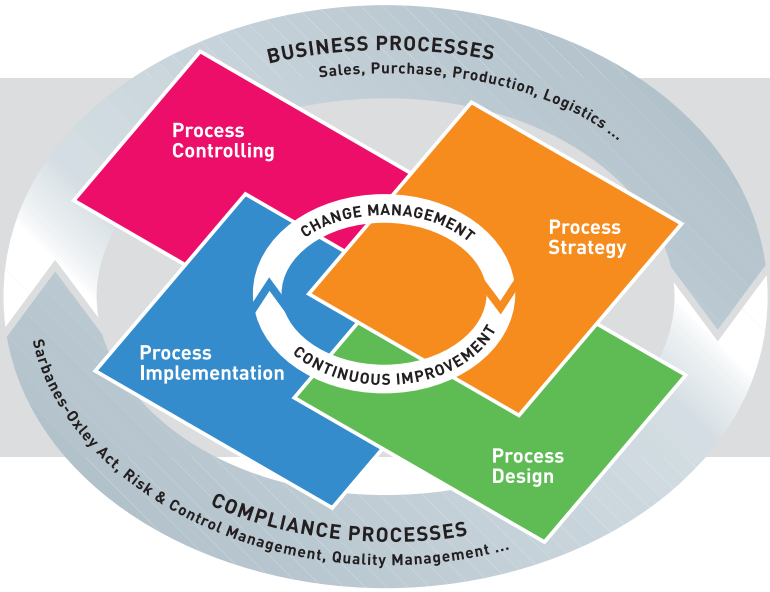
Business Process Management

ARIS Value Engineering-Concept

Whitepaper – June 2005



Business Process Excellence

IDS SCHEER

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Introduction

It appears that the economy has come through its recent trough, and companies are once again turning their attention increasingly to their markets and their customers. However, there is little doubt that the tight cost management of recent years will remain in place and, as though the magic triangle of time, quality and costs were not enough of a challenge, companies now need to develop substantial innovation and growth potential and gain their customers' enthusiasm. The quotation "Value creation benefits not only the company that creates the value but also the customer" is an accurate summary of this trend.

Changing markets and technological innovations will bring about further strategic refocusing by companies. Companies of various sizes and from different industries will be concentrating their efforts on improving their proximity to the market and their customers and increasing their flexibility and response speed. A willingness and ability to bring about fundamental changes to processes, structures and behavioral patterns in the socio-political corporate environment – in parallel to further possible cost reductions – will be the critical success factors in the economic recovery following the abortive dotcom economy.

The general strategic conditions for shaping the internal organization have also changed drastically in recent times. More often than not, traditional job-shop or functionally-based organizational concepts fail to meet today's requirements:

- Traditional functional corporate organization only has a limited ability to adapt itself to dynamically changing market demands, in particular in terms of speed and flexibility.
- The functional structures and processes are poorly suited to achieving the highest possible degree of efficiency and effectiveness in the use of modern information and communication technology.
- In traditional concepts, management responsibility is being worn away, thus preventing any reserves of motivation from being tapped.

Despite this enormous pressure to adapt, many companies limit their efforts to adapting only their structures, neglecting the crucial step of strategically refocusing their internal processes. **As a result, the internal organization often becomes a constraint on taking advantage of market opportunities that present themselves.**

However, this is precisely where we find the crucial lever for future corporate success. When the economic turnaround comes, the companies that benefit more than most from the growth opportunities will be those that can maintain the "ideal fighting weight" – and total "physical fitness" – that they have attained after several years of "cost dieting".

Ultimately, **the key to success** lies in Business Process Management. Just like a "real" diet, this involves making permanent and sustainable changes to companies, not just rapid fasting followed by a yo-yo effect.

The BPM approach developed by IDS Scheer and described below represents a comprehensible and efficient procedure for making successful Business Process Management (BPM) a reality in your company. Depending on the specifics of your project and your individual objectives, steps can be modified, added or omitted. The foremost objective of a BPM project is to achieve benefits for the company. The use of structured methods (ARIS) and the tools based on them (ARIS Process Platform) is an essential requirement for this approach. Join us on the road to **Business Process Excellence**.

Business Process Management

What is Business Process Management?

The issue of Business Process Management (BPM) is far from new. It is a management approach that was first discussed back in the early 1990s. Early discussions of the issue focused heavily on short-term organizational aspects (BPR). The objective was to achieve rapid and radical changes to selected business processes on a project basis. Nowadays, the issue of BPM is an integrated and continuous approach, which deals equally with organizational and technological considerations. It is important to understand that BPM itself represents a process. It is a process consisting of the phases of process strategy, process definition, process implementation and process controlling. The challenge is to implement this process in a company, both in organizational and technological terms. The approach described below provides a kind of reference model for achieving this. The efficiency and effectiveness of the Business Process Management process plays a key role in determining the effectiveness and efficiency of operational business processes themselves.

In practical terms, this means that BPM is a multi-faceted management issue. Concrete **process optimization** (internal or inter-company) can always be viewed as the current "classic" form of BPM. The move from being a functional organization to being a **process-oriented organization** is directly associated with BPM. Likewise, there is a whole series of other management issues that are either directly part of BPM or can be better represented using BPM. These include **quality management** which, since the introduction of ISO 9000-2002, is process-oriented and demands an **integrated management system**, and **personnel requirements planning**, which will never be able to offer more than an incomplete view without BPM. The same applies to **risk management** and **cost reduction**, if these are to be sustainable without having a negative impact on success factors such as quality, time and customer satisfaction. **Standardization of processes, IT systems and working equipment** in global companies is a typical example of BPM with a long-term focus, where the quantity structures in global companies mean that it can have an enormous impact on efficiency. Furthermore, BPM is now an indispensable concept when it comes to **implementing IT systems**. In future, the use of so-called Enterprise Services will enable companies to achieve a maximum level of IT integration and flexibility, but without BPM it is no longer possible to develop an executable IT system.

Without BPM, it will be impossible to make decisions about **insourcing and outsourcing** in the future, as they will increasingly involve the possibility of outsourcing entire business processes. Even now, outsourcing of systems or organizational units without an appropriate level of **transparency in the organization and the data**, such as can be achieved with BPM, is impossible.

Process cost accounting is another important aspect of BPM, as it is often the (only) method of **product cost accounting**, particularly in service companies.

Key performance indicator systems for corporate control or to support a continuous improvement process must also cover the process angle. **Process Controlling** is therefore constantly gaining in importance, as is shown by the success of the well-known management concept of the **Balanced Scorecard** (BSC). Key performance indicator concepts such as the BSC highlight what BPM is really about, namely the development of an organization that **conforms to the corporate strategy**.

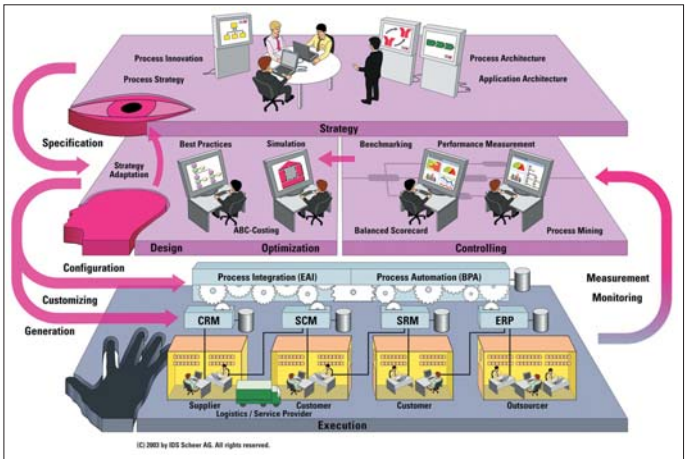

Figure 1: 3-Level Model

Status quo

- "BPM is a question of when, not if – start now."
- "The true value of BPM lies in the fact that it allows business processes to be defined and implemented independently of applications and infrastructure."
- "Business processes are the nervous system of a company and therefore ultimately determine its economic fitness."

