

THE APPROACH OF SYSTEMS THINKING IN STRATEGIC MARKETING CONTROLLING

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1. THE APPROACH OF SYSTEMS THINKING IN STRATEGIC MARKETING CONTROLLING

Strategic marketing can look back on a long history of success. Controlling of strategic marketing still lags behind the trend. This may be based on the fact that in general, controlling in Germany is handled quantitative. Dealing with qualitative data and weak signals, typical for strategic queries, is difficult, especially for costing orientated controllers. In view of globalisation and the resulting challenges, strategic marketing controlling will advance as a success factor. Since the world has become a (global) village, the individual urban area can no longer isolate itself from a crisis situation. A local crisis can easily create a global breakdown which in the past would have possibly had little influence on the own development. At the rate at which the context of the environment is dynamically changing, discontinuities and complexity tend to increase. The old rules on known regularities, if they ever existed at all, are no longer applicable. Through the development of new situations and the increase of relevant influencing factors, the prediction of changes becomes slighter in the entrepreneurial internal and external world. Even if the enterprise is successful in registering the relevant factors and their dependencies, the variables prove to be more difficult to manage on account of their stronger impact. Globalisation leads to more ex-

treme booms and downturns and trends are reinforced and accelerated. These developments complicate the adaptation of enterprises, respectively prolong the adaptation time (Gomez 1981). There is a danger to exhaust energy in the management of the different crises instead of being proactive for the future.

Parallel to this purpose the improvement of information flow leads to an increased rationality of the decision maker. Since value for money comparisons are easier the pressure for differentiation is higher for the enterprises. As a reaction to the improved market transparency the innovation rate will further increase, the product life cycle will be shorter and the pressure on pricing will increase. At the same time, as a consequence of dynamic markets, the phases have become shorter to take an easier pace during which the enterprise can become stabilised and align itself (Malik 2008). The changes force enterprises to develop and implement procedures to:

1. better recognise the developments of the external and internal environment, i.e. more exact and premature
2. to be able to structure the interdependence of the enterprise relevant variables, the strength of impact as well as the timing related interdependence.

Since these tasks aim at understanding the external and internal environment of the enterprise, they are to be handled in the field of strategic marketing controlling (Probst, Bassi 2014).

2. OBJECTIVES AND APPLICATIONS OF A HOLISTIC STRATEGIC MARKETING CONTROLLING

If the following speaks about strategic marketing then it is in the sense of a unitary, evolutionary thinking and acting, based on a holistic world view. The strategic, unitary marketing controlling as a management instrument has the objective to recognise, build up and maintain the success potential of an enterprise in order to survive the environmental changes (Müller 2009). It is appropriately geared for the future and is closely related with strategic management, planning and controlling, whereby the definition of action oriented strategies stays in the background. Referring to a changing enterprise environment, the strategic marketing controlling should record the flexibility of the enterprise

