



Strategy development based on intangibles in SMEs – an integrated approach

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Abstract

The approach in this paper is based on the principles of action research and rapid prototyping. The paper shows the current status of a ‘bottom-up’ research process dedicated to continuously developing and improving management instruments that suit the requirements of small and medium-sized enterprises (SMEs): pragmatic, easy-to-use and generating direct practical benefit. As a result, this paper links the concept of intangibles to the practical strategy development process in SMEs. The integration shown concerns several challenges:

- (1) Integrate the internal and external perspective on intangibles, and, by that, link the concept of intellectual capital (IC) as a resource-based view with the concept of customer value as a market-based view.
- (2) Integrate the theoretical concept of IC with a methodology for comprehensive strategy development.
- (3) Integrate the formulation and implementation of business strategies taking into account the actual practice in SMEs.

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Introduction

Today’s economy is characterised by continuous globalisation of markets, shorter product life-cycles and dynamic changes in the business environment. In this context, a company can only achieve business success if it is able to exploit its particular competitive advantages that describe a company’s ability to offer the same products as its competitors at a cheaper price, or to offer better products at the same price (Hungenberg, 2004). Customers only perceive differences in price or performance, but the ability to make the particular offer can have different sources. Regarding those sources of competitive advantages two major theoretical streams within strategic management research exist. On the one hand the market-based view (MBV) identifies a dominant market position as the major source of competitive advantages (Porter, 1991). On the other hand there is the resource-based view (RBV), which argues that the specific resource base of a company offers the source of competitive advantages (Barney, 1991).

By now, MBV and RBV are considered as complementary approaches in order to identify competitive advantages (Mahoney & Pandian, 1992). A dominant market position is worthless when a company is not able to exploit it effectively. Conversely, a company’s resource can only be considered as valuable by utilising its potential to be the source of business success in a competitive environment. In conclusion, the major objective

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of strategic management is to identify and to exploit competitive advantages that could be conceptualised from an external perspective (MBV) or an internal perspective (RBV) and should be ideally developed by integrating both perspectives. After identifying competitive advantages and delineating corresponding strategies the strategy implementation requires major attention. A strategy – however neatly defined – is worthless when it is not implemented adequately (Welge & Al-Laham, 2001, p. 488). The implementation is not only crucial for the final success of the strategy process but it can even adjust poorly developed strategies by modifying them during the implementation process (Wheelen & Hunger, 2012, p. 221). Despite its already recognised importance strategy implementation is still often neglected within practical strategic management (*ibid.*).

Furthermore, the critical success factors of economic growth have changed towards the generation, application and exploitation of knowledge. The key to competitiveness increasingly turns on the way people combine, master and commercialise their know-how. Small and medium-sized companies (SMEs) are especially affected by this phenomenon as they are the driving force of Europe's economy. To obtain their competitive advantage, it is crucial for SMEs to utilise knowledge efficiently and to enhance their innovation potential. Thus, managing their specific intellectual capital (IC) becomes more and more important for future-oriented organisations. Reporting those intangible assets to customers, partners and investors systematically has become a critical factor of success in the context of the globalisation process (Mertins *et al.*, 2006; Will *et al.*, 2006).

The first efforts to measure intangibles and to evaluate their potential started in the 1960s with Schultz (1961) and Becker (1964). They focused on how investing in human capital (HC) affects the growth of national economies. Within the subsequent Human Resource Accounting approach especially Hermanson (1964), Flamholtz (1974) and Fitz-enz (1984) developed models that aimed at calculating the costs as well as the value of human resources in order to support a more effective management within companies. At the end of the 1980s comprehensive management information systems had already been developed but financial indicators still dominated. The already developed knowledge about 'soft' factors did not regain prominence until the development of the Balanced Scorecard (BSC) (Kaplan & Norton, 1996).

