

# A MODEL OF PLANNING PROCESS BY USING SCENARIOS IN STRATEGIC MANAGEMENT

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## Abstract

*The organization environment is characterized by uncertainty and risk that have an important impact of strategic management. In order to face this problem the managers need to plan their strategies. A useful tool in strategic planning is forecasting, but it is difficult to be applied in uncertain environment. This paper briefly discusses these aspects and proposes a model that uses scenarios in strategic planning.*

**Keywords:** uncertainty and risk, strategic management, strategic planning process, scenarios.

**JEL Classification:** M1, C1, Y8

## 1. Introduction

Strategic management represents a superior approach of the relation company-environment through which the organization creates its own future by handling all its resources and capabilities in order to obtain competitive advantage and to realize flexible structures and management systems that are used to find out alternatives and politics for action plans.

Forecasting or future anticipation is part of strategic management that comes as a response to the uncertainty of the environment in which the company operates. That is why the approach of the strategy in management has to be flexible, dynamic and innovative.

The strategy design requires the consideration of the economical, political and social instability and in the same time forecasting as closer as possible to the real life.

The information technology revolution has facilitated the using of mathematical modelling and sophisticated approaches, but in the context increased volatility of the international environment forecasts don't always give effective coordinates for decisions that lead to performance. Usually, the managers seek for certainties to easier manage the operations and sometimes with probabilities to assess the risks of their decisions by assuming additional costs, but the environment is often uncertain and the management has to face a large number of variables, demanded elasticity and competition, that constitute the main barriers in predictions.

While the risk problems may be planned using conventional methods, when the external environment becomes uncertain the future design cannot be based on predictions but on alternative options and possible futures.

Makridakis (1988) has identified a large list of errors in predictions, among the optimism, inconsistency, actuality, availability, conservatism, selective perception, effects of regression and others that underline that forecasting not always fit the management possibilities in designing the strategy. The situations where patterns of similar experiences don not exist may use the scenarios technique which may be a useful and valuable instrument in designing the strategy and the future of the organization.

## 2. Uncertainty and the risk in strategic management

### 2.1. Strategic planning

Strategic planning is basically realized on long term, usually over 10 years, and it is no doubt that is less certain then operational or medium term planning. The quantitative techniques are not effective, the majority of them being replaced with qualitative techniques. But, nevertheless the vision on the organization's future is useful and relevant for strategies. Whether techniques of modelling phenomena are useful for tactics drafting in strategies design an „educated guess” is needed (Herbig cited in Ringland 1998, p.11). „Futures design or planning involves issues of development and strategic planning. It observes the organization from both an internal and external view. It does this by gathering information from the environment and the system itself. It does all the future orientated tasks: research and development, training (except the orientation and maintaining skills), recruitment,

public relations, and market research. Consistent with the information gathering activities, it is also connected with the creation of knowledge” (Yolles 2009).

Considering external environment with discontinuities and uncertainty the strategic planning techniques have been developed by General Electric and improved by Group Royal Dutch and Shell Group. The recent proofs underline the General Electric success in strategy based on professional managers that is out of control and opposite of the known theories. „Existing theory in the field of strategic management does not predict or explain GE’s investment into fungible and noncontrollable managerial resources”. (Lehmborg *et al.* 2009).

## **2.2. Uncertainty versus the risk**

The risk associated to hazard is technically defined as a product between the hazard amplitude and the probability of appearance that is the cost of diminishing the risk. When more probabilities or chances exist we talk about the expected value of risk costs. The amplitude of risk and the probability of appearance are elements of risk under the human subjectivism, because people make errors in risk perception and these depend on the general importance given to different types of risks. The tendency is to overestimate the importance of rare but unpleasant risks, having defavorable consequences and to underestimate or even ignore the common, known ones, even if the induced risk has stronger impact on activities. Hence, the estimation approach and risk management have two basic elements: the risk amplitude and the probability of risk appearance (Doval 2009).

