

**STRATEGIC PLANNING IN GERMAN SMALL AND MIDSIZED  
INFORMATION TECHNOLOGY COMPANIES**

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**ABSTRACT**

Business and its management models are more than ever in flux. Competition is getting stronger, special technologies and cloud solutions become commodity, digitalization and globalization brings up new competitors, customers are more than ever well informed and the intervals of national and global crises with economic or political background are getting shorter. The changing nature of products is disrupting value chains and forcing companies to rethink nearly everything they do, from how they conceive, design, and source their products; how they manufacture, operate and service them; to how they build and secure the necessary IT infrastructure.

Telecommunication and especially vocal transmission of information by phone calls has undergone already one main change in the transmission from analogue to digital telephone switching units. Analogue switching stations needed mechanical dial tools of large ground consumption in technical buildings. The change to Integrated Services Digital Networks (ISDN) switching devices was one fundamental change by adding digital technology and the old mechanical switch machines became irrelevant. Today is even the analogue telephone line switched by a digital switch unit at the phone provider. Nevertheless, the ISDN technology is at the end of life, too. The new technology will be even simpler but universal in its kind as well. Voice over Internet Protocol (VOIP) is using the Internet Protocol (IP) that accepts any kind of data to be transferred and interprets voice only as simple data.

How do managers of SME in Germany within IT business design their long term planning process? Which factors do managers of SME in Germany target in their long term planning process?

**Keywords:** SME, Strategic Planning, SME, ISDN, Germany

**Introduction**

Information Technology is a field of expertise that requires the adaption of constant changes initiated by the environment, especially by competitors within the own market segment. Some market segments change due to social disruptions, others due to new jurisdiction or laws.

Thinking of the development of global players within the Information Technology (IT) - like Apple or Google - one must accept, that their market power gives a global position to shape the demand for products by their company's perspective and to their own benefit.

Small market players have not this ability, due to a lack of market presence and financial background. They cannot influence markets according to their business models or business aims. SME companies have to adapt and deal with market developments by adjusting their own business model, products and services to the current development.

This article aims for the mechanisms that influence owners of SME within the IT segment in Germany. It tries to discover the planning structure and the according planning process for business development, out of a fast changing market environment.

There is one major technical disruption of a widely used technology ahead. Integrated Services Digital Network (ISDN) phone technology is at the end of life in Germany. It is main technology for land lines in telecommunication, worldwide. The technology is substituted in the upcoming years by Voice over Internet Protocol (VoIP), and in Germany even within the years 2017 and 2018. Modern internet based communication protocols are more affordable and reduce the costs for maintenance. Information Technology (IT) companies that sell ISDN related products or services must change their business model accordingly. The question is, how did they plan for their own future business model? Moreover, did they really plan or is it to be an incidental process.

## **Material and Methods**

### ***Research Design***

The Research Design is selected among the three main designs, quantitative, qualitative and a mixed approach. Research questions have therefore to be analysed by their aim, audience and population. Creswell defines a quantitative approach as suitable for "testing theories by examining the relationship among variables" (Creswell, 2013, p. 4). As both research questions aim for the development to the current situation or a process, the relationship among variables is not to be researched. The qualitative design is on the other hand "exploring and understanding the meaning [...] individuals ascribe" (Creswell, 2013, p. 4). The focus is in a qualitative approach on the individual meaning. As the main population for this study is limited by the number of subjects having insight in the topic, the sample size is expectedly small as well. The information of each individual is therefore to be valued carefully and evaluated precisely. Miles states that qualitative research design is related to "small samples of peoples nested in their

context” as applicable in the context of IT SME in Germany (Miles, Huberman, & Saldana, 2013).

### ***Research Type***

The description of the case follows clear structures that are defined primarily in Yin (Yin, 2013), giving the most detailed information on case study research design, supported by Flick (Flick, 2014) describing the framework in qualitative research. Further is the construction of the case described in literature by Kumar (Kumar & Phrommathed, 2005). Another detailed description with Behavior guidelines in case study research is given by Cohen (Cohen, Manion, & Morrison, 2013).

