

ERP / IT Strategy Guidelines

**Procedure Model for Development
of an ERP / IT Strategy**

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1 Preface

Technology has become such an integral part of our lives to a point that business is impossible to imagine without it. For decision makers, top managers, information technologists and information and company consultants, the question arises: how can this need be utilized as a success factor?

This book concentrates on answers to this question and describes the most effective way to a customized IT strategy which has been derived from the company strategy. Solutions give rise to several frequently asked questions:

Does a company really need an IT or ERP strategy and what advantages would it have? Does an IT strategy not only make sense for larger corporations? What would an efficient strategy cost and should our company pay it? What are the advantages for executives, managers and IT?

How do I start a strategy project the best? Do I entrust external consultants or can I instruct my internal IT department to complete the project? Can company management delegate an ERP / IT strategy or is it necessary to associate valuable and expensive resources from top managers? Does a proved and tested model for development of an IT strategy already exist? What approaches would therefore be considered?

Would the strategy actually be used practically? How can I ensure that the invested time and related costs for strategy development will actually be implemented and used correctly? Why are ERP and IT strategies still seldom used?

What organizational entities apply to the IT strategy? Should the computer science strategy also provide for and include telecommunications?

Does an ERP strategy replace a process analysis or does an ERP strategy increase the value of ERP implementation? How do ERP and IT strategies collude?

The answers to these questions are summarized in structured guidelines which support company specific strategy development. The procedure model can be applied to the entire IT system as well as to the business processes within an ERP system.

This book provides a basis for preparation and development of a planned strategy project which assists facilitators and project leaders during the project. In addition, it explains procedures and goals of an ERP / IT strategy to contributors from management and IT.

2 Introduction

Information technology has developed into one of the most important success factors in achieving company objectives. Does your IT strategy account for your company strategy?

According to university studies¹ there are still only information strategy approaches used in companies and even these are hard to come by. An efficient ERP / IT strategy is a component of the company strategy and is even derived from it. In this way the company is especially supported in the most important and profitable business areas by the strategy.

This book with the title „ERP / IT Strategy Guidelines - Procedure Model for Development of an ERP / IT Strategy“ is concentrated specifically on this subject. The goal is to help provide guidelines in the form of an ERP / IT strategy book for large companies as well as small and medium sized companies so that they can create their own ERP / IT strategy either independently or with support from an external consultant.

2.1 Academic Background

This publication originated at the Business School Vienna in Klosterneuburg and derived much of its know-how and documents from the University of Innsbruck and the University of Linz in addition to literature on this subject matter in business and information technology.

2.2 The Author

The author, Johannes Schwab, has been active in the industry since 1988 and has continued on by furthering his education within the field of computer science, in particular in the area of information management. His professional career began in information sales and project management, which mostly included the design and implementation of computer solutions for small and medium sized companies.

¹ L. J. Heinrich, I. Häntschel, G. Pomberger, Diagnose der Informationsverarbeitung. Konzept und Fallstudie, in: CONTROLLING 3/1997, p. 196 - 203

L. J. Heinrich, G. Pomberger: Diagnose der Informationsverarbeitung, in: Stickel, E. et al. (Hrsg.): Informationstechnik und Organisation. Planung, Wirtschaftlichkeit und Qualität, Teubner, Stuttgart, 1995, p. 23 - 38

L. J. Heinrich, G. Pomberger: Prototyping-orientierte Evaluierung von Software-Angeboten, in: HMD - Theorie und Praxis der Wirtschaftsinformatik Bd. 197, 1997, p. 112 - 124

He has worked for many international corporations such as Porsche, Alcatel and SAP and was a consultant for companies in the areas of trade, industry, insurance and financial services. Since 2001 he has been successfully self-employed in HR consulting and as a management consultant in the areas of SAP and information technology. He has worked on diverse projects with many well known companies such as Swarovski, mobilkom austria, Engel Austria, Gebrüder Weiss, CSC, Flughafen Wien, SAP Österreich, Intesy Business & IT Solutions (Böhler-Uddeholm), RHI and Accenture.

In addition to his degree in information systems, he is a certified SAP consultant in business process management and therefore could liken his 20 years of experience with general theory and incorporate this into his daily work.

2.3 Structure and Contents

This book aims to serve as a set of guidelines which, using a methodical procedure model, support the development and formulation of an ERP / IT strategy. The underlying research has both a theoretic and empirical nature. This concentrates on the scientific methods of strategy development found in literature and standardizes this in one efficient procedure model.

The contents² deal primarily with the following:

- IT-diagnostics,
- Situational analysis,
- Derivatives of strategic IT goals,
- As well as the resulting development ERP / IT strategy.
- The finished ERP / IT strategy is finalized in action planning which is derived from the ERP / IT strategy.

² L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 301,
L. J. Heinrich, F. Lehner: Informationsmanagement, Oldenbourg, München 2005, p. 74

2.4 Concept ERP, IT & Technical Terminology

The term ERP stands for „enterprise resource planning“. ERP is application software used to support resource planning in a company in all of its organizational departments.

These strategy guidelines integrate the following areas into the term IT (information technology):

- DP (data processing)
- EDP (electronic data processing)
- Computer science
- IS (information systems)
- ICT (information and communication technology)
- IP (information processing)

Furthermore IT includes:

- TC equipment (telco, telecommunication or radiotelephony)
- Mobile ICT systems.

In general the procedure model can be used for the creation of an IT strategy, ERP strategy or a combined ERP / IT strategy. The term ERP strategy is not as common as the term IT strategy. A comprehensive IT strategy should include the area ERP. Because these strategy guidelines enable the development of a stand alone ERP strategy, this book uses the term ERP / IT strategy.

2.5 Areas of Application

These strategy guidelines should assist smaller companies with their strategy development and therefore avoids using scientific concepts and specific terminology. Furthermore, straightforward examples are used to make understanding the topics even easier.

It has been designed as a reference book and procedure model for decision makers, upper management, information technologists and information and company consultants. These strategy guidelines are non sector-specific and are designed for all company sizes. Due to its basic design it is useful not just for small and medium sized companies, but can also be beneficial for larger companies as it sticks to the motto „keep it simple“!

These strategy guidelines cover topics, when needed, such as IT architecture, systems, platforms or networks. These are, however, only very general from a management point of view and are not a technical view.

3 General

„Strategy is the art and science of developing a company's strengths so that a most profitable survival can be ensured.“³

Information technology and communication have recently developed into important competitive and value creating factors for companies in achieving their goals. Even smaller companies are often included in supply chains. For business partnership continuation, key accounts are demanding compatibility in communication and business processes more and more. This requires that even the smallest companies have state of the art IT solutions which can be ensured through tailored ERP / IT strategies.

