Unlocking the Hidden Wealth of organisations:

the development and communication of intangible assets

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B&Q

Acknowledgements

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Like all companies, B&Q assesses, manages and reports on its assets regularly, through its parent company, Kingfisher – but these are largely tangible assets, such as sales, property, human resources and so on. Because there is not yet an accepted way of examining our intangible assets - such as knowledge management, innovation and brand value - we decided it was time to investigate further, to look seriously at our own work thus far and at that of other leading organisations. Through an examination of best practice, working with the leading academics in the field, we have developed some exciting new thinking about the development and communication of intangible assets. Of course, we will use these conclusions in our own business, but we have produced this report, with its eight frank case studies, to help benefit all forward-thinking businesses.

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Executive summary

The way value is created is changing. In many parts of the world better access to education and information is inexorably altering the behaviour of societies and markets. Paradoxically, more knowledge and information also leads to increased uncertainty.

Organisations that wish to be effective – whether in public service or commercial enterprise – are realising that industrial era tools and techniques are no longer adequate. To survive and prosper they need to mobilise every resource at their disposal.

These trends are exposing the fact that many organisations possess a wealth of resources that have been taken for granted or allowed to lie fallow or even deliberately concealed. Such resources would include reputation, specialised expertise and intellectual property. At a deeper level lie organisational culture, values and beliefs.

Collectively, these types of assets are known as 'intangibles' – but for many people the term is opaque and does not set the pulses racing. This report seeks to throw light on the subject; to reveal the importance and value of intangible assets and to show what practical steps can be taken to unlock their potential.

To a great extent the value of intangible assets depends on context. A deep understanding of biotechnology may be of little use to a hotelier. There is no 'best way' to unlock hidden wealth. Each organisation needs to identify and foster those hidden assets that it believes will sustain it in the future. Then they must be managed.

This requires ingenuity, commitment and, most importantly, communication. Recent business collapses are a stark reminder that the ultimate fate of an organisation is usually determined by the perceptions of people outside it; regulators, experts, accountants, interest groups and the ordinary person in the street. This complex network of players is behind the rising pressure for greater corporate transparency although, to be fair, not all these groups are equally enthusiastic about improved reporting of intangibles.

Pioneering organisations, institutions and governments have been exploring methods for dealing with intangibles for at least a decade. But there are still no mandatory requirements to measure and report such assets. UK plc does need to be aware that other EU states such as Denmark are gaining a significant lead. Forewarned is fore-armed.

In the short term progress is dependent on innovative practitioners. Those that are taking the initiative are doing so voluntarily. They are doing so because they know that the practice opens up great potential for business improvement and stimulates innovation. The management of innovation is usually promoted by advocates as good in itself. In reality, all innovation carries a degree of risk. This report does not portray the reporting of intangibles as risk free. Rather, it argues that well-managed organisations can take steps to minimise these risks whilst harvesting the corresponding business benefits.

As evidence, the report draws on the experiences of eight organisations that are serious about managing their intangible assets. They are variously based in the UK, other EU states and the US, pursue different lines of business and vary in size from small to multinational. The common factor is that all are achieving outstanding performance.

The report concludes with a distillation of key messages that offer a menu of options to organisations that intend to emulate these thought leaders.

A remedy for our times

The new millennium has ushered in uncertainties that increasingly trouble the leaders and citizens of our world. Economies have experienced a dramatic boom and bust cycle, populations are ageing, pension systems are under stress, corporate scandals have shaken public confidence, the pervasiveness of computer-mediated communications has brought both benefits and burdens. Globalisation of business, environmental pollution and random acts of terrorism have added to the sense of foreboding.

History tends to repeat itself. A century ago Rudyard Kipling's advice, if times are tough and if effective remedies are in short supply, was: "keep your head"[1].

Today's pressures and uncertainties have been forcing nations, markets and organisations to look to new sources for value creation. In recent years this has led to a quiet but steady transition from an exclusive focus on tangible assets towards a more holistic view of organisational resources. For example:

- OECD countries are annually investing 50-100% as much on the acquisition of knowledge as on physical assets[2]. US companies are annually investing approximately $1 trillion into intangibles[3]
- Knowledge workers were the fastest growing segment of the OECD's labour force in the 1990's, growing at an annual average of 3%[4]
- By 1998 only 15% of the S&P500's market value was attributed to tangible assets, compared to 62% in 1982[5]. Between 50-90% of the value generated by firms was attributable to intangibles[6]

For most of the 20th Century, management good practice concentrated on maximising returns from capital investment and physical resources. The economic and accounting systems supporting this approach shone a bright light on these resources through a tightly focused lens. But this harsh spotlight left other less tangible types of asset obscured in shadow. In the quest for improved performance, some organisations have been diffusing light across the wider landscape of their businesses and, in the process, illuminating hidden wealth that is locked up within their intangible assets.

This report sets out to explain the nature and value of this hidden wealth and to describe practical steps for unlocking it. The report draws on the experiences of eight organisations that have recognised that their intangible assets are a major source of wealth and are committed to identifying, developing and communicating the way they manage these assets. These beliefs are borne out by their willingness to collaborate in the research for this report and to allow others to share the lessons learned.

These thought leaders have decided to manage rather than be deterred by the risks that can accompany increased transparency. By 'keeping their heads' they are deriving substantial business benefits.

Dispensing with the mystery

In ordinary conversation the subject of 'intangible assets' rarely sets the pulses racing. For most people the nature of the topic is masked behind arcane management-speak. So let us look at what the management of intangibles actually means in more natural language.

The familiar meaning of 'intangible' is: 'that cannot be touched; impalpable'[7]. In an organisational context it is generally used to refer to assets exhibiting these qualities.

By convention, the term *tangible asset* is used to describe such things as property, buildings, plant and equipment, stocks and raw materials and financial capital. Traditionally, such assets, together with labour, have been treated as the fundamental economic resources and factors of production. Characteristically, they are things that can be measured or counted in accordance with generally accepted accounting principles.

In contrast, *intangible assets* are actual or potential resources that do not fit comfortably within these categories and, typically, are hard to measure in absolute terms. They exist across a spectrum ranging from intangible goods, through intangible competencies to latent capabilities:

- **Intangible goods and products** – these include licenses, franchises, patents, trade secrets. Broadly speaking, the value of such assets can be established in the marketplace.
- **Intangible competencies** – these include distinctive competencies, routines and business processes. Such assets are tradable in highly specific contexts but, typically, their value is most evident when it has been lost rather than when it has been acquired. In general this type of asset exists within human beings and so the intrinsic value is established in the behaviour of the possessors.
- **Latent capabilities** - these include such things as reputation, leadership and workforce calibre. The value of this type of asset is established in the perceptions and expectations of stakeholders. Therefore this value tends to be manifested in indirect indicators such as the cost of capital and relative share price performance.

These examples of intangibles represent the tip of an iceberg of potentially valuable assets. The range of this hidden wealth reflects every organisation's unique combination of history, purpose and beliefs. Despite this variety, long term research at Cass Business School[8] has found that organisations choosing to unlock their hidden assets tend to select from a relatively small number of 'entry points' based on organisational priorities. This choice of focus includes intellectual property rights (IPR), brand value, knowledge, innovation and the reporting of intellectual capital.

The IPR route is a priority for relatively few organisations. This report seeks to elaborate the other four routes which may have broader utility. These routes need not be mutually exclusive but they are distinguished from each other as follows:

Brand value

Brand value is positioned as an intangible good. A focus on brand value provides an important entry point into the management of intangibles for organisations whose business activities also require substantial investment in tangible assets such as sales outlets and distribution capabilities.

Knowledge

The term 'knowledge' can usefully characterise the second category of intangible assets, namely; 'intangible competencies'. A focus on the knowledge theme is particularly important to organisations whose product or service effectiveness is almost wholly dependent on the creation and deployment of knowledge to the right people at the right time.

Innovation

Innovation is a driver of future wealth. This theme is of particular importance to organisations that operate in hypercompetitive and rapidly changing markets. The continued existence of such businesses is determined by their ability to create or identify and respond to market opportunities. The capacity to innovate characterises the third category of intangibles: 'latent capabilities'.

Reporting intellectual capital

This theme tends to be adopted by knowledge-intensive businesses. Its importance is that it is a business process for communicating the effective management of the whole range of assets and explicitly shows how this practice enhances the business performance of the organisation. As the resulting transparency exposes the organisation to the public gaze, this theme is usually accompanied by thorough risk management procedures.

The EU-funded PRISM project, a two-year pan-European research effort that reported[9] in September 2003, has formulated a model of the new corporate asset base. This presents assets across a spectrum that highlights degrees of intangibility (see figure 1).

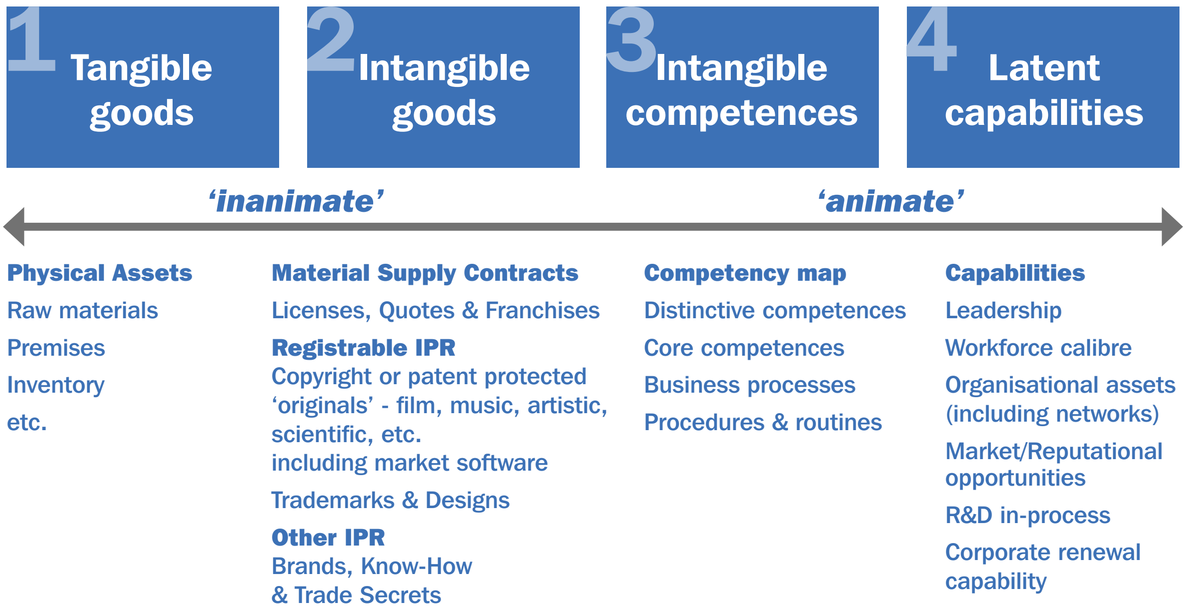

Figure 1: the New Corporate Asset Base formulated by the PRISM project in 2001

Over the two years of the project, PRISM researchers based in seven European states produced more than 100 reports and a themed collection of 15 in-depth case studies. Taken in the round, this body of work highlights the steady transition from an industrial era to a knowledge-based era – a transition that is already evident in developed economies and becoming apparent in rising economies such as those of India and China.

The research has identified, as evidence for this shift, the emerging organisational strategies and patterns of behaviour that characterise good practice. The most salient of these include a tendency for organisations to foster formal and informal linkages with suppliers, customers and society at large – in other words, to become 'networked organisations'. This transition is accompanied by increasing awareness of the importance and value of corporate social responsibility and the management of knowledge.

The findings reflect a growing understanding that superior performance in the knowledge era requires managers to treat intangible assets as factors of production that are just as important as the industrial era factors. According to PRISM estimates, approximately 75% of the potential for value creation lies buried in intangible products, intangible competencies and latent capabilities. Organisational effectiveness in the 21st Century will depend on the ability to create value through the managed interplay between tangible and intangible factors of production.

The idea is not new. Over a hundred years ago Alfred Marshall wrote: "Capital consists, in a great part, of knowledge and organisation. Knowledge is our most powerful engine of production”[10]. Clearly, practical action to apply this wisdom is long overdue.

In its final report the PRISM project provides a diagram to illustrate how the managed interplay of tangible and intangible factors of production catalyses a value creation cycle (see figure 2).

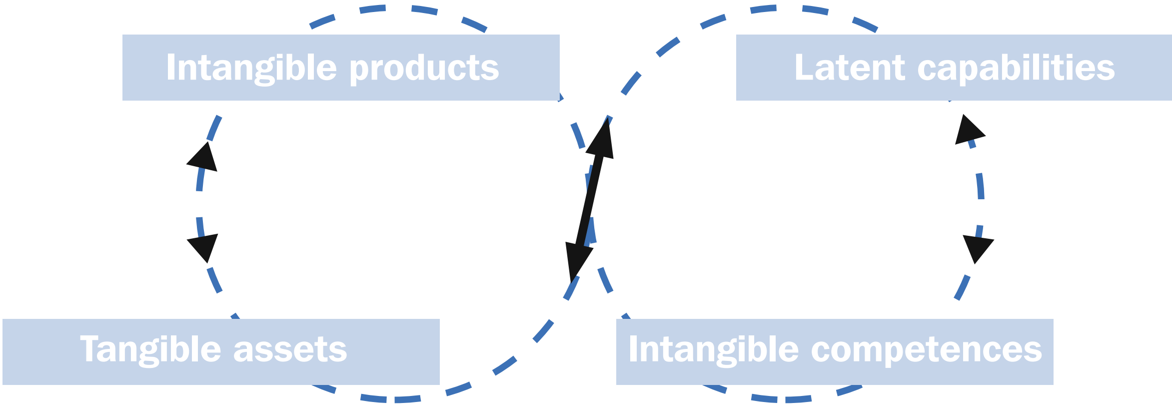

Figure 2: The tangible/intangible value creation cycle - from the PRISM project 2003

In practical terms, pioneering organisations in a number of industry sectors have been managing this interplay for some time. For example, in the pharmaceutical industry the value creation cycle tends to start with funding for Research & Development. When this leads to discovery of a novel compound it is followed by a patent application. If clinical trials of the new drug are fruitful the quest moves to development of an economical production process. A successful drug reinforces the brand value of the organisation and produces the revenues that fund new Research & Development …. and the cycle begins again.

Value creation in the 21st Century

As any manager can testify, there is no ‘one right way’ to ensure superior business performance. By the same token, few would deny that the socio-economic climate is being changed inexorably by the need to manage and balance process, technology and people-related issues.

These factors are reflected in the range of tools and techniques now available to managers. Since 1990 this toolbox has expanded to include, among many, Business Process Reengineering (BPR)[11], Information Systems Strategy and Applied Knowledge Management.

These successive waves of management innovation shared one thing in common. All required managers to learn how to harness intangible resources: the intellectual property of the organisation, the value of its brand and reputation, the capabilities of new information and communications technologies, the knowledge and skills of people both within and outside the organisation - including ‘the customer’. And the managerial skill that links these factors systematically is communication.

Clearly this is a rich recipe. The possible combinations are many and varied; one size does not fit all. The goals and the circumstances of an organisation will determine which of these intangible resources should be the chief focus of attention.

Selecting an approach

Many governments and supra-national bodies are investigating possible methods for reporting intangibles. At present none imposes any mandatory requirement. Organisations that are taking the initiative and reporting on their intangible assets do so voluntarily and because they are convinced that the practice delivers benefits.

Now that some 80% of activity in advanced economies is service-centric, thought leaders have increasingly drawn attention to the importance of non-financial, intangible factors of production. Since the mid-1980s various approaches have emerged for increasing attention to these. Three stand out:

1. The 'balanced scorecard' approach which seeks to relate financial metrics and hard-to-measure factors concerned with human behaviour and its outputs.
2. Concern with the quality of life and the impact of human activity on the environment.
3. Technology-based standards, such as XBRL, which apply a new 'grammar' to data in order to facilitate collation and comparison and to highlight trends.

Each approach has sought to develop models which characterise sustainable good practice and voluntary codes that demonstrate adherence. Such efforts have been diverse and disjointed but there are signs of convergence around the concept of complementing corporate financial statements with social and environmental reports – Corporate Social Responsibility reporting (CSR). The purpose of this so-called 'triple bottom-line' reporting is to give stakeholders a fuller picture of an organisation's business performance.

In Europe, the EC issued CSR guidelines in 1992 and a voluntary code in 1995. The UN refined these as ISO 14000 in 1996. In 2001, the EU made Social and Environmental reporting mandatory for businesses operating in the financial services sector.

Vested interests have delayed widespread adoption. In Italy, for example, only 52 organisations publish environmental reports and a mere 30 issue social reports[12]. The story is similar in the UK, according to a DTI survey of 8,000 firms representing the 3.7 million UK businesses employing fewer than 250 people[13]. This found that although 73% felt there was a link between environmental good practice, increased sales and profitability and better customer relations, a mere 3% currently have an accredited environmental management system. However, nine out of ten firms said they would act to avoid prosecution if legislation was imposed.

Despite this tardiness to take up the acknowledged business benefits available to early adopters, some well-publicised incidents indicate that ordinary consumers are forcing both nation states and companies to take greater care of that most intangible and valuable of assets – reputation.

- In 2002 the Enron scandal destroyed the reputation of Arthur Andersen almost overnight and caused panic among the general share-owning public. This compelled the US government to rush through the Sarbanes-Oxley Act[14] making directors personally liable for misleading business information.
- When Shell announced it would sink in the deep ocean its obsolete floating oil rig, the Brent Spar, a widespread boycott of its products forced the company to dismantle the rig safely and at huge expense.
- The NIKE brand suffered a severe setback when it was revealed that its suppliers used child labour on low wages to make its expensive shoes and sports equipment.

Taking a balanced view

In the absence of official guidelines for reporting intellectual capital, the methods developed to date have been piecemeal. However, it is evident that, typically, these methods recognise the principles of the Balanced Scorecard[15].

Robert Kaplan and David Norton, who conceived this innovative management tool in the late 1980s, had observed that in the increasingly turbulent business environment a single-minded focus on financial performance did not guarantee long term prosperity, or even survival. They proposed that a business should monitor and balance performance in four business 'perspectives' – Financial, Internal business processes, Customers, Learning and growth. The performance is gauged by means of metrics that communicate the targets to be achieved.

Such metrics or Key Performance Indicators (KPIs) for the financial perspective are well established and widely used – for example, 'return on capital employed' (ROCE). The same does not apply to the other three perspectives. These are concerned with less tangible and non-financial aspects and each business will need to select KPIs that are relevant to its particular objectives.

Non-financial perspectives can be hard to measure in absolute terms. Early adopters of the Scorecard approach have found it useful to refer to Professor Karl-Erik Sveiby's Intangible Asset Monitor for inspiration[16]. Some experienced practitioners include indicators that gauge performance simply in terms of an increase or decrease. Their advice is only to measure something if you intend to act on the results; then agree targets that are meaningful to those involved. For instance, a pharmaceutical company might decide that for its Learning and Growth perspective it was vital to monitor the proportion of its research staff holding a PhD. In many other contexts this metric would be irrelevant.

The issue of context is crucial. Different types of organisation may employ a particular non-financial metric for completely different reasons. Take staff turnover rate for example. Many organisations fear the loss of specialised knowledge and would want to keep this metric as low as possible. But firms in creative industries and consultancy are likely to prefer the rate to remain above 25% to ensure a constant influx of fresh talent.

Evidence of good practice

This section of the report addresses practical applications. Over the past few years a small but increasing number of organisations have decided to give priority to unlocking their hidden wealth. In the absence of any nationally or internationally agreed standards or guidelines, these pioneers have been obliged to develop tailored approaches. Eight of these pioneers have agreed to share their experiences by way of the case studies that are appended to this report.

The cases have been selected to illustrate our four themes - brand value, knowledge, innovation, and the reporting of intellectual capital - with two cases for each theme. The common factor is that all eight organisations have outperformed during the difficult economic conditions since the turn of the millennium.

Of the eight subject organisations six are private sector businesses, one is in the public sector and one is a public/private partnership. One operates solely in the UK, three are based in the UK, one each is based in Austria, Italy, Sweden and the US. All except one employ more than 500 people.

The portfolio of detailed case studies accompanies this report. A synopsis of the salient issues and lessons from the cases follows for each theme.

Theme 1: Brand value

The importance of brand value is that it underpins the marketing strategy of the organisation and communicates its values and beliefs to all stakeholders. A brand transcends the life-cycle of specific products and services and allows these to be extended, repositioned or replaced seamlessly. This enables sustainable growth and future revenues that, in turn, reinforce brand value. Business takeovers show that when brands are sold or licensed they typically bring far greater proceeds that the tangible assets.

The featured organisations are B&Q and Whitbread.

B&Q

Since its humble beginnings as a single store in Southampton in 1969, B&Q has expanded both organically and by acquisition, and upheld its brand essence throughout. Brand value is one of the most intangible of assets because it is largely determined by people outside the organisation. B&Q has built a multi-level approach to brand development that is designed to create and return new value from investment.

Alongside its brand development strategy, B&Q has pioneered a range of complementary initiatives for nurturing its intangible assets, including e-learning via the B&Q University and B&Q Social Responsibility. Innovation of both brand and product deliver additional intangible value to B&Q and its parent company Kingfisher in the form of reputational capital.

The results of B&Q's determination to foster its intangible assets are clearly visible in the sustained improvements in financial results.

The principle lessons from B&Q's experience are:

- Fostering brand value engenders a widespread public perception that the company stands for value for money and is increasingly associated with high quality.
- A focus on CSR leads to greater business efficiency and raises the reputation of the company among staff and in the minds of existing and potential customers.
- The policy of measuring and reporting on the management of intangibles has an impact on the supply chain. B&Q's suppliers have responded with, for example, radical improvements in forestry, a substantial reduction of volatile chemicals in paints and the development of peat-free growing media.
- Intangible values can be difficult to measure. 'Proxy measures' such as regular independent surveys of staff and customer satisfaction can provide powerful indicators of any increase or decrease in value. These indicators alert managers to take early action that will reinforce financial results.

Whitbread

After 250 years as a leading brewer, Whitbread became one of the first UK companies to sense and respond effectively to the formation of what is now the leisure industry. During the 1990s the company embarked on the bold strategy of divesting its beer production and distribution facilities and re-investing in a portfolio of high profile brands, including hotels, restaurants and health & fitness clubs. The company has embedded its original values and beliefs into a 'balanced scorecard' approach and the successful transformation has been underpinned by the use of brand 'templates' that set out the structure and discipline for managing each brand effectively.

The company's published results show how the brand portfolio strategy has resulted in a broad-based platform providing stability, resilience and growth. Between October 2000 and August 2003 only half of FTSE 100 companies delivered any growth in total shareholder returns; thus Whitbread's achievement of 80% growth in this period places it in the elite Top 10.

The chief lessons learned by Whitbread are:

- Effective brand management follows a 6-stage cycle that starts and ends with 'consumer insight'. This enables trends to be anticipated and brands to be differentiated.
- In the leisure industry, brand value is indissolubly linked both to customer and employee satisfaction. Key to this is a method for managing such intangible factors of production that is understood by all and clearly linked to the reward system.
- Regular customers increase brand value, so a consistently satisfactory experience is vital. The management of intangibles must therefore extend beyond corporate boundaries to suppliers and other alliance partners.

- A clear link between intangible assets and 'the bottom line' is crucial when growth opportunities beckon. Whitbread's ability to manage intangible assets has delivered over 80% growth in total shareholder returns since October 2000 – placing it in an elite Top 10 among FTSE100 companies and fuelling ambitious plans.

The processes these two companies have developed for tracking and fostering brand value are notable for addressing customer and employee satisfaction, and for linking both to business performance outcomes.

Theme 2: Knowledge

The importance of knowledge is that it is the essential ingredient for creativity and drives organisational effectiveness. 400 years ago Francis Bacon proclaimed that 'knowledge is power'. Today, organisations are increasingly recognising that the value of knowledge increases exponentially when it is shared and accessible at the moment it is needed.

The two featured organisations are Bloomberg of New York and the UK Fire & Rescue Service.

Bloomberg

In 1981 Mike Bloomberg launched an offering that, until then, had been impossible – real time bond market data supplied digitally and combined with analytical tools for application by the client. The service gave early adopters such competitive advantage that the firm achieved a global presence within 6 years. Continuous innovation and extensions to functionality have driven sales growth to become exponential. Today, Bloomberg is the leading provider of financial market information and one of the world's most received radio, TV and web broadcasters and publishers.

With over 8,000 staff in 94 bureaus worldwide the concept of workspace is fluid. There is no organogram and no job titles. People learn and develop the business and themselves by frequent relocation to cross-fertilise ideas and boost management skills. The company's own product is the backbone of the organisation. Instant messaging has virtually eliminated paper. The system tracks and records all activity. This provides staff with ready access to structured information that, in any given context, unleashes the corporate knowledge of the organisation.

The chief lessons Bloomberg has learned are:

- Very rapid growth is only sustainable if the company becomes a 'learning organisation'. When employees are aware of and can contribute to the knowledge and competencies that exist across the enterprise they can grow with the business.
- A tightly defined organisational structure can inhibit knowledge-sharing and the development of experience. It is more important to be able to reach people with know-how than to know what they do in their job-role.
- Openness and transparency demands loyalty and mutual trust. Bloomberg is a private company. People who join are treated as family and developed. Those who leave can never return.
- Experimentation should be encouraged and failures forgiven. It is the synergy between business units rather than the contribution of each to the 'bottom line' that leverages sales of the core products.

The UK Fire and Rescue Service

The visible side of fire service work is dramatic, heroic and palpably tangible. This case throws some light on the hidden side – a side that is strongly focused on the effective management of intangible assets such as knowledge, skills and safety in order to achieve the economical delivery of superb public service.

As part of this, the National Mobile Data Project is transforming the way in which relevant information and collective experience is being captured and made accessible in real time to officers at the fire ground and to other emergency services. This work has already been independently assessed as of national importance.

The principal lessons learned by the UK Fire & Rescue Service are:

- When crucial business decisions must be made away from the office the organisation stands or falls by its ability to deploy relevant knowledge and information in real time.
- Organisations possess vast amounts of knowledge but much of it resides in people's heads. Its essential documentation is an expensive process. The investment is worthless if knowledge cannot be readily and remotely accessed and used when required.
- When time is of the essence the user needs access, in the first place, to the most immediately relevant information. Therefore the organisation should audit all its information and knowledge and then decide which is most important to the achievement of its objectives.
- Information provision must be geared to the financial and physical resources that enable knowledge and information to be acted upon. Managers must prioritise the more efficient utilisation of property and equipment.

Both Bloomberg and the UK Fire and Rescue Service recognise the importance of knowledge in the business, and for information to be organised so it can be accessed in a timely and relevant way. Well-structured information frees up people to act flexibly in accordance with the demands of the situation.

Theme 3: Innovation

The importance of innovation is that it is a process that enables concepts and ideas to be converted into products and services that people will want. Existing products can be copied by rivals or can quickly fall out of fashion. In many industry settings the capacity to innovate is a prerequisite for survival. This capacity is a function of attitudes and behaviours that are understood and shared across the enterprise.

The two featured organisations are Intercos of Milan and mmO2.

