Intellectual capital (IC) or *Wissensbilanz* process: some German experiences

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Abstract

**Purpose** – This article aims to summarise a successful, pioneering prototyping project in Germany with IC statements, supported by the German Ministry of Labour and Economics (BMWA).

**Design/methodology/approach** – A systematic process view method has been applied. A special impact scoring method generates a map, enabling management to determine where they should give executive priority for intellectual capital investment.

**Findings** – Most of the participating companies would like to have a more standardized *Wissensbilanz* with indicators for added value in order to use the tool as a complimentary report (management report) for the purpose of external reporting as well as comparison.

**Originality/value** – The project has now inspired some 100 enterprises of different types and is now spreading outside Germany.

**Keywords** Intellectual capital, Financial reporting, Flowcharts, Germany

**Paper type** General review

Why is the German approach to IC so appreciated, interesting and valuable? Is there something more behind the fact that the world’s two most advanced standard car producers are BMW and Toyota?

**Contextual background**

Looking at the world map of IC today, some trends may be recognized related to the evolution of the management of intangible assets and intellectual capital (IC). The USA is struggling with its Sarbanes-Oxley Act and the administrative impact this has had on company reporting, auditing and management. The initial book on intangibles, called *The Unseen Wealth*, from the Brookings Institute in Washington (Blair and Wallman, 2001), based on work by Professor Baruch Lev and supported by the Securities and Exchange Commission (SEC), has not gained very much momentum. However in 2006 the Federal Reserve and its new leader B. Bernanke, together with researchers from University of Maryland, launched a most interesting report on the intangible economy in the USA. *Business Week* (2006) had a front cover based on the report, calling for “Unmasking the economy”.

In Asia, the Ministry for Economics, Trade and Industry (METI) in Japan is very active, organizing a whole weeks in December 2005 and December 2006 devoted to intellectual assets (see www.meti.go.jp/policy/intellectual_assets/index.htm). In 2007 joint projects are being planned between Japan and Germany based on the same
taxonomy of intellectual capital reporting and an interest in adopting software made in Germany to Japanese conditions.

A strong growing strategic aspiration with governmental initiatives for countries like China and India can also be observed. These two countries together represent the major proportion of human capital in the world.

In Europe, the European Commission sees knowledge management and innovation as a top priority. This strategic effort is often referred to as the Lisbon Agenda 2010. Parallel to this, a lot of IC initiatives in Europe have also been undertaken on a country level. In particular, Denmark, Finland and Norway were quick to build on IC experience emerging in Sweden.

Much of the ongoing work has been summarized in a report from the European Commission, 2006, under the name RICARDIS – Reporting Intellectual Capital to Augment Research, Development and Innovation in SMEs (European Commission, 2006). This report recommends that the Commission acts locally with local SMEs in order to understand how local business works and to allow different cultural ways to create value related to the context in its member states. It is too early to define a common, standardized IC report guideline. The Commission is recommended to learn more, especially from the German and Scandinavian experiences. This can then be summarized into more of a guidance of the process of creating IC value and how to report on this. It is also recommended to listen and to understand in more detail the business context of knowledge intensive companies before writing a recommendation on IC reporting.

In Germany, based on combined learning from both Scandinavia and Austria, a group of pioneers started work on what is called Wissensbilanz, or intellectual capital reporting, in the summer of 2003. The idea was to look for a systematized management approach to the hidden knowledge assets in SME in the largest economy in Europe. The German Federal Ministry of Labour and Economics (BMWA) became interested and decided to back it financially[1]. The support of the Ministry was essential to the grand echo that Wissensbilanz has received from the business sector. At the end of 2006, approximately 80-100 companies were prototyping and implementing it, both small as well as large enterprises, and both product-oriented companies as well as service enterprises such as bank and hospital services.

The German Government has also realized, across political borders, that it is necessary to support and to develop the theme of knowledge management in a high-cost country like Germany in order to safeguard employment. In this field of politicians wanting to create and save jobs and companies, yearning for more fair credit conditions in the wake of Basel II (Kivikas and Pfeifer, 2005), the “Wissensbilanz” project, with experts from both financial management and knowledge management, filled the gap between politics, the financial community, and industry and the business sector. The aim of the project was to show how small and medium-sized companies (SME) in Germany proliferate from a process-oriented way of thinking and utilize their intellectual capital (Wissenskapital). This means that the prime target was not to commercialize existing intangible assets but primarily to raise systemic understanding within those SMEs of where their own intellectual capital assets lie, thereby raising the competitiveness of German SMEs in a globalised economy.