The integration of formerly independent strategic management approaches like BSC, Management Accounting (Society of Management Accountants of Canada, 1998), and Customer Relations Management (Shapiro, 1974) had been furthered mainly in Scandinavia. Especially practitioners like Edvinsson & Malone (1997) and Sveiby (1997, 2002) influenced the development during the 1990s. They developed two different models (the 'Skandia Navigator' (Edvinsson & Malone, 1997) and the

'Intangible Asset Monitor' (Sveiby, 2002) to measure the components of IC by using qualitative and quantitative indicators and communicate the results in an intellectual capital statement (ICS). Both models aimed at identifying and evaluating IC in order to outweigh the deficits of mainly financially oriented management. Edvinsson subdivided IC into HC, structural capital (SC) and relational capital (RC). This structure is currently the most frequently used to describe intangible assets (Alwert, 2006).

More recent approaches emphasise the effective management of IC regarding the overall value creation within a company. The ICS model by the Austrian Research Center Seibersdorf (ARCS, 1999; Koch *et al.*, 2000) as well as models developed by DLR (Blum & Borrmann, 2004), the Austrian university statement (Republic of Austria, 2002a, b), NOEST (2004), Joanneum Research (2003), the Value Chain Scoreboard (Lev, 2004) or ICS – Made in Germany (Alwert *et al.*, 2004) integrate aspects from value creating models (see Porter, 1985; EFQM, 2003) with a structural perspective of IC. Framing IC in an input-process-output-relation these approaches stress the importance of IC for developing strategies and the operational implementation of the most important business processes (Leitner, 2005). At the same time models have been developed which integrate the evaluation of IC by using indicators with a monetary evaluation of the particular components of IC (Andriessen, 2004; Alwert, 2005; Mertins *et al.*, 2005).

ICS: experiences in European SMEs

In recent years different national approaches to the management of IC have been developed and tested. Financed by the German Federal Ministry of Economics and Technology, the methodology 'Wissensbilanz – Made in Germany' (Alwert *et al.*, 2008) was developed by the project consortium 'Arbeitskreis Wissensbilanz' led by Berlin-based Fraunhofer IPK. The consortium conducted a pilot project to adjust the preparation of ICSs to the German SME situation and to test it practically. In order to ensure including the most recent state-of-the-art in the field of IC research, experiences from leading experts like Leif Edvinsson and Daniel Andriessen have been incorporated. The results and the experiences of the project led to the first German Guideline for implementing ICSs in SMEs (Alwert *et al.*, 2004). By the end of 2007, more than 50 ICSs have been implemented in the course of the pilot project. The German ICS guideline and the supporting software had been retrieved 100,000 times by 2011, but still a European-wide standard regarding the measurement and management of IC was missing.

The emerging need for a consistent method and a European standard was the starting point for the EU project 'Intellectual Capital Statement – Made in Europe (InCaS)'. The intention of InCaS was to harmonise the different national ICS approaches and to develop and test this European ICS methodology in 25 SMEs in five core countries. Target groups of InCaS were SMEs that depend decisively on their IC to ensure success, that is

that are based on so-called knowledge-intensive business models. National SME associations in those countries acted as dissemination partners and aimed at the target of 1000 EU SMEs to be using the InCaS model and tools by the end of the project (December 2008). By 2011, the harmonised ICS methodology (European Commission, 2008) was implemented by trained ICS moderators in over 1000 companies in Germany and Europe, using a special software, the 'ICS Toolbox' developed by Fraunhofer IPK, while Fraunhofer Academy is responsible for the training and certification of ICS moderators as well as the quality assurance of the applications using a specifically developed ICS audit approach.

Despite their focus on supporting SMEs in managing their IC on a very practical level, both projects, 'Wissensbilanz – Made in Germany' and 'InCaS', allowed the collection of valuable data about the perceived strategic importance of different IC factors in European SMEs. Furthermore, valuable insights on how to adapt the method in order to fulfill SMEs' requirements even better can be gained in these projects. Some of the findings from this data collection are shown in the following section.