Intercos

Milan-based Intercos is a specialist in colour cosmetics. Each tonne of the talcum it mines makes over 100,000 items of make-up – in any colour imaginable – for the world's best-known beauty brands. The transformation takes 16 weeks and the added value is enormous … but fashions change overnight. Innovation is the life-blood of the company and the way through which Chairman Dario Ferrari envisions Intercos becoming the world's leader in the colour cosmetics field: "We have no other strategy than continuous innovation".

Intercos has embraced the management of intangible assets, in itself an innovative approach, as the principal driver of business growth through client relationships. The development of an Intangible Capital Statement to communicate the company's values has been widely perceived to be of strong importance, with a remarkable impact on customers who view the decision to show Intercos in full transparency as enlightened.

The chief lessons learned by Intercos are:

- There is no such thing as a generalisable tool for managing intangible assets because every organisation has a unique set of value creation drivers. At Intercos, the main source of value creation is innovation; the driving force resides in its customers.
- The application of an Intellectual Capital approach means radical change to the company's culture. The commitment of top management is essential to secure the buy-in of all stakeholders. If an IC report is produced merely as a PR exercise it will almost certainly backfire.
- An IC report exposes weaknesses to the public gaze; the report must state clearly what action is being taken. The pay-back comes when the value creation focus moves from measurement to management.

- In Intercos' experience, its Intangible Assets Report supports and justifies its policy of re-investing 24% of net sales revenues in new product development. Intercos has increased this every year since 1994 and quadrupled sales during the same period.

mmO2

The fostering of intangible assets is playing a vital part in the establishment of mmO2 – the listed, re-launched company derived from BT Wireless in 2001 – as a credible, innovative, independent business. mmO2 concludes that the assiduous management of intangible assets has helped it post a sound financial performance for seven successive quarters and convince many in the City that it is a serious company.

The group's first annual Corporate Responsibility report was published on the mm02 website in July 2003. In October 2003, results showed that company is on track to reach 30 per cent operating margin for the year and achieve doubt-digit growth.

The chief lessons that mmO2 has learned in implementing this policy are:

- CSR is a company-wide way of thinking, which focuses attention on problems to be profitably solved and new opportunities to be pursued.
- CSR identifies key stakeholders and issues the company should engage with, and brings it closer to its customers.
- As a result, CSR becomes a management tool for motivating staff; dealing promptly with problems, lapses and omissions; and communicating with customers and investors. In short, it leads to innovation.
- Tracking company performance on CSR measures makes everyone aware of the importance of 'intangibles' as the source of business success in a climate where traditional sources of earnings can no longer be relied upon.

These two companies use different reporting tools to reflect intangibles, but both have the effect of focusing employees on customers as the driving force for innovation.

Theme 4: Reporting intellectual capital

Reporting intellectual capital (IC) is a business process that communicates the effective management of the whole range of assets. It presents goals, targets and results regarding the organisation's people, its organisation and its customers, and explicitly shows how this relates to and enhances financial performance. The resulting transparency carries risks that are outweighed by stakeholder confidence. IC reporting is of particular utility to knowledge-intensive businesses whose success will derive from the potential value of intellectual property, know-how and workforce calibre.

The featured organisations are Austrian Research Centers of Seibersdorf and Celemi of Malmö.

Austrian Research Centers (ARC)

As Austria's largest Research Technology Organisation, ARC's main function is to manage the transfer of knowledge between state-owned laboratories and universities and the applied research and development in companies. The chief outputs of this public-private partnership are highly intangible: knowledge that can be re-applied and workable innovations that can be made into products. In short, ARC's business is to foster intellectual capital.

ARC decided that traditional accounting procedures did not allow it to report adequately to stakeholders on the management of its IC. In 1999 ARC developed a new approach to measuring and reporting IC based on transparency about goals and business strategies, performance indicators and data-gathering techniques, change management issues and project management procedures. ARC has since established this innovative, process-oriented method as an internal management tool and for communicating with other stakeholders in a supplement to the annual financial accounts.

The principal lessons that ARC has learned are:

- The company's mission should be expressed in terms of its primary 'knowledge goals'. The business processes that underpin their achievement can then be identified.
- An organisation must decide which types of intellectual capital are important to it and should be measured for each knowledge goal. ARC measures, balances and reports five types – human, structural and relational capital, key processes and results.
- As an intangible asset, knowledge can be replicated many times. Any IC reporting model must ensure that an intangible asset is not double counted. This requires people across the enterprise to understand and actively participate in the measurement process.
- An effective IC model provides both an internal management tool and a means of communicating with external stakeholders. It should present precise definitions, numerical values, qualitative explanations and symbols depicting results trends and intended actions.

Celemi

The measurement and reporting of intellectual capital is still evolving as an essential business activity, despite clear bottom line business benefits. In the early 1990s Celemi, a Swedish learning design consultancy, developed a business simulation that enabled executives of knowledge businesses to understand that financial and intellectual assets must be managed equally well.

Believing it should 'practise what it preached' Celemi applied the methodology to itself. The resulting Celemi Monitor reveals fully the non-financial metrics that drive performance. The Monitor has been published alongside the company's financial statements since 1995. Notably, the Monitor helped Celemi overcome problems during the e-commerce downturn, restoring stability and dramatically improving profits. This small company now operates in over 20 countries, serving many of world's leading organisations.

In Celemi's experience, the chief lessons are:

- The monitoring of intellectual assets highlights the non-financial metrics that drive business performance. It signals trends requiring attention and enables staff to participate in decision-making and resource allocation.
- Start with measures that lead to increased customer satisfaction and follow with measures that nurture employee satisfaction. This provides the basis for reducing costs. The secret is simple - don't measure activity; measure the results of activity.
- Financial statements reveal past performance. The measurement and reporting of intangible assets exposes how the business is positioned for the future and focuses attention on the things that will deliver tomorrow's profits.
- Publication of an intellectual assets report is unlikely to affect clients' purchasing behaviour. Rather, it enables the company to identify and develop the right sort of clients – those that enhance the company's image and buy regularly because they are attracted by the company's thinking, not simply its products.

The development of intellectual capital reporting is a demanding task. But it pays off. The two cases highlight its value in revealing the underlying drivers and processes for future business performance. It helps these organisations to think deeply, and to think ahead.

Key messages

In advanced economies manufacturing now represents less than 20% of gross domestic product. The balance has swung in favour of service industries that supply intangible goods, competencies and capabilities. And consumers of manufactured goods now expect and demand knowledge to be embedded in the products. The pervasiveness of information and communications technologies has transferred power to consumers and helped replace ‘supplier push’ with ‘customer pull’.

However, economic, accounting and management systems have not kept up with the pace of change. Good practices perfected during the industrial era are inadequate for reporting performance in an intangible economy.

Against this background thought leaders in a variety of industry settings have been quietly developing methods and processes for identifying and enhancing their intangible assets. Instead of just shining a spotlight on financial performance, these pioneers have been diffusing light across the wider landscape of their businesses and exposing valuable assets that have been neglected and allowed to lie dormant. This illumination also reveals connections and pathways that can be cleared to facilitate the interplay between intangible and tangible assets.

This report has highlighted the experiences that eight of these pioneering organisations have been happy to share. The following key messages stand out:

- **Context**. Whereas financial accounting is based on generally accepted rules that allow stakeholders readily to make inter-company comparisons, there are presently no agreed standards for measuring and reporting intangibles. Accordingly, interpretation of intellectual capital reports requires an understanding of the contexts in which the reporting organisation operates.
- **Value creation**. Explicitly managing brand value focuses the attention of stakeholders on the ways in which the organisation creates value. This not only increases internal effectiveness but also enables supply chain partners to contribute to improvements for mutual benefit.
- **Risk**. The reporting of Corporate Social Responsibility (CSR) or intellectual capital (IC) exposes to public gaze both the strengths and weaknesses of the organisation. The reporting process should therefore be accompanied by thorough risk management procedures, and reports should clearly state planned actions.
- **Innovation**. CSR and IC reporting is a company-wide way of thinking that promotes innovation and creativity. Systems must be in place to manage, reward and capitalise on such behaviours. Initiatives designed to present a favourable public face are likely to backfire.
- **Communication**. The management of intangibles creates a potent channel for communicating with stakeholders and for motivating staff. It is not just a medicine; it is more like a corporate fitness regime that prepares the organisation to withstand new pressures and threats.
- **Objectives**. To secure the active participation of staff the organisation’s mission should be expressed in terms of explicit knowledge goals. Key performance indicators can then be selected to show whether or not each goal is being achieved.
- **Performance**. The effective management of intangibles builds on past performance by causing employees to think about improvements and innovations that will address and deliver sound performance in the future.

These key messages constitute a menu of policy options that can be used jointly or severally. They are offered to businesses that wish to emulate thought leaders in the management of intangibles and unlock the hidden wealth in their organisations.

Endnotes

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Brand value

1

case study B&Q

Brand Value	Knowledge	Innovation	The measurement and reporting of intellectual capital
B&Q	Bloomberg	Intercos	Austrian Research Centers
Whitbread	UK Fire & Rescue Service	mmO2	Celemi

Abstract

Since its humble beginnings as a single store in Southampton in 1969, B&Q has expanded both organically and by acquisition, and upheld its brand essence throughout. Brand value is one of the most intangible of assets because it is largely determined by people outside the organisation. B&Q has built a multi-level approach to brand development that is designed to create and return new value from investment.

Alongside its brand development strategy, B&Q has pioneered a range of complementary initiatives for nurturing its other intangible assets, including e-learning via the B&Q University and B&Q Social Responsibility. Innovation of both brand and product deliver additional intangible value to B&Q and its parent company Kingfisher in the form of reputational capital.

Context

For many people today the letters B&Q stand for 'Do It Yourself'. In 1969 it was simply a sign over the door of a shop in Southampton where Richard Block and David Quayle had opened for business.

At that time UK TV personalities like Barry Bucknall were introducing the population to the idea of maintaining and improving their homes by using their own labour. Block and Quayle's vision was to offer ordinary members of the public self-service access to building materials and tools – with a little practical advice thrown in for good measure.

The offering was hugely popular and in 1979, with 26 stores in operation, the company went public. Almost immediately it was acquired by Woolworths to complement its High Street chain of 2,000 low-cost general stores. In 1982 both companies were taken over by Paternoster – now Kingfisher.

Since then B&Q has continued to expand both organically and by acquisition. By 1984 there were 155 UK stores and this number passed 300 in 2000. In 1990 B&Q started to build larger format stores called The Depot and these shifted to a Warehouse style with the first of 100 out-of-town superstores opening in 1994. The first venture outside the UK was in Taiwan in 1996. What was then B&Q's largest store worldwide opened in Shanghai in 2001 and soon afterwards B&Q launched its transactional website - http://www.diy.com - and its first store in Ireland. Korea is next on the list.

This sustained growth has made B&Q's parent Kingfisher number 1 in Europe and the world's most international home improvement retailer with over 600 stores in 12 countries. In 2003 the home improvement business produced sales of nearly £7bn and, at £534M, two-thirds of group profits.

The value of 'brand' as an intangible asset

Throughout this continuous evolution B&Q has upheld the 'brand essence' devised by the founders 34 years ago; taking it from 'accessible DIY' to 'helping people make their homes better'. The brand of an organisation could be defined as 'a characteristic that serves to identify a particular product, trade name or trademark' which in turn presents a combination of *rational* values – what the brand actually delivers - and *emotional* values that are connected more to the dreams and aspirations that the brand can deliver.

This makes the brand one of the most intangible of intangible assets because the value ascribed to it is determined by people outside the organisation – customers, suppliers, analysts, regulators and, largely, by ordinary members of the public. In this sense the value of a brand is an indicative measure of expectations of service, of profitability and of acceptable business behaviour as well.

The evaluation of a brand is a subtly different matter. The absence of a recognised standard for measurement has meant that less than 15% of leading UK companies have capitalised their brands on the balance sheet. However, the issue is gaining in importance because, typically, the market capitalisation of successful organisations is significantly greater than the book value of tangible assets. This disparity makes it difficult for investors and stakeholders to gauge the true value and performance of a business.

Despite uncertainties about absolute measurement of brand value, organisations know they must continually strive to increase this hard-to-measure intangible asset. This is because its value is largely determined by customers and others outside the organisation. It lies in the esteem and trust they have in the organisation – a supremely valuable intangible asset that must be continually nurtured and refreshed. When it is taken for granted the consequences can be severe. Witness the sudden collapse of Arthur Andersen, the world's top professional services business until a scandal destroyed public confidence. What can take decades to build up can be torn down overnight.

21st Century strategies for enhancing corporate assets

B&Q seeks to increase the full range of its ‘corporate assets’ through a range of approaches. The aim is to ensure stakeholder satisfaction in the short, medium and long term. These approaches are in part driven by Marketing and Communications strategies that are designed to develop brand value and to enhance the reputation of the company. These objectives are not mutually exclusive; they can contribute jointly to measurable improvement in business performance.

Nurturing brand value at B&Q

Figure 1 offers a depiction derived from interviews with B&Q executives to describe this flow of investment activity and the return flow of newly created value. This model highlights the tangible/intangible dynamic at B&Q – the way in which financial capital is applied to the creation of brand value to accomplish a return on investment. Arguably, the process has made a very real contribution to the holding company’s status.

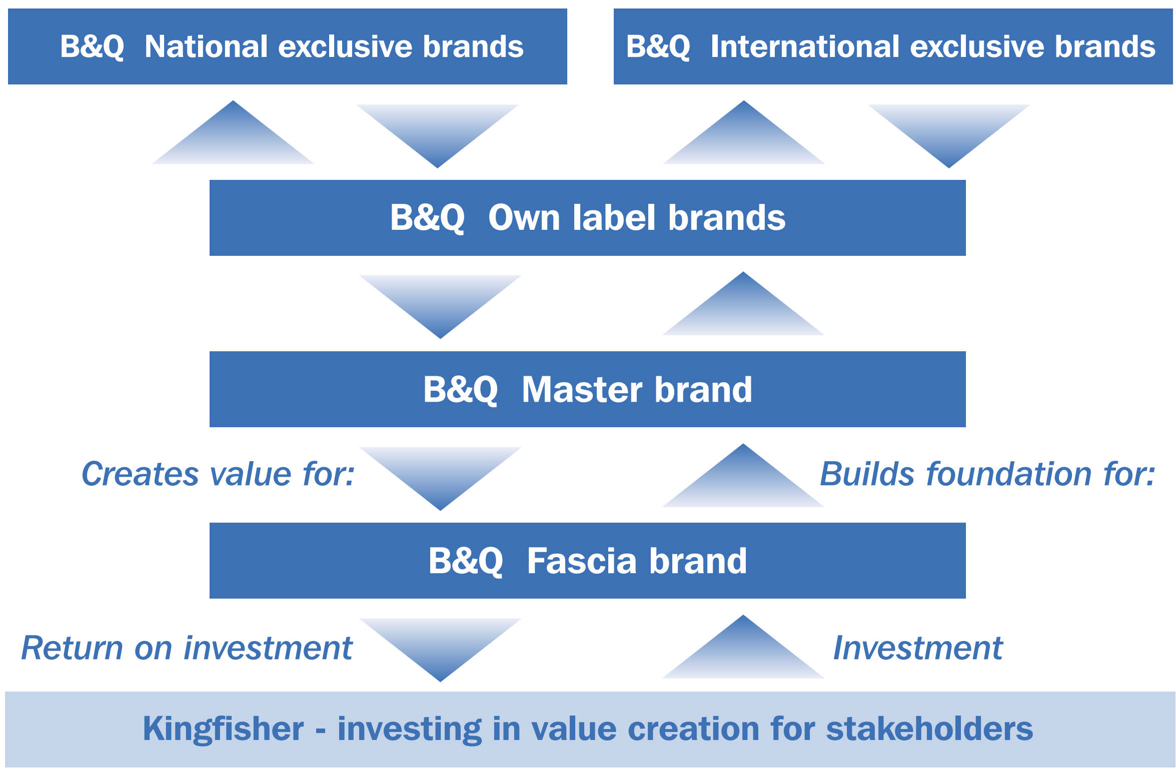

Figure 1: B&Q’s brand development strategy

Each stage in the brand development strategy is explained below.

Fascia brand

At the root of the strategy lies the Fascia brand symbolised by the familiar orange B&Q logo. Few UK customers know of its origins in the founders’ names and in Taiwan and China it is even less meaningful in a literal sense. B&Q’s fascia brand stands for value for money and is increasingly associated with high quality.

Master brand

The fascia brand underpins the Master brand. This captures the values and beliefs that the company upholds and promises as part of the shopping experience. These include accessibility and range, knowledge and help – qualities that have persisted since the early days when the strategy was the classic 'stack it high and sell it cheap' approach. More recently, customer surveys indicate a growing perception that the master brand conveys innovation, inspiration and style – the sort of attributes often linked with up-market retail brands like Habitat.

Own label brands

The master brand has supported the development of Own label brands. These are mainly applied to core DIY products like hand tools and gardeners' compost which are known as 'Hero' products because of the vast amounts sold. They reassure the customer that the products are more than fit for purpose whilst delivering exceptional value for money. They familiarise customers with the B&Q label, associate it with reliability at low prices and variously support the master brand.

Exclusive brands

The next level contains Exclusive brands. These mark out products that are wholly owned by B&Q and, like Own label brands, cannot be acquired from any other source. While Own label brands offer commodity products at keen prices, exclusive brands offer so-called lifestyle products – fashionable items that fulfil wants rather than needs and so are connected to more emotional, less rational values. Both Own label and Exclusive brands enable B&Q to own the intellectual property vested in the product design and to ensure that components and raw materials comply with set standards. This approach generates new value in two distinct ways. Firstly, it allows B&Q to specify and manage materials sourcing, production, quality control, environmental impact, labour practices as well as the control of all elements of the marketing mix, such as packaging, advertising and in-store communications. Secondly, the products deliver a higher profit margin to B&Q than can be earned by reselling goods made and packaged by well-known manufacturers.

B&Q's stable of Exclusive brands includes Colours paint, Performance Power (power tools), New England Paint and Form (storage solutions). Each exclusive brand has its own defined brand essence, which in turn adds additional values to the B&Q master brand. In the case of Performance it is: 'an entry level power tool that is strong, long lasting and easy to use'. In the case of Form it is 'practical, innovative and stylish shelving and storage solutions for the home'. Roth notes that "the exclusive brand approach enables B&Q to appoint designers and manufacturers and to supervise the entire supply chain".

The Performance Power brand, for example, offers a range of power tools such as masonry drills and garden power tools such as hedge-trimmers and shredders. Marketing director David Roth recalls: "in the early days the market leaders were Bosch and Black & Decker. These manufacturers had been used to selling direct to builders or through the traditional Builders' Merchants and they were reluctant to supply us with stock".

Perceptions in the UK of the Black & Decker brand remain higher than the Performance Power brand. However, B&Q's investment in its own Exclusive brand means that it is fast catching up and is already the market leader in terms of sales. As Roth puts it: "the established power tool manufacturers have significantly reduced investment in their intangible assets. We offer a better value proposition based on higher performance and reliability. I see price as the tangible part of the equation; brand is the intangible bit."

Each level in B&Q's brand hierarchy provides a platform for value creation at the next level. In turn, the value feeds back through the structure to deliver both financial and non-financial benefits to the B&Q fascia brand.

National and International exclusive brands

Roth reports that this brand strategy is enabling B&Q to reach a further level of value creation. "We are now able to develop two types of exclusive brand. National exclusive brands leverage our exclusive and own-label brands in national markets to deliver economies of scale and more efficient procurement. International exclusive brands help us to harmonise the subtly different strategies we employ each time we enter a new national market".

B&Q's recent entry into the Chinese market illustrates this. B&Q already has fourteen stores in China, including its two largest. They are two-storey buildings rather in the style pioneered by IKEA. Heavy and commodity products are housed in the lower sales area.

New homes in China are normally sold as shells, with no interior finishings or fittings. B&Q therefore offers an interior design and specification service and, through its retained workforce of 3,000 installers, the option of a full 'supply, deliver and fit' service. As a result the brand image in China has advanced from 'helping people make their homes better' to 'delivering better homes'.

James Zhang, B&Q's CFO in China, notes that this shift from Do it Yourself to 'Build it Yourself' already accounts for a significant proportion of profits earned in China. In Zhang's view, this subtle change in the brand offering could usefully be replicated in the established UK business.

Roth expects such changes to be reflected in the presentation of the B&Q brand in Korea and other new country markets. "Our brand essence is the same in each country market; it's simply that they are getting to the end point at different times."

These trends are producing the climate for innovation of both brand and product and this is delivering additional intangible value to B&Q and to Kingfisher in the form of reputational capital.

Strategies for enhancing B&Q's reputation

In parallel with its brand development strategy B&Q has pioneered a range of complementary initiatives for nurturing its intangible assets. Typically these initiatives have sought to exploit opportunities rather than to deflect threats.

Pilot schemes have been used by B&Q to identify, test and refine procedures for formalising the management of particular types of intangible asset. Further investment has been justified when indicators give reason to believe that an initiative is contributing to an overall increase in the value of corporate assets. Such initiatives include e-learning via the B&Q University and B&Q Social Responsibility.

B&Q University

Adrian Jones and the 35 people at the B&Q University are responsible for delivering the company's commitment to the development of its people. In the UK, 33,000 employees are based in B&Q's stores. A further 2,000 managers and staff are located at the Southampton headquarters and at administrative centres.

The B&Q University provides a learning and development framework supporting three principal development streams aligned with the company's Human Resources policy. These are: management development, e-learning and customer advisor training. There are ten regional training centres with locally-based managers.

New recruits are given 40 hours of training during the first three-month induction period. There are mandatory training modules, for example on health and safety, and optional learning packages. Jones observes three types of recruit: "those who stay in the job they applied for, those who progress and those who leave. The learning and development framework offers them a structured training plan and a structured career path. Our aim is to ensure that as many as possible will progress."

Training is always costly. The retail sector endures fairly high workforce attrition rates; at B&Q it is near to the average for all sectors – that is, about 28% per annum. In a sense it is an act of faith to invest in improving customer service levels because of the risk that expensively-trained staff might leave to work for a competitor. To reduce this risk, and the associated costs, as well as improving customer service B&Q decided in 2000 to explore the potential of e-learning. This approach embraces web-based learning and distance learning. Other benefits have been accessibility of training which is also more flexible to meet the needs of part-timers.

A team was set up to study exemplar approaches deployed by the Royal Bank of Scotland and Lloyds TSB. Among retail competitors Asda and Sainsbury's were seen to have good systems although these were reported to lack validation procedures or a centralised tracking system. The team designed a standard interface for all B&Q learning modules and supervises specialist developers and content providers to produce the modules.

Jones recalls that "management envisaged that people would sit down for two to three hour 'slugs' of learning. Pilot schemes revealed that most people prefer to undertake short, sharp bits when the need is there." These findings influenced the design of modules. Learners can break off at any point. When they resume, the module re-opens where they left off.

In the first two years 26 hours of e-learning materials were produced at a cost of about £30,000 per hour. As a result recruits now receive 32 hours of face-to-face training for skills development augmented with 6 hours of e-learning for acquiring knowledge and an understanding of business processes.

The central tracking system means that achievements are recorded and can contribute to staff appraisals and reward systems. Jones reports that the impact has been very significant. "e-learning not only offers flexibility, accessibility and sustainability – it is also cheaper. Take Health and Safety training for example. This is compulsory. We used to bring 10,000 staff each year to training sessions in stores for the half-day course. The e-learning module cost £50,000 and already 28,000 people have done it successfully. That works out at less than £2 per person."

Training to use the company's SAP HR system used to require three days of face-to-face workshops – respectively on basics, advanced use and applied practice. A 5-hour e-learning module was developed to replace the first two days. Most people who complete this see no need for the third face-to-face day. However, B&Q has maintained the third day session to ensure that people can apply the knowledge in practice.

Jones recounts that 80,000 e-modules were completed during 2002, bringing the total to date to over 100,000. "People still receive a good deal of face-to-face training but we can now blend traditional and e-learning methods. We also offer self-directed learning – people can go to our intranet to download and print course materials and, on completion, log on again to update their training record. In comparative terms, what used to take five weeks can be achieved in three weeks – a saving of two weeks of learning time. We reckon so far that e-learning has delivered a return on investment of nearly 500%".

Measurement of the effectiveness of education and training is a perennial challenge. B&Q has discovered a number of 'proxy' measures to highlight correlations between training and business performance. When the Edinburgh store outperformed in the number of 'You can do it' store cards issued it was found that its staff had the highest number of completed e-learning modules concerned with this card. Another store was returning very high sales of power tools and the learning tracking system showed very high use there of the e-learning module on 'Garden power tools'.

B&Q is also experimenting with ideas for providing customers with product information in an educational style. E-learning modules are now being considered for conversion for customers – for example on 'How a pressure washer works'.

Six months ago the company launched a module on corporate social responsibility. 3,000 staff have now completed the module. The independent market research organisation Gallup conducts regular surveys of B&Q customers to gauge and track satisfaction levels. During the same period they have observed a 15% increase in customer satisfaction.

It would be hard to prove a direct correlation but Jones and his colleagues are in no doubt about the connection: "The Personnel Today awards rank our e-learning in first place; no other UK retailer comes anywhere near it".

Corporate Social Responsibility at B&Q

Far-sighted organisations have recognised that it is better to jump than to be pushed. B&Q has been pioneering work in the field of social responsibility since the early 1990s. Ray Baker, B&Q director of Corporate Social Responsibility, recalls that initially there were no official guidelines; the company had to set its own agenda for a step by step approach. Twelve years later Baker can point to posters on every notice-board that highlight and link four corporate goals: environment, diversity, ethical and community.

The initial work led to the publication of environmental reviews. By the mid-90s the firm had commenced social reporting and the implementation of an ethical trading policy. Since 2000 the company has added the theme of diversity and the concept of community. As Baker notes: "you have to win the right to operate in communities". Stores aim to respond to local preferences and to offer some locally produced offerings. As a company, B&Q aims to support the concept of community at the national and international level.

These initiatives were not merely driven by altruistic motives. Baker is in no doubt about the commercial benefits. "We started the work at the store level. We had no formal measurement system but we began to see correlations. For example, our Macclesfield store was outperforming and we found it had a much higher proportion of staff over the age of 50. These people had experience; they could advise a customer about the right tools or fixings to use with a product".

The company built on this and now enjoys widespread respect for its 'Over 50s' employment policy. Customers like it and staff surveys show that those who gain the jobs want to work for B&Q and are happy to prove their worth. And yet the policy remains unusual. The Sunday Times report on the '100 Best Companies to Work For' (March 03) found that, typically, less than 3% of their workforce is aged over 55.

Baker reflects that B&Q's Over 50s policy makes sound business sense. "Bournemouth has few young people and almost no unemployment. Our store there simply couldn't operate if we had not learned how to induct older staff". Jones, of the B&Q University, adds: "We thought e-learning would be beyond them. In fact, we've found that with a little training our Over 50s staff are the most avid users of our online modules".

The same commercial common sense applies to the promotion of community. For example, B&Q is playing a part in the fight against the spread of AIDS in Africa. Baker observes that "It's not just a 'right thing to do', it's about having well-run factories that are efficient and deliver better quality. If we don't help, this rich source of renewable supplies of excellent timber and other products could collapse".

Notorious cases have shown that customers are repelled if they learn that products are assembled by children or result in damage to the rain forests. Roth notes that "the exclusive brand approach enables B&Q to appoint designers and manufacturers and to supervise the entire supply chain". Lorian Coutts, B&Q Communications director, adds that "when dealing with manufacturers with smaller brand names it is not their name but B&Q's name that catches the headlines".

