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**Developing Strategic and Operational
Planning, A German Perspective**

by Jürgen Weber, Utz Schäffer and Hanns Goedel*

WHU Koblenz
- Otto Beisheim Graduate School of Management -
Burgplatz 2
56179 Vallendar/Rhein

* Professor Dr. Jürgen Weber is head of the chair for Business Administration, especially Controlling und Logistics at WHU Koblenz. Hanns Goedel and Dr. Utz Schäffer are members of the chair of Controlling and Logistics.

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Planning is among the most intensively addressed subjects in business research. Simultaneously, planning has also played a central role in business practice. Nevertheless, close analysis uncovers that stark deficits are still present, which can be ascribed to the question: „Integrated Planning, Just a Myth?“ This article attempts to explain why such strong inconsistency has developed in practice, and lays forth methods for improvement. To this end, management theory is applied to the findings of an industrial research group.

1. Deficits in Business Planning

Despite the wealth of contributions to strategic and operational business planning literature over several years, many weaknesses still exist in practice relative to strategic and operational planning individually, as well as to their linkage. This observation is especially underscored by the findings of the research group *Benchmarking Controllershship*, which was conducted over three years (1994-1997) at WHU Koblenz¹ and included the analysis and comparison of planning processes in eight well known German firms.² Through this analysis, the following deficits were identified:³

1. Regarding strategic planning, goal formulation is highly formalized in several firms. The process proves to be insufficiently conducive to idea generation and intuitive goal conceptualization. The attempt to develop innovative strategies through bureaucratic structures appears to provide little insight.
2. There is insufficient linkage between strategic and operational planning. One of the main reasons for this is the inadequate communication of strategic objectives to those individuals responsible for operations. Therefore, the bridge to translate these objectives into operational goals and into the subsequent execution is missing.

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¹ Koblenz School of Corporate Management, Otto-Beisheim-Hochschule, based in Vallendar near Koblenz.

² The goal of the research group, which was conducted over two years at the Chair for Controlling and Logistics, was to use benchmarking in order to determine and implement measures to increase the efficiency of controlling. Up to now, the processes of reporting, investment planning, and planning have been analyzed. The subsequent results allowed increases in efficiency, which turned out to be large in some companies. Ref. Weber/Goedel/Hamprecht, *Benchmarking*, 1995, pp. 115. In the next phase, the processes of cost accounting are to be compared and evaluated.

³ Ref. the dissertation of Hamprecht, *Controlling von Konzernplanungssystemen*, 1996, for more detail.

3. In the context of operational planning, individualized goal creation (in the original sense of the word) is neglected. As a rule, operational goals merely build on the previous year's values. In contrast, the utility of budgeting must be questioned due to inadequate and unfocused goal identification.

The above benchmarking findings strongly concur with business literature's criticism of planning systems.⁴ These deficits force us to question the utility of planning as currently practiced, which contributes several million dollars to large firms' annual costs. Controllers increasingly demand (with justification) efficiency and effectiveness in the creation of performance objectives. Such demands are only taken seriously, however, when such processes as planning, in which controllers are especially skilled⁵, are critically scrutinized and continuously improved. With this in mind, the following article attempts to provide tips on how to develop strategic and operational planning, and subsequently draws on the lessons learned from the benchmarking project's practical perspective.

2 The Applicability of Business Planning

2.1 Knowledge Deficits as a Criterion for Development

The following analysis of planning is based on a frame of reference in which *knowledge deficits* are identified as the primary criterion for developing an efficient action plan^{6,7}. This method is outlined as follows.

Considerations are based on a differentiation between leadership and the executive process. Leadership is understood as actions taken with the objective of setting degrees of freedom for other activities.⁸ A requirement for setting degrees of freedom is the availability of knowledge about operational activities⁹. If all consequences of a specific operational activity cannot be known, then knowledge deficits exist. In such a case, degrees of freedom cannot be set in a singular step, but rather several successive leadership activities are required.

If several leadership activities are needed to set degrees of freedom, the need to coordinate between these individual tasks emerges. Existing organizational

⁴ Regarding strategic planning, ref. Marx, *Obstacles*, 1991, pp. 22; Mintzberg, *Strategic Planning*, 1994, p. 321; and Rieckhof, *Spannungsfeld*, 1989, p. 371. Regarding operative planning, ref. Hungenberg, *Optimierung*, 1993, pp. 233; Franz, *Beschleunigung*, 1993, pp. 29.

⁵ Ref. Weber, *Einführung*, 1995, pp. 14.

⁶ Ref. Weber et al., *Grundgedanken*, 1995; Weber/Brettel/Schäffer, *Unternehmensführung*, 1996, for more detail.

⁷ The importance of knowledge deficits for the formulation of action plans has long been emphasized in economics and business economics literature. Ref. in terms of economics: among others, von Hayek, *Sprachverwirrung*, 1969, p. 206, and Hirshleifer/John, *Uncertainty*, 1979, p. 1375; for the information economics approach in business economics literature: among others, Williamson, *Market and Hierarchies*, 1975, pp. 20; also Wittmann, Witte, Brockhoff, and Gemünden. Ref. Wittmann, *Unvollkommene Information*, 1959; Witte, *Informationsverhalten*, 1972; Brockhoff, *Informationsverarbeitung*, 1983; Gemünden, *Informationsverhalten*, 1986.

⁸ Correspondingly, an operational activity is an activity for which all relevant degrees of freedom are fixed.

⁹ The issue of availability is to be seen in relation with the corresponding action. A differentiation between subjective and objective availability – which is not undertaken here – could be followed.

management literature identifies several mechanisms for meeting this need for coordination. In their theory of organizational structure, Kieser and Kubicek differentiate between hierarchical (in the form of plans, programs and personal directives) and heterarchical (in the form of mutual adjustment) coordination mechanisms.¹⁰

The efficiency of these mechanisms can be traced back to the varying levels of knowledge deficits. Programs are the coordination mechanism that require authorities¹¹ to possess the highest level of knowledge, since detailed instructions are a vital ingredient of this particular mechanism¹². Mutual adjustment, in contrast, requires the lowest level of knowledge.¹³ In this case, authority limits itself to setting the context in which mutual adjustment may be practiced.¹⁴

Business planning can easily be identified as a managerial function. Because planning is an activity that is strongly oriented towards the future, it can generally be assumed that knowledge deficits exist that preclude singular managerial acts. Therefore, activity plan complexes are required, which must be coordinated.