An efficient ERP / IT strategy is an integral part of the company strategy and is derived from it. In this way the company can successfully support the most profitable and important business areas, especially those areas where it is necessary. This enables appreciation in cooperation between business, organization and technology.

It is a top priority and must be assigned and approved by upper management. Management's cooperation is instrumental and a prerequisite for forming a successful ERP / IT strategy. An ERP / IT strategy design without management would be flawed internally and could therefore lead to false derivations. Implementation of such a defective ERP / IT strategy would encounter resistance within the company and run the risk of failing from the outset.

3.1 The Business World and Data Processing

The business world and data processing (information technology) continue to merge together and in doing so, new technology is brought out in even more frequent intervals. An ERP / IT strategy can only be effective if it is adaptable, flexible and provides lasting support for company success over a long period of time. It should assist in increasing company value as well as providing for quick adoption and implementation. At the same time it should not lose sight of cost efficiency and the IT costs should be kept low. In general, an ERP / IT

³ H. Simon: Das Grosse Handbuch der Strategykonzepte – Frankfurt/Main 2000, p. 9 (quotation)

strategy should also be innovative, at least when the company strategy requires this.

3.2 Why Strategic IT Planning?

The question of „why do we need strategic IT planning?“ can be fittingly answered with the following quote:

„The internet is the kind of technology which contributes most effectively to diversifying a company because it creates a major digital market. In other words: it is a comprehensive company information system which connects an infinite number of sellers, buyers and shareholders and encourages the effective and economic exchange of data, products, services etc. Management needs to recognize the opportunities and risks associated with technology development early enough and react accordingly. This corresponds to the definition of challenges and demands of implementing a strategic IT plan.“⁴

3.3 History – The Development of the Concept “Strategy”

Beginning in the 1960s⁵ the word „strategy“ sporadically emerged in professional journals. In the 1980s “strategy” became a more modern and centrally used concept for management. Previously the term strategy was used more for military purposes and was associated with Carl von Clausewitz (1780–1831). He was famous for his work “Vom Krieg” and wrote about strategies, tactics and philosophy. Even today his theory is taught in military academies. Furthermore it is also applied in company management and marketing.

Prof. Michael Hülsmann⁶, Director of the Institute for Strategic Corporate Competence in Germany, views the development of the concept “strategy” as outdated- already arranged resources so the military can implement defined goals. Around 1920 he comprehended the use of strategy in business administration as thorough planning of alternatives for any possible situations that may occur.

⁴ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 197 (quotation)

⁵ H. Simon: Das Grosse Handbuch der Strategykonzepte – Frankfurt/Main 2000, p. 9

⁶ M. Hülsmann, I. J. Timm: Strategic IuK-Evaluation, Deutscher Universitätsverlag, 2006, p. 19

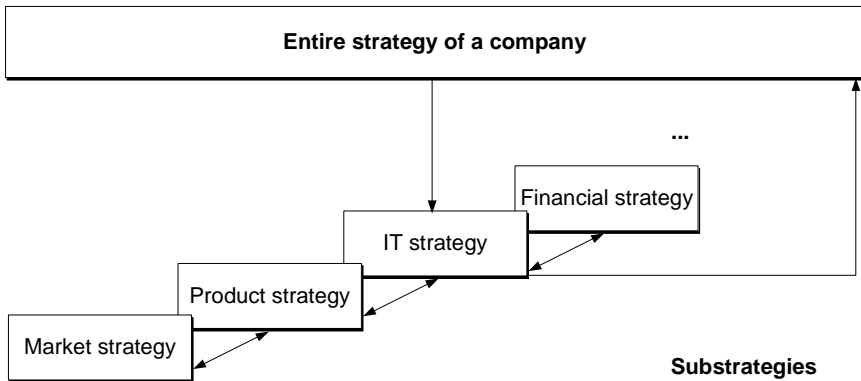


Figure 1: ERP / IT Strategy as Partial Strategy¹¹

Strategy planning can occur at the following levels:

- Entire company in the form such as holding or group / corporation
- Business areas such as competition strategies
- Organizational areas such as marketing, IT (ERP / IT strategy).

¹¹ H.R. Hansen, G. Neumann: Wirtschaftsinformatik I, UTB, Wien 2001, p. 190

4 Overview

4.1 Concept of Strategic IT Planning

The concept¹² of strategic IT planning can be shown in the following model:



Figure 2: Overview of Concept of Strategic IT Planning

A prerequisite for change in information technology is the preparation of the actual situation and an analysis of the current situation by means of IT diagnostics. This is done by the IT department. On the basis of the

¹² L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 301,
L. J. Heinrich, F. Lehner: Informationsmanagement, Oldenbourg, München 2005, p. 74

4.2 Significance of IT Strategies for SMBs

An interesting survey²⁰ of 22 SMBs in Germany gives information regarding the significance of IT strategies for small and medium sized businesses. The survey took place in the area of Baden–Württemberg in several industries.

4.2.1 Definition SMB

To start with, a short definition of SMBs will be covered. The Austrian Chamber of Commerce refers to the EU²¹ definition of SMB which defines a large company as having more than 250 employees.

Company	Number in Austria 2005 according to Statistik Austria	Employees	Turnover	Total assets	Independence: minority interest shares or voting rights
Smallest	244.296	less than 9	≤ EUR 2 mm	≤ EUR 2 mm	< 25 Percent
Small	29.681	10 - 49	≤ EUR 10 mm	≤ EUR 10 mm	< 25 Percent
10 - 19	19.404				
20 - 49	10.277				
Medium	4.706	50 - 249	≤ EUR 50 mm	≤ EUR 43 mm	< 25 Percent
Big	995	more than 250	> EUR 50 mm	> EUR 43 mm	> 25 Percent
Total	279.678			10 - 249 employees 34.387	

Table 1: Definition SMBs

According to Statistik Austria²² there are around 1,000 companies in Austria that meet the criteria of large companies. More than 34,000 companies in Austria are designated as SMBs, companies with 10 to 249 employees. Additionally there are 244,000 of the smallest size company with less than 10 employees.

²⁰ G. Schug, S. D. Herrmann: Strategic IT-Planung für kleine und mittlere Unternehmen, VDM Verlag Dr. Müller, Berlin 2007, p. 59 - 67

²¹ Official Journal of the European Union: COMMISSION RECOMMENDATION of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (notified under document number C(2003) 1422); Official Journal of the European Union 2003, p. 1 – 6

²² STATISTIK AUSTRIA Bundesanstalt Statistik Österreich: Hauptergebnisse der Leistungs- und Strukturstatistik 2005 nach Beschäftigtengrößenklassen, p. 1

4.4 Architecture Model of Information Infrastructure

Normally information structures are created in a “bottom-up” type manner, however the correct way to create information infrastructure is “top-down”.

