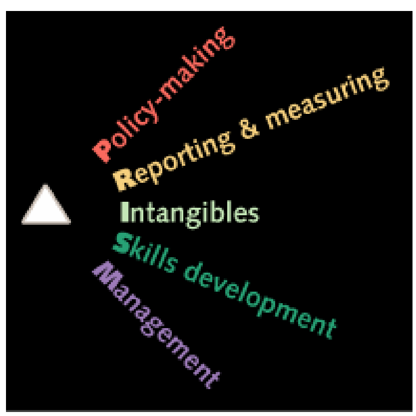
EUROPEAN COMMISSION
INFORMATION SOCIETY TECHNOLOGIES
(IST)
PROGRAMME

THE 2003 EUROPEAN INTANGIBLES SUMMIT

Accountability, Competitiveness and Productivity:
Understanding and communicating the value
of intangibles in 21st Century organizations.

The PRISM Conference
Friday July 4th 2003
Cass Business School,
London



EVENT PROCEEDINGS

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Introduction

The EC-funded PRISM project brought together thought leaders from a broad range of business and academic interest groups for this international, one-day conference on understanding and communicating the value of intangibles in the 21st century economy. The principal aim of the conference was to broaden the audience exposed to, and concerned with, these issues, with a view, ultimately, to stimulating changes in mindsets and working practices.

The agenda was designed to look at intangibles and their role in value creation from a number of different perspectives. It was structured around three themes, each representing a topic of major interest to the PRISM group:

1. Understanding and Measuring value creation in the 21st century macro-economy
2. Creating value: challenges for firms in the 21st century
3. Auditing and analysing value creation in the capital markets: external viewpoints

Some 200 participants gathered together to share their opinions and expand their knowledge around this subject. A delegate list is contained in Appendix 1. More details on the event, including speakers' presentations, are available on the PRISM website (www.euintangibles.net).

That we have been able to gather together over the last two years such a diverse community of high-profile stakeholders with a direct interest in the issue of intangibles represents one of PRISM's most notable achievements to date.

The stage is now set for the work to be taken forward to the next level of understanding and practical application.

Mike Hall, Sandrine Labory and Richard Youngman

July 21st, 2003

Executive Summary

The major points arising during the day have been grouped together under three themes, which are structured in line with the main PRISM research lines.

1. **The first theme concerns a new and emergent theory of the firm. The PRISM group believes that management challenges and practices are changing due to the changes taking place in the context in which they operate. What is it about the "new" economy that requires the development of new tools and thought-patterns?**

With hindsight, the talk about a 'new economy' over the last decade was more intuitive than rational, and there is no evidence of an all-embracing new theory of the firm at this stage.

While there are no fundamental economic discontinuities, there has been a shift in the mode of wealth creation and the sources of competitive advantage, a shift that has happened gradually over decades and one that we have not observed with sufficient depth since the data systems that we rely upon are not aligned to track it

This shift is illustrated in the macro-economy by the findings of the OECD Growth Project which found that the high-growth economies of the 1990's were driven primarily by a combination of factors that included an increased usage of labour, higher investment, and higher efficiency (collectively known as higher multi factor productivity). Other intangible factors played a role, such as investment in R&D (public *and* private), organizational changes (which increase the positive effects of investment in ICT), and entrepreneurship

Our attention during the day was drawn to thinking in terms of a paradigm shift. This was characterised by a shift from manufacturing at the core of the production process within a linear model of value creation to a much more complex process in which the organization of the pre and post manufacturing phases are equally, if not, more important. The leadership challenge in this environment is to leverage the production of innovation and knowledge to best effect.

Whereas in the old firm, value was created by organizing things, it was suggested that value is now created almost by dis-organizing things, by emphasizing people over process.

Furthermore, there has been too much focus on intangibles as resources. Rather, we need to concentrate on their contextuality, on their role in transactions. Although competitive advantage does indeed arise from the inter-relationships between resources, there's a great difference between access to resources and their effective deployment.

The rise in intangibles implies for firms the need to organise as networks, be they productive networks or innovative networks. This will enable the access to the requisite resources; the next and vital step is to learn to effectively orchestrate them.

Management time should be prioritised towards thinking about internal effectiveness. Intangibles and sustainability need to be embedded into the core of managerial thinking. What we are working on is actually about a change in belief systems, and we must accept that this takes a long time. Our expectations need to be adjusted accordingly. In the words of Albert Einstein, we need "new ways of thinking to solve the problems of the old ways."

2. **If there *are* new management challenges and practices, then there is a consequent need for different ways to account for, to measure and report such practices. Our current practices were devised when firms were clearly and vertically-defined and their resources were physical and owned. Only with new tools that reflect the new value drivers can we hope to improve the chances of effective capital allocation decisions both by management - both within firms and within government -and by the financial community.**

Measurement requires sound underlying theory. Too many of the solutions created thus far do not have a strong underlying theory. As a result, their theoretical rigour has not been put to the test.

The topic of measuring intangibles is nowhere near as well understood as it needs to be: top quality research is required, work that is not only grounded in what we already know but that also learns from other fields and methodologies. More thorough data-based research is encouraged through the pursuit of longitudinal studies of measurement and the development of more case studies, anecdotes and opinions.

We need to understand precisely what the various guidelines, models and systems in existence offer us, and which merit survival. Management by measurement becomes a distinct negative possibility in the absence of a fuller understanding of the causal relationship between intangibles and value creation.

The importance of analysing the sources of value creation was reiterated a number of times during the day. The challenge with measurement is not to develop new indicators but rather to be sure that we are going in the right direction with measurement and to ensure that we are becoming less ignorant about value creation.

Intangibles is an umbrella term which captures a number of different elements. Economic characteristics of intangibles vary greatly in a way that physical stores of value do not. Some are akin to traditional fixed assets, others cannot be treated so by our “narrow” current conventions. Context, conditions and complementarities are all-important in determining their value. Indeed, in commoditised markets, the role of intangibles is often to de-commoditise tangible goods and hence increase their value. And a lack of ownership makes these stores or drivers of value dynamic and vulnerable.

As a consequence of the above realities, measurement needs to be viewed as a learning journey to develop better performance information, some of which will ultimately be disclosed to the external world.

The current reporting paradigm makes it very difficult to distinguish between luck and skill as the cause of good or bad financial performance. It focuses on valuing tangible assets and then assessing returns on these assets. Although intangible and latent capabilities can’t easily be measured or financially valued today, they can be evaluated using appropriate guidelines and mindsets.

Perfection is the enemy of the good – are we allowing ourselves to overly worry about getting intangibles measurement and reporting perfect before using it? Let us not expect too much too quickly. Let’s choose what to measure: it doesn’t matter if we are not measuring everything.

3. **The third theme is concerned with the implications – in particular, for corporate executives, auditors and accountants, bankers and investors, and for public policy.**

The plethora of guidelines to improve the situation shows the scale of stakeholder concern. However, these are hindered by the obvious lack of any common terminology, language or frameworks in use at this time. Determining standards of definition and facilitating thought convergence surrounding intangibles are priorities. A glossary of terms would be helpful.

What is clear is that there is an urgent need for a consensus on a holistic business reporting framework and convergence towards a minimum external reporting requirement.

The company annual report has become a public relations exercise and, in its current form, represents only the starting point for investment analysis. It discloses much but reveals little. At the heart of the problem are poor communication skills within companies, especially at the senior levels. There are institutional investors who wish to see companies adopt a more holistic approach in their reporting to better communicate their internal value drivers and in return offer long term commitment to provide a stable platform for company managers to make long term decisions.