The ethical trading policy has supported the development of Own label and Exclusive brands because these give B&Q the opportunity to impose conditions on its supply chain. These help to rule out the use of child labour and to promote fair wages and sensible harvesting of renewable supplies. This closeness to the supply chain also enables B&Q to import and resell products directly from countries like India China and South Africa. As a result, B&Q's ethical trading policy influences other labels as well as its own - for example, in terms of safer working conditions and increased productivity.

In Baker's view "you can't apply traditional cost-benefit analysis; it's about business impact. While some of this can be quantified, some can't be, but is important to the business. For instance, in good relationships with non-governmental organisations".

How B&Q measures and reports social responsibility

During the 1990s B&Q progressively developed systems for measuring intangibles. This work has contributed to formulation of the 'Ladders' approach for the whole Kingfisher Group. In the first place, the company identified 12 key trends in society which will affect how business is done. By focusing on these trends B&Q can target ways to work towards change. As can be seen from table 1, some of these trends are amenable to performance metrics while others rely on proxy measures that can be gleaned from staff and customer surveys, share price movements and market share.

• **Respect for people**	• **Greener supplies**
• **Store neighbourhoods**	• **Timber**
• **Store waste**	• **Chemicals**
• **Transport**	• **Climate change**
• **Product stories**	• **Packaging**
• **Factory working conditions**	• **Product disposal**

Table 1: B&Q's 12 Corporate Social Responsibility priorities

The metaphor of a ladder is used to set performance targets from 'rung' or level 1 to 4 (see figure 2).

Figure 2: B&Q's Corporate Social Responsibility 'Ladder'

Baker points out that for each key trend there is a sensible level to aim for. "The minimum acceptable result is to achieve level 1 but it may be unnecessary to strive for level 4 in all cases.

The B&Q 'Climbing the Ladders' initiative is promulgated with training courses and an e-learning module. The results are published to all staff annually in a report sponsored and introduced by CEO Bill Whiting.

Lessons learned

B&Q's directors are satisfied that its pioneering search for ways to manage intangible assets is bearing fruit. The focus on brand value is enabling the company to develop winning Own label products and Exclusive ranges and exert greater influence on the supply chain. In turn, this is supporting international expansion plans and gradually shifting public perceptions of the B&Q brand towards quality, style and innovation.

The focus on corporate social responsibility is leading to greater business efficiency and raising the reputation of the company in the minds of existing and potential customers and among staff.

The adoption of QUEST - Quality, Environmental and Social management principles - led to the setting of key performance indicators to show the evaluation and monitoring of suppliers' progress. This, with policy implementation, has resulted in VOCs (volatile organic compounds) per litre in paint products sold through B&Q being reduced by 35% from 1996 to 2001. By 2001, virtually all timber products were being sourced from independently certified well managed forests and work continues to increase the availability of certified timber to meet future demands.

B&Q recognised early on that the peat used in its growing media ranges was not sustainable. But as the largest retailer of peat, B&Q started working on targets to reduce its dependency of on this natural resource. The proportion of peat alternatives in growing media is on track to meet, by the end of 2003, the target of 50% of volume sold. Other metrics relate to reducing packaging by promoting innovative solutions which simultaneously increase sales and to reducing CO^2 emissions from the transport fleet.

In terms of business benefits, this focusing of the attention of staff on the key trends has enabled B&Q to identify and develop innovative alternatives to traditional products. For examples, by introducing the first Own brand independently-approved organic gardening range, solar powered garden and security lighting and a range of energy efficient products such as insulation, kitchen appliances, boilers and lighting. These innovations have also enabled the company to tap new sales.

As for the more intangible key trends – such as 'respect for people' and 'greener suppliers' – stakeholders' perceptions are and are likely to remain hard to measure in absolute terms. Surveys of staff and customer satisfaction and the perceptions of commentators provide indicators of an increase or decrease in intangible values. However, different audiences react in different ways and this can make it difficult to know which levers to pull for best effect. As Coutts points out: "Corporate clients and local authorities that wish to buy in bulk from us are influenced by the way we manage our sources of timber but, in truth, this is an issue that affects the buying decisions of only a small percentage of ordinary citizens."

The experience of pioneering organisations is that the interplay of well-managed tangible and intangible factors of production leads to clearly visible improvement in the 'bottom line'. In the case of B&Q, the results of a focus on brand values and on reputation as a straightforward employer and trader are to be seen in the published annual accounts. In these, the consistent growth of revenues and profits and the ability to expand internationally express in tangible terms the benefits to be gained from the effective management of intangible assets.

Brand value

case study 2

Whitbread

Brand Value	Knowledge	Innovation	The measurement and reporting of intellectual capital
B&Q	Bloomberg	Intercos	Austrian Research Centers
Whitbread	UK Fire & Rescue Service	mmO2	Celemi

Abstract

After 250 years as a leading brewer, Whitbread became one of the first UK companies to sense and respond effectively to the formation of what is now the leisure industry. During the 1990s the company embarked on the bold strategy of divesting its beer production and distribution facilities and re-investing in a portfolio of high profile brands, including hotels, restaurants and health & fitness clubs. The company has embedded its original values and beliefs into a 'balanced scorecard' approach and the successful transformation has been underpinned by the use of brand 'templates' that set out the structure and discipline for managing each brand effectively.

The company's published results show how the brand portfolio strategy has resulted in a broad-based platform providing stability, resilience and growth. Between October 2000 and August 2003 only half of FTSE 100 companies delivered any growth in total shareholder returns; thus Whitbread's achievement of 80% growth in this period places it in the elite Top 10.

Context

The last twenty or thirty years has seen a radical change in the way entire industry sectors view themselves and present themselves to the public. Among the first was the airline industry in the US whose key players began to realise that they were actually in the transportation business. The failure of the US railroad companies to understand this subtle shift may account for their subsequent decline. Then investment bankers started to see that instead of simply dealing with money they were now principally dealing with information about money. More recently, the focus of public sector organisations has been shifting from a public administration mindset towards 'serving the citizen'.

These changes have been influenced and driven by the evolution of working practices and lifestyles in advanced economies. Increasing prosperity has been accompanied by attitudes and behaviours that could be characterised as 'work harder and play harder'.

The expectations associated with these lifestyle changes have affected a number of discrete industry sectors. Once upon a time a consumer requiring a meal might visit a restaurant; a social occasion with alcoholic drinks would mean going into a pub. By the same token a wish for entertainment meant going to the cinema or a games arcade. Hotels simply provided the traveller with a bed for the night. A requirement for fast food meant taking it away.

Gradually, the boundaries between these disparate sectors have become blurred by a common factor – the popular demand for recreation.

Today it is easy to find pubs with proper restaurant facilities and, perhaps, a place to watch sporting events on wide-screen televisions or to use gaming machines. Increasingly, hotels offer facilities for the whole family and, for the travelling worker, a fully supported drop-in office space. Health and fitness clubs are now to be found in commercial centres and, in addition to rowing machines they often sport a bar – presumably for replenishing the calories burnt off in the gym. New-style coffee bars have emerged as favoured places to relax and socialise.

In short, portions of these previously distinct industry sectors are coalescing to form a leisure industry. And Whitbread plc was one of the first UK businesses to sense and respond effectively to the opportunity that this presented.

The 250 year evolution

of Whitbread

The firm of Whitbread was founded in 1742 when Samuel Whitbread set up his first brewery on the northern fringe of the City of London. In those days beers and ales were usually brewed by publicans on their own premises. Their recipes were many and varied – and tended to contain some highly dubious ingredients. Whitbread's innovatory idea was to pioneer an approach to mass production that also facilitated quality control.

The reliability of the products enabled Whitbread to develop a wholesale trade and, when discerning consumers like Dr Johnson spoke highly of the company's products, Samuel Whitbread's fortune was made.

Only a dozen or so surviving UK companies pre-date the colonial era. In his study of long-lived European businesses, Arie De Geus[1] notes that not one of them is still engaged in the activities for which they were set up. Whitbread has followed this hallowed but surprising tradition – although as Chief Executive Officer David Thomas observes wryly: "at Whitbread the really big changes only happen every 250 years".

The company focused on its core brewing business until well into the 20th Century. In the process it developed a vast and sprawling estate of public houses, coaching inns and country house hotels. The first beer bottling plant was opened in 1868. This major innovation greatly eased the problem of distributing such a perishable commodity and quickly established Whitbread as a national brand.

The firm became a public company in 1948. Production at the original brewery inside the City of London continued until 1976. These historic buildings now house a prestigious conference centre. At around this time the company began to diversify. In part this was by acquiring businesses such as Thresher's off-licence chain and by divesting some business units.

Broadly, these steps towards diversification were aligned with or supported the core brewery business. But in order to satisfy its ambitions the company needed to find new avenues for growth. As a result the company started to enter into arrangements with some of the world's biggest brands to obtain UK licences and franchises. These initiatives included a franchise for TGI Friday's restaurants, a Pizza Hut joint venture with Pepsi-Co and rights to the Marriott hotel brand in the UK.

Meanwhile, the group added continental-style high street brands like Costa, Cafe Rouge and Bella Pasta. In parallel, it set about rationalising its property estate and transforming itself into the largest hotelier in the UK.

The success of these new ventures was remarkable. For example, the company developed its portfolio of Marriott hotels from 16 in 1995 to over 60 in 2001. The profits and cash flow generated by these enterprises enabled the company to embark on a spending spree. Between 1995 and 2001 the company acquired David Lloyd Leisure, Costa Coffee and Swallow Inns.

These changes obliged the group to re-assess what business it was in. The resulting strategic analysis exposed the underlying trend; the company was changing into a new type of business - a leisure business. It was time to think the unthinkable. The breweries and pub estates that had underpinned the company's success for 250 years were no longer an ideal strategic fit. Consumers' preferences had shifted from traditional British beers to the lagers produced by multinational corporations. And the UK government was introducing laws to limit the size of pub estates in order to stimulate competition.

In 2001, to the consternation of some investors, Whitbread sold its breweries and then exited its pubs and bars business. This profound break with the past marked a watershed in the company's history. But after several decades of diversification and the reinvention of Whitbread as the UK's leading leisure business CEO Thomas is in no doubt that the desire for business focus and the recognition that progress is only possible through innovation remain true to Samuel Whitbread's founding spirit.

Metamorphisis
from manufacture to brand manager

So, in the closing years of the 20th Century, Whitbread completed an extraordinary transformation from manufacturer and distributor of commodity products to manager of a stable of high-profile brands.

The reader might associate such a radical shift with a transfer of power to a new management team bent on distancing themselves as far as possible from their predecessors' approach to business. After all, isn't this what happened to blue-chip stocks like GEC and Cable & Wireless – with profoundly disappointing results?

In fact, a majority of Whitbread's executive directors have served the company for twenty years or more. So they learned the business as it existed in those days and have carried forward its values and beliefs while implementing the metamorphosis from brewer to brand manager. Today, the company's website [www.whitbread.co.uk] highlights the new vision: 'successful brand management in the leisure industry'.

The shape of Whitbread's brand portfolio

The group's portfolio of high profile brands features hotels, restaurants and health & fitness clubs.

In the first category Whitbread is now the UK's largest hotel operator with 361 hotels and 27,555 rooms – 9,645 branded Marriott in the four-star sector and 17,910 branded Travel Inn in the budget sector. This dual brand strategy has enabled Whitbread to maintain the profitability of its hotel business through the difficult post-9/11 period. In January 2000 the group absorbed Swallow Group's 38 hotels and has converted 24 to the Marriott brand. These hotels have proved capable of outperforming the four-star market 15%. And Forbes Magazine recently hailed Marriott as a Most Admired Brand.

In the restaurant category the company now owns 1,477 outlets – making it one of the UK's largest operators in the 'eating out' market. Whitbread's three main pub restaurant brands – Brewers Fayre, Brewsters and Beefeater – target specific segments of the market. Between them they serve over 32 million meals each year and account for over 40% of trade in this sector.

The High Street restaurant brands include Costa, TGI Friday's and a 50% stake in Pizza Hut (UK). The current total of some 800 outlets is planned to almost double within five years.

The company's health and fitness brand is upheld by David Lloyd Leisure with 55 clubs and over 310,000 members. While this sector has experienced difficulties over the past few years the David Lloyd brand has achieved steady growth in membership renewals, sales, profits and return on capital employed and established itself as the UK's premier health and fitness club business.

This has been achieved by developing a business model that differs markedly from those of competitors (see table 1).

Suburban	*rather than*	**Urban**
Families/couples	*rather than*	**Singles**
Lifestyle	*rather than*	**Fitness**
Big	*rather than*	**Small**
Club	*rather than*	**Gym**

Table 1: David Lloyd Leisure brand differentiation

The David Lloyd brand differentiation model promotes family activities, competitions and social events to enhance the club atmosphere. This approach has resulted in a membership renewal rate of 76% compared with the industry average of 60%.

The group reinforces these brands with Leisure Vouchers – gift vouchers that can be redeemed at most Whitbread hotels and restaurants or used to pay for holidays in the UK or abroad.

A flavour of the results

Throughout the transition the group has continued to deliver strong earnings growth. Between October 2000 and August 2003 only half of FTSE100 companies delivered any growth in total shareholder returns. Whitbread's achievement of some 80% growth in the period places it in the elite 'Top 10' - and substantially ahead of its main competitors.

In terms of financial performance, the group's 2002 results show how the brand portfolio strategy has resulted in a broad-based platform providing stability, resilience and growth (see table 2).

	Sales (£million)	Operating profit (£million)	Return On Capital Employed (%)
Group	**1780**	**214**	**9.4**
including contributions from			
Marriott	392	71.6	5.8
Travel Inn	204	66.7	12.6
Brewers Fayre	583	76.6	9.9
Beefeater	418	21.4	19.1
David Lloyd Leisure	183	43.3	9.1

Table 2: a snapshot of Whitbread's financial performance in 2002

Of course, the trading results of all types of organisation respect generally accepted accounting principles. The original concepts were devised 500 years ago in Italy, home of the first lending institutions. Practitioners and regulators have since developed precise rules and procedures for valuing assets and liabilities. By convention these values should be based on actual transactions. Accordingly it is a little easier to apply the rules to the measurement of capital, property and other physical resources than to intangible assets.

Intangible assets tend to offer potential value. A discovery or patent may be worth a fortune at some future date but, at present, its owner can only report its purchase cost, if applicable, and the cost of its maintenance. Similarly, the value of employee expertise can only be reported in terms of the cost of employing the skill-holders. In general, the value of brands has been treated in a similar fashion. To date only about 15% of FTSE100 companies –notably those involved in advertising or the media – have ventured to capitalise a financial value attributed to their brands.

However, the market capitalisation of a business takes account both of past performance and of anticipated profitability. Now that the developed world is moving from an industrial era towards knowledge-based economies, analysts, investors employees and regulators are calling for more meaningful disclosure concerning intangible assets.

Getting a grip on brand value

In the late 1990s, as the high-tech bubble ballooned, US treasury secretary Alan Greenspan warned investors against 'irrational exuberance' – and was ignored. The billionaire investor Warren Buffet eschewed the whole dotcom sector on the grounds that he did not understand their business models – and was ridiculed. With the benefit of hindsight, few would deny that they have been proved right. And yet some investors and organisations have pioneered safe paths through these minefields.

In the absence of guidelines these pioneers have developed different strategies but the common factor is that they never lost sight of the imperative to trade profitably while investing for the future. Whitbread was trading successfully as a straightforward brewer when its board foresaw the shift in customer expectations and embarked on a bold strategic response which is now delivering handsomely.

Brand management in the leisure industry

The mechanism Thomas uses to promulgate this strategic response is expressed in terms of a six-point cycle which starts with consumer insight (see figure 1).

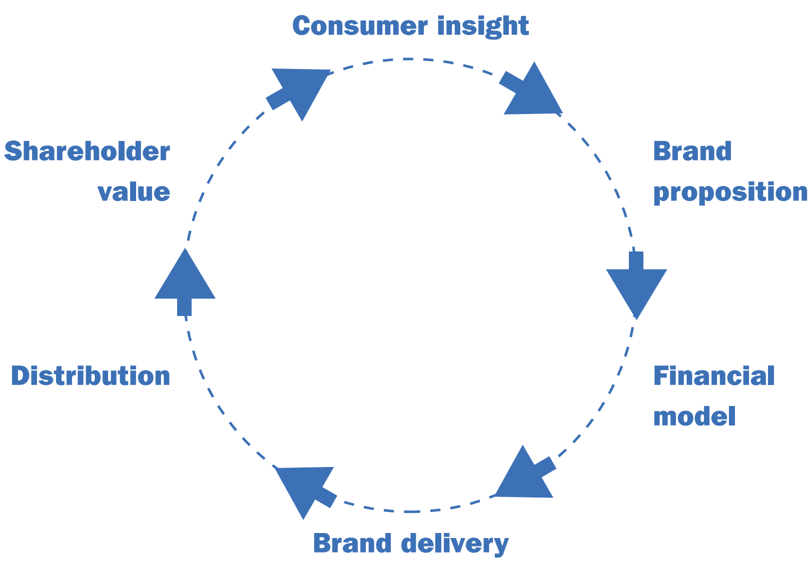

Figure 1: Whitbread's brand management cycle for the leisure industry

Thomas recalls the catalyst for formulating this cycle: "in the 1980s we were starting to get a glimmer of the value of retail brands rather than beer brands. Whitbread has always created shareholder value by being the number one brand in a market. We realised that our strategy should be to grow a portfolio of brands in markets with great growth potential".

At that time it was becoming clear that growth was slowing in the beer production, off licence and non-branded goods markets. And the government's regulatory authorities had thwarted Whitbread's attempt to take over Allied Domecq. "We took the decision to sell off these activities while they still had a perceived value and re-invest in a coherent portfolio of growth businesses. Our new business model was to deliver experiences that would enhance the leisure time of UK citizens ... people who wanted every day enjoyment. We were sure we had to appeal to customers who would buy our offerings every week or fortnight rather than try to attract those who spent a lot of money every now and then".

As Whitbread had accumulated a substantial property estate it made sense to leverage these assets by using them to house businesses that would appeal to current and future customers before competitors could do so. Tim Hammond, corporate development director, picks up the story: "we believe we have developed a good knowledge of consumer lifestyles and their impact on leisure. We use this knowledge to anticipate trends and differentiate our brands".

Steps in the brand management cycle

- The application of the brand management cycle differs for each Whitbread brand but it invariably starts with Consumer insight. CEO Thomas explains: "we study what we learn from our customers and identify occasions when a brand focuses its proposition.
- "We can then check that the Brand proposition is clearly differentiated from the competition. For our Travel Inn brand we know that people staying away from want peace of mind. So we introduced our 100% guarantee. It's unique in the travel industry. If a customer is dissatisfied in any way they don't have to prove it, they just have to report it and we will give a full refund".
- The third step in the cycle requires a re-assessment of the Financial viability of the brand: "can it deliver a return ahead of the cost of capital? Our aim is to increase ROCE by 1% every year".
- Brand delivery is the next issue to be checked. "We know that our Brewers Fayre and Pizza Hut customers look for brand consistency across geographic ranges. When they visit a branch far from home they want the same experience that they get in their local branch. So we examine our supply chain and production processes to ensure they are delivering consistently. We also look at the human element; are our staff – our Associates - adding to this consistency and the customer's enjoyment?"

In Hammond's view Brand delivery in the leisure industry is not achieved in the same way as it might be in the fast moving consumer goods industry sector. "To create a leisure experience in the restaurant business the value has to be in the food itself and the ambience. We don't want people to feel they are in a factory. The overwhelming input has to be from the people staffing each unit. So we need our 50,000 people to feel motivated to give a consistent experience ... a 'specialised touch'."

As a result, careful attention is given to motivating and retaining staff. Thomas muses: "What makes our Associates stay? Perhaps their best friend works at the same place or they feel they are given the right tools to do the job. Our recruitment and training is tuned to supporting key platforms for these levels of satisfaction."

- The Distribution step is concerned with knowledge and how this can be used to develop a brand. Knowledge of customer behaviour is exceedingly valuable in encouraging repeat visits or pinpointing negative issues like defection. It makes pre-emptive action possible without being intrusive.
- Whitbread has also accumulated a great deal of knowledge about property – its estates are worth over £3 billion. This means that if a brand is performing well with 100 outlets the group can confidently plan for large scale organic growth. On the other hand, if Whitbread's knowledge in a sector is weak it will buy in know-how or take a franchise and learn from the brand owners. On occasion the best route involves a strategic alliance. CEO Thomas is certain that the David Lloyd brand will do very well

in Spain. But property and other local matters there can be complicated. “We will do it – but only by working closely with our local partner”.

- At the sixth step the company reviews Shareholder value delivered by the brand. Whitbread went through a very tough patch four or five years ago. Since introducing its brand management cycle model the group has posted double digit growth for the last five half-years. CEO Thomas is very clear: “This hasn’t happened by accident. The model sums up the theme of our business – it’s about winning; about being number one in our chosen markets; about being the employer of choice.”

The learning and knowledge gathered during this cycle refreshes Consumer insight in preparation for periodic re-iteration of the process.

Mining the value of intangibles

The business commentator Richard Irving of The Times attributes the success of the group’s radical transformation to the strict performance criteria laid down by CEO Thomas and non-executive chairman Sir John Banham[2] .

Thomas’s take on this is very clear: “you have to start with a vision that is crystal clear to all stakeholders … in our case to be number one in the leisure industry. And the strategy for achieving this must show everyone how they can contribute. Once you have won their buy-in you can apply performance criteria.”

In order to bring this about in an open and transparent fashion, Thomas and Banham have adopted the principles of the Balanced Scorecard[3].

About the Balanced Scorecard

Robert Kaplan and David Norton, the authors of this innovative management tool, had observed that in the increasingly turbulent business environment a single-minded focus on financial performance did not guarantee long term prosperity, or even survival. They proposed that a business should monitor and balance performance in four ‘perspectives’, namely; Financial, Internal business processes, Customer and Learning & growth. The performance is gauged by means of metrics that communicate the targets to be achieved.

Such metrics or Key Performance Indicators (KPIs) for the financial perspective are well established and widely used - for example, ‘return on capital employed’ (ROCE). The same does not apply to the other three perspectives. These are concerned with less tangible aspects and each business will need to select KPIs that are relevant to its particular objectives.

For more detailed information see http://www.bscol.com/bscol/leadership/

Dr Kaplan lectured at Harvard when Thomas studied there in the late 1980s. This first-hand introduction to the Balanced Scorecard enabled him to adapt the approach to suit the particular needs of Whitbread’s stable of ‘retail experience’ brands.

Thomas explains: “In order to make Balanced Scorecard live in Whitbread, not just at Group level but also at brand level and within our retail outlets, we developed a version that focuses attention on three perspectives or areas – a ‘three-point scorecard’. This describes what has to be done for each of our stakeholder groups if we are to achieve our vision. It is against these three areas that we report the KPIs.

“For example, in the ‘Employer of Choice’ area, typical KPIs would be staff turnover rates, employee satisfaction scores and so on. As far as the Consumer area is concerned, the KPIs could be member retention in David Lloyd Leisure, guest satisfaction scores in Marriott or spend per head in one of our restaurant brands.”

Whitbread’s three-point scorecard presents in the form of a Brand Template for each of the group’s brands.

Each Brand Template is summarised onto two A4 sheets. Hammond describes the Template as “setting out the structure and discipline for managing the brand – what the brand is, how it is different, what its values are”. These core issues are illustrated with ten or twelve ‘touch points’ – statements that capture how customers view the brand. And the touch points relate to three or four ‘occasions’ – reasons why each type of customer may choose the brand.

Hammond offers an example: “For our budget hotel brand, Travel Inn, the main ‘occasions’ are couples or families stopping away on leisure; individuals away on business; white-collar groups gathering for a meeting. Between them these customer types generate 90% of sales. A touch point for the first type would be ‘while we’re here we can get on with enjoying ourselves as it is one less thing to worry about while we are away from home’. For the individual business traveller it could be ‘everything will be met, so I can concentrate on the real purpose of my visit’ … and so on.”

The Template’s supporting schedules then explain how each touch point should be satisfied. This is expressed in terms of critical success factors – those few things that must be done right if the brand is to survive and prosper. Sets of key performance indicators (KPIs) underpin each success factor. These are metrics and targets that enable employees to know what they have to achieve and how their inputs are making a difference.

Thomas and Hammond receive and analyse a completed Template from each brand for annual review. In between, each brand submits monthly KPI Reports with supporting Scorecards. The results are fed back to all of a brand’s employees on a quarterly basis and used to drive bonus payments.

Whitbread also produces an ‘edited highlights’ version of the Scorecard for briefing City analysts. This focuses on headline financials, key operating measures and certain non-financial metrics of particular interest to analysts – such as like-for-like sales.

Turning concepts into business benefits

Hammond reflects that Whitbread is still learning and practising as it develops its brand value strategy: “it goes with the territory if you want to become a learning organisation”.

The company freely concedes that the course of assembling its portfolio of high-profile brands has not all been plain sailing. But the fact that every brand has contributed its fair share to Whitbread’s double-digit growth throughout a troublesome economic period bears testimony to the company’s strategic foresight and its ability to deliver the promise.

CEO Thomas sums up succinctly: “Part of our mix of intangibles is ‘attitude of mind’. This is about winning, about pushing limits. When people achieve something they didn’t think they would, confidence goes to a new level. Happy people means happy customers and that means happy shareholders.”

[1] De Geus, A. (1999) The Living Company: growth, learning and longevity in business. (London; Nicholas Brealey Publishing) ISBN: 1-85788-185-0

[2] The Times 3rd September 2003, Tempus column, page 26

[3] Kaplan, R. & Norton, D. (1996) The Balanced Scorecard: translating strategy into action. (Boston Mass.; Harvard Business School Press)

Knowledge

3

case study
Bloomberg

Brand Value	Knowledge	Innovation	The measurement and reporting of intellectual capital
B&Q Whitbread	**Bloomberg** UK Fire & Rescue Service	Intercos mmO2	Austrian Research Centers Celemi

Abstract

In 1981 Mike Bloomberg launched an offering that, until then, had been impossible – real time bond market data supplied digitally and combined with analytical tools for application by the client. The service gave early adopters such competitive advantage that the firm achieved a global presence within 6 years. Continuous innovation and extensions to functionality have driven sales growth to become exponential. Today, Bloomberg is the leading provider of financial market information and one of the world's most received radio, TV and web broadcasters and publishers.

With over 8,000 staff in 94 bureaus worldwide the concept of workspace is fluid. There is no organogram and no job titles. People learn and develop the business and themselves by frequent relocation to cross-fertilise ideas and boost management skills. The company's own product is the backbone of the organisation. Instant messaging has virtually eliminated paper. The system tracks and records all activity. This provides staff with ready access to structured information that, in any given context, unleashes the corporate knowledge of the organisation.

Context

Markets for trade have existed since pre-history. They were part of the formation of organised societies. Some of the earliest records relate to forms of financial contract. Clay tablets from 3500BC document Mesopotamian harvests – and the taxes due. The Bible refers to moneylenders at work in the Temple.

Markets have been meeting places where parties seal a deal with a handshake – 'my word is my bond' - or pay 'cash on the nail'. By 1688 Edward Lloyd's Coffee Shop in Leadenhall Street, City of London, was known as the place where merchants could meet brokers and underwriters and transact insurance policies. Stock exchanges followed as places where businesspeople could raise capital.