The righth way
to an IT strategy

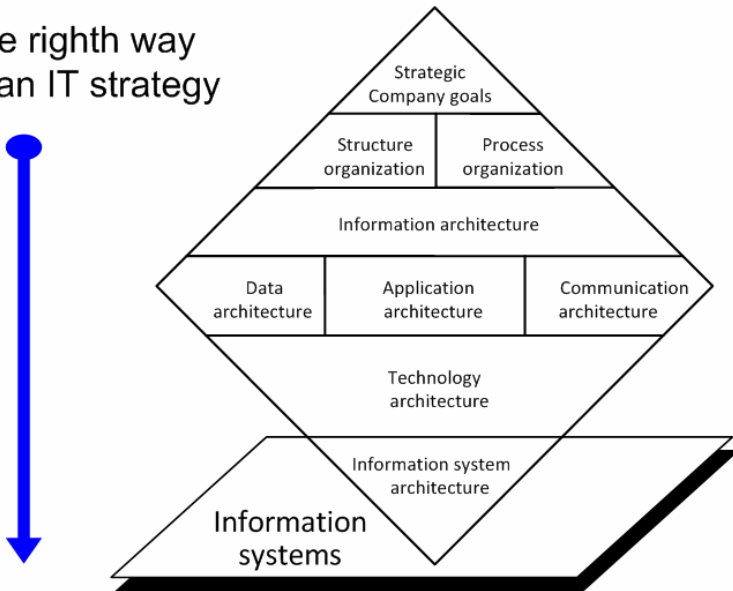


Figure 12: Architecture Model of Information Infrastructure²⁶

This figure was created by Krcmar in the year 1990 but it still has meaning today. The procedure model described in the following chapter has shown parallel ideas to Krcmar and proves that it is cutting edge.

Even in some of the most well known companies these principles are ignored. Companies with historically prolific yet uncontrolled IT growth are in good company.

²⁶ H. Krcmar: Bedeutung und Ziele von Informationssystem-Architekturen. In: WIRTSCHAFTSINFORMATIK 5/1990, 395-402

4.5 IT Controlling Process

IT controlling is an important part of ERP / IT strategies and guarantees monitoring and optimization.

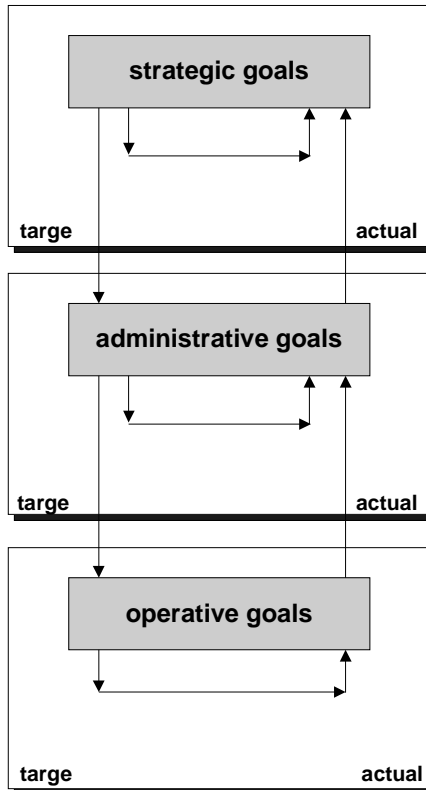


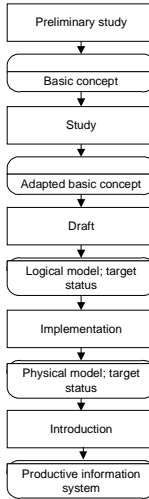
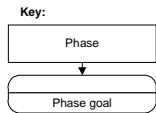
Figure 13: IT Controlling Process²⁷

The objectives are planned by upper management at the strategic level. Implementation of the goals takes place “top-down” to the user level. Feedback about the objectives takes place “bottom-up” returning from the operative goals, over the administrative goals back to upper management.

²⁷ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 216, 217
L. J. Heinrich, F. Lehner: Informationsmanagement, Oldenbourg, München 2005, p. 169

The difference with other phase models is the omission of

- System care
- System testing
- System documentation



Applied methodic approaches:

Target status orientation

Current status orientation and target status orientation within the scope of the basic concept

target status orientation, data orientation, inside out approach, prototyping

as draft

target status orientation, system integration reorganization methods

Figure 14: Phase Goals and Methodology Approaches in the Process Model⁴⁰

4.10.2 Methodology Approaches and their Use in ERP / IT Strategy Development

In the following the different methodology approaches are summarized. They are divided into two groups: those which support strategy development and those which are not applicable for the ERP / IT strategy. The second group is especially encountered in software development.

Useful for ERP / IT strategy development:

- Current state approach
- Consensus oriented approach
- Outside in / inside out approach (only used in specific situations)
- Target state approach
- System approach

⁴⁰ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 225, Autor: Art der Darstellung

4.10.2.1.6 System Approach

In the system approach⁴⁶ the inspection area is expanded as long as necessary until all of the causes and effects from the original inspection area are covered.

Example: For the development of an ERP / IT strategy all stakeholders are considered because they create causes for the information system and are also affected by the effects of the information system. The area of inspection is expanded until the furthest shareholder (executives) are reached.

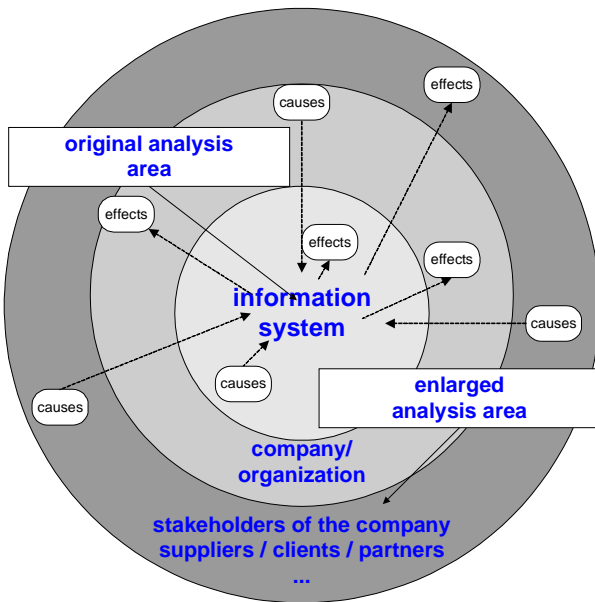


Figure 15: System Approach (own illustration)

It is very useful for ERP / IT strategy development and should be especially useful for the situational analysis.