Not only are the financial data reported felt to be insufficient, but so also are the business strategy models which analysts are trained to apply.

The answer partly lies in developing new mindsets to handle intangibles and also in developing new updated models of how businesses perform and differentiate.

However, it should be said that, although the need for the various reporting methods to converge was indeed emphasized by many, other speakers and members of the audience believe intangible measurement is firm-specific to the extent that it's ultimately impossible to harmonise across different organizations.

One delegate stated that he'd come to the conference expecting answers as to how to value intangibles but had found it to be all about storytelling, which made him feel less secure. In the absence of precise valuation techniques for many intangibles however, it was widely agreed that narratives are a move in the right direction towards a better understanding of the underlying machinations of a company.

There is a danger that measurement becomes an object in itself. To avoid this we should ensure that accounting doesn't drive business behavior. Intangibles will probably, therefore, be reported separately from traditional accounting measures.

The role of auditors should be to help companies present a more holistic picture of their business. Senior audit partners, it is felt, have the opportunity to build relationships with companies over several years, thereby putting themselves in a position to truly understand and evaluate the real underlying value drivers – the intangible competences and latent capabilities.

What is required from auditors is more meaningful rather than precise information (and a legal environment that is conducive to this) and a reporting remit that is akin to editing the multi-faceted storytelling of a company's performance and outlook by combining qualitative and quantitative data. This requires a different resource base and organizational model from that currently in place within auditing practices, as well as a more explicitly independent stance.

Whilst the measurement of intangible assets in national statistics is gradually improving, further improvements could be made. These could stem from a better combination of existing data sources, from gradually bringing in the logic of the creation of information & diffusion of knowledge as productive activities, and by properly resourcing the statistical agencies to carry out the necessary work.

A new policy agenda is required to help European organizations generate sustainable value in the intangible world.

As a starting-point, PRISM has recommended a broad range of explicit issues for policy attention. These include measuring the productivity of intangibles and R&D investment in services, the completion of the Single European Market in IPR, the development of a holistic company reporting model and the establishment of a pan-European 'meso' information system to complement the various macro and micro systems already in place.

In addition, the following policy-related issues arose during the day.

The EU has long advocated the importance of favouring innovative networks. Policy, however, has been ineffective as indicated by the large innovation gap that still exists between the EU and the US.

The rise in intangibles implies for firms the need to organise as networks, be they productive networks or innovative networks. A paradox arising in this context is that the more knowledge is diffused, the more dynamic is the economy, but also the more knowledge is diffused, the less the incentives to innovate.

What's missing is an attention to the collective intangible assets that make networks function: collective intangible assets are the set of institutions, norms and values that allow relationships to develop and consequently social capital to take root.

Favouring networks without explicit care for the social capital that makes them function is ineffective. This is especially true concerning EU transnational networks – hence, the importance of developing measures to encourage growth via the nurturing and sharing of such collective intangible assets.

In the context of online music, there was a concern that vested interests will block wealth-creating innovation activity. This challenge concerns both IPR and competition policy issues and is representative of the gap between scientific and technological knowledge and the knowledge of how to exploit it.

In the field of IPR more generally, the climate has shifted such that a pan-community IPR system is at last beginning to take shape. Assuming it is implemented smoothly, attention will now need to be shifted to educating people to use the IPR system, to turn their knowledge into know-how and to learn how to exploit it.

Conference Proceedings

Introductions and Opening Comments

David Rhind, Vice Chancellor of City University, opened the proceedings relaying some of the history of the institution and its close links to business and the financial sector. Based upon his personal and very practical experiences of the commercial challenges of dealing with intangibles, he suggested that answering the following questions would make highly suitable objectives for the day:

1. How should the terminology look for intangibles?
2. What's the best way to nurture and exploit intangibles to create tangible value?
3. Where are the metrics that will allow us to value intangibles such as the assets of the City University? How can I judge the value of the different activities and contributions made by say, the professors, within such an institution?

Oluf Nielsen, European Commission, a Scientific Officer in the Directorate General Information Society's New Working Environments Unit responsible for PRISM, congratulated the PRISM community for its achievements and above all for bringing together so many diverse stakeholders with an interest in intangibles.

He agreed that PRISM represented a "learning machine" as had been suggested by one participant, and revealed that an expert group to further investigate intangibles and knowledge management has been proposed across the DG's for Industry, Research and IST thanks, in no small part, to PRISM's contribution.

The President of the European Commission, Romano Prodi, continually emphasizes the need to get a better understanding of the e-economy, especially concerning how value is created and how knowledge is practically applied, since it determines, to a large extent, the welfare of EU citizens. The policy priorities defined at the Lisbon Summit in 2000 aim to remove perceived 'bottlenecks' and 'barriers' from the European socio-economic landscape. Early focus and achievements have concerned establishing legal frameworks and encouraging usage of the internet. The new priorities for 2005 centre on a more effective usage of the internet and other technologies in order to:

- Stimulate demand to promote context, services and applications for mobile users of technology, to provide interactive public services on line and to achieve digital inclusiveness
- Boost enabling technologies to promote broadband access and to ensure that trust and confidence in cyberspace are built

He concluded by encouraging the PRISM community to make suggestions for new policy challenges such as these as well as to participate in forthcoming calls for funded projects to continue the good work.

Clark Eustace, Director of PRISM, finalized the day's scene setting with a statement on some of PRISM's headline findings. The day's content was designed in part to see how others' research and experiences added to (or indeed subtracted from) these headline thoughts.

Six headline conclusions from the work were briefly presented[1]:

1. Talk of a "new economy" was more an intuitive response than a rational one.

There has been no new post-industrial economic revolution: the economic fundamentals are still in place. But, in the words of Paul Romer, some kind of soft revolution does seem to have taken place. That is to say, the elements in business which we have inadequately and inaccurately described as soft, immaterial or intangible have in fact have become the key economic goods. There has been a shift in the mode of wealth creation and the sources of competitive advantage, a shift we have not observed with sufficient depth since the data systems that we rely upon are not well aligned to track such a shift. A fundamental difference between the 20th and 21st century economies is that we can no longer rely on tangible assets and the representation of production as purely a physical process to provide us with a reliable guide to the rate and direction of economic change.

Mass production is giving way to mass customisation; demand-side economics is ceding dominance to the supply-side; economies of scope are equally important as economies of scale. The nature of the firm is changing accordingly. Economics and management, as disciplines, need to penetrate more successfully the 'black box' that is the firm.

2. Intangibles issues are all-encompassing, growing, but are poorly defined and understood

Investments in knowledge-intensive intangibles amount to as much as 100% of physical capital investment (dependent on country/definition) - and the proportion seems to be rising. It is clearly dangerous if our measurement systems are poorly designed to track such flows.

Measurement requires a sound underlying theory, but measurement and the statistical sciences are seen as vocational rather than academic disciplines. This needs to change. PRISM has found intangibles to be an umbrella term which captures a number of different elements. Economic characteristics of intangibles vary greatly in a way that physical stores of value do not. Some are akin to traditional fixed assets, others cannot be treated so by our "narrow" current conventions. Context, conditions and complementarities are all-important in determining their value. And a lack of ownership makes these stores or drivers of value dynamic and vulnerable.