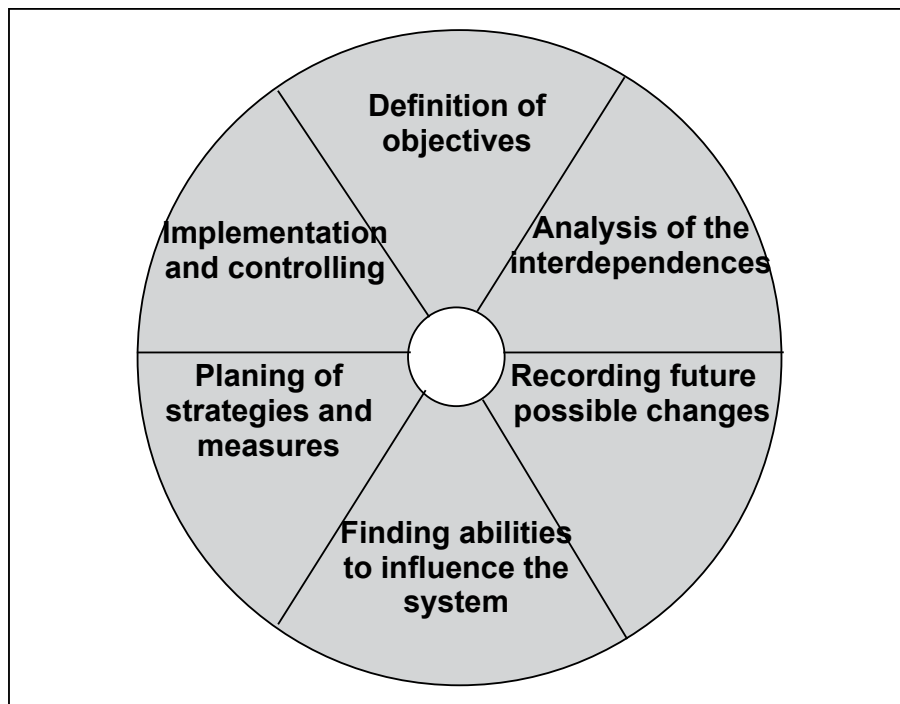
and protect the enterprise from surprises by supplying the necessary information reflecting the change of success relevant parameters. In order to fulfil the tasks, strategic marketing controlling has to:

- be based on an holistic understanding of the system,
- have the aid of weak signals,
- have the basis for a proactive and flexible procedure
- have control discontinuity

in order to guarantee the adaptability of the enterprise.

3 SIX STEPS FOR AN HOLISTIC STRATEGIC MARKETING CONTROLLING

The basis of the holistic strategic marketing controlling is the recording of the entrepreneurial environment including its cross-impact whereby the dynamics of the system should always be clearly outlined. The methods for a systems thinking were developed to allow for successful reaction to complexity (Wiener 1963). The understanding of the short- and long-term consequences of an action requires a dynamic model to simulate the multiloop, non-linear nature of the system. The condition for this is a circular causal logic, which the registration of cross-impact of the system variable allows (Vester/Hessler 1990). In the late 80's these methods reached a broader audience in Europe, thanks to the works of Ulrich (Ulrich/Probst 1988), Gomez (Gomez/Probst 1995) and Probst (Probst/Gomez 1991). In the meantime holistic approaches are being used to resolve various entrepreneurial questions.

Figure 1: The six steps of the holistic strategic marketing controlling

Based on cybernetics, the enterprise is recorded as a system which is part of a larger system. The advantages of this method results from the possibility to register complex systems and situations more comprehensive than with other approaches and therefore react more successfully. Systems thinking is an iterative process done in six steps (cf. Ill. 3).

3.1 DEFINITION OF OBJECTIVES

Problems are always then observed when there are deviations between the wishes of the enterprise and reality. The precise definition of enterprise objectives is the requirement for recognising problems. The question of strategic objectives of an enterprise and its interdependence is widely discussed. In the end each enterprise has to create its own objectives. A high disturbance stability and a distinct fault tolerance are strategic objectives which are generally accepted and are positively combined with stronger, economic distinctive objectives. On the other hand, the orientation towards one-sided economic objectives can for instance lead to a choice of a strategy which on a long-term basis destabilises the enterprise. From a strategic marketing point of view, it should never be to achieve certain states. Moreover, capabilities have to be acquired which warrant success in a changing environment. Systems thinking in the strategic field will never result in wanting to adapt the environment to its prognosis and therefore

wasting energy fighting unforeseen developments. Systems thinking makes the enterprise take on and use opportunities arising from environment changes, according to the jiu-jitsu principle¹. A prerequisite for this, apart from the ability to register changes, is a reorientation of the enterprise that must observe itself and others from a different perspective. Instead of the widespread orientation on competition (cf. Strengths-Weaknesses Analysis), the enterprise has to consider itself as part of a large system. The perspective may no longer turn from internal to external but rather the own activities are to be seen from the perspective of the system. By doing this a changed consciousness results automatically for the interaction of individual entrepreneurial activities.