These 3 quotations provide an apposite summary of the current status of BPM in two respects:

- Priorities are shifting away from data integration and towards the agreement of company-wide processes. BPM is increasingly turning from an IT issue into an organizational issue, as companies have realized that business processes primarily relate to the business and the value creation behind it. By contrast, it is far less concerned with optimizing isolated organizational processes in one department or mapping these in information systems. The aspect below has enabled BPM to make the final breakthrough to being accepted as an organizational issue.
- After a period of strict cost management, the full scope of BPM will be used in the future. In the last 2 to 3 years, BPM has mainly been used with a view to cost reduction, and has thus detached itself from the IT-oriented approach that had previously prevailed. In future, this will remain an important aspect, but the focus will be on the customer-customer view when it comes to increasing efficiency. Furthermore, the question of effectiveness will come to the fore again. Even the highest level of customer satisfaction today is worth little if the customer buys from the competition tomorrow.

IDS Scheer investigates such issues in detail once a year in its Business Process Report. The 3rd edition of this annual market analysis has recently been published.

According to the report, more than three quarters of companies are working intensively or very intensively on optimizing their business processes. This trend is also confirmed by the Delphi Group, whose own findings show that the acceptance of BPM has more than doubled in the last 2 years. **The companies questioned have used the past year to make further improvements to their organizational processes.** As a result, companies consider the efficiency of their business processes to be higher than last year. Overall, the average score has slightly improved from 2.88 to 2.81 (2002: 2.97). This bears witness to the benefits of BPM but also backs up the argument that BPM is a management concept and not just a package of measures. Companies need to deal with BPM on an ongoing basis and continuously improve their process performance. This includes the prompt and rapid implementation of appropriate measures, that is to say the realization of genuine quick wins.

At the same time, the modest emphasis of efficiency overall indicates that there is still considerable potential for improvement. **Despite general budget reductions, companies want to continue investing in business process optimization in 2004.** By working on optimizing their internal company processes, companies are once again making the traditional objective of BPM their top priority this year. Companies are once again focusing more on a growth phase, in which cost reduction is no longer the absolute priority, although it remains one of the two highest priority objectives. However, rather than achieving cost reductions that are effective in the short term, the objective is now to open up market potential by permanently increasing the performance of the entire organization.

Particular attention is being focused on the areas of Sales and Marketing, Product Development, Human Resources and Controlling. Companies rate their processes as being worse than the overall average in these areas. With regard to investment in business processes, the emphasis on Sales and Marketing, Customer Support and Order Processing shows that the focus is clearly on processes relating directly to the customer.

Why Use Business Process Management?

The effectiveness and efficiency of internal and external business processes play a significant role in determining the economic success of a company. The main objectives of BPM are therefore to increase customer satisfaction and improve productivity and competitiveness. As a result, BPM includes the objective of increasing company value, but it can only achieve this if it is actually concentrated on business processes, that is to say company activities that create value, and customer-customer thinking is applied. The ongoing measurement and optimization of business processes forms the basis of continuous improvement of internal performance.

By way of example, Figure 2 shows the typical organizational weaknesses of today's companies, which BPM seeks to improve.

The fundamental objective of companies is to create value. The processes involved in providing goods and services (core processes) lead directly to value creation by the company, while management (management processes) is designed to facilitate this value creation and the support functions (support processes) provide support for the activities that create value but should not result in losses of value themselves.

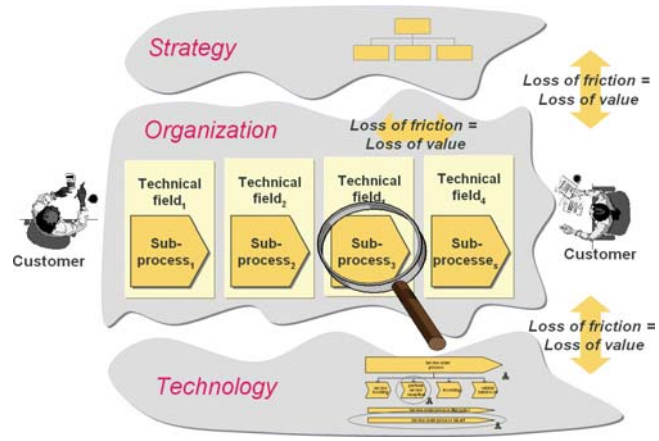

Figure 2: Reasons for Business Process Management

In practice, it is actually very common for significant frictional losses to occur between the strategic level and the operational organization. There is often no link between the strategic view of "Doing the right things" (effectiveness) and the organization behind it, "Doing things right" (efficiency). While strategically the company thinks in terms of business processes based on products and markets, the organization frequently deals in (extremely efficient) processes within functionally-oriented departments. BPM closes this gap by linking the business segments and their success factors with the business processes and objectives necessary to create value. Figure 2 shows that when it comes to value creation, value can even be destroyed if the process thinking is only based on sections of the process chain. The view of departments is focused on their structural organization rather than the business process. BPM provides a welcome remedy for this. Business processes, including the support processes, are consistently viewed from a customer-customer perspective and the organization is converted step-by-step into a process organization with the corresponding areas of responsibility. In IT, the sections of the process chain are integrated in data technology terms, such that the business process is mapped across the IT systems, but genuine process orientation is not achieved, as the internal customer, the operational department, has a functional structure and accordingly has functional IT requirements and prefers particular IT systems from a functional perspective.

The IDS Scheer concept for BPM described below provides a contemporary, practical approach for linking a company's strategy and organization across all departments, giving it a process-oriented focus and integrating the IT – all while achieving market flexibility and putting a brake on costs.

IDS Scheer as a Partner for Business Process Management

IDS Scheer is a true pioneer when it comes to BPM. Our dedication to achieving **Business Process Excellence** for our customers has been the basis for the successful development of our own company over the last 20 years, development that has remained stable and effective even in difficult economic periods. With its ARIS Toolset, in 1992 IDS Scheer became the first company in the world to supply a software tool specifically for the analysis and optimization of business processes. With over 45,000 installations and more than 4,000 customers, IDS Scheer is now the global market leader in this sector. Over this time, we have continually advanced the issue, both conceptually and technologically, enabling us to offer our customers valuable services and products. We have succeeded in creating benefit for our customers, and met their needs in terms of time, quality, costs, flexibility and customer satisfaction.

IDS Scheer is a reliable and economically stable partner. By combining expertise, methodology and integrated tool support with strategy, organization and IT, we offer a unique solution approach for BPM, which brings together all of our experience and knowledge from the past 20 years, adapted for today's companies and focused on the needs of the future – your future. Our services and products for continuous process controlling using key performance indicators and benchmarks enable us to achieve sustainability in optimization, which was difficult to imagine in the past. We are also pioneers in this area, with the ability to successfully implement our visions for your benefit. Our BPM tools have led the way for many years. Visions, innovation and a focus on implementation are necessary to maintain this coveted position. We have proved on many occasions that we can do this. For example, we are the BPM partner of SAP AG. But as the old saying goes, "Pride goes before a fall". So we are definitely not resting on our laurels. With every contract, we want to prove to you – our customer – that we believe in what we do and that we are experts at what we do. Put us to the test. You have the right to do it.

The IDS Scheer Business Process Management Lifecycle

Lifecycle Overview

We have decided to visualize our BPM approach as a lifecycle, using the image of a wheel. How many wheels you need depends on the size and complexity of your company. You can move along comfortably and quickly on a modern unicycle. By contrast, a truck with trailers and multiple axles drives on 10 wheels. The idea of the wheel is nothing new. We have been dealing with process controlling since 1988 and have used the wheel image ever since. You will also find this image in the world of our BPM tools – ARIS Process Platform – as our consultancy services and products are completely integrated with one another.

Figure 3: Business Process Management Lifecycle

We see the Business Process Strategy as a wheel bearing. Without a wheel bearing, the wheel will not turn or if it does, it will only do so with considerable friction on the wheel axle. A well- lubricated bearing simply makes everything better and faster. We therefore recommend that you start BPM with a short strategic analysis. You know your own company best and we want to understand what makes you tick, where you are and where you want to go. For you, this is an opportunity to look at familiar aspects of your company from a new perspective and through IDS Scheer's process eyeglasses.

Change Management is a well-worn concept. For us, it is a high-performance lubricant that has the effect of allowing the wheel to turn at maximum speed without damaging the wheel bearing. We know that lubricant-free ceramic wheel bearings are also available. However, for these to function, a high level of engineering skill is required when producing the wheel bearing and the wheel itself. Companies are social systems. They contain people and wherever there is a human element, there are limits on what engineering can achieve. We believe that it is possible to extend these limits but not to eliminate them. Change Management is therefore necessary, but its extent depends on the nature and scope of your BPM project.