In order to analyze the development of business planning, *Figure 1* first differentiates between high and low knowledge deficits. Additionally, the matrix also differentiates between the creation and the realization of intent.¹⁵ Considerations of intent-propagation rest on the high importance of propagation as a prerequisite for realizing the created intent.¹⁶ A comprehensive analysis of business planning must therefore include the creation as well as the propagation of intent.

¹⁰ Ref. Kieser/Kubicek, Organisation, 1992, pp. 104. In mutual adjustment, coordination takes place through the decisions of group members of equal standing, and is based primarily on the direct, personal communication between group members. Mutual adjustment is thus a heterarchical coordination mechanism, in contrast with programs, plans, and personal directives, which are hierarchical coordination mechanisms.

¹¹ "Authority" is here and in the following taken to mean only the top management level.

¹² Ref. Weber, Einführung, 1995, p. 40.

¹³ Ref. Schäffer, Selbstabstimmung, 1996, pp. 75.

¹⁴ Ref. section 3.1. for more detail.

¹⁵ This differentiation is frequently found in literature, ref. Hahn, Führung, 1971, p. 161, as an example.

¹⁶ In practice, intent creation is usually not differentiated from intent propagation, even though the importance of intent propagation is generally acknowledged. The reason for this may lie in the fact that intent creation and intent propagation are so closely linked through a system of coordinated plans that they are not differentiated linguistically. This is also reflected in the way the expression "coordination by plan" by March/Simon is translated to "Koordination durch Planung" in German. Ref. March/Simon, Organisation, 1976, p. 150. Note that in this paper we refer solely to those intent creation and propagation processes that lead to plans resp. occur through plans. Intent creation and planning are thus not synonyms, but are instead related in a hierarchical fashion.

	high knowledge deficits (strategic)	low knowledge deficits (operative)
creation of intent	reflection intuition	reflection intuition
	strategic plan	operative plan
propagation of intent	communication of the strategic plan	communication of the operative plan
	context for operative planning	implementation

Figure 1: Framework of planning in firms

2.2 Large and Small Knowledge Deficits

The first dimension of the field of observation lies in the differentiation between large and small knowledge deficits. These fields correspond to the terms operational and strategic planning respectively. Gälweiler argues that strategic planning is composed of identifying and developing *potentials* for success and performance, whereas operational planning is geared exclusively toward *realizing* success.¹⁷ Strategic planning is thus defined as an attempt to shape the future deliberately. Strategic planning thereby influences the context of business activities and/or is instrumental in its creation, whereas operational planning is for the most part dependent upon a given context.¹⁸ In light of these ideas, it becomes clearly evident that strategic and operational planning significantly differ in the level of their respective knowledge deficits.

Based on its significant knowledge deficits, strategic planning allows solely for the planning of purely selective as well as highly aggregated non-monetary objectives. Planning of monetary objectives cannot be conducted in cases of large knowledge deficits since evaluations of production functions lack clearly identifiable relationships between monetary and non-monetary objectives. Objectives in

¹⁷ Ref. Gälweiler, *Strategische Unternehmensführung*, 1990, pp. 23.

¹⁸ Ref. Kirsch, *Planung*, 1990, pp. 99.

strategic planning can therefore only be approximated, if at all, by estimation (or by setting normative values).

Knowledge deficits in strategic planning are also (in addition to the planning context and planning objective) related to the resources to be allocated and to the planning process itself. In this context, it is impossible to determine at the beginning of the strategic planning process which personnel must be included in the planning process, which information is required and which instruments should be used. Knowledge about the required planning resources and processes emerges from the planning itself.

Moreover, the relevant data and facts cannot be consciously defined in their entirety – they may not even be known. Information about large scale inter-relationships as well as the individual knowledge of the planning decision makers is limited, specific and oftentimes unconscious. Knowledge is for the most part only implicit.¹⁹

In contrast, operational planning is marked by a high level of available and explicit knowledge. It can be assumed in operational planning that a given set of alternatives exists, for which the possible future activities are known. The existing explicit knowledge is not only related to the possible activities, but also to the non-monetary objectives to be achieved as well as their relationship to monetary objectives.²⁰ It is therefore possible to shape the planning process primarily from the perspective of the desired monetary objectives (e.g. company profit to be achieved).

The high availability of knowledge relevant to planning finally also leads to the ability to make definitive statements about resources to be allocated, such as relevant planners, information and instruments. This is especially true for recurring, structured planning responsibilities, such as cost planning for a production center, which regularly require homogenous information.²¹

2.3 Creating and Propagating Intent

The second dimension of planning development differentiates between the creation and propagation of intent. The creation of the decision-makers' intent can be characterized as a data transformation process²², the output of which is the anticipation of a realisory activity's production function. If one identifies

¹⁹ Regarding the differentiation of implicit and explicit knowledge, ref. Schäffer, *Selbstabstimmung*, 1996, p. 93.

²⁰ This statement applies explicitly only to a certain level of aggregation. If one leaves the level of operative periodic overall planning, one may find high knowledge deficits even in short-term planning tasks (e.g. in relation to weekly sequence planning).

²¹ Between the levels of strategic and operative planning, mention is often made in the relevant literature of tactical planning. In relation to the available relevant knowledge, tactical planning could be referred to as planning under conditions of medium knowledge deficits. The uncertainty regarding the tasks and contents of this form of planning can be assumed to result also from the fact that under conditions of medium knowledge deficits, some relationships between monetary and non-monetary goals are already known, but a complete valuation of non-monetary goals with cost and revenue figures is not possible. However, tactical planning will not be elaborated upon any further in the following. For the purposes of our analysis, it is sufficient to observe the end points of the continuum of knowledge deficits. Positions that lie between them can derived.