Empirical evidence on the demand of European SMEs regarding strategy development based on intangibles

On the basis of the results of the German pilot project, 15 standard IC factors have been extracted 'bottom-up' from the actual ICSs of the 50 pilot SMEs. This set of harmonised IC factors has been used and continuously reviewed during later stages of the German project and in the course of the European project. The set covers about 80–90% of the factors named by the pilot SMEs as relevant for business success (Mertins *et al.*, 2007a). Using this standard set of IC factors and additional questions with regard to enterprises' strategic alignment to the market Fraunhofer IPK conducted an online survey of over 1000 German enterprises across different industry sectors.

The results of this survey (Alwert *et al.*, 2010) are based on the 'Wissensbilanz-Schnelltest' (IC Quick Check). The 'Wissensbilanz-Schnelltest' provides enterprises with a quick overview of the *status quo* of their IC as well as first recommendations for action to manage their soft factors. In the time period from July 2009 to December 2010, 2300 data sets were captured through the websites www.wissensbilanz-schnelltest.de, www.wiwo.de and www.impulse.de. The participating enterprises were asked how important certain factors are with regard to their business success (impact) on a scale from 0 to 10. Furthermore they were asked to estimate how well these factors are developed in their enterprise at present (rating). After the revision of all data sets 947 questionnaires could be used for evaluation.

The survey sample comprises 947 enterprises. Eight hundred and twenty-eight of these enterprises answered the questions regarding the sector they are active in.

Sample according to number of employees
(n=902)

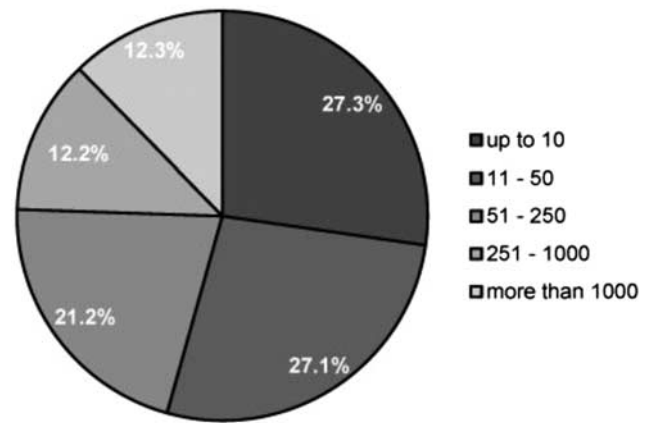


Figure 1 Sample according to the number of employees (Alwert *et al.*, 2010).

In this context 287 enterprises (34.7%) stated that they belong to the production sector and 541 (65.3%) stated to be part of the service sector. Nine hundred and two enterprises answered the question regarding the number of employees (see Figure 1).

Of the 947 enterprises surveyed 795 enterprises stated their annual turnover. The majority of the companies participating in the survey (38.9%) quoted an annual turnover of up to €2m. About one-fifth of the enterprises stated that they have an annual turnover of more than €50m (20.4%).

Study results on the RBV

Following the most frequently used structure to describe intangible assets (Alwert *et al.*, 2008), the InCaS approach divides IC into three dimensions: HC, SC and RC. HC includes the staff's competencies, skills, attitudes and the employees' motivation. HC is owned by the employee and can be taken home or onto the next employer. SC comprises all structures and processes needed by the employee in order to be productive and innovative. According to a sloppy but useful definition, it 'consists of those intangible structures which remain with the organisation when the employee leaves' (Edvinsson & Malone, 1997). RC sums up the organisation's relations with customers, suppliers, partners and the public.