However, if we start to look at the German industrial situation today, there may be a reason for this. Due to intensified competition in recent decades, German companies
have understood that they need a better understanding internally of where these “hidden” assets are, the assets that are not visible on the financial balance sheet. Second, if they can make these hidden assets transparent in a trustworthy way towards external stakeholders like banks and investors, they will be in a better position to reduce external financing or the cost of financial capital. Third, if the enterprises could develop a systematized process for value creation, it might lead to better sustainability (Edvinsson and Kivikas, 2003).

The philosophical background of the Wissensbilanz is based on Germany’s long tradition in leadership with a social responsibility. The word Wissen has a positive connotation. However, Wissensbilanz tries to connect this Wissen, or “knowing”, with the accounting term Bilanz, or “balance” (or balance sheet). However, in German, the word “balance” does not necessarily mean a balance sheet as in the Anglo-Saxon language. It means that a world in change can actually be balanced as well (Bilanz ziehen). This is an important linguistic difference between German and English and therefore shows the cultural difference of the understanding of how an organisation creates future financial value based on its IC. In Germany there is still a moral compassion within many SME owners and leaders of companies also having a social (local) responsibility. This so-called Rheinkapitalismus is not new, and was one of the major success factors for the German Wirtschaftswunder under Ludwig Erhard after the Second World War. In Germany there is a saying that you will meet your business partner at least twice in a lifetime; therefore, a more long-term and ethical view on management behaviour is (still) advocated in a lot of business communities.

There also seems to be an information discrepancy and asymmetry between international financial investors and those “Rheincapitalists” on how value is created and how to report on this. SMEs in Germany account for more than 70 per cent of employment and 50 per cent of domestic investments made. Therefore they are the basis for the future prosperity and competitiveness of Germany. This also means that the majority of German companies that add economic value to Germany are not aligned to the standards used on the world financial markets. The flow of information between financial institutions and the companies must therefore be more synchronized and less asymmetric. Management behaviour in these SME is also often more long-term related and does not find the correct language or harmony towards the financial capital markets.

Therefore, a lot of well performing SMEs in Germany are actually blocked from external financial capital, which is necessary for investment to stay competitive in a market where more and more intangible investment in renewal is a necessary prerequisite to stay independent and competitive. The German entrepreneur generally uses a different language regarding businesses success and how to get there compared to financial investors educated in the Anglo-Saxon culture. Now the requirements of Basel II are pushing them to show a higher visible equity to fulfil the requirements their lending banks have towards stricter criteria on their risk portfolio[2], mostly leading to a higher tax burden for SMEs.

**Approach to Wissensbilanz – made in Germany**

The Wissensbilanz project group, together with international and national experts, called the “Kranichstein Group”[3], started with a group of volunteering SMEs, invited
and selected by the BMWA. A first step was to listen in a dialogue with the companies to how they create value through their existing IC. The starting point was to find a common language and perspective on IC as a prerequisite to reach strategic goals. This common perspective was based on the emerging taxonomy, mainly from Edvinsson and Malone (1997), visualizing that the intangible knowledge values are usually outside a traditional financial balance sheet, and this represents the enterprise’s often hidden intellectual capital. This taxonomy as refined over the years is now becoming a standard perspective, describing IC in three major areas:

1. human capital;
2. structural capital; and
3. relational capital.

The Fraunhofer Institute in Berlin added an engineering approach and legitimacy to the pioneering Wissensbilanz work. It also resulted in action research on the prototyping work from one of the project group participants, Dr Kay Alwert, with his PhD thesis (Alwert, 2006). The German IC business model is shown in Figure 1.

The objective of the applied process was to visualize action points needed to reach an organisation’s strategic goals like improved competitiveness and sustained profitability in a comprehensive way, and also for external reporting purposes. In 2004 this model was initially prototyped in 14 German SMEs. This resulted in the first German guideline on IC statements/reporting, published in September 2004[4] by the BMWA, together with its new website, www.akwissensbilanz.org. It was updated in 2005 and a further update is planned for 2007. Interest in the website is illustrated by the numbers of 5,000-7,000 visitors per week and 50,000-80,000 hits per month.

In the 1960s and 1970s the work on system dynamics of Jay Forrester and Fridrich Vester inspired followers to look more into IC systems dynamics, like Dr Nick Bontis in Canada as well as the research enterprise Seibersdorf in Austria (see, for example,
The focus of this work is how intangible factors interrelate systemically with one another and with a holistic view on how value is created or destroyed by different management actions.

Primarily, the German approach is used as a tool to improve the systematic process of an organisation’s intellectual capital management. Many enterprises have also decided to communicate externally, and initiate continuous reporting on their Wissensbilanz to external stakeholders. However, the core of this work is an approach to visualizing the process flow of intangible factors leading up to the intangible value of enterprises. This gives a platform for management to prioritize activities from a cost/benefit approach for the firm’s future earnings potential. In other words it is intelligence for the value-creating intellectual capital process.

