WORKING PAPER
ALFRED P. SLOAN SCHOOL OF MANAGEMENT

DIAGNOSIS AND DESIGN OF STRATEGIC PLANNING SYSTEMS IN DIVERSIFIED CORPORATIONS

Peter Lorange

WP 890-76 December 1976

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
50 MEMORIAL DRIVE
CAMBRIDGE, MASSACHUSETTS 02139
DIAGNOSIS AND DESIGN OF STRATEGIC PLANNING SYSTEMS IN DIVERSIFIED CORPORATIONS

Peter Lorange

WP 890-76

December 1976
I. A View of Strategic Planning Systems

A major purpose of strategic planning is to coordinate the many processes of a corporation's diverse activity-centers to avoid duplications or bottlenecks, make available appropriate financing, and create an efficient planned pattern for the interaction between money, men, materials and information (M, M, M, I). This aspect of planning requires a long-term focus in many corporations, given long lead-times, added complexities in production and/or distribution with less flexibilities for short-term changes, and added magnitudes of risks and financial commitments. Thus, what we might label integration planning is a strong, necessary, and important component of the long-range planning activities of many companies.

A second purpose of planning, however, springs from the need to cope with discontinuities in the firm's environment and to seize new opportunities and avoid arising threats. Scanning the environment for relevant data, developing new programs in attractive business areas, taking advantage of the firm's strengths and providing for unforeseen contingencies comprise a second aspect of long-range planning activity that we might label adaptive planning.

In most corporations there will be a need for both integration and adaptation planning. A planning system which is heavily based on long-term financial predictions but which lacks the elements of strategic awareness vis-a-vis the environment may satisfy the integration

---

1. See Ansoff (3).
2. See Lorange (13).
requirements quite well but will probably provide little facilitation for adaptation to long-term opportunities and threats. Conversely, a planning system which is built around strategic examination of environmental opportunities and threats but which neglects the breakdowns on program development and coordination may contribute to adaptation but may be less effective for integration purposes.

At a given point in time a corporation may have different needs for adaptation planning relative to integration planning. For instance, a company which has just completed several major acquisitions may desire to consolidate its position for some time and need a planning thrust which puts relatively more emphasis on integration planning and relatively less on adaptation. During the stage when it was actively seeking new acquisitions partners, however, it might have put relatively more emphasis on adaptation planning. Similarly, a company which is hit by declining profits, increasing costs, and a recession-like business climate for its products may want to shift its planning emphasis relatively more towards integration. Conversely, a company with stable growth and increasing reserves and unused debt capacity may want to shift towards a relatively higher emphasis on adaptation. There is evidence that companies will respond to changes in the general economic climate with changes in its overall strategies.1 It is likely to expect, then, that this will lead to changes in the company's demand for services from its planning system.

Given that a company's position changes vis-a-vis its environment, but also given that management's objectives and outlook as well as the firm's risk-taking capacity might change, it is likely that we might see

1. See Glueck (8).
a desire to change the relative emphasis on adaptation planning versus integration planning over time. The company's planning needs of today are in fact not likely to coincide with its needs tomorrow.

To judge how useful a planning system is for a given company, then, we may want to assess the degree of fit between the needs of the company for adaptation as well as integration planning emphasis in a given situational setting at a particular point in time and the capabilities of the planning system for adaptation and integration at that point in time. A useful planning system is required to provide a relatively good fit between the capabilities it provides and the company's needs. We shall consequently consider the degree of consistency between need and capability as an indication of the "effectiveness" of a planning system. This should not be confused with the consideration about cost/benefit of planning investigated in several research studies which conclude that companies undertaking planning are better performers than companies not planning.¹

Let us summarize the discussion thus far by stating four propositions about what should be required from a good planning system:

a) There should be two elements of a planning system - one that emphasizes adaptation to environmental opportunities and threats, and one that emphasizes integration of ongoing activities so that the company can be efficient in its operation.²

b) There should be a balance in the capabilities provided by the planning system between the relative emphasis on adaptation versus that on integration. This balance should be dictated by the com-

---

1. See Thune and House (23), Herold (9), and Ansoff et. al. (2).

2. See Lorange (13).
pany's situational setting.

c) The balance of the planning system should be managed so that the planning system's adaptation and integration capabilities continuously fit the evolving needs of the corporation.

d) The effectiveness of the planning system should be assessed by the degree of match between the balance of the adaptation and integration needs dictated by the situational setting of the company and the adaptation and integration capabilities provided by the planning system.