3.2 ANALYSIS OF THE INTERDEPENDENCIES

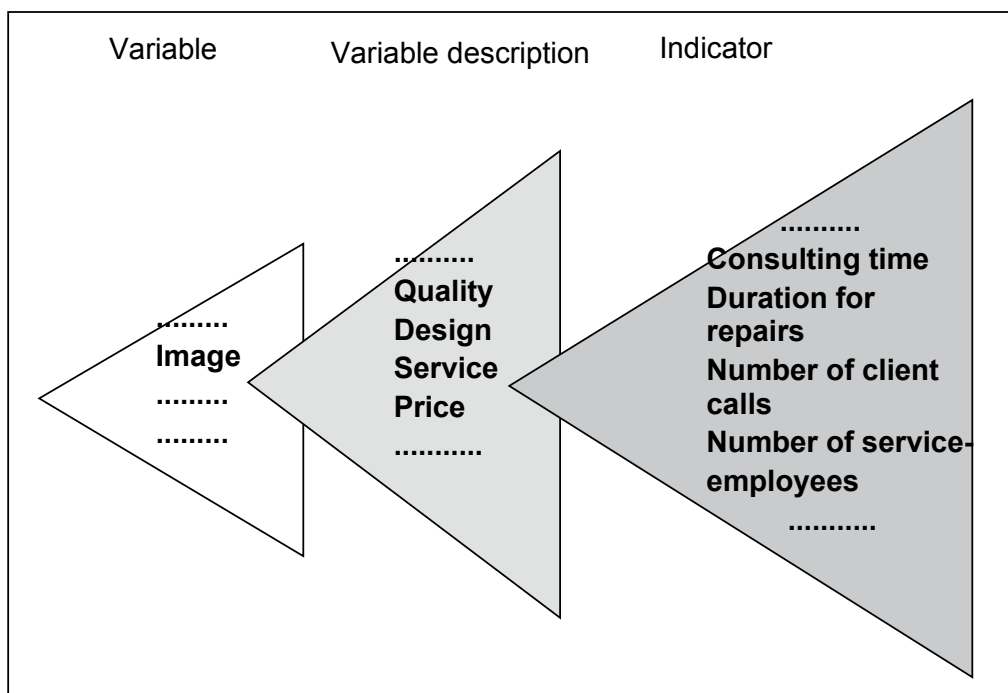
The analysis of the interdependencies is the heart of the holistic strategic marketing controlling. It makes it possible to register the environment as a system. The best way to learn a system is to design it. Therefore the findings are visualised in the form of a network and the essential system variables are evaluated by means of a cross-impact matrix. The process of uncovering the system structures usually starts with a brainstorming session. Therefore a deliberate subjective procedure is applied in order to collect knowledge about the system. In this case, the variables considered as essential are noted and discussed. A relatively homogeneous idea from the entrepreneurial environment rapidly develops. The results of the brainstorming session will be even better when the participating persons have varied backgrounds. This should be considered when selecting participants for the appropriate project group. The next step is to determine the relevancy of the variables (Vester 1999, p 184). Independent of the fact whether they are a quantitative or qualitative variables, they always form the intersections of the system and portray the interdependencies. Since variables can unite several aspects, the system description should always be complemented by a variable description.

The connection between a system variable, the sub-variables and the indicators is documented in the variable description. This way, the system variable “image” can combine the different aspects such as quality, design, service or price. Each variable can then be determined on the basis which indicators it

¹ According to the Jiu-Jitsu principle, available energies, even if they are apparently disturbing, can be accepted and with little energy diverted to the desired direction.

should be describing, respectively measuring. In an example the service quality can be fixed for consulting time, duration for repairs, the number of client calls, etc. The indicators can be both of a qualitative and quantitative nature. According to its lead time and its problem adequacy, the indicators will emit weak or strong signals. The described interdependency varies from enterprise to enterprise, so that an existing multicausal loop diagram cannot be transferred from one enterprise to another. The systemic structure of an enterprise is as individual as the enterprise itself and requires continuous modifications.