Case studies are distinguished into four main characteristics, according to Yin (Yin, 2013). The structure of the case is to be determined in research design. Single-case design is concentrating on a unique case, a critical or an extreme one. Multiple-case designs are required in studies where several cases are to be compared with one main case. Both groups, single and multiple designs can be divided into the standard or embedded version of the case. The embedded case is in both cases the version in which the case or cases can be divided into subcases. Subcases might be necessary as they describe the one case clearer. Cohen states in that context that embedded cases are forming one case by subgroups within each case (Cohen et al., 2013, p. 291).

The case of this thesis is a single case to be evaluated. One case is in that context described by more than one SME entities. That context implies an embedded, single-case design as formed in literature on qualitative case study design.

Embedded single-case designs are according to Cohen (Cohen et al., 2013, p. 291) best to be evaluated with tools such as observations, interviews or questionnaires. Analysis of data and sources is the object of the study and performed in an exploratory and descriptive process.

### ***Main population***

Sampling theory starts with the description of the main population, where the sample is a subgroup from (Kumar & Phrommathed, 2005, p. 164). According to Kumar is the sampling process in qualitative research not as detailed as in quantitative research. The aim for qualitative research is to describe the situation in which the research takes place (Kumar & Phrommathed, 2005). In context to this thesis is the environment described in the case itself. The main population is therefore defined as all companies in Germany, out of the IT Sector and more specific out of the software programming business in ISDN context. The companies in question are out of the SME segment

### ***Sampling***

Sampling is according to Kumar in qualitative research bound to the saturation point, which is defined by Kumar as the point from there on no new data can be discovered (Kumar & Phrommathed, 2005, p. 165). The saturation point is in this thesis discovered within the interview process. A first sample size of five interview partners is aimed for, so that information on the business structure can be discovered. Small sample sizes are productive, as Miles states (Miles et al., 2013, p. 31). The qualitative research gathers a large number of data from one single source that needs close investigation. The sample size is therefore defined as of five managers in the selected business segment.

Kumar defines three main sampling strategies, random, non-random and mixed sampling (Kumar & Phrommathed, 2005, p. 170). Aiming for the main population, the best way to approach software on ISDN telecommunication is to find the place where the business meets in trade fairs and conferences. Approaching managers here and selecting them by their company segment is one useful strategy to gain access to the managers of the designated business segment. This strategy is according to Kumar and Creswell defined as of random sampling (Creswell, 2013, p. 158; Kumar & Phrommathed, 2005, p. 170).

### ***Sample***

Germany's trade fair landscape dominated by one main trade fair on telecommunication and computers (CeBIT) in Hannover that is taking place annually. This trade fair offers visitors a wide variety of products and is designed to inform the mass market and end customers of telecommunication. This trade fair has in 2016 3.300 exhibitors and is therefore too wide as to get in contact with the required businesses.

One smaller trade fair and conference is the Call Center World (CCW) that offers access to companies out of the professional user segment as well as suppliers around the telecommunication infrastructure and software.

CCW 2016 was taking place in Berlin and has a number of 267 exhibitors. This number offers direct contact within three days of the fair to the management and sales force of exhibiting companies. Within the trade fair a contact to 12 SME companies out of the software segment in ISDN could be established. Five of these companies offered to participate in the survey for this study by an interview in person or via the telephone.

Yin states in his work that the selection of the sample has to be equitable, as no group of people is being treated unfairly or even excluded (Yin, 2013, p. 78). The process of sampling in a trade fair within the designated business sector offers the best chance to reach out to all of the

participating companies, searching for contact and increasing their business. Excluded within this selection were all companies that did not participate in the trade fair. Given the fact that a number of 267 exhibitors participated alone in the German market, the number of excluded businesses is to be seen as extremely small. The market of call centre businesses in Germany is limited. Call Center Verband, the German inter-trade organization in call centre business has around 300 participants, showing that the 267 exhibitors of the CCW in 2016 exclude only a limited number of players in the market segment. These players might be of small companies, but given the fact that one half of participants are customers, the other half is suppliers. That limits the number of excluded companies in the sampling process by half. Excluded companies might therefore be around 15-30, depending on the exact number of companies in the CCW.

