

Our Passion: 20 Years of Complexity Management

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Complexity is a term most frequently hear when explaining undesirable events and results. But what do we actually mean when we talk about complexity? Even though the term is widely used and has relevance in today's world, it does not come easy trying to define complexity in a universally accepted way. Neither does it become easier when trying to define it with the modern concept of management in mind. But it is essential to take a closer look at complexity in order to deduce possible next actions for an organization.

Examining scholarly theory, the study of Management Cybernetics at the University of St. Gallen, Switzerland, is likely the most comprehensive assessment of complex phenomena in management praxis. Using cybernetics and especially system theory, companies are understood as complex social systems. These systems morph into entities that are difficult to predict because of the interactions between their elements (e.g. employees, clients, process, and products). In this context, complexity is caused by the multitude of system elements and their relations, as well as the ability of the overall system to adopt different states over a given time period.

Observing pragmatically, company management experiences complexity when it becomes increasingly challenging and strenuous to initiate change within a company and to steer these change efforts in the right direction.

Complexity – A Problem?

In order to influence the complexity of a system constructively, the recognition of structures, functional contexts, and patterns are a precondition. Adequate tools are needed and the scope of the observation has to live up to the problem.

Having said this, companies are especially complex systems. Management needs to have an overview of the whole range of possible solutions, reduce them to a comprehensible amount, make decisions and maximize the company's success by choosing the right measures. This task can be described through Complexity Management.

Inherently, the human being can only grasp a limited amount of influencing factors and their relations cognitively. Reducing system elements and purposefully omitting immaterial facts, allows for an initial comprehension of complex situations.

In nature, different strategies of simplification have proved to be successful. Their purpose is to remain capable of continuing effective decision making. Our comprehensive approach of Complexity Management contributes to:

- Employing company resources in a focused manner while not losing focus along the way
- Separating the essential from the non-essential and the important from the urgent
- Reaching distinct decisions with the overall company goals in mind
- Offering orientation for the coordination of individual measures
- Thinking of alternatives in order to react appropriately when making complex decisions
- Having an overview of the basic methods of Complexity Management

In corporate practice, decision making processes are considered complex when the prognosis of the impact of planned measures causes a large amount of insecurity,

even if they were prepared most diligently. Today this is the case with most corporate decisions.

The complexity of decisions lies in the interaction between strategic factors influencing the competition as well as company specific factors. Being permanently successful is therefore mostly dependent on the ability to successfully handle the complexity of the decision making process. Thereby, the long-term competitive position of a company is determined (Fig. 1).

Managing Complexity – More Important Than Ever

Schuh & Company understands the term Complexity Management as the systematic exposure of organizations to diversity and dynamics that surround them in order to have sustained economic success. Over the past 20 years we have developed a systematic approach of dealing with complex decisions (Fig. 2). The decisive requirements to successfully handle complexity are a holistic approach to find solutions and the attempt to realize an overall optimum.

In the first step, an overview of all influences on a company has to be generated in order to identify the relevant factors influencing its complexity. Without an extensive analysis of these factors the quality of any derived decision suffers and with that the company's success.

Initially the multitude of influencing factors is collected and a deliberate decision about which of these factors to include is made. During this selection an equal amount of judgment, experience and knowledge is needed.

Complexity Management - A Trade, not an Art

In a company a decision is necessary when dealing with specific customer requirements and having to decide whether or not a new, customized solution for each individual client (products as well as services) should be offered. In the context of these decisions, relying on the identification of allocated costs of a variant rich product mix only leads to reliable results when unique and reoccurring process costs can be estimated in addition to factoring the classic the classic overhead calculation. Superficially identified savings in cost of materials, when generating a new variant, are often overcompensated for by additional expenditures during the involved process.

To improve the quality of decisions, a budget increase is more important than an inflated effort to determine a single cost element.

In a second step, the factors influencing the interdependencies and their basic relationship should be considered when coming to a decision.