⁴⁶ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 225

Company size is not necessarily crucial. Expected strategic objectives are dependent on the size of the company and its structure. They provide for the structure of the ERP / IT strategy and are described by the strategy proposition. Furthermore the number of meeting participants (upper management and IT management) also influences the amount of time per meeting. The company strategy is also an important factor. Is it clearly defined and how comprehensive is it? Does it allow for it to change to the strategic objectives?

The project leader's influence has already been discussed in the paragraphs above.

Seven cases without IT diagnostics show the following values:

Personnel Costs	Hours			Days		
	min.	max.	Ø	min.	max.	Ø
Upper Management	30	68	49	4	9	6
IT Management	15	40	28	2	5	3
Total	45	108	77	6	14	10
Project leader	65	140	103	8	18	13
Support personnel	10	35	23	1	4	3
Total	75	175	125	9	22	16

Table 2: Costs ERP / IT Strategy⁵⁴

The goal of ERP / IT strategy development in SMBs is that upper management does not exceed four days per person and IT managers do not exceed two days per person. Realistically though, reduced IT diagnostics cannot be executed in two days, regardless of the size and coverage of IT and existing documentation.

The mentioned operating expenses are common in larger and middle sized companies. In small companies in which one or two people are responsible for management and IT this can even be reduced further. An experienced project leader can even finish the entire ERP / IT strategy planning in two to four days.

5.1.4 Project Preparation

There are three major points to consider during project preparation:

⁵⁴ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 308

5.1.5 Diagram - Overview

The five phases that make up the concept of strategic IT planning⁵⁵ can be seen in the following diagram:

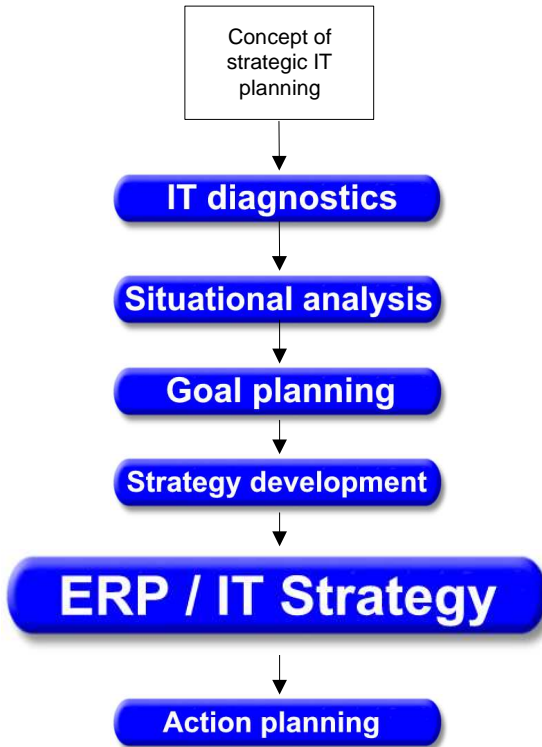


Figure 16: Concept of Strategic IT Planning Overview

⁵⁵ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 301, L. J. Heinrich, F. Lehner: Informationsmanagement, Oldenbourg, München 2005, p. 74
Autor: Darstellung und Ergänzung durch (reduzierte) IT-Diagnose

5.1.6 Diagram – Detailed Overview

In Figures 17 and 18 a detailed overview of the five phases can be seen in the procedure model below⁵⁶ which thereafter is described in detail.

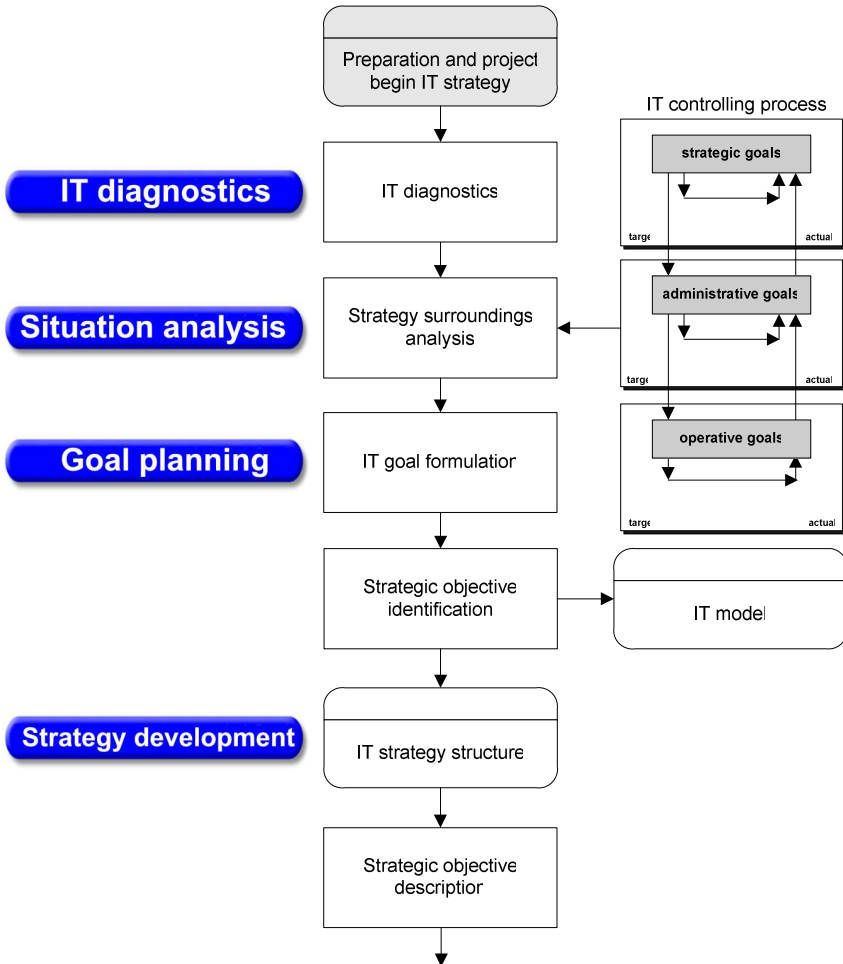


Figure 17: Procedure Model – Detailed Overview 1

⁵⁶ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 301, 305, Autor: Erweiterung und Überarbeitung der Darstellung