Over the last 25 years the way commodity and financial markets operate has changed dramatically. Bids and offers are no longer communicated by open outcry. Regulation has largely replaced trust as the guarantee of straight dealing. New information and communications technologies allow people to transact business without ever meeting.

This case study describes a company that has played a significant role in these radical transitions and the globalisation of markets.

Turning concepts into business benefits

In 1981, Mike Bloomberg had a brainwave. He had just been fired as general partner in Salomon Brothers' New York headquarters and used his severance pay to set up Innovative Market Systems to develop and market his idea.

Today, some might feel that his idea was rather obvious. Hindsight is a wonderful thing. But 22 years ago it was a revolutionary concept that few had dreamt could ever be achieved.

At that time traders could obtain bond market data piped in digitised form through computer networks to their desks. They could also build or buy tools for analysing chunks of the data re-keyed into their local mainframe systems. In bond markets, sharp-witted traders can exploit pricing anomalies and make a profit before the imperfect market corrects. Such corrections tend to happen within a matter of seconds. If data processing delays decision making the opportunity for arbitrage is lost.

Mike's idea was to combine the data supply and the analytical tools within a single product that operated in real time.

Prototyping and testing of the product – then called MarketMaster – took a year. Merrill Lynch became the first customer in 1982. The system provided such competitive advantage that, by 1986, many leading US investment banks had bought a screen. The system now presented data on various equity markets and a continually increasing range of analytical tools. The growth in sales enabled Bloomberg to move to prestigious offices in Park Avenue, New York.

Banks were then, and are still, spending huge sums on information technology. Bloomberg's selling proposition was to offer access to a ready made system with embedded tools at a fraction of the cost of a home-grown system.

Bloomberg's only realistic defence against copying was to establish a critical mass of customers as rapidly as possible and to retain these customers by continually increasing the functionality and utility of the system. The pricing model for the service involves monthly payments and an initial two-year contract. It is therefore in joint interests that salesmen continued to help clients to understand and use as much as possible of the system's functionality and ensure that the contract is renewed.

The first outpost opened in London in 1987, quickly followed by bureaus in Tokyo and Princeton. Information providers like Reuters and Thomson Financial had also become competitors. Fortunately clients were prepared to buy from more than one supplier in the belief that this gave them the best possible range of information.

By 1988 the installed base of what were now called 'Bloomberg Professional' screens exceeded 5,000 and Bloomberg decided to launch its own trading system. This is a platform for trading that integrates analytical and risk management tools and connects to trade order management systems that take care of the life of a trade.

The company stopped printing user manuals and switched over to an online help system for all users at no extra cost. At that time companies would have to pay at least $1 million for a bespoke system of this sort. Business took off. Staff numbers increased from 350 in 1989 to 1600 in 1990, based in 94 bureaus around the world.

A subtle development

About ten years ago the authors first met Stuart Bell, then managing director at the London offices. Bell explained that most customers used the system to view real time market data, download data sets and apply tools to it. By then the system offered, for example, 371 ways to calculate discounted cash flow (DCF). In addition, leading banks used advanced mathematics to develop their own complex and top secret economic models.

The communications technologies available then meant that a large data set could take a significant time to download to a client machine. It was quicker for 'power users' to place their top secret models on Bloomberg's central system and let the calculations take place there. The result was that one of the computers at Bloomberg's server farm at Canary Wharf hosted the economic models of nine of the world's largest banks.

The implication of this was clear: these customers trusted Bloomberg's business ethics and security systems. Reputation is one of the most fragile of intangible assets – chiefly because it exists and develops solely in the minds of third parties. Reputation can take years to grow but can be destroyed overnight. Bloomberg had found a way to stimulate and cultivate this invaluable asset.

Enhancing the offering

During the 1990s Bloomberg built on this burgeoning reputation by launching a succession of innovative enhancements to the core system. These not only attracted new customers to the offering but also helped to retain existing customers. The agreed monthly fee for connection is the same regardless of the amount of functionality used. Bloomberg's salespeople spend much of their time showing customers how to take fuller advantage of their subscription.

The Bloomberg Markets magazine first appeared in 1992. This has since accumulated over 50 awards for the quality of its journalism. Bloomberg Radio was launched in 1993. In the US alone, 16 million listeners tune in every day.

The same year an 'instant messaging' capability was added to the system. Senior staff believe this has turned out to be the best yet of Mike Bloomberg's many ideas. Today over 18 million messages are exchanged every day between customers, between staff and between customers and staff. As with an email system, messages are stored in a mailbox for collection. But because the system displays a green dot beside a person's address when s/he is logged on, the instant messaging feature enables people to have a synchronous online 'conversation'. The utility of this has been supplemented with another presence-based system - Instant Bloomberg - which is part of the 'always on' Launchpad monitor.

In 1994, Bloomberg initiated its first TV channel, using the network to broadcast business and financial news around the clock. This soon became multi-channel, in seven languages. Today these services reach 200 million homes globally.

Customers soon realised that so many of their key stakeholders were connecting to the network that, if a CEO wished to announce something, Bloomberg TV was an ideal way to reach stakeholders simultaneously and promptly. This has significantly eased the task of acquiring and assembling relevant content and 'breaking news' for broadcasting and the Bloomberg terminal. Business and thought leaders are only too pleased to be interviewed.

TV was quickly followed by a corporate website – now established as one of the world's most trafficked sites. The first book from Bloomberg Press appeared in 1996. Interactive TV was introduced in 1998. In 2000 a strategic alliance with the online brokers Charles Schwab opened up contact with Schwab's 900,000 wealthiest customers.

The network effect

The way in which these successive innovations allowed people to interact transformed the 'hub and spoke' distribution of the original system into an inter-connected network with far greater utility. In essence, Bloomberg evolved from being a 'must have' information supplier to being a network provider.

In short, the utility of Mike Bloomberg's invention led to ubiquity of the product. This spawned a new and competitive industry sector. The promotion of interactivity allowed customers to become part of a global network of informed practitioners. The result is a fundamental change in the way millions of people around the world do their work.

According to Metcalfe's Law[1] every new node connected to a network increases the number of inter-connections exponentially. In Bloomberg's case the evidence of this lies in the growth of the installed base of customer terminals (see figure 1).

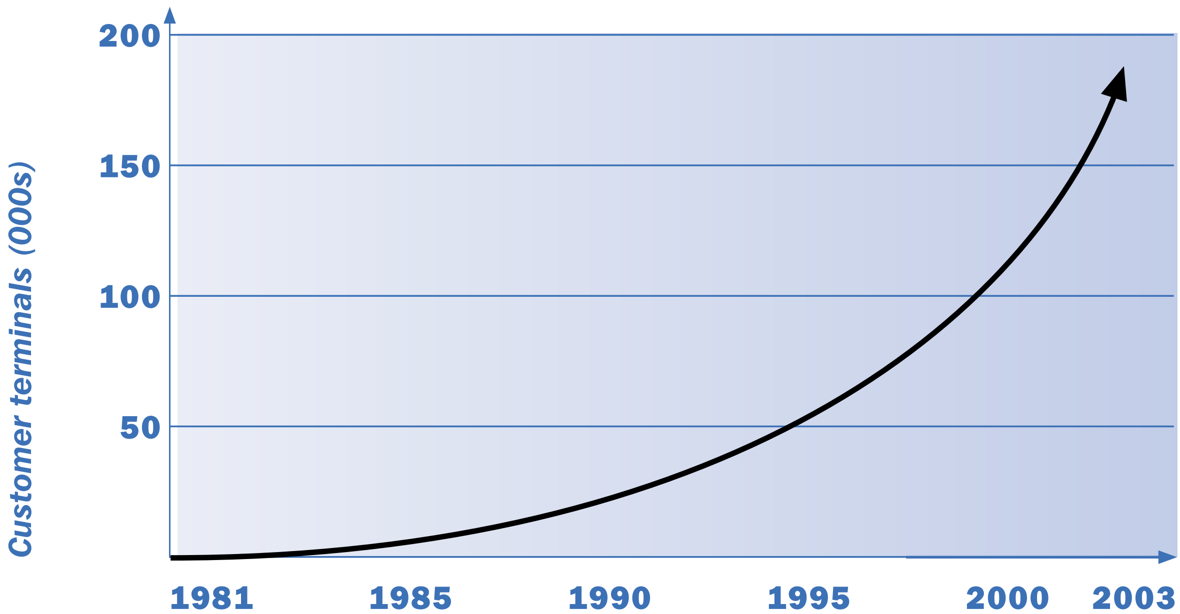

Figure 1: Growth of installed base of customer terminals

By annexing the network effect, Bloomberg has created a new intangible asset – for many customers the power and utility of the network makes Bloomberg's product indispensable.

Building a knowledge-intensive culture

The size of Bloomberg's workforce has mirrored the exponential growth of the business and now exceeds 8,000 people worldwide. To accomplish this effectively the company has employed innovative methods to induct people with intellectual curiosity and to help them develop a growing range of competencies.

Even though Mike Bloomberg ceased to run the firm when he was elected Mayor of New York in 2001, the business remains a private company and continues to uphold the founder's values and beliefs. One of these is that employees are treated as a family of colleagues. This is characterised in a statement on the corporate website[2]: "We demand much of our people; they are treated with the respect that they have earned by building us into a world leader in our industry. We give them every advantage in their careers, with top-flight training and windows for advancement. All of this means that we create an environment in which there's an unparalleled opportunity to excel."

In exchange, total loyalty is expected. Anyone leaving the company can never return.

Learning the business

People who join Bloomberg tend to stay – and, in the process, they continually develop additional roles and skills. As a result the company rarely recruits senior staff from outside the business.

New joiners, whatever their background and experience, have to spend their first few months working in 'Global Customer Support'. Here they use the Bloomberg system to answer inquiries and to connect customers through the global network to the appropriate colleague. This means that the recruit very quickly learns exactly what the company does, who its customers are, who in the company knows what and where they are.

This induction is extremely important because one of the founder's principles is that there are no job titles – the company professes no formal structure and has no organogram.

Knowledge and space

The term 'open plan' does not do justice to the premises. When the company opened in the City of London's Finsbury Square it occupied a high-ceilinged former banking hall on the ground floor behind a superb but austere Portland stone façade. It was open plan and zones were delineated by huge tanks of tropical fish – one of which, the managing director delighted in pointing out, contained piranha.

Today Bloomberg occupies the entire south side of the square. Behind the façade the interior has been completely replaced with the most striking architectural layout – a layout that speaks volumes about the company's organisational culture.

On entering, one is surrounded by glazed TV studios operating round the clock. Escalators lead to reception and 'The Kitchen' – an extensive and completely free delicatessen-cum-coffee bar where staff and visitors can meet. One then passes through huge atria allowing views into glazed work areas at every level. One such is named 'Connect' – it houses the computer hub of the business. Entire TV channels are controlled from high-tech consoles condensed into a space about the size of a bond-trader's workstation.

Security precautions are elaborate but some parts are open to the public and offer displays of modern art, installations and scuplture. The company rarely advertises but has become known for its philanthropy.

The use of lifts is not encouraged. Access to work areas is provided by bridges, walkways and staircases constructed of glass on which are projected dynamic, abstract murals. Circulation spaces feature works of art in the guise of furniture and these are regularly used for informal meetings. Flowering plants are much in evidence. Plasma screens – 'The Arcade' – have completely replaced notice-boards.

A well-appointed auditorium and dining area is available for business meetings. When not in use these facilities are freely available to other organisations and groups.

Within this extraordinary environment there is a bustle and buzz of purposeful activity. The business is sales oriented, through and through. Everyone in the firm, whatever their role, shares in the success of the company's core business - the Bloomberg system – through a bonus system known as the certificate program. Interns move from the support desk to a space known as 'The Booth' where they learn to 'cold call' potential customers for terminals.

This space is situated close to the Chief Executive's desk – a simple desk within the open plan arrangement. Its sole distinguishing feature is the adjacent glazed cubicle for private conversations – one of many meeting spaces bookable via the Bloomberg system.

Grooming the talented

Bloomberg recruits people whom it feels can fit into and contribute to the organisational culture. The sort of experience that is most highly valued is that which people gain by working for the company. Exceptions are made when highly technical skills are required – for example in TV broadcasting. Attitude is at least as important as academic or specialised qualifications.

Bronwyn Curtis, who is responsible globally for Bloomberg's broadcasting delivery platforms, is a case in point. Four years ago she became one of the few to be recruited into the executive level of management. This was partly because of her in-depth knowledge of content for the financial broadcasting channels that Bloomberg was launching.

Curtis is well placed to describe Bloomberg's staff development methods: "Staff are developed by constantly exposing them to new challenges. Apart from the most specialised technicians, people are relocated frequently to new departments and teams. There is no fighting between departments – the job is for everyone to get better." Relocation means people may be given tasks they have never done before. Motivated and energetic people can succeed in these circumstances because they didn't know it was impossible.

A person joining a new team or taking on an unfamiliar task can use the Bloomberg system to access a wealth of information and sources of knowledge. The system also posts internal job vacancies and deploys the Bloomberg University - which is also freely available to customers. This offers a range of technical and management training modules. "The idea is to enable people to learn to be more useful. Although some modules are available as e-learning packages much of the work is done in face-to-face meetings of small groups." The company believes that leaders can be made. Accordingly its Leadership Development track is strongly promoted via three levels of courses.

All courses are accredited. Results are taken into account at annual reviews. Everyone is reviewed on their anniversary of joining. They are helped to set personal objectives - there is no hierarchy of corporate objectives. The policy of 'move up or move out' is anathema to the company. The team leader's comments are important. In the broadcasting department performance is gauged by customer feedback and such things as the seniority of CEOs interviewed and the amount of breaking news reported.

There is a rating process for certain skills such as communication skills and use of the Bloomberg terminal. But the main factor is how they have done over the whole year. The reward system is driven by the appraisal results and by people's contribution to Bloomberg. Curtis observes that "although people are assigned to a department to use or learn particular skills, the effect of continuous relocation is that employees do not become entrenched. They say: 'I work for Bloomberg'."

Focus days for customers are held twice each year. The 1500 guests are offered a selection of seminars on issues as diverse as derivatives and cookery. Events are also run for staff. "These present as a sort of 'jobs day'. Every department sets out its stall. It's an important way for people to find out about opportunities for promotion. If you don't like change this is not the place to work."

Sales staff travel to meet customers from Tuesday to Friday. At 8 AM every Monday morning there is a sales meeting in the main auditorium. It is relayed to all terminals in the building. “We start with a short TV programme that flags key events in the coming week. Then we usually have ten speakers who have travelled from our other bureaus to give three-minute presentations on technical and market issues and pointers concerning customer needs. The occasion helps salespeople to help customers to know about the services that Bloomberg can provide.”

Bloomberg’s open and inclusive culture has proved that it can cope with very rapid growth and continuous innovation and diversification. Two years ago this culture was put to a different test. Global financial markets were depressed. Many banks were laying off staff and imposing austerity measures. Instead of following suit Bloomberg set two priorities: to ensure that existing customers were retained and to sell more terminals. It worked. No staff were laid off.

By contrast, the company’s chief competitors have had to endure deep job cuts and swingeing losses. Bloomberg derives no satisfaction from this: “we don’t want any of them out of business or we will get soft”.

Managing the business by using its own product

Clearly, the way Bloomberg has managed the business has also had to cope with the company’s phenomenal growth. It has achieved this successfully by using its own core product as the backbone of the business management process. Some might call this ‘eating your own cooking’. Within the company the system is known as ‘The Bloomberg’.

The opening screen makes the purpose of the system clear to customers and staff alike – the provision of financial market information in real time by means of a range of delivery channels (see figure 2). These include tables of numbers, graphs, ‘ticker tape’ readouts, dedicated TV and radio services, and instant messaging. The system allows the user to drill down, navigate and make selective use of a vast bank of data, information and knowledge.

Figure 2: A typical ‘trader’s eye view’ of a 4-part Bloomberg Terminal - with Bloomberg Television in the background, on a plasma screen.

Once one enters the data banks it is noticeable that the look and feel of the user interface has changed little over the years. This is partly because customers have become accustomed to it and are reluctant to see it altered.

One system serves all customers but the degree of functionality is virtually unlimited. Security measures and access control systems ensure that every user is able to 'see' only what he or she is authorised to see. These capabilities allow Bloomberg to deploy on the core, networked system all the facilities, features, tools, forms, manuals and so on that it needs for managing its own business.

Although the majority of internal management areas are restricted to staff, some – such as Bloomberg University - are visible to customers and they are strongly encouraged to enrol.

The underlying management approach is 'hands-on'; there are no secretaries or personal assistants, and very few administrators. The philosophy is: 'if it can be 'seen' through the terminal we will run it through the terminal'. Everyone must publish their appointments diary; inter alia, this facilitates the arrangement of meetings. The 'Scheduler' area enables people to claim expenses, reserve holiday time, record sick leave and so on. People also use this area to report time spent with customers, the number of demonstrations given and new orders secured. These arrangements promote personal accountability. If authority is required, the system will automatically alert a person's manager to the posting of a request.

Bloomberg's internal management systems are inextricably linked with its corporate culture. The systematic documentation of all activity enables managers to collate data sets and generate departmental management reports. At the same time, results are viewed holistically and in terms of the 'bottom line' for the entire enterprise.

Curtis explains: "It is the synergy between the elements of our overall offering that it of most importance to us. The way data presentation, analytics, audio-visual services and so on combine to add value. As a private company I suppose we can take more risks; we can encourage experimentation. If a system innovation doesn't work out we just change it."

The creation of value

A working definition of *knowledge* is 'actionable information endowed with context'. This is precisely what Bloomberg sells.

Chris Taylor is responsible for corporate communications globally and is based in New York. She affirms that knowledge-related values and practices are deeply embedded into the way Bloomberg operates as a business – the design of workplaces, an open culture tied to accountability, comprehensive support for self-development, the promotion of innovation and, through frequent relocation, the continuous creation of fresh opportunities to learn.

Clearly Bloomberg has invested and accumulated substantial wealth in its premises, computer systems and global communications network. These are the sorts of tangible assets that are recorded in balance sheets and depreciated over time.

However, it would appear that the company has earned these assets by focusing on other sources of value that rarely feature in corporate financial statements. These would include the Bloomberg brand itself, the intellectual property in its inventions, its customer networks and relationships, the skills, calibre and loyalty of the workforce, the company's reputation and its ability to continually innovate - in short, its intangible assets.

Today Bloomberg's integrated and networked data, news, analytics, multimedia and email system is used by over 260,000 professionals in 125 countries and in every currency. 1000 data analysts and 1600 journalists and a worldwide network of support staff contribute to a round the clock service that includes ready access to more than 3.6 million financial instruments.

So, have the tangible results flowed from the intangibles? Or has it been vice versa? In Bloomberg's case the questions are immaterial. The company's undoubted success has resulted from the managed interplay of its tangible and intangible assets.

This is evidenced by the outcomes – among which some of the most salient are:

- Sales of the core product have catalysed a network effect that has immeasurably greater utility to customers than a straightforward data service.
- The policy of 'taking care of employees' by helping them to develop and meet challenging opportunities has produced a workforce capable of meeting customers' needs.
- The prioritisation of security systems has underpinned client confidentiality which, in turn, has fostered the company's reputation.
- Client retention has been secured by continuous waves of innovative service additions that cater for individual preferences in the way information and knowledge is consumed.

Curtis sums up: "The plain fact is that people like and want the knowledge package we offer – and they can't get it anywhere else".

[1] Robert Metcalfe' founded 3Com Corporation in 1979. (see http://www.3com.com). He realised that the utility of a network equals the square of the number of users. This powerful discovery has become known as 'Metcalfe's Law'.

[2] See http://about.bloomberg.com/about/index.html

Knowledge

case study 4

UK Fire & Rescue Service

Brand Value	Knowledge	Innovation	The measurement and reporting of intellectual capital
B&Q Whitbread	Bloomberg **UK Fire & Rescue Service**	Intercos mmO2	Austrian Research Centers Celemi

Abstract

The visible side of fire service work is dramatic, heroic and palpably tangible. This case throws some light on the hidden side – a side that is strongly focused on the effective management of intangible assets such as knowledge, skills and safety in order to achieve the economical delivery of superb public service.

As part of this, the National Mobile Data Project is transforming the way in which relevant information and collective experience is being captured and made accessible in real time to officers at the fire ground and to other emergency services. This work has already been independently assessed as of national importance.

The evolution of fire and rescue services in the UK

As a fundamental force of nature fire can take away life with random carelessness and it can make life liveable. Indeed, the ability to light a fire at will first distinguished our ancestors from other animals. It can be very pleasant to have an open fire in the hearth … but an unplanned fire remains one of the most terrifying and destructive events we can face.

The management of this dilemma has taxed societies for millennia. The techniques developed by the Romans for quenching dangerous fires were lost during the Dark Ages. In the 12th Century the London City Council ordered stone walls to be built between timber dwellings. But such simple measures did not prevent the razing of the capital in 1666 – and the ensuing economic crisis.

Broadly, citizens were left to their own devices. Those who could afford it bought insurance from companies with fire engines and staff. A small lead plaque fixed over the front door – the world's first corporate logos – told patrolling firemen that premiums had been paid and that signs of a fire should not be ignored.

This kind of loose arrangement continued until 1865 when a London public authority became the first to have a duty imposed upon it to extinguish fires. The fire brigades required payment for their services and so they continued to listen most to the insurance companies.

These practices were finally outlawed by the Fire Brigades Act 1936. However, changes to the structure and role of the service were delayed by the second World War. The fire services now familiar to UK citizens result from the Fire Services Act 1947, as amended, and other related legislation.

Today the UK has 58 Fire Brigades. But the needs of conurbations and rural districts vary so much that a variety of forms of governance has emerged. Services in metropolitan areas are managed by Fire and Civil Defence Authorities. Those for some cities, such as Oxford, are managed within County Council structures. The Shires tend to operate under a Combined Fire Authority. A further anomaly exists in Northern Ireland where the fire services for the whole province are managed by the Department of Health, Social Services and Public Safety.

The brigades also vary greatly in size. The Isle of Wight brigade is the smallest whilst that for the London Metropolitan area employs over 6500 operational staff. The duties – and therefore the necessary skills – can also differ significantly. Some brigades have to take care of very large chemical plants; others are bisected by major motorways. Buckinghamshire, for example, although relatively small in geographical area, has to contend with incidents on the M1, M25 and M40 and, therefore, needs to be able to coordinate very effectively with neighbouring brigades.

These differing needs have also shaped employment arrangements. Full-time fire stations are manned round the clock and have dormitories so that personnel can work a shift pattern. Daytime stations are also manned by permanent staff. Retained stations operate rather like the Lifeboat Service – calling in members of the local community when an incident occurs.

Learning from experience

This complexity and the need for specialisation has tended to inhibit the mobility of labour. By the same token, it has held back the sharing of good practices. These serious issues have led to a series of investigations and initiatives sponsored by the Office of the Deputy Prime Minister. Many of the current initiatives are reliant upon existing or emerging technology.

Among these are:

- FIRELINK. Provision of a secure communications network for fire service personnel. This is similar to the Airwave programme being developed for UK police services by mmO2. Firelink is also concerned with interoperability between the fire service and other blue light agencies.
- Integrated Risk Management. Development of an integrated risk management system to enable Chief Fire Officers to plan and manage resources more effectively within their communities. The main aim is to help find the balance between prevention and intervention and target resources towards 'at risk' groups.

- Rimsat. An EU-funded initiative to assist cross-border collaboration between emergency services and enhance information sharing capabilities.
- BDAG. A building advisory service prompted by the 9/11 terrorist atrocities and focusing on design and inherent safety features within the built environment.
- New Dimensions programme. Another post 9/11 initiative – this time focusing on the provision of fire service vehicles and equipment having the capacity to meet the increased threat of terrorism.
- E-Fire National Programme. Part of the government's wider objectives for Electronic Service Delivery. Within this, five project streams are being progressed which are specifically aimed at the fire services and colleague agencies. All will lead to the enhanced provision of information to all stakeholder groups including the citizen.

The unifying factor of these initiatives is to bring about a safer working environment for Fire Service personnel through better equipment, training and access to information.

The importance of information

In many industrial and commercial contexts, health and safety provisions can be designed for and managed at a regular place of work which constitutes the operating environment. By contrast, the operating environment of fire service personnel is wherever an incident happens to take place. Clearly, this is where the risks are highest – and where health and safety considerations should be focused.

Ten years ago two fire-fighters from the Hereford and Worcester Fire Brigade were killed while tackling a blaze. The ensuing inquiry ascertained that vital and available information that could have prevented the tragedy had not been accessible on the fire ground. The inquiry's conclusion was inescapable: timely, accurate and relevant information is a fundamental prerequisite for effective command decision making in the emergency services operational environment.

In 2000 the Chief and Assistant Fire Officers Association (CACFOA) commissioned a pilot project – to be called the National Mobile Data Project - to investigate the use of information by fire brigades. The brief highlighted two questions; what sorts of mobile data devices were being used within the fire service and how could the use of information in the operating environment be improved?

The project director is Damian Smith, Deputy Chief Fire Officer at Buckinghamshire Fire and Rescue Service and their Director of Operations and Corporate Planning. His close involvement in several of the national initiatives described above had enabled him to develop a network of informed people concerned with fire service issues. Over the last three years these people have made a substantial contribution to resolving issues relating to the provision of risk information in the emergency operational environment.

Initial research identified that a range of mobile solutions were being employed across the fire and rescue service. These were being sourced from a variety of commercial enterprises and one result of this was that no standardisation existed in terms of technical capabilities, interoperability or functional capability. In addition, these diverse systems did not cater for the fact that information requirements can vary significantly over time and according to the individual role responsibilities of users.

As a result the taskforce concluded that the provision of much more detailed information at an incident ground was a necessary and important strategy and that new mobile data capabilities had the potential to support very considerable improvements. This led to the recommendation that a common methodology and standard format for the collection of risk and fire safety data would enhance command decision making and facilitate cross-border coordination with other brigades and emergency services. Furthermore, it would assist brigades with audits of existing systems and streamline the process of replacing systems.

The study findings and recommendations were published on the CACFOA website in October 2002 [www.fire-uk-org/mobdata]. Following this the FIRELINK project board decided in December 2002 to fund a second phase of the national mobile data project. DCFO Smith was appointed as project director, in parallel with his role as programme director of the E-Fire initiative.

Tapping tacit knowledge

Information can exist across a spectrum of states. For convenience these can be termed data, information, knowledge and wisdom. BS3527 part 1 (1976) defines data, in terms, as a representation of raw facts suitable for processing by humans or automatic means. When data are combined they constitute information: 'the meaning that a human assigns to data by means of conventions used in their presentation'. Knowledge can be defined as an understanding of information in a particular context. Wisdom is the ability to apply experience and knowledge with judgement.

For example letters and numerals like 2, h and i are data. 2 The High Street is partial information. The addition of MK49 2DD transforms the data into actionable information – a precise location. A person who is aware that this (fictional) address is a one-way street endows the information with knowledge.

Michael Polanyi, a Hungarian philosopher who came to live and work in the UK during the 1950s, observed two types of knowledge; explicit knowledge is amenable to codification and transfer to others in the form of information. Tacit knowledge can only ever exist to an individual's head. It is shaped by that individual's life experience and worldview and this can mean that – even if it can be transferred – it may be of little utility to others.