Staying with the image of the wheel, the outer circles of Business Process Design, Implementation and Controlling are the tires. Without them, in the truest sense of the words, your company will not get far along the road. The mix and the profile depend on the nature of the journey, your driving style and the environmental conditions. Sometimes, a simple robust mix is sufficient but for Formula 1 you get nowhere without high-tech equipment.


Figure 4: Start With Us!

Let us accompany you on your journey and find out how our BPM approach can help to create value for you. We draw two other parallels to motor racing, which we have also taken into account in our approach:

- These days, as well as pure speed, the pit strategy is crucial. The pit strategy is based on telemetry, which can be used to obtain and analyze data as the race progresses. Find out more in the section Business Process Controlling.
- Process efficiency and resource efficiency are conflicting objectives. This conflict can only be resolved with a combination of qualitative and quantitative optimization approaches and a great deal of creativity.

ARIS Value Engineering

Our Mission

The IDS Scheer BPM approach described below is based on our concept of Value Engineering. We are guided by the following mission:

- As a **preferred partner**, we enable our customers to improve their competitive position and continuously optimize their process performance.
- IDS Scheer provides the leading approach for the establishment of a process-oriented organization.
- The integrated combination of strategy, process management and IT enables **quantifiable benefits to be demonstrated** across all phases of our method.

Methodological Features of the Approach

With ARIS Value Engineering, IDS provides a brand new procedural model. Instead of sequentially, as in a waterfall model, the individual components of the BPM lifecycle can be combined flexibly. ARIS Value Engineering can be used most effectively wherever a company wants to introduce a complete process-oriented organization or optimize entire value-added chains. However, ARIS Value Engineering also provides solutions for specific problems, such as the introduction of process controlling or the process-oriented development of IT systems. **The BPM Lifecycle should be seen as a construction kit, consisting of services, methods and tools, as well as our experience, which we can use to build value for your company**.

The general features of our approach are as follows:

- Ensure project effectiveness through our Business Process Strategy workshops. A strategy audit or snapshot analyses using benchmarks are also possible as an add-on.
- Defined realizable deliverables for each phase and work package. You know exactly what you will get at the end. You can look at neutralized examples from past customer projects in advance.
- Scaleable and modular, with various entry points. The model adapts to you, not vice versa.
- Optimum project efficiency thanks to the use of tried and tested and clearly defined accelerators for each work package. This uniform standard also provides a guaranteed level of quality for international teams in large projects.
- Sustainable results due to Process Controlling (Process Performance Management).

Business Process Strategy

Tasks and Objectives in the Strategy Phase

At the beginning of every project, there should be a brief strategic analysis, in which we get to know and understand your business and work with you to define the essential cornerstones of the project.

The fundamental objective of the strategy phase is to develop an initial, top-down process map. The process map depicts your company's business in terms of business processes and represents the central starting point for any business process optimization. It is essential to produce this map, as it is extremely rare indeed for a company's organizational structure to accurately represent the business process model. Normally, it represents an ideal structure that then acts as a guideline for the subsequent optimization of the organization.

Your business segments and the critical success factors for these segments are important parameters that can be used to produce a process map. They represent the interface between the corporate strategy and an organizational project. The question of whether the organizational project is heading in the correct direction and whether it will be effective can only be answered if this interface has been defined.

A further objective of the strategy phase lies in identifying and prioritizing the business processes to be optimized and deriving concrete objectives for the optimization of these processes.

If it should emerge that the business segment strategy for your business segments needs to be adapted or redefined, we will assist you in evaluating the strategic options and developing a new business segment strategy before the underlying business processes are modified.

Solution Approach and Results

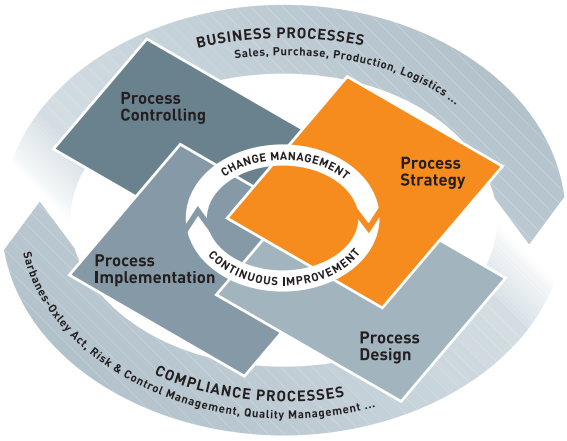

Figure 5: Business Process Strategy

Business Process Strategy
Produce **business segment**
Identify **key success factors**
Adopt **process landscape**
Produce **process portfolio**
Determine **business process objectives**

The strategy phase is characterized by management workshops, in which we get to know your business in more detail and work with you to define the scope of analysis for the project. With our support, you then derive your business segment matrix. This illustrates which products you are represented by in which markets and how you rate the development of the individual business segments. Based on this matrix, we perform an analysis of critical success factors. To do this, the critical success factors (e.g. customer satisfaction, delivery times, product quality, etc.) are drawn up for each business segment. This involves a comparison of your current positioning with that of your competitors or similar enterprises, using benchmarks where necessary. With this as a starting point, we then define plan values for your future positioning, which are compatible with your business segment strategy. If significant differences come to light, we will work together with you to develop an appropriate business segment strategy for the relevant segments. The business segment strategy is clearly focused on customer requirements and the conditions in the market.

The next step is to derive the business process model. This involves classifying the individual business processes into the following categories: management processes, core processes and support processes. It is important at this stage to take an end-to-end (i.e. from customer to customer) view of the processes. This enables us to identify the most important value drivers and their core competences. This is represented graphically using a process map, which will be the starting point for all subsequent business process optimization and modeling.

The business processes are then prioritized according to their process performance and their relevance to the critical success factors. Placing them in a portfolio allows the processes for which optimization is necessary to be identified immediately. These processes are notable for their poor process performance and a high degree of relevance to meeting the critical success factors.

The following can all be used as a basis for determining the process performance:

- Customer satisfaction (directly measured or indirectly derived)
- Benchmarks
- Management estimates

Based on the portfolio, the processes that are relevant for the BPM project are then assigned clear process objectives. The objective parameters can be divided into the dimensions of time, quality and costs. The objectives should be demanding but at the same time realistic. If unrealistic objectives are set, a BPM project is doomed to failure from the outset. In conjunction with continuous project controlling, these objectives can be used to achieve optimum control of the project.

One critical success factor for a BPM project is that the company's management is fully behind the BPM. The strategy phase and the workshops with management document this commitment. A further result of the strategy phase is that the sponsors of the BPM project are involved from the very beginning and in a decisive phase. Communication of the project objectives and procedure to the affected employees in the company should start as early as possible. A suitable method for doing this is to establish a continuous Change Management system (see below).

Figure 6 provides an overview of the crucial project results during the strategy phase.

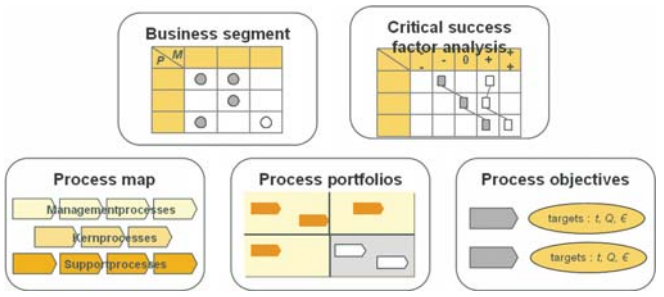

Figure 6: Results of Business Process Strategy

Benefits

The concrete benefit of the strategy phase lies in the fact that, with just a few workshops at management level, it significantly improves the chances of the BPM project being successful. In addition, it combines strategy and organization in such a way that an effective and manage-able BPM project can be set up. The clear objectives and the focus on critical processes and variables considerably increase the project and process efficiency. It is not designed to enable the company to make drastic changes right away, it is about systematically setting the tone and setting in motion individual, clear optimization without losing the overview of the whole project. In summary, the following benefits should be mentioned:

- Determination of clear positioning and objectives using the business segment matrix.
- A verified end-to-end process map.
- The BPM project is tailored to the actual situation of the company.
- The BPM project is managed using the process objectives.
- The focus is placed on the relevant processes.