Sampling is still done on a randomized basis, but the selection process is in the context of the trade fair constraint to the participants of the fair and personal access to them. Conversation and the selection by stands on the fair were supported by a pre-selection of exhibitors out of the exhibitor listing on the fair. This preparation and pre-selection is in context to the case definition seen as purposive sampling (Cohen et al., 2013, p. 161).

The first contact to the possible sources has been made on the trade fair, as described in the sampling process. In that context were the possible partners informed that their data is being used in a research study on the development of SME's in Germany's telecommunication industry. Contact data have been exchanged and they were given the information that contact will be made within a few months of time from the trade fair onwards.

The first contact was made by e-mail after the research design of this thesis was finished. Interview process and ethical considerations were ready for the interview phase and pre-checked by three sources within the industry. The e-mail addressed the interview partners, reminded them of the meeting on the trade fair and requested a set of three possible dates for meeting in person or interview time via telephone. The necessary interview time frame was announced as of one hour.

### ***Question design***

Qualitative research design is concentrating on the level of information, given in free speech or observation. The standardized form and strict structure of a quantitative design can therefore not be achieved. Embedded single-case designs as in the structure of the case for this thesis, are according to Cohen best to be evaluated with tools such as observations, interviews or questionnaires (Cohen et al., 2013, p. 291).

The observation of long-term planning and the process of such planning is due to the nature of such process inefficient. Planning is influenced by information that is gathered constantly. This information is shaping the attitudes and values of a manager. Of interest in this study is whether the management in SME companies have a planning process and how it is rolled out in the business. Most promising in this context is an interview process as described in methodology literature for qualitative research (Creswell, 2013, p. 191; Kumar & Phrommathed, 2005, p. 123; Yin, 2013, p. 239). A detailed process of designing the interview process is taken from Clough (Clough & Nutbrown, 2012, p. 128). The process for an interview has further been adapted in dependence to Adelman in form of a semi-structured interview (Adelman & Jenkins). The strategy behind the semi-structured interview is to gain answers from open questions but in an order that has been predefined. On one hand is the semi-structured interview the interviewer supporting that no topic is to be forgotten, on the other hand is the interview partner free in his answers. Open questions are to be given, to gain the answers in free speech. Closed questions are in an interview process possible, but in the end of the interview to gain background data and answers to digital questions of yes or no. The interview questions are to be arranged in a manner so that the widest questions, where answers are as open as possible, are asked first. Questions with specific and more detailed knowledge or interest are at the end of the question routine. From the wide to the narrow perspective (Starman, 2013). Kumar states that there is also the possibility of random question order, but at the same time he gives advice to follow the rule from broad to narrow perspective (Kumar & Phrommathed, 2005, p. 140). Such semi-structured process guides the interview partner and supports the concentration on the currently addressed topic. Creswell points directly to the chance of leading the interview partner in a way that has been planned and structured through the interview session (Creswell, 2013, p. 191). This opinion is supported by Turner (Turner III, 2010). Turner states that the straying towards another argument or topic can be minimized by the interview structure. Another argument for the structured type of interview is the chance to write a structured interview protocol, following the line of argumentation within the interview. The line is to be expected as linear towards the pre-developed interview order of arguments and topics of interest. Such order allows the researcher to cumulate the fitting answers and analyse the transition arguments from one topic to another (Jacob & Furgerson, 2012).

Interview questions are designed, as in literature described, in a way so that only one argument or subject is being asked for and by formulating questions in an open ended way. Each of the interview partners of a semi-structured interview will be asked the same question in the same way and in the same order. That offers the best comparable and logical link between the interviews. No interview partner is given a different way of building and developing answers out

of a different history within the interview. Such approach supports the logical order and similar development of links between the different variables.

In correlation to the case, managers are as interview partners to be selected. They have the information on variables and long-term planning insight. Nisbet recommends senior partners for interview processes (Nisbet & Watt, 1984). That statement aims for managers or even better the proprietors of the companies selected.

Yin describes the interview process for case studies as consistent of five stages (Yin, 2013, pp. 90-91). Questions on the specific case are of the highest importance and questions on the personal situation of the interviewee follow behind.