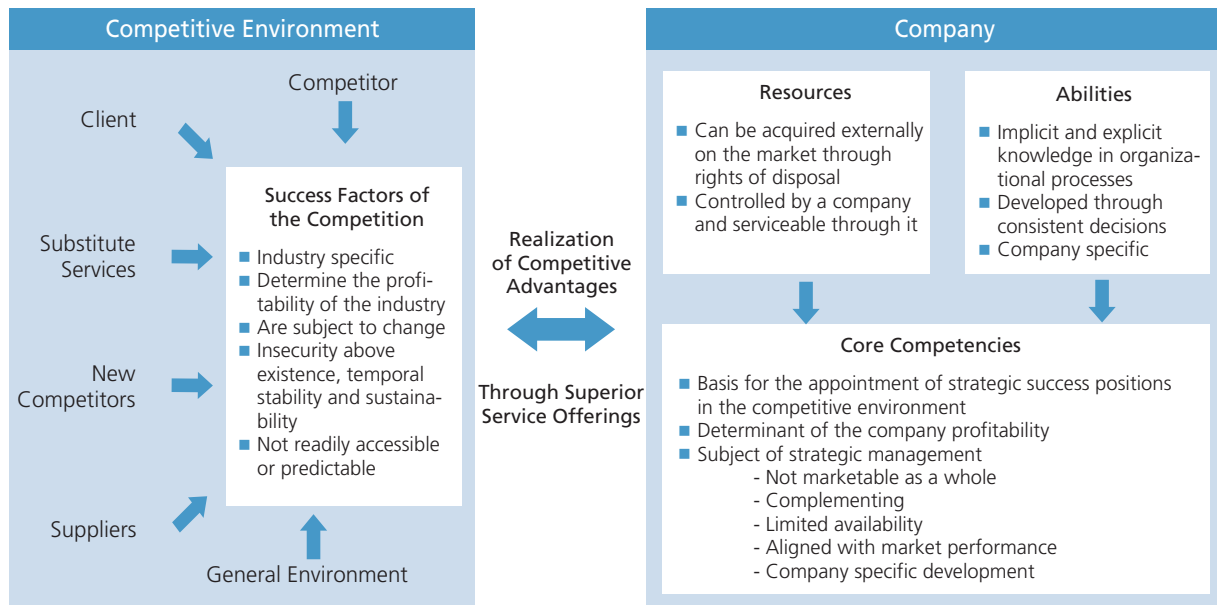


Figure 1: Description of Competitive Advantages

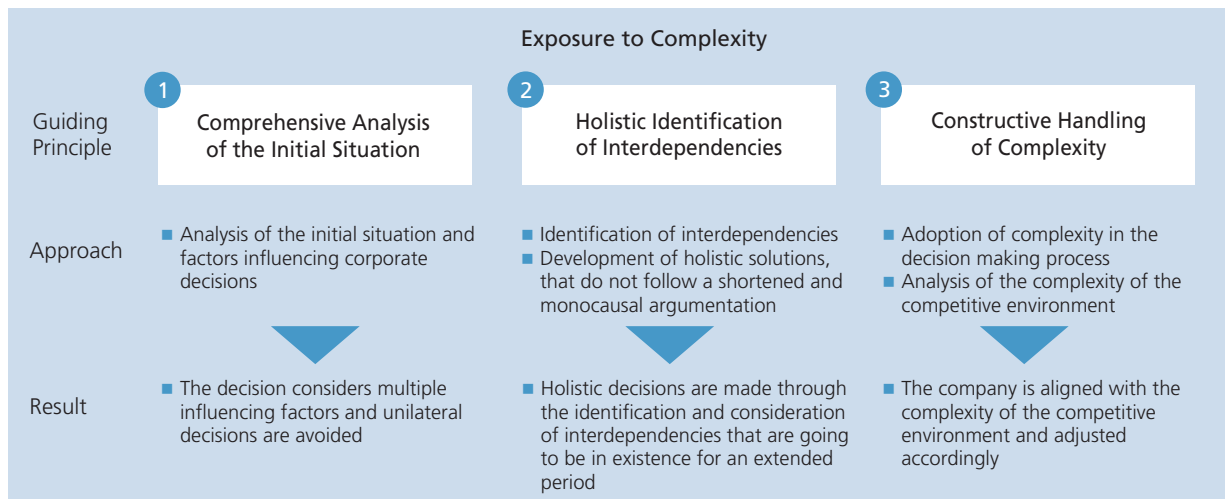


Figure 2: Our Strategies for Dealing with Complexity

Without employing tools to visualize system elements, it is often hard to recognize interdependencies. For technical applications, an example would be the interdependence between optional performance features (e.g. heating of side mirrors on cars) and the increase in product varieties (e.g. from 42 to 62 varieties of mirrors) cannot be intuitively assumed.

The multitude of factors and their reciprocal influence can be mastered when applying appropriate methods. The tools aim to adjust the barrier of controllable complexity and thus keep it manageable.

Because of the temporal dynamics complicated issues change into complex issues. Complexity can in most cases only be marginally eliminated. In many cases, only mastering the complexity will produce competitive advantages. The key to this success lies in adequately adapting the processes and structures to fit the challenges of the competitive environment.