The EU project has started with the harmonisation of ICS content based on the empirical results collected in 50 pilot implementations: The results from practice proved that approx. 80–90% of individual IC elements could be harmonised on an aggregated level, while the remaining 10–20% are completely individual (Mertins & Will, 2008). Within the European Guideline for ICSs (European Commission, 2008), these harmonised IC factors were agreed upon as a basic standard set of factors

that are relevant to the major part of companies when assessing and analysing IC. On the basis of a firm's assessment of a set of standardised IC factors, strengths and weaknesses of IC can be compared between different companies, for example the respective industrial sector, different branches, sizes, regions etc. and reveal the very specific IC strategy of a sector, branch, region or any other group of companies.

As part of the study, the most important enterprise resources were assessed with regard to the factors' individual impact on the enterprises' business success. On the basis of the assessment, it was possible to derive the importance of the specific factors for different groups of enterprises.

All in all, the different types of IC are already of higher importance for business success than material resources are today (see Figure 2). In addition IC is also rated better by the surveyed enterprises. The impact of HC on business success is by far the greatest (8.2) and has the best rating (6.7) as well. The factors of SC (7.2) are seen as the second most important type of capital by the surveyed participants and were rated with a mean of 6.1.

When analysing the difference between rating and impact it becomes obvious that the rating of the factors is in most cases lower than their impact on business success. The biggest difference is to be found in HC (-1.5) followed by SC (-1.1) and RC (-0.4). The factors of the material resources only show slight differences. In conclusion the highest demand for action of knowledge-based corporate management is shown in HC.

If one compares the ratings of the enterprises from the service sector with those of the production sector, differences can be determined. Significant differences in the area of HC show that the service sector is one step ahead of the production sector with regard to structural and employee-related corporate development.

The participating service enterprises rate the impact and thereby the importance of HC (8.3) significantly

higher than the participating production enterprises (7.9). On the other hand, material resources are more important to the production enterprises (6.7) than to the service enterprises (4.7). These results ratify the dependency of production enterprises on machinery, plants and raw materials and the capital needed to finance these, while the service enterprises strongly depend on the abilities of their employees. Although material resources are of great importance for the business success of production enterprises, they are seen as less important than HC. Hence the employees are the most important type of capital in the production sector.

IC as a whole and especially HC obviously has a higher impact on the business success of the surveyed enterprises than material resources. Figure 3 shows which factors of IC are most important and thereby critical for corporate success. In addition, the figure shows how well the enterprises are presently doing with respect to the factors critical for business success (rating).

Professional competence (8.5), customer relationships (8.3), motivation of employees (8.3), social competence (8.1) and leadership ability (7.8) are the factors with the highest impact on business success, followed by the factors of SC such as internal cooperation and knowledge transfer (7.7), IT and explicit knowledge (7.6), corporate culture (7.4), and management instruments (7.0).

The material factor with the highest impact is financial resources (6.8), which ranks in the midfield. Material factors such as machinery, plants and buildings (4.5) and material and raw material (4.4) have relatively the lowest impact on business success.

Surprisingly process innovation (6.9), and product innovation (6.5), show a relatively low importance as well. Hence innovative products or new products and processes do not seem to be in the focus of German enterprises and are seen as less critical for business success.

Another interesting fact is that the impact of investor relationships ranks last within RC (5.4) as shown by previous surveys on the importance of IC (Mertins *et al*, 2007b). A reason for this circumstance could be found in the fact that enterprises are currently holding back investments and thus the importance of investor relationships seems low. On the other hand the low impact could also be based on enterprises' expectations with regard to the support to solve financial problems.

Furthermore the surveyed enterprises assign a relatively low impact to the factors of RC in general except customer relationships. This allows the conclusion that the participating enterprises rate their internal resources as more important than public relationships, supplier relationships or investor relationships.