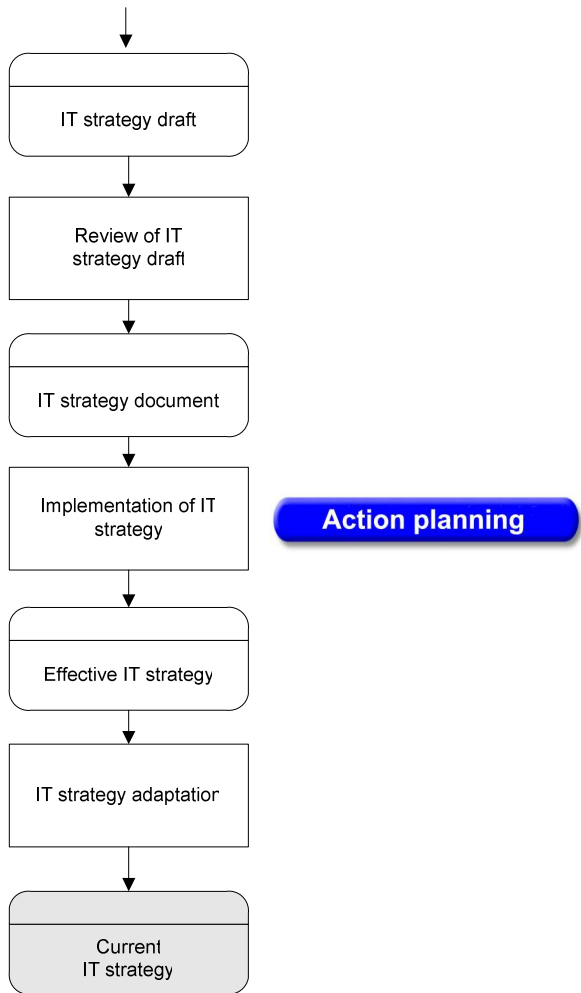


Figure 18: Procedure Model – Detailed Overview 2

Example: Strategic Balance / Imbalance based on the example of the strategy object network management, Figure 19.

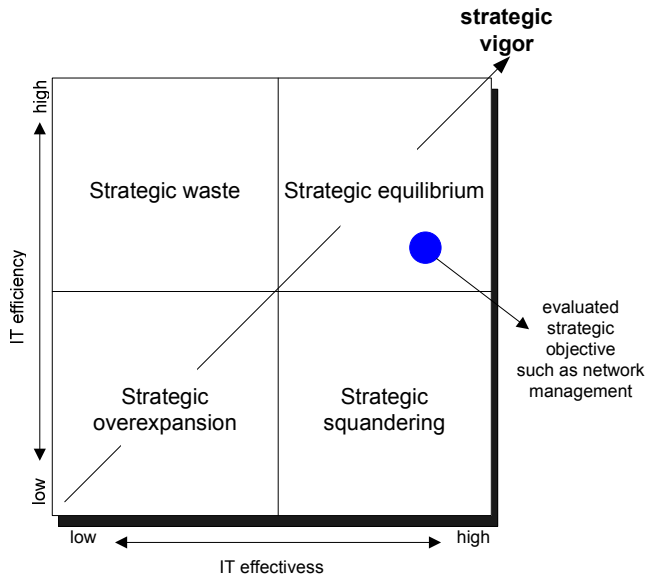


Figure 19: Evaluation of the Current Status and Target Status according to Effectiveness and Profitability⁶¹

⁶¹ L.J. Heinrich, G. Pomberger, I. Häntschel: Diagnose der Informationsverarbeitung, Handbuch für Evaluation und Evaluierungsforschung in der Wirtschaftsinformatik (Handbuch für Praxis, Lehre und Forschung); Hrsg. L.J. Heinrich, I. Häntschel, Oldenbourg Verlag (München/Wien), 2000, p. 62
L. J. Heinrich, F. Lehner: Informationsmanagement, Oldenbourg, München 2005, p. 78

The main questions are:

- What are the functions and tasks of information technology and what are their strategic roles (currently and in the future)?
- What are the internal and external conditions for information functions and what is their potential?
- How can a potential success factor for performance potential within the information structure be found?

Example: Table 3 Strategy Surroundings Analysis Example standardizes this process. The valuation of the current (actual) and future (target) characteristics takes place in a backwards school grading scale from 1 (low) to 5 (high) and allows for an automatic prioritization of the information functions in the column “differences in characteristics”. The higher the value, the higher the priority and importance of the information function. The abbreviation CRM stands for “Customer Relationship Management” and APS stands for “Advanced Planning System”.

Information function - Functions and tasks	Strategic Roles		Evaluation of		difference priority	Competition Potential success
	current = performance potential	future = success potential	actual (1 - 5)	target (1 - 5)		
IT support of production logistics	portray and administer, low automatization	further increase of the level of automatization, decrease of inventories and their costs, optimization of production orders	2	5	3	higher level of automatization, lower inventories and lower inventory costs, efficient production orders through APS system
IT support of controlling	integration into accounting	depiction of not yet defined figures, especially for project management and controlling; setting up a management cockpit	3	4	1	strategic management through balanced scorecard and management cockpit which enables strategic planning and risk management
IT support of the sales	order management	tender management, delivery query for materials to be produced, CRM for the sales force	2	4	2	tender management over the internet with delivery query; CRM for the sales force

Prioritization of the informations functions

Table 3: Strategy Surroundings Analysis Example

5.4 Goal Planning

Goal planning⁶³ is a workshop in itself. Participants include upper management, the IT department head and the project leader.

5.4.1 IT Goals

As a reminder from the chapter overview: The definition of **formal goals** is the goal oriented persuance of a function oriented **objective** through specific qualities and performance which is supported by IT tasks (such as inventory reduction).

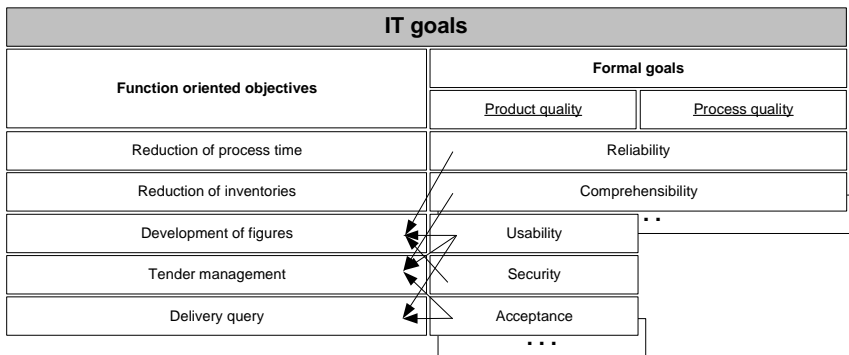


Figure 20: IT Goals

Ideally the definition of IT goals results from the strategy surroundings. Experience has shown, however, that this is very difficult to achieve when an ERP / IT strategy does not already exist. In this way the project leader must present IT goals based on IT diagnostic results and the basis of theoretical goal systems. This enables further advancement in workshops and discussions.