The importance of the distinction between explicit and tacit knowledge is that data, information and explicit knowledge can be written down or digitised; tacit knowledge and wisdom cannot. For example, the skills in the fingertips of a master potter are clearly evident but it can be years before the pupil can replicate them. Very experienced fire-fighters can sometimes sense when a blaze is about to explode into a fireball. However, they may find it hard to explain to a new recruit how they know this.

The mobile data project team embarked on a series of interviews with fire officers to ascertain everything possible about information requirements in emergency situations.

In an extension of earlier research undertaken by the project team the Mid and West Wales, Fife and London brigades and seven brigades in the East of England Region were consulted during the early part of 2003. Ultimately it was intended to secure the buy-in and commitment of all UK brigades. In the process the team interviewed a total of 822 fire officers with a wide range of experience across a range of ranks and roles in brigades all over the UK. Between them the respondents had accumulated over 13,500 years of first hand experience. Each interview lasted between two and four hours so that as much explicit knowledge as possible could be captured and to allow inklings of tacit knowledge to emerge that might suggest some useful patterns.

Analysis of this wealth of experience elicited 55 generic profiles of key roles, up to 28 of which may be present on an incident ground. The investigation also led to a data dictionary of 612 discrete items and a further 79 linking items. Some were of a generic nature and would be required at most incidents; others may be required by particular role-holders in specific emergency situations.

Data dynamics in a fire service context

In order to define when information was required the project team established that when incidents occur they go through a series of five phases. Phase 1 usually starts with a telephone call from a member of the public. The proliferation of mobile phones means that an incident can prompt as many as 50 calls. Clearly, the operator needs to ascertain if these relate to one or several incidents - and their location and nature - so that the appropriate resources can be despatched as quickly as possible. This process initiates phase 2 during which further information is transmitted by radio to the crew in transit.

Phase 3 starts when the crew arrives at the fire ground. The senior officer in attendance assumes command. During this phase the need for information increases dramatically. This information may be in the cab or it can come by radio from the control centre or be provided by local people at the scene. The information available will greatly influence the risk assessment undertaken by the officer in command and the resultant plan which will be applied to ensure that the incident is dealt with effectively.

The great majority of incidents are resolved or brought under control within 30 minutes. The incident enters phase 4 if it escalates and persists for more than one hour. Continuation for more than two hours constitutes an exceptional phase 5 incident.

During such an escalation, as the management of the incident becomes more complex, a more senior officer takes control and the previous acting commander will be required to undertake a functional role. At a major fire this change of command responsibility can happen six or more times – right up to Chief Fire Officer. However, recent research by the Deputy Chief Fire Officer of Nottinghamshire, Mark Smitherman, has found that these transfers of responsibility can lead to a breakdown of communication.

The national mobile data project team analysed the information requirements it had adduced and allocated these to the various phases of an incident. This made it abundantly clear that the first few minutes after arrival at the scene are absolutely critical (see figure 1). This applies whether the incident is a fire, a road accident or a special service incident. And it is equally clear that these information requirements can only be satisfied if the personnel concerned are equipped with suitable devices for accessing remotely-held data.

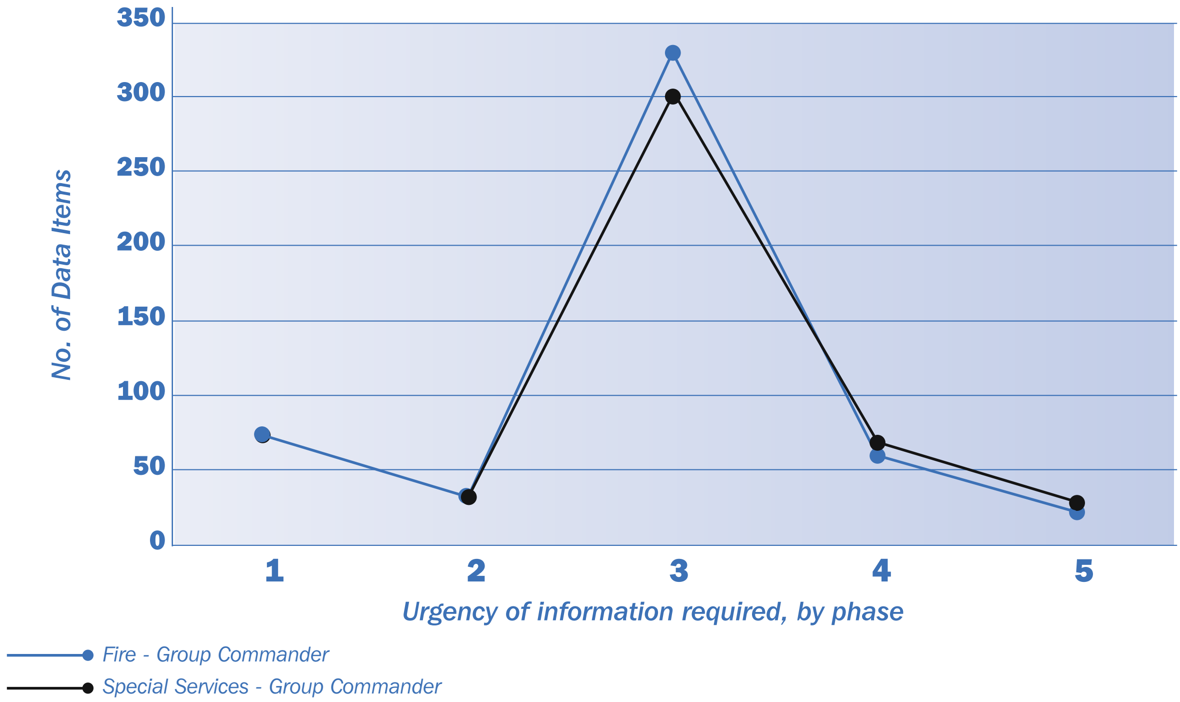

Figure 1: Peak demand for data – on arrival at the scene

Fire brigades do not deal solely with emergencies. A significant proportion of their time is devoted to preventative measures including surveys of properties as a precursor to statutory certification. In the process substantial amounts if data are collected – often as paper-based records. These could include floor plans, the location of fire escapes, extinguishers, sprinkler, dry risers, water mains, flammable materials and so on.

At the fire ground ready access to this routinely collected data and information can mean the difference between life and death.

Using technology to reduce complexity

Computers can only process very simple and precise instructions. Pressing the 'A' key on a computer keyboard starts a long series of pre-recorded instructions buried deep within the operating system before an A appears at the selected point on a screen. The design of a modern computer means that it can process these laborious instructions at the rate of thousands or millions per second.

In order to regularise the presentation of text, typographers developed an approach called standard generalised mark-up language (sgml). Readers who use a web browser will be aware of html (hypertext mark-up language). This simplified derivative of sgml was developed by the English physicist Tim Berners-Lee to animate his invention of the 'World-Wide Web'. It allows an assembly of data in the form of an image of a page of text and/or graphics to be sent from a server to a client computer. As such it is effective but it cannot cope with a request that entails collating data from several repositories.

This has been solved by the development of XML (eXtensible Mark-up Language). XML is derived directly from sgml rather than html and is structured in the fashion of a grammar. In order to function, XML is dependent on a very precise data dictionary which defines relevant data items very precisely.

This relevance is determined by the context in which the grammar is to be applied. The UK insurance industry, for example, has developed an XML grammar called ACORD. It took some two years to agree a vast data dictionary including definitions of every imaginable item of property. Once agreed this universal dictionary allows electronic forms to be used to gather and present insurance data from multiple sources – for the benefit of companies, customers and regulators. By the same token, XBRL (eXtensible Business Reporting Language) has been developed to facilitate the collation and exchange of business and accounting data. XBRL is already being used by the Australian financial services industry to report data to the regulators and the central bank.

In view of these developments the mobile data project team decided to establish a data dictionary for the fire and rescue services. The guiding principle set out by the project team is that: "relevant, accurate, timely information should be available to all staff at any location from a single source as an integral part of the working environment".

The interview process revealed what data was actually needed and used by fire service personnel. The completed dictionary now provides the foundation for a data management toolkit and a technical specification for prototype software that would support the deployment of risk assessment tools.

The size of the dictionary and the large number of roles reflect the wide variety of tasks dealt with by fire and rescue staff. In any particular incident a much smaller subset of information items and roles is likely to be required. However, the project interviews revealed that officers at a fire ground currently only had ready access to about one in seven of the information items they felt they needed at the time.

Accordingly the team looked for patterns and for hierarchies of importance that would indicate which data was needed in what sequence to make effective decisions. In short, which 10% of the 701 data dictionary items are mission critical? It also became clear that some types of information need not be digitised.

Taken together, these findings and their implications have highlighted the need for a root and branch revision of data collection and data management methods and procedures. The team concluded that such a revision will impact across the entire brigade structure and into the wider community.

Developing an IT-mediated solution

The team's ascertainment of information requirements and priorities formed the basis for new methodologies. The purpose of these is to assist brigades to audit their existing data gathering and management processes and proceed towards acquisition of mobile data systems – all in a sequence that delivers the greatest benefits first. The tools will enable them to:

- Identify the urgency and criticality of data to the individual within the organisation

- Analyse the impact of data dynamism
- Review the appropriateness of held legacy systems
- Plan and cost for assembling the data
- Decide on hardware and software for managing the data
- Marshal the resources for gathering, maintaining and distributing the data.

DCFO Smith has devised a model to explain how these factors are connected into a new paradigm (see figure 2). The triangle at the centre represents the crucial relationship between data relevance, timeliness and accuracy. The term 'bearer capacity' refers to the bandwidth of digital communications links.

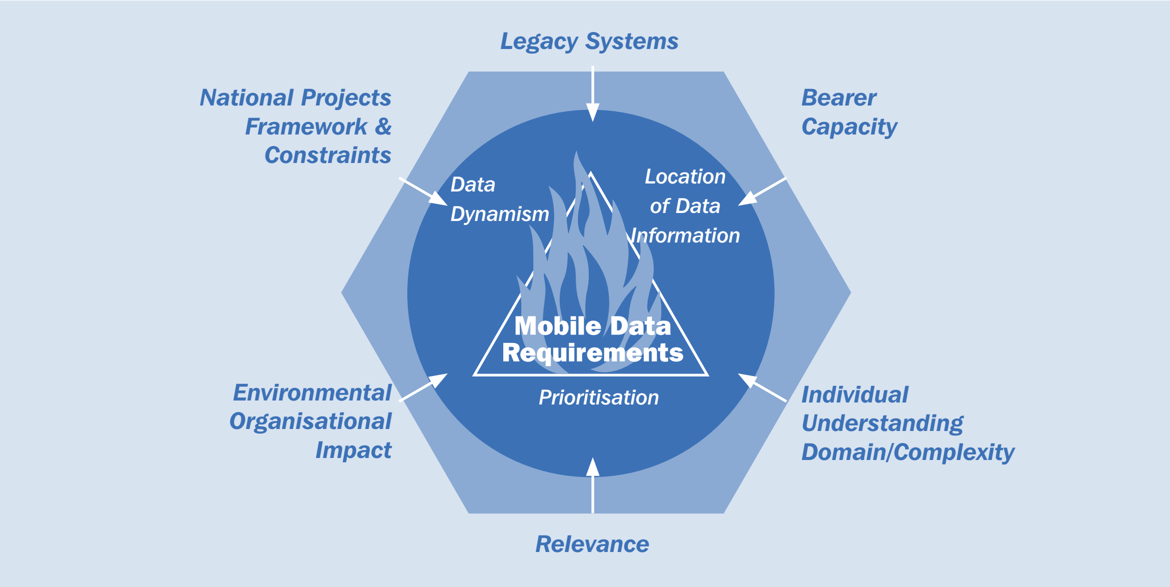

Figure 2: The mobile data paradigm for fire services

This high level model encompasses the factors that a technology solution must deliver if it is to meet fire service needs on a national basis. The essential purpose of the resulting tools must be to enable brigades to assess operational risks and areas of concern for fire safety.

However, tools can only deliver value if their introduction is accompanied by changes in attitude, behaviours and business processes. This entails an integrated approach to the management and use of risk management information and sustained attention to the collection of risk and fire safety data for shared use by all brigades.

The costs of achieving these goals are high. Over recent years the threat of terrorism has led to substantially increased funding for fire and rescue services. However, much of this is 'earmarked' to cover the cost of new responsibilities. Investment in new mobile data systems will deliver efficiencies in the medium term. In the meantime brigades are striving to find new ways to deliver better public services without increasing the burden on council tax payers.

An innovative approach to this has been developed by Buckinghamshire Fire and Rescue Services. The region is speckled with traditional English market towns and villages and yet it is within convenient commuting distance from London. As a result, property values are high. The brigade's senior management has seen this as an opportunity for judicious property management.

The Marlow fire station is right in the centre of this picturesque riverside town. Access and egress for modern fire tenders has become increasingly difficult. By selling the building to eager developers, the brigade raised funding for a new fire station at the junction of two major roads just outside the town, refurbished a defunct station and built a state-of-the-art training centre for fire personnel. A similarly effective scheme is now in hand in Aylesbury. As a result, Buckinghamshire residents pay one of the lowest charges for fire services in the UK.

A UK Fire & Rescue Service for the 21st Century

The National Mobile Data project reported in October 2003. It lays down a blueprint for radical improvements in the efficiency and effectiveness of UK fire services. The focus is on the fostering and management of intangible assets – in this case, knowledge, skills, safety and reputation for public service. The proposed solutions are also mindful of the vital interplay between intangible and tangible assets such as finance and physical resources.

Technical specifications and templates have been produced to enable suppliers to prepare competitive quotations for an integrated technology solution. Although the initial objective is for mobile data systems for fire services, an important aspect is to ensure that the required solutions will be capable of linking with other emergency services such as the police and ambulance services, with government agencies and business in general.

Figure 3 provides an illustration of these longer term plans.

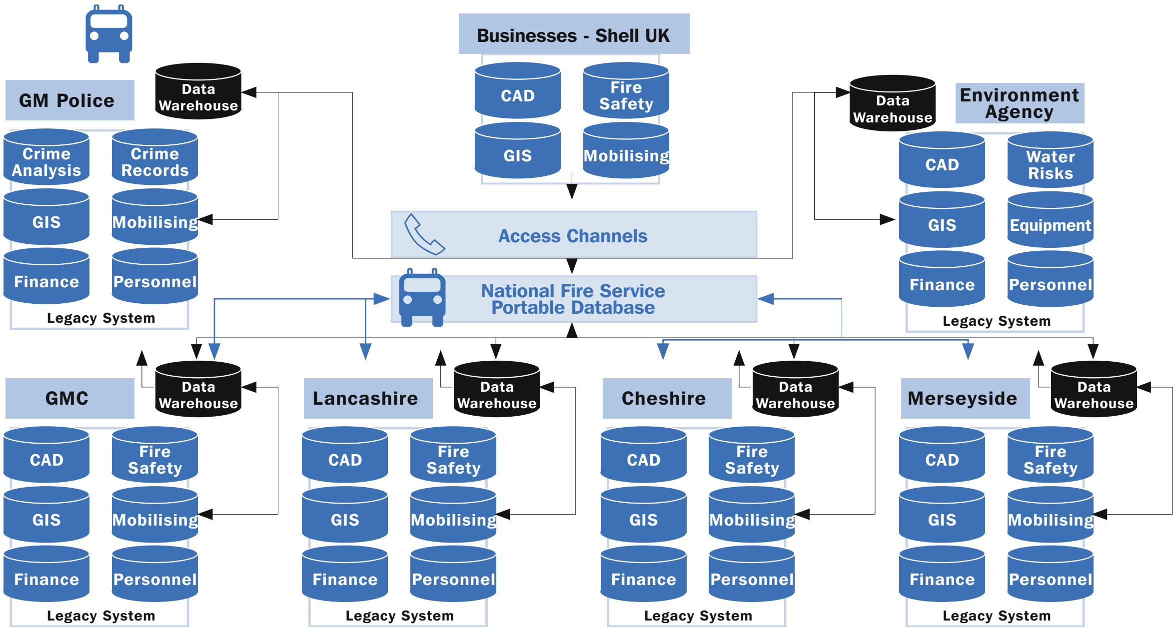

Figure 3: The road map for linking fire service systems with the wider community

Following an independent review of the project, the University of Wolverhampton declared the findings to be of national importance because an effective solution would be of great utility in many areas of government, commerce and industry.

When fully implemented the provision of integrated mobile data will go a long way towards neutralising King Lear's anguished command: "You sulphurous and thought-executing fires … Strike flat the thick rotundity o' the world".

Innovation

case study 5
Intercos

Brand Value	Knowledge	Innovation	The measurement and reporting of intellectual capital
B&Q Whitbread	Bloomberg UK Fire & Rescue Service	**Intercos** mmO2	Austrian Research Centers Celemi

Abstract

Milan-based Intercos is a specialist in colour cosmetics. Each tonne of the talcum it mines makes over a 100,000 items of make-up - in any colour imaginable - for the world's best-known beauty brands. The transformation takes 16 weeks and the added value is enormous ... but fashions change overnight. Innovation is the life-blood of the company and the way through which Chairman Dario Ferrari envisions Intercos becoming the world's leader in the colour cosmetics field: "We have no other strategy than continuous innovation".

Intercos has embraced the management of intangible assets, in itself an innovative approach, as the principal driver of business growth through client relationships. The development of an Intangible Capital Statement to communicate the company's values has been widely perceived to be of strong importance, with a remarkable impact on customers who view the decision to show Intercos in full transparency as enlightened.

The context

Most human beings care about their appearance; they want to feel that they look their best. In the survival stakes, attractiveness and vitality bring distinct advantages. And these benefits can be prolonged if we take care to 'look good for our age'. Competitiveness is part of the human condition. Unfortunately, few of us are destined to be fashion models; as the bloom of youth fades, most of us need a little assistance.

This assistance is provided by a group of industries that make and advertise the garments, shoes and cosmetics that will help us achieve our goal. Each of these industries is a major industry in its own right and they both drive and are driven by fashion and style - a multi-billion dollar business.

This 'fashion business' embraces commentators, brand names and producers. The fashion gurus tell us what beautiful people are wearing. But, of course, if we copy them, we all end up looking the same. So, to stay in the lead, the 'fashionistas' must constantly seek a new 'look' – and that is what we will wish to copy tomorrow.

The brand names in fashion are essentially marketing organisations have earned a reputation for safely predicting and then satisfying demand for the next fashion. Most are multinational enterprises but few of them make physical products – in such a fast-changing business, the risk of getting stuck with out-of-date stock is too high. The brand names rely on firms specialising in materials production or component manufacture or sub-assembly or assembly or packaging or distribution.

The reader will be familiar with leading brand names – for example, Giorgio Armani in garments; Ferragamo in shoes; Estee Lauder in cosmetics – but may be forgiven for not knowing the names of the firms in these industry sectors that actually produce the goods and provide the brand names with substance via complex supply chains.

The glue that holds these supply chains together is comprised largely of communication and trust. This ensures that clothes, shoes, handbags and cosmetics complement each other and match the 'new look'. This case study addresses this less well-known but vital supply side and focuses in particular on the cosmetics industry and its supply chain.

In order that firms in supply chains know what is going on and can efficiently transfer part-work to the next stage in the process they need to be located in close proximity to each other. This has resulted in the emergence of so-called 'industrial districts' – comprised mainly of small to medium-sized enterprises. Some of these districts have existed for centuries – such as that for the jewellery trade in and around Hatton Garden in the centre of London. In the garment industry a prime example is centred on the Italian city of Milan, in an area with a radius of approximately 20 kilometres.

Intercos is a firm specialising in colour cosmetics that is headquartered in Agrate Brianza, close to Milan. The company has grown into a leading and international player partly because of its origins within the Milan industrial district but, more importantly, because of its relentless pursuit of excellence. Colour is just part of the story; innovation has become the life-blood of the company. The case describes why and how Intercos has embraced the management of intangible assets as the principal driver of business growth through client relationships.

What Intercos does

The business starts with the most tangible of ingredients – natural raw materials that it wins from mineral deposits. This material is ground into an extremely fine powder, in various hues to form the basis for many types of cosmetic product. These include face powders and eye shadows, emulsions, foundations, mascaras and eyeliners, lipsticks and cosmetic pencils for eyes and lips.

The company was founded in 1972 to produce and market the talcum powders in bulk form for further processing by the client. It soon became clear that some clients preferred Intercos to undertake the processing for them. This processing can range from semi-finishing to assembly and right through to delivery of consumer products, such as propelling lipsticks, labelled with the client's brand and ready for sale in retail outlets.

As a result, the company developed manufacturing facilities in various parts of Italy including Barlassina, Chieve, Caravaggio and Limbiate and, in addition, established specialised 'laboratories' in Geneva, Switzerland for the production of skin care products. Today, Intercos procures its raw materials from many parts of the globe. Naturally, cosmetic products must meet stringent medical standards. Intercos has all its products tested for compliance at independent research laboratories run by AGER.

The perceived quality of its products enabled Intercos to win contracts with many of the leading brand names in the industry. Many of these market their branded products worldwide. As one tonne of bulk powder converts into approximately 100,000 finished products it made sense to set up manufacturing facilities in the USA and Malaysia to reduce distribution costs.

The company's net sales have increased steadily from €47M in 1994 to €163.6M in 2002. Intercos now has 245 principal clients including such well-known brands as L'Oreal, Procter & Gamble, Unilever, Estee Lauder, Johnson & Johnson, Revlon, the LVMH Group and Chanel. UK-based clients include Boots, the Body Shop, Debenhams, Marks & Spencer, Tesco and Virgin Vie.

Today, 7% of Intercos' production is sold in bulk form, 16% in a semi-finished state and 77% as finished product ready for shop display. This means that 1450 tonnes of bulk powder are converted annually into some 320 million pieces of finished product. To assist it in this transformation, Intercos employs over 650 supplier organisations.

The fundamental factor in all these products is colour. The phenomenal rate of transformation is even more remarkable when one considers that, each time a client launches a 'new look', Intercos must create a new range of colours.

The business model of Intercos

The mission that Intercos chairman Dario Ferrari has set for the company is "to help satisfy the desire for beauty that exists in every human being".

The vision he communicates for achieving this is: "to be the world's leader in colour cosmetics and to offer our clients innovative products that no one else is able to think of and produce."

In order to deliver the promise, Intercos has divided its business processes into 3 main areas: Sourcing & delivering, Innovation and Customer. These are integrated by a fourth area dedicated to Corporate Service.

The company is candid about its performance in the three main areas. In essence, there is room for improvement.

Sourcing & delivering

As is the case for almost all organisations, Intercos is striving to reduce sourcing and delivery costs and to improve quality. The company has achieved a high reputation for the quality of its products. To maintain this, it has gained ISO 9000 certification for its in-house manufacturing activities. However, capital expenditure on plant and equipment has risen steeply over the past three years.

The management of over 650 suppliers is an ongoing challenge. The procurement processes developed by Intercos are elaborate. But many of these suppliers are much smaller and less sophisticated businesses than Intercos. The chief targets are to ensure that quality requirements are met and that lead times are brought into line with the expectations of Intercos' clients. At present, lead times remain stubbornly in the 6-16 week range. Company records show that switching to an alternative supplier usually increases costs by about 6%, particularly in the area of packaging.

Markets and Customers

On average, the company's 245 clients each place orders worth some €700,000 per annum. However, sales to the company's top 10 clients have risen steeply in recent years to reach 39% of total sales revenues. In a start-up firm this trend could be cause for celebration. For a more mature business like Intercos, operating in a market driven by the whims of fashion, it is a potential cause for concern. The defection of a major client could significantly delay return on the increased capital investment being made by Intercos.

On the other hand, independent surveys of stakeholder satisfaction show that over 80% of Intercos customers think highly of the company and that 31% are happy to give positive references and endorsements.

Respondents were polled on 16 factors. Clients, suppliers and employees all scored the company as 'excellent' in two of these factors: innovation and prestige. However, the results for two other factors – satisfaction with the business relationship and managerial transparency and clarity - were rather different. Here, suppliers were very satisfied but clients and employees awarded very modest ratings.

These sales trends and the survey data persuaded the company that it must work much harder to win the hearts and minds of both clients and staff.

Innovation

The company has long held the belief that the ability to innovate is absolutely critical to success in its chosen field. Indeed, when asked about the company's business strategy, chairman Ferrari replies "we have no other strategy than continuous innovation".

In some quarters invention and innovation are viewed as the same thing. In an industrial context, invention is concerned with original ideas and novel solutions to problems. Innovation, on the other hand, is more progressive. It is about developing ideas into products and services that people will find useful.

The ability to innovate requires investment and commitment. Intercos has a long history of re-investing a substantial slice of net sales revenues in new product development. In 1994 the proportion was 12.3% and, as a further sign of the company's commitment to innovation, this proportion has been increased every year to reach 24% in 2002.

To put this in context, Dyson Ltd – one of the most innovative of UK firms and inventor and maker of the bagless vacuum cleaner and the contrarotator washing machine – re-invests 17% of its revenues in R&D. The consumer electronics giant Siemens re-invests about 11%. However, the all-industry average in Europe remains stubbornly below the 3% mark.

At Intercos innovation is treated as the key component of the quality cycle for product development and manufacture (see figure 1).

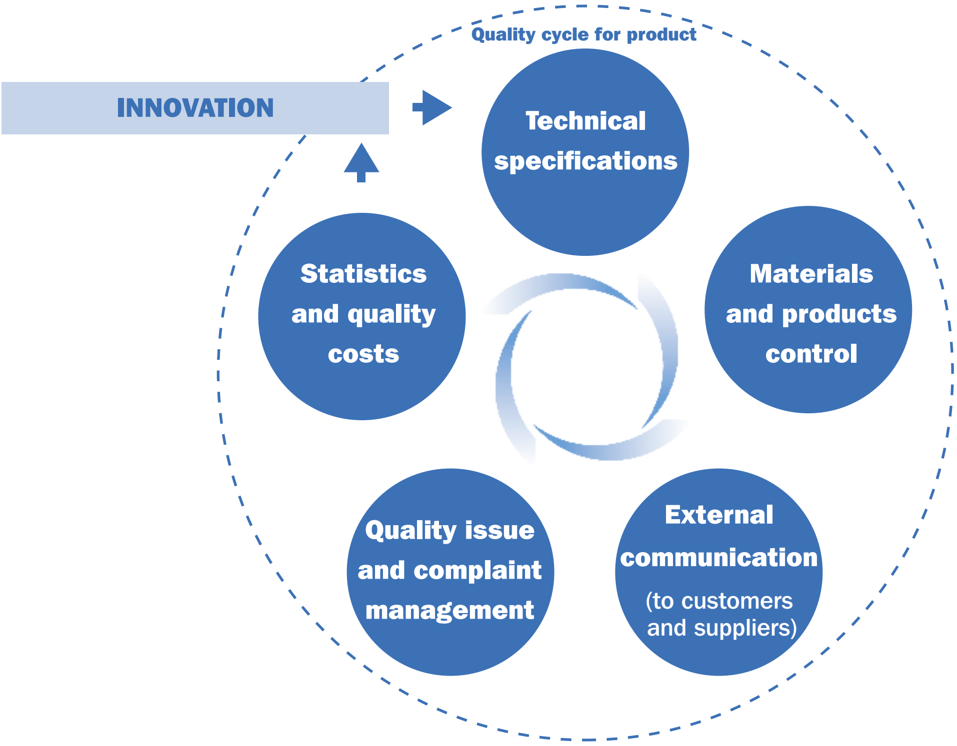

Figure 1: how innovation drives the quality cycle at Intercos

Managing intangible assets at Intercos

Intercos knows itself to be innovative and the independent surveys have shown that the company is widely regarded for its prowess in this area. So it is not really surprising that, having identified the weaknesses in its relationships with clients, Intercos should sieze upon an innovative approach to remedying the situation.