The order of questions is bound to the order of the variables stated in the chapter before. Variables have been described in a way from the highest importance towards the lowest. The question order must refer to the widest context, the most open one, and then narrowing it down to the most specific information. Such structure supports the avoidance of bias in answers. The most specific answers in the beginning would focus the attention towards the specific topic and relate all following answers to this specific topic. Questions follow therefore the order from wide to narrow in context of the case and long-term planning.

The first set of questions focusses on the evolving planning variable. Managers have the option to display the development of their planning structure in context to the case. The operationalization of long-term planning is in direct context to an evolving planning. How is planning implemented in the company's structure? Adaptation of environmental changes refer to a specific event and show the ability to change a plan within the business. Verification allows the manager to display how the changes in business are being monitored and how the business reacts towards unforeseen actions. This set of questions is followed by the methodology variable. How is planning planned and are there any tools involved? More precisely is the question on the funding of long-term planning in the business. This variable goes in the budget of the business and verifies if the explanations before are really operationalized. A definition of the USP and the current and future USP follows up. Here is the moment where the questions aim for the situation of a software product around the ISDN technology. A software product at the end of its life time has maybe still a USP, but the USP is about to vanish and so does the current product. The last set of questions focusses on the development of a new product and the definition of future business structure and appearance in the market. This set points out how competitive the company still is and if new products are already developed, still being developed and at what time the products enter the market.

- Evolving planning



A vision at the incorporation has to be developed with various stake holders. They have to know, understand and share the vision. The first question aims for the extent and existence of a vision within the company. A vision describes aims for the future and certain factors on teamwork and collaboration. After the description of the vision follows the path of developing a vision and the group of employees or partners involved in the process. Each question aims for the description of a collaborative planning process, the last question is asking for the circle of persons involved. Question one and two offer the chance to an open answer and the last question is descriptive according to involved persons. Questions on the vision implicate deliberately a vision. A vision is in that context the wording for a long term plan, the longest plan in strategic planning.

- Operationalization

That set of questions asks for the doing and the integration in a daily work routine. Evolving planning is followed by the description of the planning process, as the element of “doing” explains the importance besides the daily work routine. Further is the focus on the staff side, whom are the tasks assigned, is the manager planning himself and is he planning alone?

- Adaptation

This set of questions reaches out for the changes required from environmental perspective. How would a company react? That set points the first time directly to the changing situation in the environment of the companies of the case. Their product is in the end of life phase.

- Verification

This section aims for implemented mechanisms that support the planning process in reflecting the output and changes in business out of the plans.

- Methodology in strategic planning

This set aims to discover if the manager is using any methodology at all. If a methodology is used, this set offers the chance to discover which methodology seems useful for the interview partners. The order of questions implies that the interview partner describes open and unbiased in the first sentence how planning is processed. The following questions lead the interviewee in case no answer is given to the first statement. The last question, the most detailed one, aims for the use of classical techniques in strategic planning. Question two and three have a direct question to follow up. This question identifies if the interviewee is not only knowing but using the methods and tools.

- Financing



Each change resulting from strategic decisions or strategic planning itself must be financed out of the profit. In this question set the way how the strategic planning process itself is financed as well how the strategic changes are integrated in the long-term planning was analysed.

- Unique Selling Proposition

The USP of a product or service is the argument why customers should buy this very product. A USP is the main aim for developing a long-term planning. The product can be sold best for as long as a USP is unique.

- Product context

The product in context to the case can be sold only for a limited time. A new product should be already out of the development stage.

Please describe the process for planning new products in your company!

Clearly the interviews are done in a manner that allows the interviewee to answer freely and as unbiased as the questions allow it. That description forces the interviewer to remain silent most of the time and allow the interview partner to float in his answers. The more information to be gathered, the better for the analysis. Qualitative research does on the other not mean that the interviewee can take any direction he or she wants. It is important to focus the interview partner on the topic. Too extensive floating has to be stopped either by asking for focus to the current question or by introducing a new question in the conversation.