Figure 2: The connection between variables and indicators



Based on the central causal loop, step by step the system is formed and extended (Gomez/Probst 1995, p 78ff). Secondary causal loops are determined and fed into the system so that in the end the loops becomes one unit and a network of essential related impacts is created. To begin with, the network provides a static picture of the system, only when the strengths, direction and the interdependence timing of the related impacts are recorded, then the dynamics of the system are shown. The direction of the cross-impacts are illustrated by arrows in the diagram (Figure 4). Similarly directed variables are shown with a positive sign and opposite directed variables are shown with a negative sign. The number of signs clarifies the strength of impacts. This simple procedure has the advantage that all related impacts, even those which are not quantifiable, can be documented in a uniform manner and results in an homogenous overall picture.

(To determine impacts, a statistical procedure such as the LISREL approach. The timing of the cross-impacts which essentially constitute the dynamics of the system, can be shown by different arrow sizes. Due to the dynamics of the system, the system interdependencies are subject to modifications. It should therefore be tested continuously whether the represented relations are also effective for the future. If necessary adaptations should be made.

3.3 RECORDING OF FUTURE MODIFICATION OPTIONS AND DISCOVERING ABILITIES TO INFLUENCE THE SYSTEM

Last but not least, due to the intrinsic dynamic, the complex system should be examined regarding further development. On the basis of the portrayed relations in the network, possible changes within the system environment or in the system can be simulated. Future opportunities and dangers as well as the effect of individual interventions in the system can be revealed. Since many external influences can not be predicted with causal methods, the corresponding scenarios have to be developed so as to capture the modifications of the general conditions.

By means of the determined cross-impacts a synchronised early warning system can be developed. The system relevance of the absorbed signals can be easily evaluated by taking into consideration the information incorporated into the network. The new information with regard to its influence on the system structure is checked simultaneously. This way, the influence of discontinuity can be currently registered. The result is a network which adapts itself to the varied structures. If, for example, the enterprise recognises a danger in strong supplier dependence and reduces this danger through a targeted expansion of subcontractor relationships, then the influence of the subcontractors will also be correspondingly regressive on other system variables, for instance product quality or profit. This in turn leads to a re-evaluation of the variable and a modified system structure.

Figure 3: Cross-impact matrix

Influence from on	1.	2.	3.	4.	5.	6.	...	n.	Intervention amount (= active amount)
1. Sales	0	4	3	0	1	1			
2. Investments	3	1	3	2	2	1			
3. Research and Development	3	0	2	2	3	2			
4. Customer focus									
5. Labor cost									
6. Market share									
n.									
Influence amount (=passive amount)									

The evaluation of the system variables and their interdependence is done with the aid of an cross-impact matrix (Vester 1999, p 192ff). The strength of the impacts are evaluated by means of a set scale, mostly five scaling proves to be sufficient. This way the cross-impact of the variables can be recorded. A high column total (influence amount) illustrates that the variable is influenced strongly by other system components. A high line total (intervention amount) illustrates that the variable considerably influences the system.

3.4 PLANING STRATEGIES AND MEASURES

The simulation of modification options provides the decision maker with a number of alternatives for taking action and influence the system both in the strategic and operations areas. As a result, the capability of taking action normally increases and new channels are disclosed which are faster, less expensive or more suitable for the enterprise than the standard strategies. The enterprise can easily develop its own individual strategies and does not remain at rest on well trodden paths. Even in the event that no new action alternatives are shown, as it rule it increases the efficiency of decisions. Due to the holistic approach it allows for the contradiction between the demand for stability of a strategy and the compulsion to adaptation of a strategy for a changing environment, if it is

not resolved then at least it is reduced considerably. This is possible because previously various strategies regarding their sensitivity to environment changes were able to be checked. The adaptability of a strategy to a changing environment can be simulated and evaluated. Furthermore the larger number of action options enables strategies to be adapted more sensitively i.e. more imperceptible. Also, the smooth inter-meshing of strategic and operations planning is facilitated. Strategic planning becomes far more effective and operations planning become far more efficient.