The company has a good record for managing and growing its tangible assets of capital and physical resources. It has also proved itself adept at managing certain intangible assets such as intellectual property. But the weaknesses appeared to lie in even more intangible areas of business: leadership, transparency and reputation. After all, the surveys showed that although over 80% of suppliers viewed Intercos as 'the best choice', only just over half of clients and employees thought this way.

The question Intercos faced was: 'how to manage intangible assets better?' Chairman Ferrari turned to Franco D'Egidio for the answers. D'Egidio, a former sociology professor, is managing director of Summit, a consultancy he founded in 1982. Summit specialises in corporate culture change and, more recently, in the evaluation of intellectual capital. The firm is a member of the advisory council of the EU-funded PRISM project on the measurement and reporting of intangibles [http://www.EUintangibles.net].

D'Egidio was familiar with Intercos; two of his lead consultants, Simone Gibertoni and Andrea Santin, had conducted the stakeholder satisfaction surveys. A Summit team led by Sergio Caredda had been working with a number of Italian companies, including several banks, to develop an Intellectual Capital Value system (see figure 2). Following refinement in the course of projects with several Italian companies in the engineering sector this system has now been registered as a trademark – Intellectual Capital Value® - in the EU and the US and as a copyright across Europe.

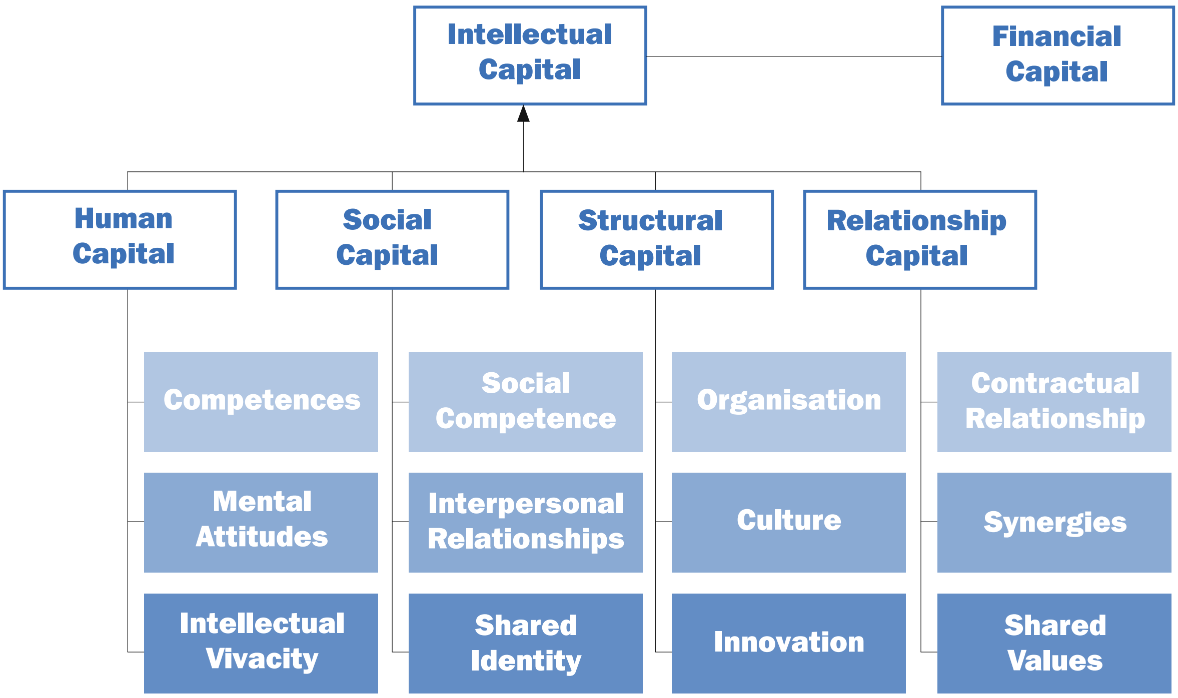

Figure 2: schematic diagram of the Intellectual Capital Value® system

Elsewhere in the world, organisations in insurance, research and consultancy have published intellectual capital reports. As far as D'Egidio was aware, no-one in manufacturing, marketing and distribution had yet done so. Enthused by the briefings given by Summit, Dario Ferrari resolved that Intercos would be the first.

In announcing his decision, in January 2003, Ferrari said: "There is room for creativity but not for improvisation. By accepting to reveal everything about us we present ourselves to our clients and partners in a fully transparent way, especially with regards to future prospects. They will have reliable indicators to know exactly who we are, where and how we are investing our energies, what we want to reach and what we believe in. I believe that the Intangible Capital Statement will communicate our values and our desire to reach more ambitious results to the market."

Intellectual Capital action plan

Chairman Ferrari recognised immediately that his decision could have a profound impact on corporate culture at Intercos. He decided to position the concept of IC statements as a management tool. This meant that the existing incentive plan offered to senior managers would have to be revised to take account of intangible goals and objectives and the non-financial indicators that would be elaborated in the IC statements.

Accordingly the top 48 managers at Intercos were involved in an extended dialogue to establish a commonly shared set of key indicators that would be accepted as evaluation points by all the people involved. The result of this dialogue was a completely new managerial tool for the company based on a revised version of Kaplan and Norton's Balanced Scorecard approach. The main difference with the original approach is a strengthening of the importance of the intangible asset base of the company as the main driver of the business of Intercos.

In order to make this management tool operational an action plan was formulated – initially covering the first 4 years. The Summit team introduced the Intellectual Capital Value® system to people at all levels in the company as a precursor to calibration of the model for the Intercos business.

The first step would be to decide what should be measured and then agree the current values for each metric. Working with them in close collaboration, the team identified the top 30 drivers of value creation at Intercos. From this it was possible to define some 350 'intangible indicators' (see figure 3).

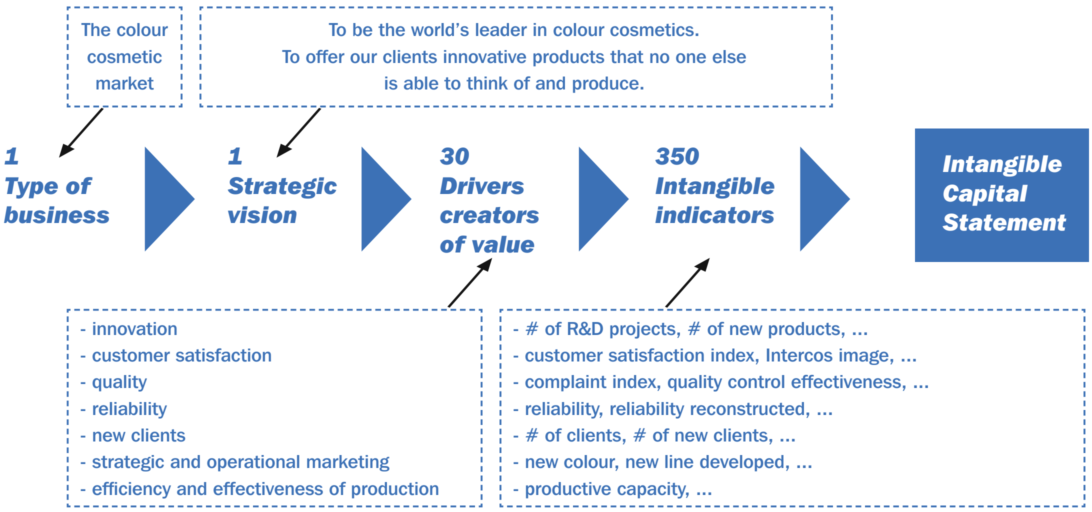

Figure 3: summary of the process for identifying intangible indicators at Intercos

This process enabled Intercos to identify the full flow of value creation for the whole company. Each department has been assigned goals and objectives across both financial and non-financial indicators. And for each person a single scorecard has been created to highlight the short list of objectives that that person must achieve. A part of the incentive programme is linked to the reaching of these goals.

Intercos' intangible indicators are reported, analysed and published in the inaugural IC statement together with an action plan for the coming year. Each year, the results will be reported in the next annual statement and action plan … and so on.

This arrangement builds on the Process and Quality Improvement initiatives that Intercos has been running successfully since 1995. The stated aim of combining the two initiatives is to achieve 'customer and stakeholder continuous satisfaction'.

Early benefits flowing from the IC report

The main international fair or exposition for the cosmetics industry is COSMOPROF. Intercos has earned a reputation for presenting striking scenarios on its stand each year. The 2003 event was held in Bologna in March and offered Intercos an opportunity to disseminate its Intellectual Capital Statement.

Intercos decided to break with tradition. No products at all were displayed on its 2003 stand. The entire space was devoted to publicising the company's decision to focus investment on its intangible assets. Videos and posters displayed the charts in the IC statement. Intercos staff on the stand were specifically trained to introduce the annual report to the customers attending the event.

Intercos' initiative has been widely perceived to be of strong importance. The impact on customers has been remarkable. Typically they have commented: "For the first time in history that a company had the courage to show itself in full transparency to its customers".

Corporate culture at Intercos

Corporate culture is a function of the values, behaviour and relationships of and between all the people that comprise the company. In any particular company it is a 'soft' variable that is difficult to define precisely. By contrast, 'harder' variables such as organisational structure, operational mechanisms, procedures and systems are more amenable to measurement.

At Intercos the IC statement project was initiated with a questionnaire survey on corporate culture to all personnel. This examined 19 factors that can be analysed across two axes: Hierarchical/Egalitarian and Task-oriented/People oriented.

These axes define a matrix in which four typical cultural typologies can be identified:

'Incubator': marked by Service, Commitment, Energy, Integration and Idealism

'Missile': marked by Growth, Characteristic, Success, Individual responsibility

'Family': marked by Determination, Sense of direction & focus, Decision-making power, Cooperation

'Eiffel Tower': marked by Order, Control, Rationality, Stability

The Family cultural type is based on 'support'. The Eiffel Tower type is typical of highly structured organisations. The Guided missile characterises an organisation that is strongly oriented to objectives. Incubator typifies organisations where stakeholders exhibit a strong sense of ownership of the company.

There is no 'right place to be'. However, identification of the prevailing cultural type is an essential precursor to the successful management of intangible assets.

Analysis of the survey at Intercos revealed that none of the four types was absent although a 'Family' culture prevails - that is, a corporate culture based on interpersonal relations where the leadership of managers is crucial (see figure 4).

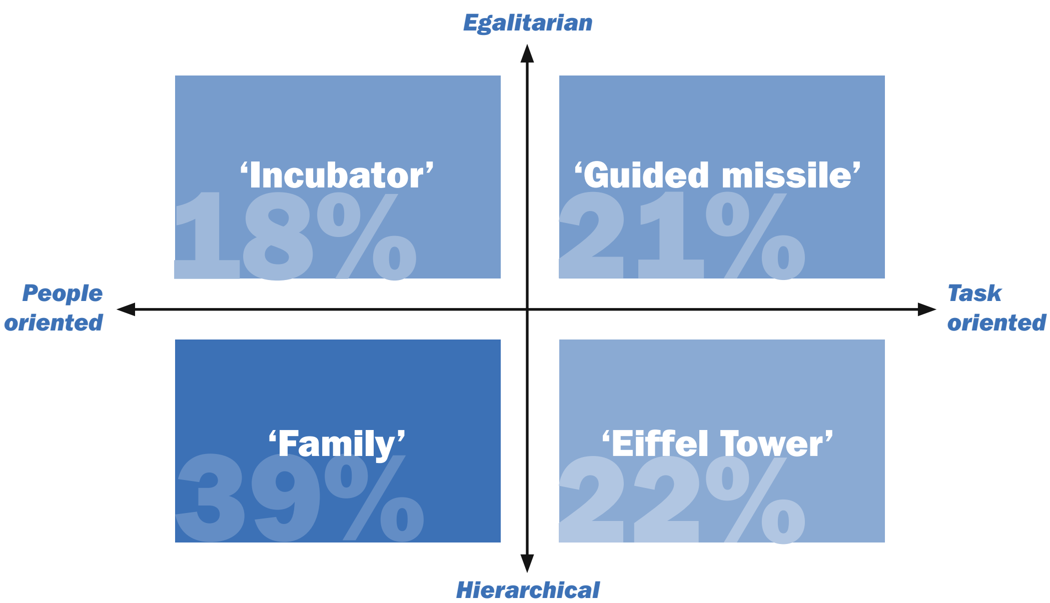

Figure 4: quantified analysis of corporate culture at Intercos

This initial analysis strongly influenced the IC management approach developed by Intercos. As described in the case, the approach was communicated by a visionary leader, adopted by the top management cadre, cascaded throughout the workforce by consultation and then made part of the performance appraisal process.

Lessons learned

In managerial terms one of the most important practical results of Intercos' application of the Intellectual Capital Statement was a specific action plan for the reorganisation of the commercial activities of the company. In particular, the customer satisfaction surveys conducted within the framework of the project allowed Intercos to analyse what customers perceived to be the strengths and weaknesses of the company's services.

Many of the issues that emerged from the surveys are qualitative in nature and resist expression in terms of numbers or indicators. However, awareness of the perceptions of customers, suppliers, employees and managers has produced much of the value that has already been derived from the company's Action Plan for 2003. For example, one of the key issues that emerged was a demand for increased transparency. This has become a major factor driving the full disclosure by Intercos of its intangible assets and how these are managed.

One of the chief lessons that has been learned from Intercos' experience is that it is impossible to elaborate a generic tool for managing intangible assets. Currently, a number of national and industry-wide initiatives are seeking to develop generalisable frameworks that can be replicated in many different companies. In part, this is motivated by a desire to define ideal levels of 'efficiency'. Unfortunately, experience shows that for any particular company this tends to result in a suit that does not fit, that does not answer its requests and its needs and, eventually, produces a useless combination of numbers and data.

To be effective the tool needs to be tailored to a company's own value creation drivers. At Intercos innovation is the main source of value creation - and the driving force resides in its customers. Therefore the whole system for Intercos had to be designed around this core concept. The investment of time needed for tailor-making an intangible asset evaluation system is recovered as soon as the company begins to apply its value creation drivers in the context of moving the focus from measurement to management.

A second important lesson learned is that applying an intellectual capital approach within a company means a radical change of the company's culture. Therefore the full commitment of the top management must exist from the very beginning of the project. And during project development phases the commitment of all the other people must be sought and secured.

Lastly, empirical observation suggests that some companies have developed an Intellectual Capital Statement purely as a Public Relations exercise. In practice the impact of applying such a system to a company is so high that an effective investment structure is essential to cope with the project results. It is vital that the management foresees and plans an appropriate structure from the very beginning in order to achieve improvements in all the weak areas that will be exposed.

Intercos chairman Dario Ferrari summed this up in an interview in July 2003. "The choice to publish the full Intellectual Capital Statement was born, particularly, as an answer to the indication made by customers during the Customer Satisfaction Survey - that transparency was a key area of improvement for the company. This implied for Intercos a true culture change; a new way of thinking across the whole company".

Innovation

case study
mmO2

6

Brand Value	Knowledge	Innovation	The measurement and reporting of intellectual capital
B&Q	Bloomberg	Intercos	Austrian Research Centers
Whitbread	UK Fire & Rescue Service	**mmO2**	Celemi

Abstract

The fostering of intangible assets is playing a vital part in the establishment of mmO2 – the listed, re-launched company derived from BT Wireless – as a credible, innovative, independent business. mmO2 concludes that the assiduous management of intangible assets has helped it post a sound financial performance for seven successive quarters and convince many in the City that it is a serious company.

The group's first annual Corporate Responsibility report was published on the mmO2 website in July 2003. In October 2003, results showed that the company is on track to reach 30 per cent operating margin for the year and achieve doubt-digit growth.

The context

The world's first mobile phone call was made a mere 18 years ago. The early portable instruments were about the size of a shoe box and might more properly have been described as 'luggable'. The service offered was unreliable and very expensive but the ability to communicate while out of the office was a compelling attraction to City high-fliers and those who relish being seen sporting the latest technology.

Harvard's Professor Clayton Christensen has observed that when a new technology is perceived to offer benefits that cannot be obtained from established alternatives in the market place it becomes a 'disruptive technology'. History shows that disruptive technologies very often displace the existing technologies in that market.

To date, mobile telephony has exhibited these characteristics and emerged as one of the fastest growing offerings in history. About one-sixth of the world's citizens now have a mobile phone. However, it remains to be seen if mobile telephony will eclipse traditional 'fixed line' communications infrastructures. These continue to transport both data and voice traffic far faster and more securely and also constitute a key component of the Internet.

The birth of mobile telephony coincided with the trend in many advanced economies to liberalise state-owned fixed line communications systems. Until the 1980s these were generally seen as vital strategic assets that had to be protected in the national interest. Members of the public had to pay whatever they were charged for telephone services; there was no alternative. In the UK, for example, telephone systems were the responsibility of the General Post Office – later split into The Post Office and British Telecommunications (BT). About a quarter of a million civil servants were engaged to maintain and administer the public telephone service. This workforce included many engineers and mathematicians to solve the complexities inherent in very large networks. Similar skillsets were prevalent within the main communications equipment suppliers – such as Racal Electronics and GEC.

Between them, these scientists were able to demonstrate that a mobile telephony service was technologically feasible. The businesses needed to bring the offering to market came from a range of backgrounds. BT Cellnet was set up within BT in 1984 and Vodafone was spun out of Racal; both launched services in 1985. These pioneers were later joined by start-ups Orange and One2One.

If there was a common trait it was that all were entrepreneurial and exhibited strong skills in marketing and deal-making. They had to rely largely on income from early adopters to fund the construction of a cellular network of radio transmitters. They also had to create alliances with firms who would make the equipment and handsets. Typically these new suppliers had no history in telephony. Motorola was and is a leading manufacturer of computer chips. In 1980 Nokia specialised in making rubber boots.

These unlikely partnerships had to collaborate in the formulation of standards for mobile telephony - such as GSM (Global System for Mobile). GSM and its successor standards have been adopted in most countries except the US and Japan – hence the need for travellers to have a so-called triband phone. The partners also had to work with government agencies to gain official acceptance of proposed standards and to obtain licences for radio frequencies in the broadcasting spectrum.

Rapid technological innovations and the achievement of UK national coverage led to connectivity between rival networks and with fixed line systems and to 'roaming' agreements with other countries. By the late 1990s mobile phones were owned by up to half of the populations of some economic regions such as Scandinavia. European governments saw an opportunity to raise money for the exchequer by auctioning licences for the much faster '3rd Generation' services that had been developed in the laboratory.

The urge to maintain the competitive edge caused bids to far exceed expectations and, across Europe, some £60bn was pledged. Shortly afterwards a worldwide economic decline left bidders with massive debts and reducing revenues. The result has been rapid consolidation and the forced sale of assets. BT was one of the casualties and, under strong pressure from investors, decided that in order to create shareholder value it would demerge BT Wireless, of which BT Cellnet was the UK business. Some commentators doubted the wisdom of leaving the mobile telephony market but it is now clear that, following the demerger and a record-breaking rights issue, the parent company is in better financial shape today than many other fixed line telcos.

The subsidiary was floated in November 2001 and in May 2002 it was re-launched under the brand name O_2 under the holding company mmO2. This case study describes how the fostering of intangible assets is playing a vital part in the establishment of mmO2 as a credible, independent business.

The Birth of mmO2

2001 was not a propitious year for a new business. The collapse of the e-business bubble in 2000 had not just affected the dotcoms. Despite US Federal Reserve Board Chairman Alan Greenspan's warnings of 'irrational exuberance', investors around the world had inflated to unsupportable levels the share prices of almost any business that appeared to be poised to prosper in the 'information age'.

During 2000-2002 the market capitalisation of many information and communications technology businesses plummeted by as much as 90%. Some vanished altogether. Even the strongest suffered a fall of 50%. In order to survive, afflicted companies had to reduce headcount and liquidate saleable assets. The prices realised were often a mere fraction of the values attributed by analysts a few short years before.

The prospects for the sold businesses were even less attractive. The economic situation had depressed consumer spending and there was intense competition to win over those customers who remained willing to spend.

Despite this gloomy scenario mmO2 had some particular advantages. Its former parent, BT, was and is a huge multinational corporation. As a subsidiary, BT Wireless was itself a very substantial business with a modern physical infrastructure, some 15 million subscribers and annual revenues of about £4bn. As a result, when BT Wireless was floated it was the largest business start-up in UK financial history. The newly demerged firm immediately found itself in the top 40 of the FTSE100.

Even in a slump, institutional investors must remain active. Pension and insurance premiums continue to arrive. Financial regulations require policyholders' funds to be invested in a range of assets, including equities. Institutional investors habitually look among the leading quoted companies for the safest havens. So, among the many challenges facing mmO2 has been the need to prove to investors that it can deliver profitable growth.

The company demographics in brief

At the outset, mmO2 business units covered five regional areas: O_2 UK, O_2 Ireland (formerly Digifone), O_2 Germany, Manx Telecom and O_2 Netherlands - which was sold in June 2003. In addition, the group offered services to the emergency services through Airwave and O_2 Products – which oversees product development for the Group and includes O_2 Online, a web-based service to attract high value consumers who are typically heavy text and data users.

The company was first in the world to roll out a GPRS network (General Packet Radio Services). GPRS is known as '2.5G' because it is a necessary intermediate step towards Third Generation' ('3G') services. Most O_2 business units hold licences to offer 3G services. Manx Telecom launched Europe's first 3G service, in November 2001, and also operates the Isle of Man's fixed line services.

On 31 March 2003 the group had 19.4M subscribers (up 11%) and 12,476 employees (down 13%). The location of subscribers is: UK 12,050,000; Germany 4,812,000; Ireland 1,225,000; Isle of Man 59,000. The financial contributions of the business units are roughly proportionate to their share of the total customer base.

In the year to 31 March 2003 group turnover was £4,874M – an increase of 14%. Data traffic is growing at a faster rate; during 2002 O_2 subscribers sent and received 11.6 billion text messages. After 18 months of trading as an independent business, gross profits (expressed in terms of EBITDA) had increased by 98% to £859M. Debt was down 11% to £549M.

These data make mmO2 Britain's fourth largest mobile phone group. By comparison, Vodafone – which has been an independent business for 15 years longer than mmO2 – has 120 million customers in 20 countries. According to Metcalfe's law the value and utility of a network increases exponentially with each additional connection. So Vodafone's much larger geographical 'footprint' allows it, for example, to get better deals on equipment from suppliers such as Nokia and Ericsson. In order to stay in contention, mmO2 must continually innovate to cut costs and charges, to develop new services that will attract and retain customers and to foster business alliances that will help to level the playing field.

David Varney has led the executive team, as Chairman of mmO2, from the outset. His experience of playing a central role in the successful break-up of another major UK utility company, British Gas, had strongly influenced his management approach. It had convinced him that a demerged business had to distance itself from its former parent as quickly as possible – even if that parent was perceived to be a well-managed company. He believed that mmO2 had to position itself as a completely new business with a fresh vision, new goals and convincing policies for achieving them.

Accordingly, the mmO2 board of directors that he shaped is comprised of people from a wide range of corporate backgrounds. Knowledge of the sector was important, of course. For example the CEO he appointed, Peter Erskine, had gained experience of international communications networks at BT Wireless and previously at UNITEL, one of the first Personal Communications Networks in the UK that eventually became One to One. At the operational level some other ex-BT managers were engaged to ensure continuity and service effectives but, wherever possible, managers have been recruited from other sources.

One of Erskine's principal tasks has been to persuade City analysts that mmO2 is not the unwanted child of a troubled multinational but is a serious business in its own right. The purpose of his recruitment strategy was two-fold. Firstly, to communicate to investors that the board would not be fettered by an engineering mindset better suited to a fixed-line network environment. And, secondly, to send a clear message to all employees that the company offered real opportunities to people who could bring fresh ideas and help formulate new business solutions.

One of the board's first tasks was a consultation exercise to identify the core values of the new company, namely; bold, open, trusted and clear. Erskine then initiated a culture change programme to communicate these four values and 'keep the customer experience at the centre of our vision'. This initiative was named 'Breathe' to symbolise its objective.

Following a survey about 8% of the workforce were identified as potential 'change catalysts'. Within 3 months of the demerger these people had been allocated into groups of some 200 people from all levels and parts of the business. These groups were brought together for one-day workshops to learn about the four values and then, in small syndicates, to discuss: 'how do you change your working habits to work in this company?'

Varney recounts that what emerged from this process was "a determination to understand the different needs of stakeholders and to develop appropriate services to benefit society in different ways". He summarises the attributes that would be required as: 'inventiveness, an appetite for risk-taking, an ability to manage complex problems and an instinct for innovation'.

The Breathe programme revealed that the workforce wanted the company to 'turn from being inwards looking in favour of being outward looking and genuinely useful'. In response the board recognised that there is a dynamic tension between control and innovation. The company must deliver tangible 'bottom line' results today while exploring possibilities for innovative offerings that could underpin tomorrow's results.

The board, recognising that the concept of Corporate Social Responsibility (CSR) would help to achieve this balance, decided that the principles of risk management would be the best way to manage a CSR programme in mmO2.

The origins of CSR go back to the mid 1980s when business thinkers in various parts of the world began to point out that the market capitalisation of successful quoted companies often greatly exceeded the book value of assets. They protested that traditional accounting methods measure financial capital but largely ignore what these pioneers named 'intellectual capital'. This uncounted capital was made up of invisible or intangible things such as intellectual property, the special skills of staff and customer trust. The pioneers asserted that if company accounts ignored these factors of production then they could not provide stakeholders with a transparent view of the true value of a business.

Another school of thought – and one that mmO2 subscribes to – disagrees that CSR emerged in response to a perceived need to account for intangible assets but believes it came out of a genuine recognition of the need to address social impacts in order to assure business sustainability.

Acceptance of these ideas has been slow but the European Union now requires CSR reports from firms engaged in certain financial services and, in the US, the Sarbanes-Oxley Act may lead in the same direction. In general, formal reporting of non-financial performance remains voluntary. In Europe, some companies are addressing CSR by means of intellectual capital statements which they publish with their annual report and accounts. Denmark appears to be setting the pace with 120 firms publishing IC statements based on guidelines produced by its Ministry of Trade and Industry.

As evidence of its belief in CSR as a foundation for business sustainability, mmO2 appointed and gave her its full backing to Ms Charlotte Wolff as manager of Corporate Responsibility (CR). The group's first annual CR report was published on the mmO2 website in July 2003.

mmO2's approach to corporate responsibility

The message that Erskine constantly communicates is crystal clear: "Corporate responsibility has become an important reality of the day-to-day business of being in business". It is notable that thought leaders in completely different industry sectors are sending out a similar message: "You have to win the right to operate in communities".

Erskine adds: "Corporate responsibility matters as much as getting customer services right, maintaining effective financial controls, seizing the right market opportunities and delivering growth. Indeed, it underpins all of these things. It is a social fact. It is a corporate reality".