***Case description***

The main subject of both research questions points to the use of long term planning processes and its characteristics within the Small and Midsized Businesses in Germany. In context to the long term planning in SME's, the process is in theory widely seen as too complex for application within smaller companies. Many managers are caught in daily business and understand strategic planning as luxury that is only to be executed by large companies. As the generalization of a process for long term planning is difficult in reaching a substantial number of managers for questioning, the qualitative approach seems promising to gather information on this subject.

The case for this research has to be narrowed down further for a successful description of results. Germany's IT business is based on hard- and software development. Hardware business is bound to long term planning already, as the development costs and production cycles as well as the ready for market period are extremely costly. Research and development is the one side of the medal, but the set up for production in terms of machinery and know how even more are challenging. Software products are on the contrary in no need of production machinery besides

the programming hardware in form of computers, venues for the business and communication technology to reach customers and markets. Software is therefore harder under pressure to follow market trends and customer requests. Production cycles are much shorter than in the hardware industry. However, two special features are often neglected in context with the software industry: The first version of a software needs a high investment in research and development and software is constantly changing by the dependencies of all surrounding components in the ecosystem.

Another field of research is currently the German telecommunication market. Germany's situation in the telecommunication industry is at the moment promising for a case study as the telecommunication infrastructure is under a long announced change in technology. The currently used technology of Integrated Services Digital Network (ISDN) is too expensive in maintenance compared to the revenue. About a decade ago was the end of life of ISDN proclaimed within the German market. ISDN requires expensive switching units, as they are a hybrid product between the old analogue systems and fully digital networks. ISDN operates with 90V of source power that is provided by the switching unit for distances in the kilometres. The total power consumption of ISDN is in cities on the edge of being profitable, but with rising energy prices not affordable in the future. Further are the replacement parts also coming to an end of life and are difficult to get already. The latest technology of Voice over IP (VOIP) is using the Digital Subscriber Lines (DSL) with their latest upgrades on Very High Speed Digital Subscriber Line (VDSL) and Synchronized Digital Subscriber Line (SDLS) as base technology. Internet connection is here seen as the channel for any kind of data. Voice is translated into digital packages and nowadays handled as data only. The Internet does not distinguish between e-mails, webpages or telephone calls.

The change to VOIP is putting many of the German businesses at the edge of their existence. Companies that are now still focused on services or products around ISDN might be in substantial economic trouble within the next three years, until 2018. ISDN is about to end with Germany's largest telecommunication provider Deutsche Telekom AG (Hill, 2015). Although the proclaimed death of telephones is exaggerated, the appearance of telecommunication devices is about to change and the supporting technologies as well. ISDN offers several interfaces within the service that are docked by a large variety of software developers to offer their products. One example is the Telephony Application Programming Interface (TAPI) that is a programming interface for telephone services onto ISDN services. Established in 1993 by Intel and the Microsoft, the interface is offering software telephony, video conferences and is the core of most call-centre software products. TAPI is together with ISDN at the end of its lifecycle. Software products that base upon TAPI interface will stop working as soon as VOIP technology is embedded. Most customers of the software products are not aware of the change in Germany.

The end of ISDN was proclaimed for too long without any steps in the process. Customers tend to wait until the end of ISDN is actually happening in their building, which is announced by telecommunication providers three months before.

The case of an ISDN market with a clear end of life perspective in the upcoming years is ideal for research in the field of strategic planning. SME companies in the software business offer within the sector of telecommunication the segment with highest flexibility in changing their business model, due to the lack of hindering production machinery. Software design and programming requires the employees and hardware resources that are in no need of change in comparison to the former business model.

The segment of the changing market in the ISDN to VOIP technology is meeting the expectations for analysis of the strategic planning processes in SME companies. Either have they prepared new products to prevail in the market, or they face high costs while changing their product portfolio in the future when they do not sell any products. The second scenario might be an essential threat to their business.

### **Findings**

The findings chapter summarizes the results of the interviews and assembles the answers to reach a picture that can be drawn from the answers.

Main path is the construct of variables and questions from methodology. All of the participants required to remain anonymous as they fear that their customers gain knowledge about the current situation of their company. This fact can be seen in context to the following answers on planning and future development of all companies in question. Nevertheless a system with capital letters will therefore be used to identify the interview partner.