3. Sustainable competitive advantage stems from the effective interplay of tangible and intangible goods, competencies and latent capabilities

Following the line of thinking that intangibles vary in character, PRISM has identified four resource domains as a conceptual model - tangible and intangible goods, intangible competencies and latent capabilities. The model was revisited by a number of the speakers.

It is, PRISM contends, the successful orchestration and interplay of these four resource domains which goes to the heart of achieving competitiveness – whether it be for a firm, a city, or for regions and nations.

The key is to create or to access unique, or difficult-to-replicate capabilities, competences and quasi-assets. New modes of monopoly rent are created from leveraging and exploiting both distinctive internal capabilities and the strategic assets that networks so clearly have become.

[1] For more detail, the audience was referred to the PRISM CD and the first draft of the PRISM research findings and policy conclusions. A final version of this report will be completed in September 2003.

4. Intangibles do not conform to the logic of current statistical and accounting models which have not kept pace with economic realities

PRISM has been path-breaking in bringing both macro and micro accounting together and promoting the recognition that the problems are very similar. Knowledge and innovation are not catered for in their underlying logic. They cannot be neatly "boxed" as inputs and outputs. PRISM has estimated that approximately 10% of GDP is missing or is mis-classified.

Macro-economic analysis and statistical models do not produce routine data to support production and productivity analysis.

Similar problems exist in the micro measurement framework, where Pacioli's classical accounting model and its derivatives focus on transaction flows. The plethora of guidelines to improve the situation shows the scale of stakeholder concern. What is clear is that there is an urgent need for consensus on a holistic business reporting framework and convergence towards a minimum external reporting requirement.

5. Measuring intangibles is not a specialist niche: it is central to a holistic understanding of wealth creation & the evaluation of risk

There is an urgent need for new tools to assist with managing intangibles internally – so central are they to the value creation process. Measurement needs to be used as a learning journey to develop better performance information some of which will ultimately be disclosed to the external world. There is a key role for the software industry – through standards such as XML, XBRL, etc. – to assist the development of such solutions.

Banks, credit rating agencies, financial analysts and auditors are concerned with evaluating intangibles, in particular latent and core competencies, competitiveness and calibre of management. However, as things stand, PRISM can find no evidence of any common language or frameworks in use at this time.

6. The rise of intangibles challenges our existing policy & regulatory conventions: it has exposed the weakness of governing today's knowledge-based economy with tools of the industrial era

It is increasingly apparent to some of us that the simplistic treatments of innovation, investment and value that are embodied in the current reporting model are masking deeper, longer-term and more international problems than are currently recognised.

Moreover, the policy community appears to have relied on the gurus of the "new economy" paradigm to show the way forward. That paradigm has largely collapsed and lost credibility, thereby leaving an ideas vacuum.

A new policy agenda is required to help European organizations generate sustainable value in the intangible world. As a starting-point, PRISM has recommended a broad range of explicit issues for policy attention.

These include measuring the productivity of intangibles and R&D investment in services, the completion of the Single European Market in IPR, the development of a holistic company reporting model and the establishment of a pan-European 'meso' information system to complement the various macro and micro systems already in place.

After the opening remarks and scene-setting, the plenary session continued with a series of themed panels. They are numbered in accordance with which of the 3 themes of the day they related to. The structure of the panels was a series of short (about 15mins) contributions, designed to generate the issues for a panel-style discussion which included questions from the audience.

Panel 1: Understanding and Measuring Value Creation in the 21st century Economy

Context of the Panel

A 'new-look' economy has gradually emerged over the last few decades, accelerated in recent years by the advance of information and communication technologies. Knowledge and innovation are central to the production of economic value and yet are peripheral in our measurement systems. The central assumptions of our existing measurement systems are based on a particular view of the economy that has not changed fundamentally since Adam Smith's time. This view is based on the notion that the production of physical goods is the main source of economic value.

> "*Over time, and particularly during the last decade or two, an ever-increasing share of GDP has reflected the value of ideas more than material substance or manual labor input. This ongoing development is imposing significant stress on our statistical systems*" *(*Alan Greenspan, 2001*)*

Insights into these changes are not routinely available – only in glimpses. Our macro-economic data systems are unable to systematically produce a full picture of economic production in today's economy.

Diane Coyle of Enlightenment Economics chaired the session. She reminded the session's panelists that the session's main objectives were to:

- To outline a view on the economic and business context of the 21st century.
- To identify how this differs from what we had before. What are the fundamental change drivers?
- To identify the measurement issues which inhibit our understanding of today's economic context.
- To identify what are the key policy challenges in such a context.

Summary of the Individual Panelists' Contributions

The OECD's Dirk Pilat summarized the main findings of the OECD growth study, aimed at identifying the new drivers of growth and how they could be measured. Dirk outlined that some countries, such as Australia and Ireland, registered consistently stronger growth over the last decade, and that this appears to be due to a combination of factors:

- Increased usage of labour,
- Higher investment; and
- Higher efficiency (collectively known as higher multi factor productivity - MFP).

The contribution to growth of investment in ICT increased over the period, especially investment in software. The level of education of the labour force has also risen. MFP grew in Sweden, the US and Ireland over the period while it decreased for a number of countries including France and Italy. The service sector has strengthened productivity in some countries partly thanks to their use of ICT. Other intangible factors played a role, such as:

- Investment in R&D (public *and* private)
- Organizational changes (which increase the positive effects of investment in ICT); and
- Entrepreneurship.

The main policy messages arising from the Growth Project were:

- Get the fundamentals right so that markets work and macro conditions are sound.
- Facilitate the diffusion of ICT and foster business investment that enable its use.
- Foster innovation.
- Invest in human capital and adapt labour institutions to the changing nature of work.
- Improve the entrepreneurial environment.

In terms of measurement issues, the main conclusions were:

- Quality-adjusted price indices have helped demonstrate the impact of ICT on growth.
- Software has been included in the System of National Accounts (the SNA) since 1993 and its economic effects are now becoming visible as a consequence.
- Measures of R&D are improving; R&D may be included as a capital formation activity in the next version of the SNA.
- Statistical offices are paying more attention to the firm level (getting data via surveys).

The challenges we face would include:

- That we know much about education (an input activity) but little about skills (an output).
- That we also know little about firms (especially the rationale and modalities of organizational changes); and
- That it's difficult to get measures for the output of services such as software that are comparable across countries.

Dirk's overall message amounted to that, although we shouldn't underestimate the difficulties and costs, the measurement of intangible assets in national statistics is improving. Some further improvements could also stem from a better combination of existing data sources.

Peter Hill of PRISM made the distinction between statistical measures for information and those for knowledge within the national accounts.

The lack of measurement tools for intangible assets is costly in that it leads to an underestimation of growth. The production of new *information* such as scientific and technological assets, representing public goods, is subsequently consumed as intermediate goods and not explicitly recognised as capital formation. This accounts for approx. 2-3% of UK GDP. Information subsequently absorbed by individuals as *knowledge* is also outside of the boundaries of current production measures and represents approx. 7% of GDP.

Reasons for the omission of such information from the national accounts are mainly due to costs, institutional rigidity and the disruption to users of the statistics that then have to back-date changes so as to use a constant time series of data.

Changes to the SNA should, therefore, be made progressively. One such improvement in the near term might well be the capitalisation of R&D expenditure.

Patrizio Bianchi of the University of Ferrara and PRISM stressed that intangible assets are the intelligence engine of economic growth. Intangibles such as trust, competencies and capabilities are essential to growth.