Study results on the MBV

The question regarding the enterprises' prime markets was answered by 900 enterprises. The distribution is

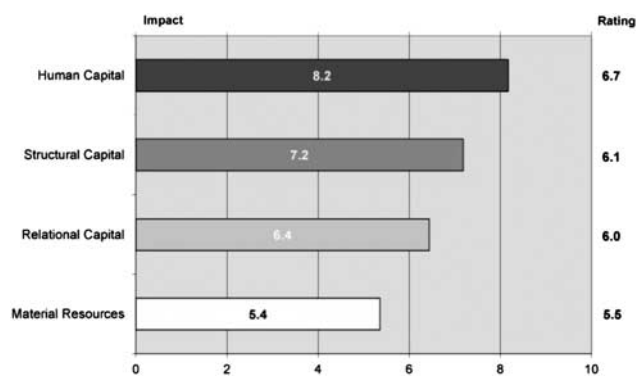


Figure 2 Impact and rating of the different types of capital with regard to business success (Alwert *et al*, 2010).

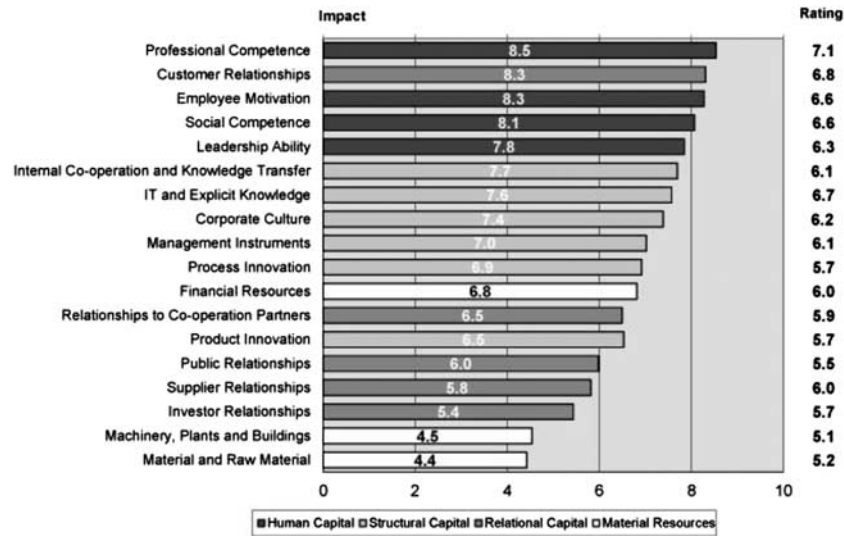


Figure 3 Impact and rating of the success factors of knowledge-based corporate management (Alwert *et al*, 2010).

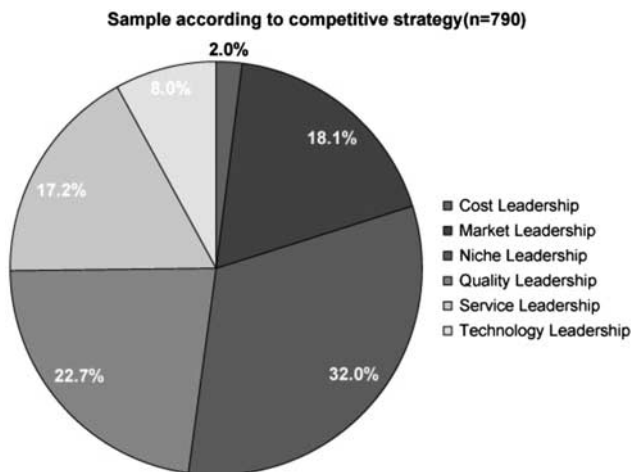


Figure 4 Sample according to competitive strategy (Alwert *et al*, 2010).

relatively homogenous, whereby slightly more enterprises (38.1%) sell their products and services nationwide. In contrast, only 26.2% of the enterprises are operating on international markets. 74.7% of the 894 companies that answered the question concerning corporate objectives stated that they aim at future growth while 24.4% stated that they aim at maintaining their current position. Around one-third of the enterprises that answered the question regarding their competitive strategy stated that they pursue a niche strategy (see Figure 4). A minority (2%) said that they are concentrating on cost leadership.