In her role as manager of CR, Wolff's task has been to operationalise this message. As a first step she took the outputs from the Breathe workshops back into the workplace. This has involved sending 'mystery shoppers' into O_2 stores to sample the service, giving the opportunity for staff to recruit their family and friends as O_2 subscribers on discounted rates and setting up a website 'meeting place' where employees can post ideas and vote, with stars, on other people's ideas.

Wolff recalls that "an apparently small thing can trigger a major improvement. For example, a friend complained to me about an employee at one of our shops – and I posted some comments about this in the website meeting place. Almost immediately a response was posted by a manager offering possible reasons and saying that the matter would be investigated". As a result the staffer was helped, the customer was satisfied and the workforce learned from the incident.

Breakthroughs like this have encouraged the top management team to make regular visits to company sites. CEO Erskine calls into a customer service centre every month: "Customers are familiar with the message *'your call may be monitored for training purposes'* but might be surprised to know that the listener could be me. It is very revealing. It exposes the issues. We've learnt, for instance, that when a customer's phone stops working they assume it is O_2's fault, not the handset maker's".

Anecdotes and story-telling at all levels in the organisation play an important part in making CR happen. After O_2's customer services had been criticised, David Finch, chief finance officer, visited every UK call centre. "At our monthly meeting yesterday he reported that the buildings are superb and the staff are fantastic – but the computer screens they have to use are simply appalling. It was great to hear this from him – after all, he sits on the funds".

The demerger re-launched BT Wireless as mmO2 and within six months the business was re-branded as O_2. The Breathe programme has helped staff to identify with the new brand and 'to live and breathe O_2'. Already, independent market research in the UK reports 80% brand awareness.

The focus is now on 'customer centricity'. This means a group-wide alignment between company strategy and skills and then providing the appropriate tools. "It's about making O_2 relevant to customers. Although we are descended from a traditional telco we're here to sell services, not technology".

Many challenges still lie ahead. At the time of the demerger, group companies employed no fewer than nine different billing systems. The plan is to replace these with a single system by next summer.

Competition in the market is fierce and it is widely expected that the number of operators in the UK will increase from five to eight within a year. Despite this, telecommunications remains one of the most heavily regulated industry sectors and OFTEL, the UK government's watchdog for the telecoms industry, has pressed the market to reduce call termination prices by 15% in each of the next three years. Wolff fears that all this regulation can actually hold back innovation and stifle competition.

In Finland it has been possible since 1995 to use a mobile phone the pay for a train ticket or a soft drink. The cost is simply charged to the phone bill. In the UK the sale of goods for immediate consumption falls within the remit of the Financial Services Authority. A pre-payment such as a pre-pay phone card does not. Wolff notes that some phone companies are finding it necessary to set up banking divisions to handle the complexity. “Issues like this give us the opportunity to venture into new fields of expertise and, usually, these require us to learn new skills.”

Making corporate responsibility a reality

The company participates in a wide range of consultative bodies and special interest groups concerned with CR. As a result it has adopted the disclosure guidelines published by the Association of British Insurers. Corporate responsibility reports are subjected to independent audit by Ernst & Young.

For the time being, O_2 is concentrating efforts on six key CR areas: corporate governance, good practice in the marketplace, health, environment & sustainability, the workplace, the community. The company has published a set of Business Principles laying down policies for each CR area and on wider corporate governance issues such as information policy and internal control & risks.

Objectives and performance targets have been set for each of these areas and their subsets. All this has been fully documented and published and may be downloaded from http://www.mmo2.com/cr/report2003

Some might dismiss the material as well-meaning verbiage. O_2 has sought to head off sceptics by developing a number of specific projects to show clearly how CR is being put into practice. These projects have the added virtue of being socially useful. The following examples offer a flavour of what is happening.

Breathing easy

Asthma is becoming an increasingly serious problem across Europe. In the UK there are 3.4 million sufferers and the Thames Valley region is the worst affected. O_2 is running a one-year pilot scheme in this region, in collaboration with e-San Limited, a spin off company from the Department of Engineering Science at Oxford University. 100 sufferers have been given an O_2 xda (a device combining a phone and mobile computer) fitted with a flow meter and special software.

When the patient breathes into the flow meter an analysis is instantly transmitted to a central computer for comparison against the norm. An abnormal reading prompts a connection to the patient’s doctor for advice.

Results to date indicate that the project is reducing the incidence of acute asthma attacks. The experiment has also shown that the system could be used readily to assist people suffering from other ailments such as hypertension and diabetes.

Recovering

The rapid pace of technology means that many old phones are discarded. In the UK alone the number now exceeds 15 million annually. O_2 has launched a recycling programme in conjunction with Fonebak. So far 20,000 phones have been refurbished for resale. The funds generated are donated to charity and possibilities for distributing refurbished phones in emerging markets are now being explored.

Damaged phones are stripped of useful components and precious metals – leaving less than 2% of the material for conventional disposal. The success of the scheme is such that O_2 will now roll it out in Ireland and Germany.

Multiplying

Cattle breeding is one of Ireland’s most important industries. It entails painstaking paperwork to maintain a database of the most productive animals. It then means transporting bulls back and forth across the country. This is stressful for the animals and the journey is wasted if either the bull or the cows are off colour.

Inspectors from the Irish Cattle Breeding Federation have been equipped with an O_2 xda device. Now, as they visit farms, they use the device to update a computerised database and to send text alerts to farmers when particular animals are in peak breeding condition.

Already 10,000 of the best cattle have been identified and the target for the next three years is to increase this to 50,000. This experiment has proved the feasibility of applications for specialists in other contexts – such as blood transfusion services.

Reflections and futures

Mobile telephony has quickly become established as an inclusive technology. In many countries, far more people have a mobile phone than have access to a computer linked to the Internet. This accessibility offers society huge opportunities – but it also raises expectations. And in some quarters there is unease that less well-off people might be spending a disproportionate amount on mobile phone calls.

David Varney – who is also chairman of Business in the Community – is convinced that business risk is reduced when an organisation knows and manages its social, environmental and ethical impact. He also believes that cultural diversity ensures a creative workforce that can help the company continually to innovate. And in the fast-moving mobile telephony sector innovation is nothing less than the key to survival.

The realisation of these beliefs demands an acute awareness of conventions on human rights. For example, policies for segmenting customers by postcode or recruiting particular ethnic groups could provoke unwelcome reactions. Furthermore, when employees subscribe innovative ideas it can raise issues about intellectual property rights.

The next wave of services

Like all telcos that invested heavily in 3G licences, O_2 is searching keenly for profitable applications for the technology. Cynics scoff that 3G stands for gambling, girls and games. Although this is distasteful, informed opinion has it that these three areas are set to deliver huge revenues. Whilst downloading a computer game to play on a mobile phone is harmless enough it is clear that the promotion of ‘adult material’ and gambling facilities at vulnerable audiences would be in direct conflict with O_2’s CR strategy.

The problem also raises technological issues. Wolff notes that peer-to-peer networking is not controllable. O_2’s solution is to refrain from marketing access to adult content until filtering services are in place to enable customers to protect themselves or their children.

Wolff sees gambling as a slightly different issue. “O_2 will allow traffic to and from licensed bookmakers. However, this is not central to our operations I can tell you that our stance meant that during the last twelve months the earnings from this side of our operations were negligible”.

So what will be ‘the next big thing’? O_2 is investigating a raft of potential applications. Already existing applications include location-specific services and provision of devices in refrigerated trucks to warn the driver if the freight temperature rises. Wolff reflects: “We can develop them – but first we need to understand the benefits they can bring. We want to engage university researchers to help us. We know how to work with them to solve technical problems but social science research is a different matter. It’s another area we need to learn about”.

Next steps for Corporate Responsibility at O_2

O_2 had much to do at the start but embraced the principles of corporate social responsibility within nine months. “We benchmarked each business unit on how they treated things like employment, mast siting, environmental concerns and so on. The results were all different! By working hard on this as a group we now have a much clearer picture of who we are, what we are and what our impacts are”.

These efforts have been recognised by socially responsible investment indices such as the Dow Jones Sustainability Index and O_2 has now resolved to achieve ISO 14000 certification for the whole group. "

There is a growing realisation at mmO2 that what CSR actually means is 'improving the management of your business'. A tangible illustration relates to mandatory insurance cover. Employers' liability and public liability insurance premiums are a major cost to all businesses. Wolff gauges risk management procedures in her bi-monthly CR report to mmO2's Corporate Responsibility Advisory Council. This information is partly prepared by the insurer who recalculates the premium required. Clearly, any reduction in premiums directly improves group results. And as the figures are prepared for each business unit the practice injects a little friendly competition when management accounts are presented.

Another unexpected spin-off from publishing CSR reports is that they are picked up in the Dow Jones Sustainability Index. This can lead to more investment by pension companies and funds offering 'green' and 'ethical' funds and can have a positive effect on the quoted share price.

Lessons learned

Wolff advises that "you can't 'do' corporate responsibility by isolating it into a team or department. If you do, it is seen as the repository of the corporate conscience and no-one else needs to do anything about it. Everyone in the company has to learn to incorporate social, environmental and ethical beliefs and attitudes into their activities".

Wolff insists that, when the right method is used, a CSR initiative costs next to nothing. "When we published our first CR report a shareholder rang me to complain about what it must have cost. I explained that this amounted to my salary and the cost of producing the report. He had to concede that for a company turning over £5bn this was affordable."

Wolff reflects that staff do not spend time 'doing' CSR; it guides the way they do their daily work and encourages people to see customer feedback as an opportunity to innovate. The CEO of a UK design institution recently sent a lengthy email. Her parents were travelling in Portugal but found they could not use voicemail or dial-back. As a result, their mobiles had become virtually useless. Wolff takes up the story: "I mentioned this in my next report. One director noted that it represented a loss of revenue that could be happening many times. Another took up the challenge of finding a solution. A third gave priority to obtaining more feedback like this. Customer feedback has become an agenda item. Since then we have received and acted upon feedback on a number of issues – including some from customers with disabilities".

Not all ideas will work but it is essential to keep trying. A campaign in O_2 shops – 'bring us your old phone and we'll plant a tree in our forest' – produced a negligible response. On the other hand, sponsorship of a major Asian festival in Croydon gave an opportunity to raise awareness about O_2's diversity policy.

Although evidence is elusive that CR directly improves the 'bottom line', Wolff notes that "What we have done demonstrates that any company can take on a corporate responsibility agenda. It has gained us a lot of goodwill among shareholders. Every employee knows that we are taking it seriously and that all can take part".

Now that mobile phone ownership in Europe is approaching saturation and call charges are being forced down by industry regulators, future revenue growth must come from continuous innovation of service offerings that are useful and attractive and cheaper. As part of this, mmO2 is exploring an alliance with similar sized operators in regions beyond its current 'footprint'. Chief executive Erskine envisages 'an agreement to roam together, buy products together and launch together' in order to compete more effectively against larger rivals.

Wolff concludes that the assiduous management of intangible assets "has helped us to post a sound financial performance for seven successive quarters and convince many in the City that mmO2 is a serious company". The pre-close trading update of October 2003 shows that mmO2 is on track to reach 30% operating margin this year and achieve double-digit growth.

case study 7
Austrian Research Centers

Brand Value	Knowledge	Innovation	The measurement and reporting of intellectual capital
B&Q	Bloomberg	Intercos	**Austrian Research Centers**
Whitbread	UK Fire & Rescue Service	mmO2	Celemi

Abstract

As Austria's largest Research Technology Organisation, ARC's main function is to manage the transfer of knowledge between state-owned laboratories and universities and the applied research and development in companies. The chief outputs of this public-private partnership are highly intangible: knowledge that can be re-applied and workable innovations that can be made into products. In short, ARC's business is to foster intellectual capital (IC).

ARC decided that traditional accounting procedures did not allow it to report adequately to stakeholders on the management of its IC. In 1999 ARC developed a new approach to measuring and reporting IC based on transparency about goals and business strategies, performance indicators and data-gathering techniques, change management issues and project management procedures. ARC has since established this innovative, process-oriented method as an internal management tool and for communicating with other stakeholders in a supplement to the annual financial accounts.

Approaches to intellectual capital formation

People have been aware of the value of intellectual property for millennia. It has long been the stock-in-trade of high priests and medicine men and, in the form of trade secrets, it underpinned the formation of craft guilds in 14th Century Germany and England. And in the 15th Century the Italian genius Machiavelli taught its role in statecraft and the exercise of power by persuasion or coercion.

The first patent – from Letters Patent, open letters marked with the King's Great Seal – was granted by Henry VI in 1449. It granted the privilege of monopoly rights to a novel method of making stained glass for Eton College. Monopolies led to high prices so, in 1610, James I limited monopoly rights to 14 years. The Great Exhibition of 1851 prompted a simplification of the application process and, in 1902, a further reform added the requirement to prove that a discovery had novelty. Comparable patenting arrangements emerged in other European countries, in parallel.

Meanwhile, two English institutions, the Royal Society for the encouragement of Arts, Manufactures and Commerce (RSA), founded in 1754, and the Lunar Society of Birmingham, in 1765, were probably the first organisations to perceive that the sharing of knowledge was an essential ingredient for converting inventions into innovations.

Subject to full disclosure, inventors could show-case their ideas and attract support for development. RSA members including Dr Johnson and Benjamin Franklin backed the construction of a canal system; The Lunar Society members including Thomas Jefferson and Josiah Wedgewood sponsored work on ideas for steam power by Boulton, Watt and Stephenson. In this way the notion of publicising intellectual property kick started the industrial revolution.

A range of approaches is available to people wishing to assert ownership of novel discoveries, ideas, designs and images. These include registered trade marks, licenses,and copyright as well as patents.

A patent places full details of an invention in the public domain and is normally only enforceable within a jurisdiction defined by national boundaries. There is no such thing as a global patent - although the European Union has just introduced a European Patent - so inventors must register in many countries if they wish to block copying that would otherwise be perfectly legal. This can easily lead to annual fees of $25,000 – only really an option for large corporates that can also afford to enforce a patent effectively.

Less well-off inventors tend to rely on secrecy or, like academics, on asserting copyright by publishing in a learned journal. The concept of copyright is accepted in most countries and requires that the original source is acknowledged when the idea is referred to or applied.

A significant proportion of primary research is state funded. During the 20th Century national institutions were set up as custodians of the resulting intellectual property. Private sector organisations treat their research and development work (R&D) as a source of competitive advantage. Governments, however, are increasingly promoting the dissemination to industry of state-owned intellectual property for the renewal of national wealth. The UK's National Physical Laboratory, for example, in 2002, helped bring about new business activity worth an estimated £5 billion.

About Austrian Research Centers

In the Republic of Austria the transfer function between the basic research at universities and state-owned laboratories and the applied research and development in companies is organized through Research Technology Organizations (RTOs)[1]. The over-riding purpose is to spawn innovation for the good of the economy and society.

Austrian Research Centers (ARC), situated in Seibersdorf, is the country's largest RTO. Ownership of ARC Seibersdorf is shared between the Republic, holding 51%, and a panel of major private sector enterprises. As a legal entity ARC is constituted as a 'private limited enterprise'.

ARC was founded at the end of the fifties as a nuclear research institution and has since diversified its research range to embrace information technology, material technologies and engineering, life sciences, nuclear technology services and systems research. Today, the organisation has more than 700 employees engaged on publicly funded research projects and industry funded applied research and development projects.

In 2002 these projects generated revenues of €25.3 million. About half in number were with small to medium-sized enterprises; the balance being mainly for the public sector. And yet 54% of all expenditure budget was spent on independent or 'pure' research. In 2002 this resulted in 67 papers appearing in learned journals and conference proceedings, a further 51 articles being published in trade journals and 24 completed PhD theses. In addition, ARC staff sat on 57 standardisation committees.

ARC's structure and purpose mean it must operate both as a fully accountable business and maintain a public service ethos. In the late 1990s, ARC executives looked for an innovative way to reconcile these apparently immiscible requirements.

Like any 'going concern', ARC has working capital and fixed assets – not least its campus of state-of-the-art laboratories. But the 'raw materials' it converts into products and solutions are largely comprised of intellectual property and the competencies its researchers, their networks of expert contacts and ARC's reputation. Generally accepted accounting principles offer scant advice for the measurement and valuation of such assets and, therefore, the contribution they may be making to return on capital employed. A further constraint on the management is that, typically for an organisation of this sort, most expenditure is concerned with payments to employees – in whose heads sit the company's stocks and inventory.

ARC's chief outputs are knowledge that can be re-applied and workable innovations that can be productised. Clearly these are highly intangible deliverables. But, by adopting a project-based operating model, the company has made it feasible to establish a market price for them. This predicates agreeing a price with a potential client for fundamental research that may – or may not – result in a breakthrough. Even if it could resolve all these issues, ARC would still have to satisfy its shareholders and funders that they their investments were in safe hands … and growing.

In order to solve this conundrum ARC delved deeply into studies and thinking about intangible assets that had been accumulating since the mid-1980s. Broadly speaking, two schools of thought had emerged. The first started simultaneously in Scandinavia and Japan and was driven by academics and business practitioners. Arguably the main thrust of this school focuses on knowledge and human endeavour.

The second school emerged in the US and, later, in Australia, and tended to be driven by economists and accountants. Arguably, the focus of this school has been on rules, definitions and procedures for measuring intangibles – particularly the more easily tradable types such as patents – and the development of digital technologies like eXtensible Business Reporting Language (XBRL) that aid the standardisation of reporting. The US Sarbanes-Oxley Act 2002 added a 'human dimension' – but in the form of a stark reminder that accountability for reports of business performance remains firmly with an organisation's senior officers.

The differences between the two schools are largely of a cultural origin. Organisations and institutions based in countries at the heart of Europe have been faced with a choice of soft or hard schools – or of formulating a hybrid approach.

The intellectual capital reporting approach developed by ARCS

ARC recognised that, for a knowledge-intensive organisation, traditional accounting procedures for reporting stewardship of capital and physical assets painted an inadequate picture. ARC's stock-in-trade is intangible assets and it needed to inform its investors what it are doing with these assets. This could only be achieved by supplementing its financial reports with a report on its management of intellectual capital (IC).

The directors of ARC observed three reasons for taking action. First, as an RTO, ARC had a duty to document and assess the potential and the development of its intellectual capital. Second, as a recipient of taxpayers' money, ARC needed an open and transparent method for reporting the value created by its application of these funds. Third, the valuation and assessment of intangible assets is a serious academic task it was therefore highly appropriate for ARC to thoroughly understand this domain and its potential influence on organisational leadership.

Any one of these reasons justified a corporate response; their combination compelled Professor G, Koch, ARC's Managing Director of Science and Technology, to champion the quest for an effective solution. He initiated the task in 1999 by assembling an internal team led by Dr Karl-Heinz Leitner, a scientist in the technology policy department of ARC's systems research business, and by securing the collaboration of the Department of International Management at Karl-Franzens-University[2].

Deciding what should be monitored

Leitner's brief re-iterated that the whole purpose of ARC's business is to achieve five Knowledge Goals:

- Knowledge Transfer
- Interdisciplinarity
- Research Management
- Internationality
- Spin-offs & Investments

The project team's task was, therefore, to ascertain how best to measure and report the business processes characterised by these Goals. The nature of these meant that traditional accounting methods could only provide part of the answer. The team surveyed published models and methods for describing and gauging intangible assets, investigated pioneering examples of their application and took soundings among interested parties throughout ARC.

The research elicited a wide range of possibilities. The Scandinavian view was attractive. In essence, this has it that intellectual capital is comprised of human, structural and relational capital. Respectively, these categories are concerned with: 'our people and our knowledge', 'the way we do things here' and 'our appeal to current and potential customers'.

But ARC also wanted its IC report to take account of work on the reporting of intangibles by the US Financial Accounting Standards Board and the German Standardisation Council.

The problem facing Leitner – and all those in a similar position – was that there were then, and continue to be, no defining standards or legally binding procedures for gauging investments in intangible assets. Another factor was that this lack of standards means that most organisations simply don't document their intangible assets in a systematic manner.

On the other hand, ARC was well versed in the merits of knowledge creation and the fact that the most fruitful climate for breakthrough innovations is created by physical or virtual interaction between people and organisations – one of ARC's proven capabilities.

Consultations among ARC's business units highlighted some intangibles issues that were important to itself but not necessarily to other units. Leitner realised that a model that tried to cater for every special case was likely to be unwieldy. Besides, it would rule out any possibility of benchmarking with other organisations.

The team concluded that a process-focused approach would best suit ARC's needs and that performance should be gauged at the enterprise level. They felt that if they could create a prototype method that worked for the whole enterprise it should be possible later to develop compatible variations that respected the particular activities of subordinate business units, departments and teams[3].

This thinking led the team to identify five intellectual capital 'themes' the measurement of which would enable ARC to show the extent to which its Knowledge Goals were being achieved in a given period. These IC themes are:

- Human Capital
- Structural Capital
- Relational Capital
- Key processes
- Results (subdivided into economy-oriented results and research-oriented results)

Figure 1 indicates a schema that links themes with goals. Such a schema allows some flexibility. One goal might require inputs regarding all five themes; for another goal a subset of the themes could be adequately informative.

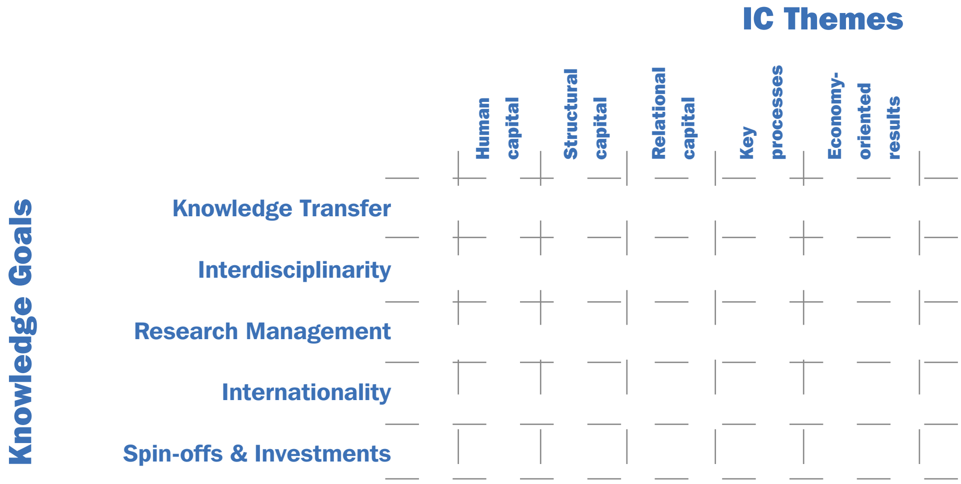

Figure 1: ARC's IC reporting matrix

In recent years ARC, like many organisations, has introduced a series of business improvement projects including Total Quality Management, Management Information Systems, Business Reengineering and activity-based accounting. It was important to dispel the perception among staff that the proposed IC Report was not just another exercise in this series.

Accordingly, the team communicated a depiction of the IC Model that showed very clearly how intangible asset management would be integrated and aligned with the overall objectives of the organisation (see figure 2).

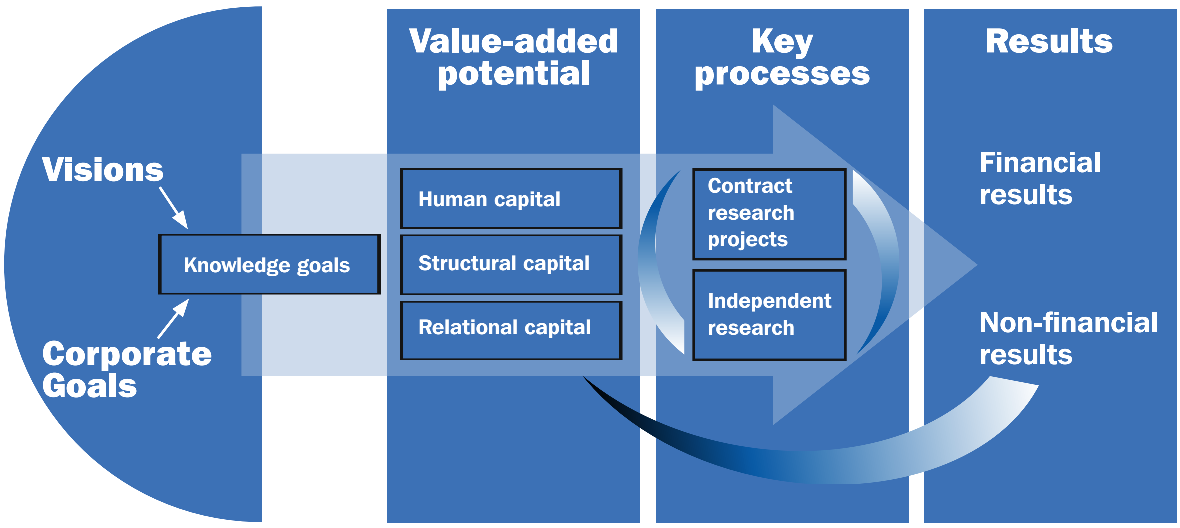

Figure 2: the ARC Intellectual Capital Report Model

In Leitner's view a key aspect of ARC's IC Report model is that it distinguishes between the processes that create intellectual capital and the outputs and results achieved by investing in intellectual capital.

Selecting the metrics

As well as communicating the strategic importance of the IC Report, Leitner wanted to ensure that its regular compilation did not place unreasonable burdens on managers and staff. This meant adopting metrics that other practitioner organisations had found to be the most useful, taking advantage of data already being reported and keeping the number of metrics to a sensible minimum.

In Leitner's opinion: "the rules for reporting tangible assets set out to show that a reported result is either 'good' or sub-optimal." As yet there are no such rules for reporting intangible assets. But, at the very least, stakeholders ought to be advised if performance is 'good enough'.

A major consideration about knowledge assets is that, unlike tangible assets, they can be given and yet still retained. This predicates the risk that a particular knowledge asset could be 'counted' more than once. For example, the indicator "number of lectures per scientific employee" could be a measurement of knowledge transfer to students, a measurement to value the opportunities for networking or recruiting, and even a measure of the competence enhancement of the lecturer.

Furthermore, some non-financial metrics point to potential benefits that could be harvested 'one day'. When someone freely assists another is there not a tacit obligation to return the favour at some unspecified future date?

Through consultation and pragmatic distillation a prototype set of metrics was agreed upon. This meant between 7 and 11 metrics for each IC theme – for selective application to the various knowledge goals (examples of these metrics can be seen in figures 3 and 4 opposite). The five themes reflect the logic, if not the actuality, of the Balanced Scorecard technique invented by Kaplan and Norton[4]. To respect this difference, ARC uses the term 'Active Scorecard' to characterise its approach.

In mid-1999 the team applied the prototype model to its own activities. Having inspected it the board ordered a 1999 IC Report for the entire organisation. Work started in January 2000; by April 2000 the first IC Report was ready and was published. With minor refinements the process has been repeated every year since then.

The presentation of each annual IC Report employs the Active Scorecard to communicate performance in regard to each of the five Knowledge Goals. The Active Scorecard conveys results in numerical terms for the current year and offers prior year results to highlight trends. This is augmented with additional contextual information by means of qualitative commentaries by top management – often illustrated with examples of best practice.

As Alexander Welzl, then envoy of the Managing Director, explains: "Our annual IC Report publicises our results in the form of a story that describes the kinds of goals we are pursuing and tells how these goals are being achieved".

Preparation of the annual report is an on-going process. Welzl highlights ARC's surveys of employee satisfaction. "We do this to ascertain what works and what doesn't rather than as part of the staff appraisal process. We look particularly at the formulation of communities of practice that promote interactive work between departments. We measure effectiveness in terms of an increase or decrease in this interaction."