Research shows that the rise of intangible assets in the economy is in fact attributable to the natural evolution of industries and to factors like the diffusion of ICT and globalisation which have accelerated such evolution.

The rise in intangibles implies for firms the need to organise as networks, be they productive networks or innovative networks. A paradox arising in this context is that the more knowledge is diffused, the more dynamic is the economy, but also that the more knowledge is diffused, the less the incentives to innovate. Hence, a balance between appropriation and diffusion has to be made, representing a challenge when innovation is mainly performed in networks.

The EU has long advocated the importance of favouring such innovative networks. Policy, however, has been ineffective as indicated by the large innovation gap that still exists between the EU and the US.

Bianchi stressed that what's missing is an attention to the collective intangible assets that make networks function: collective intangible assets are the set of institutions, norms and values that allow relationships to develop and consequently social capital to take root.

Favouring networks without explicit care for the social capital that makes them function is ineffective. This is especially true concerning EU transnational networks – hence, the importance of developing measures to encourage growth via the nurturing and sharing of such collective intangible assets.

Dominique Guellec of the OECD, responding to the previous contributions, confirmed the importance of measuring intangible assets to obtain appropriate evaluations of growth. He stressed that this is by no means a novel idea, but he did concede that almost no effort was made to measure the 'new economy' due to the high costs of producing such data. In statistics, he reminded us, you get what you pay for.

He stressed that the OECD is making improvements in three respects:

- Capitalising intangibles such as R&D expenditure and in doing so using a cost index instead of a price index for those intangibles which cannot be priced (e.g. innovation);
- Measurement can be improved by using company surveys which are now moving beyond measures for technological innovation towards a focus on service industries that use technology;
- Finally the OECD is increasing its database of patents as measures of technological output.

Summary of the Q&A/Open Panel session

The discussion that followed mainly concerned the need to better understand the value-creating characteristics of intangible assets in order that we might obtain better measures.

Overcoming short-term disincentives for capital raising that generally result from a discussion of intangibles might be helped initially by the creation of meso measures of value and output. It's not possible, however, to have multi-purpose measures for intangibles. A cost basis is a start although the trade off is a move away from measures of a market economy.

Measuring the difference in value between immediately exploitable and non exploitable basic research is another challenge since although statistics are available for basic R&D, they aren't very reliable and even defining 'basic' is a problem.

One participant expressed the need for a glossary of intangible terms to guide interpretation, for example, about whether to consider R&D an activity or an output.

One panelist viewed invention as more important than diffusion for value creation. In the context of online music, there was a concern that vested interests will block wealth-creating innovation activity. This challenge concerns both IPR and competition policy issues and is representative of the gap between scientific and technological knowledge and the knowledge of how to exploit it.

Assuming that knowledge is infinitely distributable and its application represents value creation, and considering education as a logistics process, the panel was asked to define the equivalent of 'sales' within this context. The response was that we need much better absolute and relative measures for education before we can measure differences in quality.

Patricio Bianchi summarized well the challenges in this domain in his statement that we 'should work with the wine as well as the bottles'. Let's stop counting the bottles, and look more deeply into its contents.

Panel 2a: Firms and the Management Agenda

Context of the Panel

The demands on today's corporate leadership are extreme. The strategic activities of a firm extend far beyond its legal boundaries, and CEO's are expected to orchestrate such activities and contingent resources in a manner that satisfies all the various stakeholders of the business.

> *"It used to be that competitive strategy was all about the internal challenge of either creating differentiated products or services or having lower costs. The key to strategy now is architecting capability."* (Don Tapscott)

This presents a serious challenge for our existing management thinking and measurement approaches to which the response has been, at best, immature. We urgently need a change of mindset away from the old-world equilibrium models and a marked conceptual shift away from the focus of cost to a pre-eminent notion of value.

Mark Bezant of Deloitte and Touche chaired the session, the first of the 3 sub-sessions belonging to the day's Theme 2, "Creating value: challenges for firms in the 21st century." The following key questions were to the fore:

- What does this 'new-look', intangibles-intensive 21st century economy mean for corporate management?
- What are the strategic imperatives for firms trying to create value?
- How are some organizations adapting their strategies and practices accordingly?

In opening the session, Mark highlighted the challenges between the internal and external reporting agenda's of how management marshals, organises and exploits their resource base for value creation. Measures for competitive advantage are a key element to consider as are the methodologies and philosophies behind the construction of Intellectual Capital (IC) statements.

Summary of the Individual Panelists' Contributions

Jan Mouritsen of Copenhagen Business School and PRISM presented his thoughts on measuring intangibles from his experience gained with developing intellectual capital statements with a large number of Danish companies.

He and his team have developed guidelines and procedures which enable management to increase their knowledge of intangible assets, in particular the organization's individual and collective knowledge as it relates to the end user.

A key point stressed by Jan is to accept that one cannot measure knowledge per se. One can only measure one's knowledge about something – i.e. knowledge needs an object. Much of the work within developing intellectual capital statements is, therefore, about defining what knowledge objects are required to serve the end user.

The following issues were seen as key to building an IC statement:

- Companies are more concerned with relative measures rather than accurate metrics
- Management time should be prioritised towards thinking about internal effectiveness
- Rather than increasing levels of certainty about internal and external factors, the knowledge economy makes companies more alert to risks and problems
- Insights come from afar via networks and alliances

IC statements appear, therefore, primarily as tools to raise awareness of a company's assets and challenges, to represent progress towards various aims and therefore to better manage the firm in the context of the intangible economy. Mouritsen called this "building a knowledge strategy" which in turn becomes the vehicle for external reporting of the firm's activities.

Lars Kolind of PreVenture, Denmark and formerly CEO of Oticon, provided a practitioner's view. He stressed that what we are experiencing is a shift in paradigm: from manufacturing at the core of the production process within a linear model of value creation to a much more complex process where organization is based upon the workings of the human brain and where measuring the effects of innovation and change should be prioritized.

Most of the talk about measuring value however isn't built on a solid foundation close to the actual spiral of value creation and usage. According to Kolind, there are 8 ingredients to the recipe of his 'spaghetti organization' which, if carefully put together, create value:

- Design jobs around individuals (with wider tasks and competencies)
- Diversify the workforce by, for example, social and cultural background or age
- Create a common interest for all firm members via, for example, co-ownership
- De-emphasize structure via fewer hierarchical levels and encourage information transparency and less departments so that the barriers to communication are eliminated
- Manage not through plans and budgets but through vision and values
- Perceive organizations not as enclosed forms but as open units where the value lies in relationships
- Empathise with stakeholders' views to attract the right relationships

- Focus away from corporate governance towards corporate leadership and emphasize action

Kolind concluded that whilst in the old firm value was created by organizing things; value is now created by “dis-organizing” things.

Nick Butler of BP then presented the main challenges for his firm of the intangible economy, challenges which have become much more a focus over the last five years, especially owing to the scrutiny BP endures due to its profile.

Drilling, for example, is a key activity accounting for $2bn of annual costs. The capture, transfer and application of knowledge concerning how to reduce costs in this activity is an important intangible.

Global standards for operations are another intangible enabling reduction in transactional inefficiencies and should, therefore, ultimately be reflected in the share price.

Reputation risk in a multinational on the other hand represents an intangible liability which needs to be managed.