Nine hundred and forty-seven enterprises answered the question regarding their competitive differentiation. Customer orientation is the most important factor

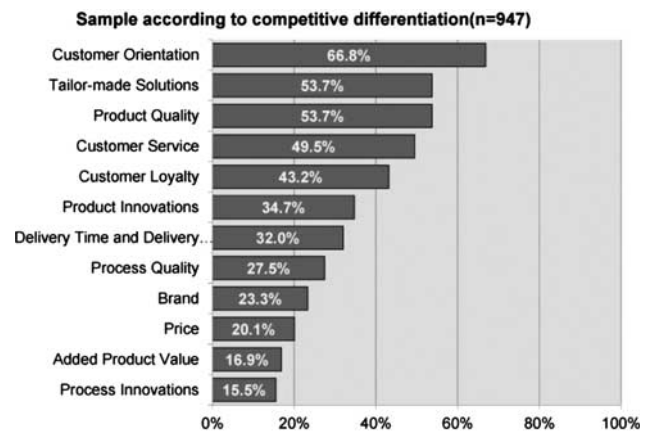


Figure 5 Sample according to competitive differentiation (Alwert *et al*, 2010).

to differentiate themselves from the competition (66.8%). In this context factors like price (20.1%), additional product value (16.9%) and process innovations (15.5%) are considered less important by the enterprises in order to stand out from the competition (see Figure 5).

The results of the study indicate that one-dimensional strategy types like cost leadership or market leadership do not sufficiently reflect the actual conditions SMEs are facing in competition. Rather a multi-dimensional individual differentiation is required to be able to meet competition successfully. Furthermore the study shows that intangible resources already today have a significant higher impact on German enterprises' success than material resources like machinery, facilities and buildings.

Requirements of SMEs regarding a methodology for integrated strategy development (ISD) based on intangibles

Apart from collecting data regarding the relevance of IC, an analysis of how the SMEs evaluated the method use has been carried out. Figure 6 illustrates which components of the German method have been valued most by the SMEs. 70–90% of the participating companies evaluated the benefits of the ICS implementation process as 'Very high' or 'High' regarding all analysed categories. The benefits of 'Development or reflection of business strategy', 'Strategy and Intellectual Capital becomes transparent', 'Corporate Culture benefits from open discussions' and 'Enhanced understanding about how the organisation works' have been perceived as very high.

In general, all SMEs participating in the InCaS project were satisfied with the ICS implementation and the organisational arrangements. One of the most cited benefits of the ICS implementation was the 'verification of gut feeling', that is most SME managers had some intuitive image of their strategic IC factors and their particular strengths and weaknesses, but were not able to structure, visualise and communicate this implicit knowledge within their company. The ICS process helped them to identify the relevant IC factors and to detect their strategic potential for improvement precisely.

On the other hand, it became obvious that SMEs need to pay more attention to strategy development in general. Especially in the course of the InCaS project it occurred that the first implementation was hindered by the fact that some SMEs did not have a well-defined strategy at all. For this reason, it is necessary to complement the method by modules devoted to strategy development issues, for example business model definition and competitive analysis.

Derived from this analysis and from practical experiences with numerous SMEs in Europe, the following

methodological requirements for an integrated approach to strategy development can be summarised:

- Integrate the internal and external perspective on intangibles, and, by that, link the concept of IC as an RBV with the concept of customer value as a MBV.
- Integrate the theoretical concept of IC with a methodology for comprehensive strategy development.
- Integrate the formulation and implementation of business strategies taking into account the actual practice in SMEs.

Moreover, some general SME requirements have to be met:

- Easy-to-use and cost-efficient implementation.
- Comprehensive but pragmatic procedure for implementation.
- Modularised implementation with single methodological steps that create a result with clear benefits to the SME management.

Outline of an integrated approach to strategy development in SMEs

The integrated approach to strategy development in SMEs below aims at integrating two dimensions:

- How can the external (market) perspective and the internal (resource) perspective of strategy development in SMEs be integrated?
- How can strategy form(ulation) and strategy implementation be integrated as an iterative process in practice?

