. By focusing on business processes, companies can focus on and coordinate mission critical activities within their organisation, while at the same time establishing strategic external partnerships with a network of experts for non-core processes. BPM is particularly useful today as organisations can now utilize advancements in technology to streamline the seven basic process capabilities, namely: discovery, design and redesign, deployment, execution, maintenance, optimisation, and analysis (TIBCO 2002: Internet; Smith 2001: Internet & Chambers et al. 2003: Internet).

BPM ensures a continuous focus on customer retention, cost control/reduction and performance and asset retention. It is also an effective way to ensure increased customer centric operations and reduced operational costs. BPM builds on the foundation of imaging and document management, workflow, task management, and process automation. Workflow moves those images and documents to the appropriate processing areas and monitors the progress of that work while ensuring that the right people are processing the right items at the right time. Task management monitors individual processing steps and guides employees through pre-defined steps to ensure that each task is completed accurately (Welch 2002: Internet).

Technology can now be leveraged to automate business processes and this process automation can be applied to work steps where human intervention is not required - resulting in additional process improvement. Process automation eliminates many traditional manual steps, resulting in significant productivity gains, customer retention and increased overall operational efficiency by automating sequences of tasks and enabling detailed analysis and optimization of process flows. The automation of business processes also enables greater business visibility and provides interactive reports that allow managers to monitor their processes in real time and make the required adjustments. Next generation process analysis tools will also incorporate simulation capabilities that will allow organisations to model business processes and then simulate them under real conditions. This will allow managers to detect potential bottlenecks and will enable processes to be tested and optimized before being implemented in a production environment (TIBCO 2002: Internet & Roberts 2002: Internet).

Unique, efficient and well-managed business processes and the technology used to automate them form an important source of intellectual capital, as the specific way in which organisations organise work and perform operations to produce goods and services and deliver them to market cannot be easily imitated by competitors. For example, a unique and efficient production process for new product delivery provides prolonged first-mover advantage for that product as competitors may not be viably able to cost-effectively produce a competitive offering due to their inability to imitate the efficiency of the competing organisation's production process.

Some business processes are so unique and valuable that they are patented in order to protect a particular organisation's investments and intellectual capital against competitor imitations. The challenge for companies that wish to mine their intellectual property for patent potential is to protect those processes that are differentiators and that make an organisation's business better than that of competitors. Efficient BPM can assist organisations in identifying and protecting those processes (e.g. ensuring that differentiator processes are registered and maintained as patents) (Frieswick 2001: Internet & Japan Patent Office 2002: Internet).

Project Methodology Management

Methodology refers to the processes, procedures, templates, best practices, standards, guidelines, policies, etc. that an organisation uses to perform certain aspects of work. All of these methods are typically employed by organisations to manage projects and the methodologies provide the framework that project managers use to manage their work. The methodology must be adaptable in order to meet the changing needs of the organisation and must add value to the projects that utilize it. Such methodologies represent valuable sources of intellectual capital as they ensure the success of organisational projects. For example, efficient methodologies can enable faster speed to market for new product development projects as well as faster response by projects that monitor and institute counter-actions regarding competitor actions – prolonged first-mover advantage and sustainable competitiveness consequently realized.

Organisations must create a project management office (PMO) and allocate responsibility for efficient project methodology management to its manager and staff. There are three areas of methodology management that the PMO should be responsible for, namely: methodology development, support, and enhancement (Mochal 2002: Internet).

- **Methodology development** – an organisation must choose whether to: build their own methodologies (building a custom methodology from scratch); buy methodologies that have been developed by other companies; or purchase already developed methodologies and then customize them according to an organisation's unique standards, templates and processes. Methodologies that have been built or customized are valuable components of an organisation's intellectual capital as they enhance project performance in the market place.

- **Methodology support** – this involves answering questions about the methodology and how best to apply it to individual projects; and providing ongoing training classes for new and current employees. This ensures that the methodologies are efficiently applied to related projects for the attainment of ultimate project advantage.

- **Methodology enhancement** – this includes areas such as: expanding and extending the current processes; creating new training classes; and enhancing processes and templates to make them more valuable and easy to use – again ensuring optimal project performance.

Project management methodology is an intangible intellectual asset that must be developed, supported and enhanced. This valuable intellectual property must be leveraged as a long-term asset and must be strengthened over time in order to provide the best support for organisational projects that ultimately secure sustainable competitiveness and prolonged first-mover advantage.

CONCLUSION

It is evident, from the evidence presented in this article that a thorough understanding of and the efficient management of structural capital (particularly the innovation and process capital components), provides organisations with valuable opportunities and tools for achieving sustainable competitiveness and prolonged first-mover advantage in today's dynamic and competitive marketplace. The efficient management of innovation capital is particularly important for two main reasons: patents provide a stable income stream and enable monopolies which allow for increased and prolonged profitability, market share and competitive advantage, and also provide a highly visible starting point for the development and implementation of organisation-wide intellectual asset management; and brands, particularly high-equity brands, ensure a loyal customer base that allows an organisation to protect its competitiveness. The efficient management of process capital is however also necessary, as it ensures that an organisation's unique, efficient and productive processes and methodologies are appropriately leveraged to secure market position and the customer base.

Structural capital is an organisation's sole property and can be manipulated, exploited and managed as deemed necessary and appropriate by that organisation. Consequently, structural capital management is essential for ensuring that this capital is appropriately exploited and leveraged in order to secure loyal customers and suppliers (relationship capital), sustainable competitiveness and prolonged first-mover advantage with its associated prolonged profitability and large market share.

CLOSURE

This article concludes the series of three articles on intellectual capital management. These articles have explored customer capital (pertaining to both suppliers and customers) and innovation and process structural capital and have subsequently demonstrated that these capital forms can enable an organisation to achieve sustainable competitiveness in the current dynamic marketplace. These intellectual capital forms have received the least amount of attention and have not traditionally been regarded as intellectual capital. Organisations wishing to achieve sustainable competitiveness must realise that these capital forms are in fact rare, unique and inimitable resources that frequently collectively represent greater value than the traditional tangible assets. Once this realisation has been reached, effective systems must be put in place to effectively capture, manage and leverage these forms of capital; only then will the benefits of these invaluable intangible resources be reaped

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