It is the relevance of these four normative propositions that we intend to study in this research. We feel that there should be considerable benefit from testing the validity of the planning approach just outlined. Further, we shall attempt to identify major problem areas that corporations face when attempting to implement a planning system with the normative features just indicated. Specifically, what are the major difficulties in achieving good adaptation and/or integration planning or in obtaining an appropriate balance in the system? Are the difficulties primarily due to organizational resistance, inappropriate assessment of the company's planning needs, difficulties of designing and/or managing a comprehensive planning system, and so on?

We see examples in practice of companies which face difficulties developing an overall adaptation-integration planning approach. We feel that there are ample real-life indications signaling the timeliness and usefulness of a study that attempts to explore what might be relevant approaches for tailormaking adaptive-integrative planning systems to different corporations' situational settings. One way that this potentially might be explored would be to "take an audit" of the
planning practices of a diverse set of corporations for thereby to assess the "state of the art". However, given the present body of knowledge about design and implementation of planning systems we feel that it might be more timely to state normatively how an adaptive/integrative planning system should be structured, for then to test the relevance of our scheme with actual data from various company settings. Our attempt thus, is to come up with results that ultimately might help us to prescribe how planning systems design might be improved.

The rest of this paper shall elaborate on the research design for this study. We will first present a normative "theory" of strategic planning systems design. This theory is based on the premises of situational tailormaking of a system to a particular corporate setting and of dynamic updating of the planning system to reflect changes in the company. Several elements of this model shall be discussed in detail. We shall then state a number of hypotheses about the planning system, corresponding to our "theoretical" discussion. These hypotheses, stated rather broadly, will be followed by a discussion of specific measurement approaches to be used in the field interviews for the empirical data gathering to test our scheme. Finally, in an Appendix there will be a brief note on our research methodology.

II. A "Theory" for Strategic Planning Systems Design

Our theory of strategic planning will be based on the premise that the planning needs of the company will be determined as a consequence of its situational setting, including the goals and risk-taking willingness
of senior management. The effectiveness of the planning system will depend on how well its adaptation/integration capabilities match the adaptation/integration needs dictated by the situational setting and senior management's goals. This is illustrated in Exhibit 1.

Exhibit 1. Situational Design of a Strategic Planning System, seen as a Dynamic System
The task of designing a strategic planning system is however, a dynamic one. The output of the planning system will presumably be a series of objectives, programs and budgets (action plans) that the corporation will attempt to carry out. The degree to which the company will actually be able to carry out its plans will of course be partly outside its own control, in that unforeseen external and/or internal events may occur; actual performance may differ from planned. Whatever planned and/or actual performance is, however, it will have an impact on the company's situational setting. For instance, during the preceding period of operation a new product was introduced, a new country entered, an acquisition and/or divestiture was carried out, thus changing the company. Similarly, the degree of success or failure of a plan may change senior management's outlook on goals and attitude towards risk. Thus, the outcomes of the planning effort typically will contribute to changes in the situational setting and/or the senior management's outlook. This, in turn, will require that we should modify the planning system to the new setting. Thus, there will be a task of almost continuous updating and improving on a strategic planning system; there is no final design.

Let us discuss briefly each of the elements of this model, following the encircled numbering of Exhibit 1.