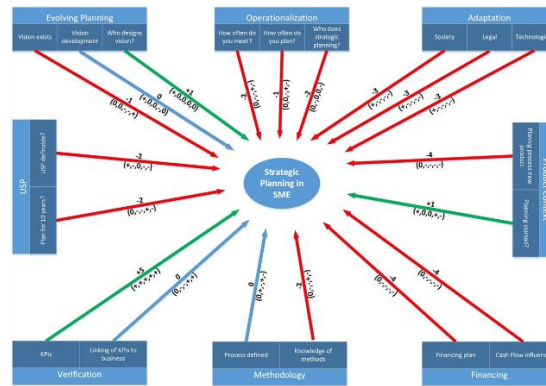
All interview partners are out of management level of their company, all but one are proprietors of the company in question. Interview partner A is on upper management level of the company.

### ***Score Model***

The given explanations on a qualitative basis on the variables have been described and their answers in triangulation expanded with a score index. This score represents a tendency of the importance of the variables on strategic planning of the SME's within the ISDN technology environment. The reasons for acting are explained in the chapters above in qualitative description and the index model delivers insight into the cumulated direction of the answers given.

The following Figure depicts the importance of the variables on strategic planning and helps to understand the influence on the planning process.

Interestingly, only the use of KPIs delivers with a ratio of plus five, the group of involved persons in the design of a vision and the start of a planning for a new product with a value of plus one positive results. Three other values for the linking of KPIs to business activities, a defined process with regard to methodology and the division of a vision have neutral results. The other elements deliver negative results.



In correspondence with the research questions of this thesis draw the various answers the following picture.

**How do managers of SME in Germany within IT business design their long term planning process?**

It can be stated that the planning process is in all proprietor run businesses fully dependent and in the hand of the proprietors themselves. The largest company has a process that is integrating the knowledge of all interested employees out of project groups although the final decision is on management level.

All companies rely on KPIs in keeping up to date information by verifying their current business status, but the link of the gained knowledge to the business is in the majority of cases not done by the proprietors. The vision is designed by more than one person, but one company simply bought the vision and another one involved family and friends in the design. All proprietor run business have no clear vision, only the largest company, recently bought by a corporation, develops a vision right now under involvement of all employees willing to participate. The planning for a new product has been started by two companies, all other companies ignore the imminent threat of an end of life of their products. External influences of technology, society and legal extent are fully ignored by the proprietors. It is remarkable that proprietors ignore all external influences and are of the opinion that their knowledge of the product and its market will

protect them from all external influences. A missing planning and warning system is to be discovered in all companies in question within the survey. Warning mechanisms are not implemented in the reporting, as the reporting process of all companies includes only internal numbers and leaves external factors aside.

Overall it can be stated that the managers of SMEs in this study are in 80% the proprietors of the company. Their internal long-term planning process is not scheduled or described and handled on the personal experience and knowledge of the proprietors. A design is not describable, although in all cases bound on KPIs of the company. The strategy of these companies is describable as fully reactive with no forecast or planning element on external influences. It is assumable that the planning did exist at the beginning of the company but got lost with their business success.

**Which factors do managers of SME in Germany target in their long term planning process?**

The main similarity of all business in question is the use of KPIs in reporting to discover the current situation of their business. All companies rely on the information gathered by the use of KPIs. Nevertheless, one interview partner describes that KPIs out of old business models cannot support modern business processes and need revision according to the new directions in what he describes as “network like logics”. The interaction of business elements and the network structure in delivering products and moreover services to customers demand a new form of analysis of the current state. KPIs are so easy to set up and to handle, that SMEs depend on the information out of that simple reporting form. IT is on the other hand obvious that the interpretation of KPIs is difficult for SME managers, too. The KPIs are used depending on financial numbers or items sold. Qualitative information on the sales process and the growing demand for services – as confirmed by the managers of this study – are not collected although a growing demand for services requires this information. Network logics offer the chance to combine and refine KPIs as well as to connect them to the qualitative demand in a new business situation.