Through the prototyping work done at Seibersdorf, Austria, an enterprise model for IC was developed which is close to the one today used for the German Wissensbilanz (Bornemann and Sammer, 2003). It visualizes systemic interrelationships as a process flow of contextually refined key IC components into an intelligence map. It is based on work by an internal project team to review the value creation process and its critical factors, their relative importance, and impact. This then leads to a priority order of critical factors to be addressed by management.

This can be illustrated by one of the companies, Reinisch (see Figure 2). They are transparent to their stakeholders with this cause and effect dynamics and publish it in their annual IC report. They also have a special team on the subject including among

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**Figure 2.**
IC process flow chart

**Source:** Anja Flicker; reinisch AG
others the rewarded Wissensmanager des Jahres (Knowledge Manager of the Year) in Germany, Mrs Anja Flicker.

In an interview with Professor Jan Mouritsen at Copenhagen Business School (the key person behind the Danish Governmental Guidelines for IC), he pointed out why he thinks the Wissensbilanz has been so welcomed in German SMEs:

... the process approach highlights the importance to show management of a firm the connection its intellectual capital has on its strategic goals and the existing organizational gap to reach those targets.

The last step of showing how those factors influence one another gives management another priority list of where to take action (and also where not) and therefore helps them to allocate investments more efficiently[5]. This is illustrated among others in an IC portfolio map such as that shown in Figure 3, with its impact foresight related to leadership, control and impact, i.e.:

- *entwickeln* – develop or take actions;
- *stabilisieren* – stabilize and nurture such important IC factors;
- *analysieren* – analyze relevant IC factors; and
- *kein Handlungsbedarf* – no management action needed.

![IC Management Portfolio Map for Executive Decisions](image)

Source: EnBW AG (2005) and Fraunhofer IPK, Berlin
Such a portfolio map of IC areas to invest into is a most valuable tool for boards of directors. It will give a much better explicit decision balance between tangible versus intangible investment.

The companies have been invited again to tell on how they internally proceed with findings they had after the first Wissensbilanz had been made[6]. We found that the IC language between different branches and business sectors, with some exceptions, was quite common. The difficulties in evaluating IC could mostly be referred to an unsystematized business and enterprise strategy and also a complex competitive and political context. The uncertainty of the future is today much higher compared to the reality German companies faced 20 years ago, when most of the executives of today received their Master’s degrees in business administration and leadership. Therefore the existing communication platform between SMEs and their surroundings cannot only be based on historical financial data, but must also integrate its future earnings capabilities, i.e. intellectual capital.

Therefore in September 2006, about 30 analysts from major financial institutions were invited to test whether this Wissensbilanz influenced their recommendations (Kivikas et al., 2006). The cooperation and responsiveness of German financial institutions has been surprisingly high, and they have show great interest in this movement. One reason for this is increasing legal requirements[7], but also fiercer competition between banks in the SME market. Since investments in intangible assets in most of the attractive business sectors is now more than 50 per cent, they wish to have more transparency on what these investments bring to the company’s value and their impact on financial results. One of the largest banking groups is currently testing how to use the Wissensbilanz as a fitness test of how their branches stand today to meet the goals of tomorrow. It is also seen as complementary to the Balanced Scorecard, which has defined the strategic goals, and with the fitness check a gap can be defined to concentrate management actions to where output is likely to have the highest impact to improve innovation capability and competitiveness.

When releasing its second Wissensbilanz in January 2006, Mr Pfeifer, Strategic Manager at VR-Bank Südpfalz said:

The Wissensbilanz did not show us anything we did not already know. However, it made our gut feeling transparent and pushed us to finally get started with things we had been wanting to do for years, such as educating our sales personnel on soft skills and not only on product benefits. We also find out how important it was to integrate our risk management into our day-to-day operations and not to have it separated as it used to be. We have already saved a lot of money through a more efficient allocation of our budget.

In Germany there now seems to be a demand from policy makers, SME and from parts of the financial community to continue the efforts of getting IC reporting to remain as an integrated part of management and external reporting.