1. The company's situational setting. We shall suggest that the adaptation/integration needs of a company will differ depending on how a company is characterized according to three types of situational factors:
a) The degree of diversity of the company. The homogeneous, one-business firm will be faced with an adaptation/integration planning task for its business, involving a business headquarters and a number of functional activities. The diversified, divisionalized firm, on the other hand, will be faced with adaptation/integration planning tasks for each of its businesses as well as for planning changes in the balance or mix of the "portfolio" of businesses at the corporate level. Thus we are dealing with a much more complex planning task in the latter case. While the single-business company will be faced with essentially one adaptation/integration planning task the divisionalized corporation will have to sort out the adaptation/integration planning task for each of its businesses as well as the overall corporate portfolio planning. In the diversified firm we thus expect relatively more emphasis on formal integration than in the homogeneous firm.¹

b) The nature of the environment. The environment may be seen as relatively stable, homogeneous and riskless, or alternatively, as rapidly changing, heterogeneous and risky.² In the former case we may expect relatively less emphasis on adaptation than in the latter. While the homogeneous firm will face one environment only, the heterogeneous firm will face a separate environment for each of its divisions as well as an overall corporate environment.

c) Where is the company along the product life-cycle? A homogeneous corporation may be positioned in a business in such a way that it faces rapid growth with resulting strain on its financial resources. Alternatively,  

¹. See Lorange and Vancil (14)

². See Dobbie (7).
the company may be positioned within a more mature industry, typically experiencing less growth and enjoying the financial resource situation as relatively unconstraining. In the former instance the planning challenge will probably be one of facilitating the necessary integration to keep the rapid growth position under control. Adaptation planning will probably be relatively less important, given the ample growth possibilities already available within the present business. For the more mature company, on the other hand, the opposite may be the case. The less hectic growth might call for relatively less integration planning emphasis but relatively more adaptation planning emphasis in order to come up with new growth opportunities to utilize the financial resources.¹

For the divisionalized corporation the life-cycle balance will again be more complex. Each division will be in its own life-cycle posture with its own resulting adaptation/integration planning requirements. For the corporation as a whole the overall life-cycle position will depend on how large a proportion of the company's divisions that are in growth versus mature businesses.

2. Senior Management's Goals and Risk-Willingness

Senior management will be expected to have a considerable influence on how planning should be done in their company. We shall distinguish

¹ A number of studies have addressed aspects of a contingency strategy approach towards managing the business in different stages of the life-cycle. See in particular Wright (26), Boston Consulting Group (4), Abernathy and Utterback (1), Hormann (11), or Larange (12).
between two aspects of senior management's influence, namely their goals and their attitudes towards risk-taking within the company.

a) Senior management's goals. Senior management will have two sets of goals, one personal and one for the company. The two will probably be in conflict to some extent. However, it is important that the personal goals are not allowed to dominate the corporation's goals to too large an extent. Senior management's role in setting corporate goals will probably depend critically on its ability to come up with a meaningful set of strategic visions for where the company should go. Further, the degree of explicitness and internal consistency in this set of visions is probably critical. The planning system should be designed to acknowledge explicitly the senior management's goals, partly by focusing planning around those goal factors that senior management want to optimize and partly by recognizing the constraints set by these goals (for instance, to follow a generally conservative policy - "not rock the boat").

b) Attitude towards risk. A strategic plan should lead to an indication of what would be an appropriate spread of the employment of assets, engagement in businesses, usage of discretionary expenditures, etc., adding up to a corporate "portfolio" strategy with an explicit expectation of future profits or profit uncertainty. The strategic planning effort might typically also come up with alternative portfolio strategy combinations, with different expected return/uncertainty considerations attached to them. Some of these alternatives will clearly dominate and

---

2. See Normann (17) and Rhenman (20).
others will be disregarded. When it comes to a choice among efficient portfolio strategy alternatives, however, the attitude towards risk that the company wants to follow will dictate the choice. A conservative management will choose a different alternative than a more risk-prone management. Senior management's willingness to commit itself to particular alternatives and to avoid oscillations between overly risky and overly conservative positions is probably key to what risks the company de facto will end up taking. Thus, senior management's attitude towards risk will be important for the design of the planning system too, in that this will dictate the alternatives to plan for.¹

3. A Strategic Planning System

The proposed strategic planning system will be presented in two parts. First we shall outline a framework for development of strategic plans that contain both adaptation and integration elements. Secondly, we shall discuss a set of factors for changing the relative emphasis on adaptation and integration, i.e., for tailormaking the system.

a) A structural planning framework.² We shall set out five requirements of a structural framework for planning:

- it should be an hierarchical system, i.e., encompassing the corporate level, each division and each activity-center within each division.