An experienced project leader can base decisions on experience or fall back on the following examples of IT goals.

⁶³ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 305, 306
 L. J. Heinrich, F. Lehner: Informationsmanagement, Oldenbourg, München 2005, p. 87 - 96

Each goal is looked at with the following questions:

- How do the goals fit into the company surrounding?
- Extent of goals
 - Description and definition of each goal
 - What should be achieved?
 - The valuation of the goals is completed by IT diagnostics by using a reversed school grading system on a scale of one to five.
- Time scale: When and how can each goal be achieved on time?

Incompletion in the form of achieving goals and sticking to deadlines has to be understood during this process.

IT goals		General description	How do these goals fit in the current strategy situation of the company?	Degree to which goal achieved Description/ Definition	Evaluation (1-5)			Time reference When and how is each goal able to be reached on time?
Function oriented objectives	Formal goals				actual	target	priority	
Process time and reduction of inventories	A availability	Derived from the information function from the situation analysis "IT support of production logistics" was recognized as a potential success factor for increasing the degree of automatization, reduction of inventories and related costs and the optimization of production orders.	As a production company, production is the most important component of the company strategy. According to company strategy the company would like to become number one in the areas of quality, availability, number of products sold in its production division.	Reduction of process time and inventories for all materials. Introduction of a comprehensive production plan.	1	5	4	A goal of average reduction of process time by 30% and the inventories by 20% are given. This goal should be achieved in 24 months.
Development of a figure system	Usability, security, reliability	Current controlling is integrated in accounting and portrays merely internal accounting. Depiction of the not yet defined figures, especially for project management, and project controlling for the management as a simple to use cockpit in the form of a balanced scorecard.	According to its company strategy, the company vows to use risk management to avoid risks and recognize them early enough.	Development of a figure system for project management, project controlling and strategic company planning.	2	4	2	The depiction of figures in the form of a balanced scorecard is the goal given. Implementation of a management cockpit within 12 months is expected.
Mobile tender management and delivery query	Availability, usability, acceptance, comprehensibility	Currently order management exists which enables invoice processing. In the future tender management, delivery query for materials to be produced and information disclosure and processing should be implemented by the sales force.	To reach its goal of being number one in its division in the areas of quality, availability and number of sold products, the entire sales division must be updated technologically to the newest standards.	Expansion of order management and invoice processing by tender management, delivery query for materials to be produced in production logistics and information disclosure and processing for the sales force at a mobile work place.	2	5	3	18 months for realization is defined. The given goals are tender preparation including delivery time consent at the client's by the sales force.

Table 4: Example IT Goals

Example: Table 4 shows the ideal case. IT goals were derived directly from the information functions in the strategy surroundings in Table 3. The formal goals which underlie the contextual goals in column one are adhered to in column two.

The current and target situations are valued with a reversed school grading scale from one to five so that the IT goals can be prioritized. The resulting difference is the level of prioritization. The description of the IT goals and their valuation of target and current states can be used for more simplified and efficient IT controlling later.

5.4.2 Formal Goals

What are the formal goals which form the basis of planning, supervision and operation at the strategic level? Until now science and experience⁶⁴ could not give any answers. This work poses a new depiction for formal goals which, together with other parameters, also considers the implication of the formal goals. The following figure shows the formal goals⁶⁵ divided up by whether they have a stronger connection with profitability or with effectiveness.

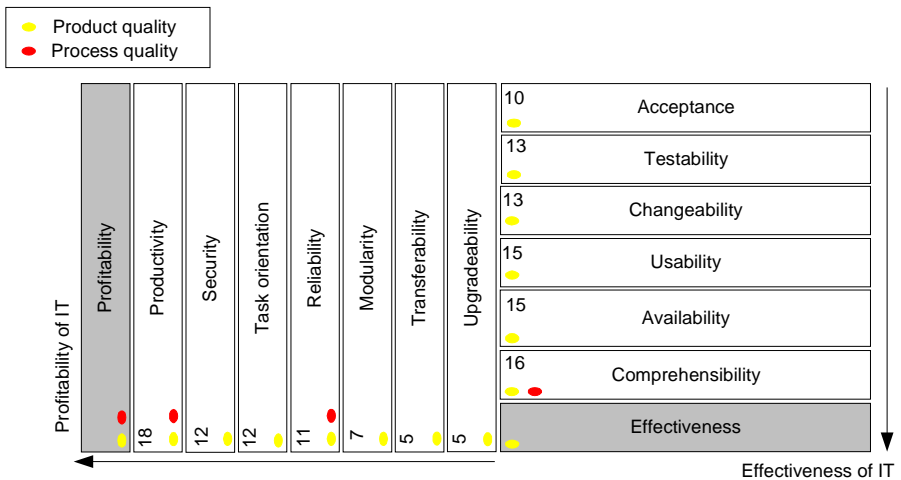


Figure 21: Possible Depiction of Formal Goals

The number given for each goal shows the sum of the identified relationships (influential factors and implications) among each other.

⁶⁴ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 217

⁶⁵ L. J. Heinrich, F. Roithmayr: Wirtschaftsinformatik – Oldenbourg, München 2007, p. 214

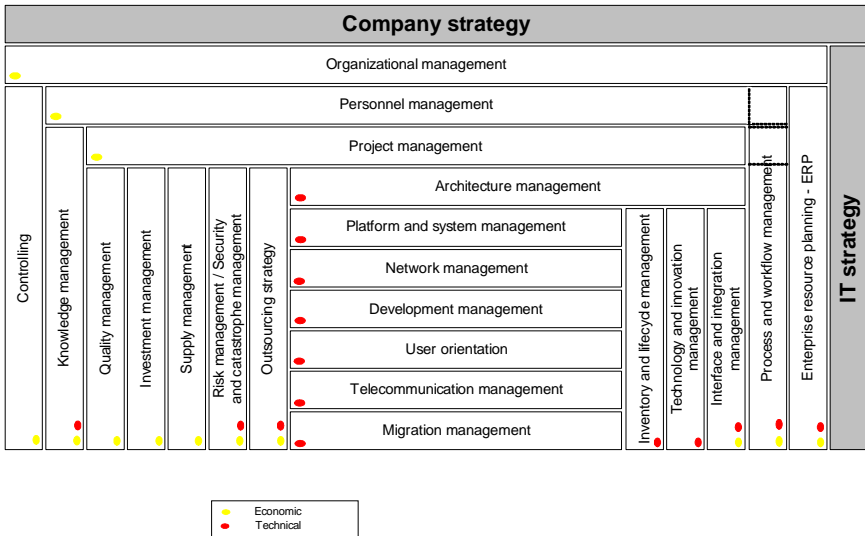


Figure 22: Possible Strategic Objectives and their Positioning and Dependency

The economic and technical strategic objectives are each shown in Figure 22 and 23.