The 'Integrated Strategy Development' (ISD) method consists of a structural model, containing all necessary content categories from the RBV and MBV, and a procedural model, that is the major stages of a holistic strategy development process, integrating strategy

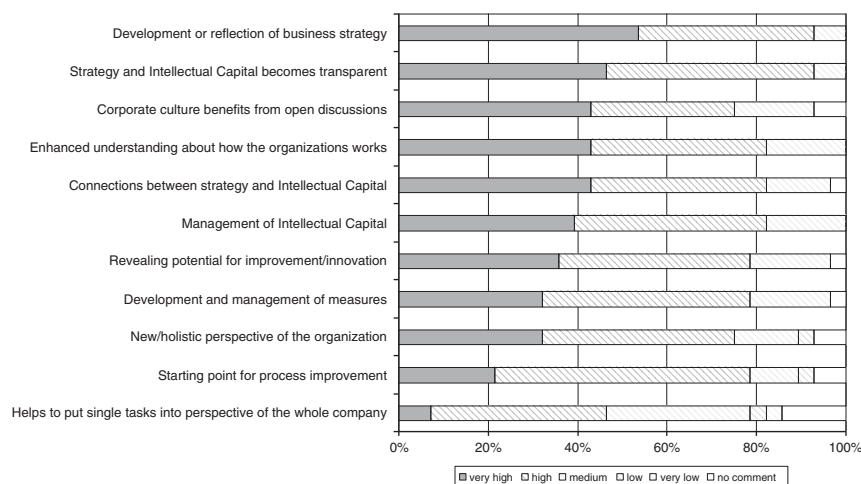


Figure 6 Benefits of implementing an ICS (Will et al, 2006).

formulation and implementation (Will, 2012). Figure 7 shows the ISD meta model combining the structural model in the vertical perspective and the procedural model in the horizontal perspective.

In the structural model the business model consists of one or several business areas, defined as homogenous combinations of products and markets. For each business area a value adding model is defined for the specific company. The four layers of the value adding model can be linked to the four dimensions of the BSC:

- *Business Success* describes all desired financial and non-financial results for one business area.
- *Customer Value* describes the intangible values from the market perspective, defining distinct differentiation features for the company.
- *Business Processes* describe the main value adding activities of the company in the respective business area.
- *Intellectual Capital* describes the main intangible success factors from the resource-based perspective.

During the strategy development process the main stages are the structured description of (1) the *actual status quo* in all six layers of the business model, (2) the desired *target* status in the future, (3) the *strategic gap* between

actual and target status, (4) the necessary *actions* to close this gap, and (5) the key performance *indicators* to measure the successful implementation of these actions.

To implement this strategy development process in a systematic and easy-to-follow way in SMEs, the implementation procedure as shown in Figure 8 has been defined and tested in practice.

The implementation procedure consists of three major phases and is a moderated workshop-based procedure combined with pragmatic analysis and visualisation tools for each of the four steps per phase. The workshop participants are a representative team of senior executives and other key staff of the respective company, called the 'strategy team'.

In the first ISD phase, the strategy team assesses the actual status of the existing products and market segments the company operates in. From a structured analysis of chances and risks for specific options on developing new products and/or new market segments, a consensus is built on the main strategic objectives. These strategic objectives describe the targeted development of the product portfolio and the targeted market segments. Compared with the actual status, a precise strategic gap can be defined, which is the *focus* and the basis for all subsequent steps of ISD implementation.

In the second ISD phase, those success factors on the four layers of the value adding model are defined that are crucial to reach the strategic objectives defined in the first phase. After being weighted according to their strategic importance, the success factors are assessed in a special self-assessment procedure, derived from the European ICS method described above. In the three dimensions 'Quantity', 'Quality' and 'Systematic Management' each factor is assessed by the strategy team on a scale from 0 to 100% and this is backed up with detailed reasoning for this consensus-based rating of the team. This multidimensional *analysis* allows the strategy team to prioritise those fields of intervention with the highest leverage according to the strategic objectives set in the focus phase.