- it should provide for the identification of significant environmental changes for the corporation as a whole, for each division and for the functions.

- it should provide an orderly and coordinated way of "narrowing down" the strategic options so that a set of coordinated action-plans

---

¹ See Myers (16).

² This framework was developed by Vancil and Lorange (24).
Multiyear Programs
(Constraints and Policies)

Budgets
(Plans and Goals)
it should provide for the possibility to arrive at plans through interactions, but in such a way that managers obtain commitment to the choices they make in the gradual narrowing down of options. Exhibit 2 outlines such a structural planning framework. We shall not discuss further here how this framework functions, as this is discussed extensively elsewhere.\(^1\)

### b) Adaptation/integration tailormaking

We might imagine that the relative capability for adaptation versus integration that is built into a strategic planning system can be illustrated as in Exhibit 3. We see that adaptation is relatively more important during the earlier part of the planning process, while integration is relatively more important during the later part of the planning process.

---

Exhibit 3. Relative Importance of Adaptation and Integration at Various Stages of Planning

1. See Vancil and Lorange \(^24\)
There might be several factors, more or less under management's control, that might be utilized in tailormaking the adaptation and integration capabilities of a planning system by reinforcing the emphasis of one part of the three cycle system relative to others:

i) Linkage between the cycles of the system. Should the linkage be "tight vs. loose" in terms of the content of objectives, programs, and budgets, in terms of the same versus different organizational units involved in the preparation of each cycle, and in the timing of the preparation of each cycle? How do expectations (i.e., inputs) at each cycle get developed?

ii) Nature of corporate management's reviews. What is the relative degree of involvement by senior management in the review at each cycle, in terms of time spent on the reviews, number of iterations that typically result from the reviews and quality and degree of probing in questions raised?

iii) Degree of open-endedness during Cycle 1. How specific will the corporation's initial guidelines be? How much de facto reconsideration of the appropriateness of a company's portfolio balance will typically take place?

iv) Nature of the programming activities by the functions within divisions during Cycle 2. To what extent are the programming activities interfunctional? Are the programming activities to any extent based on the notion of discretionary expenditures and/or 0-based budgeting? Are the functions provided with enough time to carry out elaborate programming?

1. This section draws heavily on Lorange and VanCil (14).
2. See Shank et. al. (21).
3. See Lorange (12).
v) Environmental scanning. Are the environmental scanning activities linked to the "3 x 3" scheme so that the scanning activities are task specified by level and cycle? Are the scanning activities specific or implicit? For instance, does the corporate level scan for diversification and/or investment opportunities? Does the business level scan for competitive strategic analysis, etc.?¹

vi) Linkage of each cycle to performance review. What type of performance review is carried out to monitor the appropriateness of the objectives? The programs? And the budgets? What is the nature of the review against each of these factors? To what extent is performance fulfillment tied to executive compensation?²

vii) Balance of efforts put into the analysis of new activities versus present activities in the planning effort. Do past records indicate that the chief executive is willing and able to make changes in the diversity of the companies, i.e., in its portfolio? To what extent are resources, such as key personnel, financial resources, and time available for strategic planning?

viii) Degree of "quality control" of planning at each step of the process. How does the chief executive judge that the rest of the organization is doing reasonable planning? How does a division head judge that these functional units are doing reasonable planning, etc.?

These eight factors can be designed and monitored in such a way that together they yield an appropriate balance between adaptation and integration efforts so that the relative emphasis of adaptation/integration can be reached at each cycle of planning.

¹ See Klein (10).
² See Warren (25).
4. Effectiveness of Planning Systems. It is extremely difficult to measure the effectiveness of planning for several reasons, even though a company is performing well according to standard performance measures. For instance, this does not have to be the result of a good planning system. Also, even though the planning system might have been very appropriately designed and implemented, the substantive strategy judgments of management might have been well-conceived so that bad decisions were taken despite the appropriateness of the system. (The converse might, of course, also be true, namely, that brilliant strategic decisions are being taken despite the lack of support from a good planning system.) We shall, therefore, resort to two measures for the effectiveness of planning systems, both not direct and quite subjective.

i) Conceptual consistency of the approach towards planning. Are the roles of the various managers, such as senior management, divisional management, functional management, and staff planning executives clear? Are the planning procedures reflecting the de facto decision-making and the de facto strategies clear?

ii) Is there a "match" between the adaptation/integration needs of a company or one of its organizational subunits (as dictated by the situational setting as well as by senior management's goals, and risk-taking capability) and the capabilities of the planning system in terms of its providing for adaptation/integration support?

