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Scenario building in strategic management
Why scenarios?

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The corporate operating environment has changed radically during the past few years—even months. Companies are used to being the lead in the play. However, the play has now been removed from the repertoire—there is no new script and new theatre companies are being formed. It is time to prepare scenarios.

A scenario is originally theatre terminology, referring to a draft of the plot; it elaborates on the lines, the actors, blocking on the stage and the set in different phases. When transferred to the corporate world, its use is very analogical. Customers and competitors are co-actors, the general operating environment forms the set, and corporate strategy forms the lines and blocking on stage. The essential difference compared to theatre activity is that the repertoire and the actors' roles are not fixed for the next season. Instead, a company must write several back-up scripts and secure roles even in different theatres.

Scenarios are a part of modern futures studies. They help imagine what is possible and analyse what is probable. They also act as a foundation when choosing a desirable future to be implemented.

From the company's point of view, scenario-based thinking emphasises, on one hand, the unpredictable nature of the future, but on the other hand it grants the company the role of a proactive agent: it is possible to influence the future with one's own choices and actions. According to Ervin László, a company can cope in a changing environment with the help of three basic conditions:

1. All parts of the company are productive.
2. The future is not built on past success factors.
3. No "master plan" will be made.

Including scenarios in strategic planning helps with all of these points. Scenarios stretch the examined time span further into the future. Thereby it is easier to see whether different business operations have a bearing in the future. Introducing different alternatives in the examination and identifying and dramatising—at least in one's mind—even the smallest changes and weak signals serves to question old success factors.

In addition, scenario-based thinking in strategic planning emphasises flexibility and actively creating the future. This, in turn, breaks down the traditional way of thinking; first creating a master plan which will then be implemented. In scenario-based thinking a decision must be made at each moment, in a way, regarding whether to plan more or to start acting.

What are scenarios?

A scenario is an image of the future based on assumptions, which outlines the company's future operating environment and describes the development path from the present to the future in a comprehensive and multi-dimensional manner. Scenario building, in turn, consists of developing at least two alternative scenarios regarding the company's operating environment. This means a description of what a company is able to and wishes to be in these environments, and eventually

formulating the corporate strategy so that the information contained by different scenarios will be taken into consideration.

In scenario building, the company is examined as a part of its operating environment. Here the operating environment encompasses both the competitive environment as well as the wider operating environment where also broader economic, technical, social, political and ecological factors come into play—in addition to factors related to the sector. These factors bring added perspective and new ideas for creating the strategy, and based on these new ideas the company can create new competitive edge or prepare for the changes that threaten it.

Scenario building is related to the company's strategic planning in three ways. Firstly, themed scenarios answer the question about what are the possible worlds. They are often common to the whole sector, company or at least to several units. External experts, or strategy officers responsible for developing business operations, are usually responsible for the process.

Mission scenarios answer the question about who and where we are. They examine the company's strategic mission and the basic beliefs in the background, related to customers, business models and one's own competence. The idea is also to bring up the taboos that may be hidden and restrict your own thinking and actions. Mission scenarios are within the area of responsibility of the operative management; in the future, owners and key customers will participate in this discussion more often than before.

Operational scenarios are scenarios regarding where the company can go and how within the framework established by themed and mission scenarios, and where they decide to go. The company's operative management is responsible for preparing the operational scenarios. A person working in process management usually acts as the facilitator, who may be from the strategic planning unit but also from outside the company.

The operational scenarios will be connected with the company's strategic monitoring systems in order to anticipate the indicators. The indicators in question are indicators or metrics linked with the time-axis of scenario-specific navigation marks. Figure 3 presents how the scenarios are linked with the strategy process within the framework of operational scenario building.

Figure 1. Scenario description through theatre analogy.

Figure 2. The company in general operating environment and competitive environment.

Figure 3. Framework for scenario building (adapted from Lucien Gerardini's original figure from 1971).

How are scenarios used?

In European corporations (Meristö 1991), those using scenario building can be divided into two groups according to the intensity of use:

1. Performance-oriented users of scenario building, who process the scenarios as a separate part of the planning process. Scenarios function as input information in the planning process, and their use resembles the philosophy of forecasting; however, instead of one forecast there are several. In

practice, these users create only themed scenarios.

2. Users of process-oriented scenario building, for whom scenarios are an integral part of planning and management. The process is therefore emphasized in the scenario building, even at the expense of the end result, alternative scenarios. The process emphasizes the participation and commitment of the management. Thereby scenario building becomes a step towards visionary management.

When mirrored in the remit of futures research, the users of performance-oriented scenario building fulfill, at best, the two first tasks: imagining the possible and analyzing the probable. Only the users of process-oriented scenario building also fulfill the third task: participating in creating the future by choosing what is desirable and possible to implement.

The third remit of futures research, participation, gives significance to the information related to the future. It brings values within the sphere of examination: according to whose interest will the alternatives be evaluated? By going back to the division into themed, mission and operational scenarios, the task of mission scenarios is to include values into the examination process, and those serve as the basis for strategic thinking for the whole organization.