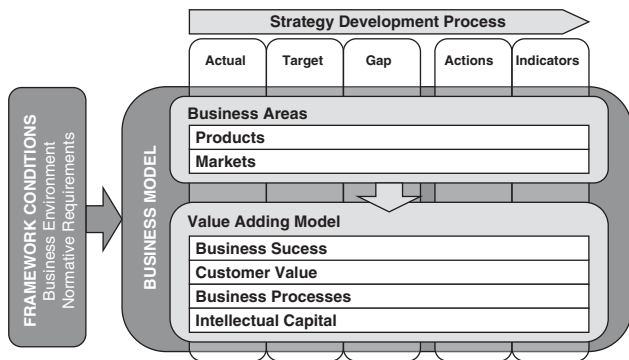


Figure 7 Meta model of ISD (Will, 2012).

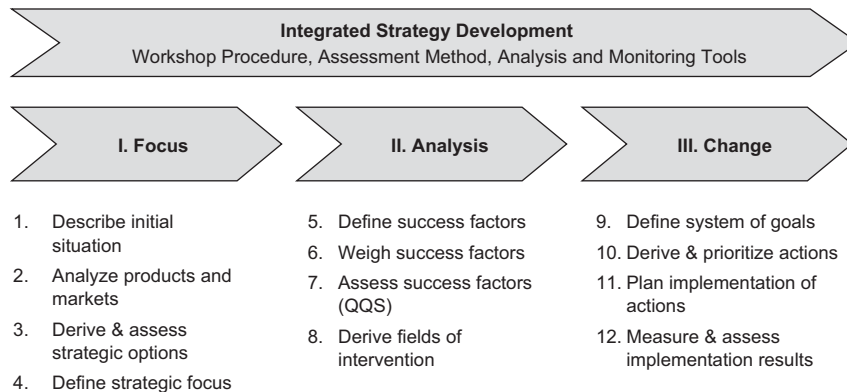


Figure 8 Implementation procedure of ISD (Will, 2012).

Starting from these fields of interventions, tied to the strategic objectives of the first phase, the third ISD phase begins with the definition of a consistent system of goals for the required strategic *change*. In the next steps, suggestions for useful actions to achieve this change are gathered and prioritised according to their impact on these goals of change. Providing a series of practical tools like templates for the planning of actions etc., the ISD procedure produces a roadmap for implementing these actions backed up by detailed operational implementation plans including a systematic analysis of the expected impact on the previously defined strategic objectives and change goals. On this basis, a coherent measurement and control system is built up, consisting of specific indicators assigned to those success factors that should be improved according to the defined fields of intervention and corresponding change goals.

Conclusion and possible directions for future developments

As a final result of applying the ISD method, the company gains an integrated set of actions that are aligned with specific strategic objectives and directly affect the achievement of systematically derived change goals, closing strategic gaps in the intangible resource base as

well as on the level of intangible values from the market- and customer-based view. Moreover, a multidimensional measurement system is derived from the strategic objectives and the operational action planning, which allows the company to continuously monitor the progress and to verify the success of action implementation. This supports systematic and fact-based operational decisions in the future, that is re-adjusting, adapting, adding or cancelling single actions in the context of the defined strategy (single-loop learning), as well as strategic decisions, such as adjusting objectives to new market situations or refining the targeted product portfolio by learning from tests, prototypes or market failures (double-loop learning).

First pilot implementations have shown that ISD supports the consensus-based formulation of consistent strategies as well as the transfer of strategic objectives into the day-to-day management of strategy implementation in practice. The systematically derived indicators can be integrated into new or existing monitoring systems of the company, including adaption into the BSC.

Future developments should focus on the further integration into standard management systems, for example the transfer of ISD results into the yearly financial planning cycle including investment plans for strategic actions defined by the ISD.

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