Business Process Design

Tasks and Objectives in the Design Phase

Business Process Design follows the strategy phase and its process analysis and process optimization are based on the defined process map and its process objectives.

The essential objective of the design phase is to analyze existing business processes in order to find starting points for optimization. These can either be found in the process structures (e.g. organizational or system interfaces, redundant activities or activities that no not create value) or can be derived from process key performance indicators (processing time, customer satisfaction, error rates). Concrete alternative actions are then drawn up and their implementation planned. The essential criterion is to focus on the defined objective variables in order to derive a cost-benefit analysis or ROI calculation.

Solution Approach and Results

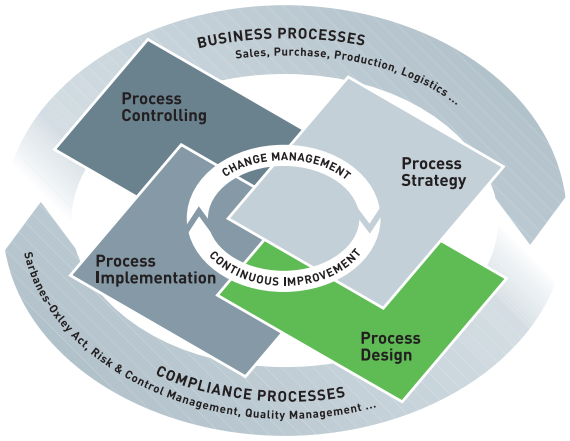

Figure 7: Business Process Design

Business Process Design
Analyze **processes**
Seek out **interference factors**
Determine **potentials**
Devise **target processes**
Test **feasibility**
Determine **cost-benefit / ROI**

A detailed tool-based investigation of the business processes, e.g. using extended event-driven process chains (eEPCs) can be used to create a well-founded data basis with slightly more documentation work. Detailed analyses of the distribution of responsibilities, system interfaces or activity-specific improvement potential can then be performed by way of database evaluations. Accurate information about the activities, the roles involved, input and output and systems therefore form the basis for qualitative/structural analyses. Tool-based data collection involves no more work than any other method. On the contrary, it can in fact be more efficient and more powerful than any other approach, as each new evaluation leads to faster amortization of the collection costs.

Re-use of this database normally also leads to significantly lower costs in the optimization sub-phase.

However, if there is only imprecise knowledge of the actual processes, if they are to be radically questioned and changed or if the focus is primarily on quantitative process analyses, a rough representation of the processes, e.g. using value-added chain diagrams, is normally sufficient. This can then be refined in the optimization sub-phase.

We recommend that the analysis include an investigation of the attainment of objectives for the processes to be analyzed, i.e. aim for a quantitative analysis in every case, as this is the only way to ensure verifiable success of the optimization in the form of an ROI calculation. This approach goes hand in hand with the top-down procedure recommended above for the identification of business processes and the production of the process map.

Typically, this allows the interference factors determined to be evaluated in terms of their share of the total optimization potential, so that the collection of data can then be concentrated on the most important interference factors. This results in packages of measures, which bring about the highest possible optimization potential at the lowest possible implementation costs and the maximum degree of feasibility.

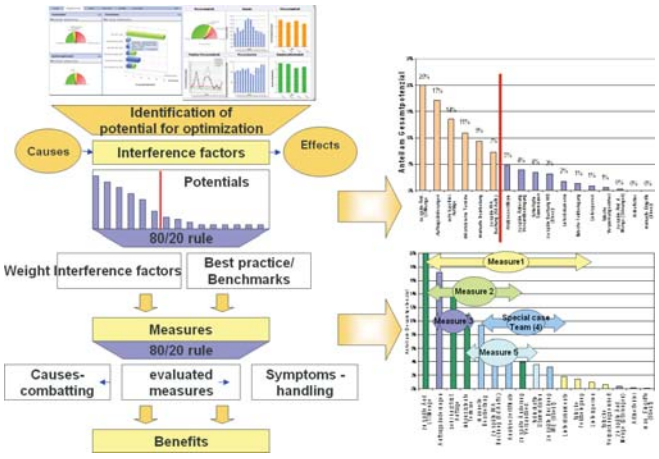

Figure 8: Deriving Measures

The essential steps within the analysis sub-phase can be summarized as follows:

- Setting up any BPM tool needed.
- Drawing up project conventions.
- Definition of level of detail and documentation.
- Definition of any master data needed (organization, documents, systems).
- Discussion and modeling of processes (online modeling).
- Recording attainment of objectives (using system analyses, surveys, etc.).
- Searching for interference factor.
- Deriving improvement potential and concrete alternative action.
- Setting out defined measures and defining packages of measures and a project plan for the optimization sub-phase.

Figure 9 provides an overview of the crucial project results during the analysis of the actual situation.

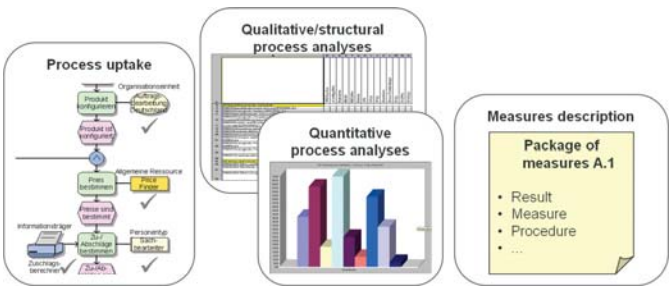

Figure 9: Results of Business Process Design - Analysis

Examples of qualitative/structural process analyses are as follows:

- Activities that do not create value (e.g. testing and control steps).
- Organizational interfaces (e.g. duplication of responsibilities).
- Media interfaces.
- System interfaces (e.g. too many IT systems and interfaces along a business process)
- Logical weaknesses in process.

Examples of quantitative process analyses include:

- Time evaluations (e.g. throughput time, processing time).
- Cost evaluations (process costs, function costs).
- Quality key performance indicators (e.g. delivery reliability, returns rate, complaint rate).
- Customer satisfaction.
- Risk analyses.

The evaluated package of measures from the analysis sub-phase now forms the basis for optimization. **The measures identified are prioritized using appropriate portfolio representation, and this provides a basis for identifying possible quick wins.** Rapid measurable success provides you as an optimizer with an assurance that your activities are correct and the knowledge that you are heading in the right direction. In terms of project marketing, realized quick wins also have a positive impact on the overall acceptance of the issue of business process optimization and BPM among senior management in the company.

We recommend that dealing with the issue of process visualization be made an important element of the optimization sub-phase. On the one hand, it allows you to reap the fruits of a detailed process analysis at an early stage and, on the other hand, a clear and detailed visualization is useful when designing the target processes, as it can be re-used many times and in various situations, e.g. for work instructions or publication using a Process Web with links to learning platforms and/or your own ERP system. However, the focus here should also be on pragmatic modeling aimed at the project objectives.

The early involvement of the operational departments and stakeholders will ensure the success of your project during optimization. This is where the actual creation of value can be identified and implemented. Broad involvement of the affected departments also promotes the subsequent acceptance and implementation of your target processes.

Your success only becomes truly measurable when you collect or simulate the key performance indicators relevant to your objectives. This can back up the forecast effects or provide additional support based on more detailed/more accurate data.

The definition and calculation can also be the source of important experience and knowledge for Process Controlling, considerably simplifying the transition to the final phase in the lifecycle.

Figure 10: Results of Business Process Design – Optimization

Benefits

The quality of the potential benefits of the BPM lifecycle is pre-determined by the quality and accuracy of the design phase. **Making the correct choice of processes for optimization, along with the correct measured variables and realistic objectives, is the only way in which you can give your changes a chance to be successfully implemented and withstand subsequent verification.** This aspect is of crucial importance in terms of the sustainability of your BPM. The phase is consistently based on the results of the Business Process Strategy phase and puts in place a fundamental basis for continuous Business Process Controlling.

In addition, the quality of the design phase determines whether and the extent to which the subsequent phase of Business Process Implementation may contain hidden surprises and whether any new iterations of Business Process Design are necessary. In summary, Business Process Design brings the benefits listed below.

From the analysis sub-phase:

- Transparent actual processes and process structures.
- Common and documented understanding of weaknesses.
- Initial estimate of potential.
- Agreed improvement measures.
- Clarity in terms of objectives and procedure for optimization.