Lessons learned and benefits gained

Some of the more striking ways in which it delivers business benefits can be seen in the effectiveness of web-based recruitment, the ability of research staff to find out readily who has relevant knowledge and the delivery of successful projects by re-using past

According to Welzl, ARC's IC report "has forced a better understanding of our strategy and increased our internal transparency … our fairness in achieving management objectives. People know 'why' … and the decisions behind it".

Communicating and harvesting

In Leitner's view, "above all, our IC Report serves as a practical tool for informative communication".[5]

The measures are expressed in numerical or percentage terms for the current and previous two years. In addition, arrows and 'emoticons' depict the achievement trend upwards, downwards or unchanged for the period being reported and to indicate the target set for the coming year.

This technique is illustrated in the following fragment extracted from the IC Report for 2002 at the section on Knowledge goal 5: Spin-Off and Investments (see figure 3).

Spin-offs & Investments

Results	**Goal 2002**	**Goal acheived**	**Goal 2003**
Economy-oriented results			
Number of new contract projects with customers	↗	☹	↗
Number of new customers (%)	↗	☺	↗
Number of spin-offs	↗	☹	
Revenues from licences (€ 000)	↗	☹	↗
Research-oriented results			
Patents issued	↗	☺	↗
Patents applied for			

Figure 3: How ARC uses directional arrows and 'emoticons' to reveal trends

These data tables are accompanied by qualitative explanations and comments about the key points. This is shown in figure 4 - a full extract of the Spin-off & Investments section including performance results in numerical and financial terms for the current years and the preceding three years.

Spin-offs & Investments

Results	**1999**	**2000**	**2001**	**2002**	**Goal 2002**	**Goal acheived**	**Goal 2003**
Economy-oriented results							
Number of new contract projects with customers	194	204	221	172	↗	☹	↗
Number of new customers (%)	20.3	40.7	19	22	↗	☺	↗
Number of spin-offs	2	1	1	0	↗	☹	
Revenues from licences (£ 000)	56	57	45	29	↗	☹	↗
Research-oriented results							
Patents issued	4	2	2	3	↗	☺	↗
Patents applied for			16	20			

Overall Interpretation

In the year under review our main priority was to invest in promising innovation projects so as to exploit the companies technological capabilities commercially. We also entered into new strategic alliances in which there is a possibility of of mutual capital investment in the medium term. The present situation is unfavourable for the founding of spin-offs, though in this context one must also take into account the financial cost of restoring the human capital lost in the process.

Figure 4: disclosure of soft and hard results with time series and qualitative summary.

At the end of ARC's annual IC Report the results for each Knowledge Goal are collated and re-presented in two formats to ensure that full disclosure is effectively communicated:

- Firstly by means of a summary 'report in figures' - an extended table of results over the last four years for all five Knowledge Goals.
- Secondly, with a qualitative appraisal of performance under each of the five intellectual capital themes.

As Leitner observes: "there is no point in embarking on IC reports as some of 'quick fix' for contemporary ailments – the results will be inferior."

Welzl adds, “our IC Report says what management will do about particular indicators during the next year. This is strongly communicated and encourages people to talk about goals. It also generates feedback from customers – what they say is quoted in both the Annual Financial Report and the IC Report. This is very important for external communication – especially with the Republic of Austria.”

Leitner commends the practice of IC reporting. He cites four reasons that have been of tremendous value to ARC. It obliges an organisation to:

- expose for public scrutiny its goals and business strategies for achieving them
- identify and communicate the most relevant performance indicators and to specify how data will be gathered
- address change management issues and instil effective project management procedures
- understand that the primary purpose of an IC report is as a medium of communication to all stakeholders

Providing a measured and credible response

Because of their required construction, statutory annual reports tend to focus on performance that has actually happened. It is up to investors, analysts and markets to take a view about what this historical performance means for the future. An intellectual capital report which supplements the statutory annual report enables an organisation to provide more information about future prospects.

Joint Managing Directors Erich Gornik and Helmut Krunes, emphasise their commitment and the importance to ARC of its IC report by signing off with: “Our Intellectual Capital Report 2002 … is one of the most important cornerstones for the future of the company”.

Welzl comments: “The chief benefits of our IC reporting are that it enables us to communicate clearly what we are doing and it makes our activities transparent to the world. These benefits support the achievement of a third benefit: trust building.

“We haven’t really encountered any problems. In fact the government is so impressed with the way we are reporting our intellectual capital that they are minded to increase their shareholding. Our industrial partners feel likewise. The consensus is that our IC reporting approach is a very good model for Public-Private Partnerships and offers a working example that could be taken up by other types of organisation.”

Leitner sums up: “our IC Report now provides us with a foundation for management intervention based on sound data about the corporate knowledge base. The more it is accepted as an instrument credibly reflecting the ‘softer’ aspects of business the better it will support the organisational development process”.

Leitner is in absolutely no doubt about the wider issues: “our experiences convince me that the main challenge facing all organisations will be the standardisation of indicators and the establishment of guidelines for developing and applying IC reports.”

[1] In the UK, a number of state-owned research institutions such as QinetiQ (formerly DERA) and the National Physical Laboratories have been or are being reconstituted as more commercially-oriented organisations. However, none belongs to the Association of Independent RTOs.

[2] For further discussion see: Bornemann, M. & Leitner, K-H. (2002) Measuring and Reporting Intellectual Capital: the case of a Research Technology Organisation. Singapore Management Review, Vol 24, No 3

[3] see Leitner, K-H., Bornemann, M. & Schneider, U. (2001) Development and Implementation of an Intellectual Capital Report for a Research Technology Organisation. In Bontis, N. ed (2001) World Congress on Intellectual Capital Readings. (Boston; Butterworth-Heinemann)

[4] Kaplan, R. & Norton, D. (1996) The Balanced Scorecard: translating strategy into action. (Boston Mass.; Harvard Business School Press)

[5]All ARC’s IC Reports are available at http://www.arcs.ac.at/publik/fulltext/wissensbilanz

case study 8
Celemi

Brand Value	Knowledge	Innovation	The measurement and reporting of intellectual capital
B&Q	Bloomberg	Intercos	Austrian Research Centers
Whitbread	UK Fire & Rescue Service	mmO2	**Celemi**

Abstract

The measurement and reporting of intellectual capital is still evolving as an essential business activity, despite clear bottom line business benefits. In the early 1990s Celemi, a Swedish learning design consultancy, developed a business simulation that enabled executives of knowledge businesses to understand that financial and intellectual assets must be managed equally well.

Believing it should 'preach what it practised' Celemi applied the methodology to itself. The resulting Celemi Monitor reveals fully the non-financial metrics that drive performance and has been published with the company's financial statements since 1995. Notably, the Monitor helped Celemi overcome problems during the e-commerce downturn, restoring stability and dramatically improving profits. This small company now operates in over 20 countries, serving many of world's leading organisations.

Introduction

Does education and learning have any value? The reader may well consider this to be a superfluous question – surely it goes without saying that a university graduate is likely to have a more prosperous life than someone leaving school with no qualifications?

However, work published in 2002 by the EU funded PRISM research project on intangibles has found that the National Accounts of many advanced nations count the costs of education and learning but do not adequately reflect their value. Indeed, the research team led by former accounting professor Peter Hill has estimated that correction of the omission would increase the figure for Gross Domestic Product in both the US and the UK by at least 7%[1].

Governments compile National Accounts in order to gauge overall economic activity. The data gathering processes are shaped by a Standard Industrial Classification (SIC) system which codifies many hundreds of industry categories and a Standard Occupational Classification (SOC) system that categorises thousands of job types.

These economic data, built up over extended periods, allow extrapolation of trends and a degree of forecasting. But this facility is impaired by any change in categorisations. Perhaps because of this, the UK SOC codes still include five types of punched card operator. And even though politicians increasingly speak of the 'knowledge economy', UK SIC codes continue to give prominence to industrial era activities that have greatly diminished, such as mining and steel smelting.

Organisations must continue to manage excellently the three fundamental economic resources – capital, labour and physical assets. But forecasts that draw on metrics that have become less relevant are unlikely to provide accurate pointers. Today it has become essential also to manage excellently a fourth economic resource – one that is concerned with information and intellectual capital and therefore far less tangible. Advanced economies were content to refocus on service provision and let developing countries take the lead in heavy industry. But few foresaw that India would become world class in the creation of computer software and provision of Call Centre services or that China would emerge as a leading manufacturer of small, high technology devices.

It is not just governments whose plans and forecasts are influenced by measurements of yesterday's imperatives. Large enterprises also find it difficult to keep up with the pace of social, political, environmental and technological change. But they do need to keep pace if they are to create the innovative products and services that will secure their future. The success stories consistently show that development of ideas into workable solutions requires a combination of tangible and intangible assets.

Large organisations may account for the majority of new patent registrations but the actual inventions are usually the brainchild of small, close-knit teams. This means that small companies or start-up firms can be at least as good at developing new ideas and bringing them to market. Typically, these 'knowledge businesses' possess few tangible assets; they live or die by their ability to foster, manage and measure their intangible assets.

The business of learning

In 1985 Margareta Barchan, Klas Mellander and Krister Nathanaelson, three Swedes, set up a business in Switzerland based on their views of how people learn. The firm, Learning Methods International, was relocated to Sweden in 1990 and renamed Celemi in 1994.

The vision of the founders was to make Celemi into the leading learning design consultancy for corporate clients. In a business context they view learning as a business process. From the outset there have been two principal types of offering: business simulations usable by any company and tailor-made learning programmes designed for specific client situations. Ultimately, the purpose of both is to enable people (and therefore organisations) to understand and buy in to what their organisations are trying to do and hence to contribute more fully to that process or journey.

Celemi markets its portfolio of business simulations through alliance partners (such as Advantage Performance Group in the US), known as Celemi Solution Providers (CSP's), and has developed an extensive global network of such partners. Celemi's business presence in Finland is a case in point – the simulations are sold via a CSP and consultancy assignments are referred back.

Celemi's learning design consultancy services are provided to top management in organisations and through this partnership customized learning tools are created either for the whole organisation or for discrete groups. These tools are then cascaded via a 'train-the-trainers' approach delivered by a core team of Celemi 'experts'. These are specialists in the creation of learning solutions and interact closely with clients' senior staff during development of the learning tools. The Celemi experts are supported by administrative staff on a ratio of about 10:1. Administrative roles include financial controllers and a small number of Corporate service functions such as marketing and communications. In this way Celemi's workforce of fewer than 100 staff can very effectively deliver benefits to multinational clients with more than 100,000 employees. SAS and SAAB were among early clients.

By pursuing these policies over the last 18 years Celemi has retained its shape as a small, highly focused and privately owned knowledge business. However, its client list constitutes a roll-call of the world's best known organisations including such firms as IKEA, Microsoft, 3M, GlaxoSmithKline, Deloittes, BT, BP and a range of public sector organisations including the UK Inland Revenue. Group turnover is approximately £10M per annum and value added per expert exceeds £75,000 (where value added means total receipts after payment of all third party liabilities).

Celemi's Intangible Assets Monitor

One of the founders' friends was Professor Karl-Erik Sveiby who, in the mid 1980s, was working as a newspaper editor. Sveiby had become aware that the business reports required by his paper's proprietors almost entirely ignored what he perceived to be a key asset of the business – namely, its intellectual capital. His book, 'The Knowhow Company'[2], described what intangible assets 'looked like' in comparison with the tangible assets that are more familiar to managers. In a business context these intangibles can be characterised by three types of capital: human, structural and customer. In essence these types are concerned with: 'what we know', 'the way we do things around here' and 'what our customers think about us'.

Sveiby proposed that a knowledge business had to manage equally well both its financial and its intellectual assets. He collaborated with Celemi to create a business simulation that would help people learn how this can be accomplished. By the mid 1990s the success of this product, named Tango, was great and making a very real contribution to the success of the company. Celemi opened offices in the UK, the US and Belgium and was named one of Europe's fastest growing companies. Margareta Barchan was voted Veuve Clicquot Businesswoman of the Year in 1997.

The attractiveness to so many practising managers of the principles enshrined in the Tango simulation persuaded Celemi's directors that they should apply these principles to their own business. Celemi decided to apply Professor Sveiby's Intangible Assets Monitor, which was embedded in the Tango simulation. The result was the Celemi Monitor. In the early 1990s little practical guidance was available for measuring and reporting intangible assets and the publication of the 1995 Celemi Monitor made Celemi one of the first organisations in the world to report measures of the value of its intangible assets.

Having set a benchmark for transparency and corporate governance, Celemi has made the Intangible Assets Monitor a regular feature of its Annual Report. Typically, the Intangible Assets Monitor occupies four pages, followed by a similar portion for the statutory accounting information. The recently published 2002 Monitor charts some non-financial performance metrics over the past six years. These openly reveal the ups and downs that the firm has had to negotiate en route to a doubling of value added per expert from a broader client base through partners in over 30 countries in Europe, the US and Asia Pacific.

Ian Windle is Managing Director of Celemi Learning Consulting, based in the cathedral city of Guildford in Surrey, UK. This division, which is also represented at the offices in Sweden and Belgium, now accounts for two-thirds of group revenues. Windle observes that tangible and intangible metrics can be interconnected. "Don't think about intangible assets too differently from traditional accounting measures. Paying attention to non-financial measures is not like putting a cuckoo in the nest".

This interplay between tangible and intangible factors of production is reflected in the way in which the Celemi Intangible Assets Monitor presents a meaningful snapshot of information (see figure 1).

	Tangible assets	**Intangible assets**		
	Our financial capital	**Our clients**	**Our organisation**	**Our people**
Growth/Renewal				
- a metric	*result*	*result*	*result*	*result*
- a metric	*result*	*result*	*result*	*result*
Efficiency				
- a metric	*result*	*result*	*result*	*result*
- a metric	*result*	*result*	*result*	*result*
Stability				
- a metric	*result*	*result*	*result*	*result*
- a metric	*result*	*result*	*result*	*result*

Figure 1: illustration of the Celemi Intangible Assets Monitor schema

In each of the four asset columns the format offers the result for the current period and the two prior years. Across the board, the reported metrics are grouped under three performance categories; growth, efficiency, stability. The three intangible asset columns deal respectively with external structure, internal structure and competencies.

Between seven and ten metrics or indicators are provided for each of the four asset categories. The Monitor therefore reports over 30 indicators each year – of which some 25 are non-financial metrics.

The results are presented in both numerical and qualitative terms. Most of the numerical values are the product of ratios expressed as percentages. Each component is precisely defined in the report and referenced from the results table.

An alternative and more qualitative view is provided by use of the 'traffic light' convention. Cells in the Monitor are coloured green if the indicator is equal to or greater than Celemi's strategic plan target. Red cells indicate values less than 80% of target and yellow cells indicate values in between. Notably good or bad results are elaborated with additional graphical and narrative information.

This configuration and range of metrics is illustrated in Figure 2 which displays the section on 'Our People' from the 2002 Celemi Monitor. The bracketed numbers refer to detailed definitions set out in the Monitor.

Our people (Competence) *(overall rating year)*	**2002**	**2001**	**2000**
Growth/Renewal			
Average professional experience, years (3, 9)	13.7	11.8	10.1
Competence enhancing clients (4, 5)	25%	41%	44%
Growth in professional competence (11)	-3%	-25%	18%
Experts with tertiary degree (6, 8, 9)	89%	84%	75%
Efficiency			
Value added per expert TSEK (9, 17, 28)	1,224	629	813
Value added margin on sales TSEK (28)	52%	33%	48%
Stability			
People satisfaction index (29)	69%	45%	48%
Expert turnover (7, 9)	20%	39%	16%
Expert seniority, years (9, 26)	6.9	5.5	4.0
Median age all employees (17)	41	39	39

Figure 2: The 'Our People' section of Celemi's Intangible Assets Monitor 2002

A practical approach to fostering intangible assets

Windle recalls that when he joined the company seven years ago the UK business received 80% of revenues from one major client. It is not unusual for a start-up business to have all its eggs in one basket – both in terms of products and clients - but as the firm grows it needs to spread the risk. Two measures in the Monitor address and balance this: 'Revenues per client' (encouraging account penetration) and 'Percentage of revenues from five largest clients' (encouraging the spread of risk). "The problem is that clients tend to associate a small supplier with a particular product or service. This can make it difficult to persuade the client that you can deliver other things that are needed. Bids become regulated by what you usually do. We use a consultancy approach; we challenge the brief and try to find out what the real problem is. The pain in the patient's forearm may be due to a bad back".

For Windle, 'frequency of winning new orders' is a vital non-financial metric. "This helps us to address strategic effectiveness – it is key to smoothing out feast or famine. The size of projects is important; our clients are buying a relationship and a person. Each of our Account Directors is responsible for at least one major client account. The trick is to spend as much time with our clients as possible. That way we really understand their business and can add the most value".

The imperative of face-to-face meetings with clients provides a practical example of how the Monitor helps Celemi's managers to improve the bottom line. "We need these meetings to build relationships … and to help clients understand more about all that we do. But these meetings mean significant amounts of non-productive time spent travelling to client sites or to training venues. Our measuring and monitoring of these displacement costs persuaded us to relocate to offices right next to a mainline rail station". So a clear-cut monetary cost can be viewed and balanced in comparison with an intangible value such as quality of client relationship.

Lessons learned

Windle reflects that 2001 was a difficult year for the company. "Towards the end of the 1990s we developed ambitious plans and recruited about 40 additional staff to cope with rocketing sales and revenues per client. We also got caught up in the excitement about e-commerce. We converted some of our business simulations into eLearning products that could be distributed via the Internet and the web". Both the Market Reality™ simulation developed with Ericsson Consumer Lab and TangoNet™ - an online version of the knowledge-business simulation – gained prestigious awards. "However, the deflation of Internet bubble and the general market decline left us very exposed. Our greatly increased overheads were completely wiping out profits".

All Celemi's staff had been through the Tango simulation and appreciated what it means to measure and manage intellectual assets. This facilitated a widespread review of the Monitor to identify what had to be done to effect a turnaround. "We realised that the influx of new employees had led to a lowering of the average years of experience of our experts and a reduction in knowledge sharing. We also saw that a vital metric – the proportion of 'image enhancing customers' - those giving us referrals and repeat orders – had been allowed to decline for several years. Many of our new customers were 'one-off' purchasers and we had not yet developed long-term relationships with them".

The most experienced staff wanted to stay and help the company ride out the storm. Most of the recent recruits left - with the result that the number of employees reduced quickly from 105 to 65. "Most of our staff were involved in projects rather than account development. We took all the remaining staff through the knowledge-sharing process of developing and managing strategic accounts".

This enterprise-wide focus on the customer rapidly restored stability and within a year, the firm was able to post its best-ever profits. The following graphics extracted from the Celemi Monitor for 2002 document this dramatic turnaround in growth/renewal (figure 3) and in business efficiency (figure 4). These extracts also show how the graphics offer additional information by incorporating the traffic light convention.

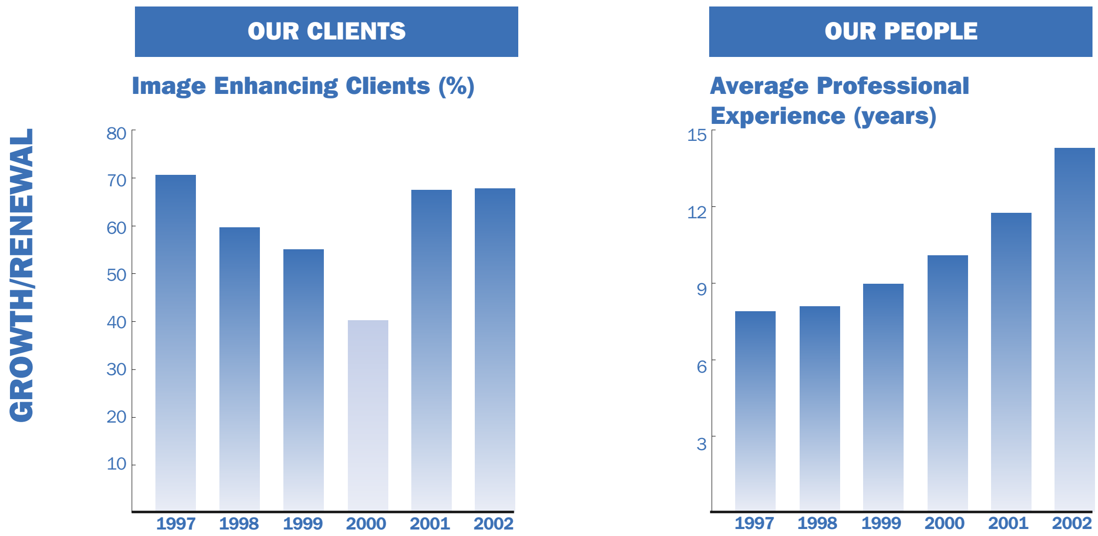

Figure 3: improvements in growth & renewal since 2000

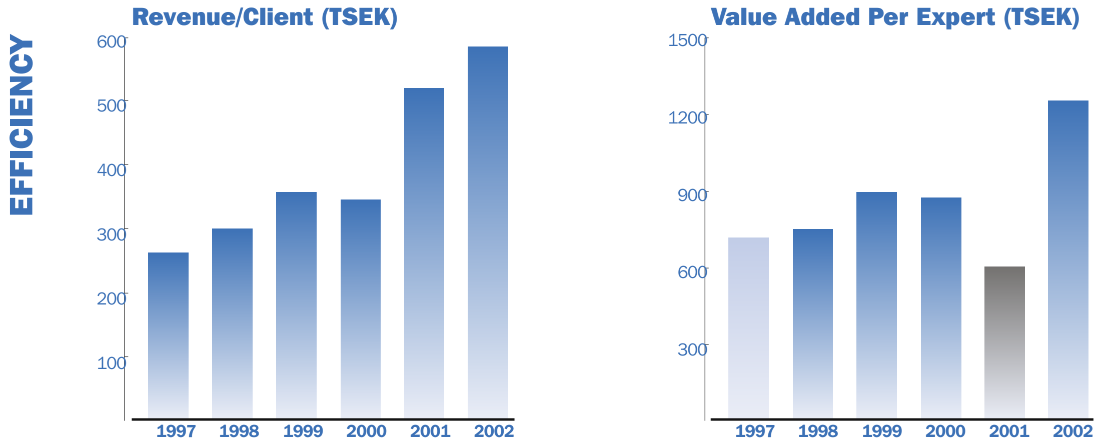

Figure 4: improvements in business efficiency since 2000

Business benefits from measuring and reporting intangibles

Windle observes that it can be quite hard to explain to new clients what Celemi does – partly because very few firms do it. Road-show events and sample workshops are used to raise awareness and reach new clients. Figure 5 depicts how the Celemi consulting business delivers value to clients.

Celemi learning consulting: Value contribution program

1. Learning Assessment	2. Learning Workshops	3. Program Prestudy	4. Learning design and development	5. Implementation	6. Evaluation	7. Follow-on
Analysis of existing change/ communication/ training and development issues	Definition of strategic and tactical learning needs in cooperation with senior management	Research of strategic challenges. Recommendation of learning programs, including deliverables, timelines and fees	Design and development of learning program, applying: - unique learning methodology - leading learning tools - business issue experience	Train-the-trainers and support materials for internal facilitators. Rapid global multi-language roll-out experience.	Tangible and intangible measures	Specific tools within focussed areas. Keeping up the momentum.

Figure 5: Celemi's value contribution process

In essence, the company's offerings cover change management, strategic communications, business literacy (hence the new office in Shanghai) and new product launches. The latter category could include design of a learning solution to help doctors understand a new drug, to help car dealers to understand a new model or to help a flooring retailer to sell a new wood-laminate flooring. “In this latter example we created a number of learning tools to enable retailers across the US and their installation specialist to truly understand the features and benefits of the new flooring, how it was different from the competition and how to best sell it to different types of customers. The paper-based training binder that was produced internally was free but the dealers had to pay for the new learning tools. Half of them bought the tool and, after a short while, they reported an increase in margins averaging 38%. Very soon, two-thirds of the dealers who had opted for the free binder came back for the tool”.

So the proof of the pudding is in the eating. Windle recounts that “established clients tell us that they buy our thinking and our approach as much as our products. Frankly, the fact that we publish our Intangible Assets Monitor has little or no bearing on purchasing behaviour. On the other hand it certainly helps us to identify and develop the right sort of clients for us”. The key drivers are concerned with ‘image enhancing’ clients, revenue per client and repeat orders stemming from long term business relationships. Celemi’s goal is that clients can say ‘I see what I’m buying – your thinking’ and that the firms experts are equally clear: ‘I see what I’m selling – our thinking”.

Celemi does not target particular industry segments to broaden its range – the aim is to respond effectively to a client’s needs regardless of sector. In this context the Intangible Assets Monitor has proved to be a powerful strategic tool. “A few years ago we had no public sector clients. Then we were approached by one that was being groomed for partial privatisation and the phasing out of state funding. Unfortunately their budget was too small to warrant a bid. But the guiding principles of the monitor told us that potentially this would be an excellent client. It was a question of balancing intangible assets against margin and revenue. So we offered a cut-down version of our standard service, using junior staff, and it was accepted. The outcome was that our people gained valuable experience and the client acquired necessary competencies. It reversed any tendency to de-motivate staff by taking on low margin work … and from these modest beginnings we have won a number of valued public sector clients in the UK, across Europe and in Australia”.

Reflections and futures

Celemi has been publishing its Intangible Assets Monitor for eight years. It is freely available but the company’s stakeholders have always been the principal audience. The company was won over by Professor Sveiby’s theories. In a knowledge business people must be seen as assets, not costs. The Intangible Assets Monitor enables all staff to see clearly how and where their contributions make a difference.

In Windle’s opinion “the chief benefits are that most people in the company think of Celemi as a different type of organisation and, accordingly, they think about our clients in a slightly different way. The Intangible Assets Monitor has given Celemi a reputation and this means there is less need to market the company. You have to start with measures that will lead to increased customer satisfaction. Then you use measures to nurture employee satisfaction. With these in place you have a basis for reducing costs. The secret is simple – measure the activities that lead to results. With the right measures in place, the right behaviours are encouraged. The overriding measures in the Celemi Intangible Assets Monitor work as guidelines for identifying individual performance measures in all areas.”

In a recent message to stakeholders Celemi CEO, Arne Leeb-Lundberg, said: “Measuring and monitoring intangible assets has bottom line business benefits, and that is the real value of our monitor. While traditional financial statements provide us with a snapshot of past performance, the monitor enables us to see how we are positioned for the future; it is a ‘lead indicator’. It is also a reminder of what is driving the performance of our company”.

In 2002 the company reached for the first time its overall targets in all categories – tangible and intangible. But there is no room for complacency; the monitor still shows that a number of supplementary metrics need to be promoted from red to green.

Windle sums up: “By applying its award-winning product Tango to its own business Celemi can proudly claim that it ‘preaches what it practices’. Learning from this we have decided to add a new metric to the monitor - ‘Thought Leadership’ - and measure this very intangible asset across the business. All knowledge has a sell-by date and needs refreshing or replacing. Our people hold this knowledge. By valuing and sharing it in this way the business as a whole can become known for Thought Leadership”

[1] for further details see http://www.euintangibles.net/research_results/WP5/index_html

[2] Co-authored with Anders Risling, 1986. Not available in English