Appreciating the value of trust is imperative for a firm like BP which makes investments for the very long term and needs to nurture local and global relationships without consideration of short term wins. There is a constant trade off between public reputation and the cost and flexibility of operations. Fulfilling commitments and track record are more important than any public relations exposure. Getting these things right can unlock latent value as is being demonstrated in BP’s partnering with Russian oil companies whose joint operations are now valued more highly due to the rising trust associated with the BP name.

In terms of EU policy, Butler made the following comment. Although it’s widely recognised that European R&D is indeed behind the US, the Lisbon objectives are not enough; a crucial issue in the EU is the single market which still does not properly function and many barriers remain. The improper functioning of the single market is an intangible liability that should be eliminated.

Sue Slipman, the ChairPerson of the Financial Ombudsman, presented her work on corporate social responsibility for the UK’s DTI (Department of Trade & Industry), defining CSR as the management of an organization's total impact upon both its immediate stakeholders and upon the societies within which it operates. It entails the integrity with which a company governs itself, fulfils its mission, lives by its values, engages with its stakeholders, measures its impacts and publicly reports on its activities.

Slipman highlighted that underlying trust is an important intangible asset and emphasized that its most important aspect may be that it guarantees the integrity of the firm and good relationships with society. Intangibles such as core values and beliefs, corporate reputation and relationships are increasingly part of value creation. CSR can be used as a vehicle to strengthen strategic company decision making and to better understand the market value of intangible assets such as knowledge and social relationships. CSR can enhance the reputation of the company (itself an intangible) by aligning its practice with stakeholder expectations.

The remit of the DTI working group chaired by Slipman was to map and measure what specific generic skill sets are required for the practice of CSR and the successful inter-section with other professional practices; to examine how to incorporate CSR practice into the training, assessment and qualifications of general managers; and to decide whether the establishment of some form of CSR Academy would be a valuable way to promote the development of CSR in the UK.

The challenge, she concluded, is to change managerial mindsets by ingraining therein the hooks between social responsibility and business performance and by developing more structured understanding and training for CSR. CSR suffers within organizations from its 'placement' within a specialist department. Its principles ought to direct and impact all managerial thinking within the organization, whatever the individual's underlying functionality.

Leif Edvinsson began his response to the previous comments by congratulating the PRISM group for its work and stressing that the conference was a milestone in the development of our understanding of intangibles and intellectual capital.

He reiterated the importance of analysing the sources of value creation and that the problem with measurement is not to develop new indicators but rather to be sure that we are going in the right direction with measurement and that we are less ignorant about value creation, which he collectively nicknames 'me-assure'.

We need to build trust in indicators beyond those that measure wealth. Managing intangibles is about in-sourcing capital in waiting (getting the brains), while corporate social responsibility is about out-sourcing (the relationships between the firm and its environment).

Managing intangibles is not only also about the micro level, but about the very micro level: the individuals, the brains. The departure of a key employee can lead to a fall in a firm's value: hence some intangible assets can also be considered intangible liabilities in waiting.

He poses the question as to whether the collective intellectual capital of the 300m Europeans can be considered as assets or liabilities in waiting.

Summary of the Q&A/Open Panel session

The discussion that followed raised several points.

The first line of questioning concerned whether employees' enjoyment at work should be measured, the response to which was that rather than enjoyment itself, what's key is the consciousness of the importance of the work people do. On this point, Nick Butler stressed that adopting company values helps employees identify with it and an example of this is the endorsement of employees of the change of position taken by BP on climate change in the early nineties.

Another point was about the seriousness with which business should take social responsibility. It was noted that the issue of corporate responsibility has resurfaced at a time when governments are taking less responsibility on social matters. The panel agreed that the social responsibility of business should be limited.

Other topics covered the importance of non-prescriptive processes, collective motivation and business acumen over good management with certain panelists concurring with Lars Kolind's emphasis of organization over process.

Panel 2b: Firms, Intangibles, Measurement and Reporting

Context of the Panel

There is increasing acceptance that financial governance alone will not suffice in the 21st century – something which is already recognized by many corporate leaders. A new, holistic tracking and reporting model is required that links the dynamics of economic value creation with the labyrinth of transactional activity that is the basis of our current management accounting system.

> *"Focusing exclusively on financial objectives distorts the structure of {organizations]…and in ways that ultimately jeopardise them. This is the most important business lesson of the past decade."* (John Kay)

Mike Starkie of BP took the chair in the main conference amphitheatre to continue the morning theme on management issues. This was the second of the 3 sub-sessions belonging to the day's Theme 2, "Creating value: challenges for firms in the 21st century". Particular attention was paid to the following questions:

- What methods are being used by organizations to cope with evaluating and tracking intangibles? What motivates corporate managers to try these new tools?
- What progress has been made in our understanding of cause and effect? What indicators appear to be the most powerful and accepted?
- Where are the "gaps" in management's understanding? In which areas are more solutions required?

Summary of the Individual Panelists' Contributions

Jon Low of CGEY's Centre for Business Innovation presented his work on the measurement of 'invisible advantage' – how intangibles are driving organizational performance.

He stressed that the problem isn't so much finding data but rather a problem of will, i.e. convincing firms and public authorities that intangibles have to be measured. This in spite of the facts (as discovered by CGEY's research) that:

- Markets are valuing intangibles every day – whether firms like it or not.
- Intangibles are the most significant differentiator between successful and unsuccessful IPO's.
- Gaps in intangibles measurement (meaning the inadequacy of corporate performance systems to cope with intangibles management) are correlated with financial performance measures such as ROE, 1 & 3-year stock returns, and 5-year sales growth

Low presented some indices of value creation and value drivers created by his research unit, showing via cases how they have helped management and other stakeholders to understand a firm's problems and the strategies to resolve them, and how they can be linked to financial outcomes.

Daniel Andriessen of Nyenrode University and KPMG presented the results of his Ph.D. thesis, in which he had analysed 25 of the best-known methods for measuring intangible assets.

He found most of them to be "solutions in search of a cause," meaning that they are unclear about the problem they intend to solve or use unsound argumentation; and/or they lack a problem definition phase as part of the implementation process; and/or they simply take a leap of faith and jump to solutions.

He also questioned "the measurement fallacy" that immediately assumes that measurement is both a necessary and sufficient requirement for management.

He went on to suggest that a suitable definition of value would be "the degree of usefulness or desirability of something, especially in comparison with other things." Therefore, valuation *always* includes certain values or norms as yardsticks.

Andriessen classified the 25 methods into three categories according to their key end objective, their motive for valuation, their "WHY":

- The improvement of internal management
- The improvement of external reporting
- Those developed with statutory and transactional motives.

He completed the matrix of the 25 by also classifying these 25 methods' valuation methods, their "HOW":

- Measurement
- Financial Valuation
- Value Measurement (or Assessment)

Brian Pearce of the Forum for the Future outlined the overlapping nature of three concepts, arguing that our primary concern should be with where materiality occurs at the overlaps:

- Corporate sustainability - maintaining the size and quality of key assets (balance sheet assets, workforce, social and environmental assets)
- Corporate social responsibility - concern for equitable outcomes in key stakeholder relationships (customers, workforce, local communities, suppliers, government)
- Corporate competitive advantage – the ability to create Economic Value Added from distinctive capabilities (key internal and external relationships, reputation, capacity to innovate, strategic assets)

He also pointed to the links between sustainability and an organization's distinctive capabilities (described as key internal and external relationships, reputation, strategic assets and capacity to innovate). He illustrated his point with a number of cases. One such case cited was that of Marks and Spencer which created its competitive position thanks to long term relationships with employees and suppliers.