From the optimization sub-phase:

- Quick wins are realized immediately.
- Target processes take into account feasibility (and cost-benefit or ROI aspects).
- Potential benefits are specified and evaluated in more detail.
- Enables a management decision based on more detailed cost-benefit or ROI analysis and implementation planning.

Business Process Implementation

Tasks and Objectives in the Implementation Phase

The implementation phase immediately follows the design phase and has the task of establishing the new target process within the organization. On the one hand, this involves adapting the structural organization to match the processes and the necessary process responsibility [Process-to-Organization (P2O)], and on the other hand guaranteeing optimum IT support [Process-to-Application (P2A)] for the new business processes. Information technology is becoming increasingly important as an instrument for the implementation of process optimization. The individual steps follow the implementation plan agreed in the design phase and are systematically controlled using milestones, thus guaranteeing optimum implementation.

The objective of this phase is to focus the business processes on the objectives and critical success factors of the individual business segments and **to establish an effective and efficient process organization.**

Solution Approach and Results

Business Process Implementation
Adapt **structural organization**
Change **procedures**
Chance/introduce **IT systems**
Monitor **measures**
Develop **process competence**

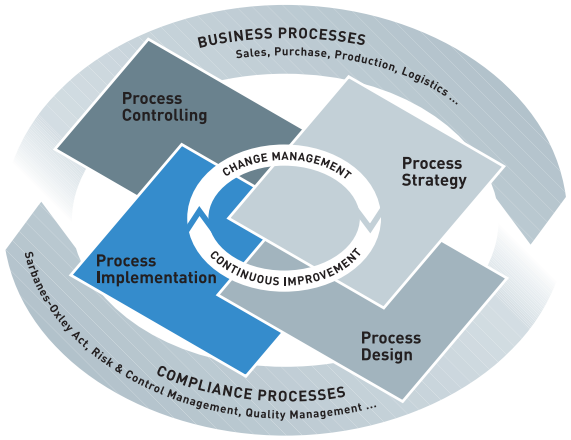

Figure 11: Business Process Implementation

The Business Process Implementation phase begins with the adaptation of the structural organization. The first step is to appoint a business process owner for each business process. This person will be responsible for the effectiveness (setting objectives) and efficiency (attainment of objectives) of the business process and for its implementation. The exact rights and obligations will be drawn up in detail in workshops. The introduction of end-to-end business processes does not necessarily require the abandonment of the functional organization and establishment of a purely process organization, but it does require considerable willingness to change and implementation capabilities. We support this process with targeted Change Management activities and structured workshops so that any transitional structures necessary can be established. Implementation is always based on the phrase coined by Alfred Chandler: "Structure follows process and process follows strategy".

In the second step, the business process owners are responsible for establishing the target processes in the organization, obtaining and deploying resources for the processes, and ensuring that the processes run optimally. IDS Scheer supports them with a coaching method, which ensures the transfer of know-how between the process adviser and the process owner. The aim is to build up additional process competence within the company.

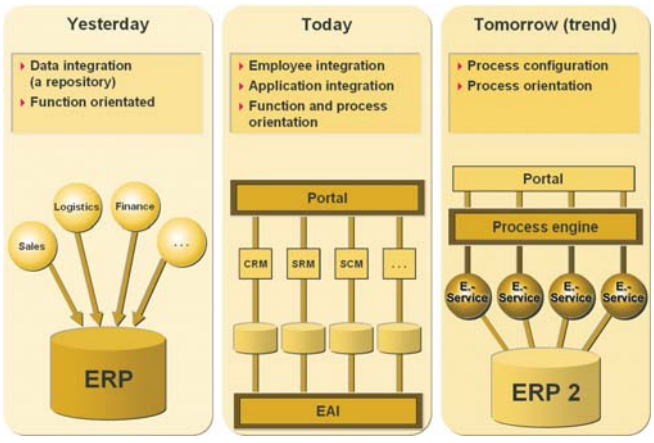

Figure 12: Process Engineering –
The Future Method of System Implementation

Furthermore, the route from process to organization (P2O) is driven by modern project and Change Management (see below). **Our approaches, e.g. blended learning as part of Change Management, can be pursued much more efficiently than traditional methods.**

An important aspect of implementing the business processes is ensuring optimum IT support for the processes. To do this, it is often necessary to adapt existing IT systems or to introduce new systems. IT should be considered as an "enabler" at this stage, not as the "driving force". IDS Scheer has comprehensive expertise in the introduction of all types of IT systems (ERP, SCM, CRM, workflow, etc.).

The concept of Process-to-Application (P2A) not only refers to the general tasks involved in providing effective and efficient support for business processes using information technology, but also to the change in application development from standard to customized software. Object-oriented software architectures, UML and Enterprise Services are the technical elements of this change. Without the corresponding process knowledge and a detailed process description, modern application systems can no longer be brought into operation, as is shown in the figure on the next page. In future, the Process Engine will be the central controlling element of this application architecture.

A further additional component of the implementation phase is constant monitoring using the milestones defined in the implementation plan. ProjEx, which is a project management procedure (see below) specially developed by IDS Scheer and used in every IDS Scheer project, includes systematic monitoring to ensure this.

Figure 13 provides an overview of the crucial project results during the implementation phase.

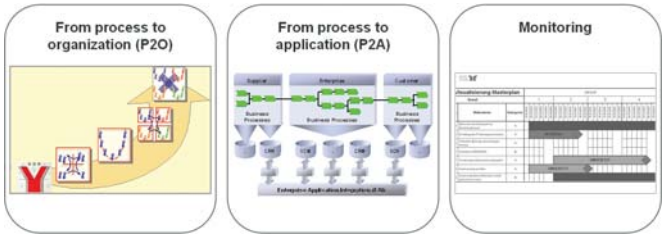

Figure 13: Results of Business Process Implementation

Benefits

The benefits of a successful implementation can be summarized as follows:

- Business processes are adapted to objectives and critical success factors
- Structural organization is based on business processes.
- Increased effectiveness and efficiency of IT.
- Company flexibility and competitiveness are increased.
- Project success is assured.

Business Process Controlling

Tasks and Objectives in the Controlling Phase

Corporate success, which is ultimately documented by accounting and financial indicators, results from the creation of value in the company's business processes. We therefore believe that efficient controlling and management of the performance of your core processes is indispensable. To achieve profits, it is necessary to efficiently design the relevant core processes in the company (e.g. depending on the industry, product innovation and development, sales, order processing, service business, etc.) based on the criteria of costs, quality and time. Internally, this allows cost reduction potential to be utilized and at the same time can increase employee satisfaction in terms of the professionalism of their own work. Externally, efficient processes guarantee high customer satisfaction and can increase market share or open up new markets. The efficiency of the processes must be constantly and promptly monitored, so that any difficulties can be identified at an early stage and actions can be taken to optimize them. **The objective of Business Process Controlling is to continuously monitor and evaluate a company's business processes, in order to provide a basis for deriving measures that can be used to make your organization more efficient.**

This approach is the foundation for ongoing corporate control based on key performance indicators and processes. Business Process Controlling combines the performance level with the management level and closes the gap between the corporate strategy and operational implementation of its objectives. A process-oriented organization and constant controlling and management of business process performance are the foundation stones for true corporate flexibility.

In recent years, IT managers were often the first point of contact when it came to cost savings. The issue of the benefits of IT for business success (effectiveness of information technology) was all too often forced into the background. Success factors such as reduced costs (outside IT), increased productivity or increased customer and employee satisfaction are often ignored as not being quantifiable, as the varied effects of software introduction on the operational business make a comprehensive efficiency calculation extremely complicated and protracted.

However, the return on investment can be determined by looking at the optimized performance of the modified business processes. For example, after the introduction of an ERP system it is possible to determine whether, and by how much, the average throughput time of orders has been reduced. This kind of process improvement can easily be used to calculate the impact on costs, customer satisfaction and sales. Although the responsibility for process quality lies with the operational departments, the efficiency of the processes is determined to a significant extent by the quality of the IT support. Therefore, it is crucial to control the interface between the operational department and IT, in order to make process optimizations in IT solutions measurable and therefore to document the genuine software ROI. The VOI (Value on Investment) is often discussed instead of ROI in this context. Pure IT benchmarks, as are often used to assess the efficiency of information technology, take account of this aspect using qualitative surveys that have to be carried out as an additional task and only represent a snapshot and do not allow any quantitative conclusions to be drawn.