²² A data transformation process is here taken to mean the process of data storage and data processing. By transforming data, a reduction in knowledge deficits is achieved. Ref. Schäffer, *Selbstabstimmung*, 1996, p. 48.

knowledge deficits as the value that determines the efficiency of the planning process, then two forms of intent creation can be identified: reflection and intuition.²³

- If sufficient explicit knowledge is available to determine a future set of action steps, then *reflection* is the efficient form of intent creation. It corresponds to the rational element of *Gutenberg's* leadership and can be characterized as management activity whose outcome is (generally²⁴) predetermined. The necessary knowledge is a mixture of experience and specialized data collection.
- If only limited explicit knowledge is available, intent is created through *intuition*. Even today, neurological research has yet been unable to determine how such processes are accomplished. However, there are enough empirical studies to conclude *that* solutions are found intuitively and that these solutions are generally efficient. Intent creation through intuition corresponds to the irrational level of *Gutenberg's* dispositive factor and can be understood as a managerial activity whose outcome is not (sufficiently) described.

Once intent creation is complete, then realization is mentally anticipated. So that intent can indeed be realized, it must be appropriately communicated to the operations level. We define the totality of all measures that serve to transform predetermined intent into reality as intent propagation.²⁵

If one combines the two dimensions of the present area of study, it becomes evident that when large knowledge deficits are present, as is characteristic at the strategic planning level, intuition complements, and must even dominate, the decision makers' reflection. If, however, intent is created primarily through intuition, then the setting of strategic objectives and/or their inter-relationships cannot be explained rationally.

Thereby, explicit representation of the knowledge of goals and their inter-relationships is highly limited. Correspondingly, there is only limited possibility to quantify strategic intent. Quantification requires a high degree of conscious and exactly representative objective constructs, which is only present in the rarest of cases with large knowledge deficits. In this context, it also becomes apparent why numbers only play a secondary role in strategic planning and qualitative statements prevail. In cases of small knowledge deficits, as is present in operational planning, reflection is the prevailing form of intent creation. Correspondingly, knowledge is represented quantitatively.

²³ This differentiation is found in identical or similar form in numerous psychology texts, as well as in the more recent philosophical literature. Ref. Schäffer, *Selbstabstimmung*, 1996, pp. 95, for an overview. A third conceivable form of intent creation is improvisation. Improvisation is a reactive type of action, which occurs without rational preparation and without a specific knowledge base, "off the cuff" (Wittmann, *Unvollkommene Information*, 1959, p. 207). Ref. also Mellerowicz, *Betriebliche Planung*, 1979, p. 21: "Improvisation is "muddling through", is completely unsystematic and unrelated, and certainly not oriented towards the long term." Replacing planning by improvisation is fundamentally unsatisfactory for a business economist and should therefore only be applied when existing knowledge deficits leave no other choice.

²⁴ In this and the following paragraph, idealized concepts are described. Intent creation will in reality never be able to be based exclusively on reflection, nor will it have to be based solely on intuition.

²⁵ A direct parallel to Gutenberg's concept of organization is apparent at this point.

2.4 A Process-Perspective of Planning Development

In practice, an action-plan's degrees of freedom are set successively. The range in which agents may react is thus tightened through an intent creation and propagation process which occurs step-wise over various hierarchical levels. Several feed-back loops also occur such that intent creation and accomplishment can be illustrated as a series of linked loops (see Figure 2).

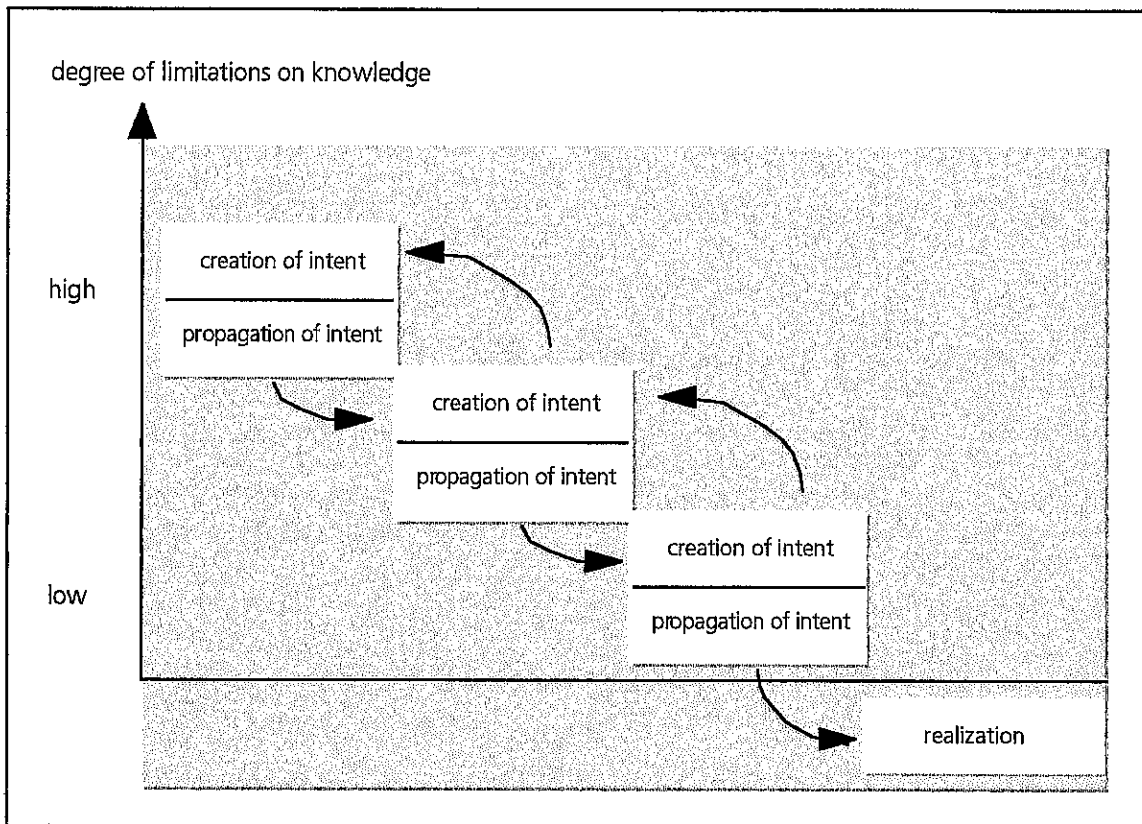


Figure 2: Hierarchy-overarching linkage of intent creation and intent propagation