The risk which does not imply costs is not a risk, because the magnitude of risk is estimated in terms of costs. Therefore the risk is assessed in context of beneficiaries’ interest. The probability of risk appearance or the chance a hazard is realized is considered as a sample of possible events. The error of not including events invalidates the whole operation, therefore it is important to estimate amplitude limits. In practice the failure tree and events tree diagrams are used to do the judgment. This kind of diagrams permit the traceability of possible future events and the probability is attached to each knot of the tree, so that the composed probabilities may be determined by multiplication. The difficulty is to include all probabilities, but this type of analyses is usually made by experts.

When the probabilities could no be known, it is about uncertainty as opposition of risk.

This is a crucial factor in strategic planning. There are three categories of uncertainty (Mercer 1998): hidden certainty, expected uncertainty and random uncertainty.

*Hidden certainty:* Plenty future events, especially in strategic development of the companies, result from the hidden tendencies, but they may be planned if they are selected with judgment; for example the decreasing population in Eastern Europe.

*Expected uncertainty:* Some events, even they are not totally predictable, are expected to appear because they are based on consensus; for example, the increasing role of female managers.

*Random uncertainty:* some events, even not many, cannot be predicted and they lead to dramatic failure of the strategic plan; for example, showers that destroy trees, earthquake or exchange crash.

In practice, the long period forecast lead to decision based on judgment.

## **3. Scenarios technique**

### **3.1. Scenarios functions**

In strategic planning managers are taking into account experience and acquired knowledge, but some limits appear in uncertain environment. „Often the managers don’t define and don’t explore the strategic problems and don’t generate alternatives. They study in part one or whole alternatives which are at their disposal for a long period of time” (Bood and Postma 1997, 636).

The scenarios contribute to learning by encouraging the managers to explore unfamiliar domains and to analyse them by the means of the question „What if...?” Boost and Posma (1997) have identified five functions by using scenarios:

- *Strategy assessment and selection.* The scenarios offer the framework for managers to judge the strategic alternatives.

- *Integration of data oriented towards the future.* The scenarios may integrate quantitative and qualitative inputs, including subtle and fuzzy sets, and may incorporate results obtained by using other techniques of forecasting.

- *Exploration of future.* By formulation of hypothetical sequences of the events the scenarios may help to the identification of the major changes and the potential problems and to generate options for managing them. They also permit the unexpected problems anticipation and assure a system of warning in time about their appearance.

- *Warning the environment uncertainties.* The scenarios require managers to accept uncertainty, to understand it and to make part of their judgment (Wack 1985).

- *Organizational learning.* The scenarios offer the possibility to explore the strategic decisions consequences.

In strategic planning by using scenarios technique the uncertainty has to be approached with a high degree of flexibility.

### 3.1. Scenarios approach in strategic planning

Theoretically, the scenarios take into account three important alternatives of the future of the events (Heller 1999, 44):