According to the experiences of European companies, the essential characteristics of scenario building can be summarized as follows:
- Scenarios are comprehensive and wide-ranging descriptions of the company's future operating environment and the company's own role in it.
- The time span of scenario building extends further into the future than ordinary strategic planning, preferably doubling the so-called normal time span for strategic planning.
- Prepared scenarios are possible but not necessarily probable futures.
- Scenario building deals with, in one way or another, the uncertainty of the future, even though it does not make it disappear.
- Scenario building produces alternatives whose effects are evaluated in terms of the company's business operations, but also in terms of the strategy (e.g. actively participating in creating the future).

It is difficult to evaluate and impossible to measure the benefit derived from scenario building. European corporate users found that the criteria for its usefulness was that the scenarios prepared are taken into consideration when making decisions concerning the future, i.e. they make a difference in real decision-making. On the other hand, corporate representatives also stated that scenario building as such is a laborious and time-consuming process. For this reason, it would not be used if it were not deemed as useful. (Meristö 1991)

Non-problematic use in companies does not exist. The basic requirement for success is that top management is committed to scenario building and participates in the process. There may still be problems in the following areas:

- How to bring the world view of the headquarters/group closer to those of the units, and vice versa?
- How can the scenarios be quantified without losing their qualitative and imaginary substance?
- Which alternative is selected as the basis for preparing the strategy?
- Where to find qualified personnel to be involved in the scenario process (analytical capacity is usually sufficient, but where to get imagination in addition)?
- How to avoid extrapolating current trends?
- How to filter for weak signals of change in a globalising world, and to interpret them in different cultures?
- How can scenario building be made a fixed part of strategic planning and management without losing its innovative ad hoc nature?

Process for operational scenario building

The process for operational scenario building that I have developed and applied in my own research aims to abolish these defects. Experiences after corporate cases and interviews are positive regarding its operating capacity.

   The process for operational scenario building (Figure 3) includes 4 main phases:
I Who and where are we?
II What are the possible worlds?
III Where and how can we go? and
IV Where do we decide to go?

In this manner, there will be 4-8 process sessions, 1-2 in each phase. Each session is half a day or even one day long. Due to the development of online tools, some of the work can be implemented as telework or in the form of preliminary tasks.

The work should be timed before the actual strategic planning cycle, when a wider perspective and new possibilities can be used in preparing the actual strategy. The purpose of the whole process is to help develop a flexible strategy and to make the participants aware of the small changes in the operating environment, which may change the world when they come true.

The work should be extended through a 2-3-month period, leaving 2-3 weeks between the meetings to collect information on any issues and questions that may arise. The current intelligent information gathering tools offer great support for the process, and also speed it up. The time span for the work is always agreed upon on a case-by-case basis, depending on the business sector and product. However, the rule of thumb is that the time span for scenario building is at least double compared to ordinary strategic planning. This ensures that there will be time to influence the future with one's own choices and actions. In addition, one will make sure that also small signs of change gain sufficient emphasis when their possible cumulative effects are seen—in the short term, these changes might not present themselves so dramatically. (Figure 4)

The starting point for the process is defining the strategic mission. This ensures that the scenarios are not merely separate images of the future that are, of course, interesting to know, but that have no real significance in terms of the company's future. In the first phase in particular, mapping the basic beliefs brings the necessary commitment to the process: What does everyone believe without any doubt, and what is all decision-making based on without reservation? Both the strategic mission and basic beliefs provide a starting point on where we are and how to proceed towards the future with the current strategy. Mapping one's own core competences also makes the examination more realistic, by explaining what can be done and in what time frame.

In the second phase, the current state and the sector are left behind, as every participant turns on their 360-degree radar and starts mapping changes in their operating environment, both on a general level as well as on sector-specific level. On a general level, the filtering method is PESTE. This ensures that different perspectives are included and the whole is taken into account, instead of looking at things from an individual viewpoint. On an operational level, Porter's model regarding the competitive environment helps with the classification, and ensures that both customers, suppliers, rivals and newcomers as well as replacement products are included—not forgetting the company's own role in the sector (cf. Figure 2 above).

Figure 4. The relationship between vision, scenarios and strategy (Meristö 1992).

Figure 5. Krupp's diagram: social, market, research and technology perspectives.

When preparing scenarios, it is to be noted that all events and trends are not relevant within the same time span. It is possible to grasp the issue in a more systematic way e.g. by examining the actors behind the phenomena and their interests. As an aid, I use the intersection of three circles, known as the Krupp diagram, where the levels of examination are the market, society as well as research and technology.

The actors operating in the market often use the shortest perspective, which is also called quarterly thinking. The social perspective often spans from elections to elections, and it is medium long by nature. In terms of research, the perspective of basic research is sometimes infinite, and even that of applied research is much longer than the time span for normal strategic planning. Time does not pass in a linear manner in scenario building, but in accordance with the concept of the time of the occurrence.