Besides the use of KPIs delivers the design of a vision positive answers on the importance and use within long-term planning. In most cases is the vision just in the head of the proprietor and is not written down and accessible for employees. Nevertheless is the first business idea by proprietors often misinterpreted as a business vision. Visions are influenced by family and friends and only in a small minority by employees as well. One interview partner which company has recently been bought by a corporation describes the importance for the quest for a vision in an extent to which several project groups out of voluntary employees have been set up

to define and describe a new vision, based on the change from product to service centered business. The vision is clearly important for any business, although proprietors misinterpret the vision as their first business idea.

Another interesting position in the market is that all interview partners, except for the one which company has recently been bought by a corporation, neglect the influence of social, technological or legal changes in the environment on their long-term planning and their product. All interview partner that stated so have been the proprietors of their company and were of the opinion that they well understand their business and their customers so that influences from outside are not important for them. They understand themselves as the experts and state that external influences are not important and need no further observation for planning on products and services for the market. This statement is very interesting in the context of a market that is already at the end of life and even more interestingly as all these proprietors have no new product or service ready for the new market demand.

Another interesting example for the variables on long-term planning is the financing strategy of the companies in question. The large company recently bought by a corporation has theoretically unlimited funds in the design process for a new product. The corporation understands that the company at the end of life of its product and sees the potential to develop a new business segment, the service industry and consultancy with a side effect of selling IT products. In this case the unlimited funds are designated to the design of the new business direction, a new vision and a resilient business concept. All other four companies use their funds for small changes on their product so that it can be sold until the end of ISDN technology is finally reaching their clients. All changes are so minor – and have been minor since the first design of the product – that they can finance them out of daily business. Just one interview partner answers that he uses a small bank out of his village to support him. The scope of repay is here within months. All interview partner state that financing is no real challenge and the changes necessary are so minor that they can be done in weeks of time. Interestingly the need for financial sources – since Basel II bound on a clear strategy on how to use sources – does not force them to set up a long-term plan that has to be approved by an external professional within a bank. Long-term planning even on financial elements does not take place in proprietor run companies within the ISDN environment. This result leaves one interesting conclusion. Funds are not needed in all these companies. Business is dying, the market is shrinking and steeply going to the end of life. No new product is designed and no design process has been started. It seems that there is simply no need to come up with a new product. The proprietor has financed his private life and runs the business up to the very end. Future plans are not needed any more.



## **Discussion**

This thesis started once with the idea to develop a planning framework for SMEs and wanted to depict the simplicity of strategic planning even for SMEs on the example of a market at its end of life. The idea was to show that under the pressure of the end of life phase a company is designing a new product or service, and has a planning process that is simply in the mind of the proprietor. This process needs to be extracted and structured and might be a role model for other proprietors in the quest for a simple approach on strategic planning structure for other businesses. At the end of the study it was clear that no planning process can be extracted as all proprietors run blindfolded in the end of their business. They do that willingly, they do not see the end of life as a threat to their personal situation. The only conclusion from this development is, that they do not need to make business from a private wealth point of view any more. All proprietors seem to have gained substantial funds over the last decades with their product, so that they do not need to plan for a second phase of their business. They missed the point on which a sale of the business would have produced a return as they calculated that the end of ISDN is still far away. In a certain way they were right for around 15 years. Now is the end already there, some 20% of ISDN lines have been discontinued by telecommunication providers already. One would assume that the businesses of ISDN technology related products would come up with a new product or service for the clearly marked follow-up technology, VoIP. All companies in question deliver no answer to the end of life of their market. One company escapes this dilemma by being integrated into a large corporation. That way they have to follow the planning processes of the large corporation and deliver answers as well as develop new strategies. Moreover they have been assigned a new strategy in consultancy of businesses of their customers, getting highly involved in the business processes of customers and deliver solutions for the processes that are IT supported. This strategy looks promising and is even implemented already. All other proprietor-run-businesses are not even entering a planning phase on a new product. It is difficult to describe a strategic planning process when the strategy is based on the “gut feeling” of proprietors who once brought an innovative company to life and miss to keep it alive. Coming up with a second new idea in life seems difficult. Interestingly, all proprietors do somehow decline the end of life of their product, although the market development and literature describes the exact opposite. ISDN technology is at its end of life worldwide. The technology is too expensive, IP based telephony is in hardware everywhere already existing where a computer is connected to the internet. The long-term strategy of all proprietors is the end of life of their business, they look just for keeping their existing business, their current vision and their current product model up to the last possible moment. In the end there is no product left and they have to close the business. Proprietors maintain only minor changes to their products and calculate with the termination of their business activities in the mid-term future.