5. Outputs and performance tracking. The planning approach as outlined thus far should be seen as a decision-making process in that it attempts to identify the various strategic options and to narrow these down through a series of three cycles, each cycle committing the
organization to narrowing down the options further. Consequently, decisions will be taken as a result of the planning. Typically, the budget constitutes such a decision-oriented action program for the next year. Given that the planning system provides the basis for decisions, it becomes important to monitor actual performance in terms of fulfillment of the budget, fulfillment of the program, and fulfillment of the objectives.

i) Budget fulfillments. The monitoring of the budget fulfillments might be done in terms of ordinary dollar variables as well as non-dollar variables relating to such short-term phenomena as inventory levels, sales levels, accounts receivables levels and market shares.

ii) Monitoring of program might be done in terms of preparing "milestones" for the physical achievement of parts of a program, as well as for actual spending against planned program cost. Also, "early warning" models might be developed to forecast whether aspects of a program are "out of line" or not.

iii) Monitoring objectives fulfillment performance. Several objectives are quantitative at least to some extent and can, therefore, be subjected to more specific monitoring. Other objectives are more qualitative and conceptual in their nature. Whether or not these objectives are being fulfilled is often an indication of the capabilities of the manager who is responsible for the objectives. The way of measuring the strategic performance of managers is to build up track records of their success in this respect over a number of years, thereby ameliorating some of the problems caused by rapid job transfers.

The measurement of actual performance will in turn lead to changes that have taken place or will
have to take place in the situational setting of the company. The role of executives' incentives will be important here. For instance, to what extent are effects from uncontrollable elements of uncertainty being recognized when post facto reviewing performance? To what extent will management receive incentive compensation based on objectives-fulfillment in addition to the (common) budget-fulfillment?

As indicated in Exhibit 1, the actual outcomes of decisions will mean a change in the firm's situational setting. For example, the development and commercial introduction of a product that in turn will be successful will positively influence the product base of the company and thereby its situational setting. Conversely, if the product had failed this would also have influenced the situational setting in that the firm's financial position would have been weakened. Each decision outcome will in real life probably not influence the situational setting very much. However, taken together these outcomes point in the direction of the firm's path of general evolution. There will, of course, now and then be a few major outcomes that in themselves significantly will change the situational setting of the firm. These major events, that might considerably strengthen or weaken the firm, will typically also have an effect on senior management's attitudes. The more routine outcomes, on the other hand, will probably not significantly change senior management's outlook.

Let us briefly summarize our normative theory for design of a

1. See Carter (5)
2. See Texas Instruments Case in Lorange and Vančíl (15).
strategic planning system as outlined in this section. A company's situational setting, together with its senior management's strategic outlook, will determine the company's need for planning, in terms of adaptation to environmental opportunities and threats, and of long-term integration of its on-going activities. The strategic planning system should be designed in such a way that it will have the capabilities to meet the company's need for planning. A measure of effectiveness of the planning system will be the degree of "match" between needs and capabilities. Finally, the actual outcomes of decisions need to be measured and assessed in terms of their effect on changing the firm's situational setting and its senior management's outlook. Thus, we have a contingency theory in that there is no one best particular design of a strategic planning system; it needs to be tailored to the situational setting. Also, we have a dynamic theory in that the design of the strategic planning system needs to be updated to reflect the evolving situational setting - the evolution of the system should be managed.