Essentially, one can view business planning as a chain of management activities which contribute to the goal of reducing knowledge deficits. Through the establishment of a context by the next higher level, relevant knowledge deficits are reduced for the next lower level.²⁶ The form of the activity to be executed is thus made more concrete in a step-wise fashion. In the following section, this process and its sub-processes are more closely analyzed, and recommendations for efficient planning are made.

²⁶ The higher level contributes "context knowledge", which is successively filled with "detail knowledge" from the lower levels.

3 Developing the Planning Processes

3.1 Strategic Planning Processes

Based on the characterization of strategic planning as planning with large knowledge deficits, recommendations are made in the following section on how to develop these processes. These recommendations are, in turn, based on the assumption that, due to large knowledge deficits, only coordination through mutual adjustment is efficient. The analysis of planning with large knowledge deficits begun in Section 2 is thereby continued.

A significant reason for the efficiency of mutual adjustment is due to the innovative character of strategic planning. Instead of beginning with a given set of conditions, conditions are first influenced or even created through strategic planning. A heterarchical system appears most appropriate to this end since every form of hierarchical coordination could deter innovation.²⁷

The large knowledge deficits in respect of the required planning sub-process also help to explain the efficiency of mutual adjustment. If management authority wished to implement a program-oriented form of coordination despite the large knowledge deficits, then this would mean that the authority would continuously have to revise the program or would have to include different programs for all possible developments. It appears clearly evident that both methods are prohibitively expensive.

The authority's difficulty of structuring strategic planning is further complicated by the lack of detailed knowledge about which planning centers and relevant information are required. This is also an argument for mutual adjustment, which is characterized by the fact that coordination takes place at the same time as the planning process itself. Only in this way can management react flexibly to the changing personnel and information needs emerging throughout the planning process. The often cited "weak signals"²⁸ provide a useful example of the flexibility required. These signals emerge within the operative process and can heavily influence the strategic planning process. This further illustrates how little management authority can predetermine the strategic planning process.

Knowledge deficits also exist regarding strategic plans. These plans attempt to describe an unknown future environment, which leaves a multitude of interpretation variants open and requires a long list of further decisions in the realization phase. Therefore, feed-back loops between intent creation and accomplishment must continuously be included in order to substantiate and check the acceptance of strategic alternatives.

The degree to which the management-relevant level of knowledge changes determines how far the fundamental strategic planning must be modified and/or substantiated.²⁹ It is also necessary regularly to adjust the set objectives to the

²⁷ Wild – representative of many authors who hold similar views – considers direct cooperation more efficient than hierarchical forms of coordination for solving tasks whose focus lies in identifying and solving problems. Ref. Wild, *Hierarchie*, 1973, p. 51.

²⁸ Weak signals are "fundamentally (as yet) ill-defined and (as yet) vaguely structured data which are based on a high lack of knowledge." Maul, *Systemtheorie*, 1993, p. 721.

²⁹ Ref. Galbraith, *Designing Complex Organizations*, 1973, p. 14.

current level of knowledge.³⁰ March and Simon argue that coordination through plans is replaced by coordination through feed-back.³¹ That is why intent creation and propagation are so closely linked on the strategic planning level that a separate treatment of either component appears impossible. Accordingly, a high level of mutual adjustment appears necessary not only in intent creation but also in its propagation.

Overall, the ability of management authority to develop strategic planning in a hierarchical fashion is highly limited due to the large knowledge deficits.³² Strategic planning must therefore be developed in a way that utilizes the knowledge of the individual decision makers on a decentral level. Von Hayek describes such a spontaneous process of decentralized, cross-level communication as the discovery method.³³ This process can be supported by planners or controllers and requires careful definition of the context. The context definition is a prerequisite for the efficient running of the mutual adjustment processes.³⁴ The following aspects appear especially significant in this regard:³⁵

1. The coordination of the planning activities of the individual mutual adjustment sub-processes can only succeed without the direct interference of management authority when responsible parties share common values and goals. In contrast to the practice, observable in several firms, of only defining the fundamental principles, it is also vital to communicate and instill these values actively. A shared goal system can be achieved, for example, through the creation of a firm-wide goal upon which planners can orient themselves.³⁶
2. In addition to shared values and objectives, it is also necessary to establish a shared vocabulary and thought process in order to create a linguistic context in

³⁰ Ref. McCaskey, *Contingency Approach*, 1974, p. 284: "We are so accustomed to setting goals before acting (or at least saying that we do) that we overlook the ways in which we can discover goals by acting. Having once acted, planners obtain new information about what they want to do and what market opportunities and constraints there are." Hauschildt/Pulzinski use the case of the Large Wind Energy Park (Große Windenergie-Anlage, GROWIAN) to show the negative effects of overly rigid goal definition in innovation processes. Ref. Hauschildt/Pulzinski, *Flexibilität*, 1992, p. 74.

³¹ Ref. March/Simon, *Organisation und Individuum*, 1976, p. 150.