Figure 23 shows in which strategic objectives either little or no dependency to each other has been identified. This assists in visualizing the complex relationships with each other. This type of depiction is preferred because if the direct dependencies were shown the picture would be excessive and too confusing.

5.4.7 Summary Goal Planning - Entire Goal Planning Process

The following, Figure 24, uses an example to show the entire process of goal planning according to the top-down method. The figure visualizes the high dependence on one another and their mutual influence.

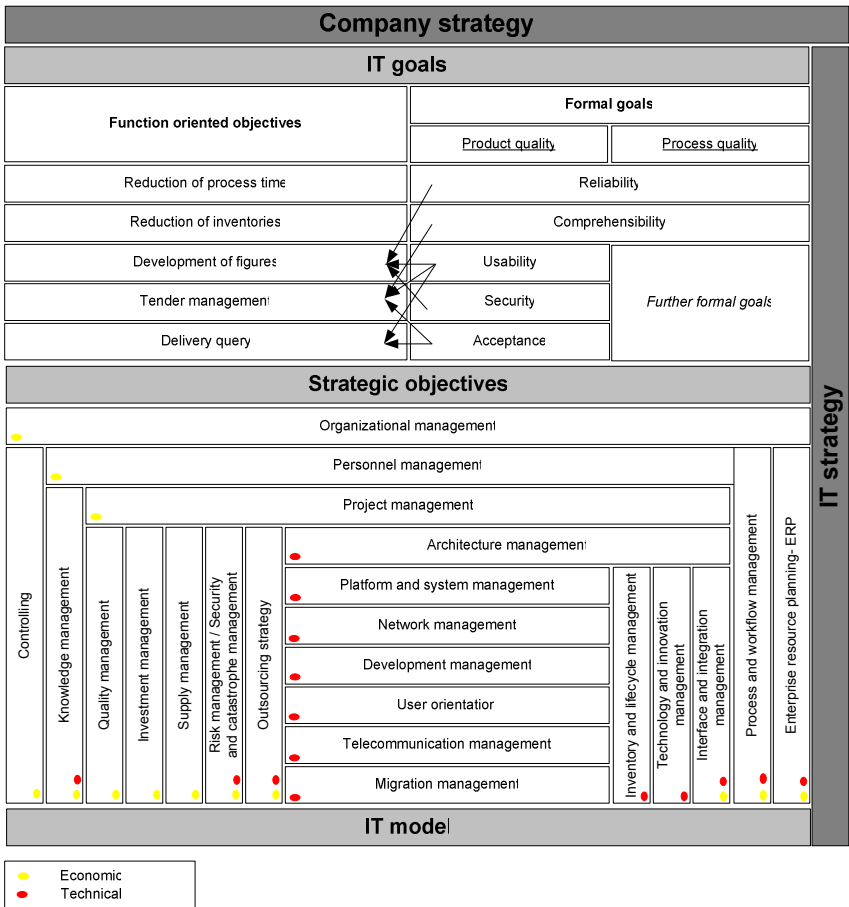


Figure 24: Summary Goal Planning - Entire Goal Planning Process

5.5.2.7 Independent ERP Strategy

For larger ERP applications or introductory projects, an independent ERP strategy can be useful especially when there are no resources for a new ERP / IT strategy because of the size and complexity of the project.

In this case an own strategic objective, adapted from the modules (SAP SD/MM, FI/CO) or organizational entities (logistics, accounts as well as entities such as the SAP Customer Competence Center - SAP CCC) can be considered in the company and in the technical areas (technology and development).

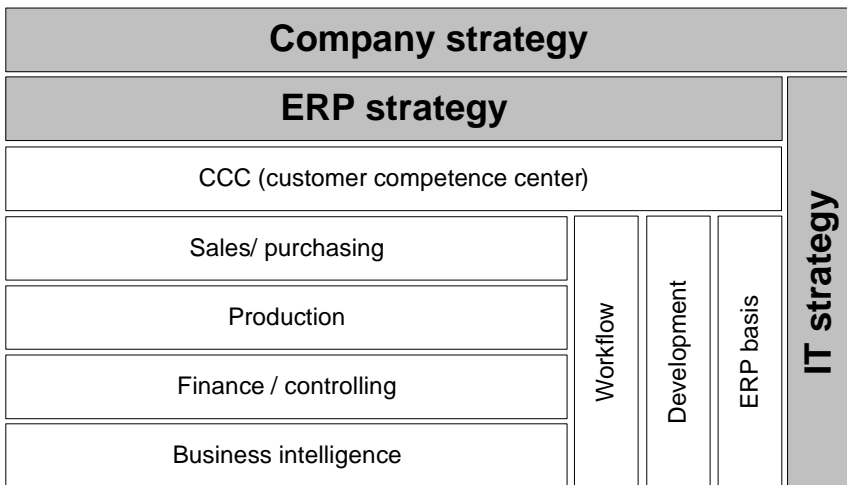


Figure 25: ERP Strategy

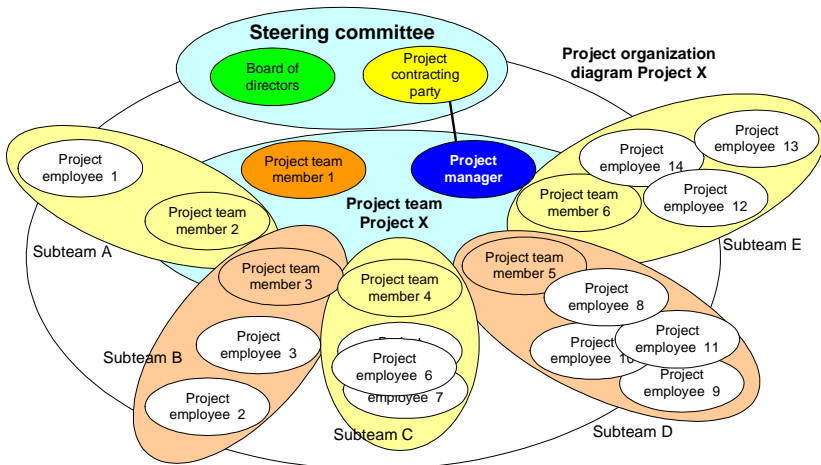
In this way the ERP strategy would become part of the ERP / IT strategy, which would furthermore be a part of the company strategy. In doing so it is important to retain the affiliation and connection to the ERP / IT strategy, because the strategic objectives cooperate together and are dependent on one another.