III. Hypotheses and Measurements

In this section we shall state broadly the major hypotheses of this study. To a considerable extent the hypotheses will be more or less self-evident, given the theory for design of strategic planning systems. We shall in general therefore be fairly brief in our discussion. We shall also briefly indicate how we intend to approach the problem of measurement of a particular phenomenon. Here too we shall be quite brief; a detailed list of questions will be available for those interested.¹

¹. See Phillips (18).
The hypotheses shall typically be stated in terms of needs and/or capabilities for adaptation or integration. It should be stressed at this point that there is no dichotomy between adaptation and integration in that more adaptation should be paired with less integration. It may be that both adaptation and integration levels will be hypothesized to increase or it may be that the relative emphasis of one will be hypothesized to increase in relationship to the other. In our discussion we shall follow the same numbering as in Exhibit 1 and in the previous section.

1. The situational setting. We shall hypothesize that

$H_1$: The more diversified a company, the more emphasis on integration.

$H_2$: The less diversified a company, the more emphasis on adaptation.

The narrower base for the company's business should make it more dependent on adapting to the limited environment it faces.

$H_3$: The more volatile the environment, the more emphasis on adaptation.

$H_4$: The more volatile the environment, the more emphasis on integration.

$H_5$: The larger the fraction of the company's business activities in the growth segment of the business life cycle, the more integration.

The planning needs at this stage center around efficient management of scarce funds.

$H_6$: The larger the fraction of the company's business activities in the mature segment of the business life cycle, the more adaptation.

Adaptation to maintain the company's growth through utilization of excess funds will be important.¹

¹ Hypotheses $H_5$ and $H_6$ are supported by Lorange's findings that among 95 smaller companies integration capability differed more between companies primarily in the growth stage of the product life cycle that were high sales
We intend to measure the situational setting as follows:

a) Company's diversity. This will be measured by categorizing the companies in terms of degrees of diversity by constructing an index based on the information in Exhibit 4.

- number of strategic business units, together with sales and profits for each

Exhibit 4. A Company's Diversity

and profits growth performers versus not. For companies primarily in the mature stage of the product life-cycle adaptation differed more between the higher and the lesser performers. Lorange (11).
b) Positioning along product life cycle. This will be measured for each strategic business unit by constructing an index based on the information in Exhibit 5.

![Diagram](Diagram.jpg)

Exhibit 5. Strategic Business Unit Typology

Also the net funds flow position for each division as well as for the company as a whole will be recorded.

c) Volatility of environment. We shall attempt to measure this in two ways, by observing the degree of change in Exhibits 4 and 5 over the past years (an indirect indication of the environment's stability), and by constructing an index of degree of environmental volatility by having each strategic business unit rate various dimensions of their environments.

2. Senior Management's Outlook.
We shall hypothesize that:

\[ H_7: \text{The more ambitious the C.E.O. is about moving the company, the more need for adaptation.} \]

\[ H_8: \text{The more ambitious the C.E.O. is about moving the company, the more need for integration.} \]

\[ H_9: \text{The more risk-averse the C.E.O., the less need for adaptation.} \]

\[ H_{10}: \text{The more risk-averse the C.E.O., the less need for integration.} \]

We shall attempt to measure the C.E.O.'s ambitions by means of an index which will rate various executives' perceptions about the C.E.O.'s ambitions for the company along several dimensions. We will attempt to measure the C.E.O.'s attitude towards risk in a similar fashion.

It should be noticed that the above phenomena are very hard to measure, particularly when we have to rely on other peoples' perceptions. A better but implementation-wise unfeasible approach would be to observe the decision-making roles of the C.E.O. over a longer period of time. Given the poor nature of the expected quality of our measures, it becomes critical that the indices only get to be used for broad classifications, say, into two or three groupings of C.E.O. archetypes.

3. The capability of the strategic planning system.

We intend to measure the capability of the planning system for adaptation and integration in two ways. One is to analyze the structure of the planning process; another is to assess the effects on the adaptation/integration capabilities of the system from the eight tailor-making factors.
a) Structure of the planning process. We shall attempt to assess the structure of the planning process by describing how a company's process can be flow-charted on a diagram similar to Exhibit 6. That should allow us to determine the extent to which the process differs from our model expressed in Exhibit 2. Based on the logic of the flow as well as the appearance/non-appearance of elements of planning in the various cells, we expect to be able to identify the degree of adaptation-capability and integration-capability, rated along three-point scales.