³² In the same way, Mintzberg questions a hierarchical form of coordination when he characterizes strategic planning as "... an immensely complex process, which involves the most sophisticated, subtle, and, at times, subconscious elements of human cognitive and social processes ... We know that the dynamics of the context have repeatedly defied any effort to force the process into a predetermined schedule or onto a predetermined tack. ... Accordingly we know that the process requires insight, creativity and synthesis, the very things that formalization discourages." Ref. Mintzberg, *Strategic Planning*, 1994, p. 227.

³³ Ref. von Hayek, *Rechtsordnung*, 1969, p. 167, and idem, *Sprachverwirrung*, 1969, p. 210.

³⁴ Ref. for context definition as a management strategy in the case of large knowledge deficits: Schäffer, *Selbstabstimmung*, 1996, pp. 214.

³⁵ Ref. Hamprecht, *Controlling von Konzernplanungssystemen*, 1996, pp. 145.

³⁶ One example of a shared goal is "strategic intent". Hamel/Prahalat, *Strategic Intent*, 1989, p. 63. Strategic intent implies that management formulates a goal which is a challenge for the company and on which the various teams can orient themselves. At the same time, however, creativity is not hampered by formalization of strategic planning: "While strategic intent is clear about ends, it is flexible as to means (...) Creativity is unbridled, but not uncorralled, because top management establishes the criterion against which employees can pretest the logic of their activities." Hamel/Prahalat, *Strategic Intent*, pp. 66.

which mutual adjustment can function. This is a significant prerequisite for efficient communication between the mutual adjustment processes. The importance of a common language is especially strong between highly heterogeneous planning groups which rely on differing languages due to their respective experiences.

3. Management authority can further increase the efficiency of communication by enabling employees to understand how exchanging information with parties of differing knowledge bases can, notwithstanding problems of interpretation, contribute to the generation of new ideas.³⁷ It is especially important to create an open as well as cross-hierarchical and cross-functional atmosphere in which communication between planning groups and functions is increased.³⁸

In summary, it appears that in cases of large knowledge deficits, mutual adjustment is favored over program-oriented planning – in opposition to the common practice firms inherited from their operational planning practices.³⁹ The role of management authority in this sense is to create an environment for successful functioning of these mutual adjustment processes.

Comparison with business practice:

In German business practice, primarily two deviations from the strategic planning described above can be found. These are related first to the *form of coordination* and second to the *inclusion of employees in decentralized levels* in the strategic planning process.

In contrast to using mutual adjustment as a means for coordinating strategic planning efforts as proposed in this paper, these processes are program-oriented in many firms. Only in two of the eight participating firms can the strategic planning process be described as driven by group-processes. In the other firms, a systematic, pre-determined accomplishment of specified tasks prevailed.⁴⁰

Closer inspection demonstrates that these firms are not really conducting innovative and strategic planning but rather long-term operational planning.⁴¹ For this form of "strategic planning" to be considered efficient, a very low level of

³⁷ Regarding the problem of interpretation in communication, refer to Brockhoff, Schnittstellenmanagement, 1989, p. 43, and Weber/Brettel/Schäffer, Unternehmensführung, 1996, pp. 40.

³⁸ This includes members of the planning group gathering information in divisions and functions as well as transferring information from outside into the planning group. Such open communication can be furthered, for instance, by hierarchy-transcending meetings, personnel exchange between business divisions, employees' meetings etc. It appears important, however, that the central authority cannot, because of knowledge deficits, predetermine the communications activities in detail. Considerations regarding the value of additional information can only be made by members of the group itself.

³⁹ Because of this finding, it appears (at least potentially) problematic to require „strategic budgeting“ on the strategic level analogously to budgeting on the operative planning level; „strategic budgeting“ being understood as an instrument that is made up of the „formulation, acceptance, control and error analysis of strategic budgets“, ref. Lehmann, Strategische Budgetierung, 1991, p. 111. Indeed, Lehmann argues that strategic budgeting should be applied in the context of group processes (p. 115). The question remains of whether the concept of „budgeting“ does not lead to wrong (program-oriented) associations, implying that it should be analyzed in depth and revised if necessary.

⁴⁰ In some cases, even the contents of the strategic plans are predetermined in detail. In one company, exact rules regarding the form of presenting strategic plans exist.

⁴¹ Ref. also Hamprecht, Controlling von Konzernplanungssystemen, 1996, pp. 258.

environmental complexity and dynamics is required.⁴² Due to relatively fewer knowledge deficits, this process can be completed in a more formalized fashion. Increasing complexity and dynamics pushes the efficiency of such processes to their limits, and the need for innovative strategic thinking, which can no longer or only minimally be structured, increases.

The second break in theory-practice occurs in the inclusion of decentralized managers in the strategic planning process. Whereas including decentralized managers to decrease knowledge deficits is efficient from a theoretical perspective, strategic planning is (still) generally performed by centralized planning departments.

The members of these departments, however, only possess limited understanding of the decentralized business units' operations. As a rule, they only spend a few days per year in these operational areas. Subsequently they develop no understanding of the rules and requirements of the individual markets. Moreover, the theoretical requirement of including decentralized managers in the strategic planning process by forming cross-functional or cross-hierarchical teams has remained unaddressed in business practice. Thus, detailed information about markets and customers, especially the "weak signals" which can only be received at the front line, is missing.

In contrast to the above mentioned breaks in theory and practice found in large firms, the often repeated accusation that small and medium businesses (in Germany known as the *Mittelstand*) practice no strategic planning appears unfounded. *Mittelstand* managers might not use traditional strategic planning instruments. This by no means, however, signifies that they do not think and plan strategically. Contrarily, *Mittelstand* entrepreneurs often possess the theoretically required intuitive understanding of new potentials for success and capabilities. In this respect, connecting intent creation and realization proves much simpler for the *Mittelstand*: by maintaining continuous contact with operational managers, entrepreneurs can motivate employees in a singular strategic direction and can avoid interpretation problems.