3.5 IMPLEMENTATION AND CONTROLLING

The enterprise will always choose and implement the action alternatives which show the highest possible flexibility in order to consequently have the lowest risk. Experience shows, however, even with the most careful planning, the chosen strategy is not fully applied since imponderables will always remain. The task of controlling is, the planning progress, the deviations and to scrutinise the impacts in order to keep the confrontations going with the complex system “enterprise”.

4 IMPLEMENTATION OF A HOLISTIC STRATEGIC MARKETING CONTROLLING

At first glance, the requirements appear high to produce an integral controlling. There is, however, a system that supports management both in strategic and operational decisions. The necessary integration of early warning information and the inclusion of weak signals assist to avoid the most frequent mistakes which are made in decision situations. The clear system structure improves the tuning between operational and strategic measures and considerably improves the quality of decision.

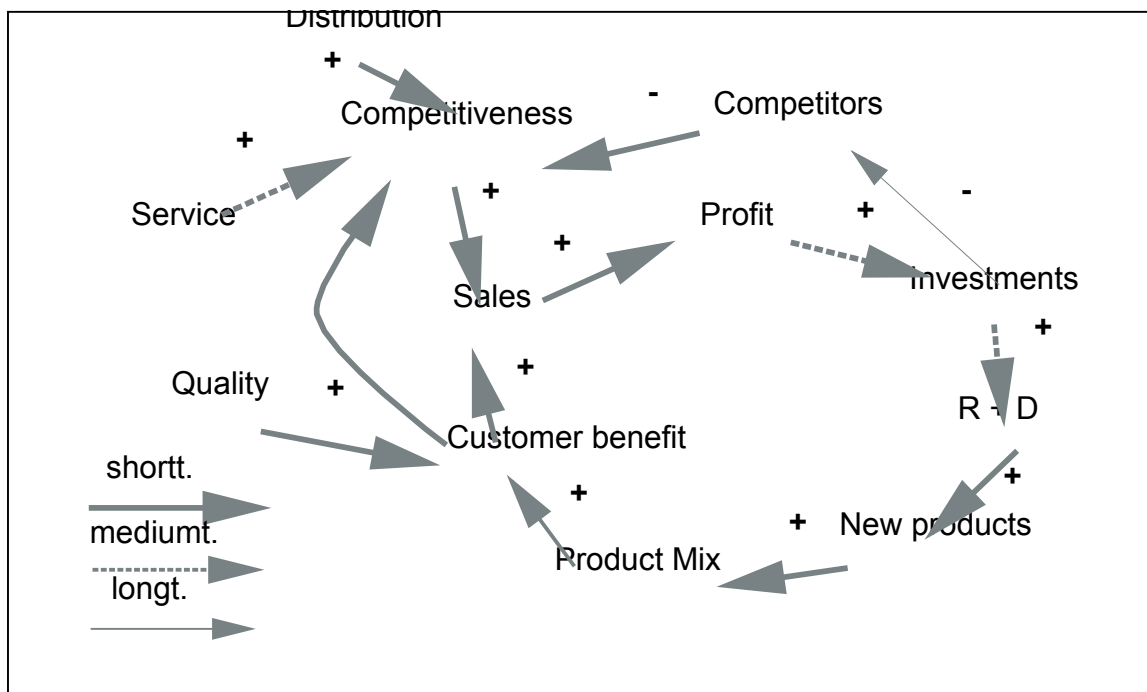
This also applies to holistic controlling, it is only as good as its acceptance. For that reason strong promoters and decision makers should be included in the development of the system. The self-conception of the controlling staff members must also change, stop data-mining and move on to being a consultant. Within the field of controlling the essential data still requires to be co-ordinated, however communications with other fields will change. The staff member in the holistic strategic marketing controlling will primarily provide conclusions

and argumentation to other departments. Whereas the continuous data flow via a corresponding information system is guaranteed.