Business and IT aspects also coincide when it comes to the issue of IT monitoring: For example, what effects do any IT problems that occur have on ongoing business processes and what priorities should an IT manager give them for escalation and troubleshooting? Business Process Controlling can be used to obtain important experience in this area. For the process owner, the question of whether IT problems were a contributory factor is of interest when investigating the causes of weaknesses. **This means that monitoring the performance of a company necessarily involves combining strategic aspects (represented by Balanced Scorecards, for example) with process-oriented analyses on the one hand and IT-based analyses (IT Service Management) on the other, in order to guarantee an integrated view** (see Figure 14).

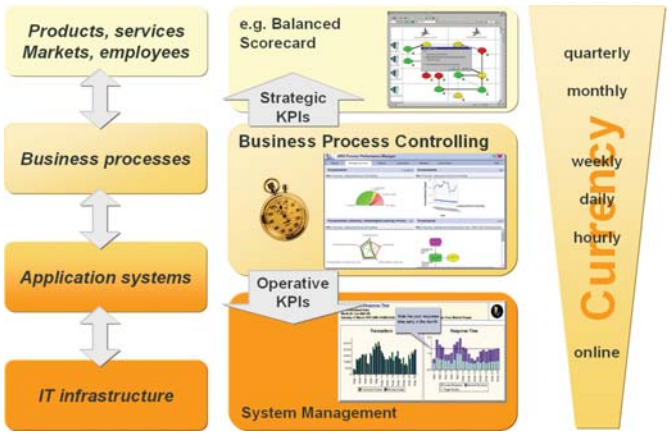

Figure 14: Positioning of Business Process Controlling Between Strategy and IT Implementation

Solution Approach and Results

Business Process Controlling is based on a key performance indicator system, which combines the process perspective with the fundamental controlling aspects of the business. The key performance indicators must allow conclusions to be drawn about the process effectiveness (e.g. customer satisfaction) and the process efficiency (e.g. processing time, delivery reliability, process quality and costs). In terms of process effectiveness, it is worthwhile to derive this indirectly from the processes, e.g. by recording complaint rates, repeat purchase rates, etc., as an alternative to or in addition to direct customer surveys.

In addition, a process-oriented key performance indicator system is structured in such a way that conclusions about the actual course of the process are possible.

With regard to the company's business, it is important that worthwhile facts are actually measured, as in the end it is the critical elements that are to be evaluated and not the non-critical elements. Which elements these are depends primarily on the company's markets and products (business segments) and on the relevant phase in the market, product and company lifecycle. It also depends on the nature and design of the business processes – in other words, the scope of process integration and process maturity.

Business Process Controlling
Develop **key performance**
Measure **performance**
Establish **process revision**
Introduce **reporting system**

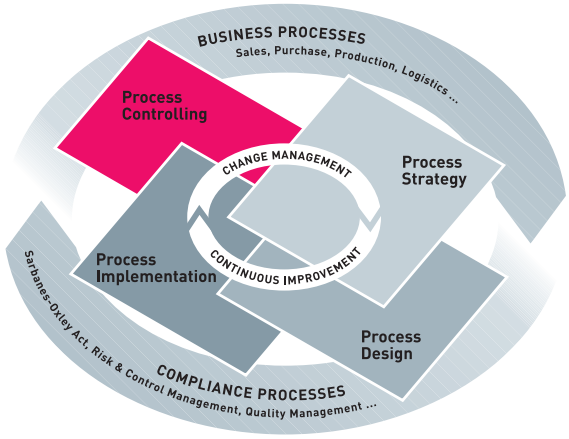

Figure 15: Business Process Controlling

A typical practical example illustrates this. Problems in the financial field provide the incentive to work on optimizing value creation in a structured and quantified manner. Non-achievement of planned sales triggers the following analysis chain:

- In the second quarter, sales only increased by 1.8% compared to the same quarter the previous year, instead of 4% as planned. What is the cause?
- Incoming orders were fine, but the number of credit notes has increased dramatically. What is the cause of this?
- Question to Sales: Do we have quality problems?
- If not, question to Sales: Do we have problems with regard to delivery reliability?
- If so, question to warehouse: Do we have a lot of out of stock situations?
- If not, question to logistics: Do we make mistakes during provision or do we have deadline problems in dispatch?

The example shows that financial indicators can frequently point to symptoms that necessitate a more detailed analysis. In many cases, this leads to an investigation of the performance of the company's core processes, as the actual causes can be found in the value-added chain.

However, in a few cases it can be sufficient to perform a one-off manual analysis of operational processes. Data acquisition techniques such as interviews, working groups, etc. are very useful to bring transparency to the business processes, but this kind of investigation is not sufficient to meet the company's needs in terms of currency and objectivity. **As the majority of process-relevant data now exists in IT systems, it is possible to automatically extract this data from these "source systems" and ultimately to reconstruct the entire process chain from these individual items of information, e.g. from the customer inquiry through to delivery and receipt of payment.** The advantages are clear, particularly when processes stretch across system boundaries (e.g. CRM – ERP – legacy system).

Our experience has shown that such analyses using data warehouse technology are generally not possible, or only at high costs (and even then at unsatisfactory quality and functionality). ARIS Process Performance Manager (ARIS PPM) from IDS Scheer follows a different approach, which can be ideally combined with existing data warehouse or controlling systems. ARIS PPM reads process-relevant data about current business occurrences from one or more source systems into its own repository via so-called adapters. Depending on the source system, a wide variety of original process-relevant runtime information about the activities performed can exist (e.g. log files, documents, histories). For each procedure (process instance) a model process description is then generated automatically – e.g. in the form of a so-called event-driven process chain (EPC) – in accordance with the chronological progression and associations of these process fragments. It contains all the individual activities (functions) in their logical chronological sequence and their link to the organizational units that perform them. Configured process key performance indicators (in accordance with the defined key performance indicator system) are calculated and aggregated for every process instance read-in. In terms of the type of key performance indicators, a distinction can be made between three basic groups:

- Time and quantity-related key performance indicators (e.g. throughput times, processing times, frequencies, probabilities)
- Cost-related key performance indicators (e.g. process costs/cost rates)
- Quality-related key performance indicators (e.g. complaint rate, error rates, number of processors)

The definition of these key performance indicators is based closely on the critical success factors drawn up for each business segment in the Business Process Strategy. For the key performance indicators that are related directly to a process, this relationship is documented by an extension of the process models, making it clear which KPIs are determined between which measuring points.

In addition to the key performance indicators, process-relevant decision variables (dimensions) are defined, e.g. region, customer group, material group, division. These are also read from the source systems as features of the individual process instances. The user can then use the interaction of key performance indicators and dimensions to analyze and evaluate the efficiency of his business processes.

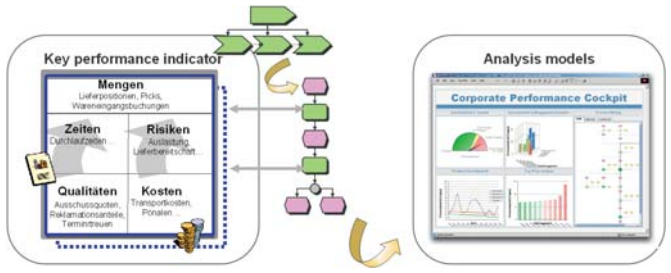

Figure 16: Results of Business Process Controlling

The sustainability of BPM and business process optimization increases in line with the intensity of Business Process Controlling and performance management, which is why we at IDS Scheer recommend ongoing controlling. However, regular (not ongoing) snapshots are still much better than no controlling of business processes at all. There are various starting points:

- Documented target processes are being used increasingly often as a basis for **process revision**. Using example concrete procedures, the conformity between the procedure specified by the Business Process Design and that brought to life by the Business Process Implementation is reviewed. The Sarbanes-Oxley Act (SOA) shows, in this case by way of example using the internal financial reporting processes, that demands for this kind of process revision are increasingly being reflected in legal regulations. Companies are suddenly being legally forced to have their business processes reviewed by external auditors.
- It is also possible to collect various company and process data manually from the IT systems on a one-off basis. After the data correction that is normally necessary, a sufficiently large sample of data can be analyzed using a standardized key performance indicator model. IDS Scheer offers this approach with its ARIS PPM for Logistics (Procurement module). The data from a snapshot is run through a pre-configured key performance indicator and analysis model, i.e. the questions of "What is being analyzed." and "How is it being analyzed?" have both been considered for a concrete division (in this case Procurement). This means that important impetus for optimization can be obtained and potential can be quantified at an early stage.