Forum for the Future are now working on a project with 8-12 large corporates to develop a balanced scorecard management and valuation to assist business strategy

Franco d'Egidio of Summit Consulting presented his practical experiences in measuring intangible assets in collaboration with two of its corporate clients, Intercos and Plastal.

He stressed that mindset shifts are required for intangibles to be measured, such as the shift of considering people as assets rather than costs.

He showed some indicators built by Summit for measuring intangibles, in particular the corporate vitality index which tends to peak before product life cycle curves and is therefore useful as an early warning signal. Corporate vitality consists of eight factors: employee satisfaction, energy, corporate identity, image, innovation (culture and openness to changes), learning and knowledge, leadership and emotional competence.

Summit has also developed a measure of IC, based on human capital, leadership, structural capital and relationship capital.

Representatives of Intercos and Plastal presented their results from measuring intangibles through the Summit methods:

- Intercos believes that using an IC statement helps in the communication of their values and their ambitions for the future. Accordingly, clients and partners 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."
- For Plastal, the IC statement is primarily a managerial tool for both the development and continuous improvement of the company. It helps shift the managerial focus from contingency planning to strategic thinking with a long-term perspective.

Summary of the Q&A/Open Panel session

The general discussion that followed stressed once again the importance of loyalty and trust in today's economy.

Trade off's between employment protection and flexibility are less important than motivating employees to be involved in IC reporting.

Although the panel emphasized the need for the various reporting methods to converge, other speakers and members of the audience believe intangible measurement is firm specific to the extent that it's impossible to harmonise across different organizations.

Panel 2c: Organizations and Society - Intellectual Property: who owns what, who benefits and where's the balance?

Context of the Panel

The objective of this session, the third under the day's Theme 2, was to highlight some of the headline issues, problems and challenges with Intellectual Property. Where does Intellectual Property fit in this 'new-look' 21st century world? Each contributor has a slightly different angle:

- The first looked at IP from the viewpoint of the public sector – the issues and challenges found from the conduct of a few case studies.
- The second looked at IP from the viewpoint of the private sector – the issues and challenges faced by European companies as seen from a practising lawyer's perspective.
- The third looked at IP from a more global policy perspective – what could be done to improve the IP system?

Summary of the Individual Panelists' Contributions

Edward Truch of Henley Management College and PRISM described how public bodies are increasingly identifying and generating intellectual property as alternative sources of funding.

He explained four cases of intangibles measurement in various public agencies inside and outside the UK. The Austrian organization was held up to be the most advanced in measuring intangible assets.

He concluded that the main challenge regarding measuring intangibles is contextuality, i.e. understanding the context in which they are created. The need to better understand the interlinkages within governments departments represents another challenge.

Larry Cohen of McDermott Will & Emery then shared his experience in the field as head of the European IPR practice of a large US law firm.

He argued that there are two kinds of IPR:

- Statutory IPR whose aims are to exclude others (negative rights); and
- Knowledge and know-how representing "rights to use" which imply difficulties in measurement.

He presented some highlights from European IPR policy and stressed that a federalised IPR system will shortly be available concerning statutory rights as follows:

- Patents - system available by May 2004. The main issues in this field are the lack of patents on software and patent thickets (patents for not only a product but also all the subsequent changes in the product)
- Trademarks: A Community Trade Mark (CTM) is already available although brands are particularly difficult to value
- Designs
- Copyright (harmonised)
- Confidential information (pan EU renforcement possible)

On a different angle, Cohen drew a distinction between knowledge and know-how. Knowledge is possessed by many people in an organization, but unless there is a recipient, it remains merely as knowledge. But it is only when the knowledge of one or more people in an organization is consolidated, ordered, placed into a particular context and usually recorded in permanent form for others to use that it becomes commercially useful, and transforms into know-how. That know-how may or may not be confidential.

Know-how can be sold or licensed, and even mortgaged or charged. By contrast, knowledge cannot be divorced from the individual who has it. Thus, know-how is an intellectual property right in the classic sense. Knowledge is its precursor.

Many people have knowledge. We need to teach people how to convert it into know-how, and then how to exploit the know-how. Packaged know-how can be recognised and valued. Knowledge cannot be. It is too diffuse but it is a vital ingredient of goodwill, especially in a service business.

And an important part of the knowledge is better knowledge about the EU's IP system. Knowledge is needed of the IP system, and how to use it, and that knowledge can be turned into know-how to protect and then exploit advances in technology.

Stephen Merrill of the US National Academies in Washington spoke about "US and EU patent policy in the global economy: where from here?"

The US has led in terms of IPR in a variety of fronts both domestically and internationally, with the philosophy of granting patents to "everything that is under the sun".

Changes are now being made, introducing new principles such as a strong but not excessive protection of genuine inventions in new technology areas and rights obtainable and enforceable in relevant markets at reasonable costs.

Merrill sees the following as the main agenda issues for the EU:

- Making the community-wide patent a reality
- Ensuring community-wide enforcement;
- Accelerating the opposition process;
- Making the system more responsive; and
- Allowing some discovery in litigation

Merrill also identified a European agenda for US policy which might include:

- Remedying application priority: replacing first-to-invent with first-to-file;
- Improving litigation by focusing on containing cost escalation, increasing predictability and consistency, and limiting awards to actual damages.

The degree of consensus regarding changes is high but progress is slow, especially in the EU due to language differences, and in the US due to the champions of individualism.

The problems that deserve attention include the fact that defensive patenting and strategic licensing drive up transaction costs and may block innovative projects, and that negotiating through patent thickets may be too difficult.

Panel 3a: Audit, Accountancy & Corporate Reporting

Context of the Panel

This session was the first of two under the day's Theme 3, "Auditing and analysing value creation in the capital markets: external viewpoints."

The time was devoted to building a perspective on today's economy through the eyes of those whose role it is to verify, narrate and interpret value creation from an external viewpoint.

> *"Accounting accuracy is important to the capitalist mechanism because it measures the extent to which our continuous bargain between the present and the future is being kept in practice. Doubts about accounting integrity have a chilling impact on the economic mood….But the issue goes far wider than a few disputes about accounting standards. More broadly, financial markets play both a practical and symbolic role. Their practical one is to act as the calculating engine that tells us exactly what today's effort or sacrifice can be expected to generate in future gains. Confusions or miscalibrations in the engine lead to distorted valuations of corporations and assets and so sap our ability to act confidently."* (Peter Martin, "A crisis of faith", Financial Times, July 2002)

Miscalibrations lead to uncertainty about which business models and which companies will succeed in the future. The seamless flow of finance is heavily dependent on the provision of information which helps the decision-maker assess a company's ability to generate future profits and cash flow.

This first session was chaired by **Reinhold Enquist of Reidev Ltd** with the following subject matter in mind:

- The Future of Auditing and Accounting in Europe:
  - How to bring governance, public interest and strategy back into the audit?
  - Can accounting conventions move to a value-based framework?
  - How can technology facilitate change?
- The development of Financial Reporting:
  - What is the relevant information set companies need to disclose?
  - What key information is missing for institutional and other investors?
  - How to motivate companies to embrace accountability, in particular how to provide more on strategy, the process of value creation and intangibles?

Summary of the Individual Panelists' Contributions

Jonathan Hayward of Independent Audit Ltd highlighted some of the problems with audit practice today, the implications for the incumbents and some possible solutions to achieve a broader appreciation of a company's activities via its reporting.