<table>
<thead>
<tr>
<th>Stage Level</th>
<th>Objectives-Setting</th>
<th>Programming</th>
<th>Budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divisional</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exhibit 6. Flow-Chart for the Planning Process

b) Tailormaking factors.
i. Linkage between the cycles of the system. We shall assume that a tighter linkage between the cycles will lead to more integration emphasis while a looser linkage will lead to more adaptation emphasis. We further assume that looser linkage will lead to more adaptation capability up to
a point only - if there is no linkage, the activities of the earlier cycles become meaningless from a decision-making point of view. We shall measure linkage by means of an index that incorporates ratings along the following phenomena: degree of difference in content between first year of the plan and the budget; degree of reconciliation between the contents of the plans developed this year and the plans developed in the past for the same years; the nature of the responsibility for the development of the plans at each stage of the process (specifically what are the roles of the planners vs. the controllers); and the timing patterns of the various activities over the year.

ii. Nature of corporate management's review. We shall assume that if the C.E.O. is heavily involved during the early stages of the planning process, this will strengthen adaptation. Conversely, a heavy involvement by the C.E.O. during the later stages will strengthen integration. We shall measure this by means of an index which will be based on the following factors: amount of time spent on different types of review; rating of the quality of questions raised by the C.E.O.; and a measure of the degree to which the C.E.O.'s reviews will lead to iterations and revisions.

iii. Degree of open-endedness during Cycle 1. If at the outset the chief executive comes out with very explicit assumptions about this year's planning, and these assumptions differ little from the objectives followed in the past, then we shall expect that there will be little room for adaptation. If on the other hand, the C.E.O. states his assumptions as tentative and allows the divisions to come up with relatively unconstrained objectives, then this is probably a reflection of a more adaptive capability.
However, if the C.E.O. takes an entirely non-committal (maybe even aloof) attitude, then the basis for meaningful adaptation will have gone. We shall measure this by means of an index that indicates the degree of specificity of the C.E.O.'s initiation of the planning process and the degree to which this statement differs from objectives in the past.

iv. Nature of the programming activities by the functions during Cycle 2. If the programming activities are carried out in a highly sequential way along the functions we shall assume that the adaptation capabilities will be rather weak. If on the other hand strategic programs are being carried out largely cross-functionally then we shall expect that the adaptation capability is higher. We shall measure this by means of an index based on the characteristics found when examining ten strategic projects.

v. Environmental scanning. A more pointed environmental scanning effort in accordance with the strategies of a given organizational unit will be expected to increase the adaptation capability. This will be measured by means of an index based on the extent to which formal scanning is being done relative to the key variables of a strategy.

vi. Linkage to performance review. We shall expect that by linking the fulfillment of longer term objectives and strategic programs to the incentive systems of key executives we shall increase the adaptive capabilities of the system, relative to what the capabilities are when incentives are based primarily on short-term performance fulfillment primarily. We shall measure this by means of examining the incentive schemes according to several dimensions about how incentives are set, and summarize this by means of an index.
vii. Balance between new and existing activities. We shall measure this in terms of the degree of change considered in the plans. How widespread is the "what-if" alternative scenario examination practice? An index will be developed based on the rating of each planning unit in terms of the extent to which it undertakes various "what if" procedures.

viii. Degree of "quality control" of planning. This shall be measured by means of an index that examines line executives' concerns about the appropriateness of the planning process.

4. Effectiveness measurements.

We shall carry out three aspects of effectiveness measurements, namely with regard to the extent to which there seems to be consistency between the needs for planning and the capabilities of the planning system, whether the planning approach satisfies certain rules of common sense, and finally, how each company is performing along external measures such as sales and profits growth.

IV. Conclusion

We have stated a "theory" of planning which we shall attempt to test through in-depth field studies in twelve large corporations. The attempt will be to verify whether our approach to planning is viable, in the broadest sense.