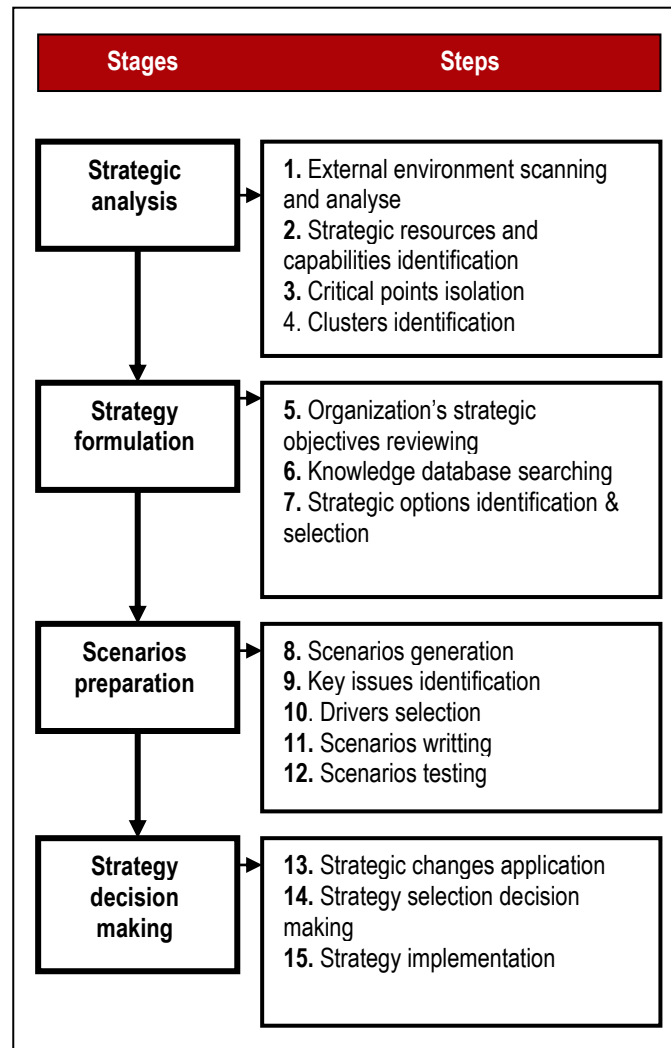
- the ideal scenario (optimistic), where the events follow an ideal successful way;
- the reasonable scenario, where the events follow a mitigated way;
- the catastrophic (pessimistic) scenarios, where the events end with failure.

In practice, the optimistic and pessimistic scenarios are neglected and the reasonable scenarios are developed in several alternatives. Stapleton (2000) proposes three stages for the process of strategic planning by using scenarios: environment analysis, scenarios preparation and strategy formulation.

Searching for good practices, we observed that the strategic resources and capabilities are strongly linked to strategy planning that have to be used in the context of the organization mission and strategic objectives in order to obtain competitive advantage and finally added value. „There are clear linkages between strategies, value-adding activities, core competences, and resources. The more that core competences can be integrated into value-adding activities, the greater will be the value added” (Stonehouse, and Snowdon 2007).

Therefore, a model for the process of strategic planning by using scenarios is proposed bellow (Figure 1).

The model consists into four stages: strategic analysis, strategy formulation, scenarios formulation and strategy decision making and 15 working steps: 1. External environment scanning and analyse; 2. Strategic resources and capabilities identification; 3. Critical points isolation; 4. Clusters identification; 5. Organization’s strategic objectives reviewing; 6. Knowledge database searching; 7. Strategic options identification & selection; 8. Scenarios generation; 9. Key issues identification; 10. Drivers’ selection; 11. Scenarios writing; 12. Scenarios testing; 13. Strategic changes application; 14. Strategy selection decision making and 15. Strategy implementation.



**Figure 1.** The process of strategic planning by using scenarios model

### Stage 1. Strategic analysis

**Step 1. External environment scanning and analyse.** External environment is often complex and volatile and affects the long-term decisions. The first step in strategy planning is to scan the external environment and to identify the hidden constraints. The external environment factors are to be evoked and analyse their influence on the organization's activities. The best practice is the brainstorming with an opened and divergent thinking which has not to have the „judgment” characteristics. The ideas could be refined by using techniques like STEEP (Social, Technological, Economical, Environmental and Political factors) analyse and/or check lists.

The industry analysis is also included and the best tool is Porter's five forces model (1980).

**Step 2. Strategic resources and capabilities identification.** As the final goal of strategy planning is to obtain competitive advantage, the second step is to identify the strategic resources and capabilities able to be multiplied within the organization (Prahalad, and Hamer 1999; Amit, and Schoemaker 1999; Grant 1999 and others). In this respect, permanent covering and the optimization of resources use, as well as the identification of the organization ability to create and multiply the strategic capabilities are some of the main activities to be done.

**Step 3. Critical points isolation.** In order to survive and prosper in an industry the organization needs to compare its success factors with the competition. The Grant model (1998) could be a useful tool. Strong points and especially the weaknesses need to be emphasised and new ideas about how to handle them need to be generated.