Lessons Learned after 20 Years

Summarizing what we have learned during two decades of dealing with complex issues and Complexity Management, it can be stated that the following four lessons should be emphasized:

1. A company has to periodically scrutinize its products and services and rid itself of unnecessary or unprofitable ones. If this step is not performed, the

value proposition of the product or variant is sooner or later going to shrink. At the same time the costs necessary to manage the complexity, which are also difficult to reduce, increase at an above average rate.

2. The direct and indirect processes of a company are to be reassessed constantly with regards to their value-adding contributions. New potential structures or technologies have to be implemented.
3. Innovation that is rewarded by the customers has to be facilitated and new ideas need to be implemented quickly. If a lot of capital is invested into innovation, the courage to go all the way should be displayed as well. Courage does not mean being naïve.
4. In the best case the company is a functioning social system that is able to survive in a complex environment. The necessary transformation demands the participation of all. A company wanting a future has to face the ever-changing competitive environment and needs to handle it in a professional manner.

Complexity Management – Not Only a Task for Engineers and Business People

We support our clients in finding solutions to complex situations by providing our experience, competence in methods, and knowledge of state-of-the-art developments.

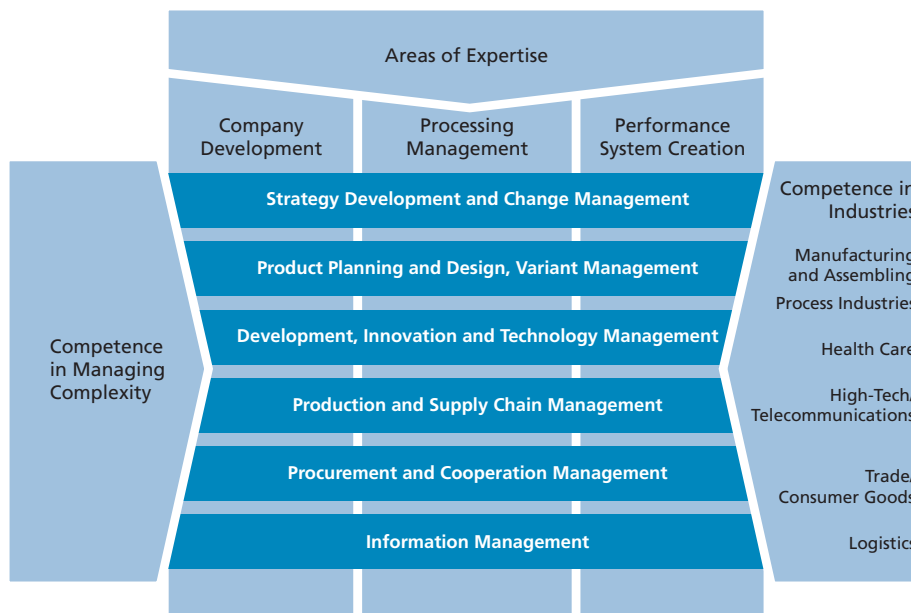


Figure 3: Consulting in Complexity Management Requires a Wide Scope in Competencies

Our systemic and holistic approach follows our conviction that in order to gain a true understanding of the interrelation between context, structures, and company performance, certain preconditions have to be met. Only if multifaceted dependencies, temporal dynamics, structural alternatives, and the criteria for results merge to form an overall assessment of the situation is it possible to reach an optimum level of performance.

Since 1989, Schuh & Company has established itself as a mid-size consulting firm with emphasis on Complexity Management. Our main focus lies in company development, process management, and structuring the product mix; all of which developed along the original topic of product complexity and were necessary to ensure the sustained success of our customers (Fig. 3).

We support our customers in managing their complexity successfully as well as accompanying an active implementation. The focus on the topic Complexity Management paired with the great experience of our consultants guarantees our clients a high conception quality and implementation strength. At the same time, we maintain an intensive cooperation with the Universities in Aachen, Germany and St. Gallen, Switzerland. We can thus offer our own experience in addition to a constantly updated knowledge base that touches all relevant economical questions. This will help our clients in finding solutions to their challenges.

Because of growth and internationalization seen in many companies, the soft factors of complexity have gained considerably more importance. The management of social complexity today is critical to optimizing product and process complexity. When both hard and soft skills are necessary, we work with Fischer Group International (fgi), a consultancy on leadership development and cultural change. In such situations we can successfully cover all aspects of change management projects.

In our projects we follow a participative approach, integrating all persons involved when designing concept and context, thus ensuring a successful implementation. Client and process orientation are the focal point of organic company development.

The success of our clients is the benchmark of our work.

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