He discussed the expectations gap between what an audit provides statutorily and the information set actually needed by users of financial statements.

Alluding to the PRISM framework for intangibles, since there are no mechanisms in place for the reporting of intangible and latent competencies, current audit reports focus mainly on tangible assets and some intangible goods. Senior audit partners do, however, have the time to build relationships with companies over several years, thereby putting themselves in a position to truly understand and appraise the real underlying value drivers.

What is required from auditors is more meaningful rather than precise information and a reporting remit that is akin to editing the multi-faceted storytelling of a company's performance and outlook by combining qualitative and quantitative data. This requires a different resource base and organizational model from that currently in place within auditing practices, and a more explicitly independent stance.

Kurt Ramin of the IASC Foundation presented an update on the International Financial Reporting Standards and the development of the common reporting format XBRL.

Despite the fact that most would agree that XBRL will increase productivity in the financial information supply chain, definition difficulties across languages and culture represent a major challenge.

Accounting standards for business combinations will create a demand for intangible goods valuation experts.

Michelle Edkins of Hermes, one of the most high profile long term institutional investors, then presented the Hermes principles in terms of what investors expect from companies and what companies in turn should expect from their investors.

The annual report has become a public relations exercise and represents only the starting point for a proper investment analysis. It discloses much but reveals little. At the heart of the problem are poor communication skills within companies, especially at the senior levels.

Hermes wishes to see companies adopt a more holistic approach in their reporting to better communicate their internal value drivers and, in return, offer long term commitment to provide a stable platform for company managers to make long term decisions.

Alison Thomas of PwC presented a potential future model of corporate reporting along three axes, namely a layer of information reported as per global GAAP, a layer of industry standardized metrics and a layer of company specific measures.

This is familiar to many and is, of course, represented in PwC's extensive work under the label of ValueReporting.

The current reporting paradigm makes it very difficult to distinguish between luck and skill as the cause of good or bad financial performance. It focuses on valuing tangible assets and then assessing returns on these assets. Although intangible and latent capabilities can't easily be measured today, they can be evaluated using appropriate guidelines and mindsets.

Although the information feed for 75% of measures cited by investors as necessary for a proper corporate analysis is often available within the firm, it is rarely reported externally. PwC has developed the Value Reporting framework to remedy this situation and to ensure that companies get rewarded with lower capital costs and access to finance when they deserve so.

Sean Gilbert of the Global Reporting Initiative briefly introduced his organization and proceeded to highlight benefits from the triple bottom line reporting methodology which it encourages.

Accountability and a better understanding of value creation are the two main drivers behind the GRI.

Understanding and building intangibles - and benefiting from this - are seen as a major benefit derived from the adoption of such reporting standards.

Summary of the Q&A/Open Panel session

A short Q&A focused on the debate over the relative benefits of forward looking speculative data and the extrapolation of trend historic corporate information.

One delegate stated that he had come to today's event expecting answers as to how to value intangibles but in reality he had found it to be all about storytelling which makes him feel less secure.

In the absence of measures for intangibles however, it was widely agreed that narratives are a move in the right direction towards a better perception of the underlying machinations of a company.

There's a danger that measurement becomes a means in itself. To avoid this we should ensure that accounting doesn't drive business behavior and that instead intangibles are reported separately from traditional accounting measures. The role of auditors should be to help companies present a more holistic picture.

The need remains, however, to overcome the conflict between assisting in the production of company reporting statements and providing the assurance that such statements represent the truth.

Other thoughts expressed in the room concerned who, if not auditors, might be the best placed information intermediaries to report on intangibles. Major concerns on this were:

- Who will pay for the production of information on intangibles?
- How to differentiate financial and investment analysis if the market converges on a framework such as Value Reporting?

Some questioned whether an approach such as Hermes' is scalable given the private nature of much information concerning intangibles. Others worry that such private disclosure and the effort placed by company management therein is to the detriment of other providers of finance.

A question mark also hangs over the relevance of XBRL for intangible competencies and latent capabilities.

Panel 3b: Intangibles: Analysis and Interpretation of Corporate Information

Context of the Panel

This second session of Theme 3 was chaired by **Tim Cooke of Barclays**. The participants considered how providers of finance interpret corporate information and how they analyse value creation in the context of intangibles.

Summary of the Individual Panelists' Contributions

Frede Mørck and Mike Hall of PRISM presented the headline findings from their work with commercial banks and venture capitalists, concluding that investors should focus on their own intangibles in order to better understand and analyze the intangibles of companies to whom they provide finance.

Although more systematic methods are required to better understand how intangibles drive corporate value creation, the lack of a common language for intangibles and of the right mix of mindsets and knowledge tools severely hinders effective capital allocation and leads to many deserving SME's going unfunded.

The focus for investment analysis should be on identifying the underlying intangibles which drive cashflow, more so than the more visible metrics we follow today.

Peter Wright of Fortis Bank explained how he endeavors to evaluate quality of management and competitive positioning in his day to day activities as a provider of leveraged finance and equity. Not only are the financial data reported insufficient, but so also are the business strategy models which analysts are trained to apply.

The answer partly lies in developing new mindsets to handle intangibles and also in developing new updated models of how businesses perform and differentiate.

Jonathan Moore of Thomson Financial offered the perspectives of an information infomediary in the supply of corporate information.

He too advocates a common language for intangibles to bridge the information gap between demanders and suppliers of financial information. What's required is comparable data in a user friendly format.

He questioned however the industry's capability of material progress in intangibles absent of regulation.

Summary of the Q&A/Open Panel session

A short Q&A followed which discussed the relevance of the prevalent business strategy models for analysing intangibles intensive companies. Michael Porter's work on competitive strategy was seen by some as outdated but by others as a very good starting point to understanding the requisite intangibles for, say, overcoming barriers to entry and defending market share. A better appreciation of more recent models concerning network type businesses and problem solving organizations was advocated.

Worries also surfaced concerning Basle II and the supply of debt capital to SMEs, a solution to which could be that if banks can demonstrate a better understanding of their borrowers, then they should be rewarded with lower capital requirements and thus a higher capacity to lend to SMEs they know well. A challenge as ever will be to overcome the paradoxical reliance on IT intensive credit risk systems as proposed by the Basle Committee which in reality deters investment away from SMEs and towards retail banking.

The Final Panel: Concluding Remarks

Context of the Panel

Three individuals attempted to synthesise the day's content into a few major take-away points, identifying the most novel and ground-breaking thoughts. In so doing, they were addressing some of the key forward-looking questions such as:

- So what?
- What are the implications and ramifications?
- For whom?
- Where do we go from here?
- What do the different audience groups need to be thinking about?
- What does the EC need to be thinking about? How to position this subject?

Summary of the Individual Panelists' Contributions

Göran Roos of Intellectual Capital Services presented his thoughts by responding to the 6 headline messages PRISM, through Clark Eustace, had earlier postulated. These thoughts are synthesized below.

Roos sees no new theory of the firm, but instead, in the words of Albert Einstein, a need for "new ways of thinking to solve the problems of the old ways."

Measurement issues are clouded by what Roos sees as the higher priorities of determining definition standards and facilitating thought convergence surrounding intangibles.

The topic is nowhere near as well understood as it needs to be: top quality research is required, work that is not only grounded in what we already know but that also learns from other fields and methodologies.

More thorough data-based research is encouraged through the pursuit of longitudinal studies of measurement and the development of more case studies, anecdotes and opinions.