**Step 4. Clusters identification.** The ideas are combined with the constraints and organization’s competences into clusters that will be the basics for drivers of change identification.

**Stage 2. Strategy formulation**

**Step 5. Organization’s strategic objectives reviewing.** The organization strategic objectives are revised by analyzing them against clusters.

**Step 6. Knowledge database searching.** The knowledge data bases are searched and explicit knowledge referring to the clusters are selected.

**Step 7. Strategic options identification & selection.** Considering the clusters, strategic objectives and the explicit knowledge a team of experts will design new strategic options. A list of a few alternatives will be selected and this will be the foundation stones for scenarios preparation. The strategic options will be informal and qualitative and prepare the next stage planning.

**Stage 3. Scenarios preparation**

**Step 8. Scenarios generation.** In this step the events which are intercorrelated and have the potential to multiply or spread in the future are selected and as many as possible scenarios are then generated. Based on consensus the complementary scenarios are selected. They have to enrich each other. The preferred scenarios by the top management are avoided. The main characteristics that have to be considered when designing the scenarios are:

- the number of the identified scenarios is not limited;
- the scenarios that are too optimistic or too pessimistic are usually avoided;
- the scenarios have to be simulative and challenging; flexible and plausible;
- the scenarios need to balance the favourable and defavorable perspectives.

**Step 9. Key issues identification.** The scenarios are examined in order to determine the critical events and key issues that will be compared with events or decisions with strong impact on the long-term organizational potential or its possibilities to survive in a period of crisis.

**Step 10. Drivers’ selection.** The drivers have to be carefully chosen on the 80:20 principle and having significant consequences. All predictable events or factors will be enclosed in all scenarios, but the efforts will be focused on unpredictable, uncertain and important events or factors. Stapleton (2000) recommends the Importance/Uncertainty matrix utilization (Figure 2).

It is convenient to choose drivers that create added value. A good approach is offered by (Scott 2002).

	Uncertainty		
Not important	Driver 1 .....	Driver 2 Driver 4 Driver 7 .....	Important
	Driver 3 Driver 6 .....	Driver 5 .....	
	Certainty		

**Figure 2.** Importance/Uncertainty matrix

**Step 11. Scenarios writing.** In this step the context of scenarios is developed. There is not a standard pattern of how scenarios have be presented, but they scenarios are often presented as a written text, based on qualitative variables and is written in such a way to express the organization’s interests and needs. The condition is that every scenario has to be entitled. In some organizations they are presented as the conventional report.

This step needs rigour and divergent thinking because the consequences of the events have to be considered.

**Step 12. Scenarios testing.** In this step the degree of trust and the validity of the designed scenarios are tested.

#### **Stage 4. Strategy decision making**

**Step 13. Strategic changes application.** In this step has the role to balance the limited resources of the organization with the external challenges and the divergences identified during planning and to operate the necessarily corrections to the designed strategies.

**Step 14. Strategy selection decision making.** Using strategy evaluation techniques based on feasibility analyses or others, such as Johnson and Scholes criteria (1997) or Rumelt tests (1985) it is selected the strategy that better fits the criteria and better participate to the added value.

**Step 15. Strategy implementation.** The final step of the strategic planning is to act to put in practice the plan. A separate short term plan of actions having clear responsibilities and schedule is prepared.

#### **Conclusions**

Whether random uncertainties cannot be anticipated and the management cannot find and apply actions to thwart them, the hidden certainties may be forecasted after identifying them and could be assimilated with risks. The expected uncertainties are not always predictable, but they may be controlled by the management by using scenarios.

The scenarios represent a tool to identify the forces and events that succeed on long time and they have success whether they conduct to effective strategies formulation. The scenarios technique consists in the observation of the present and the establishing alternatives in which the economic phenomena may evolve in the future. As simple are the scenarios as more effective they are in strategy designing and planning.

The proposed model is the result of the generalization of practices of different organization's strategic planning and strategy design and it is not tested yet such as it is. The research continues with the model application in practice and details resulted from this activity.

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