A dominant problem in the *Mittelstand*, however, is the failure to examine critically strategic objectives which are to a high degree subjective and selective. In this respect, it should be the *Mittelstand* advisor's or consultant's priority to examine the entrepreneur's intuitive strategic thought based on reflection and the employment of strategic planning instruments.

3.2 Operational Planning Processes

In contrast to strategic planning's discovery function, making the discovered more concrete dominates in operational planning. Knowledge deficits are substantially smaller than on the strategic level due to two main reasons:

- First, the results of strategic planning reduce the extent of knowledge deficits in operational planning, by focusing the context and objectives base.⁴³ Those responsible for operational planning do not face their strategic counterparts' challenge of an insufficient knowledge of the "big picture."
- Second, due to its shorter time horizon, operational planning is characterized by a better ability to predict the relevant future.

⁴² The key point here is that it is highly doubtful in practice that the contextual prerequisites have been fulfilled.

⁴³ Ref. Macharzina 1995, p. 222.

In this regard, sufficient knowledge is often available to predict the desired future situation comprehensively, and to determine appropriate actions. Fittingly, reflection plays a substantially larger role in intent formulation than in strategic planning.

Further, the results of operational intent creation can be described in a quantitative and detailed manner due to smaller knowledge deficits so that only limited requirements for further specification remain in the realization phase.⁴⁴ Propagation is thus primarily limited to communicating objectives to the operational units. Unlike on the strategic level, this communication can be accomplished without direct, personal contact due to the quantitative nature of these objectives.

Subsequently, in cases of small knowledge deficits the possibility to structure the planning process is substantially greater. First, it is known *ex ante* which decision makers and planning information are required for the creation of individual plans. Second, interfaces between the individual intent creation processes can be defined more easily than on the strategic level.

This means in effect that the intent creation processes running on different levels of the hierarchical ladder can be structured to achieve an optimal level of knowledge utilization. In this light, operational planning is not a spontaneous process, but rather - under ideal conditions - a process which can be pre-structured to objectify the strategic context.

The well-known process of operational budgeting falls within this area, in which objectives identified at headquarters and business units are reconciled with one another.⁴⁵ The realization of objectives is accomplished through specifying budgets for all business units and levels. Management of the budgeting process is conducted via "planning schedules," which prescribe process steps and thereby exemplify a program-oriented coordination mechanism.⁴⁶

In sum it can be asserted that a program-oriented planning framework can be identified as efficient for operational planning with minimal knowledge deficits. It is doubtful, however, whether small knowledge deficits can always be assumed in operational planning. In dynamic environments or at least in periods of high dynamics this does not appear to be the case. It is necessary in such a case to link decentralized knowledge in order to develop solutions for improving performance and for adapting to changing environmental factors. Program-oriented planning frameworks especially do not ensure this necessary task.

The classical top-down theory of operational planning overlooks access to decentralized knowledge. Even the attempt to minimize knowledge deficits through so-called "top-down bottom-up methods" fails when the methods are conducted in a program-oriented fashion because they account only for the individual knowledge of decentralized decision makers. Drawing relationships between this fragmented knowledge is left to higher echelons, where it is limited by the ability to transform data into usable information. In this regard, such "top-down bottom-up methods" as we have encountered in practice can be interpreted as mechanisms which

⁴⁴ In certain cases of extremely small knowledge deficits, concrete objective planning can even be avoided, since the connection between concrete and formal planning is known in the manufacturing function. In such case, formalized planning suffices.

⁴⁵ Operational budgeting refers here to the development of a monetary (especially cost) plan, which allocates (cost) values per responsibility-center in the firm, and in which those responsible are to a limited degree included. See also Weber 1995, p. 131.

⁴⁶ Ref. Deyhle, Controlling-Brevier, 1984, p. 134.

function primarily as political measures to reconcile and find consensus in aligning contrasting objectives. Actual intent creation is thus not adequately performed.

For this reason, program-oriented operational planning appears unsuited to initiate necessary firm changes in dynamic environments. Inclusion of decentralized knowledge can only be accomplished through a higher level of mutual adjustment even on the level of operational planning.

This does not mean, however, that program-oriented operational planning is to be generally identified as inefficient. Rather, the point here is that planning should be conducted increasingly through mutual adjustment when the efficiency of program-oriented planning decreases due to dynamics in the competitive environment.

Comparison with Business Practice

Benchmarking indicated that the observed firms – corresponding to theoretical derivations in cases of small knowledge deficits – without exception conduct operational planning. This is demonstrated, for example, through the use of detailed planning handbooks and planning schedules. Remarkably, this program-oriented method generally remained unchanged over years of application. Such practice could be seen as efficient if the respective business environment had remained highly stable. This appears, however, not to be the case with the observed firms, such that (corresponding to the theoretical analysis) at least intermittently stronger mutual adjustment-oriented planning should have been employed.

Admittedly, a substantial degree of dissatisfaction is at times in business practice associated with operational planning processes. Attempts to improve operational planning, however, are most often focused on optimizing program coordination. Thus, for example, planning dates, forms, and IT-systems, etc. are examined and adapted to changed firm structures. The efficiency of the program-oriented methodology, however, remains unaddressed by Controllers and those responsible for operations alike.

It is assumed (at least implicitly) that sufficient knowledge is available to conduct operational planning in a program-oriented fashion at all times. The need to switch between various planning frameworks is (still) not identified enough. This could also be due the fact that business practitioners do not see examination of the planning framework as a continuous process, and subsequently no one in the firm is made responsible for this task.

4 Linking the Planning Processes

The results of the Benchmarking project indicate two potential frameworks for interfacing between the strategic and operational levels of planning. Both frameworks are demonstrated below. Thereafter, the fundamentals for a possible third framework are sketched.