The list that results from identifying variables is usually long and includes factors on very different levels, and therefore classifying them into different perspectives based on actors structures the scenarios to be prepared on a preliminary time axis already in this phase. The selection into critical factors is made through a preliminary SWOT analysis. The analysis in question filters mainly factors strengthening the current strategy and basic beliefs, and, on the other hand, factors weakening the current mode of operation. The former are possibilities and the latter are threats.

Those basic beliefs that are strengthened will remain as basic beliefs, i.e. they are strengths. Weakening beliefs are weaknesses that cannot be trusted without doubt. For this reason, special attention should be paid to them.

Another noteworthy factor is classification based on the degree of uncertainty: Certainties, probabilities and uncertainties differ in these examinations in terms of how many options the variable will be given. A certain variable will be given one, a probable variable one above the others, while examining other options as well, and uncertain variables will be given genuinely different but equal variable values. In addition to these, wild cards and taboos will be examined. They are considered surprising either because there has not been any sign of them, or no one has dared to discuss them out loud.

Critical factors are included in the closer analysis. Based on them, a futures table will be constructed, which contains these factors as rows and the alternative values for each factor as columns. Since there are still factors on different levels included, the tables can be constructed on different levels, which may include e.g. the world, Europe, Finland and nearby areas, province, city and its neighboring areas etc. The tables therefore serve as the basis for preparing scenarios.

Different factors are selected as initial assumptions, based on which the consequences in terms of each factor shall be evaluated. In principle, it is possible to prepare as many scenarios as possible, but due to time use and other resources, usually this is limited only to a few alternatives that are considered to sufficiently represent the range of alternative futures.

The market, society as well as the research and technology perspectives in Krupp's diagram work well as a menu when preparing starting points for alternative scenarios. At the same time, the comprehensive nature of the scenarios is secured from yet another perspective. On this basis, Meristö

et al. (2001) have developed a filter model for scenarios, which depicts, in addition to the starting points, a later development path that happens on a certain time axis, or how it may come to halt at different filters. This model has been presented in Figure 6.

For the final examination, it is recommended to select preferably an even number of alternatives, for example 2 or 4. In this manner, there is no "compromise in the middle", but you have to look at the extremes. The idea behind the process for operational scenario building has only been finalised when the strategic mission is mirrored against the final scenarios and conclusions and possible changes to the strategy and measures are implemented based on it. The question will be to what extent the strategic mission can be implemented in all the alternatives, and, on the other hand, which revisions must be made in any case.

Such issues, threats or possibilities that only present themselves in a certain scenario are the most problematic ones. You cannot count on them for certain, but they cannot be ignored either, because "what if…" The strategy must be made flexible on account of such factors and events.

In traditional strategic planning, the question is usually how much resources must be allocated to reach a certain goal. Instead, the question should be how much resources should be left unallocated or at least obtained quickly from somewhere in order to respond to the threat or to make use of new possibilities.

Flexibility can be developed by making solutions modular or by asking when this should be done at the latest. With large one-time investments, the latter case is applied, and this provides more time to acquire information about possible development directions.

In principle, a company has six different ways of using scenarios as a basis of their strategy work:
1. Foreteller (chooses the most likely alternative).
2. Risk-taker (chooses the alternative best for their own results).
3. Risk-avoider (prepares a strategy with which to manage in all scenarios, i.e. does not choose).
4. Realist (develops some flexibility in case of the remaining alternatives).
5. Master of the future (is proactive in making sure that the desired alternative takes place).
6. Slaughter animal (waits and hopes).

Naturally, the decision-maker's own risk-taking ability and risk profile affect the choice, but also the risk-bearing capacity of the organization. Sometimes the decision-maker's own profile is not in balance with the company's properties, and in this case there are usually changes in the company's top management.

Figure 6. Filter model for scenario building (Meristö et al. 2001).

In the selection situation, it is essential to also examine the business potential included in each scenario, in order to quantify the possibilities and threats in each scenario more clearly. It may be necessary, perhaps, to develop new competence, be ready to renounce an old form of business operations, or change the aggression level of the strategy from defensive to offensive.

To conclude

Introducing scenario building in a company does not only mean bringing a new method to help with planning. In fact, we cannot speak merely of a method, but rather an approach, a mode of working,

which includes different methods and tools. Introducing scenario building in a company usually means an overall change in management approach or systematisation of what is already thought and what is partially observed in operations.

This is a management approach that emphasises interaction, where, on one hand, every employee's knowledge and intuition become a part of the company's future planning, but on the other hand the top management's vision is a guiding factor both in its operations as well as in acquiring the information to guide the operations. In this manner, even the smallest crumbs of information gain meaning and are not wasted. The policy-maker can make the decision at any moment whether to plan more or to act, when he or she knows that the whole organisation is harnessed into creating the future, and he or she receives the required information.

The prepared scenarios also serve as aids for communication. They focus attention on the key variables and relations and bring in such qualitative factors that are not traditionally included in reporting. Connecting the information systems to monitoring the implementation of the scenarios significantly increases the efficacy of the scenario building and emphasises its continuous nature. We must monitor the implementation of the scenario-specific anticipatory navigation marks, which are realised, for example, in the filter model for scenario building with the help of the barometers connected to the fourfold filter fields.

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