On asking Professor Daan Andriessen, at the IC Research Center in Holland (called InHOLLAND) why he thinks that this Wissenskapital project has been so successful in Germany, he answered[8]:

It has been able to involve and manage the very different stakeholders, such as the enterprises, the government, and the financial community. It has been able to go from measurement metrics of numbers to the process, i.e. create a dialogue internally. To create such an approach in a business context was not expected. The design, the linguistic approach to the project and taxonomy upgrading is also an essential part.
A recent project study from the Fraunhofer Institute highlights the practical benefits for the prototyping participants in this German approach to be, among others:

- internal management and communication benefits;
- improved external communication material, especially for banks and investors;
- revealing strategic potential and value creation within the organisation; and
- increased transparency on strategy and IC and therefore a better allocation of already scarce financial resources.

Interest from the enterprise market can also be illustrated by the requests for downloads from the popular website www.akwissensbilanz.org. There the enterprises are offered information but also free downloads of a software such as the Wissensbilanz toolbox, which was launched in August 2006. So far it has been downloaded as a CD-ROM approximately 15,000 times.

The push for more IC reporting from different stakeholders also shows the result the company Soer GmbH in Oelde had when presenting its Wissensbilanz to its Hausbank and suppliers. According to Dr Thomas Rusche, owner and CEO, his company saved more than €100,000 within six months in lower interest rate costs and better supplier conditions.

The German Wissensbilanz approach can be summarized into three major perspectives and characteristics:

1. IC business model;
2. IC process flow; and
3. IC potentials portfolio.

Conclusion
The current situation can be described as the next stage of the Wissensbilanz movement. Most of the companies participating would like to have a more standardized Wissensbilanz with indicators for value adding so they can use it as a complimentary report (management report) to the external reporting as well as comparison. They also push for standards so they can improve their communication towards first of all banks/lenders and for external benchmarking. This can also be described as a quest for improved intelligence for navigation of enterprise value creation.

Since Germany is the biggest economy within the European community, these prototyping efforts have provoked great interest from the European Commission. A special EC project has now been launched, called Intellectual Capital Statements (InCas), to continue the spread of this approach to other EU countries like France, the UK, Poland and Slovenia. Also Japan, with its METI Ministry, is now focusing on these systems approaches from Germany to be applied both in national strategy as well as enterprise guidance.

Could it be that there is in Germany as well as in Japan a special cultural context, systemic mindset and attention to holistic details that is attracted to and by this IC creating approach?
Notes

1. The core team of Dr Kay Alwert, Dr Manfred Bornemann and Mart Kivikas, supported by Professor Leif Edvinsson, Professor Kay Mertins and Dr Peter Heisig.

2. In Germany, there is usually a very close social relation between the owners and executives of a company and its major bank (Hausbank). Through legal pressure for more transparency and the increasing competition on the cost side between banks, this phenomenon is declining rapidly.

3. The Kranichstein Group comprises Professor L. Edvinsson, Lund University, Sweden; Dr P. Heisig, European Research Center for Knowledge and Innovation, Berlin; Professor Dr-Ing K. Mertins, Fraunhofer IPK, Berlin; Professor D. Andriesen, InHOLLAND, University of Professional Education Amsterdam, The Netherlands; Dr K.-H. Leitner, ARC Systems Research GmbH, Austria; Professor Dr K. North, Wiesbaden Technical College, Germany; Professor Dr J. Mouritsen, Copenhagen Business School (CBS), Denmark; and G. Szogs, Commerzbank AG, Frankfurt am Main.


5. Interview with Professor Dr J. Mouritsen, 22 November 2006.

6. The project “Wissensbilanz – Made in Germany” in going into its third phase, in which new sectors will be tested. Banks and investors will test how to use the Wissensbilanz in the credit and rating processes and the impact the Wissensbilanz has on management behaviour will be analysed. For further details, see www.akwissensbilanz.org

7. National and international accounting standards (such as IAS 38, DRS 12 and E-DRS 20) already recommend showing intellectual capital in the notes of the classical balance sheet. A law has been in force in Austria since May 2006 which obliges universities and institutes of higher education to submit intellectual capital statements in order to give account of their commercial activities.

8. Interview with Professor D. Andriesen, InHolland Research Centre for IC, on the Wissenskapital Project Germany, 9 November 2006.

9. Markus Will, Fraunhofer Institute, Berlin, “Wirkungstest, Teil 2”, based on a study of 38 companies that have implemented the Wissensbilanz.

10. Dr Thomas Rusche is CEO of SØR Rusche GmbH. Established in 1956, SØR Rusche GmbH is an SME with a staff of 122, which is active nationwide in textile retail and achieved a net turnover of €22.7 million in 2003. The family-run company headquartered in Oelde/North Rhine-Westphalia specialises in men’s outer clothing, and is the German market leader in the premium segment of men’s outfitters with a particular focus on the growing segment of high-quality sportswear. Dr Rusche was Knowledge Manager of the Year in 2005, an award made by Financial Times Germany and Commerzbank AG.

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