4.1 Program-oriented Structuring of Strategic and Operational Planning

Based on the experience gained in the Benchmarking project, deliberate and program-oriented planning dominates both strategic **and** operational planning in business practice. In these cases, strategic planning is also highly formalized. Planning tasks, planning instruments and contents are extensively stipulated in schedules and forms. Strategic planning with a high proportion of intuition and mutual adjustment as can be derived in theory does not exist in these cases.⁴⁷ In two of the observed firms, the objectives identified in the strategic planning processes (barring a few strategic concepts) almost equaled those of the operational planning. In these cases, strategic planning can be seen more correctly as long-term operational planning.

If strategic and operational planning are program-oriented, then the interface between them is relatively simple. The key values of the first year of strategic planning are set as objectives in operational planning. Operational planning thus becomes an instrument for realizing „strategic“ objectives. Independent intent creation does not take place on the operational level (see *Figure 3*).

Figure 3 illustrates the operational planning process of a brand manufacturer. Objectives of this process based on planning premises (e.g. wage and materials cost increases) are taken directly from the quantities laid forth in the strategic plan. It is the responsibility of the individual business units to break the objectives down into less highly aggregated tasks. To do so means making the objectives more concrete and specifying details. The process of operational planning is thus steered by means of a planning calendar.

This procedure proves efficient when, based on low dynamics and complexity in the business environment, it is possible to avoid innovative planning on both the operational and strategic levels. Fulfilling this prerequisite is proving less and less possible for firms in light of current market developments.

⁴⁷ Ref. Hamprecht, Controlling von Konzernplanungssystemen, 1996, pp. 258-259.

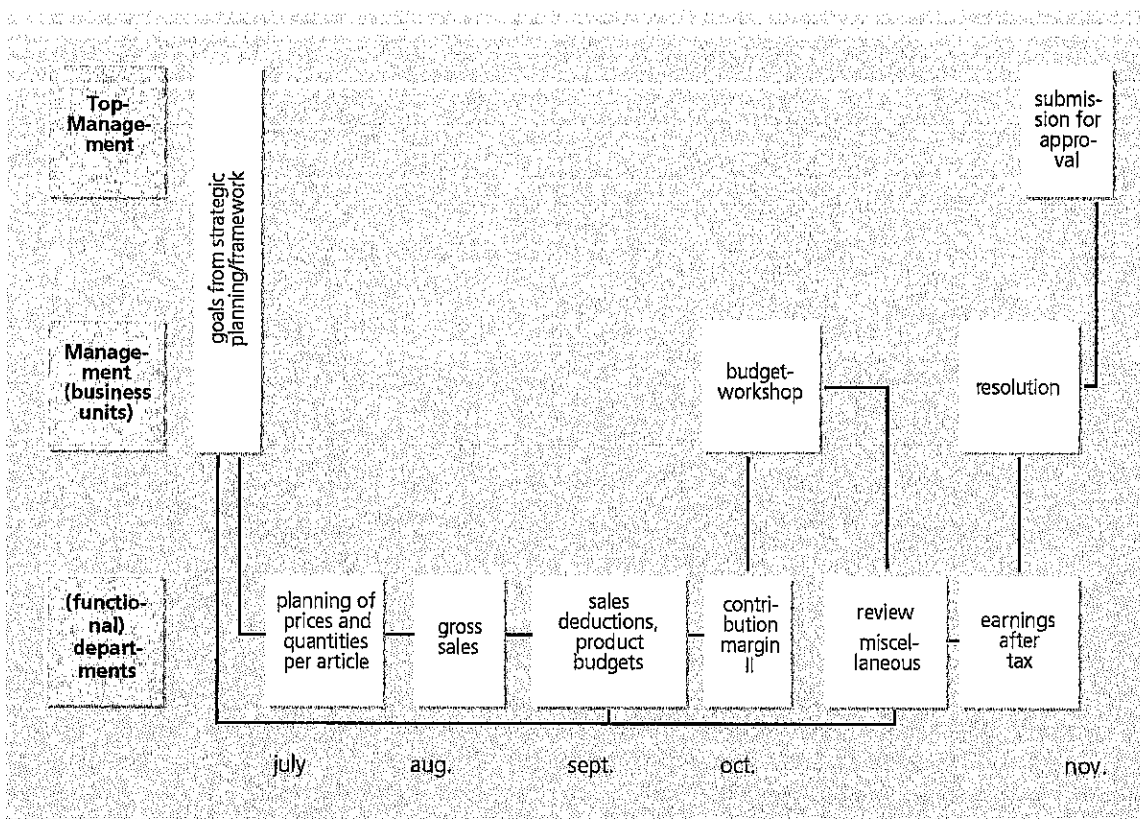


Figure 3: The operative planning process of a brand producer

4.2 Orienting Strategic and Operational Planning on Mutual Adjustment

A second structural framework is based on a high degree of mutual adjustment processes on the strategic as well as operational levels. The multi-national firm competes in a highly dynamic business environment.⁴⁸ Here traditional, program-oriented operational planning – as described above – reaches its limits. Executive knowledge can no longer identify detailed and well-supported objectives through formalized goals in top-down processes nor can it synthesize the individual knowledge of decentralized decision makers into one coherent big picture through “top-down bottom-up” planning methods.

Employing mutual adjustment processes on operational **and** strategic levels, large firms face a complex problem stemming from their need for high numbers of mutual adjustment processes and groups. Therefore, it is practically unrealistic for large firms to structure planning in this manner.

One possible solution observed in business practice is to bundle the most important strategic objectives into projects that flow directly into operational planning. Thereby, this firm is able to ensure that the various mutual adjustment

⁴⁸ In the observed firm, product life cycles are in many cases shorter than one year.

processes on the different planning levels can be focused and coordinated. This technique is exemplified by the so-called „Hoshin-Kanri Method.“⁴⁹

Derived from strategic long-term planning, the Hoshin-plan is limited to a few selected goals that are identified as important for achieving the desired market position („breakthrough objectives“). These objectives are subsequently broken down on all levels by a formalized and structured process. Most notable is that they are directly transferred into the operational planning.