4.1 NETWORK AS AN INFORMATION BASE

The development of an efficient and generally accepted network (Figure 4) is above all the main focus of marketing controlling. The targeted level of detail of the system results from the objective. It has proved effective to carry out extensions successively after determining the primary causal loop. After all secondary loops are registered, they are finally integrated into a system.

Figure 4: The Network



A broad acceptance of holistic controlling can only be achieved if staff members accept both the methods and its implementation. It is recommended from the beginning, to document the considerations of the project group in order to keep other staff members informed on the development of the network. It is always necessary to present the network and the related, essential considerations of systems thinking to all staff members. The better this information phase is planned and carried out, the better the acceptance to work with the system. Consequently, the quality of the planning and the implementation of internal communication represents an essential factor for project success. Within the scope of the presentation, it should be emphasised that:

1. the cross-impacts of variables is certainly undisputed;
2. the network enables the interdependence to be recorded
3. planning safety increases;
4. more opportunities for influence are recognised
5. the network adapts to the environmental developments;
6. suggestions for improvements are always welcome.

4.2 DEFINITION OF THE RELEVANT VARIABLES

A deciding factor for the practical implementation of the findings of the systems thinking is the quantification of the system variables. By using the cross-impact matrix, the interdependence is determined. To visualise the results, the variables are represented in a two-dimensional diagram. The influence amount (= passive amount) is shown on x scale and the intervention amount (= active amount) is shown on the y scale. From the situation in the diagram, the role can be well recognised which a variable in the system plays. Four decisive roles can be distinguished:

1. The buffering variable: its influence on the system is minimal, simultaneously it is slightly influenced by the system variables; overall it is hardly involved with occurrence in the system.
2. The active variable: it exercises a strong influence on the system, however, it is hardly affected by the system;
3. The crucial variable: it is involved strongly in occurrences in the system because on the one hand, it strongly intervenes occurrences and on the other hand, it is strongly affected;
4. The reactive variable: It is strongly affected by the system, however, it hardly influences the system.

On account of their shown qualities the variables have different tasks in strategic marketing controlling.

- **Active variables** offer good starting points for controlling intervention, above all their relevance comes into effect with discontinuity management, especially if it has to do with stabilising the system again.

- **Reactive variables** are particularly suitable as indicators because they react noticeably to changes in the system areas. Due to their minor system relevance, they are unsuitable for management measures.
- **Buffering variables** are effective as a damper and therefore stabilise the system, however, they are somewhat unsuitable both as indicator and steering variable.
- **Crucial variables** on the one hand are suitable as an indicator, on the other hand, they are suitable for steering variables. Intervention, however, on crucial areas is to be done with the utmost caution otherwise it could easily lead to rocking or capsizing the system. Particularly during the initial phase due to lack of experience, strategies should be favoured which use active variables to influence the system.

4.3 GENERATION OF EARLY WARNING INDICATORS

On the basis of the represented, time frame network and the findings of the cross-impact matrix, those indicators can be determined which have an early warning function. Each indicator is to be pre-determined:

1. how it will determine,
2. which aspects are to be registered,
3. in which time frequency the information is to be raised and,
4. as of which threshold value a signal is to be sent out.

The early determination of procedures is recommended for all indicators, however, it is particularly advisable in the case of the early warning indicators due to the low sensitivity of the decision makers for weak signals.

5 HOLISTIC, STRATEGIC MARKETING CONTROLLING: AN APPROPRIATE ANSWER TO INCREASING DEMANDS

In view of the more complex environment, controlling will take over new tasks and therefore have to implement new instruments. A cost orientated controlling is hardly in a position to cope with this. Only if all relevant cross-impacts are known and considered, can marketing controlling fulfil its primary task, namely support management in its decision making. For this purpose, it is not enough only to develop new instruments but rather to comply all activities into a system. It is also required that impulses are given internally for new ways of thinking. Move away from causal linear thinking and move on to a systems thinking. These changes will not be easy and therefore can only be managed with the support of the power promoters, which in the end is necessary on account of the initial expenditure. If an enterprise is successful in setting up an holistic, strategic controlling then this implementation expenditure will quickly show a payback.

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