Management by measurement is a distinct negative possibility absent a fuller understanding of the causal link between intangibles and value creation and absent a clear link to measurement theory. The UK's National Health Service was cited as an example of "management by measurement" gone wild.

Although competitive advantage arises from the inter-relationships between resources, there is a great difference between access to resources and their effective deployment.

We need to express what we know in both complicated and simple ways such that decisions are auditable, especially in the public sector where accountability ought to be higher.

We need to establish and meaningfully deploy data, standards and frameworks for intangibles and overcome the fact that 'most managers are educated by people long since dead'. What we are working on is a change in belief systems, something we must accept takes a long time.

David Young of Boston University prepared the audience for his synthesis of the day's event with the comment that 'perfection is the enemy of the good'.

We shouldn't raise our expectations too much foran intangibles reporting system. Intangibles can't predict the future. Latent capabilities are a big thorn in the side of any measurement and reporting initiatives and should perhaps be left aside for the moment. Some intangibles simply cannot be monetized. Even more challenging is that some are not quantifiable at all.

The main difference between intangible goods and intangible competencies is that the former can be seen and touched whereas the latter can be but merely described. Young proposes breaking intangible goods into two categories – those whose cost can be determined and those that will remain unquantifiable at least in the near term. Intangible competencies could be categorized as either easy to describe (brands, patents etc) or difficult to describe (creativity, talent, culture etc.).

We should work to add further dimensions to the PRISM framework such as time, processes to develop and maintain intangibles, sustainability in terms of the role of intangibles in overcoming threats, and a user overlay to cover such constituents as the national accounts, companies and investment communities.

We urgently need to act and make a deeper understanding of intangibles happen. The outstanding question is: 'who will enable this?'

Chris Hendry of CASS Business School focused on issues of value and measurement and emphasized that, since we can't measure everything, we have to draw boundaries between what we perceive as intangibles. Let's choose what to measure: it doesn't matter if we are not measuring everything.

His key message concerning value was to stay grounded in reality and to focus on value in use, at the point of a transaction and on valuing intangibles as the object or purpose of knowledge. Competencies are, after all, the application of skills and knowledge. Measurement of intangibles encompasses trade off's between appropriation (encouraged by measurement) and the free flow of knowledge.

Reconciling measurement and value requires a clearer view of causal links between the intangibles in which we invest and business performance. This requires, firstly, a greater taxonomy of measurement systems and models to test causality – along the lines of the work of Daniel Andriessen.

He called for the consultancies who have accumulated a wealth of data to "open it up" to academic research so their rigour might be tested.

Summary of the Q&A/Open Panel session

In the spirit of a prompt closure to a very informative day's proceedings, Q&A was limited to insightful thoughts concerning the emergent philosophy from the PRISM work concerning intangibles.

Roos encourages the addition of new dimensions to the term 'value' beyond the current most frequent connotation of 'wealth', encouraging, for example, non-monetary instrumental and intrinsic values.

Young concluded, to the agreement of many, that we can't emphasize greatly enough that intangibles need to be understood and analysed above all within their correct context. This means we should not get overly fixated on looking at intangibles as resources, instead of from the perspective of what they do and how they can be exploited.

Key Challenges and Priorities for the Future arising from the PRISM conference

This final section lays out in brief the major challenges ahead which were most readily identifiable from the day's discussions.

Appetite exists to see a convergence of ideas, definitions and standards in this field. This might entail:

- Creating a glossary of terms.
- Developing further a taxonomy of the guidelines, models and systems that have already been developed – along the lines of Andriessen's work.
- Testing the efficacy and value of such models in some kind of "competitive shoot-out".

Measurement efforts going forward need to designed with some of the following thinking:

- Perfection is the enemy of the good – you cannot perfect it before you use it. It is a learning journey.
- Ensure measurement tools are meaningful i.e. they are linked to theory and they are a solution to a cause.
- We need to continue to add dimensions to the term 'value' beyond the current most frequent connotation of 'wealth'. We need to build trust in indicators beyond those that measure wealth.
- The challenge is not so much to devise yet more indicators but to be certain we are improving our holistic understanding of wealth creation and our ability to evaluate risk.
- We can't measure everything - we have to draw boundaries and stay grounded in reality and focus on value in use. This means approaching the valuation of intangibles by identifying the object or purpose. We 'should work with the wine as well as the bottles'.

Attention must be paid to managers and to getting the meaning and messages of work in this field across to both this generation of managers, and even more so the next. There's a danger that measurement becomes a means in itself, the dangers of which can be seen in the primacy of the shareholder value mantra of the 1990's and how it has contributed to the severity of today's bear market.

- This requires us to develop new models of analysis which are not accounting-driven. This is a part of the long-term effort to re-work our belief systems and mindsets.
- Tools such as IC statements can help managers build a knowledge strategy which in turn could become the vehicle for external reporting of the firm's activities since they can help management and other stakeholders to understand a firm's problems and the strategies to resolve them
- We have to become more comfortable with the idea of working with narratives and story-telling. Not all things of value can be assured, benchmarked, monetized and packaged for IT systems to "number-crunch".
- Communication skills are paramount and the importance of loyalty and trust cannot be under-emphasized in today's economy.

The current reporting paradigm makes it very difficult to distinguish between luck and skill as the cause of good or bad financial performance. There is an urgent need for us to make progress towards a more holistic and widely-accepted framework.

- However companies are going to need assurance that the investor community appreciates such a development and that they would be rewarded in cost of capital terms and would receive a stable platform against which to take long-term managerial decisions.
- Auditors could help companies present such a more holistic picture of their activities. What's required from auditors is more meaningful rather than precise information – in effect a different statutory mandate and a different resource base and organizational model than that which is currently in place.

Appendix 1: List of Participants

Chairs and speakers have been marked in bold.

First Name	Surname	Organization
Neil	Abbot	Brown Brothers Harriman
Ralph	Adam	Freelance writer
Shola	Akinyamoju	Department of Trade & Industry
Camilla	Allwood	BeDoGo
Mark	Ambler	PwC
Birgitte	Andersen	Birkbeck College, University of London
Nicholas	Anderson	Gravitas Partners
Daniel	**Andriessen**	**Nyenrode University & KPMG Knowledge Advisory Services**
Devarajan	Anketell	Anketell Management Services
Jan	Annerstedt	Copenhagen Business School
Clare	Attenborough	Cass Business School
Neil	Bachelor	Cognisco
Mahmood	Baghieri	Cass Business School
Alberto	**Baj**	**InterCos**
Donatella	Bau	Plastal
Mark	Barratt	Text Matters
Colin	Batten	Merchants Ltd
Lyonel	Bell	Business Change Consulting Ltd
David	Bent	Forum for the Future
Jack	Berkovi	RSM Robson Rhodes
Mark	**Bezant**	**Deloitte & Touche**
Patrizio	**Bianchi**	**University of Ferrara & PRISM**
Ian	Bird	ICB Consultancy Services
Oriol Garces	Bonet	European Parliament
Ahmed	Bounfour	RCS & University Marne La Vallee
Richard	Brennan	TMI UK Ltd
James	Brown	Cass Business School & PRISM
Nick	Brown	
Jeff	Butler	University of Manchester
John	Butler	Home Office
Mike	Butler	Kendric Ash
Nick	**Butler**	**BP**
Janda	Campos	The Danish Commerce & Companies Agency

First Name	**Surname**	**Organization**
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