Through such project-bundling, knowledge deficits in operational planning can be reduced efficiently. First, deliberate selection of fewer and more relevant objectives effectively reduces the complexity associated with realizing strategic intent. This simplifies the communication and the understanding of strategic objectives. Second, the direct translation of Hoshin-objectives into operational planning enables transferring strategic components to the operational level so that uncertainty about measures to realize the strategic objectives is diminished.

4.3 Orienting Strategic Planning on Mutual adjustment and Operational Planning on Programs

Above we suggested that the differing types of knowledge deficits in strategic and operational planning require differing coordination mechanisms. Such a structuring of planning, namely mutual adjustment processes on the strategic level and program-oriented processes on the operational level, could not be identified in the eight observed firms. A possible explanation for this divergence of theory and practice lies in the fact that problems associated with bridging these two types of planning are so great that realization of this planning framework remains unachievable in practice. We have identified the following three main categories of problems in this regard:

1. Forms for representing the varying types of knowledge differ: in cases of small knowledge deficits numbers are primarily used, whereas language dominates in cases of large knowledge deficits. Appropriate adaptation problems are to be expected and to be overcome.
2. Similarly, the mechanism for intent creation on the two levels differs: the planning structure is more hierarchical in operational areas and cooperative in strategic areas.
3. The third problematic area is related to the planners themselves. The highly divergent frameworks of strategic and operational intent creation and realization demand varying technical and behavioral abilities of the process participants and thereby bias a further level of incompatibility. Our experience in including mutual adjustment dominant research and development departments in the plan dominated context of the entire firm indicates the problematic combination of strongly distinct coordination mechanisms for individuals responsible for the processes.

⁴⁹ The meaning of this term is understood in its elements Hoshin (objective, direction) and Kanji (steering, management). Thus, Hoshin-Kanri refers to the management of objectives. In contrast to the Management by Objectives method, the Hoshin method is to be understood more as Compass-management and flows the goal of focusing the individual firm goals on specific strategic objectives. See also Soin, Essentials, 1992, pp. 54-55.

Despite these problems, this structural framework appears to be highly relevant for the further development of planning systems in practice. Assuming that the dynamics of the business environment will continue to increase over the coming years, the program-oriented planning frameworks currently employed in most firms will become increasingly inefficient. The third framework could therefore provide an important means for reorienting planning systems to treat knowledge deficits adequately. This framework furthermore appears more efficient, especially in situations where a high amount of knowledge is (still) available about operational abilities but knowledge deficits about potentials for success and capabilities are growing due to greater business dynamics.

Assuming increased knowledge deficits due to greater business dynamics, intent creation on the strategic level can only be accomplished through mutual adjustment processes. Executives must limit themselves to developing an appropriate planning context. To bridge the gap to program-oriented operational planning, strategic intent creation must apparently be substantially broadened and systematically structured. In contrast to thoroughly mutual adjustment oriented planning, it cannot be assumed that the breaking down of selected strategic objectives to the operational level will suffice. Program-oriented operational planning requires specific, quantifiable objectives in all relevant planning areas. This, however, appears possible only if strategic intent realization is more strongly systematized and formalized compared with pure mutual adjustment.

It is evident that additional measures must be implemented to overcome the problems emerging from bridging the two levels of planning discussed above. Two aspects appear to be of highest importance:

- First, a high level of participation appears necessary to minimize the adaptation problems between operational and strategic planning. It is extremely important in this respect that those responsible for operational planning and those for realization of strategic objectives participate in the strategic planning process. Only in this way can a common understanding about strategic objectives be achieved despite large knowledge deficits. This in turn will enable these objectives to serve more easily as objectives in the context of operational planning.⁵⁰
- Second, planners must learn to play different roles on both the strategic and operational levels – namely, to function in a heterarchical environment on the strategic level and to „work through“ specified standardized processes on the operational level. A primary requirement for this is increased trust in the results of mutual adjustment processes. This is necessary for planners on the operational level to accept standards and objectives. An important means for building trust could include, for example, at least intermittent open access to the mutual adjustment processes.

These aspects require much further research. On one hand, the prerequisites for an efficient cooperation between mutual adjustment and program-oriented structures must be examined. On the other, research should also determine under which

⁵⁰ Ref. Weber, Selektives Rechnungswesen, 1995b.

circumstances the change from one planning framework to another should be undertaken.

5 Conclusions

In light of the theory conceptualized in this paper combined with the practical experience from the working group Benchmarking Controlling, the following conclusions can be drawn:

1. In several firms planning is (still) focused on a stable business environment. Strategic planning is formalized and allows little room for mutual adjustment processes. Furthermore, the content of strategic planning redundantly overlaps that of operational planning. Therefore, strategic planning can more correctly be identified as long-term operational planning in several cases. Operational planning is dominated by the planning and/or realization of given objectives. Operational intent is almost never created independently. In many cases, however, it is questionable whether the prerequisite for the efficient program-oriented formulation of planning, namely a stable business environment, is even present.
2. One possibility to react to the increased dynamics of the business environment is the formulation of strategic and operational planning based on mutual adjustment processes. Ensuring efficient mutual adjustment especially in large firms requires careful contextual formulation. An efficient bridging of mutual adjustment processes on strategic and operational levels is also key. The Hoshin-Kanri method, for example, appears well-suited to this end.
3. The possibility to combine both these types of planning frameworks, namely mutual adjustment on the strategic level and program-oriented planning on the operational level, was not identified at least in the working group Benchmarking Controlling. This bridge appears extremely relevant for business practice, however, when one considers that program-oriented planning throughout the entire planning process becomes increasingly inefficient as business dynamics increase. This area, especially the interface between the two levels of planning, is in need of substantial research.
4. The completed empirical study demonstrates that the activities undertaken by firms to this point to rework planning processes remain inadequate. A long lasting improvement of planning can only be accomplished when the fundamental planning framework is continually analyzed and changed appropriately. In the end, the planning development effort must focus on enabling switching from one planning framework to another depending on the level of knowledge deficits. Until this is made possible, substantial theoretical and practical advances must be made.

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