Interestingly describe the proprietors their “strategy” as to look at the other market participants. That is their form of market analysis. The market has been reduced over the last ten years and most participants have withdrawn from that market, too. The market is formed by several SMEs that seem therefore to observe themselves and miss the overall development outside of their market.

One obvious conclusion of this thesis is that information given to an analysis is only as good as the person feeding it. The reduction to only one person, the proprietor, leads to certain blind spots that reduce the quality of an analysis and misses out information that is next to the usual path. Thinking out of the box, once a strong advantage especially of these small businesses, is gone with routine and satisfaction of the proprietors. It seems that most of them missed to build a follower, a new leader for their company. Some proprietors might not wish to build one and sell or close their business for their retirement. Nevertheless is thinking in the box their result for the dilemma of their business. Influences from outside, social, technological and legal have been ignored for too long.

Proprietors describe the importance of KPIs for their business. That would make a step towards the development of a strategic framework for SMEs. Nevertheless state all proprietors later that they do more or less not link the KPIs to long-term development or planning. They use the results just for marketing purposes in adjusting their marketing strategy online so that their resources are optimized. One manager, the one of the company that got bought, states that former KPIs are not valid today. The business model is changing, customers are changing and in a new customer and not product centric approach these KPIs do not gather useful information anymore. KPIs need to be adjusted on a customer centric point of view.

Funding out of daily business returns is one sign for the extent of changes these companies face. Minor changes are enough to satisfy the market and these changes can be financed out of daily returns on a time horizon of a few weeks. Strategic planning is out of their scope as these changes do no harm to their business model. These proprietors are not forced to plan for the long term, they have no necessity to plan any longer. It seems that they either set their horizon for long-term planning so short that the end of their market is still not to be discovered, or that their need to have income out of the business is not existing and the short-sighted horizon fulfils their personal goal. Personal wealth seems the only explainable reason for such short-sighted planning. The proprietors seem not to stay in business for financial reasons any longer. Just one proprietor states that changes out of strategic thinking to stay in the market would “restrain” him and do not deliver results that are useful when not turning the company upside-down in the end. That statement describes the situation at its best. Changes at the end of life of the only product they have are substantial. They take a lot of energy and are hard and time consuming. There is no

will to start such process in all of the proprietors, they just want to continue as long as possible. This statement describes a proprietor that has made a decision. Investment into his company would start to pay back in five or ten years. By then the private long-term planning of the proprietor is to retire or be in retirement already. These investment would never be returned or only on a limited amount, the ROI is not calculable. The intention of a proprietor is therefore not to invest and start over, it is to remain in the current situation, get financial benefit out of a business that is about to end and close the business down.

Altogether that is a strategy. It is not a long-term strategy, but a strategy altogether. Keeping up the business until the end of life happened, delivers declining but existing income. There might be a small chance to deliver products to niche systems that remain in a closed environment for another ten years. Anyhow, the company itself has no future that way but the proprietor gains some additional profit.

Unfortunately this strategy is not delivering insight into a framework of planning that is worth describing it for other SMEs to learn from. That strategy is understandable from the point of view of its proprietors, although the social responsibility for their employees seems not existing. Keeping up the business until the very end requires out of social responsibility an open communication with all employees. That is another aspect that is worth analysing it in another scientific study. Social responsibility at the end of life of an SME and how the proprietor handles that seems an interesting point at the end of this thesis.

The result for employees of such companies is to find new employers soon and leave the ISDN market behind. Customers can not expect innovation out of these businesses and consultancy out of these companies is doubtful, too. Who wants to be consulted by experts that are not open to new technologies and look more in the past than into the future? Even the service industry needs innovative market participants. Living from the past and looking into the past is obstructive in finding innovative products.

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