Benefits

There are essentially 3 target groups for Business Process Controlling:

1. Top-Level managers
2. Process owners
3. Employees responsible for performance at operational level

Each of these target groups has its own requirements and can derive different benefits from Business Process Controlling. While members of top management are primarily interested in aggregated data and notification in cases of significant deviations from strategic specifications, those involved in a process need detailed information about their process and the attainment of agreed performance objectives. Pursuing performance objectives is an important task for process owners in a company. Continuous monitoring of the relevant processes with regard to throughput time, quantity volume and process quality, and in respect of possible improvements, requires a constant comparison of actual data with planned variables and with data from previous periods, in order to identify trends.

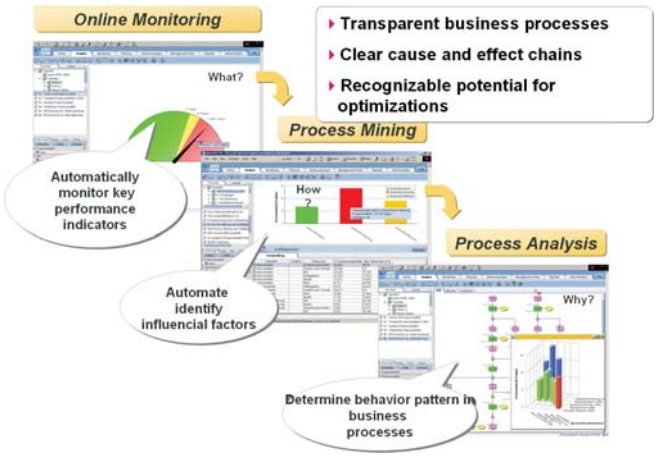

Figure 17: From Symptom to Solution

Figure 17 shows the way in which a cockpit-type overview (management responsibility) is used to isolate the causes of performance problems based on target groups (process responsibility) and then how the concrete process structure of these combinations can be analyzed when investigating those causes (performance level).

Ongoing Business Process Controlling brings particular advantages for BPM through cross-departmental comparisons, benchmarks and plan-actual comparisons.

In summary, Business Process Controlling provides the following potential benefits:

- Sustainability due to constant Process Performance Measurement and Management.
- Efficient process control due to specific key performance indicator system.
- Anchoring continuous process improvement.
- Consistency due to combination of corporate and process controlling

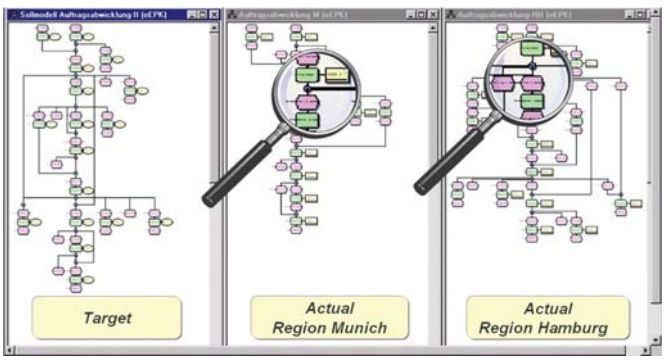

Figure 18: Plan-Actual Comparison in Internal Benchmarking

Tasks and Objectives of Change Management

IDS Scheer considers Change Management to be an integrative approach, whereby people in the company are guided and supported through the change process. The objective is thus to secure the sustained success of change projects and changes to the organization, processes and systems. Change Management is the only way to make genuine changes in a company. In one of our publications, Michael Hammer wrote: "The problem with changes is that people resist them – and the greater the change, the greater the resistance."

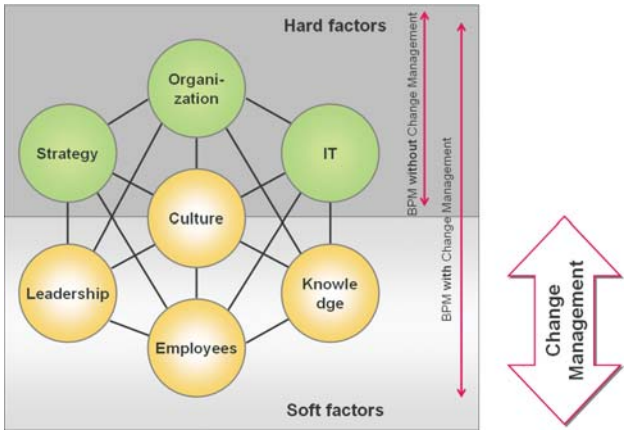

Figure 19: Change Management in Project

In general, we differentiate between proactive and reactive Change Management. Proactive Change Management involves creating a climate that is receptive to change, in which new ideas and new concepts can be developed. It allows the company to prepare itself for future changes. Reactive Change Management is all about creating an environment that promotes the implementation of concrete changes that have already been planned – normally as part of a project.

Analysis of change projects in the early 1990s showed that only 20% to 30% of these projects were ultimately successful. More recent studies have come to the conclusion that the number of successful change projects in the German-speaking region is now around 50%. On the one hand, this figure shows that people are now more conscious of Change Management and that it has achieved some success, but it also indicates that there is still a great deal of untapped potential. In many cases, analysis of the causes of failed projects has uncovered an exclusive focus on processes, systems and infrastructure, without sufficient consideration of the human factor, which is an essential part of the organization and valuable capital for the company (see Figure 21).

People often react to anything new with uncertainty and fear. Working processes change, perhaps you will even be working with different people, or at least working differently together, and you have to learn how to handle a new system. Experience has shown that in comprehensive and long-running change projects, over time a wide gap opens up between the experience of the project team and the perception of the affected employees. The project team gains knowledge about the new developments and experiences the enjoyment of something new and the team spirit of day-to-day project work. Meanwhile, the people affected perceive their own lack of knowledge and the uncertainty and resulting fear (at least subconsciously). This normally leads to rejection of what is new and a deliberate distancing from it.

This phenomenon can essentially be attributed to 2 types of barrier: knowledge barriers and barriers of will. Change Management can overcome both types of barriers by dealing systematically with the 4 specific barriers highlighted in Figure 20.

Figure 20: Barriers to Change Management

Solution Approach and Results

In change projects, we repeatedly come across the following basic requirements:

- Employees want to be kept informed. A closed-door policy leads to uncertainty and produces solutions that do not have the support of employees.
- People who are expected to identify themselves with their company have the right to play a part in designing that company. This means that they should be as involved as possible in change processes. The challenge here grows in proportion to the scope of the change project. Not every issue can be agreed with all affected employees if a large number of departments, profit centers or national companies are affected. This is exactly where Change Management is vital.

These two basic requirements can be addressed with a range of measures:

- Identification of the specific actions needed in the company and fine-tuning of the procedure based on the insights gained.
- Establishment of regular communication using the communication instruments that already exist within the company (Intranet, employee newsletter, etc.) and the opportunity to receive feedback.
- Intensive involvement of employees in the change process, but also
- Assurance of sufficient management attention.
- Early identification of resistance and fast, appropriate responses.
- Training that is designed to be role-specific and will prepare the employees for their new duties.

Changes normally represent a huge opportunity, both for the company itself and for its employees. One of the most important tasks of Change Management is to ensure that it is recognized as such.

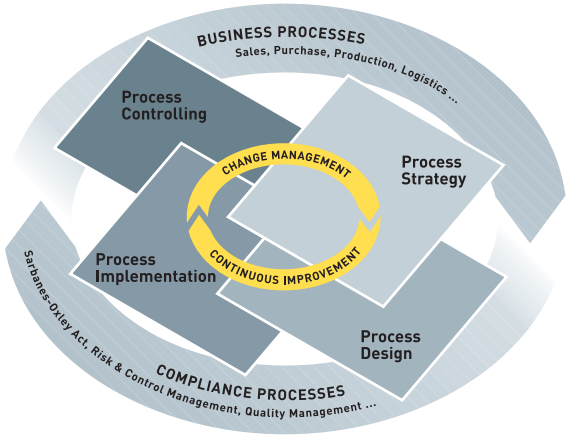

Figure 21: Change Management

Change Management
Produce **site analysis**
Create **change concept**
Plan **change**
Implement **change**
Bring about **stability**

Our Change Management is based on the phases of the BPM project it is intended to support. However, the nature, scope and design of the necessary Change Management depend to a great extent on the planned change project, the corporate environment and the affected employees.