V. Appendix: A Note on Research Methodology

The so-called logico-experimental method of research design states that

1. See Steiner (22) and Porter (19).
valid research must start with a statement of the theory which reflects the purest state-of-the-art of the field. Then, one or more hypotheses about aspects of the theory should be raised, in an attempt to disprove the general truth of this particular aspect of the theory.¹ This hypothesis-testing is done by examining real-life data to see whether one can find an instance of non-fit which will require modification of the theory. Instead of elaborating on the rationale for this research method per se we shall discuss a few implications for our study.

First, it is important that the theory to be stated at the outset of the research reflect the state-of-the-art. In the field of strategic planning, however, there is only a limited body of cohesive knowledge. The "theory" that we shall be able to state, then, will have to be quite sketchy, more in the form of a conceptual scheme but reflecting the sum of our intuitive experience as well as fractions of research findings. We shall strive to reflect the state-of-the-art in our theory statement, so that "reinvention of the wheel" can be avoided.²

Second, the theory should be as specific as possible, reflecting our understanding of contingencies. Such a specific theory will be more "economical" than a general theory in that it represents the "smallest", most precise expression of the phenomenon and will be true for this contingency setting but not true for any other settings. A major purpose of our hypothesis formulation and testing will be to get a realistic picture of what might be phenomenal invariants across contingent settings and what might be relevant contingencies.

¹. See Christenson [6].
². For surveys of research on strategic planning, see Hofer [ ] or Lorange [ ].
Third, in line with the above, we should attempt to state hypotheses that are relevant, in the sense that they should state what we deem as important. We should avoid hypotheses, however, that will have an exceptionally high probability of generating invariant answers. Thus, we should not attempt to verify what we already more or less know.

Fourth, it should be noted that the logico-experimental method, with its emphasis on stating a theory (or an aspect of a theory) and finding a case to disprove the theory (or the particular aspect of it), does not require large-scale samples of observations per se. Instead, the emphasis will be on testing the theory against cases which possess the relevant situational characteristics. This in-depth case-by-case clinical research approach seems particularly well fitted to a research setting like ours, where a complex administrative phenomenon is under investigation. Thus, it should be noted that the logico-experimental method (although derived from the physical sciences with its abilities for stringent measurements and controlled experiment) will be applied by us in a flexible sense; the task of testing hypotheses in research on strategic planning will largely be based on the researcher's ability to understand the actions in a particular company, interpret his data in a broader sense and rely on his own assessments rather than stringent measures. Hence, our approach of in-depth analysis closely resembles the so-called clinical action-research school.¹

Finally, the hypotheses must be in such form that they are testable, i.e., that they can be translated into tangible, specific, observable research questions. We intend to approach this as follows. The bulk of the data will be gathered through structured interviews with key executives in the companies

¹. See Normann [17].
under study. (Some data will be gathered by examining written documents such as annual reports, organization charts or planning manuals. No data will be collected by means of questionnaires.) For each of the major hypotheses, we shall identify a number of questions that might relate to this. These questions will be grouped together in an "interview group". The researcher will ask the executive about these questions in an open-ended form, the questions serving as a way of structuring a conversation around a theme. The answer will typically be somewhat lengthy and elaborate explanations. The researcher notes down the bulk of the answers on the sheet with his questions, a Work Sheet. He then sits down, before conducting another interview, and fills in his interpretation of the interview on a second form which has a number of more specific questions with some degree of measurement scale attached, a Data Sheet. After having synthesized his interpretation of the interview, the researcher may have to go back and ask additional questions where the original data turned out to be incomplete or where its interpretation would be difficult. When the data sheet is completed, the researcher reviews it with the executive to verify that the interpretations are accurate. After the data have been collected in this way for one major phenomenon, the researcher moves on to collect data for the next interview package.
REFERENCES


<table>
<thead>
<tr>
<th>Date</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 20 '76</td>
<td>JAN 13 '86</td>
</tr>
<tr>
<td>MAR 20 '78</td>
<td>MAR 30 '87</td>
</tr>
<tr>
<td>DEC 30 1991</td>
<td>DEC 31 1984</td>
</tr>
<tr>
<td>NOV 1 '78</td>
<td>DEC 16 1985</td>
</tr>
</tbody>
</table>

Lib-26-67