5.5.4.1.1 Project Context Analysis

In the first phase of the project context analysis, the *dimensions* of the *project context* are considered. Here, the links between **project and company strategy**, project and tasks and project and underlying business cases are viewed. In the project surroundings analysis the social surroundings including internal and external stakeholders are looked at. In the project business case the project costs and consequential costs are recorded and evaluated. Project marketing determines what communication is used with the relevant project surroundings.

5.5.4.1.2 Design of the Project Organization

During the design of the project organization, the project organizational forms are outlined first in the form of an effect, pure or matrix project organization. The **steering committee's** responsibilities and all members (executive board, supervisory board members, upper management and project leader) are all defined.



5.7 Summary and Closing Words

The great technological changes which were mostly triggered by the internet demand a comprehensive company information system so that data, products and services can be exchanged between customers and suppliers as well as further stakeholders in an efficient and economic manner. A strategic IT plan focused on **company-wide planning**, **longevity** and **competitive advantage** is imperative for the development and implementation of such a comprehensive company information system.

Two core topics are linked directly with an **ERP / IT strategy**:

- An ERP / IT strategy is **a matter for upper management**.
- Does your **IT support** your **company objectives**?

Although there is still an unclear understanding of the concepts “long-term strategy“ and “ERP / IT strategy“, ERP / IT strategies are up and coming. IT is a matter for upper management in many SMBs. Therefore the **positive effects** of an ERP / IT strategy are **recognized** for the entire company, even in small and medium sized companies.

The considerable ERP / IT strategy **advantages** for executives and upper management lie in the recognition of the **competitive advantage** through IT, “**act don’t react**” and the **relief of operative decisions**.

With an ERP / IT strategy, IT management receives **clear requirements** and **general framework** for **independent** and **self dependent** action. This **well-regulated decision process** enables less friction loss as well as clear comprehension of the entire company.

This book highlights the fact that the **system approach** during the situational analysis provides an efficient method for determination and analysis of stakeholders.

Especially in SMBs the situational analysis can find that the company has little to no adequate company strategy or that it was never documented. In this case a situational analysis is complemented by company strategy development.

These strategy guidelines include two strategic objectives which, until now, could not often be found in literature: **telecommunication management** and **ERP strategy**. Telecommunication is continually merging with IT and includes the most diverse success factors as potential. These are determined by company specifics.

ERP – “Enterprise Resource Planning“ – as an individual strategy object it is divided up among varying business areas (logistics, accounting, human resources etc.) and possesses excellent potential for location of important success factors in a company. Within the scope of ERP introduction, an independent ERP strategy in the forefront as a part of an ERP / IT strategy and company strategy can play a crucial role in the success of an ERP project. With the described procedure model, ERP strategy development is feasible and a guarantee that the future ERP solution does not only portray company processes but also supports and optimizes the actual company goals.

ERP / IT strategies are seldom found because their utility is regarded as being low, the effort for development is assumed to be high and only upper management can be given the task of ERP / IT strategy development. Furthermore, missing methods and procedure models result in ERP / IT strategies hardly existing in companies or just procedures from strategy document being found. Information technology is hardly seen in connection with strategy.

The **correct method for achieving an ERP / IT strategy** proceeds in using the definition of **company specific goals** and **systematic procedures**. These complex topics are discussed in detail in the chapter.

This book identifies what **advantages** an **ERP / IT strategy** really has and shows that **costs and effort are contained** and can even be **reduced drastically by a project leader**.

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Sources

Official Journal of the European Union: COMMISSION RECOMMENDATION of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (notified under document number C(2003) 1422); Official Journal of the European Union 2003

H.R. Hansen, G. Neumann: Wirtschaftsinformatik I, UTB, Wien 2001

L. J. Heinrich, A. Heinzl, F. Roithmayr: Wirtschaftsinformatik – Einführungen und Grundlagen, Oldenbourg, München 2007

L. J. Heinrich, F. Lehner: Informationsmanagement, Oldenbourg, München 2005

L. J. Heinrich, I. Häntschel, G. Pomberger: Diagnose der Informationsverarbeitung. Konzept und Fallstudie, in: CONTROLLING 3/1997

L. J. Heinrich, G. Pomberger, I. Häntschel: Diagnose der Informationsverarbeitung, Handbuch für Evaluation und Evaluierungsforschung in der Wirtschaftsinformatik (Handbuch für Praxis, Lehre und Forschung); Hrsg. L.J. Heinrich, I. Häntschel, Oldenbourg Verlag (München/Wien), 2000, S. 59 - 74.

L. J. Heinrich, G. Pomberger: Diagnose der Informationsverarbeitung, in: Stickel, E. et al. (Hrsg.): Informationstechnik und Organisation. Planung, Wirtschaftlichkeit und Qualität, Teubner, Stuttgart, 1995,

L. J. Heinrich, G. Pomberger: Prototyping-orientierte Evaluierung von Software-Angeboten, in: HMD - Theorie und Praxis der Wirtschaftsinformatik Bd. 197, 1997,

L. J. Heinrich, G. Pomberger: Entwicklung von Informatik-Strategyn, Vorgehensmodell und Fallstudien – SAP Business School Vienna, Seminarunterlagen 2006

H. Krcmar: Bedeutung und Ziele von Informationssystem-Architekturen. In: WIRTSCHAFT INFORMATIK 5/1990, 395-402

M. Hülsmann, I. J. Timm: Strategic IuK-Evaluation, Deutscher Universitätsverlag, 2006

G. Pomberger: Materialien zur Vorlesung Software Engineering & Architektur – SAP Business School Vienna, Seminarunterlage 2006

PROJEKT MANAGEMENT AUSTRIA: pm baseline, Version 3.0 - September 2009

G. Schug, S. D. Herrmann: Strategic IT-Planung für kleine und mittlere Unternehmen, VDM Verlag Dr. Müller, Berlin 2007

H. Simon: Das Grosse Handbuch der Strategykonzepte – Frankfurt/Main 2000

STATISTIK AUSTRIA Bundesanstalt Statistik Österreich: Hauptergebnisse der Leistungs- und Strukturstatistik 2005 nach Beschäftigtengrößenklassen, Seite 1

H. Steinmann, G. Schreyögg: Management, Grundlagen der Unternehmensführung, Konzepte - Funktionen - Fallstudien, Gabler, 2000

N. Szyperski: Geplante Antwort der Unternehmung auf den informations- und kommunikationstechnischen Wandel, in: Frese, E. et al. (Hrsg.): Organisation, Planung, Informationssysteme, Poeschel, Stuttgart, 1981, S. 177 – 195