The figure overleaf shows how Change Management supports the project and is tailored to the planned change project. In extensive change projects, Change Management begins at a very early stage. The intensity of Change Management efforts then increases continuously, before declining slightly towards the end and evolving into a regulatory process for ongoing change.

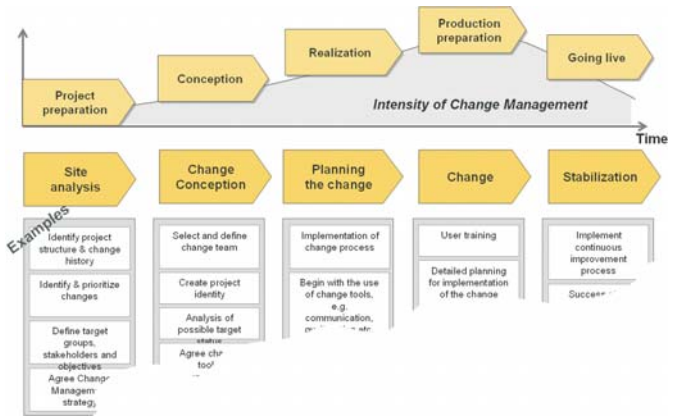

Figure 22: Phases and Intensity of Change Management

Figure 23 systematically represents the mix of communication, qualification, motivation and organizational instruments that are used to support the project.

Typical results of Change Management include stakeholder analysis, change teams, the establishment of a communication plan, qualification concepts, and employee surveys.

A stakeholder analysis allows you to obtain structured information about and subsequently an overview of the expected behavior of employees involved or affected, which people should be involved in the project and how, and the individual measures that can be put in place to positively influence underlying attitudes to ensure the success of the project.

To put Change Management on a sure footing in terms of personnel, a change team is defined. The change team institutionalizes the integration of the project and the organization and consists of employees who are directly affected by the changes. The change team

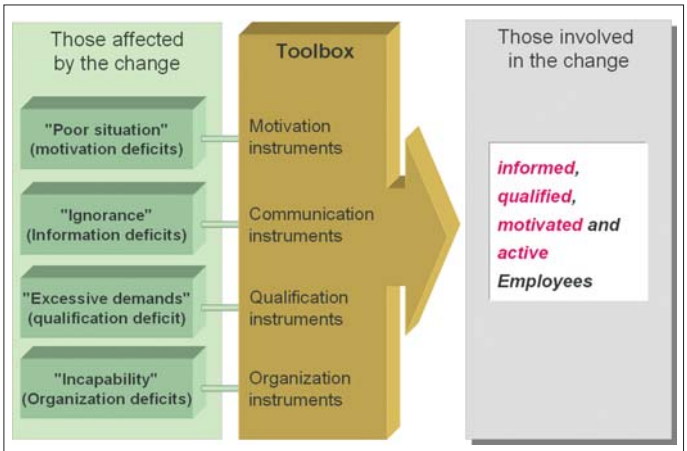

Figure 23: Change Management Tools

- is an interface between employees and the project team and a catalyst in the change process,
- acts as a contact point for the people affected on issues relating to the change process and for any employee complaints and carries out transfer work,
- provides an insight into the prevailing culture and acts as a barometer for the mood of the company,
- is an analyst of opportunities and problems and a collection point for continuous improvement processes and any complaints,
- and maintains contact with the works council and employee representatives.

The change team works jointly on the selection and design of suitable tools for Change Management. This means that, through their change team, the people affected can influence how they want to be involved. When producing the Change Management concept, rather than just selecting the appropriate tools in isolation, an integrative concept is produced.

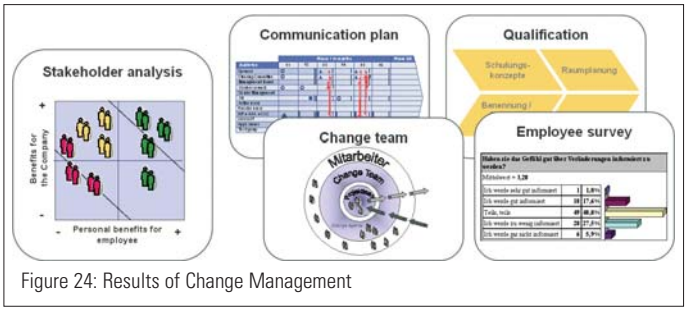

Figure 24: Results of Change Management

Comprehensive Change Management is supported by the use of regular employee surveys. As well as being an instrument that can be used to involve the employees, they also provide a method for monitoring the success of individual measures in an ongoing change process and allow critical areas to be identified, e.g. in the perception and communication of changes or the effectiveness of information or qualification measures. In large change projects, employee surveys can also be used in advance on statistically relevant samples to obtain reliable information about basic attitudes towards change projects, dealing with change, communication of changes, dealing with the system or typical methods of transferring knowledge in the company.

Qualification of the affected employees by way of training initiatives and the provision of appropriate user support are further important elements of Change Management when it comes to the transition from planning to realization of the changes.

IDS Scheer recommends a process-oriented and role-specific approach to user training and, depending on the expected volume of training and trainees, our successful, tried and tested Blended Learning approach, which effortlessly integrates E-learning, User Helpdesk (UHD), ERP system and the ARIS process modeling software into a "learning" system, along with "train the trainer" concepts.

Benefits

Change Management assists the project and the organization affected by the change to increase productivity and efficiency, and to strengthen the employees' identification with the company. This accelerates the change process. At the same time, you can use your existing resources to make a success of the change. Potential identified in the project, e.g. for cost reduction, can thus be realized. When combined with a professional approach to changes, this will increase your company's flexibility and competitiveness.

Change Management

- ensures that optimization potential identified is fully utilized,
- increases the acceptance of changes in the company,
- improves the on-time implementation of change measures,
- increases the efficiency in change processes,
- and creates a positive project image.

Project Management

IDS Scheer has a management system that has been certified to DIN EN ISO 9001:2000 by the Deutsche Gesellschaft zur Zertifizierung von Managementsystemen [German Association for the Certification of Management System] (DQS), and comprises the areas of corporate consultancy, software development and support.

This also includes our procedure and our project management standards. As part of our ProjEx (Project Excellence) initiative, we are continuously optimizing our efficiency in this field, thus allowing our experience and tools from successful (major) projects to influence our own standards. This means that you will benefit from professional project management and from the wide variety of our experience from other projects.

ProjEx from IDS Scheer

- is the central platform for IDS Scheer project management,
- maps the entire lifecycle of a project,
- is generic and can supplement your customer-specific project standards,
- and contains project accelerators such as checklists, tools, templates and best practices.

Further Information

If you would like further information about BPM or would like to organize a face-to-face meeting with us, please contact:

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The software and consulting company IDS Scheer (Saarbrücken) develops corporate solutions for Business Process Management. With its ARIS Platform for Process Excellence, the company offers its customers an integrated and complete tool portfolio for strategy, design, implementation and controlling of business processes. As a part it, ARIS Toolset is the number one selling process modeling tool in the world. A strategic cooperation with SAP makes the ARIS tools and methods standards for the NetWeaver platform. ARIS SmartPath represents a tool that will make rapid SAP introduction a reality for SME as well. Thanks to the integrated approach of ARIS Value Engineering (AVE), IDS Scheer consultants view their customers' enterprises holistically. AVE means building bridges between corporate strategy, the processes derived from it, the IT solutions needed to support it and also the controlling of running processes. Application Management and Outsourcing with own data processing service centers also belong to the company's portfolio. IDS Scheer was founded in 1984 by Prof. August-Wilhelm Scheer and now serves about 4,000 customers in over 50 countries through a network of its own branch offices and partners. In 2004, the company earned revenues of more than 280 million Euro. About 2300 people are working for IDS Scheer worldwide. In Germany, IDS Scheer is among the top 10 IT service providers. In Central and Eastern Europe, it is recognized as a market leader. IDS Scheer is listed in the TecDAX on the Frankfurt Stock Exchange, and is thus ranked among the 110 leading companies traded on the stock exchange, also known as the DAX110.

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